

**PLANNING COMMITTEE MEETING: 12 June 2008**

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

<b>UDC CASE NUMBER:</b>	LTGDC-08-045-FUL	<b>DATE MADE VALID:</b>	11/03/2008
<b>APPLICATION NUMBER:</b>	08/00460/LTGDC/LBN M	<b>TARGET DATE:</b>	10/06/2008

<b>APPLICANT:</b>	Blue-NG
<b>AGENT:</b>	Environmental Perspectives
<b>PROPOSAL:</b>	Construction of a combined cycle biofuel generation plant to generate renewable electrical energy.
<b>LOCATION:</b>	Beckton Gasworks, Armada Way, London E6

**1. SUMMARY**

1.1 The application seeks planning permission for a Combined Cycle Biofuel Electricity Plant at the Gas Pressure Reduction Station located on Armada Way, Beckton. The applicant is Blue-NG, a joint venture company formed in 2007 between Nation Grid and 2OC. The proposed facility will consist of a Turbo Expander building, a CHP building housing two biofuel powered generators and a 27.5 metre high exhaust stack, and a biofuel storage area comprising three 75,000 litre tanks. The facility will generate electricity by utilising wasted thermal energy required in the gas pressure reduction process. The predicted electrical output of the facility is 19.5 Megawatts of electricity (MWe), which equates to the electricity needs of approximately 48,000 homes. The application is recommended to be approved, subject to conditions and the satisfactory completion of a Section 106 agreement.

1.2 The primary issues associated with this development relate to air quality, noise, visual impact, contaminated land and transportation.

1.3 In response to air quality concerns, the applicant has submitted an Air Quality and Odour Assessment identifying the predicted emission output operating at 100% and at 70% capacities (the latter is the expected day to day operating capacity). The predicted levels on nearby sensitive receptors have been assessed to be within national air quality objectives.

1.4 In terms of noise, the facility once installed with appropriate sound mitigation will not be heard above the background noise levels at the closest residential location.

- 1.5 The design of the facility itself, in particular the large CHP building, is considered to be a unique and interesting feature. Although the site is not easily viewed or readily accessible to the public, this may become an important marker should the Thames Gateway Bridge be completed.
- 1.6 The site is located on land at medium risk of contamination. Appropriate mitigation is to be secured by way of conditions.
- 1.7 The delivery of fuel to the site is expected to generate three trips per day. This is not considered to materially affect traffic conditions on the surrounding road network. The routes of construction traffic will, however, be identified by way of a condition.
- 1.8 It should be noted that the application has generated much interest from Biofuelwatch, a UK based organisation opposed to the principle of biofuel as a source of energy. The basis of their objections relate to local concerns of air quality, odour and noise but also the extend wider concerns that biofuel is not a truly renewable source of energy, contributes to greenhouse gas emissions, displacement of communities in developing nations, diversion of land away from food production and rises in global food prices
- 1.9 Overall, the application complies with local, London Plan and National policy objectives. The application is recommended for approval, subject to conditions and the satisfactory completion of a Section 106 agreement to secure the following monitoring regime:

#### Air Quality and Odour Management Strategy

- Locations of air quality and odour monitoring stations at sensitive receptor sites are to be agreed with the LPA and defined on a plan of an appropriate scale.
- Levels of CO<sub>2</sub>, NO<sub>x</sub>, NO<sub>2</sub> and PM<sub>10</sub> at these sensitive receptor sites shall not exceed the relevant air quality standards and objectives as defined in the Air Quality Regulations 2000 and (Amendment) Regulations 2002
- Emissions of odour shall not exceed C<sub>98, 1 hour</sub> 5.0 ou<sub>E</sub>/m<sup>3</sup> until such a time as explicit guidelines are finalised in regulatory documentation.
- Should the above described maximum standards be exceeded three (3) times within one calendar year, plant operations shall be abated to within levels considered appropriate by the LPA at the expense of the owner/operator

#### Noise Management Strategy

- Locations of noise monitoring stations at sensitive receptor sites are to be agreed with the LPA and defined on a plan of an appropriate scale.
- Noise levels at the agreed sensitive receptor sites shall have a BS4142 of 0, i.e. a noise level at or below the existing background noise level.
- Should the above described noise level be exceeded three (3) times within on calendar year, plant operations shall be abated to within levels considered appropriate by the LPA at the expense of the owner/operator

#### Fuel Sourcing Statement

- Agreement of a Biofuel Procurement Policy, to include documented compliance with relevant programmes for sustainable crop production (at a minimum the Assured Combinable Crops Scheme (ACCS) and Linking Environment and Farming (LEAF) scheme) to be agreed with the LPA
- Report to the LPA the following:

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- Type of fuel chosen and justification for this decision
- Source of the fuel and justification for this decision
- Where practical, the transportation method and route from source to plant
- Any change in fuel source and type

#### Research and Development Statement

- Will provide updates to the LPA on potential adaptations of technology or upgrade of equipment to the plant
- Will provide updates to the LPA on the development of 2<sup>nd</sup> and future generation biofuel type and sources

## **2. SITE AND PROPOSAL**

### Site Description

2.1 The application site is the Beckon Gas Pressure Reduction Station, located on the southern side of Armada Way, 75 metres west of the northern junction with Royal Docks Road. The total site area is 1.87ha, which is split into the northern operational Gas Pressure Reduction Station of 1.47ha and the vacant land to the south of 0.4ha. The division of the north and south elements is defined by a private service road, by which the site gains access from Armada Way.

2.2 The surrounding uses are predominately industrial and commercial. The Beckton Gas Holder Station is located directly to the east and the Beckton Depot for the Docklands Light Railway to the south east. Located to the north is the retail development of Gallions Reach Shopping Park. The nearest residential development is located 200 metres to the south east, to the west of Royal Docks Road.

2.3 The existing Gas Pressure Reduction Station is positioned on the northern side of the east-west service road and is comprised of exposed pipe work, an associated turbine house 6.9 metres in height to the north and a control building adjacent to the service road 4.5 metres in height. A telecommunications mast is located next to the control building to the south west and is 17.25 metres in height. Two high level pipes cross the access road from the site to the Gas Holder Station to the east. These have a minimum clearance height above this road of 7.65 metres.

2.4 The southern side of the service road is vacant and degraded industrial land.

### Proposal

2.5 The application seeks planning permission for the erection of a Combined Cycle Biofuel Generation Plant for the supply of electricity and heat to the local network. The additions to this site include the CHP complex in the vacant southern portion of the site and a Turbo Expander Building and equipment to the north of the service road.

2.6 The CHP complex comprises the irregularly shaped CHP building, being 53.3 metres in length east to west, 18 metres in width at the eastern end and 32.2 metres in width at the western end. The roof line is also irregular in shape, having a height of 22 metres on the north eastern corner and 14 metres on the south western corner. At the eastern end of the structure is a 27.5 metre exhaust stack. Also

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extending from the CHP building to the east, but separately from the exhaust equipment, is a pump house 3 metres in height with dimensions of 10 x 10 metres, leading to 3 storage tanks 11 metres in height and 3.5 metres in diameter. This complex is to be contained within a secure compound.

2.7 To the north of the service road and west of the existing control building is the Turbo Expander Building. The purpose of the Turbo Expander is to recover wasted thermal energy from the gas pressure reduction process and convert into renewable electricity. This Turbo Expander building is proposed to occupy a 20 x 21 metre building footprint with a shallow mono-pitch roof of 6.7 metres rising to 8.5 metres.

2.8 The proposal intends to generate three streams of electricity for the local grid and one stream of heat for the Gas Pressure Reduction Station. The purpose of the existing Gas Pressure Reduction Station is to reduce the high pressure gas within the gas pipeline network to a pressure that is safe to use in homes and industry. This process of gas pressure reduction results in a cooling effect which if left unchecked would result in freezing of the pipes and damage. Therefore, the pipes used in the pressure reduction process are required to be heated. This is currently done by burning gas directly to heat the pipes.

2.9 The proposed combined cycle process will generate electricity and heat in a highly efficient manner. The first stage biofuel CHP plant will generate electricity much the same as a conventional power plant by burning the biofuel to generate heat that is used by a turbine to generate electricity. The wasted heat from the biofuel engines will be recovered using an Organic Rankine Cycle (ORC) generator to create further electricity output. The surplus combined heat from the biofuel engines and the ORC generator is then used to heat the gas pipeline for the purposes of the pressure reduction process. Any heat that is wasted in heating the gas pipeline is then fed into a third generator that provides more electricity.

### **3. MAIN ISSUES**

- Air quality
- Noise
- Visual Impact
- Contaminated Land
- Transportation Impact

### **4. RELEVANT SITE HISTORY**

4.1 The earliest occupation of the site was in 1896, being the east-west railway yards and the original Beckton Station. The first appearance of the existing gas infrastructure was in 1951, which in turn led to the disappearance of the railway by 1970.

4.2 There is no relevant planning history associated with this site.

### **5. CONSULTATIONS/NOTIFICATIONS**

The London Borough of Newham

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5.1 The application was considered by the Newham Planning Committee on the 4<sup>th</sup> of June 2008, where a resolution was made to recommend to the LTGDC that planning permission be granted, subject to conditions and the satisfactory completion of a Section 106 legal agreement.

5.2 The primary issues considered at case officer level were:

- Principle of development
- Air quality and odour
- Noise
- Visual impact
- Contaminated land
- Transportation impact
- Sourcing of biofuels
- CO<sub>2</sub> emission comparisons

5.3 On principle, the application is deemed by Newham to be acceptable. Although the site is not designated for any particular use within the adopted UDP, the application proposes an industrial use in a predominantly industrial and commercial location. Furthermore, the Newham LDF, currently at Issues and Options stage, identifies the site to be within an industry/employment area. At a regional level, the application was assessed against London Plan Policies 4A.1 (Tackling Climate Change), 4A.2 (Mitigating Climate Change), 4A.4 (Energy Assessment) and 4A.6 (Decentralising Energy). The proposal was considered to meet the objectives contained within these regional strategic policies.

5.4 In terms of air quality, odour and noise, the submitted Air Quality Impact Assessment and Acoustic and Vibrations Report were reviewed by Newham's Environmental Health Services who consider that the air quality impact will be "significant but within air quality limits" and that there would be no material harm from noise. It was concluded that the facility should not have problems meeting reasonable standards if the development comply with suggested conditions relating to hours of deliveries, plant operation noise, contamination, importation of soil and infill materials, an environmental code wheel washing facilities and impact piling.

5.5 The CHP building itself was considered to be of a high standard of design and has the potential to be a future landmark for the area. It has been suggested that the high standard should be ensured by conditioning the permission requiring further details of the external materials and appearance.

5.6 Contaminated land has been identified as an issue given the site's long industrial history. Newham's Environmental Health Services have recommended a condition that will require a ground investigation and remediation in accordance with the Model Procedures for the Management of Land Contamination. A condition on the importation of soils and infill materials has also been recommended.

5.7 The transport impact of the proposal was only considered to be significant during the construction of the facility. It has been recommended by Newham's Transportation Services is that a condition be placed requiring details of the construction traffic routes.

5.8 The sourcing of biofuel and the applicant's biofuel procurement policy was given particular attention. This procurement policy identifies such aspects as the development of ethical business practices, CO<sub>2</sub> lifecycle savings, adoption of

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programmes for sustainable crop production, traceable supply chains, and monitoring and investment in second generation biofuels. The procurement policy has been assessed by Newham's Forward Planning Policy Team who considers the procurement policy to be acceptable on the provision that the Local Planning Authority be able to control, assess and monitor the sourcing of the fuel.

5.9 The final consideration of the scheme was the comparison of the biofuel type electricity generation to other forms of electricity generation, including gas, oil and coal. The biofuel type generation was determined to be the lowest contributor of CO<sub>2</sub> emissions both directly from site and in terms of the wider carbon cycle. This was further emphasised as meeting both National and London Plan objectives.

#### The Environment Agency

5.10 The Environment Agency has no objection to the proposal providing that four conditions be placed on the permission. These are that (1) the storage of fuels have impervious bases and are surrounded by impervious bund walls, (2) penetration methods of piling or foundation design shall not be permitted without the express permission of the LPA, (3) no infiltration of surface water drainage into ground water shall be permitted without the express permission of the LPA and (4) a contamination risk assessment is submitted to and approved in writing by the LPA.

#### Thames Water

5.11 No objection to the principle of the proposal subject to a condition requiring further details of surface water drainage.

#### London City Airport

5.12 No safeguarding objections to the proposal subject to an informative requiring separate consultation with the Airport should high level cranes be required for construction.

#### Other Consultations

5.13 Transport for London and Natural England responded stating no objection and no comments respectively. The Greater London Authority and English Heritage have not responded to the request for consultation.

### **6. APPLICATION PUBLICITY**

6.1 Site Notice Expiry: 23/04/2008

6.2 Press Notice Expiry: 23/04/2008

6.3 Neighbour Notification: 26/03/2008

### **7. REPRESENTATIONS**

7.1 A total of 416 neighbouring residents and occupiers were informed in writing of the proposal. 39 responses have been received to date of which 32 are objections and seven are letters of support.

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- 7.2 The seven letters of support are focused primarily on the technology of the development and reducing green house emissions, particularly in comparison with other forms of electricity generation that require the combustion of fuel.
- 7.3 In terms of the objections, the application has sparked keen interest from Biofuelwatch, a UK based non-government organisation that campaigns against the use of biofuel for energy. This organisation has objected directly to the application and posted a standard objection letter on their website [http://www.biofuelwatch.org.uk/files/beckton\\_letter.pdf](http://www.biofuelwatch.org.uk/files/beckton_letter.pdf) , along with instructions to their supporters on how to object <http://www.biofuelwatch.org.uk/beckton.htm> . A further 36 objection letters have been received which either replicate, or are based largely upon, the text of this original objection letter and/or the instructions on how to object. The key aspects of this objection are air quality and public health, noise and smell impact of local residents and the renewable credentials of biofuel, including the global impact of the crop production in terms of deforestation and exploitation of people in developing nations.
- 7.4 An objection letter was also received from a representative of the campaign group Food Not Fuel, who further questioned the renewable credentials of biofuel and the impact of biofuel harvesting on the livelihood of people in developing nations. The objector went into further detail in analysing the application itself, stating that the air quality impact on nearby residential areas will be unacceptable. Based on these two concerns, the objector considers that an Environmental Impact Assessment should have been required.
- 7.5 Biofuelwatch and Food Not Fuel jointly organised two protest events occurring on Saturday the 31<sup>st</sup> of May at the Mrytle Road Sainsbury's and on the evening of the 4<sup>th</sup> of June outside the Newham Town Hall to coincide with the Newham Committee.
- 7.6 One letter of objection was received that appeared to be independent of these two organisations. This objection considered that an EIA is required due to the novel form of generation, is a development more than local importance and is unusually complex and has potentially hazardous environmental effects.

<b>Individual Comment</b>	<b>Response to Comment</b>
1. The burning of biofuel to generate electricity will be harmful to local air quality and public health by increasing levels of NO <sub>x</sub> , CO <sub>2</sub> , PM <sub>2.5</sub> and PM <sub>10</sub> .	An Air Quality Assessment has been submitted with the application and is considered to be satisfactory both in methodology and in findings. However, further air quality monitoring shall be secured through a Section 106 agreement. See parts 9.7 to 9.13 of this report.
2. Noise and smell will be unacceptable for local residents.	A Noise and Vibration Report has been submitted with the application and is considered to be satisfactory. However, further noise monitoring shall be secured through a Section 106 agreement. See parts 9.14 to 9.18 of this report.
3. The use of Biofuel is not a truly renewable source of fuel for energy and contributes to greenhouse gas emissions,	The issues raised are considered to be beyond the remit of the local authority and the assessment of the planning

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displacement of communities in developing nations, diversion of land away from food production and rises in global food prices.

4. The application requires a full Environmental Impact Assessment, taking into account the local impacts, the impact of biofuel production at the point of origin and the current state of climate change into account.

5. The application requires an Environmental Impact Assessment because (a) it uses novel forms of generation, (b) is a development that has more than local importance and (c) is a development with unusually complex and potentially hazardous environmental effects.

application. It is suggested that these concerns be forwarded to the Department for Environment, Food and Rural Affairs (DEFRA). The assessment of the development has taken into account local and regional impacts only and is considered to be consistent with the current policy context in relation to renewable energy and climate change. Following the formal request for a Screening Opinion by the applicant, the proposal was deemed to fall within Schedule 2 of the EIA Regulations under Category 3 "*Energy Industry*" sub-section (a) "*Industrial installations for the production of electricity, steam and hot water*". The conclusion of the LTGDC was that the characteristics of development, location of development and the characteristics of the potential impact, as described under Schedule 3 of the Regulations in terms of screening criteria, indicated that the proposed development would not result in a significant environmental impact. Therefore, the Screening Opinion concluded that an EIA was not required.

Being legislation of England and Wales, the EIA Regulations do not have scope to be applied to the source any type of fuel in other countries.

(a) Although this type of plant is the first of its kind, the basis of the technology is a combination of tried technologies, being combustion engines and heat exchangers. Section 2.9 of this report describes the process in detail.

(b) The conclusion of the Screening Opinion that the development is not of sufficient scale to have wide ranging environmental effects.

(c) The development falls within regulatory standards. See sections 9.7 to 9.18 of this report.

NB: With regard to points 4 and 5 above, the Corporation's Solicitor has also confirmed that an EIA was not necessary.

## 8. RELEVANT PLANNING POLICY

### 8.1 Central Government Guidance

- PPS 22: Renewable Energy
- PPS 23: Planning and Pollution Control

## 8.2 The London Plan (Feb 2008)

- 2A.1 Sustainability Criteria
- 2A.10 Strategic Industrial Locations
- 3C.2 Matching Development to Transport Capacity
- 4A.1 Tackling Climate Change
- 4A.2 Mitigating Climate Change
- 4A.7 Renewable Energy
- 4A.14 Sustainable Drainage
- 4A.19 Improving Air Quality
- 4A.20 Reducing Noise and Enhancing Soundscapes
- 4B.15 Archaeology

## 8.3 The Greater London Authority Supplementary Planning Guidance

- Cleaning London's Air – The Mayor's Air Quality Strategy
- Green Light to Clean Energy – The Mayor's Energy Strategy
- Action Today to Protect Tomorrow – The Mayor's Climate Change Action Plan

## 8.4 London Borough of Newham Unitary Development Plan (2001) saved policies

- S4 Sustainable Development
- S9 Design Standards for Development
- S10 New Uses for Vacant Sites
- S15 Environmental Hazards and Nuisances
- UR3 Beckton Gasworks: Land Use Proposals
- EQ45 Pollution
- EQ46 Air Quality Management
- EQ47 Noise Impact Assessment
- EQ49 Contaminated Land
- EQ63 Surface Water Disposal
- T1 Environmental Impact of Traffic
- T3 Capacity of Highway Network
- T4 Major Highway/Public Transport Contribution
- T10 Road Hierarchy

## 8.5 London Borough of Newham Local Development Framework (2006)

The draft Preferred Options for the Core Strategy was released in February 2006 and will essentially set out the future direction for Newham until 2026. The Core Strategy Issues and Options Report went out to public consultation in March 2008. Preferred Options of relevance to this application include:

- The Core Strategy Key Diagram, which identifies the movement of Industrial Land Use from Stratford and Lea Valley to Beckton and Albert Dock Basin.
- Appendix 3 shows the proposed Industrial Land/Employment Land Release Strategy. This specifically shows that the preferred option for this site is to retain the existing industrial use and reduce the area of Major Opportunity Zone 14.

## 9. ASSESSMENT OF MAIN ISSUES

9.1 The London Borough of Newham has identified that all land adjacent to major roads be deemed to fall within an Air Quality Management Area (AQMA). Although the application site does not fall within an AQMA, its proximity to Royal Docks Road must be given due consideration. London Plan Policy 4A.19 seeks that air quality is taken into consideration at the planning application stage by way of an Air Quality Impact Assessment. PPS22 states that where odour is likely from a renewable energy plant, the facility should not be located near residential areas. PPS23 also identifies air quality associated with land use and development to constitute a material planning consideration.

9.2 The Combined Cycle Biofuel Generation Plant proposes to use crude vegetable oil as fuel for combustion to generate electricity. This process will result in the release of nitrogen dioxide (NO<sub>2</sub>) into the atmosphere via the exhaust enclosure and then to the 27.5 metre high stack. As such, the applicant has prepared an Air Quality Impact Assessment to determine the implications of the facility on local air quality.

9.3 The Air Quality Regulations 2000 and (Amendment) Regulations 2002 set specific standards and objectives for air quality improvement. In terms of NO<sub>2</sub>, the annual standard for average concentration is 40 micrograms per cubic metre (ug/m<sup>3</sup>), while the standard for average concentration over one hour is 200ug/m<sup>3</sup> (which must not be exceeded more than 18 times in one year). The most recent site specific information available on local NO<sub>2</sub> concentration relevant to the application site is from London City Airport to the south west and the petrol filling station at Galleons Reach Roundabout to the north east. These both indicate that the NO<sub>2</sub> concentration is higher than the annual standard of 40ug/m<sup>3</sup>, being 47ug/m<sup>3</sup> for London City Airport and 46ug/m<sup>3</sup> at the Galleons Reach Roundabout. Further more general information is available from the National Air Quality Information Archive which predicts that in 2010 the average background pollutant concentration for a 1km by 1km square surrounding the site will be 28.2ug/m<sup>3</sup>.

9.4 The submitted Air Quality Impact Assessment has identified nine locations that are considered to be sensitive receptors, i.e. areas where members of the public are regularly present. These are:

- Tesco, western end of Galleons Retail Park
- Boots, eastern end of Galleons Retail Park
- Land to the east of the site
- Residential to the south of the Thames River
- Royal Albert Basin Pumping Station
- The residential area to the south west (Beckton)
- Galleons Primary School on the western side of Royal Dock Road
- The commercial/industrial park to the north west
- Gateway Retail Park.

9.5 The impact assessment was based on a worst case scenario assuming the plant would be operating at 100% of the time, at 100% load and 100% conversion of NO<sub>x</sub> to NO<sub>2</sub>. The results of the impact assessment indicate that the site most affected by average NO<sub>2</sub> concentrations over a one year period will be the Galleons Reach Retail Park and the school to the west. However, it should be noted that the maximum concentration level at these locations is predicted to be annual mean of 36.7ug/m<sup>3</sup> for the Galleons Reach Retail Park and 36.1ug/m<sup>3</sup> for the school. These figures are both below the National Air Quality Objective of 40ug/m<sup>3</sup>.

- 9.6 It should also be noted that Galleons Primary School would be the most affected in terms of predicted one hour average NO<sub>2</sub> concentrations, being 118.6ug/m<sup>3</sup>. Again, this figure is well within the National Air Quality Objective of 200ug/m<sup>3</sup> for average concentrations over a one hour period.
- 9.7 A second air quality modelling exercise was undertaken assuming a NO<sub>x</sub> to NO<sub>2</sub> conversion ratio of 70%. This figure is quoted by the Environment Agency as being a reasonable conversion ratio of NO<sub>x</sub> to NO<sub>2</sub> and better represents typical conditions in which the plant will operate. As expected, all sensitive receptor locations were below the National Air Quality Objective of 40ug/m<sup>3</sup>.
- 9.8 It is not considered that dust during the construction phase will be significant enough to cause harm or annoyance to nearby occupiers. This conclusion is based on the prevailing wind direction being from the south west and the distance of sensitive receptors from the application site. However, there may be contaminated land issues in relation to dust, which will be discussed later in this report.
- 9.9 The potential of the facility to contribute to local odour issues has also been considered. The most likely source of odour issue would occur with the filling of the storage tanks as air is vented due to displacement by the fuel. Odour from the stack itself is not envisaged, as the temperature of the combustion will be too high. A number of local factors make it unlikely that odour will be an issue for nearby occupiers. The primary issue is the existing background conditions in relation to the nearby sewage treatment works. Secondly, nearby residential properties are located 200 metres south east of the facility and in the opposite direction of prevailing wind conditions. Thirdly, the odour generated from the site is considered to be slight and released between long intervals.
- 9.10 The conclusions of the Air Quality Impact Assessment and the advice received from Newham's Environmental Health Officer's both indicate that the proposal will not contribute a material harm upon local air quality. The application is therefore considered to be consistent with local and London Plan objectives with regard to air quality provided that an ongoing monitoring is secured. This ongoing monitoring of air quality shall be secured by way of a Section 106 legal agreement to ensure that appropriate levels are maintained.

#### Noise

- 9.11 Policy 4A.20 of the London Plan seeks to minimise and separate potential sources of noise from noise sensitive development. Furthermore, PPS22 states that local authorities should ensure that renewable energy developments are located and designed in such a way as to minimise the ambient background noise levels. The standard for measuring noise level is BS4142, which determines that noise generated by industrial development should be less than or equal to the background noise level of the nearest residential development. Furthermore, should the development contribute any tonal noise, the contribution should be no greater than 10dB below the background noise level.
- 9.12 Background noise measurements were taken at 16 Windsor Gardens and to the east of Galleons Primary School (Oxleas Close) approximately 270 metres to the west of the site. This concluded that the existing background noise level at the nearest existing residential location is 42dB, which is typical of a residential environment. It should also be noted that the Acoustics Report takes into

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consideration the potential future residential development at Beckton Riverside, and assumes a background noise level of 39dB.

9.13 The individual pieces of equipment that are envisaged to generate the greatest noise are a diesel engine (125dB), exhaust stack (122dB), the Turbo Expander (99dB) and a fuel delivery truck (84dB). These noise levels are without any form of silencing or enclosure. The report recommends that the following is undertaken to minimise these noise sources:

- Fuel deliveries to occur between 0700 and 2300 hours
- Engine exhaust to be fitted with silencers
- The CHP building, Turbo Expander building and Biofuel pump house be built from concrete blocks within a steel frame, insulated metal sheet roofing and double glazed windows (or 25m single glazed)
- All air intakes and cooling fans contained within the buildings
- All external pipework buried or wrapped in acoustic material
- All diesel engines enclosed

9.14 With these areas of mitigation included, the resultant noise levels were modelled and determined to be below the background noise levels of the nearest residential properties. Specifically, the background noise level predicted to be heard from 16 Windsor Close is 37dB (-5dB), from Gallions Primary School (Oxleas Close) is 42dB (no difference) and from the potential future development at Beckton Riverside ranges from 31dB to 37dB. Considering these predicted noise levels and the separation between the proposed development and nearby existing and proposed residential development, it is considered that the noise generated by the proposal would not constitute a material harm to the amenity of nearby residents. This background noise environment will be maintained by the implementation of a noise monitoring strategy secure by Section 106 agreement.

### Visual Impact

9.15 The development seeks to provide an 'iconic' building to house the CHP plant. Although the site in its current context is isolated within empty scrubland and industrial installations, the site is located adjacent to the potential new route of the Thames Gateway Bridge connection to Royal Docks Road (A1020). This location is therefore ideal for a building of architectural interest to mark an entry feature to the area.

9.16 The CHP building is the most prominent of the proposed structures. The design submitted with the planning application had a building footprint of 30 metres by 30 metres and being 17 metres in height. This design has since changed to an irregular building footprint of 53.3 metres east to west, 18 metres at the eastern end and 32.23 metres at the western end. The roof line takes on a twisted form and rises to a maximum height of 22 metres at the north eastern corner and 14 metres at the south western corner. This increase in size and change in form brings the structure to sit directly adjacent to the exhaust stack and encloses the exhaust enclosure building and associated piping. Although larger than the original scheme, the design is cleaner and occupies a greater portion of the site, thereby obstructing much of the exposed pipe work and other equipment from view. It is considered that the completed building would provide an interesting feature when viewed from the most likely viewpoints from the south and west.

9.17 The concluding remarks of the submitted Acoustic Report made the

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recommendation that any exposed piping or exhaust equipment should be enclosed within buildings or buried. The revised design therefore benefits the background noise condition by incorporating this equipment within the larger structure.

### Contaminated Land

9.18 As stated in the opening sections of this report, the location of the proposal has historically been the site of railway depots and later gasworks. Both railway depots and gasworks are identified in PPS23 as being uses that are likely to contaminate the land they are sited upon. Although the proposed use will not require there to be a permanent worker presence on site, the site workers during the construction period will stand a high risk of exposure to contaminants. Furthermore, the risk that the disturbance of contaminated soil poses on neighbouring sites and the local environment must also be established.

9.19 The submitted Environmental Statement concludes that the site presents a medium risk with respect to general environmental considerations and identifies that there is a medium to high risk from on-site contamination. Other categories taken into consideration include the potential for contaminants to migrate on/off site (medium risk), pollution of controlled waterways (medium risk), property damage (medium risk) and harm to human health (medium to low risk).

9.20 The Environment Agency has acknowledged the potential risk associated with ground contamination and has recommended a condition that seeks to specifically identify this risk, undertake a site investigation, formulate a remediation strategy based on the results of the risk assessment and site investigation and to provide a verification plan that identifies any long term monitoring requirements. It is considered that such a condition would be reasonable and appropriate to ensure on site contamination mitigation in this situation.

### Transportation Impact

9.21 The impact on the local road network will occur from fuel tanker deliveries, which will have an average frequency of 2 deliveries per day, with a potential maximum of 3 deliveries per day. This is considered to be a nominal amount of deliveries that can be timed to non-peak periods. It is therefore considered that the traffic impact the local road network will not have a material impact.

9.22 It is anticipated that vehicle movements generated during the construction period will be on average 25 two way trips per day, with a maximum in the order of 40 two-way trips per day. Given these potential vehicle movements, and the likelihood that some movements will occur during peak periods, a traffic management plan will be required by way of a condition. This traffic management plan shall include such details as the size and timings of vehicle movements, defined vehicle access routes and details of wheel washing facilities all to the agreement of the Local Highway Authority.

### Flood Risk

9.23 It has been noted that the application site is located within a Flood Risk Zone 3 category and benefits from flood defences. Although the Environment Agency have not raised any issues of flood risk in their consultation response, it is felt that it would be prudent to advise the applicant of the site's flood risk by way of an informative.

## 10. CONCLUSION AND REASONS FOR APPROVAL/REFUSAL

10.1 The application has sought to demonstrate that the Biofuel Combined Heat and Power (CHP) as described in this report is an appropriate addition to this predominantly industrial location and that planning permission should be granted. The scheme has generated keen interest from parties outside of the London Borough of Newham, with issues ranging from crop competition in developing nations to impact of the facility upon local conditions. Members are reminded that a scheme of this nature can only be considered within the applicable and adopted policy framework which sets the standards for acceptable impact and mitigation upon the local and wider area. With this last sentiment in mind, the application is considered to be in material compliance with adopted Newham UDP, the emerging LDF Core Strategy, the London Plan and Central Government Policy. The applicant has satisfactorily demonstrated that the impacts upon the local area can be successfully mitigated to the appropriate regulatory standards, particularly with regard to air quality, odour and noise. However, considering that this is the first CHP plant of this type and fuel in the UK and the level of interest the plant has generated, it has been considered reasonable by officers to require that the applicant go beyond these regulatory standards and agree to be party to a Section 106 legal agreement to secure the ongoing monitoring of the plant.

10.2 It should also be noted that the design of the structure housing the facility is considered to be of a high standard that has the potential to be a future landmark for the area. Overall, the proposal is considered to be a positive brownfield development that meets the sustainability targets set both nationally and within the London Plan.

10.3 It is recommended that planning permission be granted, subject to the conditions set out in the following section and the satisfactory completion of a Section 106 agreement delegated to the Director of Planning to secure:

- Air Quality and Odour Management Strategy
- Noise Management Strategy
- Fuel Sourcing Statement
- Research and Development Statement

## 11. CONDITIONS AND REASONS

1. The development to which this permission relates shall be commenced not later than the expiration of THREE YEARS from the date of this permission.

Reason: To ensure that the development is commenced within a reasonable time period and in accordance with Section 91 of the Town and Country Planning Act 1990

2. All works shall be completed in accordance with drawing numbers  
1426 P\_100 Site Plan  
1426 P\_110 Site Elevations North and South  
1426 P\_111 Site Elevations East and West  
1426 P\_120 CHP Building Plans and Iso  
1426 P\_121 CHP Building Elevations  
1426 P\_122 CHP Building Perspectives  
TE001/BE/03/01/0908/012 rev B Turbo Expander Building

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TE001/BE/03/01/0908/014 rev B Customer Sub-Station/Pump House

TE001/BE/03/01/0908/022 rev A General Arrangement of Existing P.R.S.

Reason: To ensure that the development is implemented in accordance with the approved details.

3. Prior to the commencement of development, an Environmental Code of Practice shall be submitted to and approved by the Local Planning Authority in respect of such matters as are likely to cause nuisance to adjoining occupiers. The code shall cover all aspects of site preparation, construction and operation and include details of demolition, clearance and ground works (including decontamination), access to the site, hours operation, noise, dust, smoke, road cleaning, odour control, wheel washing and any other matters relevant to this particular site. The environmental code shall be adhered to for the duration of the construction works.

Reason: To ensure that the construction phase of the development does not adversely impact on the amenity of nearby occupiers and the local environment.

4. No more than three (3) fuel truck deliveries shall be received by or despatched from the site per day. This limit shall not be exceeded without the prior written approval of the Local Planning Authority.

Reason: To safeguard the amenities of nearby occupiers from vehicle movement and noise.

5. Plant operation on site shall not give rise to a BS4142 rating level greater than the background level at the nearest or worst affected residential property. Further details of sound attenuation methods, including exhaust silencers, acoustic enclosures, glazed surfaces and any other attenuation measures, are to be submitted to and approved in writing by the Local Planning Authority prior to the first operation of the plant. Such measures shall demonstrate that attenuation performance meets the standards set in Table 5.2.1 of the approved Technical Report NSOX0516/1 rev 0 or to an otherwise agreed level.

Reason: To protect the amenity of nearby residential occupiers from potential industrial noise nuisance.

6. No soils or infill material, are to be brought onto the site unless they have been satisfactorily proven to be uncontaminated and present no risks to human health, planting and the environment. A declaration to this effect together with acceptable documentary evidence to confirm the origin of all imported soils and infill material, supported by appropriate chemical analysis test results, shall be submitted to and be approved in writing by the Local Planning Authority prior to the commencement of development.

Reason: In order to prevent uncontaminated and remediated land from becoming contaminated with material that is potentially harmful to humans, planting and the environment

7. Prior to the commencement of the development hereby approved, details of defined access and egress routes and temporary signage to the site for all vehicles related to the construction of the development shall be submitted to and agreed in writing by Local Planning Authority, as the Highway Authority.

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Such details shall be implemented in accordance with the approved details unless otherwise agreed in writing with the Local Planning Authority.

Reason: To ensure the appropriate routing of construction traffic in the interests of neighbourhood amenity

8. Prior to commencement of the development hereby permitted, details of wheel washing equipment and facility shall be submitted to and approved in writing by the Local Planning Authority. The approved scheme is to be maintained for the duration of the construction phase at all vehicle exits to the site.

Reason: To ensure that the construction of the proposed development does not prejudice conditions of safety and cleanliness along the adjoining highway.

9. Prior to the commencement of the development hereby approved, details of a landscaping scheme featuring plant species commonly associated with industrial areas and brownfield development shall be submitted to and approved in writing by the Local Planning Authority.

Reason: To enhance the ecological value of the site and to promote the greening of this area of tree deficiency

10. Prior to the commencement of operation details of an Air Quality Management Scheme for the monitoring of particulate matter and nitrogen dioxide for health effects and nuisance shall be submitted to and approved in writing by the Local Planning Authority. The Scheme shall include steps needed to include control technology and monitoring regimes within the plant to reduce the emissions of air pollutants to a minimum. Details shall also include how it is intended to ensure that the plant continues to operate at optimum efficiency. Such details shall be implemented in accordance with the approved details unless otherwise agreed in writing with the Local Planning Authority.

Reason: To safeguard the amenities of occupiers of nearby properties,

11. Prior to the commencement of the development hereby permitted, details of all enclosures around the site boundary (fencing, railing, walling, etc) shall be submitted to and approved by the Local Planning Authority. Details shall include the proposed design, height and materials and shall be retained and maintained thereafter.

Reason: To ensure a satisfactory standard of boundary treatment in the interests of appearance and security.

12. Any facilities for the storage of oils, fuels or chemicals shall be sited on impervious bases and surrounded by impervious bund walls. The volume of the bunded compound shall be at least equivalent to the capacity of the tank plus 10%. If there is multiple tankage, the compound shall be at least equivalent to the capacity of the largest tank, or the combined capacity of interconnected tanks, plus 10%. All filling points, vents, gauges and sight glasses must be located within the bund. The drainage system of the bund shall be sealed with no discharge to any watercourse, land or underground strata. Associated pipework shall be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets shall be detailed to discharge downwards into the bund.

Reason: To safeguard local surface and ground water from contamination and pollution.

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

Reason: To ensure that the potential ground contamination identified on site is given due consideration.

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

Reason: To ensure that the potential ground contamination identified on site is given due consideration.

15. Prior to the commencement of the development hereby permitted, the following components of a scheme to deal with the risks associated with contamination of the site shall each be submitted to and approved in writing by the Local Planning Authority:

- (a) A preliminary risk assessment which has identified: all previous uses potential contaminants associated with those uses a conceptual model of the site indicating sources, pathways and receptors potentially unacceptable risks arising from contamination at the site.

- (b) A site investigation scheme, based on (a) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.

- (c) The site investigation results and the detailed risk assessment (b) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.

- (d) A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in (c) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

The scheme shall be implemented in full.

Reason: To identify the potential risk posed by ground contamination on site and to establish measure in which to mitigate this risk.

16. Prior to the commencement of the development hereby permitted, the applicant shall secure the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted to and approved by the Local Planning Authority. The development shall only take place in accordance with the approved scheme. The archaeological works shall

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be carried out by a suitably qualified investigating body acceptable to the Local Planning Authority.

Reason: To ensure that any archaeological remains that may exist on the site are appropriately investigated and recorded.

17. Prior to the commencement of the development hereby permitted, further details of materials to be used in the external treatment of the CHP building shall be submitted to and approved in writing by the Local Planning Authority. Such details shall include samples.

Reason: To ensure a high standard of external appearance in the interests of local amenity.

## 12. INFORMATIVES

1. The recovery, treatment and disposal of contaminated soils and groundwater are regulated by waste legislation and require a Waste Management Licence or Pollution Prevention and Control permit. The applicant is advised to contact the Environment Agency at an early stage to avoid any delays.
2. For advice and information upon contaminated land site investigation, risk assessment and implementing a remediation strategy it is recommended that the applicant contacts the London Borough of Newham Environmental Health Pollution Control Unit, Alice Billings House, 2 -12 West Ham Lane, Stratford, London E15 4SF Tel: 020 430 3820. The Unit has produced a leaflet 'The development of contaminated sites' which can be downloaded free from [www.newham.gov.uk](http://www.newham.gov.uk). The developer shall notify the Council's Development Control and the Environmental Health Pollution Control Unit of the start dates and programme of site investigations and any subsequent remediation works.
3. The site is located within Flood Risk Zone 3 and benefits from flood risk defences. The applicant is advised to contact the Environment Agency prior to the commencement of development for further advice on the site's risk of flooding.

**CASE OFFICER:** Stephen Allen

**Appendix 1:** Site Location Plan

**Appendix 2:** Proposed Site Layout Plan

**Appendix 3:** Proposed Elevations