August 2008

# Avonmouth Wind Turbines

*A Statement of Community Involvement for Bristol City Council's Energy Management Unit*

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# 1. Introduction

Bristol City Council's Energy Management Unit (EMU), together with the Council's Corporate Consultation Team, carried out pre-application consultation in relation to the development proposal for two wind turbines to be built on land in Avonmouth currently owned by the Council. Discussions took place early on with key statutory and non-statutory consultees with the main public consultation taking place from the beginning of March to end of April 2008.

The EMU, together with PPS, carried out pre-application stakeholder and public consultation in relation to the draft Environmental Impact Assessment that accompanies the planning application. It was felt to be important to give stakeholders and the public the opportunity to discuss and comment on the environmental issues in more detail.

Both consultation programmes and their results are detailed in this report alongside the EMU's response to the key findings from each.

Bristol City Council has a draft Statement of Community Involvement (SCI) that has recently been independently tested for its soundness prior to a final draft being approved by the Secretary of State. The consultation programme carried out by the EMU and PPS complies with the draft SCI's recommendations for public consultation by developers.

# 2. Methodology

## i Pre-application Consultation on the Development Proposal

Bristol City Council's Energy Management Unit and the Corporate Consultation Team employed a number of tools to ensure that key stakeholders and the local public were informed about the plans and had an opportunity to comment on them:

1. Stakeholder meetings
   In March 2007 at the beginning of the pre-application consultation process, the EMU and the project team held meetings with key stakeholders.

   On 6 March a meeting was held for Statutory Consultees at which the following organisations were represented: Seabank Power Station; Highways Agency; Bristol Port Company; and the Government Pipelines & Storage System. The following officers from Bristol City Council also attended: Archaeologist; Nature Conservation Officer; Historic Environmental Record Officer: Landscape Architect; as well as the County Ecologist from South Gloucestershire Council.

   A number of actions were agreed at this meeting in terms of information that needed to be included in the Environmental Impact Assessment.

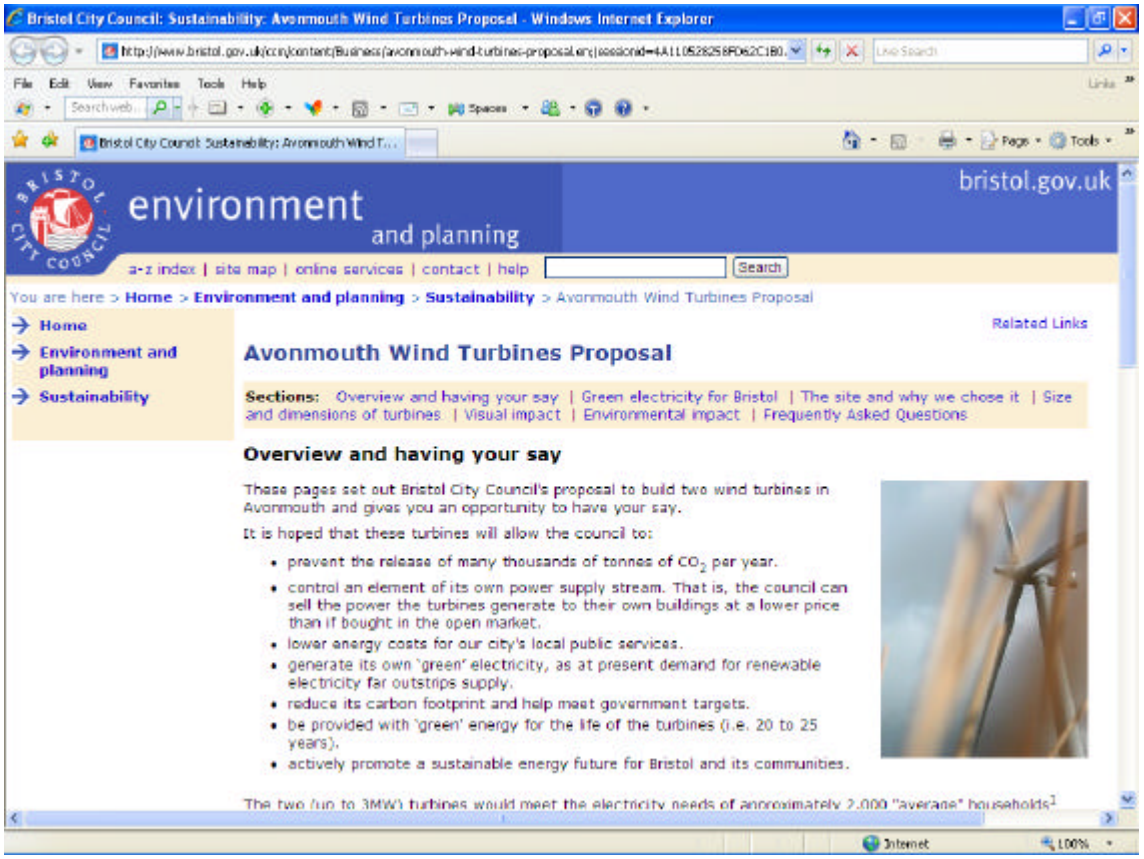
   The following groups were represented at the Non Statutory Consultees meeting held on the same day: Bristol Naturalists Society; Avon Wildlife Trust; and the Bristol Ornithological Club. Participants at this meeting supplied information about bird migration patterns and other issues. This information was subsequently passed onto the project team's ornithologist for inclusion in the Environmental Impact Assessment.

2. Council newsletter
   During the first week of March 2008 an article was placed in Bristol City Council's newsletter, 'Our City', regarding the plans for the Avonmouth Wind Turbines. This is a free publication delivered by Royal Mail to every household in Bristol.

   The article highlighted the key features of the plans and showed a photomontage of how the turbines could look.

It also asked local residents to comment on the proposals and listed ways that people could get involved in the consultation process, including a public open day and an on-line survey. It also drew attention to web pages dedicated to the scheme on the Council's website.

3. Project website




Bristol City Council's Energy Management Unit set up web pages dedicated to the Avonmouth Wind Turbine Proposals. The pages set out the need for green electricity in Bristol and the reasons for pursuing this site. It also provided information on the size and dimensions of the turbines. An image of the home page of the website at the time the proposals were announced is shown above.

The web pages hosted a series of photomontages designed to illustrate to the public how the turbines would impact visually on the area. One of the pages also addressed the potential environmental impact the turbines could have on the local area.

Finally, it provided a series of Frequency Asked Questions as well as an on-line questionnaire that people could fill out to record their views.

The web pages received 1,451 unique visitors during the survey window of 3 March to 14 April 2008, 245 of whom completed the on-line survey.

4. Online discussion forum

The Council also ran a discussion forum on their website www.askbristol.com from the beginning of March to the end of April 2008. The forum was promoted on the Council's web pages for the wind turbines and in an e mail to the members of the AskBristol on-line citizens panel. The forum attracted 14 comments with 13 of these being supportive of the proposal and encouraging the Council to be more ambitious with its plans, or to accelerate implementation. The forum can be viewed at: www.askbristol.com/theme.php?id=9

5. Public Open Day

A Public Open Day was held on Tuesday 8 April 2008 at Avonmouth Community Centre. This was advertised in the Council's newspaper, on the dedicated web pages, through posters put up in shops and community facilities in Avonmouth and the surrounding area, and letters sent to all businesses in the Avonmouth area.

The event was open from 3pm to 8pm and was staffed by members of the project team from the Council's Energy Management Unit, The Landmark Practice (environmental consultants) and GVA Grimley (planning consultants).

The open day had exhibition boards, which displayed the plans for the site and photomontages illustrating the potential visual impact of the scheme. There was an information video on constant play as well as printed material for people to consider. There was also a survey form for people to complete.

27 people attended the event. A photo of the Public Open Day is shown below.

6. Questionnaire and on-line survey

   A survey was undertaken to gain an understanding of local people's views on the proposals. The survey was available to complete both on line and on paper. Paper copies were distributed to all of Bristol's libraries as well as being available on request via the telephone hotline and at the Public Open Day.

   The survey included questions on climate change and green electricity in general as well as on the proposals. There were open and closed ended questions to allow people to provide their thoughts on the proposals.

   255 people completed the survey – 245 were completed via the Council's website with the rest being paper copies.

   The results of the survey can be found in Chapter 3 of this report.

7. Media publicity

   The local media was used to publicise the proposals and the consultation process. A press release was issued and a media call held at the site. As the proposal has a visual impact beyond the boundaries of Bristol City Council, efforts were also made to communicate the message to residents in South Gloucestershire and also North Somerset.

   The project and consultation programme gained coverage on BBC Points West, ITV West and GWR, as well as local newspapers the Western Daily Press and Bristol Evening Post. Examples of the press coverage can be found in the Appendix of the Council's Public Consultation Report in Appendix 1.

### ii Consultation on the Environmental Impact Assessment (EIA)

For the consultation on the EIA, the main objective was to engage with key stakeholders but also members of the public who had expressed an interest in being kept informed through earlier public consultation.

A stakeholder workshop and site visit was organised and key stakeholders attended through an invitation letter. 22 stakeholders attended the event on 15 July 2008. A list of all stakeholders invited to the event can be found in Appendix 2.

Stakeholders were invited to attend a site visit in the afternoon before the workshop in the evening. The site visit included a tour of the Bristol Port Company's turbines accompanied by Patrick Kearon from The Bristol Port Company. The tour also drove past the proposed site of the turbines with Landmark Practice, the environmental consultants, putting the plans into perspective. 11 people took up the opportunity to attend this site visit.

A variety of stakeholders and members of the public attended the workshop in the evening. As participants arrived they were asked which discussion group they would like to join – Wildlife and Birds; Transport; Visual and the General Environment. As only a small number of participants had signed up for the Transport and Community groups, it was decided to combine these topics into a single group session.

Paul Isbell, Energy Manager at Bristol City Council gave everyone an update on the project, the Government and the Council's $CO_2$ targets and provided some examples of the effects of global warming.

Phillip Higgins from Bristol City Council's Corporate Consultation Team then outlined the pre-application public consultation already undertaken by his team on the project and results of the consultation so far.

Finally, Bernice Roberts from Landmark Practice presented the main findings from the draft Environmental Impact Assessment.

The participants were then asked to go into their groups to discuss their topics of choice. Each group was provided with a large-scale location map of the site, a site layout plan and a map showing important environmental designations in relation to the Avonmouth site. The groups were also provided with a list of suggested topics to discuss for guidance. At least one member of the project team was assigned to each group to answer questions and provide factual information, but not to lead the discussion.

The results of the workshop are outlined in Chapter 3. A meeting report of the workshop can be found in Appendix 3.

# 3. Key Findings

## i Key findings from the Consultation Regarding the Development

Bristol City Council's Corporate Consultation Team analysed the results of the questionnaire survey undertaken as part of the public consultation process. The main findings of the survey are outlined below.

**Analysis of Respondents**

The bulk of the respondents came from the 36 to 60 years age group with 54.9% of respondents falling into this bracket. 31.8% of respondents came from the 18 to 35 year age group. 69% of respondents were male.

90% of respondents were Bristol City Council residents with around 7% from Avonmouth and the neighbouring ward of Kingsweston. The remaining respondents were from South Gloucestershire, North Somerset and further afield.

11 responses were received from businesses or organisations and 244 were received from citizens.

**Green Electricity for Bristol**

235 of the 250 respondents who answered the question concerning green electricity for Bristol agreed climate change is happening now and Bristol must increase its efforts to tackle it. There was also strong support for the Council producing its own green electricity with 244 respondents agreeing to this idea.

When asked to comment about the Council producing is own green electricity, 142 responses were received. 47 comments were positive comments about the proposal, 29 comments related to other green energy suggestions, 14 comments suggested the Council should 'go ahead' with the proposals and ten comments urged more than two turbines to be built. One negative comment was received as well as one relating to the author's lack of faith in the Council's ability to deliver.

For a full report on the results please see Appendix 1.

**Proposed site of the wind turbines**

The survey included a map of the proposed wind turbines and its location in the wider context. When asked about the proposed location, 202 people commented; 164 agreed with the site, 20 wished more than two turbines could be built, six comments had reservations about the site and one commented that they thought it was a waste of a site.

An overwhelming number of comments were positive about the use of the brown field site by the Council for renewable energy. The responses show that very few respondents raised any concerns about the location of the turbines.

**Environmental Issues**

Information was provided on the EIA and the site's proximity to areas with important habitat and wildlife designations. 146 comments were received concerning this. 46 of the comments received said that there would be no or little impact on the environment by the scheme. 36 comments recognised the importance of the EIA in considering the environmental impact of the proposal. 33 comments stated that the bigger picture was more important and 11 suggested ways to minimise the impact of the turbines.

The results show that respondents did not think the proposals would have a negative impact on local wildlife habitats.

**Visual Impact**

Respondents were then asked about the visual impact of the proposed turbines and 214 people answered the question. An overwhelming 203 respondents were happy about the visual impact, four thought they were ok and six miscellaneous comments were received.

These results illustrate an incredibly high level of support for the proposals in relation to the visual impact the turbines will have on the local area.

**Size and dimensions**

When asked their views on the proposed height and size of the turbines, 59 respondents thought that they needed to be of a certain size in order to maximise the wind. 36 respondents thought the size of the proposed turbines was ok and three comments were received saying that the turbines were too high.

**General issues**

At the end of the survey there was an opportunity for respondents to add any other comments about the proposal and 175 comments were received. As with the rest of the survey results, the comments were overwhelmingly positive with 121 comments received advising the Council to go ahead and build the turbines. 20 comments were again received asking the Council to build more than two turbines on the site. Only two comments were received that were against the scheme.

As the survey results show the proposals were generally very well received with the people who took the opportunity to comment overwhelming positive about the Council's plans. The main query raised was whether more than two turbines could be built on the site.

## ii Key findings from the Consultation regarding the Environmental Impact Assessment (EIA)

The workshop held in July 2008 focused the consultation on the EIA. Participants were split into three groups – Wildlife and Birds, Transport and the Community, Visual and the General Environment. After group discussions, each group reported their findings to the rest of the participants.

The groups' feedback to the rest of the participants was very positive with few concerns raised. The main findings were as follows:

Wildlife & Birds

The group reported they were fairly positive about the proposals with only a couple of points raised.

They thought that the turbines were well located for birds as they were set away from the edge of the Estuary. The group concluded that the main problem for birds comes during the construction and start up of the turbines.

The group pointed out that no bird deaths had been caused by Bristol Port Company's turbines.

They thought that off site compensation for the bats should be provided as well as a relocation programme for slow worms and grass snakes.

Transport & Community

This group focused on two main areas: energy and aircraft.

**Energy & Public Access**

The group decided that the proposals would help minimise carbon emissions.

They queried the possibility of increasing the number of turbines on the site and questioned whether Bristol City Council had any additional sites to provide turbines.

The group questioned how the electricity would be fed into the national grid and requested that this be done as locally as possible in order to reduce the loss in transmission.

They recognised that the proposals were a good use of the site but requested the project team investigate the potential for public access to enjoy the turbines and wildlife. It was accepted that public access would need to be limited because of wildlife needs on site.

**Aircraft**

This group expressed the concern felt by BAE Systems over the cumulative number of turbines being developed in the Avonmouth area and the constraints to aircraft radar the turbines cause. Participants pointed out that Bristol Port's turbines were not a problem and that BAE Systems did not see Bristol City Council's turbines to be an issue.

Visual & the General Environment

This group thought the turbines looked good and even enhanced the area. The group stated they would like to see electricity taken to Seabank Power Station to reduce the loss of electricity during transmission.

The group queried how rough land could be maintained and who would maintain it – Bristol City Council, a management company or a Developer, such as Ecotricity as at Avonmouth Docks. They stressed that a good management plan for the turbine site would be required.

They also queried whether there could be contamination during excavations but were assured by the project team that this would be dealt with at the time.

They questioned whether disturbing the peat would release extra carbon. They also asked how long it would take for the turbines to pay back the energy used during their construction.

# 4. Response to Key Findings

Throughout the consultation programme – in the public exhibitions and stakeholder workshop - a number of questions and concerns have been raised about the proposals put forward by Bristol City Council's Energy Management Unit.

PPS has summarised the main questions and concerns under various sub-heading shown in the table below. The response from the EMU and Project Team to these questions and concerns is also shown.

| **Key issues raised** | **Response from the Energy Management Unit and Project Team** |
|---|---|
| **From the consultation regarding the proposals** | |
| **Why can't more than two turbines be built?** | Wind turbines need to be carefully located and well spaced to optimize their performance. The size and constraints of the Avonmouth site will only allow two large-scale wind turbines to operate efficiently. |
| | |
| **From the consultation regarding the Environmental Impact Assessment** | |
| **Consideration needs to be given to the construction period and how this could affect the birds.** | The Environmental Statement includes a preliminary construction programme, which states that the construction phase will last 16 weeks. The start date of construction works cannot be set until the procurement process is established (once planning consent is granted). The ecological mitigation set out in the ES states that the timing of construction will be agreed with an ecologist and the most disruptive activities will be undertaken outside bird breeding seasons. |
| **Clarification required in the EIA that** | The Environmental Statement, which reports on |

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|---|---|
| **different bird species follow the same migratory path** | the findings of the EIA, includes a map showing the flight lines used by birds using the application site and adjacent mudflats of the Severn Estuary. These flight lines differentiate between SPA (designated) species and non-SPA species and are further explained in the accompanying text and appendices. |
| **Off-site bat mitigation programme is needed** | Off-site mitigation measures for bats will be offered as part of the Long Term Ecological Management Plan for the development. This Plan will be prepared in agreement with the Local Planning Authority and Natural England and secured as part of the planning consent. Suggested compensation measures will include the erection of bat boxes on Bristol City Council owned land, outside of the application site, so as not to attract bats to the turbines. |
| **Does Bristol City Council have any other sites to develop renewable energy?** | Bristol City Council has investigated its land holdings to consider alternative sites for the Proposed Wind Turbines Project in relation to the current scheme. This search has demonstrated that this site is one of only a small number of sites which currently have potential for this type and scale of renewable energy generation. This position would have to be reviewed against changes in technology and the status of the Council's landholdings and lease agreements etc over time in order to test future schemes.<br><br>In terms of wider renewable energy schemes there are many other opportunities, and the Council already has Biomass boiler installations at Blaise Nursery, Florence Brown Special School & Netham Sports Pavilion. Biomass |

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| | boilers have also been installed as part of the current round of BSF schools at Bristol Brunel Academy as well as others planned at Brislington Enterprise College, Whitefield Fishponds Community School and Hartcliffe Education Campus. The Council will also be installing biomass boilers at the Museum of Bristol and the The Park Education Centre. Bristol City Council continues to explore wider opportunities for renewable energy contributions and carbon reduction through its Energy Management Unit. |
| **Explanation of how the electricity would feed into the national grid is required.** | A substation will be constructed on the application site containing an exit point to the nearest available entry point to the national grid. This will either be at Seabank Power Station, which lies adjacent to the application site, or at Avonmouth Docks (some 4km to the south of the application site). The work associated with connecting the turbines (between the exit point on the application site and the substation at Seabank) is covered by Western Power Distribution's Permitted Development Rights. A Feasibility Study has been undertaken into connecting the turbines at both points and concluded that connection at Seabank Power Station is technically feasible and is the most suitable connection option for this scheme, but the final route cannot be fixed until a formal offer is placed by Bristol City Council (following receipt of planning consent). |
| **Can part of the site be opened up to the public? Possibly for organised visits?** | Yes. The Council will replace the fence around the application site boundary to increase |

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|---|---|
| | security. It intends to allow organised visits once the wind turbines are operational. |
| **Feasibility of using the Estuary to deliver the blades** | It would not be possible for the ships carrying wind turbine parts to dock adjacent to the site as the mud flats are too shallow. Excavating the mud flats would be environmentally damaging and would disturb the birds. There is a wide band of salt marsh between the mud flats and the railway, which would be damaged trying to move the components across it.<br>We also anticipate that Network Rail would have concerns with parts being lifted over the railway line as this line is unlikely to be suitable for the carriage of the turbine parts. |
| **Good management plan needed to manage both turbines and surrounding land. Clear lines of responsibility required.** | A Long Term Management Plan will be prepared and agreed with the Local Planning Authority and statutory consultees. A number of suggested management measures are provided in the Environmental Statement for discussion with the Local Planning Authority. Detailed plans will be secured as part of the planning consent. The operator of the wind turbines will be responsible for ensuring that the management plan is implemented. This may be Bristol City Council or another operator if the Council chooses to hand over the development following planning consent. |
| **Is the current generated AC or DC?** | The current generated will be AC. |

| | |
|---|---|
| **Will the peat soil on site release carbon when the development takes place and, if so, how much?** | The construction phase of the development scheme will involve the use of piles to provide an adequate foundation solution for the proposed turbine bases. At this time it is anticipated that these works will comprise the drilling of a number of non-displacement piles using Continuous Flight Auger (CFA) techniques through the underlying alluvium deposits to depths of between 10 and 20 metres below ground level. The potential exists for naturally occurring carbon dioxide and methane present within peat bands in the alluvium to be released to atmosphere during the piling works. Such releases will be negligible, however, because the CFA piling technique will not create an open void via which might allow gases to migrate to the surface. The casting of concrete in-situ (it will be pumped into the hole during the withdrawal of the augers) and subsequent construction of the overlying floor slab will also effectively sever any on-going migration pathway by which gases may migrate to the surface and atmosphere. It is therefore considered that the potential for the release of greenhouse gases present within the alluvium during construction will be very low. |
| **Can the turbines be put into reverse and used to disperse fog?** | There is no evidence of turbines being used for this purpose elsewhere. From the meteorological perspective it is considered that if the turbines were "motored" to make them turn in windless foggy conditions then they would not be effective in clearing fog except perhaps for exceptional meteorological conditions and then only in a very localised manner. |

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|---|---|
| | Turbines are designed to clear and specific standards and therefore may not be operated outside the conditions that have been considered within their design. Design changes would therefore be required before such operation could be undertaken. Additionally such operation would have a substantial electrical demand with a material cost to be born.<br><br>In summary therefore it is not practical to operate the turbines in this way and it is questionable if such operation would achieve any benefit in the dispersion of fog. |
| **How long will the turbines take to pay back the energy used to produce and construct them?** | Studies show that wind turbines have an energy "payback period" of less than one year. A recent study by Vestas for 2MW machines in Denmark revealed energy payback of under 8 months for onshore wind turbines.<br><br>Set against an anticipated period of 25 years of generating electricity, wind turbines provide a major benefit it terms of reducing carbon emissions. |

# 5. Conclusion

The pre-application consultation regarding the proposed wind turbines in Avonmouth and the accompanying EIA statement, carried out by Bristol City Council's Energy Management Unit, the Corporate Consultation Team and PPS, shows strong support from both the public and stakeholders who participated in the pre-application consultation process.

A wide variety of consultation tools were used to ensure that the public were informed about the plans and had every opportunity to comment on them. The pre-application consultation programmed complied with the advice set out in Bristol City Council's draft Statement of Community Involvement.

The EMU and project team ensured that stakeholders were also given the opportunity to voice their opinions on the EIA through a stakeholder and public workshop. The result of this workshop was again broadly positive with strong support shown from a variety of stakeholders and the general public.

As a result, there has been no need for Bristol City Council's Energy Management Unit to make any significant changes to the proposals but certain points of clarification have been provided on the following queries:

- Why no more than two turbines can be built on the site?
- How the land will be managed after the construction of the turbines?
- How the construction of the turbines will affect birds and other wildlife?
- How the energy generated by the turbines will reach the national grid?

This report has served to provide Bristol City Council's Energy Management Unit with the opportunity to respond to all queries raised. These responses can be found in Chapter 5 of this document.

# Appendix 1 – Bristol City Council Public Consultation Report

**Preliminary findings of BCC public consultation on Avonmouth wind turbine proposal**

**Background**

Bristol City Council is exploring a proposal to build two 3MW wind turbines on a brown field site off Severn Road in Avonmouth. To meet the requirements of the council's Statement of Community Involvement, a public consultation was held in March and April 2008 in order to publicise the proposal and give people the opportunity to respond at the pre-application phase. The public consultation is part of an overall programme of consultation that will also stakeholder consultation looking at the findings of the Environmental Impact Assessment.

**Methodology**

The public consultation survey ran from 3 March to 14 April 2008 and included a drop-in event / exhibition held at the Avonmouth Community Centre on 8 April

**Publicising the consultation**

Extensive efforts were made to publicise the proposals and the consultation as listed below:

- One page article in the council's newspaper – Our City – delivered to every household in the city
- Dedicated web pages
- Letter sent to all businesses in the Avonmouth area
- Posters were put up in shops and community facilities in Avonmouth and the surrounding area
- Media call at the site
- Press release issued
- Public information video produced

As the proposal has a visual impact beyond the boundaries of Bristol City Council, the council also made efforts to communicate the message to residents in South Gloucestershire and also North Somerset, particularly around the villages of Pill and Severn Beach. The publicity campaign resulted in coverage on BBC Points West, ITV West, The Evening Post, Western Daily Press and GWR – see appendix . These media organisations have a footprint which include the target areas in North Somerset and South Gloucestershire.

The dedicated web pages received 1,451 unique visitors during the survey window.

**Public information about the proposal**

A website was created at www.bristol.gov.uk/wind to provide public information about the proposal. A key aim of the consultation was to encourage residents to learn about the proposal prior to completing the survey so that they would be informed consultees. To reinforce this, an online survey was created using a step-through approach, where respondents were presented with information on a key aspect of the proposal and then asked to comment on it. Multi-media – photos and video – were incorporated into the website and online survey to better convey the information to respondents.

**The survey**

The survey was available online as Bristol now has 75% of people with access to the internet at home, work or their place of study. Paper copies of the survey and information about the proposal were also distributed to the city's libraries and were available on request via the telephone helpline, which was also publicised. This was done to adequately cover those people who do not have internet access.

The survey sets the scene with some questions about climate change and green electricity generally, before posing a number of open-ended questions about the main features of the proposal.

**Exhibition of the proposals**

On April 8, a public exhibition of the proposals took place in the centre of Avonmouth Village in Avonmouth Community Centre. The event was open from 3pm to 8pm and was attended by members of the council's Energy Management Unit (EMU), Landmark Practice (Environmental Consultants commissioned) and GVA Grimley (Planning Consultants). The event featured display boards of the proposals, a video of the proposals and printed material and survey forms. Representatives from the project team were on hand to clarify any points with visitors to the exhibition. The event was publicised in council's communications for the scheme and consultation and was also publicised by posters in local shops and community facilities. The event attracted 27 people.

**Online discussion forum**

The video of the proposal was also made available on the council's www.askbristol.com website, where it introduced an online discussion forum. The discussion forum ran from 3 March to the end of April and attracted 14 comments. These will be analysed as part of this report.

**Who responded to the survey?**

The survey attracted 255 responses – 245 of which came via the council's website, with the remainder being paper forms. 7 out of 10 respondents were male.

| Absolute<br>Analysis %<br>Respondents | |
|---|---|
| **Base** | **255**<br>**100.0%** |
| **Missing** | |
| **No reply** | 1<br>0.4% |
| **Age range** | |
| **Under 18 years** | 7<br>2.7% |
| **18 years to 35 years** | 81<br>31.8% |
| **36 years to 60 years** | 140<br>54.9% |
| **60 years to 75 years** | 24<br>9.4% |
| **76 years and above** | 2<br>0.8% |

Age profile of the response is as follows:

The bulk of the responses came from the 36 to 60 years age group.

Origin of respondents

The survey asked for the postcode of the respondent so that the ward of the respondent could be mapped. 50 people gave a postcode that could not be mapped to a Bristol City Council ward, which may be because inadequate information was supplied, or the postcode is beyond the Bristol City Council boundary.

| | | Count |
|---|---|---|
| Ward | Postcode error / problem in classification | 50 |
| | Ashley | 20 |
| | Avonmouth | 13 |
| | Bedminster | 5 |
| | Bishopston | 8 |
| | Bishopsworth | 1 |
| | Brislington East | 2 |
| | Brislington West | 2 |
| | Cabot | 12 |
| | Clifton | 5 |
| | Clifton East | 7 |
| | Cotham | 13 |
| | Easton | 8 |
| | Eastville | 8 |
| | Filwood | 1 |
| | Hartcliffe | 3 |
| | Henbury | 7 |
| | Hengrove | 3 |
| | Henleaze | 4 |
| | Hillfields | 5 |

| | | |
|---|---|---|
| | Horfield | 3 |
| | Kingsweston | 5 |
| | Knowle | 4 |
| | Lawrence Hill | 4 |
| | Lockleaze | 4 |
| | Redland | 12 |
| | Southville | 8 |
| | St George East | 4 |
| | St George West | 1 |
| | Stockwood | 2 |
| | Stoke Bishop | 10 |
| | Westbury-on-Trym | 8 |
| | Windmill Hill | 13 |
| | Total | 255 |

This table shows the survey attracted a response of 18 people from Avonmouth and the neighbouring ward of Kingsweston. 7 responses were received from North Somerset Council residents and 12 from South Gloucestershire Council. 6 responses came from people living beyond the three councils affected by this proposal.

11 responses were from businesses or organisations, whilst the remaining 244 responses were from citizens.

**Green Electricity for Bristol**

The first bank of questions solicited respondents' opinions on the council's performance and leadership around climate change issues. Most respondents thought the council was tackling the issues to a degree, however, the response 'to a limited extent' attracted the highest response across all issues tested.

| Absolute Analysis % Respondents | Base | Missing | To a large extent | To some extent | To a limited extent | Not at all | Don't know |
|---|---|---|---|---|---|---|---|
| | | No reply | | | | | |
| **Base** | **1020** | **11** | **75** | **305** | **446** | **105** | **78** |
| | | **1.1%** | **7.4%** | **29.9%** | **43.7%** | **10.3%** | **7.6%** |
| **Taking real action to reduce its carbon footprint and tackle climate change** | **255** | 3 | 27 | 88 | 118 | 12 | 7 |
| | | 1.2% | 10.6% | 34.5% | 46.3% | 4.7% | 2.7% |
| **Taking a lead in encouraging citizens to reduce their environmental impact** | **255** | 4 | 22 | 93 | 110 | 20 | 6 |
| | | 1.6% | 8.6% | 36.5% | 43.1% | 7.8% | 2.4% |
| **Taking a lead in encouraging businesses to reduce their environmental impact** | **255** | 2 | 12 | 46 | 107 | 40 | 48 |
| | | 0.8% | 4.7% | 18.0% | 42.0% | 15.7% | 18.8% |
| **Increasing understanding of the causes of climate change and its possible consequences** | **255** | 2 | 14 | 78 | 111 | 33 | 17 |
| | | 0.8% | 5.5% | 30.6% | 43.5% | 12.9% | 6.7% |

The next bank of questions looked at people's interest in green electricity measures for their home. Respondents were most interested in solar panels or Solar PV technology in their homes.

| Absolute Analysis % Respondents | Base | Missing | | | | |
|---|---|---|---|---|---|---|
| | | No reply | Interested | Not interested | Done already | Not applicable |
| **Base** | **1275** | **38** | **833** | **191** | **89** | **124** |
| | | **3.0%** | **65.3%** | **15.0%** | **7.0%** | **9.7%** |
| **Small scale wind turbines** | **255** | 9 | 149 | 58 | 2 | 37 |
| | | 3.5% | 58.4% | 22.7% | 0.8% | 14.5% |
| **Solar panels** | **255** | 6 | 200 | 20 | 5 | 24 |
| | | 2.4% | 78.4% | 7.8% | 2.0% | 9.4% |
| **Green electricity tariff from my electricity company** | **255** | 6 | 146 | 27 | 71 | 5 |
| | | 2.4% | 57.3% | 10.6% | 27.8% | 2.0% |
| **Solar PV (photovoltaic) -uses energy from the sun to create electricity. PV requires only daylight, not direct sunlight, an...** | **255** | 7 | 192 | 25 | 5 | 26 |
| | | 2.7% | 75.3% | 9.8% | 2.0% | 10.2% |
| **Biomass -is produced from organic materials, either directly from plants or indirectly (eg from industrial or domestic...** | **255** | 10 | 146 | 61 | 6 | 32 |
| | | 3.9% | 57.3% | 23.9% | 2.4% | 12.5% |

The next bank of questions tested people's attitudes to climate change and the city's response to the issue.

9 out of 10 respondents thought climate change is happening now and Bristol must increase its efforts to tackle it. There was also strong understanding of the cause and possible effects of climate change (93%). Finally, there was strong support for the council producing its own green electricity with over 8 out of 10 people agreeing to this.

| Absolute Analysis % Respondents | Base | Missing | | | | | |
|---|---|---|---|---|---|---|---|
| | | No reply | Strongly agree | Agree | Neither | Disagree | Strongly disagree |
| **Base** | **1275** | **26** | **987** | **201** | **40** | **18** | **3** |
| | | **2.0%** | **77.4%** | **15.8%** | **3.1%** | **1.4%** | **0.2%** |
| **"Bristol must increase its efforts to tackle climate change"** | **255** | 5 | 199 | 36 | 10 | 4 | 1 |
| | | 2.0% | 78.0% | 14.1% | 3.9% | 1.6% | 0.4% |
| **"Climate change is happening now and is something I am concerned about"** | **255** | 5 | 193 | 39 | 12 | 5 | 1 |
| | | 2.0% | 75.7% | 15.3% | 4.7% | 2.0% | 0.4% |
| **"I understand the causes of climate change and its possible effects"** | **255** | 5 | 165 | 74 | 10 | 1 | - |
| | | 2.0% | 64.7% | 29.0% | 3.9% | 0.4% | - |
| **"The city should increase the amount of power it produces from renewable sources (wind, solar and biomass)"** | **255** | 5 | 214 | 30 | 2 | 4 | - |
| | | 2.0% | 83.9% | 11.8% | 0.8% | 1.6% | - |
| **"I support the council producing its own green electricity in order to reduce its carbon footprint"** | **255** | 6 | 216 | 22 | 6 | 4 | 1 |
| | | 2.4% | 84.7% | 8.6% | 2.4% | 1.6% | 0.4% |

The concept of the council producing its own green electricity resulted in 135 comments. These have been read and categorised as follows:

| Category | Number of comments |
|---|---|
| Positive comments about proposal | 47 |
| Other green energy suggestions | 29 |
| Go ahead | 14 |
| Miscellaneous comments | 10 |
| Build more than 2 turbines | 10 |
| Planning / Merton rule | 7 |

| Category | Number of comments |
|---|---|
| Tidal barrage comments | 5 |
| Preferable to nuclear power | 2 |
| Business and their carbon footprint | 2 |
| Economic considerations | 2 |
| Environmental objections to scheme | 2 |
| Environmental education | 1 |
| Negative comments | 1 |
| Transport comments | 1 |
| Suggestion for another site | 1 |
| Lack of faith in council's ability to deliver | 1 |

A pattern which can be seen in the analysis of a large number of responses to this survey is evident here – much support and positivity towards the proposals. Here are some of the positive comments:

| |
|---|
| "Excellent idea, especially if it makes good use of brownfield sites" |
| "I think it is an excellent idea and in fact Bristol should promote more renewable energy ideas. At least the wind turbine proposals are a starting point but how about biomass/more wind turbines" |
| "the council is taking a responsible, long term stand which should be supported by everyone" |

There is a strong demand from respondents for the council to 'get on with it' and act quickly as people regard the need for action on climate change as urgent. 10 people also wanted the council to accommodate more than 2 turbines on the site, reflecting a general mood for the council to be bold in its approach to green energy production.

Respondents also had lots of other suggestions about how more green energy production could be achieved in the Bristol area. There was a lot of support for more micro-electricity generating schemes, particularly solar, and a demand for more large and small-scale turbines.

**Proposed site of the wind turbines**

Respondents were presented with a map of the proposed wind turbines and its location in the wider context. 202 people commented on the sight and their comments have been categorised as follows:

| Proposed site | Responses |
|---|---|
| Agree with site | 164 |
| Build more than 2 turbines | 20 |
| Miscellaneous comments | 11 |
| Reservations about site | 6 |
| Waste of site | 1 |
| | 202 |

An overwhelming number of comments were positive about the brown field site the council has proposed for this development. Again, an impatience for the council to proceed and the need for urgent action in the light of climate change were apparent:

| |
|---|
| "Good use made of an otherwise derelict site. Could more than two turbines be fit in to that site / potential for more added at a later date?" |
| "Looks like a good site - there's no negative visual impact here and as it's a brownfield site, it's not building in the greenbelt." |
| "I think that this is a good proposal for this site. I suport it. More of these should be built in locations like this." |

These comments and the second most popular category 'build more than 2 turbines' show the number of people who want the council to be more ambitious in its plans to develop wind turbines.

**Environmental Issues**

Respondents were told about the environmental impact assessment (EIA) which is being carried out on the proposals and given details about the site's proximity to areas with important habitat and wildlife designations. 146 respondents made comments on environmental and wildlife issues:

| Wildlife category | Responses |
|---|---|
| No problem / little impact | 46 |
| Importance of EIA | 36 |
| Bigger picture | 33 |
| Minimise impact | 11 |
| miscellaneous | 7 |
| Wildlife adapts | 6 |
| tidal barrage | 4 |
| Refer to other groups | 1 |
| alternative site ideas | 1 |
| set aside other land | 1 |
| | 146 |

46 people foresaw few or no problems with the scheme's impact on the environment:

| |
|---|
| "In terms of other possible uses of this site, I believe that wind turbines will have the least negative impact on the immediate environment and should therefore go ahead." |
| "Though not an expert, I would expect the impacts at this location to be low given the industrial nature of the location." |

| |
|---|
| "The long-term environmental benefits of this scheme far outweigh, in my view, any short-term impact, which I feel will be minimal in this case anyway." |

36 people recognised the importance of the EIA in considering the environmental impact of the proposal:

| |
|---|
| "The EIA is a vital part of the process and some environmental impact is inevitable with installations of this size. I feel that the implications of climate change, and the need to develop solutions at the intermediate, local level (as well as the two poles of individual and governmental action) will probably outweigh the (hopefully) relatively small environmental costs associated with developing this site. If the EIA finds implications related to the status of the estuary as a sensitive ecological habitat ways to mitigate this should be sought, but barring any really disastrous impacts, the turbines should go ahead." |
| "Too early to say without knowing what EIA will find." |

**Visual impact**

Indicative views from 3 locations near to the turbines were presented to respondents and their opinions sought on the look and visual impact. 214 people responded:

| Visual impact category | Responses |
|---|---|
| Positive | 203 |
| OK | 4 |
| Miscellaneous | 6 |
| Look nice in the right place | 1 |
| | 214 |

The vast majority of respondents thought the impact of the turbines would be positive:

| |
|---|
| "The wind turbines have a positive visual impact on this area, from all perspectives. They embody a positive perspective on the area." |
| "I like them. They have no more impact than the various pylons, street lamps, buildings, chimney etc that are also visible" |
| "I like the way turbines look and the way they move. If the alternatives are nuclear or coal-fired power stations, wind turbines win every time." |

**Size and dimensions**

Respondents were shown a picture of a turbine with an explanation of the terms used and its size and dimensions. 118 people made comments about its height:

| Size category | Responses |
|---|---|
| maximum size for efficiency | 59 |
| OK | 36 |

| Size category | Responses |
|---|---|
| miscellaneous | 12 |
| no comment | 6 |
| Too high | 3 |
| Not qualified to comments | 2 |
| | 118 |

The majority of comments accepted the proposed dimensions for the turbines, accepting the argument that they need to be of a size to take maximum advantage of the wind.

| |
|---|
| “I agree that they need to be as large as possible to generate as much energy as possible” |
| “Consonant with the findings of the EIA, I recommend you build the largest ones possible.” |
| “Do you have any comments about the size and dimensions of |
| “Use whatever is the most efficient/applicable to wind” |

General issues about wind turbines

Respondents were given one final opportunity to add any other comments about the proposal – 175 people took advantage of this:

| Comments | Responses |
|---|---|
| Get on with it! / Go ahead | 121 |
| Build more than 2 turbines | 20 |
| Miscellaneous | 14 |
| Conditional approval | 13 |
| Small wind | 2 |
| Against idea | 2 |
| Preferable to nuclear | 2 |
| Tidal barrage | 1 |
| | 175 |

Again, people's impatience for the council to proceed with the project and their belief that it is imperative for us to act promptly came though:

| |
|---|
| "Just build them and stop asking people to comment on it. Takes far too long!" |
| "Please get on with it - we do not have time to lose." |
| "I think this is a wonderful project that the city are undertaking, they are taking the changes to our world seriously and please try and encourage other councils to do the same. Bristol City is an up and coming city let us lead the way with Wind Turbines and show that we are doing our bit and that we are open to change. WELL DONE" |

# Appendix 2 – List of Invitees to Stakeholder Workshop

| Name | Organisation | Address |
|---|---|---|
| Councillors | | |
| Councillor Terry Cook | Bristol City Council | 3 Bellhouse Walk,<br>Kingsweston<br>Bristol<br>BS11 0UE |
| Councillor Mark Bradshaw | Bristol City Council | c/o The Council House<br>College Green<br>Bristol<br>BS1 5TR |
| Councillor Judith Price | Bristol City Council | 5 Salisbury Avenue<br>Kingswood<br>Bristol<br>BS15 8AL |
| Councillor Albert Murphy | Bristol City Council | 179 Avonmouth Road<br>Bristol<br>BS11 9LW |
| Councillor John Bees | Bristol City Council | 17 Hallen Drive<br>Sea Mills<br>Bristol<br>BS9 2NU |
| Councillor Charlie Bolton | Bristol City Council | |
| Councillor Peter Tyzack | South Glos Council (Pilning & Severn Beach) | |
| Ms J Warren | Avonmouth Community Council | |
| Council Officers | | |
| Becky Coffin | Bristol City Council | Ecologist<br>The Council House<br>College Green<br>BS1 5TR |
| Bob Jones | Bristol City Council | Planning Transport and Sustainable Development<br>The Council House<br>College Green<br>BS1 5TR |
| Fiona Sharman | Bristol City Council | Landscape Architect<br>Planning, Transport & Sustainable Development<br>The Council House<br>College Green<br>BS1 5TR |
| Jodi Froom | Bristol City Council | Transport Planning Officer<br>Highways Development Control |

| | | |
|---|---|---|
| | | The Council House<br>College Green<br>BS1 5TR |
| Mark Curtis | Bristol City Council | Senior Environmental Health Officer<br>The Council House<br>College Green<br>BS1 5TR |
| David Bishop | Bristol City Council | Planning Transport and Sustainable Development<br>The Council House<br>College Green<br>BS1 5TR |
| Martin Seaton | Bristol City Council | Area Planning Co-ordinator<br>The Council House<br>College Green<br>BS1 5TR |
| David Bishop | Bristol City Council | Planning Transport and Sustainable Development<br>Brunel House<br>Bristol<br>BS1 5UY |
| Dave Villis | South Gloucestershire Council | Ecologist<br>Civic Centre<br>High Street<br>Kingswood<br>BS15 9TR |
| Gillian Ellis King | South Gloucestershire Council | Landscape Architect<br>Castle Street<br>Thornbury<br>BS35 1HF |
| David Evans | South Gloucestershire Council | Historic Environment Officer<br>Civic Centre<br>High Street<br>Kingswood<br>BS15 9TR |
| David Haigh | South Gloucestershire Council | Historic Environment Record Officer<br>Civic Centre<br>High Street<br>Kingswood<br>BS15 9TR |
| J Hooker | Newport City Council | Senior Planning Officer<br>Civic Centre<br>Newport<br>NP20 4UR |
| Rachel Lewis | North Somerset Council | Natural Sustainability Co-ordinator,<br>Strategic Projects<br>Town Hall<br>Walliscote Grove Road<br>Weston-super-Mare BS23 1UJ |
| Dr. Nick Michael | North Somerset Council | Ecologist,<br>Strategic Projects Group<br>Town Hall<br>Walliscote Grove Road |

| | | |
|---|---|---|
| | | Weston-super-Mare BS23 1UJ |
| David Swanson | Monmouthshire County Council | |
| Transport Groups | | |
| Ian Harris | Bristol International Airport | Bristol<br>BS48 3DY |
| Stephen Wiltshire | BAE Systems | |
| Alan Haile | BAE Systems | |
| A Jones | BAE Systems | Airport Facilities Manager |
| David Cutler | Civil Aviation Authority | |
| M Smailes | Civil Aviation Authority | |
| Green/Wildlife Groups | | |
| Richard Bland | Bristol Naturalists' Society | C/O City Museum & Art Gallery,<br>Queens Road,<br>Bristol<br>BS8 1RL |
| Charles Stapleton | Bristol Ornithological Club | Chairman<br>Hazledene<br>8 -10 Shortwood Hill<br>Shortwood<br>BS16 9PE |
| Ed Drewitt | Bristol Ornithological Club | |
| Margaret Searle | Bristol Ornithological Club | Secretary<br>112 Eastfield Road<br>Westbury on Trym<br>BS9 4AL |
| Siân Parry | Avon Wildlife Trust | Planning and Policy Officer<br>32 Jacobs Wells Road<br>Bristol<br>BS8 1DR |
| Alan Blakemore | Avon Wildlife Trust | |
| Richard Archer | RSPB | South West Regional Office<br>Keble House<br>Southern Hay Gardens<br>Exeter<br>Devon<br>EX1 1MT |
| Kevin Turner | Natural England | Block 3, Government Buildings<br>Burghill Road<br>Westbury on Trym<br>Bristol<br>BS10 6NJ |
| Angus Bloomfield | Natural England | Countryside Advisor<br>Block 3, Government Buildings<br>Burghill Road<br>Westbury on Trym<br>Bristol |

| | | |
|---|---|---|
| | | BS10 6NJ |
| Jane Stevenson | Friends of the Earth | 10-12 Picton Street<br>Montpelier<br>Bristol<br>BS6 5QA |
| Julian Jones | Friends of the Earth | |
| Cheryl Hiles | Regen SW | Head of Programmes<br>Regen SW<br>The Innovation Centre<br>Innes Drive<br>Exeter<br>EX4 4RN |
| Regional bodies | | |
| Mike Twomey | GOSW | 2 Rivergate<br>Temple Quay<br>Bristol<br>BS1 6EH |
| Ian Knight | SWRDA | Area Director<br>100 Temple Street<br>BRISTOL<br>BS1 6AE |
| Jane Lavick | SWRA | Principal Sustainable Development Advisor<br>Dennett House<br>11 Middle Street<br>Taunton<br>Somerset<br>TA1 1SH |
| Trudi Carver | Environment Agency | Planning Liaison Officer<br>Rio House<br>Waterside Drive<br>Aztec West<br>Almondsbury<br>BS32 4UD |
| Jacqui Ashman | Highways Agency | Network Planning Manager<br>Temple Quay House<br>2 The Square<br>Temple Quay<br>Bristol<br>BS1 6HA. |
| Nigel Hutchings | GWE Business West | Regional Affairs Director<br>Leigh Court Business Centre<br>Abbots Leigh<br>Bristol BS8 3RA |
| Other Organisations | | |
| D Wagstaff | Maritime and Coastguard Agency | Navigation Safety Branch<br>Wales and West of England Region<br>Anchor Court<br>Keen Road<br>Cardiff<br>CF24 5JW |
| M Johnson | Gloucester Harbour Trustees | Marine Officer<br>Navigation House<br>The Docks |

| | | |
|---|---|---|
| | | Sharpness<br>Berkeley<br>GL13 9UD |
| J Chaplin | The Bristol Port Company | Director of Engineering<br>St Andrews House<br>St Andrews Road<br>Avonmouth<br>Bristol BS11 9DQ |
| James Clark | The Bristol Port Company | Assistant Haven Master<br>St Andrews House<br>St Andrews Road<br>Avonmouth<br>Bristol BS11 9DQ |
| Patrick Kearon | The Bristol Port Company | St Andrews House<br>St Andrews Road<br>Avonmouth<br>Bristol<br>BS11 9DQ |
| | Seabank Power Station | |
| David Meadows | Babcock on behalf of Government Pipelines and Storage System (GPSS) | Turner & Partners - Bristol<br>Babcock Networks Ltd<br>Park House Business Centre<br>Park House<br>12 High Street<br>Bristol<br>BS35 2AQ, UK |
| Patric Bulmer | Bristol Water | |
| | Newport Harbour Communications | |
| Richard Smith | Bristol Harbour Master | |
| James Thomas | Lower Servern Drainage Board | |
| | National Air Traffic Services (NATS) | |
| | Heath and Safety Executive | |
| | National Air Traffic Services (NATS) | |
| | Trinity House Lighthouse Service | |
| Steve Carver | Wessex Water | |
| Simon Roberts | Centre for Sustainable Energy | |
| Leslie Watson | Sustainability South West | |
| Liz Dunn | Burges Salmon | |
| Members of the public | | |
| Mr Gulland | | |
| Cristina Crossingham | | |
| Sue Flint | | |
| Liz Daniels | | |

| | | |
|---|---|---|
| Steve Tainton | | |
| Richard St George | | |
| Steve Wade | | |
| Dick Nally | (possibility) | |
| Mr Turland | | |
| Mrs Turland | | |
| Interested local businesses | | |
| Ian Baker | Sustainable Bishopston | Hon Secretary<br>26 Broadway Road<br>Bishopston<br>BS7 8ES |
| Christine Griffiths | Aeolus Power Ltd | Director<br>Foxhole Farm<br>Pilning Street<br>Pilning<br>South Gloucestershire<br>BS35 4JJ |
| John Miller-Wilson | Aeolus Power Ltd | Director<br>Foxhole Farm<br>West Town Lane<br>Avonmouth<br>BS11 9DE |
| Tony Swain | Ashmead Building Supplies Ltd | Managing Director<br>Portview Road<br>Avonmouth<br>BS11 9LD |
| Terry Marnock | Kranlyft UK Ltd | Managing Director<br>Unit 1<br>I O Centre<br>Cabot Park<br>Avonmouth<br>BS11 0QL |
| John Ashe | AMR Amusements | Manager<br>202 b Burcott Road<br>Avonmouth<br>BS11 8AP |
| Phil Mason | Bootham Engineers | Manager<br>Third Way<br>Avonmouth<br>BS11 9HL |
| Mr M Jacobs | Spot on Supplies (Hygiene) Ltd | Unit 1<br>Avon Gorge Industrial Centre<br>Portview Road<br>Avonmouth<br>BS11 9LQ |
| Jeffrey Rendall | Evergreen Facilities Management (UK) Ltd | Business Consultant<br>112 Burcott Road |

| | | |
|---|---|---|
| | | Avonmouth<br>BS11 8AF |
| Bernard Seward | SERA Bristol & South West | Secretary<br>164b Wellington Hill West<br>Henleaze<br>BS9 4QP |
| Peter Goodwin | Bristol South Green Party | Press Officer<br>11 Lanesborough Rise<br>Stockwood<br>BS14 8AJ |

# Appendix 3 – Stakeholder Workshop Report

## Meeting Report

**Regarding:**
Avonmouth Wind Turbine Workshop

**Date:**
15 July 2008

**Project Team Members:**

Paul Isbell *Bristol City Council*
Indira Norton *Bristol City Council*
Bernice Roberts *The Landmark Practice*
Sophie Middleton *The Landmark Practice*
Rob Peters *GVA Grimley*
Rebecca Collins *GVA Grimley*
Charles St George *PPS Group*
Susan Belfourd *PPS Group*
Lyndon Roberts *The Landmark Practice*
Steve Hale *Landmark Practice*
Geoff Robinson *Bristol City Council*
Alun Owen *Bristol City Council*

A list of participants in the workshop and the discussion group they participated in is shown at the end of this report.

| Item | Query |
|---|---|
| **1. Site Visit**<br>Stakeholders and members of the public were invited to attend a site visit of the Bristol Port Company's turbines and to drive by Bristol City Council's proposed site for the development of two wind turbines. Ten participants took up this offer and this site visit was held from 2.30pm, prior to the workshop. | |
| **2. Workshop Introduction**<br>As participants arrived for the workshop they were asked which discussion group they would like to join – Wildlife and Birds, Transport, Visual and the General Environment, or Community.<br>Charles St George then welcomed everyone and explained that the purpose of the workshop was to review and discuss the findings of the draft Environmental Impact Assessment<br>He went on to introduce members of the project team and outline the format for the evening and then introduced Paul Isbell to give the first presentation. | |
| **3. Presentations** | |

| Item | | Query |
|---|---|---|
| | Paul Isbell, Energy Manager at Bristol City Council gave everyone an update on the project, the government and the Council's CO2 targets and provided some examples of the effects of global warming.<br><br>Phillip Higgins from Bristol City Council's Corporate Consultation Team then outlined the pre-application public consultation already undertaken by his team on the project and results of the consultation so far.<br><br>Finally, Bernice Roberts from Landmark Practice presented the main findings from the draft Environmental Impact Assessment.<br><br>At the end of the presentations there was an opportunity for participants to ask questions. Mr Townsend, a member of the public, asked whether the public consultation process had raised any negative comments as the findings had been overwhelmingly positive. Phillip Higgins confirmed there had been some negative comments but they were very few in comparison with the positive ones received. He offered participants the opportunity to read the full report, which he had brought to the workshop. | |
| **4.** | **Group Discussions**<br><br>After light refreshments, participants divided into groups to discuss their chosen topics. As only a small number of participants had signed up for the Transport and Community groups, it was decided to combine these topics into a single group session.<br><br>Each group was asked to appoint a Rapporteur to record the group's findings and report these back to the rest of the workshop. At least one member of the project team was also assigned to each group to provide information, advice and answer questions. Lyndon Roberts, Steve Hale and Bernice Roberts were assigned to the Birds and Wildlife group, Sophie Middleton to the Visual and General Environment group, with Paul Isbell, Rob Peters and Phillip Higgins assigned to the Transport and Community group. Indira Norton and Charles St George were available to answer queries of any of the groups.<br><br>To assist discussions, each group was provided with a large-scale location map of the site, a site layout plan and a map showing important environmental designations in relations to the Avonmouth site. The groups were also provided with a list of suggested topics to discuss for guidance. | |
| **5.** | **Group Findings** | |

| Item | Query |
| --- | --- |
| The groups discussed their chosen topics for approximately 45 minutes before coming back to a plenary session to present their findings.<br><br>Wildlife & Birds<br><br>Patric Bulmer from Bristol Water presented the group's findings. He said the group had been fairly positive about the proposed wind turbines with only a couple of points.<br><br>The group believed that the turbines were well located as birds are generally stick to the Severn Estuary and the turbines are set away from the edge of the Estuary.<br><br>The group reported that bird strikes on turbines tended to be infrequent and therefore have minimal impact on bird populations. However, it was pointed out that this is a new science with some of the older data based on wind farms which were often poorly located.<br><br>The group concluded that the main problem for birds comes during the construction and start up of the turbines.<br><br>They also noted that the threshold for significant kill is defined by a decrease in the population. Therefore if a bird with a large population is affected, it would take many more fatalities to cause significant kill than in a bird with a smaller population.<br><br>The group pointed out that it had been predicted the Bristol Port Company's turbines would cause 25 bird deaths per year but so far none had occurred.<br><br>The group said that the mortality amongst small birds tend to be less than for larger birds - this was due to smaller birds manoeuvring around the turbines better.<br><br>A member of the public asked whether different species of birds generally follow the same routes as outlined in the draft EIA. Lyndon Roberts confirmed this was normally the case.<br><br>The group said that bat surveys indicated three species of bats on the site but that there was low activity due to little woodland. Off site compensation for the bats should be provided.<br><br>With regard to reptiles, the group reported that slow worms and grass snakes were found on site and there is a need to relocated them.<br><br>Councillor Charlie Bolton pointed out that changes in climate the next 50 years could lead to changes in the bird population. Lyndon Roberts | Consideration needs to be given to the construction period and how this could affect the birds.<br><br>Clarification required in the EIA that different bird species follow the same migratory path<br>Off-site bat mitigation programme is needed. |

| Item | Query |
| --- | --- |
| replied that it was impossible to predict the climate in the Estuary in 50 years but that studies for the Bristol Ornithological Society were finding that our winters are warmer and birds are now staying in the East of England instead of flying across. He also pointed out that it was unclear what the breeding area for some birds in the Arctic would be like in 50 years, which would also affect bird numbers. Steve Hale added that as some bird populations would decrease, others, such as Mediterranean bird species, would increase.<br><br>The points discussed and recorded by this group on their flip chart is attached to this report.<br><br><u>Transport & Community</u><br><br>Liz Dunn presented the group's findings, which focused on two main areas – energy and aircraft.<br><br>**Energy & Public Access**<br><br>The group discussed the increasing cost of electricity and the potential of being held to ransom over oil. They decided that the proposals would help Bristol City Council reach its carbon levels.<br><br>They discussed the proposed Severn Barrage and recounted the views and concerns of the Bristol Port Company on this proposal.<br><br>The group queried the possibility of increasing the number of turbines on the site and questioned whether Bristol City Council had any additional sites to provide turbines.<br><br>The group questioned how the electricity would be fed into the national grid and requested that this be done as locally as possible in order to reduce the loss in transmission.<br><br>They recognised that the proposals were a good use of the site but requested the project team investigate the potential for public access to enjoy the turbines and wildlife. It was accepted that public access would need to be limited because of the need for wildlife on site.<br><br>**Aircraft**<br><br>The group expressed the concern felt by BAE Systems over the number of turbines being developed in the Avonmouth area and the constraints to the aircraft's radar the turbines cause. They pointed out that Bristol Port's turbines were not a problem and that BAE Systems did not see Bristol City Council's turbines to be an issue. However, if the number of | Does Bristol City Council have any other sites to develop renewable energy?<br>Explanation on how the electricity would feed into the national grid is required.<br>Can part of the site be opened up to the public? Possibly for organised visits? |

| Item | Query |
| --- | --- |
| turbines increases significantly then it could be a problem.<br><br>Alan Haile from BAE Systems then explained the mitigation plans the company had for the Council's proposed turbines. He added that the airfield would be installing a new radar in March 2009 to replace the current one which dates from the 1950s.The key points recorded on the flip chart by this group is attached to the report.<br><br><u>Visual & the general environment</u><br><br>Cristina Cossingham presented the group's findings. She said that the group had looked at the photomontages of the site and thought that they were good and even enhanced the area. She said the group would like to see electricity taken to Seabank Power Station to reduce the loss of electricity during transport.<br><br>The group also discussed the possibility of blades breaking and the You Tube video of a turbine breaking up in Denmark but concluded that this occurrence was very rare and would only occur if the mechanism to stop the turbines rotating at very high wind speeds did not function properly. Regular maintenance checks, as proposed by BCC, would ensure that this doesn't happen.<br><br>The group queried where the blades would be manufactured as this would affect the delivery method. They suggested the blades could be delivered by barge and lifted over the railway line by a crane.<br><br>The group thought that horses were a good form of land management but acknowledged the problem of ragwort. They queried how rough land could be maintained and who would maintain it – Bristol City Council, a management company or Ecotricity as at Avonmouth Dock. They confirmed that a good management plan of the turbines would be required.<br><br>There was a question as to whether the current generated was AC or DC. The project team responded saying that they thought the current was DC and converted to AC but they would have to confirm.<br><br>The group also queried whether there could be contamination during excavations but were assured that this would be dealt with at the time.<br><br>They questioned whether disturbing the peat would release extra carbon? The group believed this was an issue for the project team to | Can the electricity generated be taken to Seabank Power Station?<br><br>Feasibility of using the Estuary to deliver the blades.<br><br>Good management plan needed to manage both turbines and surrounding land. Clear lines of responsibility required.<br><br>Is the current generated AC or DC?<br><br>Will the peat soil on site release carbon when the development takes place and, if so, how much? |

| Item | Query |
| --- | --- |
| deal with.<br><br>The group asked how long it would take for the turbines to pay back the energy used during their construction. Christina Cossingham said the question had been prompted by a letter in the Telegraph, on 6 July 2008 which said that turbines could never pay back the energy used to create and dismantle them. In response, it was pointed out that on average turbines generated more energy than was needed to build and dismantle them after about 6 months of operation.<br><br>The key points recorded by this group on the flip chart are also attached to the report. | |
| **6. Questions**<br><br>The floor was then opened up to anyone who had any queries on the presentations or for the project team.<br><br>Justin Jones from Friends of the Earth asked whether there was any scope to make more of the land by planting things such as fruit trees? Sophie Middleton replied saying that they would have to be careful not to plant anything that attracts birds but that the project team were open to suggestions.<br><br>Alan Haile from BAE Systems questioned whether Bristol City council had any plans for houses in Avonmouth and whether the project team had considered what South Gloucestershire Council were planning. Members of the project team confirmed they had considered this and that there was no huge change planned for the area and any development would be at least 1 ½ miles away from the site. | |
| Cristina Cossingham questioned the wisdom of introducing new species to the site and stated that emphasis should be placed on preserving not enhancing the natural habitat. Bernice Roberts agreed that the site has intrinsic interest in the wider community and therefore it was important to keep it more or less the same. | Attention should be given to what is done with the land surrounding the proposed turbines |
| A member of the public queried whether the turbines could be put into reverse and used to disperse fog? The project team were unsure of the answer and promised to find out. | Can the turbines be used in this way? |
| **7. Conclusion**<br><br>Charles St George summarised the findings of the workshop by saying | A copy of the report to be |

| Item | Query |
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| that the results were generally positive with no 'show stoppers'. He highlighted the queries raised and said that the findings would influence the EIA.<br><br>Charles offered a copy of the report to all attendees and outlined the timetable for the planning application. | sent to all attendees. |

**Attendees**

| | |
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| <u>Wildlife & Birds</u> | |
| Charles Stapleton* | Bristol Ornithological Club |
| Ed Drewitt | Bristol Ornithological Club |
| Alan Blakemore* | Avon Wildlife Trust |
| Angus Bloomfield* | Natural England |
| Patric Bulmer | Bristol Water |
| Julian Jones | Friends of the Earth |
| Lee Townsend* | |
| Ruth Townsend | |
| Alex Loftus | |
| | |
| <u>Visual and the General Environment</u> | |
| Mark Curtis | Bristol City Council |
| Kevin Turner* | Natural England |
| Mr Gulland* | |
| Cristina Cossingham* | |
| Bernard Seward* | SERA Bristol & South West |
| Peter Goodwin | Bristol South Green Party |
| Fiona Sharman | |
| | |
| <u>Transport and Community</u> | |
| Councillor Charlie Bolton* | Bristol City Council |
| Alan Haile | BAE Systems |
| Liz Dunn* | Burges Salmon |
| Nicola Cunningham* | Burges Salmon |
| Sue Flint | |
| Christine Griffiths | Aeolus Power Ltd |

* Denotes attendance on coach trip