REPORT TO: **POLICY & RESOURCES COMMITTEE - 24 JANUARY 2011**

REPORT ON: **PROPOSED RENEWABLE ENERGY PLANT, DUNDEE PORT CONSULTATION BY SCOTTISH GOVERNMENT IN TERMS OF SECTION 36 OF THE ELECTRICITY ACT 1989**

REPORT BY: **DIRECTOR OF CITY DEVELOPMENT**

REPORT NO: **5-2011**

1 PURPOSE OF REPORT

1.1 The report seeks the views of the Council in respect of an application served on Scottish Ministers under Section 36 of the Electricity Act 1989 from Forth Energy in respect of a proposed Renewable Energy Plant at Dundee Port.

1.2 A copy of the application was received by the Council on 17 August 2010 and any Council objections must be received by Scottish Ministers no later than 31 January 2011.

2 RECOMMENDATION

The Committee's instructions are requested relative to the available optional responses outlined in Section 9 of the attached report and, thereafter, the Director of City Development is authorised to issue the Council's formal response to the Energy Directorate by 31 January 2011.

3 FINANCIAL IMPLICATIONS

3.1 There are no direct financial implications arising from the approval of this report.

4 BACKGROUND

4.1 Forth Energy, a joint venture between Scottish and Southern Energy and Forth Ports, is currently progressing renewable energy generation projects at Forth Port's sites in Scotland: at Dundee, Rosyth, Grangemouth and Leith.

4.2 In line with this strategy Forth Energy is seeking consent from Scottish Ministers under Section 36 of the Electricity (Scotland) Act 1989 to construct and operate a Renewable Energy Plant with a net electrical output of 100 megawatts on a site at King George V Wharf, Port of Dundee.

4.3 At the same time "deemed planning permission" under Section 57(2) of the Town and Country Planning (Scotland) Act 1997 as amended is being sought from Scottish Ministers alongside the Section 36 consent process. If Scottish Ministers are minded to grant both consents the combination of these two consenting procedures will mean that Scottish Ministers will grant consent for electricity generation as well as planning permission to use the land for the purposes of electricity generation.

4.4 The nature of the twin processes as set out in the legislation means that if consents are granted they will be required to be subject to a comprehensive range of conditions not only for the purposes of monitoring and enforcing operational and environmental issues but also to govern the subsequent submission for approval of the Council comprehensive details of the layout and design of buildings and other structures.

4.5 In making their determination Scottish Ministers may alternatively grant or refuse the Electricity Act consent and/or refuse to grant deemed planning permission leaving planning permission to go through normal procedures.

4.6 The Council therefore is not the determining authority on either of these applications. Under Section 36 of the Electricity Act 1989 it is a "statutory consultee" or potential objector together with SEPA and SNH.

4.7 In determining the application Scottish Ministers will also have access to the views of a range of non-statutory consultees with whom it has been engaging. In addition, the applicants have undertaken public participation initiatives, the most recent in July 2010 to mark the submission of the applications. The Council has been forwarded copies of all representations received by the Directorate as a result of these processes and these have been summarised in Appendix B of the attached report.

4.8 The written material submitted with the application was extensive, comprehensive and detailed. Principal among the documents submitted was a statutory Environmental Impact Assessment.

4.9 The attached report describes and evaluates the application documents and EIA, in terms of:

- the application site and its setting and alternative sites evaluated;
- the proposal and how it is intended to operate;
- land use planning policies, including the development plan and other material planning considerations;
- the various aspects of environmental impact assessed in the Environmental Statement and an evaluation of responses proposed by the applicant to mitigate significant and other environmental effects; and
- transport and socio-economic aspects.

The report also contains a Schedule of Conditions which the Council should require to be imposed by Scottish Ministers if they are minded to grant conditional planning permission or Section 36 consent.

4.10 Of necessity the attached report is lengthier than normal but an attempt has been made as far as possible to cross-reference to the applicant's documentation. The full texts of all the submitted documents may be viewed on-line at www.forthenergy.co.uk

4.11 If the Council resolves to object to the proposal, Scottish Ministers must call a public inquiry although the need for an inquiry can be avoided under Schedule 8 paragraph 2(4) of the Electricity Act 1989 which states that an inquiry may not be called if approval can be granted by imposing modifications or conditions sufficient to overcome the term of objections.

4.12 If any party other than the Council objects Scottish Ministers have the discretion to call a public inquiry.

5 POLICY IMPLICATIONS

5.1 This Report has been screened for any policy implications in respect of Sustainability, Anti-Poverty, Equality Impact Assessment and Risk Management. There are no major issues.

6 CONSULTATIONS

6.1 Throughout the preparation of the report attached and previously during the application processes the following Chief Officers and their specialist staff have been consulted:

- Head of Environmental Health and Trading Standards (Air Quality, Noise, Land Contamination);
- Director of Leisure and Communities (Landscape, Visual Impact, Ecology and Natural Heritage); and

6.2 In addition, the Chief Executive, Depute Chief Executive (Support Services), Director of Finance and Assistant Chief Executive have been consulted and are in agreement with the contents of this report.

7 BACKGROUND PAPERS

7.1 Electricity Act 1989.

7.2 Town and Country Planning (Scotland) Act 1997 (as amended).

7.3 The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations; 2000 (as amended).

7.4 The Electricity (Applications for Consent) Regulations 1990.

7.5 Documents submitted with the application:

a Environmental Statement and Technical Appendices;
b Transport Statement;
c Design Concept Statement;
d Planning Policy Statement;
e Sustainability Statement;
f Combined Heat and Power Feasibility Study;
g Fire Prevention Method Statement;
h Statement of Community Participation;
i Non Technical Summary;
j Volume of Figures; and
k Addendum Report to Environment Statement.

7.6 Environmental Statement Scoping Report - Forth Energy - December 2009.

7.7 Dundee City Council Response to Environmental Statement Scoping Report - January 2010.

7.8 Environmental Statement Scoping Opinion by Scottish Ministers - February 2010.

7.9 AEA Letter of 17 December 2010 enclosing comments on the Addendum Report.

7.10 AEA Interim Review of Air Quality Assessment of proposed FE Biomass Plant, Dundee.

Mike Galloway
Director of City Development

CW/MM 14 January 2011

Dundee City Council
Tayside House
Dundee

FORTH ENERGY

Electricity Act 1989 (Sec 36)
Town and Country Planning (Scotland) Act 1997 as amended (Sec 57(2))
The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 as amended

The Electricity (Applications for Consent) Regulations 1990

Application to Scottish Ministers for Energy Consent and Deemed Planning Permission for the construction and operation of Biomass Renewable Energy Plant to be located at King George V Wharf in the Port of Dundee

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FORTH ENERGY BIOMASS RENEWABLE ENERGY PLANT

EXECUTIVE SUMMARY

1 Forth Energy have submitted an application under Section 36 of the Electricity Act 1989 for the construction and operation of a renewable energy plant with a net electrical output of 100 megawatts. It is proposed that the plant be fuelled by sustainably sourced biomass products, 85% of which would be imported and transported by sea. The plant is capable of exporting up to 30 megawatts of renewable heat to local users.

2 The decision on this application will be made by the Scottish Ministers. The Council have been consulted on the application/EIA as have the two other statutory consultees, SEPA and SNH. A number of non-statutory consultees have been asked for their opinions. If the Council object to the proposed development then it cannot be determined by the Scottish Ministers without first holding a public inquiry (unless the objection can be resolved).

3 The principal environmental impacts of the proposed development relate to air quality and the visual impact of the development. In terms of air quality, following discussions with the Council, the applicants have agreed to increased abatement of emissions so that the impact of the construction, operation and decommissioning of the plant on air quality will be negligible. However, there is the possibility that if nitrogen dioxide levels generated by traffic (regardless of whether the plant is developed) are not controlled by the Council, that the small additional levels added by the biomass plant would exceed legislative standards. If this were to happen the plant would not receive a licence to operate from SEPA.

4 In terms of the visual impact, whilst it is accepted that this will be a very large structure at a waterfront location, it is considered that with appropriate design control an acceptable solution can be achieved.

5 Both SEPA and SNH, the other statutory consultees, consider that the proposal can in principle be supported but have issues with some of the details of the development which need to be dealt with through conditions and further monitoring. Other non-statutory consultees have given their views on the application as have members of the public. Almost 2,000 letters have been received from members of the public objecting to the development mainly based on environmental impacts.

6 While it is accepted that there are some issues which remain to be resolved, it is considered that the proposed development could be controlled in a way such that it would not result in an unacceptable level of impact. However, the options available to the Council are;

a to support the application (subject to conditions);
b to seek that consideration of the application by Scottish Ministers is deferred until comprehensive air quality information demonstrating that the development will not have an adverse impact on public health is provided; or
c to object to the application.

PROPOSED BIOMASS-FUELLED RENEWABLE ENERGY PLANT AT DUNDEE PORT BY FORTH ENERGY

REPORT BY THE DIRECTOR OF CITY DEVELOPMENT

1 PROCEDURAL BACKGROUND

1.1 The Council has been formally consulted on the above application and EIA which were submitted to Scottish Ministers on 17 August 2010 under the provisions of Section 36 of the Electricity Act 1989. The proposal is for the construction and operation of a renewable energy plant with a net electrical output of 100 Megawatts. It is proposed that the plant be fuelled by sustainably sourced biomass products. The application also indicates that the plant will be capable of exporting up to 30 megawatts of renewable heat to local users.

1.2 As part of the process leading to the determination of the application by Scottish Ministers, Dundee City Council as local planning authority is a statutory consultee and on 17 August was formally requested by the Scottish Government - Energy Consents Unit acting on behalf of Scottish Ministers, to submit comments on the application and on the Environmental Statement which accompanies it.

1.3 The Council was initially afforded a period of four months to object to the S36 application to Scottish Ministers but this period has been formally extended to 31 January 2011.

1.4 The terms of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 make the submission of an Environmental Impact Statement for this type and scale of development compulsory. Scottish Ministers cannot grant the Section 36 application unless an EIA, which complies with the relevant Regulations, is submitted along with the application. An Environmental Statement comprises a series of detailed technical and environmental studies undertaken by the applicant and its consultants to determine the likely effects of the development on the environment.

1.5 The preparation and submission of the Environmental Statement (ES) has followed from procedures set out in the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 as amended. This has involved, over a period of time:

- the preparation and issuing of a Scoping Opinion by Scottish Ministers outlining guidance as to the range of environmental issues which the applicant should consider in the ES; and

- the undertaking by the applicant of three local public awareness events (January, May and August/September 2010).

1.6 The Council in common with other consultees was offered an opportunity of commenting on the Scoping Report.

1.7 The application to Scottish Ministers comprises:

- An Environmental Statement with Technical Appendices, Illustrations and Plans
- A Non Technical Summary of the Environmental Statement

- An Addendum Report to the Environmental Statement
- A Planning Statement
- A Transport Statement
- A Design Concept Statement
- A Sustainability Statement
- A Participation Statement
- A Combined Heat and Power Feasibility Study
- A Fire Prevention Method Statement

All these documents were made available for public inspection at Reception, Floor 2, Tayside House and at the Central and Broughty Ferry libraries and were available to view on Forth Energy's website at www.forthenergy.co.uk

1.8 In addition to Dundee City Council the other EIA consultative bodies are:

- Scottish Natural Heritage; and
- Scottish Environmental Protection Agency

1.9 The Scottish Ministers have also consulted a range of non-statutory consultees. These are listed in Appendix B to this report together with a summary of responses which have been submitted to Scottish Ministers.

1.10 Prior to the submission of the application the applicant undertook a programme of consultation which included offering the Dundee public several opportunities to obtain further information and to express their views direct to the applicant. The Statement of Public Participation outlines the results of this process.

1.11 The Electricity Act 1989 (Schedule 8) indicates that should the local planning authority lodge an objection to the applicant a public inquiry must be convened prior to Scottish Ministers determining the application unless the terms of the objection can be resolved by modifications to the proposals or by conditions. If objections by other parties are received Scottish Ministers may decide to hold a public inquiry.

1.12 The application is accompanied by a request from the applicant that Scottish Ministers, if they are minded to approve the Section 36 application, should also grant deemed planning permission under the terms of Section 57(2) of the Town and Country Planning (Scotland) Act 1997, as amended.

1.13 This report follows from a detailed and considered review of the application submissions and in particular the Environmental Statement across a number of Council Departments, in particular City Development and Environmental Health and Trading Standards. Throughout the process the opportunity has been taken to seek additional information and clarification on matters of technical detail from the applicant and on matters of procedure from the Scottish Ministers.

1.14 Each section which deals with environmental impact matters will summarise the impact issues identified by the applicant together with the level of significance of any impacts and the mitigation measures proposed. For each section an evaluation of

the proposals and mitigation measures will be included together with any recommendations concerning conditions which Scottish Ministers should impose should they be minded to approve the application and direct that planning permission be granted.

1.15 Appendices to the report contain plans; a summary of the public participation initiatives undertaken by the applicant and the Energy Consents Unit, a summary of application consultation responses received by the Energy Consents Unit, and a detailed outline of suggested conditions.

1.16 This report is sub-divided as follows:

a Site Location, Description and Alternative Sites Considered

b Description of Proposal

c Planning Policy (European, National, Local)

d Assessment of Environmental Issues:

- Air Quality;
- Noise and Vibration;
- Visual and Landscape Issues;
- Cultural Heritage;
- Design;
- Ecology and Natural Heritage Issues; and
- Hydrology, Hydro-Geology and Drainage.

e Transport Impacts

f Socio Economic Impacts

g Other Issues

h Conclusions and Recommendation

Appendices

2 SITE LOCATION, DESCRIPTION AND ALTERNATIVE SITES CONSIDERED

2.1 The proposed site for the Dundee Renewable Energy Plant is located to the east of the entrance to Camperdown and Victoria Docks within the operational area of Dundee Port.

2.2 The application site covers an area of 5.9 hectares (see Appendix A1 and A2 location plans). It will be noted that a portion of the site boundary extends into the river. This is to accommodate subsurface operational works.

2.3 The site is generally level and is accessed from the A92 (ie Dock Street, Camperdown Street and King George V Wharf Road) although there is no general public access to the operational port. The site is presently used for port activities including the unloading and storage of cargo. Cargo handling operates 24 hours per day, seven days per week.

2.4 Three transit sheds for the storage of cargo are located along the King George V Wharf. There is also a passenger terminal for the cruise ships which visit Dundee and the Port Control Building on the proposed site. The activities associated with these facilities will be relocated elsewhere within the secure Port estate. The site will be cleared prior to construction commencing.

2.5 There are no surface water features on the site. The proposed plant will be located adjacent to the King George V Wharf, which is 445m in length overall. The area immediately surrounding the proposed site is flat, with the Firth of Tay to the south and the City of Dundee to the west, north and east. The site lies 1km north east of the Tay Road Bridge.

2.6 The land uses to the immediate north of the site are industrial and includes the Nynas Oil Refinery and the Nynas oil storage area to the north of the A92. To the east of the site is the remainder of the Port facilities including warehousing, storage, fabrication, oil support facilities, grain drying facilities and further operational quays. Industry at the port includes, on occasion, the repair works on the rigs (which can be over 80m in height). The industrialised area of the Port of Dundee extends over 1,400m along the banks of the Tay.

2.7 Some 75m to the west of the site boundary is the City Quay housing development. Residential areas are also located approximately 230m to the north of the site on Broughty Ferry Road.

2.8 The topography to the north and south of the river rises quickly to between 140 and 180m Above Ordnance Datum (AOD). To the north of Dundee the ground rises up to over 450m AOD.

2.9 There are a number of recreational and tourism facilities in the vicinity of the site, including the Frigate *Unicorn*, the City Quay Commercial Development and Discovery Point (1.2km to the southwest) which includes the *RRS Discovery*.

2.10 The proposed development site is adjacent to the Firth of Tay and Eden Estuary Special Area of Conservation (SAC) which is designated for its subtidal and intertidal sandbanks, sandflats and seal populations, although none of these features is present in the immediate vicinity of the site. The site lies approximately 2.9km north east of the nearest portion of the Firth of Tay and Eden Estuary Ramsar Site and

Special Protection Area (SPA). The SPA is designated for regularly supporting over 20,000 waterfowl in winter and for regularly supporting internationally important wintering populations of pink-footed goose, greylag goose, bar-tailed godwit and redshank. Approximately 8.6km east of the proposed development site is Barry Links SAC which is designated for its dune complex.

2.11 In addition, there are a number of Sites of Special Scientific Interest (SSSI) within 10km of the proposed site, including Tentsmuir Coast SSSI which also includes a National Nature Reserve (NNR) and GCR site.

2.12 The proposed site was selected as a suitable for its proposed use due to the presence of an adjacent operational quay capable of taking suitably sized ships from national or international origins as well as having the infrastructure to receive and discharge large quantities of biomass. Ships of the size required and similar types of cargo are currently being handled routinely at the Port. In addition, the site is located within a designated general economic development area, with close road links for deliveries of indigenous biomass and for ash removal. The availability of a sufficiently large area of land and the availability of an electrical connection were also factors in the site's selection. The industrial area and proximity of other mixed use consumers also is considered likely to include potential customers with a demand for steam and/or heat from the generation process of the plant.

2.13 Section 7 of the Environmental Statement describes in detail the process undertaken by the applicant to identify and select the proposed site. In summary, Forth Energy undertook an assessment of the six Scottish ports owned and operated by Forth Ports to assess their suitability for the construction and operation of a Renewable Energy Plant (REP). The technical requirements identified were:

- appropriate marine access and a suitable quay facilities;
- land availability;
- the feasibility of making a connection to the electrical network; and
- opportunities for distributing combined heat and power to potential users.

2.14 Dundee, Leith, Grangemouth and Rosyth were identified as meeting the technical requirements and each location has been identified as the site for an REP.

2.15 The next stage was to evaluate potential sites at each location against a range of additional criteria viz:

- Cooling Water Supply;
- Road Access;
- Planning Suitability;
- Sensitivity of land use Receptors;
- Archaeology;
- Air Quality;
- Ecology;
- Setting and Views; and
- Climate Change issues.

2.16 Two sites within Dundee Port were identified for further evaluation: King George V Wharf (the application site) and an area covering 22.5ha, a kilometre to the east (including and adjacent to Prince Charles Wharf).

2.17 Following evaluation the applicants decided to choose the King George V Wharf site for the following reasons:

a the Princes Charles Wharf site has been identified by the Scottish Government as having potential for use as a base for the manufacture and assembly of offshore wind turbines and associated services; and

b the King George V Wharf site, adjacent to the existing Nynas Refinery and relatively close to the Waterfront development area provided significant positive benefits in respect of the distribution of combined heat and power.

2.18 The Environmental Statement (at Paragraphs 7.1.11 - 7.1.36) provides further detail of the evaluation in respect of environmental criteria.

3 DESCRIPTION OF PROPOSAL

3.1 The proposed plant will comprise of the following key elements:

- Biomass storage buildings;
- Boiler hall;
- Turbine hall;
- Condenser plant;
- Heat delivery auxiliary boilers and stack;
- Stack;
- Conveyors; and
- Associated plant, storage areas, administrative accommodation etc.

Paragraph 6.4.7 of the ES provides a comprehensive breakdown of all the facilities by size. However the dimensions of the main buildings and structures are:

- "A" Frame Fuel Store Building Option: 120m (L) X 50m (W) X 33m (H)
- Turbine Hall and Administration: 40m (L) X 35m(W) X 30m (H)
- Boiler Hall: 60m (L) X 50 m(W) X 65m(H)
- Main Stack: 3.7m diameter X 90m(H)
- Auxiliary Boiler Stack: 1.2 m diameter X 45m(H)

3.2 The majority of biomass fuel will comprise of wood chip, wood pellets or cakes. The ES indicates that around 10-30% of the biomass is anticipated to comprise of "other biomass" (ES Paragraph 6.3.3). All biomass fuels will be environmentally sustainable (see Sustainability Statement). The precise fuels to be used will be agreed with SEPA as part of the Pollution Prevention and Control (PPC) permit process.

3.3 The ES indicates that other than during commissioning, start-up and possible "intermittent load support" - "no supplementary fossil fuel will be combusted in the main boiler" (ES Paragraph 6.3.5).

3.4 The fuel will mainly (85%) be delivered to the plant by ship via the existing operational quay. The plant is also capable of accepting fuel by road (estimated to be up to 15% by energy content). Rail deliveries are not anticipated due to the lack of facilities and in any event this is considered likely to be a less sustainable delivery option than by sea.

3.5 The REP will require up to 1 million tonnes of biomass per year. The majority of the biomass will come from international sources with some short sea delivery from UK sources anticipated. It is also anticipated that fuel delivery will result in 80 vessel deliveries per annum, equivalent to 1 to 2 vessel deliveries per week (this compares with between 270 and 500 ship visits to the Port of Dundee per annum). The proportion of fuel to be delivered by road is estimated to equate to an average of 23 HGV lorries per direction visiting the site per day (ES paragraph 6.5.10 and Transport Statement Paragraph 9.2.1).

3.6 The biomass fuels will be stored in dedicated fuel storage buildings and transferred from ship to storage by grabs, hoppers and conveyors. There will be sufficient storage for 15 days of continuous plant operation. Blended fuels will be firstly

conveyed to a day store and from there by an enclosed system to the boiler for combustion.

3.7 The main boiler will supply steam to a turbine and generating unit to produce 112Mw of electricity gross (100Mw net) with the balance being used to operate the plant.

3.8 The applicants state that it is their aim to "optimise the environmental and economic benefit" (ES paragraph 6.5.22) from the plant and have prepared a Combined Heat and Power Feasibility Study which has indicated that there are 35 potential heat customers within 5km of the plant. The first phase of the proposed heat network will be completed following the commissioning of the plant. Although these initial studies demonstrate a significant potential for the supply of heat to local customers it is only possible to undertake more detailed customer related feasibility work around contractual terms and conditions when and if consent for the plant is granted.

3.9 Flue gasses from the combustion process will discharge to the atmosphere via a stack proposed to be 90m in height. A smaller stack will be associated with the auxiliary boiler. Flue gas abatement equipment is designed to ensure that emission limits set by SEPA are complied with in respect of all fuels and fuel mixes.

3.10 Exhaust steam from the steam turbine will be condensed within the turbine hall for re-use within the steam cycle.

3.11 Cooling water for the condensing process will be extracted from the River Tay, treated and ultimately discharged to source to complete the cycle.

3.12 A new on-site 132KV sub-station will transform and transmit the electrical output from the plant to the local 132KV network between Glenagnes and Milton of Craigie Sub-stations via a 132KV underground connection. (This off site connection is outwith the scope of the Section 36 application).

3.13 The plant will probably be based on site foundations supporting a reinforced concrete plinth to ensure required structural stability and to prevent damage by ground settlement.

3.14 An accommodation building will be located adjacent to the turbine hall and a control room, workshops and stores will be monitored inside the boiler hall. Appendices A2 and A4 provide images of the site layout and process respectively.

3.15 Although the illustrations and Design Concept Statement which support the application provide architectural impressions of what the development **may** look like these do not form part of the application. Matters of detailed design will be subject to separate approvals following any grant of deemed planning permission. A layout and representative images are reproduced in Appendices A3, A4 and A6.

3.16 Although the biomass fuels to be used will have a low ash content, it is anticipated that the plant will produce up to 12,000 tonnes of ash per year (ES Paragraphs 6.5.69 - 6.6.77). It is Forth Energy's intention to recycle the ash generated either to the construction or fertiliser industries if the quality of the ash is satisfactory. Depending on its carbon and limestone content some of the ash may have to go to specialist landfill sites. Ash will be conveyed by HGV off-site and this has been factored into the Transport Statement (see Section 6 of this report).

3.17 Construction of the plant is likely to take 36 months following on from a period of 6 months after the detailed design and manufacturing stages.

3.18 Following construction, commissioning of the plant will take approximately 6-9 months.

3.19 During construction it is anticipated that construction personnel will peak at around 500, averaging 300 over the 3 year construction period (ES paragraphs 6.18.17 - 6.8.19). A wide variety of skills, disciplines and trades will be involved and Forth Energy is understood to be compiling a register of interested companies and individuals so that contractors and workers can express their interest.

3.20 Following construction it is anticipated that up to 50 permanent jobs will be created.

3.21 Once operational the plant will operate continuously 24 hours per day, 7 days per week (7,500 hours per annum), allowing for 1,200 hours per annum for maintenance.

3.22 The Environmental Statement also sets out a comprehensive decommissioning strategy at the end of its projected operational life of 25 years (ES paragraphs 6.10.1 - 6.10.14).

4 PLANNING POLICY

4.1 Introduction

The application is accompanied by a very detailed Planning Statement which reviews the proposals against the provisions of the statutory Development Plan and relevant national planning policy statements, the provisions of the Electricity Act and other material considerations.

4.2 The Need for the Proposed Development

a The Statement justifies the need for the development against the renewable energy and heat targets set at European, UK and Scottish Government levels. Chapter 4 of the ES explores this issue in some detail and concludes as detailed below.

b International and national commitments have been made to address the effects of climate change and to achieve greater security in the domestic supplies of energy. Accordingly, at European, UK and Scottish levels strong policy initiatives encourage the development of the renewable energy sector.

c In summary, European and UK Government policies establish a strategic need for renewable energy provision in the UK to assist in tackling climate change. Furthermore, the UK needs to address the potential future electricity generation gap in the UK, where electricity demand could outstrip supply due to the closure of older capacity on the system, as well as ensuring that the country maintains its security and diversity of energy supply. The Renewable Energy Plant is considered to be a valuable addition to the UKs energy generation portfolio and will assist in securing the UKs energy supply system.

d The applicants contend that proposed Dundee Renewable Energy Plant would have significant advantages compared to other renewable technologies such as wind power, hydro electric, solar and photovoltaics, which, whilst being valuable sources of renewable energy, are intermittent in nature.

4.3 The Dundee and Angus Structure Plan 2001-2016

The Structure Plan's guiding principles have been reviewed by the applicant and key relevant policies assessed. The guiding principles considered to be of relevance are:

- the creation of conditions for a vibrant diverse economy providing increased and varying job opportunities;
- the integration of land use and transport to improve accessibility for between home, work, leisure and services with a view to maintaining air quality, reducing pollution of unnecessary travel;
- prioritising the reuse of previously developed sites where appropriate;
- promoting the environmentally sustainable use of existing and planned infrastructure;

- promoting the use of renewable energy and resources, the efficient use of energy and the reuse, recovery and recycling of waste;

- the protection and enhancement of the quality and diversity of the natural, built and historic environments, including the heritage, bio-diversity and landscape of Dundee and Angus; and

- the maintenance of existing undeveloped coasts and the location of new development away from areas at risk from flooding).

4.4 The key relevant Structure Plan policies selected for detailed evaluation by the applicants are:

Employment Policy 2	Existing Employment Areas
Environmental Resources Policy 1	Natural Heritage Designations
Environmental Resources Policy 2	The Wider Natural Heritage
Environmental Resources Policy 3	Coastal Development and Protection
Environmental Resources Policy 4	Flooding and Development
Environmental Resources Policy 5A	Historic Environment
Environmental Resources Policy 6	Design and Urban Renewal
Environmental Resources Policy 10	Renewable Energy
Transport Policy 1	Strategic Transport Links
Transport Policy 4	Development Location

Renewable Energy and Waste Management are considered as a combined policy topic within the Structure Plan. With regard to renewable energy the policy text within the Structure Plan identifies that promoting the use of renewable energy is an "integral part of the Government's energy policy" (Paragraph 7.33). The Structure Plan also identifies that "renewable energy development can undoubtedly contribute to achieving the sustainability aims of the Structure Plan proposals, particularly on a large scale, may have locally significant adverse impacts on the environment, landscape and local communities which require to be taken into account" (Paragraph 7.35). The Structure Plan then states that "some impact from these developments is inevitable but this needs to be weighed against the consequences of climate change".

4.5 The key Structure Plan policy of relevance to the proposed development is Environmental Resources Policy 10 "Renewable Energy". The policy provides support explicitly for renewable energy developments where they will deliver quantifiable benefits and where the environmental impacts are not considered unacceptable. The applicants consider that the Renewable Energy Plant would deliver significant environmental and economic benefits that are quantified and, whilst there will be some significant environmental effects, these are not considered to be unacceptable and are capable of mitigation. These matters are considered further in Section 5 of this Report.

4.6 The other Structure Plan policies considered above examine specific planning matters, applicable to a wide range of development types. They are not specific to renewable energy developments. The environmental effects (both positive and

adverse) and the economic benefits that would arise from the proposed development have been considered in the context of these policies. The applicants conclude that the proposed development is supported by the policies of relevance and that there are no elements of the proposal that would undermine the strategic land use policy framework as set out in the Structure Plan.

4.7 The application considers that the proposed development would aid the attainment of the Structure Plan Vision and those "Guiding Principles" which relate to achieving sustainable development. The proposed Renewable Energy Plant is considered by the applicants to be in accordance with the relevant policies of the Structure Plan and when the Plan is read as a whole.

4.8 The Dundee Local Plan Review 2005

It is the applicants view that the Local Plan is predicated on a sustainable development strategy for Dundee which states that, through partnership, Dundee:

- will be a vibrant and attractive city with an excellent quality of life where people live, learn, work and visit;
- will offer a real choice and opportunity in a city that has tackled the root causes of social and economic exclusion, creating a community which is healthy, safe, confident, educated and empowered; and
- will have a strong and sustainable city economy that will provide jobs for the people of Dundee, retain more of the universities graduates and make the city a magnet of new talent (Page 5).

4.9 The Sustainable Development strategy, as well as forming part of the Local Plan, is also the vision contained within the Community Plan for Dundee 2001 to 2006. It is identified in the Local Plan that in terms of sustainable development, this applies to not only the environment but also the social and economic sustainability of the city.

4.10 The key relevant Local Plan policies selected for detailed evaluation by the applicant are:

Policy 1	Vibrant and Sustainable Communities
Policy 26	General Economic Development Areas
Policy 55	Urban Design
Policy 64	Scheduled Ancient Monuments and Archaeological Sites
Policy 73	Natural Heritage Designations of International and National Importance
Policy 76	Flood Risk
Policy 77	Renewable Energy and Energy Efficiency
Policy 79	Contaminated Land
Policy 80A	Development of or Next to Major Hazard Sites

4.11 From the consideration of the proposed Renewable Energy Plant against the Local Plans "aims and objectives", the proposed development , in the view of the applicants is consistent with, and would further, the Local Plan's Sustainable

Development Strategy and the objectives: "Working in Dundee", the "Environment of Dundee" and "Accessibility in Dundee".

4.12 Policy 77 "Renewable Energy and Energy Efficiency" is the only renewable energy related policy within the plan. The policy is not directly relevant to the assessment of the proposed Renewable Energy Plant; however, its objectives have been considered and the proposed Renewable Energy Plant, in the opinion of the applicant, has been found to be consistent with them.

4.13 The other Local Plan policies considered above examine specific planning matters, applicable to a wide range of development types and the associated effects of development. They are not specific to renewable energy developments. The environmental effects (both positive and adverse) and the economic benefits that would arise from the proposed development have been considered in the context of these policies. The only residual significant effects that the proposed development would result in, relate to landscape and visual matters. In this respect it is relevant to consider the urban and industrial environment that the application site is located within as well as the requirement for cities to respond positively to emerging trends and opportunities, which is specifically stated within the "aims and objectives" of the Local Plan (Page 6). The applicant considers the effects to be acceptable in this context.

The applicant concludes that the proposed development is supported by the policies of relevance and is in accordance with the policy objectives of the local land use policy framework as set out in the Local Plan.

Evaluations and Conclusions Relative to the Development Plan

The applicants Planning Statement pertaining to the Development Plan has been assessed and the following general conclusions reached which in the main corroborate those of the applicants:

- it is considered that the proposed development would be in accordance with the Development Plan when read as a whole;
- the aims and objectives of the Development Plan have been considered and the conclusion reached is that the proposed development is specifically supported by them;
- the Development Plan has sustainability at its core and the proposed development furthers that aim. The Development Plan promotes renewable energy projects, subject to assessment against various other policies within the Plan. From the assessment of planning policy considerations undertaken, the proposed development can draw significant support from the Development Plan; and
- clearly the environmental impacts of the proposed development require to be acceptable in order for it to comply with the Development Plan (and in particular Policy 1 of the adopted Dundee Local Plan Review 2005 which seeks to protect residential amenity) . This matter is considered in detail in Section 5 of this Report.

4.14 Other Material Planning Considerations

The applicants have identified a number of material considerations which the Council will wish to note in considering the proposals.

4.15 European and UK Renewable Energy Policy

a In 2008 the European Commission published the "20 20 by 2020 package". This included proposals for reducing the EU's greenhouse gas emissions by 20% from 1990 levels and increasing the proportion of final energy consumption from renewable sources to 20%. Both targets are to be achieved by 2020.

b As part of the 20 20 by 2020 package, a Renewable Energy Directive from the European Commission which requires significant increases in renewable energy production was published in its final form in 2009 and is legally binding.

c The UK Government has also published a strategy (DECC, 2009) in order to implement the obligations contained within the EU Renewable Energy Directive: this is referred to further below.

d The 20% target with respect to renewable energy is split between Member States. For the UK, the European Commissions proposals include 16% reduction in UK greenhouse gas emissions by 2020 and for 15% of all energy consumed in the UK to come from renewable sources by 2020.

e As noted above, the EU Renewable Energy Directive provides the framework for achieving the EU targets. The UK climate Change Act became law on 26 November 2008 and sets legally binding targets for the UK to achieve an 80% reduction in greenhouse gas emissions by 2050 and reductions on CO^2 emissions of at least 26% by 2020 baseline levels.

f In support of these strategies the applicants review the policy content of the following documents:

- The UK Biomass Strategy;
- The UK Renewable Energy Strategy;
- The UK Low Carbon Transition Plan; and
- The Renewables Obligation.

4.16 Scottish Government Renewable Energy Policy

a The applicants make reference to the following policy documents in support of their proposals:

- The Scottish Government Renewable Energy and Heat Targets;
- The Biomass Action Plan for Scotland;
- The Renewable Heat Action Plan For Scotland;

- The Climate Change (Scotland) Act 2009;
- The Scottish Climate Change Delivery Plan;
- The Scottish Renewables Action Plan; and
- The Renewables Obligation.

b From these documents the key policy considerations may be summarised as follows:

- the Scottish Government has set a target that 50% of gross electricity consumption should come from renewable sources by 2020 with an interim milestone of 31% by 2011;
- 11% of local demand should be generated from renewable sources by 2020;
- through the Biomass Action Plan for Scotland (2007), Scotland has significant renewable electricity generation capacity with biomass having one of a number of potential sources (wind, wave, tidal);
- Scotland is committed to achieving a target of 20% of total Scottish energy use from renewable sources by 2020;
- the Climate Change (Scotland) Act 2009 sets an interim 42% reduction in greenhouse gas emissions by 2020 and an 80% reduction by 2050 compared to 1990 levels; and
- Scottish Government energy policy could lead to an increased in "low carbon employment" in Scotland to around 130,000 jobs by 2020 (20,000 of these jobs were already provided by 2008); and
- the Scottish Government (through National Planning Framework 2) supports and encourages maximising the potential benefits from local heat networks. Reference is made to the role of Planning Authorities in facilitating decentralised patterns of energy generation and supply, and that heat networks should be considered in relation to major proposals.

4.17 <u>National Planning Framework 2</u>

a The National Planning Framework 2 (2009) sets out strategic development priorities to support the Scottish Government's central purpose of "sustainable economic growth for the period to 2030. NPF2 sets Scotland in its wider context and provides strategic planning guidance to address major future planning challenges, including tackling climate change.

b In particular, paragraph 145 in NPF2 notes that the Government is committed to establishing Scotland as a leading location for the development of renewable energy technology and an energy exporter over the long term. It states "The Government is committed to establishing Scotland as a leading location for the development of renewable energy technology and an energy exporter over the

long term. It is encouraging a mix of renewable energy technologies, with growing contributions from offshore wind, wave, and tidal energy, along with greater use of biomass."

c The applicants view the proposal as having the potential to act as a catalyst for other renewable developments in the port area.

4.18 Scottish Planning Policy

a Scottish Planning Policy (SPP) sets out a consolidated expression of National Planning Policy and indicates that an effective planning system will support the objective of sustained economic growth. The chapter on Renewable Energy is particularly significant in that paragraph 193 provides specific advice regarding large scale biomass plants indicating that their location will be determined by a number of factors, including economic costs of transporting fuel materials from source, the availability of feedstock, the location of the end user and the scale of the plant. These are issues dealt with in some detail in the ES and supporting information.

b Other relevant policy chapters reviewed by the applicants include economic development, historic environment, landscape and natural heritage, coastal planning, transport and flooding and drainage.

4.19 Combined Heat and Power Potential

The application is supported by a Combined Heat and Power Feasibility Study which details the potential which the proposal has in terms of provision of various grades of heat for industrial, commercial and distinct heating uses near to the application site. Further detailed feasibility studies, however, will be necessary once the application has been determined.

4.20 The National Renewables Infrastructure Plan

This Plan, prepared for Scottish Ministers by Scottish Enterprise and Highlands and Islands Enterprise, identifies the Port of Dundee as a "first phase site for the development of operations and maintenance" infrastructure required to support the off-shore renewables industry.

4.21 Sustainability Statement (submitted with the application)

This Statement, which accompanies the application, seeks to demonstrate that sustainability issues have been comprehensively addressed. The main points emerging are as follows:

- all forest derived biomass material will be sourced from sustainably managed forests;

- it is Forth Energy's objective to procure as much fuel as practicable from indigenous suppliers, although it is recognised that, with the limited availability of UK sourced biomass, the majority of the fuel will, at least initially, be procured from overseas;

- the majority of the fuel delivered to the site will be transported by ship, which is the most carbon efficient from of bulk cargo transportation; and

- Forth Energy intends to develop and implement a verifiable and auditable biomass sustainability policy which addresses greenhouse gas savings and wider environmental and social impacts.

4.22 Planning Advice Notes (Scottish Government)

In preparing their proposals Forth Energy has taken account of the following Scottish Government Planning Advice Notes which offer advice on best practice:

PAN 42	Archaeology the Planning Process and Scheduled Ancient Monument Procedures (1994)
PAN 45	Renewable Energy Technologies (2002)
PAN 56	Planning Noise (1996)
PAN 58	Environmental Impact Assessment (1999)
PAN 60	Planning for Natural Heritage (2000)
PAN 68	Design Statements
PAN 69	Planning and Building Standards Advice on Flooding (2004)
PAN 75	Planning for Transport (2005)
PAN 81	Community Engagement - Planning with People (2007)

4.23 Dundee Central Waterfront Development Masterplan 2001-2031

a Although the application site is not located within the masterplan area it is recognised that such a large scale development may have a potential impact on the achievement of the masterplan vision. The applicants recognise the requirement for good urban design as a key theme. Also recognised is the importance to Dundee of the V & A proposals to the west at Craig Harbour.

b The landscape and visual chapter of the ES examines the potential environmental effects of the proposal on existing communities, the transport network, and the landscape in general. A Design Concept Statement accompanies the application and illustrates an indicative approach to interpreting chosen design principles and seeks to demonstrate that there is potential to integrate the project into the existing urban fabric.

c It is the applicants view that the proposed development is consistent with the objectives of the masterplan and will be compatible with the *V & A @ Dundee* proposals as they have been developed to date.

4.24 Dundee Renewables

a Dundee Renewables is a strategic partnership between public, private and academic sectors within Dundee, working together to build a renewable energy industry for Dundee. Dundee Renewables promotes Dundee as a strategically important and suitable port location for marine renewables development.

b While the proposed Renewable Energy Plant is not an offshore renewables development, it is a renewables technology that also has a specific location requirement for port location. This proposed Renewable Energy Plant could be viewed as being a catalyst for further renewables related development.

c The applicants consider that the proposal will not hinder the development of marine renewables in Dundee.

4.25 TAYplan

a Tayplan will eventually replace the Dundee and Angus Structure Plan. The Main Issues Report was published for public participation in May - June 2010 and identifies the growth of the region's ports as a key economic priority sector. Whilst the report recognises the importance of suggesting the minimisation of waste and the promotion of alternative sources of energy it lacks specific reference to biomass technology.

b The applicants indicate that they have made representations on the report encouraging the published plan to specifically encourage renewable energy generation in the plan area and the planning issue which would arise.

4.26 Dundee Urban Design Guide

The applicants indicate that the illustrative design concepts prepared for the proposal make reference to the principles set out in the Guide.

Evaluation and Conclusions of Other Material Considerations

In respect of the other material considerations identified it is considered that this list is fairly comprehensive and that the applicants analysis fairly represents the influence of each consideration on the assessment of the application.

However, the applicants have not specifically referred to PAN 51: Planning, Environmental Protection and Regulation which states that air quality is likely to be a material planning consideration for large scale proposals where:

a the proposed development is inside or adjacent to an Air Quality Management Area (AQMA);

b the development could result in designation of a new AQMA; and

c the granting of planning permission would conflict with, or render unworkable, elements of a local authority's air quality action plan.

The development is within an AQMA and these matters are considered in greater detail in Section 5 of this Report where the air quality implications of the proposal are analysed.

In addition, the Biomass Action Plan for Scotland 2007 states that biomass is best used for heat or combined heat and power, at a small scale and in distributed locations. Based on the information provided the proposal does not appear to comply with this policy. However that policy assumed that the fuel for biomass would be sourced locally and therefore did not envisage the importation of fuel as proposed in this application.

A conclusion as to whether the other material considerations weigh in favour of the proposal will be established in Section 9 of the Report once all these considerations, including environmental issues and socio economic factors, have been taken into account.

5 ENVIRONMENTAL ISSUES

5.1 Air Quality

a The Environmental Statement (ES) provides an assessment of the potential air quality and health issues associated with emissions to air from the proposed Dundee Renewable Energy Plant. The facility will have a number of potential emission sources to air which will give rise to emissions of a range of threshold and non-threshold air pollutants. The potential emissions of air pollutants will be generated from:

- two industrial stacks; one for the main power plant (90 metres high) and another for the auxiliary boilers (45 metres);
- transport including road traffic and shipping;
- dust generated during the construction and decommissioning; and
- fugitive emissions from the biomass handling and storage.

b Atmospheric dispersion modelling has been used by the applicant to predict the likely process contributions of the proposal to ground-level pollution concentrations and levels at specific receptors. This has been predicted forward to 2015 when the proposed plant is due to commence operating. The potential impacts of the proposed plant on air quality must be considered in light of the existing air quality, the sensitivity of the receiving environment, the local topography and meteorology and the impact on sensitive receptors.

c In addition, following a request for further information from this Council and the Scottish Environment Protection Agency (SEPA) the applicant undertook further air quality assessment work which is presented in the 'Dundee, Renewable Energy Plant: Environmental Impact Assessment: Addendum' (Addendum).

d In respect of the ES, several conservative assumptions were adopted throughout the modelling assessment so that the modelled predictions would likely represent over-estimates rather than under-estimates. Sensitivity analysis was carried out to ensure the dispersion modelling methodology and predictions were robust. Within the Addendum the applicant employed a non-conservative treatment of nitrogen dioxide (NO2) stack emission conversion calculations (the "Janssen method"). For the Addendum the applicant was asked to assess the significance of the impacts of the plant using the methodology described in Environmental Protection UK (EPUK) Development Control: Planning for Air Quality 2010.

e The applicant's key findings and conclusions of the ES and the Addendum in respect of air quality are summarised below:

Environmental Statement

- the air quality assessment identified the relevant air quality objectives that are required to be protected, and reviewed the existing ambient air quality information currently available from Dundee City Council. No additional ambient air quality monitoring was deemed necessary by the applicant. A

number of mitigation measures were identified to reduce or remove the potential impacts during the construction and operational phases; including dust control and monitoring, the selection of efficient combustion technology, selection of appropriate stack height and the continuous monitoring of stack emissions;

- no significant impact on sensitive receptors is predicted due the use of mitigation measures for dust generated during construction and decommissioning phases;

- the potential impact due to road traffic emissions during construction and operational phases was forecast to be insignificant;

- the applicant's dispersion modelling results indicated that no air quality objectives or Environmental Assessment levels specified for the protection of human health would be exceeded due to emissions from the Renewable Energy Plant during the operational phase;

- the calculated maximum process contribution to nitrogen and acid deposition at Barry Links SAC triggers the need for a Habitat Regulation Assessment. The applicant has advised that they intend to carryout the necessary assessment (in fact the Scottish Government will carry out the appropriate assessment); and

- the applicant advises that the visible plume will extend beyond the site boundary during daylight hours on average, 79% of the daylight hours in the year.

Addendum

- Due to concerns raised by this Council, that the latest ambient monitoring recorded in 2009 demonstrate that the concentrations of nitrogen dioxide in the city are not improving, Forth Energy has committed to setting significantly lower emissions of oxides of nitrogen for the main plant (previously 200 mg/m3 now 150mg/m^3). This will lead to an overall reduction in predicted ground level concentrations.

- Using the conservative approach to NO2 conversion calculation the results of the assessment of nitrogen dioxide at sensitive receptors on Broughty Ferry Road indicate that the air quality objectives are not forecast to be exceeded by 2015, although the predicted concentrations are close to the annual mean air quality objective at one property. The maximum impact occurs at this property and is described as "slight adverse" using the EPUK guidance. At the other sensitive receptors modelled on Broughty Ferry Road the impact is described as "negligible". Using the non-conservative approach (Janssen method), the impacts at all modelled locations are "negligible".

- The applicant reports that, the main stack pollution contributions at most of Dundee City Council's monitoring locations are "negligible" when using the conservative approach. At some locations in the city centre or close to busy roads/junctions where the measured concentrations of nitrogen dioxide are currently above the annual objective a "slight adverse" impact is predicted.

When using the non-conservative approach the impact of the main plant is assessed to be "negligible" at all monitoring locations.

- The results of the fine particulate matter (PM10) assessment indicate that the plant is forecast to lead to "negligible" impacts at all Dundee City Council monitoring locations.

- Using the conservative approach the assessment of population exposure forecast that 19,398 people would experience a small increase in annual mean nitrogen dioxide and that 39 people would experience a medium increase. The applicants describe the worst impact to be "slight adverse". Using the non-conservative approach the plant shows a "negligible" impact.

- The assessment of population exposure forecast that 146 people would experience a small increase in annual mean PM10 concentrations which the applicants describe as a "negligible" impact.

Evaluation and Conclusions

The Council engaged a specialist consultant to provide advice on the air quality aspects of the Environmental Statement (ES). The Council has a statutory duty to work towards achieving the National Air Quality standards for the Local Air Quality Management (LAQM) pollutants: these are nitrogen dioxide (NO_2), fine particulate matter (PM_{10}), sulphur dioxide (SO_2), carbon monoxide (CO), benzene, lead and 1,3-butadiene.

The main outstanding issues relating to LAQM pollutants concern NO_2, SO_2 and fugitive PM_{10} emissions. It is considered that the applicant has not fully addressed all the air quality matters raised within the Scottish Government's Scoping Opinion and certain conditions will be required to satisfy some of these omissions. The matters are discussed in detail below

LAQM Pollutants

Nitrogen Dioxide

The development is within the Dundee City Council's AQMA NO_2 (Annual mean) and PM_{10} (Annual mean), where the Local Air Quality Management (LAQM) air quality objective and European limit value for nitrogen dioxide ($40ug/m^3$) are currently being exceeded (in most areas this is largely as a result of vehicle emissions). The LAQM NO_2 annual mean air quality objective is applicable at residential properties whereas the European Limit Value is applicable in all public areas. It should be noted that the council monitor ambient concentrations of air quality pollutants to determine whether the LAQM objectives are likely to be exceeded. There are very few monitoring locations downwind of the proposed development. LAQM statutory guidance says that there is a risk that NO_2 concentrations will breach the EU limit value within 10 metres of a busy road/junction. The pollutants from the development will ground downwind within an urban road network that has such areas. It is considered that the ES has underestimated the receiving environment in such areas, and it may be optimistic to conclude that there will be no breaches of the EU Directive limit for NO_2. The Council's monitoring is insufficient for the proper consideration of the EU Directive in all public areas at the design stage.

Emissions from the plant will contribute to pollution levels in existing areas where the LAQM objective is exceeded. As a result of this the applicants proposed to increase the amount of abatement of emissions of oxides of nitrogen from the main plant which would lead to an overall reduction in the process contributions at ground level (the effect of the change in the stack abatement could alter the findings of the plume visibility and habitats assessments and the Scottish Ministers should satisfy themselves that these are still valid).

For the LAQM objective, there is a concern that the applicant might have underestimated the future NO_2 concentrations in the vicinity of Broughty Ferry Road, in particular at the Stannergate junction (currently the only NO_2 LAQM hotspot downwind of the plant) in 2015 where monitoring over the last four years has shown year-on-year increases in NO_2, with 47.5µg/m^3 recorded in 2009. The cause of this rise in concentrations is not known. The junction is downwind of the port and levels may also be influenced by contributions from sources other than traffic. The Council may have some opportunity to manage the NO_2 contributions from vehicles through traffic management changes to the junction following the rail bridge strengthening works. However, it may be optimistic to expect substantial improvements as these works are expected to facilitate increased vehicle access to the port, in part to relieve the other accesses and allow vehicles to avoid the city centre.

Given the significant uncertainty in the characterisation of the receiving environment around the Broughty Ferry Road, it is not considered that the applicant can be unequivocal in saying no exceedences will be created. The plant emissions are likely to make only a small contribution to the local nitrogen dioxide levels, but at present there is not enough supporting information to categorically state that no new or worsened exceedences will be observed in 2015. This emphasises the requirement for ambient air pollution monitoring in the area, the findings of which will help inform the necessary level of abatement of the plant in order to protect public health and ensure that the proposals will not conflict with the Council's Air Quality Action Plan. A monitoring condition has been proposed in Appendix C.

Fine Particulate Matter (PM_{10})

The development is within the Dundee City Council's AQMA NO_2 (Annual mean) and PM_{10} (Annual mean), where the Local Air Quality Management (LAQM) air quality objective for PM_{10} (18ug/m^3) is currently being exceeded. All the currently identified PM_{10} hotspots are upwind of the development, the modelled impacts of the operational development in these areas are negligible and it is unlikely that the process contributions will trigger new exceedence areas or conflict with the Air Quality Action Plan. The population exposure assessment is considered reasonably reliable. Given that the PM_{10} abatement technique proposed (fabric filters) has been widely applied in the power generation sector and is generally considered to be Best Available Technology (BAT) for this type of process, we agree with the ES conclusion that the predicted PM_{10} impacts from the main stack can be considered "negligible".

However, there is potential for fugitive emissions of PM_{10} during the construction phase. Therefore to avoid potential exceedences of the PM_{10} short-term objective triggering the requirement for a new AQMA, a condition regarding dust suppression and PM_{10} monitoring is proposed in Appendix C

Sulphur Dioxide (SO_2)

The ES has not adequately demonstrated that the cumulative pollution generated by the development will not result in a breach of the short term sulphur dioxide (SO2) objective at relevant locations, in particular at tall residential properties in City Quay. This was a requirement of the Scottish Government's Scoping opinion and should have been included in the consideration of cumulative environmental effects in the ES. The assessment has not properly characterised the receiving environment at the flats which experience SO2 emissions from ships in addition to emissions from Nynas. The predicted impact on short term local sulphur dioxide concentrations from the Auxiliary boiler stack emissions needs further consideration given that there are significant sources of SO2 already in the area. Although the auxiliary boilers will only run in abnormal circumstances the very short term sulphur dioxide objectives could be exceeded if these periods coincide with higher than usual emissions from Nynas. A planning condition has been proposed in Appendix C to inform any necessary mitigation measures necessary to avoid triggering a new AQMA for the short-term SO2 objective in order to protect public health and to secure the amenity of the residents in the City Quay.

Assessment of Alternative Sites

The Electricity Works (EIA) (Scotland) Regulations require an Environmental Statement to include: *"The main alternatives studied by the applicant and the main reasons for his choice, taking into account the environmental effects", (Part II of Schedule 4).*

The consideration of alternative sites did not provide any quantitative estimate of differences in air quality impacts or how these would affect the environment (including populations). The applicant has merely stated that both sites are within an AQMA for nitrogen dioxide (and soon to be PM_{10}) therefore both are considered by the applicant to be the same in air quality terms. For this reason it cannot be confirmed whether this omission is material in public health protection terms.

An estimate of the difference in population who will be exposed to additional pollution from the development would be a much more useful differentiator between alternative sites investigated. The approach used in the addendum submission would have been ideal for assessing the true effect of an alternative site in air quality terms and would allow easy comparison in numerical terms.

Dundee City Council would ask Scottish Ministers to ensure that they are satisfied this requirement is met before granting consent.

Health Impact Assessment

The Health Impact Assessment conclusions described in section 9.3.23- 9.3.27 of the original submission is considered by our specialist environmental consultant to be adequate as a screening tool to demonstrate that emissions to air are highly unlikely to pose significant health risks but questioned whether it was sufficient for calculating potential exposure risks to dioxins and furans. Dundee City Council would ask the Scottish Ministers to consult with NHS Tayside and SEPA on this matter.

Conclusion

SEPA will be responsible for licensing this operation under the Pollution Prevention and Control (PPC) Scotland Regulations 2000 and they have the ultimate responsibility to ensure that ambient European Air Quality Standards and objectives are met, although some of the LAQM standards and objectives are stricter in Scotland.

The results of the modelling are based on many assumptions, in particular that the process will operate under the proposed emission limits and that SEPA, as the regulator, will have the authority to impose and enforce the modelled emission limits.

The application to date is still deficient in respect of some of the requirements of the Scoping Opinion and EIA Regulations. Conditions have therefore been recommended and other information requested to fulfil these deficiencies.

5.2 Noise and Vibration

a The Environmental Statement assesses the potential noise and vibration impacts of the construction, operational and decommissioning phases of the proposed renewable energy plant. It concludes that noise from the construction and decommissioning of the plant at the nearest sensitive receptor (the dwellings to the west of the entrance to Camperdown Dock) would be within 65dB(a) during the daytime which is the British Standard for these activities. The assessment during the operation of the plant indicates there would be no significant noise impact on any of the identified sensitive residential receptors. However, the Environmental Statement recommends that:

- piling vibration levels ought to be monitored during construction;
- that modern plant is used and that there is regular and effective maintenance of plant and machinery during the operation procedures; and
- that similar measures are considered for the decommissioning phase.

b The Environmental Statement notes that a number of measures have been incorporated into the current design to minimise the noise impact of the operational phase, including locating the main plant area as far away from the nearest dwellings as possible and locating the fuel storage buildings between the main plant area and the nearest receptors to provide additional screening attenuation. It also states that noise from the construction/operation of the proposed plant should be considered further at the detailed design stage and appropriate measures incorporated into the design and layout of the site to ensure that noise emissions from the site are minimised.

c The Head of Environmental Health and Trading Standards accepts the broad conclusions of the Environmental Statement, although he notes that much of the eventual design requires to be finalised. It is also noted that noise from the electricity generation process would be regulated by SEPA, who have the capability to choose limit values at any time during the operation of the plant.

d There may be noise issues associated with the increased usage of the riverside berths, but since Forth Ports have unrestricted rights to use these berths in connection with shipping, it is not considered appropriate to attach any conditions relating to this matter. If noise issues were to arise because of these operations they could still be dealt with through the nuisance provisions contained in the Environmental Protection Act 1990. Finally, any noise from the construction of the development is covered under the Control of Pollution Act 1974.

e Appropriate conditions to cover construction noise issues have been included in Appendix C attached to this report.

5.3 Visual and Landscape Aspects

a The Environmental Statement has assessed the potential impacts of the development on landscape and visual receptors. This assessment has included consultations with the Council and Scottish Natural Heritage. The Environmental Statement concludes that there will be significant landscape impacts for the application site itself, and for other receptors within 1km of the application site. SNH in their consultation response agree with this conclusion.

b Because of the scale of the project, it was concluded that landscape mitigation was not appropriate. Rather, an architectural strategy was considered for appropriate mitigation. Images from the architectural strategy are attached as Appendix A5 to this report and this matter is considered in 5.5 below. The Council is therefore proposing conditions to ensure that the design of the development is advanced in accordance with this strategy.

c A project of this scale will clearly dominate the landscape. This dominance will include the buildings, stacks and associated smoke plumes. However, it is to be sited within the traditional port area which is typified by tall buildings, cranes and structures. It is concluded that subject to an appropriate design for the buildings, that the visual and landscape aspects of the development are acceptable.

5.4 Cultural Heritage

a The Environmental Statement contains in Chapter 15 an assessment of the proposed development on cultural heritage features. Within this chapter cultural heritage features were defined as all relict man-made features pre-dating the First Edition Ordnance Survey mapping (surveyed 1860 in this area) and selected sites post-1860, such as wartime or industrial sites. This includes all Scheduled Monuments and Listed Buildings.

b Potential impacts of the development of the proposed Renewable Energy Plant upon cultural heritage features have been identified as:

- Physical damage to the fabric of cultural heritage features, generally resulting from groundworks associated with the construction of the Renewable Energy Plant, but also potentially from changes to groundwater levels or soil chemistry; and

- Adverse impacts upon the setting of cultural heritage features, largely this relates to visual impacts.

c The Environmental Statement identifies a summary of potential effects as a result of the construction, operation and decommissioning on the cultural heritage features. The report concluded that as a result of the construction phase there will be a negligible significance on the cultural heritage features. The report also proposes a buffer zone to protect the dock wall during the construction phase.

d As a result of the operation and decommissioning of the Plant the report identifies that the impact on nearby listed buildings and Broughty Ferry Castle shall be of minor significance.

e Due to the potential impact on the cultural heritage features of Camperdown Dock, further information has been submitted in an Addendum Report. The additional information provided a breakdown of the listed buildings around the dock area, and the predicted impacts on their setting. The conclusion was that the Camperdown Street, Victoria Dock and the Clock Tower were impacted upon to a higher degree, having a potential impact of significance borderline minor to moderate.

f The setting of the group of dockside Listed Buildings will be impacted by the proposed Renewable Energy Plant due to the close proximity and scale of the proposal. The listed buildings at the dock are largely industrial maritime structures.

g The proposed Renewable Energy Plant will be a new structure in this landscape but, like these Listed Buildings, it will be an industrial feature requiring a river-side location. It is therefore considered that the Renewable Energy Plant will maintain the existing industrial character of the dock area and not significantly impact on the cultural heritage of the area. Mitigation of the development in terms of its architectural treatment is considered in Section 5.5 below.

5.5 Design

a The proposed development involves the erection of very large structures on the waterfront. The stack will be 90 metres high, the boiler hall 65 metres high, the turbine hall will be 30 metres high and the main fuel stores will be between 20 and 33 metres high. A second 45 metre high stack will be provided at the site. As discussed in the two previous sections on visual and landscape impact (5.3) and cultural heritage (5.4), the development will have a significant impact on the landscape and to a lesser extent on the cultural heritage of the city. It is also accepted that due to its scale, the plant cannot be screened. Therefore, in order to mitigate the impact of the development an architectural strategy has been developed and this forms part of the Design Concept Statement for the proposal.

b This application under Section 36 of the Electricity Act 1989 does not provide a detailed design for the development and therefore if it is to be approved and in addition planning permission granted, it is essential that the Council has a significant role to play in the design of a building which will have such a major impact on the city. If Members were to recommend to the Scottish Ministers that the application be supported then it is essential that conditions are attached governing the design of the development.

c In order that parameters can be set to establish a good design for the proposed development, the applicants have submitted a Design Concept Statement by Gordon Murray Architects. This sets out the key design principles as follows:

- To create an identifiable symbol which will contribute positively to the Dundee Waterfront and the wider Firth of Tay.
- Make appropriate use of colour, texture and materials to create a strong visual connection between the maritime industrial setting and the proposed renewable energy plant.
- Understand the unique qualities of the site and the water's edge, by recognising the visual references and connections provided by Dundee's maritime past.
- Explore the potential of transparency and light, and the contrast between solid and void will help define how the mass of the renewable energy plant is received.
- Create clear visual distinction between the lower linear storage structures and high level equipment in order to reduce bulk and increase the drama of a beacon which addresses the skyline.
- Consider how the renewable energy plant connects with the quayside and allow opportunities for discrete and visual connections through the site of the renewable energy plant between the city and the waterfront, to decrease any sense of separation.

d The Design Concept Statement is provided to inform subsequent detailed consideration of the design approach should the Scottish Ministers be minded to grant consent for the proposals. It analyses the site, the surrounding dockland area and the wider city and concludes with a concept design for the development. This concept design seeks to create a marker on the Dundee skyline and the Firth of Tay beyond symbolic of the sustainable future, making use of solid, void, light and transparency to define the mass of the development in an appropriate manner. It comes up with the metaphor of a long ship, a 21st century "Discovery", as a means of bringing order and identity to the different elements of the development. This form will create a visual separation between the lower linear storage structures and the high level boiler equipment in order to reduce the sense of bulk and increase the drama of the skyline element. It considers that the main structure might be separated from the quayside with the creation of a translucent ground level which would visually reduce the apparent height of the storage areas by increasing the horizontal emphasis. The intention is that the structure should appear as though hovering above the quayside, about to begin a journey. It considers that sculpting the form of the buildings could significantly mitigate the impact of the plant in terms of perceived visual bulk. It proposes that the finishing materials should be those commonly found in the industrial landscape at the port such as profiled metal sheet in a subtle variety of tones and finishes. However, it considers that the skyline element including the boiler house should have a semi-transparent enclosure to allow the operational process to be clearly understood and to stand in contrast to the more solid storage processing elements below. An image from the Design Concept Statement are attached as Appendix A6.

e It is considered that a development of the scale proposed is acceptable at this location provided that attention is paid to the design of the buildings and that the resulting structures enhance the appearance of the waterfront. It is considered that this a matter which can be governed by planning conditions and that the Design Concept Statement provided gives a framework for developing an appropriate design. Concerns about the bulk and scale of the development are appreciated, but must be seen in the context of the industrial nature of the port. Historically, when the port area was much busier and the shipbuilding industry thrived, there were very large buildings and structures along the waterfront. More recently, with the development of North Sea oil and gas, very large rigs have been maintained further to the east. It is therefore concluded that the mass and scale of the proposed buildings is acceptable provided the design is of an appropriate standard and quality.

5.6 Ecology and Natural Heritage

a The Environmental Statement considers terrestrial ecology and bases its findings on consultations with Scottish Natural Heritage, desk studies and fuel surveys. It notes the nature conservation sites in the vicinity of the site and makes special reference to the international Firth of Tay and Eden Estuary Special Area of Conservation (SAC), which is designated for its common seal and habitat interests, and is adjacent to the application site boundary and the Firth of Tay and Eden Estuary Ramsar Wetland/Special Protection Area (SPA) which is 2.9km from the application boundary.

b It notes that the application site is located within the industrial Port of Dundee and features no habitat of nature conservation interest likely to provide important habitat for protected or notable species.

c It notes that air deposition modelling predicts process contributions of acid and nitrogen deposition in excess of 1% of the environmental quality standards at Barry Links SAC but that the impact on the qualifying habitats is unlikely to be significant because of existing high levels of deposition. It concludes that the plant will not result in significant impacts to identified sensitive terrestrial ecology receptors but that in line with good practice, mitigation measures will be carried out to ensure that even non-significant impacts are minimised.

d In terms of aquatic ecology, the Environmental Statement notes that the site is on the Firth of Tay about 12km from the mouth of the estuary and that it is proposed to extract and discharge cooling water to and from the Firth of Tay. The statement concludes that the construction activities will have negligible effects. In terms of operational activities, it is proposed to provide screens at the water extraction area to protect fish and the discharge of cooling water will be fitted with diffusers to promote rapid mixing of the cooling water with the receiving water. The statement concludes that taking conservative predictions of the proposed plant's impact, the small scale of the water extraction and discharge proposed is predicted to result in no significant impact on aquatic life.

e The addendum report addressed the issue of whether piling might have an impact on marine species of European importance. It is not clear whether piling will be required as part of the construction activities but if it is, a range of mitigating measures will be adopted to further reduce the impact of percussion piling.

f Scottish Natural Heritage have provided a consultation response on the development. Their view is that the proposal is likely to have a significant effect on common seals (Firth of Tay and Eden Estuary SAC), grey seals (Isle of May SAC) and bottlenose dolphins (Moray Firth SAC). However, they consider that the adverse affects can be avoided by the use of conditions which they have submitted to the Scottish Ministers in their consultation response. They also require some additional information before they can complete their views in relation to Barry Links SAC. SEPA also point out that there may be a significant impact on Barry Links SAC. An appropriate assessment of the impact of the development on the SAC will require to be made by Scottish Ministers before consent can be granted (see paragraph 5.5 (e) of this Report above).

5.7 Hydrology, Hydro -Geology and Drainage

a The Environmental Statement indicates that in accordance with the Flood Risk Assessment, sensitive equipment will need to be raised above a design datum of 5.01 metres AOD and that areas of safe refuge above this datum for personnel within the site need to be provided. It also proposes a drainage system which will manage drainage discharges into the Firth of Tay. If a piled foundation solution is required their assessment concludes that the underlying aquifer will remain protected through an appropriate assessment of such operations. In terms of potential contamination, the statement proposes a targeted ground investigation to be undertaken at the detailed design stage. It proposes measures to ensure that there are no residual effects of surface water through sediment input or site activities. It also states that the abstraction and discharge of water from the Firth of Tay will be subject to a licence and that this process will ensure that the existing hydrological environment of the Firth is maintained with no significant negative effects. The report concludes that no significant environmental effects have been identified in terms of impacts to the hydrological or hydro-geological environment and that the development will not result in any predicted negative residual effects of significance on water or soil environment.

b It is considered that the Environmental Statement provides an accurate assessment of the likely impacts and that planning conditions can be attached to deal with the potential contamination of the site.

6 TRANSPORT IMPACTS

6.1 The applicants have indicated that the tonnage of biomass fuel likely to be procured from indigenous sources has been estimated at 197,000 tonnes per annum (Transport Statement, Paragraph 2.1.6). The assumption is that this will be delivered to the plant by road. In addition, it has been estimated that 12,000 tonnes of ash per annum will be generated by the plant. Although it is hoped that some of the ash can be exported by ship it has been assumed that all the ash will leave the plant by road. No rail facilities are available to serve the plant and there is no expectation that the rail network will deliver fuel to the plant in the future.

6.2 It is on basis of these assumptions that the applicants have prepared the Transport Statement which accompanies the application.

6.3 Consultation has taken place with City Development Department and Transport Scotland during the scoping and preparation of the Transport Statement.

6.4 The Transport Statement takes into account the potential impact on the existing main road network and access arrangements at Dundee Port during the construction and operational phases.

6.5 During the Construction Phase the following assumptions were made:

- a construction period of 36 months (2012-2015);
- a construction workforce of 300 peaking at 500 at month 26;
- working hours of 7.00am - 6.00pm Monday - Saturday with daily peaks at 6.00am - 7.00am and 6.00pm - 7.00pm;
- 80% of the workforce would travel by private car; and
- 43 HGVs and 23LGVs will visit the site on a daily basis.

6.6 For the Operational Phase the following has been assumed:

- a total workforce of 40 with approximately 24 private car movements during morning and early evening peaks;
- the plant will operate 24 hours per day, 7 days per week;
- fuel and ash volumes as outlined in Paragraph 6.1 above;
- the plant will generate 23 HGV trips per direction (in and out) per day for biomass fuel delivery equivalent to less than 2 vehicle movements per direction, per hour, over a 14 hour day;
- export of ash will lead to 2 HGV movements per direction (in and out) per day;
- 4-5 vehicle fuel oil and flue gas reagent deliveries per week combined and
- total vehicle movements for biomass deliveries, ash export, fuel oil and flue gas reagent would be 27 vehicles per direction per day.

6.7 The main conclusions of the Transport Statement are as follows:

a during the construction and operational phases, traffic accessing the development will use the strategic road network comprising the A90, A85, A972 and A92.

b Routing Agreements will minimise the requirement for plant traffic to enter the city centre or adjacent residential areas.

c civil and mechanical construction traffic and operational biomass/maintenance deliveries will approach the site via A90 and A972 (Kingsway East) using A92 (Greendykes Road) and A92 (Broughty Ferry Road), turning left to access the Port of Dundee secure port estate via Roodyards Bridge. East Camperdown Street (westbound) would be used to enter the site.

d Empty vehicles would exit the site travelling eastbound along East Camperdown Street and exit the Port of Dundee secure port estate via Roodyards Bridge. As the limited movements junction allows only a left-turn manoeuvre onto the A92 East Dock Street, vehicles would leave the area via the strategic road network and utilise the A92 Tay Bridge, or A85 Riverside Drive, or utilise the A92/A991 Tay Bridge roundabout to turn back eastbound on the A92 to leave via the in-bound route described above (obviously alternative arrangements such as using the East Port roundabout will be required if an easy turn back is not available at the Waterfront).

e Under the proposed routing strategy no HGV vehicle would use the A92/East Camperdown Street priority junction (where Scotrail have concerns about increased usage of the level crossing). It is intended that the proposed route will form the basis for the Construction Traffic Management Plan and Freight Management Plan for the operational phase.

f During the construction phase a "lay-down" area will be made available within the application boundary in the area proposed for the storage of biomass and the reserved area, as shown in Figure 3.

g Parking provision for all construction worker traffic will be accommodated within the Port of Dundee in an area to be specified.

Evaluation and Conclusions

The Transport Statements assumptions, methodology and conclusions have been assessed and are considered to be robust.

The proposed access and egress strategy during the construction and operational phases are supported.

Works to upgrade access to the Port of Dundee from the east by improving Stannergate Bridge to remove the current 33 tonne weight restriction are proposed by Dundee City Council for 2011-2012. This is supported by Forth Ports as part of general improvements to future access from the east.

Dundee City Council wishes to see a wider re-appraisal of access to the Port of Dundee when the bridge improvements are complete and the Council's preference would be Renewable Energy Plant operational traffic to use this access in the future.

Critical to the success of the implementation of the strategy is the preparation by the applicants, in consultation with the Council, Transport Scotland and Tayside Police, of appropriate Construction Traffic and Freight Management Plans.

It is therefore recommended that appropriate conditions are suggested to Scottish Ministers governing the preparation, submission, agreement and enforcement of such plans and also to govern the means of entry and exit to the site to ensure traffic safety and the free flow of traffic on the road network.

7 SOCIO-ECONOMIC IMPACTS

7.1 The ES contains (Chapter 16) an assessment of the potential socio-economic impacts of the proposals during the construction, operational and decommissioning phases. Although the proposed development has the potential to have both positive and negative impacts on local communities and the local economy, significant direct and indirect employment impacts and economic benefits from the development are anticipated during each of the 3 phases.

7.2 In terms of the construction phase the study concludes as follows:

- typically, 300-500 people will be employed during the 36 month construction phase;
- construction will generate the equivalent of 90 FTE local jobs with a further indirect and induced employment of 49 FTE local jobs;
- although it is likely that a significant proportion of the manufactured items necessary to construct the plant will need to be sourced outwith Scotland, significant elements of the following works/plant will accrue to the local and wider regional economies viz site clearance and preparation, foundations and ground works, utilities and cabling, transport, port activities, security and cranes; and
- taking economic multiplier factors into account, expenditure on local goods services and transportation arising out of the construction phase is estimated as £7.3 million at local level and £8.25 million at a Scottish level.

7.3 During the operational lifetime of the plant the applicants estimate that there will be a requirement for 40 FTE permanent jobs covering management, administration, technicians, labourers and plant operators. Taking economic multiplier considerations into account it has been estimated that the total amount of direct and indirect employment which will be generated during the operation and maintenance phase will be 139 FTE jobs at a local level and 147 FTE jobs at a Scottish level.

7.4 The level of annual operational and maintenance expenditure for the development has been estimated at £18 million, amounting to £450 million over the projected 25 year lifespan of the plant.

7.5 To the above figures need to be added the jobs likely to emerge in the supply chain eg biomass feedstock, forestry harvesting, and trans-shipment sectors.

7.6 During the decommissioning phase the applicants have estimated that required personnel in the demolition and related trades will peak at around 200 and average 100. Taking multiplier effects into account it is estimated that 13.9 FTE jobs would result locally and 14.7 FTE jobs would result at a national scale.

7.7 In conclusion, the applicants estimate that overall the plant would bring to the local Dundee economy the following principal benefits:

Activity	**Direct Jobs (FTE)**	**Additional Indirect/Induced Local Jobs (FTE)**	**Total Net Additional Local Jobs (FTE)**	**Local GVA per Annum (£million)**
Construction	90	49	139	7.3
Operations and Maintenance	40	99	139	15.6
Supply Chain (Port)	21	4.7	25.7	2.25
Supply Chain (Feedstock)	42	0	18.3	0.5
Decommissioning	10	3.9	14	0.7
Total	**203**	**156.4**	**336**	**26.4**

Source: Environmental Statement Table 16.23.

7.8 In addition to the above and to the employment and investment/expenditure activity which would accrue to the Scottish economy in general bringing minor positive local impacts, the applicants have identified the following less tangible benefits:

- overall renewables sector supply chain benefits;
- biomass/wood-fuel supply chain benefits;
- enhancement of Scottish biomass/wood-fuel stocks;
- skills and training opportunities; and
- Renewable Heat has direct and indirect benefits to the industrial, commercial, retail, leisure and residential sectors.

7.9 The development of a major renewable energy plant in the city may assist in securing investment in other renewable energy proposals which would have major economic benefits such as the significant offshore wind energy sector.

Evaluation and Conclusions

The ES refers to the direct and indirect employment benefits which have been estimated to accrue. The estimated figures for the construction and operation of the plant and the indirect jobs created or sustained by the proposal appear to be reasonable for a project of this scale and nature. However it should be pointed out that the Council cannot guarantee the extent of local jobs created by this development.

8 OTHER ISSUES

8.1 Concerns have been raised by some consultees and members of the public about the following issues which are not directly covered elsewhere in this report (the other concerns are addressed in Sections 5 - Evaluation of Environmental Issues and 6 - Transport Impacts).

8.2 Heat Generation

a The application is supported by a Combined Heat and Power Feasibility Study which details the potential which the proposal has in terms of provision of various grades of heat for industrial, commercial and distinct heating uses near to the application site. It states that further detailed feasibility studies will be necessary once the application has been determined.

b Concerns have been raised that the generation of only 30MW of heat is an unsustainable use of biomass fuel and that there is no binding commitment to use heat from the development. It is in the developers interest to maximise the provision of heat to customers and they have opened discussions with Nynas, the Central Waterfront Development Team and others to progress this matter. It would be impossible to enter into binding agreements for the supply of heat until there is confidence that the development will proceed. Planning conditions are proposed to ensure that the use of heat, including the provision of infrastructure, is guaranteed before the development is commissioned.

8.3 Sustainability and Security of Fuel Sources

a The Sustainability Statement submitted with the application states that all forest derived biomass material will be sourced from sustainably managed forests, that as much fuel as practicable will be procured from indigenous suppliers, that the majority of the fuel delivered to the site will be transported by ship and that they will develop and implement a verifiable and auditable biomass sustainability policy which addresses greenhouse gas savings and wider environmental and social impacts.

b Concerns have been raised that because of the scale of the proposed development, almost all its fuel will have to be imported. There are fears that a shortage of supplies will lead to unsustainable fuel sources being used. However, if the development were to proceed it would operate under a Renewables Obligation Certificate granted under the Renewables Obligation (Scotland) Order. This is designed to incentivise renewable generation into the electricity generation market and it is likely that the loss of such funding would make the use of unsustainable fuel sources economically prohibitive.

8.4 Health and Safety Concerns

a Concerns have been voiced about fire hazard, the proximity to the Nynas oil refinery and other health and safety matters. All these issues will be addressed by the appropriate authorities, including the Health and Safety Executive (who had no objections when initially consulted), if the proposal is approved.

8.5 Community Contribution

a Public concerns have been raised that the approval of the proposed development would result in significant benefits to Forth Energy but little benefit to the residents of the city. However, the development will benefit the city in terms of direct and indirect employment impacts and economic benefits (as set out in Section 7 of this Report). In addition, although the proposed development will have a significant impact on the landscape and involves emissions that could impact on air quality, the report concludes that subject to the imposition of appropriate conditions, it could be acceptable. However, in response to the question raised by the community, the applicants have indicated that they are prepared to make available an annual sum of money to be invested in renewable energy projects, energy efficiency projects and fuel poverty projects in the city. This is being reported as a matter of fact but it is not material to the Council's decision whether to object to this application or not.

9 CONCLUSIONS AND RECOMMENDATIONS

9.1 It has been concluded in paragraph 4.14 of this Report that the proposed development accords with the Development Plan.

9.2 In terms of the other material considerations, the following weigh in favour of the development:

- the development could provide both energy and heat from sustainable sources, thus furthering European, UK and Scottish targets for renewable energy generation. In addition, it could provide a constant source of energy and heat;
- the development is generally in accordance with Government Guidance; and
- the development could provide jobs in the construction, operation and decommissioning stages of the project and could directly and indirectly secure jobs at the port and elsewhere in the city.

9.3 Those material considerations that weigh against the development are:

- emissions resulting from the development could exacerbate air quality standards in the city resulting in an adverse impact on public health;
- emissions from the development could result in increased acid deposition at the Barry Links SAC; and
- the development could have a significant physical impact on the city depending on its detailed design.

9.4 The options available to the Committee are;

a to support the application subject to conditions as set out in Appendix C;

b to seek that consideration of the application by Scottish Ministers is deferred until comprehensive air quality information demonstrating that the development would not have an adverse impact on air quality and public health (as specified in proposed conditions 16 and 17) is provided; or

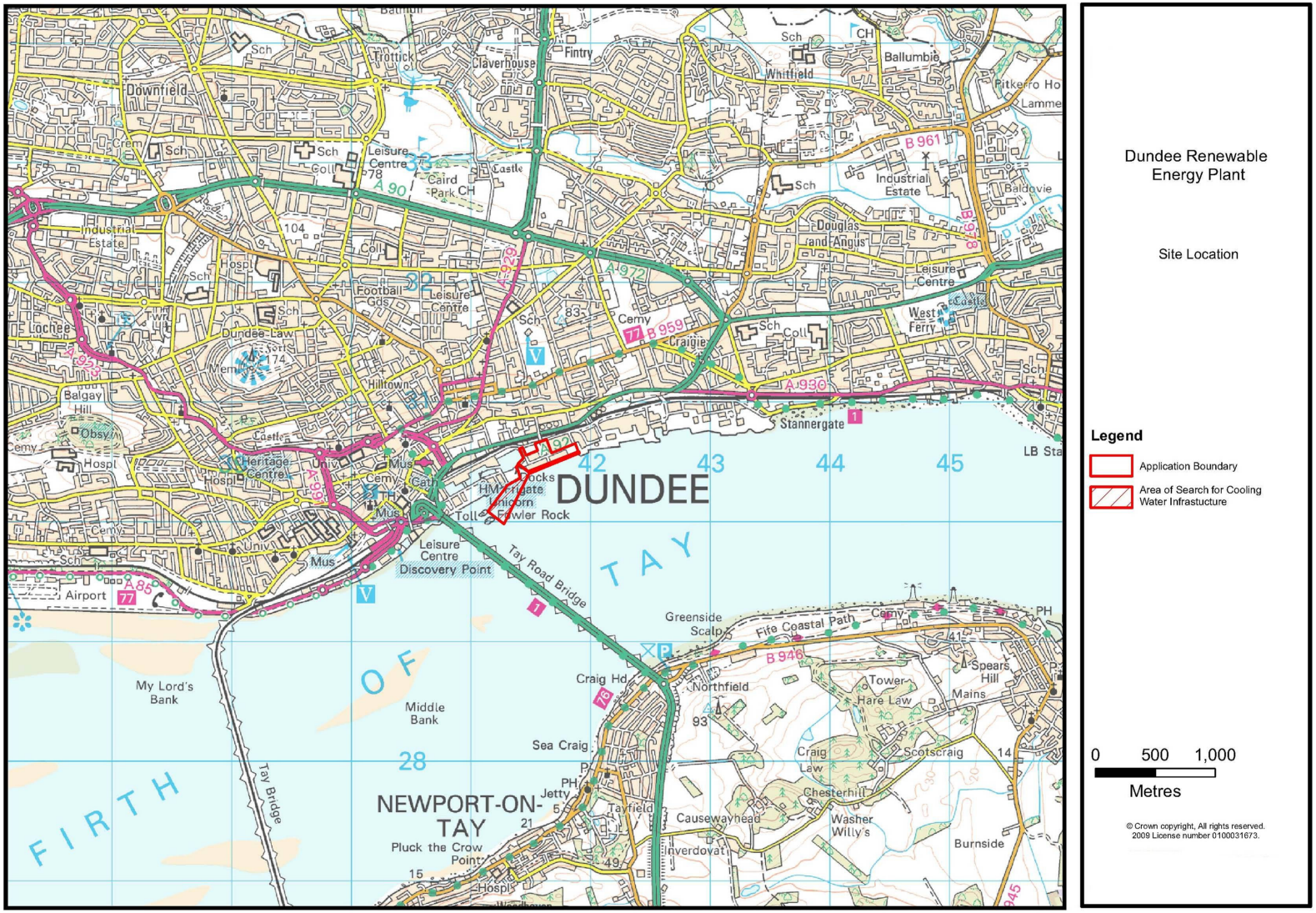
c to object to the application on the basis that it would have an unacceptable impact on air quality and public health.

9.5 If the Scottish Government is unwilling to include the conditions proposed by the Council then the response of the Council should be considered as an objection to the development.

9.6 It is considered that since the potential adverse impacts of the development could be controlled by conditions, so that it does not proceed unless there is no adverse impact, the material considerations weigh in favour of the development. However, given the need for additional information on air quality and the significant level of public objection received, the Committee's instructions are requested in this regard. It is then proposed to write to the Scottish Government outlining the Council's views on the application.

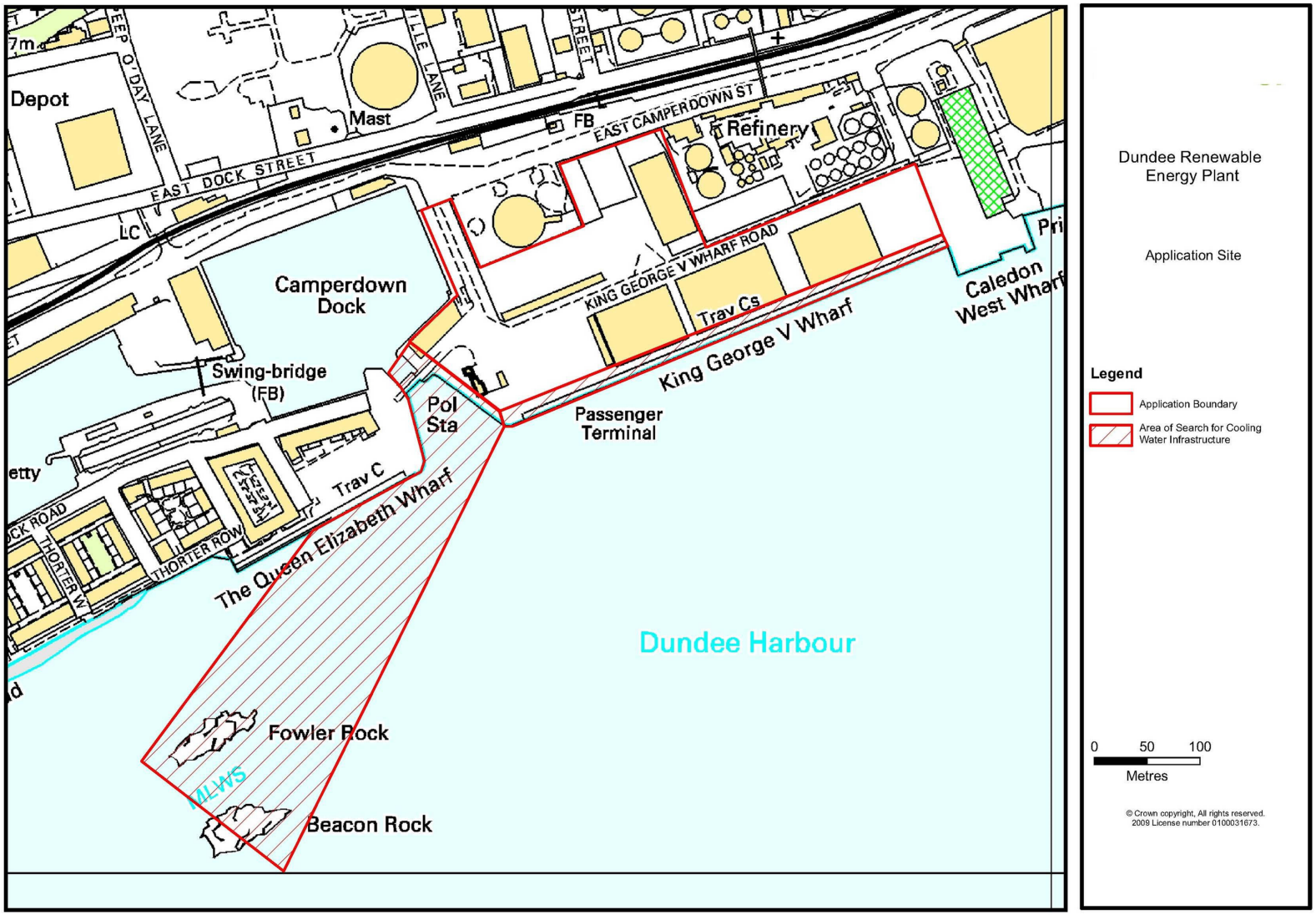
APPENDIX A - PLANS AND ILLUSTRATIONS

A1 - DUNDEE RENEWABLE ENERGY PLANT - APPLICATION SITE (CITYWIDE CONTEXT)



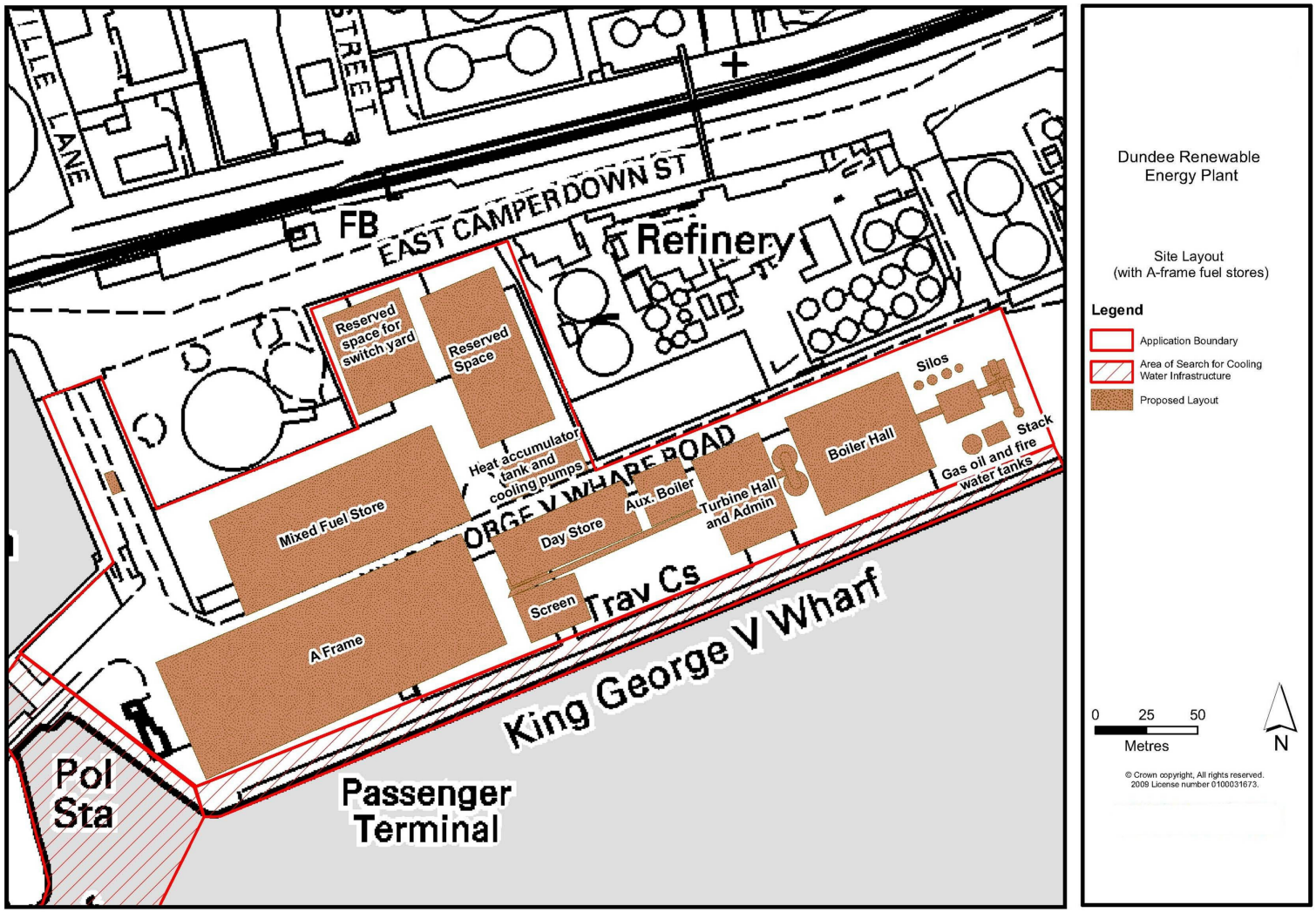
Source: Non Technical Summary Document

A2 - DUNDEE RENEWABLE ENERGY PLANT - APPLICATION SITE



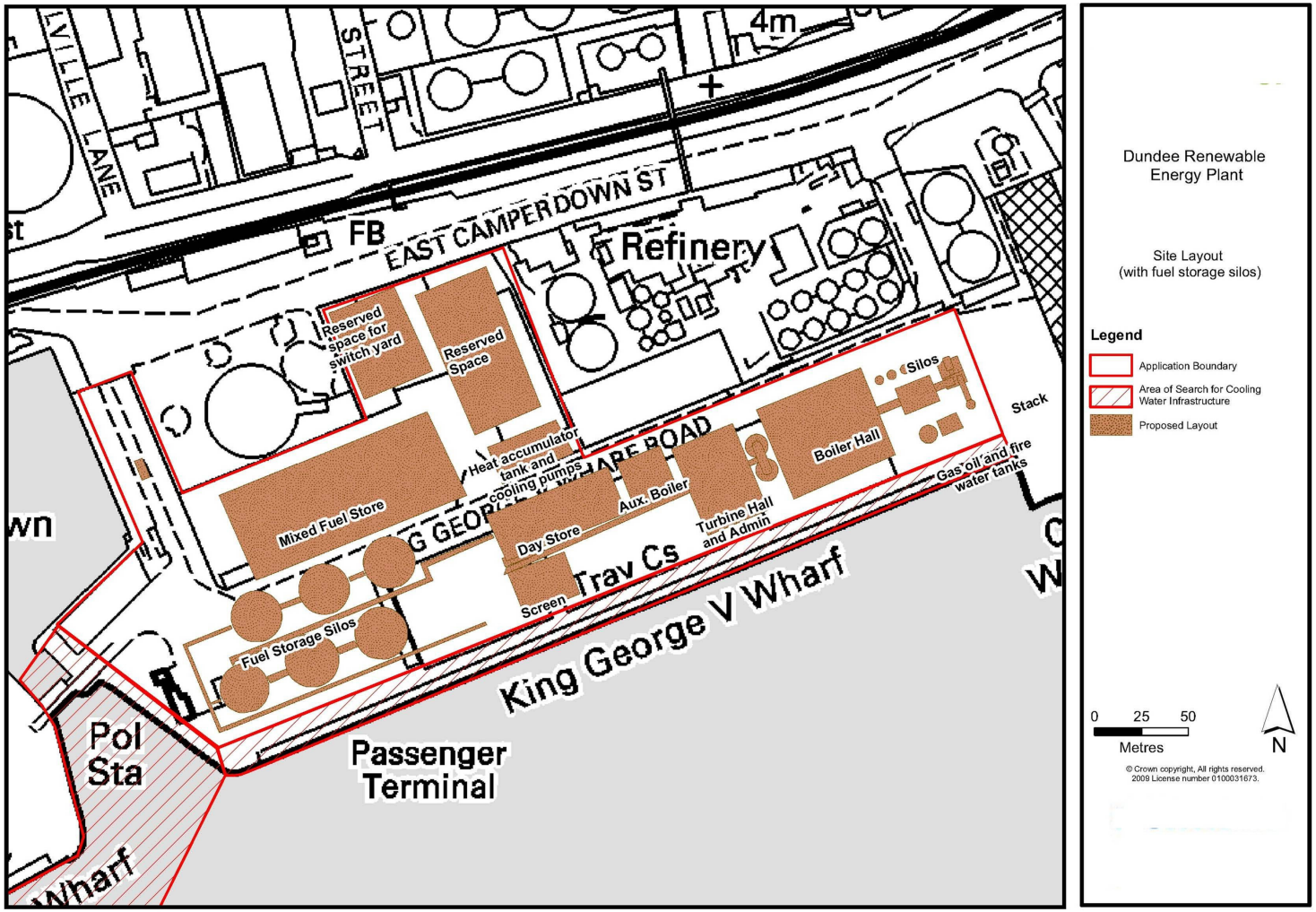
Source: Non Technical Summary Document

A3 - DUNDEE RENEWABLE ENERGY PLANT - SITE LAYOUT (WITH A-FRAME FUEL STORES)



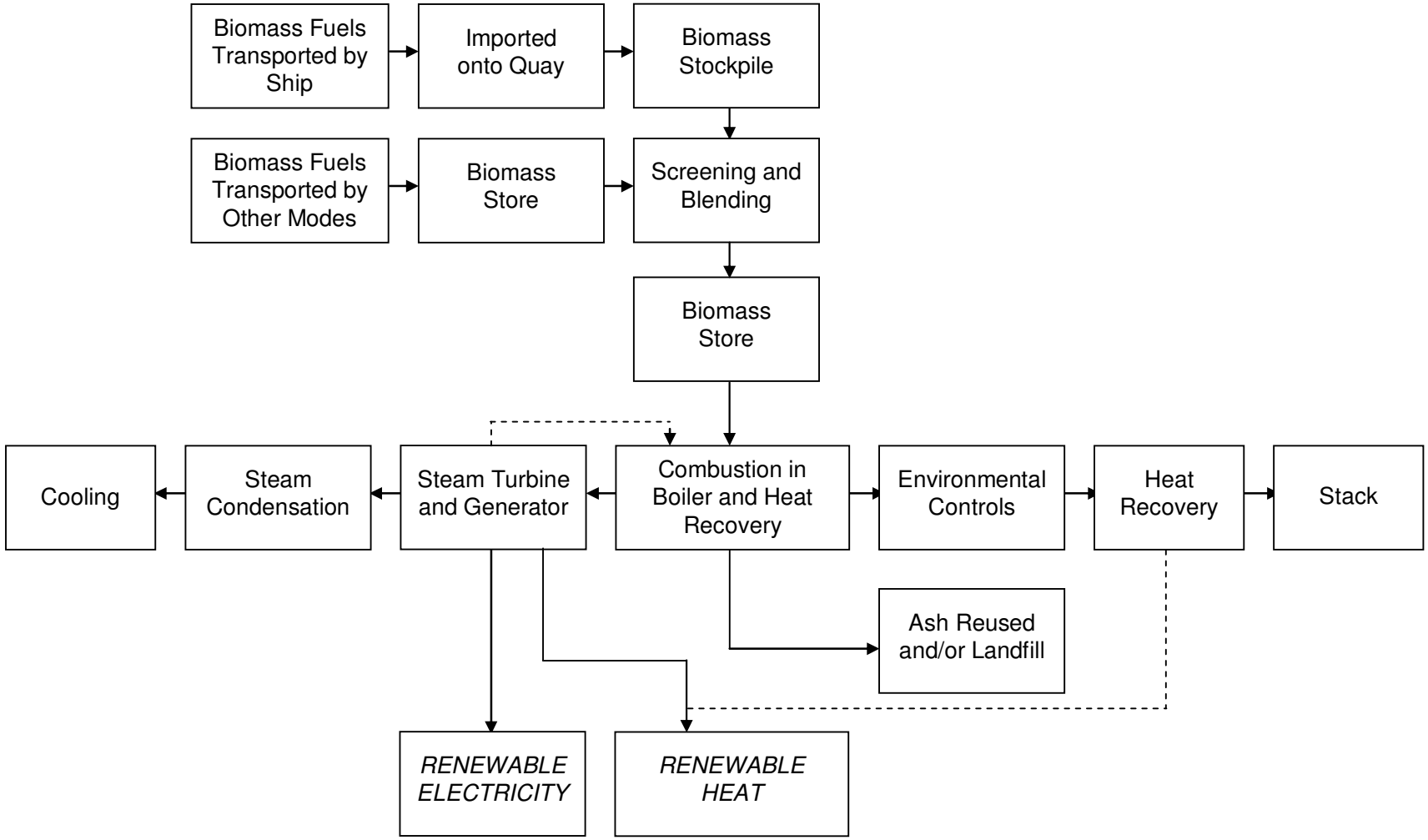
Source: Non Technical Summary Document

A4 - DUNDEE RENEWABLE ENERGY PLANT - SITE LAYOUT WITH FUEL STORE SILOS



Source: Non Technical Summary Document

A5 - THE RENEWABLE HEAT AND ELECTRICITY GENERATION PROCESS



Source: Environmental Statement Paragraph 6.3.2

iainross/inbox/flowchart

A6 - SUGGESTED CONCEPT DESIGN (A-FRAME STORAGE BUILDINGS MODEL)

Suggested Concept Design ('A' Frame Storage Buildings Model)

Source: Gordon Murray Architects for Forth Energy from Design Concept Statement

APPENDIX B

SUMMARY OF OUTCOMES OF PARTICIPATION AND PUBLIC CONSULTATION

SUMMARY OF OUTCOMES OF PARTICIPATION AND PUBLIC CONSULTATION

In support of their application the applicants have prepared and submitted a *Statement of Participation* which documents who has been consulted and when and provides a summary of the comments received and how these have been taken into account in developing the proposals.

In addition, this appendix summarises the results of public engagement following the formal submission of the application to Scottish Ministers and the additional public liaison exhibitions made available in Dundee over the period of 17 August 2010 - 24 September 2010.

Since December 2009 the applicants promoted a series of public consultation initiatives in Dundee, including:

Introductory:

- Formal consultation on the EIA Scoping Report.
- Public Exhibition - Overgate Centre: 28-30 January 2010.
- Meetings with Community Councils and Dundee Civic Forum (February - April 2010).
- Press advertisements and editorials.
- Use of FEs website - www.forthenergy.co.uk.

Follow Up:

- Public Exhibition - Overgate Centre: 21-22 May 2010.
- Offers of meetings to Community Council's and Dundee Civic Forum.
- Press and poster publicity.
- Issuing of bulletins to preliminary stage participants.
- Presentation to DCC members.

Application Stage:

- Formal Press Advertisement - 17 August 2010.
- Exhibitions - Broughty Ferry Library, Central Library, Tayside House from 17 August - 24 September 2010.

Throughout the process there has been continuous liaison between the applicant's team of consultants and Council officers from a range of Council Departments to formulate a clearer understanding of the complex technical information presented in the Environmental Statement and accompanying documentation. Similar liaison has taken place with the other statutory consultees, SNH and SEPA.

Table 1 provides a list of statutory and non-statutory consultees with whom the applicants have liaised throughout the process.

Up to the point when the application was submitted the public engagement process highlighted the following key areas of comment based on responses from the local community:

- environmental comments such as air quality, noise and pollution;
- sustainability in relation to this type of energy generation, including where the fuel is imported from and the availability of fuel;
- the impact on the local transport network;
- the visual impact of the plant on the local and wider area; and
- the advantages for the local community from the development of Dundee Renewable Energy.

Each of the topic areas is expanded upon in the Participation Statement with the issues explained in significant technical detail throughout the ES.

All representations on the application for Section 36 consent and on the ES required to be sent to the Scottish Government Energy Consents Unit (SGECU) and not the Council. However, the results of the formal consultation/participation stage have been supplied to the Council.

These are tabulated at Table 1.

Table 1 - Statutory and Non-statutory Consultees

Statutory Consultee	**Summary of Responses**
Scottish Natural Heritage	Does not consider that there will be significant detrimental impacts on designated sites. There will be effects on grey and common seals and bottlenose dolphins but these can be avoided through the use of conditions. They require further information before they can confirm their position relating to Barry Links SAC. They also note that the large scale of the plant will result in impacts on the landscape but that these cannot be mitigated. They feel that the low use of heat means that the plant results in an inefficient use of wood fuel.
SEPA	SEPA are satisfied that the proposed development is potentially capable of being consented under their licensing regime and therefore have no objection to the development. However, they caution that if air quality in the vicinity of the development does not improve as it is anticipated in the Addendum to the Environmental Statement they are unlikely to be able to grant a PPC permit. Their concern relates specifically to nitrogen dioxide in the vicinity of the Stannergate roundabout and that reducing the concentrations of nitrogen dioxide at this location in order to accommodate the proposed Biomass plant will be challenging. They also consider that Forth Energy have failed to demonstrate that there will not be a likely significant effect on the Barry Links SAC and that further assessment of this issue will need to take place. They support Scottish Government policy promoting small scale biomass best used for heat or combined heat and power and note that the proposal does not comply with this policy. They consider that the potential environmental impact of the development may have been underestimated, that there may be issues with supply of fuel, that the production of heat is low and that the proposed abatement to reduce nitrogen dioxide may compromise the plant's ability to achieve overall energy efficiency levels.

Non-statutory Consultee	**Summary of Responses**
Angus Council	Has no comment.
Perth and Kinross Council	No response received.
Fife Council	Welcomes the proposals and considers the location to be sensible. They raise questions over fuel supply, pollution control and mitigation measures.
Broughty Ferry Community Council	No response received.
City Centre & Harbour Community Council	No response received.
West End Community Council	Object to the development, considering it to be inefficient, environmentally detrimental and wasteful of resources. They state that it doesn't meet the criteria for CHP (due to insufficient use of waste heat), consider that the plant will have an adverse impact on the waterfront and that emissions will have health impacts. They are concerned about acid deposition at Barry Links, abstraction and return of water to the Tay and the disposal of ash.
Stobswell Forum	No response received.
Tayside Fire and Rescue	Has no comment.
Tayside Police	No response received.
NHS Tayside	Point out that there is the potential for a negative effect on the well being of the local population and there needs to be better monitoring of air quality prior to approval of the project. They consider that the proposal, due to its scale and the fact that it is not heat led, contravenes Scottish Government policy on biomass and should only proceed if national policy objectives around sustainability are fully met.
Dundee Airport	Have no objections to the proposal subject to compliance with various guidelines designed to protect air traffic using the airport.

Non-statutory Consultee	**Summary of Responses**
RAF Leuchars	No response received.
Civil Aviation Authority	Advised that aviation lighting will be required for the stack and that there should be liaison with the MOD.
Tay Estuary Forum	No response received.
Tay Foundation	No response received.
Association of Scottish Fishery Boards	No response received.
Go Dundee	No response received.
Dundee City Bat Group	No response received.
BBC	No response received.
British Telecom	State that the proposal will cause no interference to BT's current and planned radio networks.
The Crown Estate	No response received.
MOD	Have no safeguarding objections.
National Air Traffic Services	Have no safeguarding objections.
Ofcom	No response received.
Forestry Commission Scotland	State that the plant would not meet the criteria for good CHP, its size is excessive given the supply of local and regional fuel supplies and the limited proposed use of heat, information on fuel supply is limited and issues of potential displacement of material from other wood using industries have not been addressed.

Non-statutory Consultee	**Summary of Responses**
Joint Radio Company	No response received.
RSPB	Consider that the proposal will not significantly impact on any priority bird species or populations. They suggest that all fuel should be from Forest Stewardship Council certified stock. They wonder about the sustainability of transporting biomass fuel, the availability of adequate sustainable stocks and consider that proposals for use of heat are not sufficiently developed
Marine Scotland	Is concerned about the possible impact on migratory fish but welcomes the mitigation measures proposed. Its licensing team has little concern with this project. Any environmental issues will be associated with pipe laying, piling, dredging and construction of the outfall/intake pipes. Noise associated with the construction phase, especially percussive piling, will be subject to appropriate mitigation measures (and a condition of the FEPA or marine licence) to minimise any impact on marine receptors. In addition cumulative impacts on the aquatic ecology have been adequately addressed in Chapter 13. Mitigation measures for the withdrawal of water from the Firth of Tay (according to guidance issued by SEPA, and complimented by that of the EA) will ensure that impingement and entrainment will be minimised at the site of abstraction. Further measures will be in pace to diffuse cooling waters (in the vicinity of Fowler Rock) and therefore minimise any impacts on local marine life. Both abstraction and discharge of water will be regulated by a CAR licence.
Transport Scotland	Generally accept the findings of the TA and agree that all junctions will operate within capacity during construction and operational phases.
Historic Scotland	Does not object to the application and is satisfied that the proposal will not have an unacceptable impact on the surrounding historic environment.
Health and Safety Executive	Has no objections.
Climate Change and Water Industry Directorate	No response received.

Non-statutory Consultee	**Summary of Responses**
Scottish Water	No response received.
Network Rail	Has no objections provided construction and operational traffic does not use the level crossing.
Scottish Government Ports and Harbours Division	Have no comments.
Forth and Tay Navigation Service	No response received.
Architecture and Design Scotland	Support the production of renewable energy but question the scale and location of the plant and the significant impact it would have on the existing urban fabric. They request details of any specific advantages that might benefit the surrounding sites and communities and any mitigation measures with regard to its scale and impact. They also raise issues relating to the sustainability of importing biomass fuel, future use of Scottish timber and traffic impacts, emissions, use of heat and decommissioning of the plant.
Maritime and Coastguard Agency	The Agency has no comments to make on this proposal.
CSS Spectrum Management Services Ltd	No response received.
Scottish Gas Networks	No response received.
Scottish Hydro Electric Transmissions Ltd	No response received.
STV	No response received.
Whale and Dolphin Conservation Society	No response received.
British Waterways	No response received.

Non-statutory Consultee	**Summary of Responses**
BAA Aerodrome Safeguarding	Has no safeguarding objections.
Forth Estuary Forum	No response received.
WWF	Believes that effective robust and strict sustainability criteria and standards which minimize the direct and indirect impacts of biomass use are essential and need to be applied across the board for all types of biomass, including uses for heat and power production. For biomass only Forest Stewardship Council (FSC) or equivalent certificate fuel should be used. It is disappointing that despite identifying a source of local heat demand the power plant will only be "heat ready".
Scottish Government Flooding Policy Team	Have no comments.
Scottish Government Onshore Renewables Team	The plant has been designed primarily for electricity production at the detriment to potential heat production and use. It remains a concern that there is no guarantee that the heat will be used. The fact that there is little detail regarding the supply means that it is difficult for Energy Security to be demonstrated. We would therefore reiterate that we seek more detail on how security of supply would be managed. Scottish Ministers are particularly keen to see wider benefits for communities from renewable energy schemes such as this. Unfortunately, no mention of this could be found and we would ask that FE outlines what they propose to do in order to maximise benefits for the local community.
Scottish Enterprise	Are satisfied that the site for the biomass plant will not affect the opportunity for the manufacture of off-shore renewables at Dundee Port and note that the availability of low carbon electricity and heat would be an attractor to manufacturing companies.

Non-statutory Consultee	**Summary of Responses**
Dundee Civic Trust	Is generally supportive of renewable energy. However, it does not think this proposal should be approved in the absence of a commitment to high quality design (particularly due to its large scale and its location close to the Waterfront area). It is also concerned about emissions from the plant and the availability of long term fuel supplies (and significantly increased heavy vehicles if local fuel supplies were used as an alternative).
Scotways	Confirm that there are no recorded rights of way in the vicinity of the application site.
Tay District Salmon Fisheries Board	Have no objections subject to adequate measures being employed to protect fish stocks.

Some of these consultees were specifically consulted on the Dundee proposals whilst others were consulted because of their interest in all 4 of the Scottish proposals.

SUMMARY OF PUBLIC RESPONSES TO THE SECTION 36 APPLICATION SUBMISSION

A total of 1,999 representations were received by the Scottish Government objecting to the proposed development. 1,703 of these were organised by RATTS and are predominantly from residents of Dundee. RATTS (Residents Against Tay Turbines) is a campaigning group formed to oppose wind turbines in the Stannergate area which subsequently extended its activities to oppose the proposed Biomass plant.

243 have been organised by Biofuel Watch and almost all are from addresses in England. Biofuel Watch describes itself as an organisation that works to raise awareness of the negative impacts of industrial biofuels and bioenergy on biodiversity, human rights, food sovereignty and climate change.

The remaining 53 were from other members of the public, mainly from the local area.

The concerns of the objectors can be grouped under the following headings:

- designated site/protected;
- location/amenity;
- proximity to residential areas;
- fuel supply and sustainability;
- health and safety concerns/fire hazards;
- negative environmental impacts;
- air pollution/carbon emissions;
- visual impact;
- negative economic impacts;
- transport and road safety;
- no existing infrastructure;
- food security;
- alternative sources of renewable energy;
- effects on wildlife;
- could spontaneously combust due to adjacent oil refinery;
- contravenes Dundee Local Plan review: 2005;
- images in ES misleading - made to appear smaller than it would be;
- not carbon neutral/no clear plans for heat;
- land grabbing for fuel; and
- not enough provision for heat.

APPENDIX C

SCHEDULE OF CONDITIONS

SCHEDULE OF CONDITIONS

Issue	Condition Ref	Schedule of Conditions	Reason
Time limits	1	The commencement of the development shall be no later than the date occurring 5 years after the date of this consent, or (in substitution) no later than such date as the Council may hereafter direct. If commencement of the development does not occur by such date, then by no later than the date occurring 6 months after such date, the site and the ground shall be fully reinstated by the Company to the specification and satisfaction of the Council.	To make sure work is begun within a reasonable time period.
	2	Within 12 months after the biomass plant no longer produces electricity or heat, the development shall be decommissioned and the site restored, in accordance a decommissioning scheme and detailed restoration and aftercare scheme approved by the Council in terms of conditions 36-38 of this consent.	To ensure that the buildings are removed and the site is properly restored in the interests of visual amenity.
General	3	The development shall be undertaken in accordance with the Application, Environmental Statement, addendum, supplementary environmental information and PPC licence, except in so far as amended by the terms of this consent and direction or as subsequently agreed in writing by the Council following consultation with SNH and SEPA.	To ensure compliance with commitments made in the Application, Environmental Statement, Addendum and supplementary environmental information.
Submission and approval of details	4	The commencement of the development shall not take place until there has been submitted to and approved in writing by the Council: a details of the siting, design and external appearance of all buildings and structures to be erected and retained following the commissioning of the development hereby permitted; b details of the colour, materials and surface finish in respect of those buildings and structures referred to in (a) above;	To enable the Council to exercise reasonable and proper control over the design and appearance of the development and to ensure adequate fire prevention measures are in place.

Issue	Condition Ref	Schedule of Conditions	Reason
		c details of ground levels and dimensions of all permanent buildings and structures together with cross-sections through the site showing existing and proposed ground levels; d details of vehicular circulation roads, parking, hardstanding, loading and unloading facilities and turning facilities on site; e details of permanent artificial lighting; f details of permanent fencing or other enclosures; g details of all hard and soft landscaping; and h phasing of all proposed works. The development shall thereafter be carried out only in accordance with approved details unless otherwise agreed in writing by the Council.	
Submission and approval of details of temporary buildings, structures and roads	5	Except for the Permitted Preliminary Works, the commencement of the development shall not take place until there has been submitted to and approved in writing by the Council: a details of the siting, design and external appearance of temporary buildings and structures, artificial lighting and fencing; b details of any temporary vehicular circulation roads, parking, hardstandings, laydown areas, loading and unloading facilities and turning facilities required during the construction of the development; and c details of the proposed phasing of works referred to in (a) and (b). *Permitted Preliminary Works* means: a archaeological investigations; b soil and sub-soil stripping and temporary storage of such materials, providing these operations do not require the delivery to or removal from the site of bulk filling materials; c treating contaminated material found on site;	To enable the Council to exercise reasonable and proper control over temporary buildings and structures.

Issue	Condition Ref	Schedule of Conditions	Reason
		d installation and diversion of drainage and services within and adjacent to the site; e surveys and geotechnical/geo-environmental investigation surveys; f provision of wheel cleansing facilities necessary for (a) to (e) above; g provision for temporary contractors facilities necessary for (a) to (e) above; and h any other works agreed in writing with the Council to constitute Permitted Preliminary Works. The development shall thereafter be carried out only in accordance with the approved details unless otherwise agreed in writing by the Council.	
<u>Construction Phase</u> Traffic	6	Prior to the construction of any part of the development, a comprehensive Construction Traffic Management Plan, shall be submitted to and approved in writing by Dundee City Council, after consultation with Transport Scotland Trunk Road Network Management Directorate. The Construction Management Plan will required to be implemented during the construction period of the Renewable Energy Plant and alterations to the Construction Traffic Management Plan would have to be approved in writing by Dundee City Council, after consultation with Transport Scotland. The Plan will include, inter alia: • details of proposed access arrangements; • details of construction traffic volumes, composition and routing; • details of car parking provision and management; • details of road safety implications; • details of employee shift and travel patterns;	To reduce the impact of traffic on the local population and other users of the road network while the development hereby approved is under construction.

Issue	Condition Ref	Schedule of Conditions	Reason
		• details of temporary traffic management proposals; • details of the proposed monitoring schedule and reporting procedures; and • details for the management of the plan identifying the persons responsible for implementation. The development shall thereafter be carried out only in accordance with the approved details unless otherwise agreed in writing by the Council.	
Dust and dirt suppression	7	The commencement of the Permitted Preliminary Works defined in Condition 5 shall not take place until there has been submitted to and approved in writing by the Council a scheme for the provision of wheel cleansing facilities for any Heavy Commercial Vehicles or mobile plant associated with the construction of the development. Such approved facilities shall be installed in accordance with a timescale to be approved in writing by the Council and shall be maintained throughout the period of the construction of the development unless any variation has been agreed in writing by the Council. Any Heavy Commercial Vehicles or mobile plant associated with the construction of the Development, shall, whenever they leave the site, pass through the wheel cleansing facilities. The development shall thereafter be carried out only in accordance with the approved details unless otherwise agreed in writing by the Council.	To ensure that satisfactory measures are in force so as to alleviate any impact dust and dirt may have on the local environment during the construction phase.
	8	The commencement of the Permitted Preliminary Works defined in Condition 7 shall not take place until there has been submitted to and approved in writing by the Council an Environmental Management Plan for the control of dust during the period of the Permitted Preliminary Works and the construction of the development. The Plan shall detail all reasonably practicable measures for the suppression of dust and include details of ambient PM10 monitoring to be carried out by the applicant in accordance with LAQM.TG(09) and protocols for investigating dust complaints.	To enable the identification of elevated local concentrations and the need for additional preventative measures to be actioned to ensure that local amenity and public health is protected.

Issue	Condition Ref	Schedule of Conditions	Reason
	9	All open bodied heavy commercial vehicles carrying dry or loose aggregate, cement or soil into and out of the site shall be sheeted.	To ensure that satisfactory measures are in force so as to alleviate any impact dust and dirt may have on the local environment during the construction phase.
Noise and vibration	10	All activities associated with the construction of the development shall be carried out in accordance with British Standards 5228-1:2009 and 5528-2:2009. Prior to the commencement of construction, a detailed schedule of works for the construction stage shall be submitted for the written approval of the Council and the construction of the development shall only be carried out in accordance with such approved details.	To ensure reasonable and proper control to be exercised over noise during construction activities.
	11	The commencement of the development shall not take place until there has been submitted to and approved in writing by the Council, in consultation with SNH, a scheme for construction of the development including: the use of impact pile driving, or other means of pile driving, methods, duration, selection criteria, noise and bird mitigation and monitoring arrangements. The approved scheme shall be adhered to during the period of construction of the Development.	To ensure reasonable and proper control to be exercised over noise during construction activities to ensure that construction does not adversely affect wildlife using River Tay and Tay Estuary, and in the interests of residential amenity.
<u>Operational Phase</u>			
Fuel Type	12	All forest derived fuels to be used in operating the Dundee Renewable Energy Plant shall be certified by accepted sustainability certification systems such as the Forest Stewardship Council and the Programme for the Endorsement of Forest Certification.	To ensure that only certified biomass fuel stocks are used and to ensure that the plant operates according to sound sustainable principles and policies.
	13	The applicant shall continuously throughout the lifetime of the Dundee Renewable Energy Plant record and hold available for inspection by the Council and the Scottish Environmental Protection Agency a written register recording the quantities, nature and sources of fuel combusted including details of certification.	To ensure that only certified biomass fuel stocks are used and to ensure that the plant operates according to sound sustainable principles and policies.

Issue	Condition Ref	Schedule of Conditions	Reason
	14	Prior to the commencement of the operation of the Dundee Renewable Energy Plant the applicants shall prepare in consultation with the Council, Scottish Government, SEPA and SNH a Biomass Sustainability Policy. Once prepared the plant shall operate in accordance with such a policy.	To ensure that only certified biomass fuel stocks are used and to ensure that the plant operates according to sound sustainable principles and policies.
External Storage	15	Unless agreed in writing by the Council, or unless in an emergency, the conveyance and storage of biomass fuel feedstocks and post combustion residues shall be under cover at all times during the operation of the development.	In the interests of visual amenity, to protect the quality of fuel and post combustion residues and to minimise air-borne pollution by residues.
Air Quality	16	The commissioning of the development shall not take place until there has been submitted to and approved in writing by the Council in consultation with SEPA a scheme for the monitoring of air quality within an area to be prescribed by the Council, also in consultation with SEPA. The scheme shall include the measurement location or locations within the relevant area from which air quality will be monitored, the equipment and methods to be used and the frequency of measurement to be taken not less than 12 months prior to the commissioning of the development and for the measurements to be undertaken continuously thereafter until the plant is decommissioned. The scheme should also include details of how the applicants will supply full details of the measurements obtained, to the Council and SEPA within 24 hours of their recording, and the procedures to be employed for data ratification, quality assurance, quality control and annual reporting.	To ensure accurate air quality information is used in the characterisation of the receiving environment and confirm whether the assumptions and correction factors used in the air quality chapter in the Environmental Statement and Addendum are valid and will inform the level of abatement required. Also to ensure that the Council and SEPA are kept informed on a regular basis of air quality impacts resulting from the development hereby permitted.

Issue	Condition Ref	Schedule of Conditions	Reason
	17	The commencement of the development shall not take place until evidence has been provided to demonstrate that there will be no exceedences of the National Air Quality Strategy SO2 objectives at relevant receptors at ground level and height in the cumulative scenarios as follows: • Main Stack, Nynas Stacks and emissions from ships; • Auxiliary Boilers, Nynas Stacks and emissions from ships; and • Main Stack, Auxiliary Boilers, Nynas Stacks and emissions from ships. The methodology for the above to be agreed by the Council and SEPA, and should include air dispersion modelling, and ambient monitoring of baseline conditions. Where the assessment of any of the scenarios predicts an exceedence of any of the LAQM national air quality objectives for SO2, then the applicant shall provide a scheme for mitigating their impacts for approval by the Council and SEPA and thereafter implement in accordance with said details.	To protect public health in respect of sulphur dioxide.
Hydrology/ Hydrogeology/ Geology/Soils	18	The commencement of the development shall not take place until there has been submitted to and approved in writing by the Council, in consultation with SEPA and SNH, details of all mitigation measures relating to site drainage and hydrology as specified in Table 19.1 of Chapter 19 of the Environmental Statement Volume 2 dated August 2010.	To ensure that the development is appropriately drained and that potential pollution is prevented by appropriate containment measures.
	19	For the avoidance of doubt, the scheme referred to in Condition 18 shall include: a details of site drainage; b a Site Waste Management Plan; c measures to ensure that no leachate or any contaminated surface water from the site shall be allowed at any time to enter directly or indirectly into any watercourse or underground strata or onto adjoining land;	To ensure that the development is appropriately drained and that potential pollution is prevented by appropriate containment measures.

Issue	Condition Ref	Schedule of Conditions	Reason
		d provision to ensure that all existing drainage systems continue to operate in a satisfactory manner; e provision for trapped gullies in car parks, hardstandings and roadways; f measures to ensure that all foul sewage must drain to an approved foul sewerage and/or sewage disposal system; g provisions to distinguish between temporary and permanent parts of the works; and h phasing of works. The development shall thereafter be carried out only in accordance with the approved details unless otherwise agreed in writing by the Council.	
	20	Any surface water contaminated with hydrocarbons or silt arising during the construction of the development shall be treated to remove contamination, in a manner approved by the Council, in consultation with SEPA, Scottish Water and SNH, prior to being discharged to any public sewer or watercourse.	To ensure that potential pollution is prevented by appropriate containment measures.
	21	All facilities required for the storage of hydrocarbons, process chemicals or similar liquids must be sited on impervious bases and surrounded by impervious bund walls. The size of any bunded compound shall be at least equivalent to the capacity of the largest tank plus 10%. All filling points, vents and sight glasses must be located within the bund and there must be no drain through the bund floor or walls.	To ensure that potential pollution is prevented by appropriate containment measures.
	22	In all bunded compounds referred to in Condition 21 in which acids, alkalis or sulphides are kept, in addition to their being contained in suitable facilities, appropriate protective lining agreed with the Council in consultation with SEPA shall be applied to the inner walls of the bunds.	To ensure that potential pollution is prevented by appropriate containment measures.
	23	Any storage facility to which Conditions 21 or 22 refer shall be completed in accordance with the requirements of those Conditions before being brought into use.	To ensure that potential pollution is prevented by appropriate containment measures.

Issue	Condition Ref	Schedule of Conditions	Reason
Flood Risk	24	The commencement of the development shall not take place until there has been submitted to and approved in writing by the Council in consultation with SEPA, a scheme to minimise the risk of damage from any flooding event. The scheme shall provide for critical plant and equipment set at a minimum level of 5.01 metres above Ordnance Datum. The scheme shall include a full assessment of the safety of personnel and include consideration of methods of safe access and egress to and from the development. The measures approved in the scheme shall be implemented in accordance with a timescale approved by the Council and maintained for the duration of the operation of the development, unless otherwise agreed in writing by the Council.	To protect the development, the local environment and people from the risk of flooding.
Site Contamination	25	Development shall not begin until the investigation and risk assessment proposed in the submitted Stage I Desk Study are completed and, if necessary, a remediation strategy to deal with contamination at the site has been submitted to and approved in writing by the planning authority. The strategy shall contain proposals to deal with contamination to include: a the nature, extent and type(s) of contamination on the site; b measures to treat/remove contamination to ensure the site is fit for the use proposed and does not contain any significant pollution linkages; c measures to deal with contamination during construction works; and d verification of the condition of the site on completion of decontamination measures.	To ensure that potential contamination is dealt with in an appropriate manner.
	26	Before the development is commissioned the remediation strategy shall be fully implemented and a verification report with relevant documentation demonstrating that the objectives of the remediation strategy have been achieved shall be submitted to and approved by the planning authority.	To ensure that the remediation strategy is properly implemented.

Issue	Condition Ref	Schedule of Conditions	Reason
Transport	27	Prior to the operation of any part of the development a comprehensive Traffic Management Plan shall be submitted to and approved in writing by the Dundee City Council, after consultation with Transport Scotland Trunk Road Network Management Directorate. The Traffic Management Plan will require to be implemented during the operational period of the Renewable Energy Plant and alterations to this Traffic Management Plan would have to be approved in writing by Dundee City Council, after consultation with Transport Scotland. The Plan will include, inter alia: • details of proposed access arrangements; • details of operational traffic volumes, composition, routing and time; • details of HGV loads carried; • details of road safety implications; • details of traffic management proposals; • details of the proposed monitoring schedule and reporting procedures; and • details for the management of the plan identifying the persons responsible for implementation.	To minimise the impact of traffic from the development on the local road network.
	28	No construction, operational or decommissioning traffic associated with this development shall use the A92 East Dock Street/East Camperdown Street priority controlled junction and the Level Crossing at East Camperdown Street.	In the interests of traffic, pedestrian and railway safety and the free flow of traffic on the road network.

Issue	Condition Ref	Schedule of Conditions	Reason
Archaeology and the Historic Environment	29	The commencement of the permitted preliminary works shall not take place until there has been submitted and approved in writing by the Council a scheme of archaeological investigation and an associated implementation programme. The development shall thereafter be carried out only in accordance with the approved details unless otherwise agreed in writing by the Council.	To allow the surveying of the site for archaeological artefacts and the recovery of any important archaeological discovery before construction of the main development begins.
	30	The scheme approved pursuant to Condition 29 shall provide for: a any person nominated by the Council to be permitted safe access to the part of the site where the find is made; b finds of national importance to be evaluated and, where practicable (having regard to the purposes of the development), preserved in situ; and c phasing of works.	To allow the surveying of the site for archaeological artefacts and the recovery of any important archaeological discovery before construction of the main development begins.
	31	Any further investigations and recording of such finds as are considered necessary by the Council shall be undertaken prior to the construction of any part of the development on that part of the site where such finds are identified, and in the case of finds of national importance in accordance with the phasing of works approved pursuant to Condition 30(c), unless otherwise approved in writing by the Council.	To allow the surveying of the site for archaeological artefacts and the recovery of any important archaeological discovery before construction of the main development begins.
	32	Prior to the commencement of the development the written approval of the Council in consultation with Historic Scotland shall be obtained for a scheme which shall outline measures to be taken to protect listed structures adjacent to the boundary of the application site both during the construction and operational process. The development shall thereafter be carried out only in accordance with the approved details unless otherwise agreed in writing by the Council.	To protect structures listed as being of architectural or historic importance.

Issue	Condition Ref	Schedule of Conditions	Reason
Use of Medium and Low Grade Heat	33	Prior to the commissioning of the development an updated CHP Feasibility Review assessing potential commercial opportunities for the use of heat from the development shall be submitted to and approved in writing by the Council. This shall provide for the ongoing monitoring and full exploration of potential commercial opportunities to use heat from the Development and for the provision of subsequent reviews of such commercial opportunities as necessary. Where viable opportunities for the use of heat in such a scheme are identified, a scheme for the provision of the necessary plant and pipework to the boundary of the site shall be submitted to and approved in writing by the Council. Any plant and pipework installed to the boundary of the site to enable the use of heat shall be installed in accordance with the agreed details.	To ensure that medium and low grade heat is available for use to the benefit of the local domestic, commercial and industrial users when the demand arises.
	34	The commissioning of the development shall not take place until sufficient plant and pipework has been installed to ensure that there are no barriers to the future supply of heat to the boundary of the site under Condition 33 at a later date if opportunities to do so are identified pursuant to Condition 33.	To ensure that medium and low grade heat is available for use to the benefit of the local domestic, commercial and industrial users when the demand arises.
Local Community Liaison	35	The commencement of the development shall not take place until there has been submitted to and approved in writing by the Council a scheme for informing the local community about the progress of the development. The scheme shall be implemented in accordance with the approved details, unless otherwise agreed in writing by the Council.	To ensure that the local community is informed about the progress of the development.
Decommissioning Phase	36	Unless otherwise agreed with the Council, within 12 months of the site ceasing to be used for the purposes of electricity and heat generation, a scheme for the demolition and removal of the development from the site shall be submitted to the Council, for approval in writing.	To ensure that the site is not allowed to become derelict after the cessation of electricity and to protect the environment and the amenity of local resident and public health.
	37	The scheme referred to in Condition 36 above shall include: a details of all structures and buildings which are to be demolished; b details of the proposed reuse of any buildings to be retained; c details of the means of removal of materials resulting from the	To ensure that the site is not allowed to become derelict after the cessation of electricity and to protect the environment and the amenity of local resident and public health.

Issue	Condition Ref	Schedule of Conditions	Reason
		demolition and methods for the control of dust and noise; d the phasing of the demolition and removal; and e details of the restoration works and the phasing of the restoration works.	
	38	The demolition and removal of the development (which shall include all buildings, structures, plant, equipment, areas of hardstanding and access road) and subsequent restoration of the site shall thereafter be implemented in accordance with the approved scheme referred to in Condition 36, unless otherwise agreed in writing by the Council.	To ensure that the site is not allowed to become derelict after the cessation of electricity and to protect the environment and the amenity of local resident and public health.