

Manchester City Football Club Wind Park

Summary of proposal

- 2.1.1 **ecotricity** and Manchester City Football Club have entered into partnership and have submitted a planning application to construct a wind turbine adjacent to the City of Manchester Stadium on the Sportcity site in East Manchester.

The Turbine

- 2.1.2 It is proposed to construct a 2MW Enercon turbine, which would have a maximum blade tip height of 120.5m (85m to hub, with a blade radius of 35.5m). Enercon turbines are part of a new generation of direct drive, variable speed wind turbines. This means they do not need a gearbox, require less maintenance and produce no tonal noise. The design currently used by Enercon was produced by the architecture and design company 'Foster & Partners,' led by the award winning British architect Lord Foster of Thames Bank and has been awarded Millennium Product status by the Design Council.

Electricity Produced

- 2.1.3 The turbine would generate annually 4.12 million kilowatt hours (kWh) of electricity from the wind. This would be sufficient to supply **94%** of the stadium's electricity needs of 4.4 million kWh per year and **54%** of the 7.3 million kWh per year to power the whole of the Sportcity site (including the Velodrome, Tennis Centre and Athletics stadium) or alternatively would be sufficient to supply **1,248¹** households.

Need

- 2.1.4 Renewable energy is needed as it helps to reduce global warming and other climate change impacts. At present the UK relies extensively upon fossil fuels and nuclear energy to generate electricity, causing global, national and local pollution of the environment. The electricity industry is the single biggest contributor to two important pollution problems, climate change and acid rain, as well as producing a number of other localised environmental effects, such as thermal pollution, noise, cancer clusters and associated disorders.
- 2.1.5 Unlike gas, coal and nuclear fuels, wind is a renewable source of energy and as such is free, will never run out or need to be imported. Renewable resources also do not contribute to climate change or acid rain but provide the potential to reduce these problems by directly offsetting fossil fuelled generation. Each year, by producing 4.12 million kWh of electricity, the wind turbine would therefore directly prevent the annual generation of **3,597 tonnes of carbon dioxide** (the main

¹ Calculated using UK average annual domestic household electricity consumption of 3,300 kWh, as recommended by Ofgem & Energywatch

greenhouse gas), **63 tonnes of sulphur dioxide, 17 tonnes of nitrogen oxides** and several tonnes of ash and slag.

2.1.6 This turbine would therefore directly contribute to national and local targets to increase renewable electricity generating capacity and to reduce emissions of carbon dioxide, the increasing levels of which is one of the biggest contributors to climate change.

- National targets include the UK's legal requirement under the Kyoto treaty to reduce greenhouse gas emissions by 12.5% below 1990 levels.
- Local targets include Manchester City Council's aim to become the 'Greenest City in Britain' by (amongst other measures) reducing citywide carbon dioxide emissions at a rate exceeding UK Kyoto targets and also to support renewable energy production in Manchester. In addition, Manchester City Council's Energy Strategy includes a project to develop four wind turbines at strategic urban sites within the city.

The Location

2.1.7 The proposed location of the turbine would be situated on the southern half of the Sportcity site, to the south west of the City of Manchester Stadium and to the south of the athletics track, in an area currently used as a carpark.

2.1.8 Other locations within the Sportcity site were considered, however these were rejected as unsuitable following early assessment and consultation which identified engineering constraints that would have prevented construction or routine maintenance, or conflict with other development such as the Metrolink or the New East Manchester Regeneration Company's aspirations for the site.

Potential effects of the proposal

2.1.9 A detailed assessment has been undertaken of all the potential impacts of the proposed turbine development. The results of this assessment are summarised below:

- Visual effects – There are no nationally or locally designated areas of landscape importance in the vicinity of the turbine. Whilst the turbine will be visible from a large part of the city of Manchester, there are a number of large and striking structures within the Sportcity site and the city of Manchester as a whole, such as the City of Manchester Stadium, the 'B of the Bang' sculpture, and the Beetham building which at 170m is the tallest building in England outside London. This means that the turbine would not present an incongruous or overly dominant component of the city's or of local or distant views. In addition, its iconic shape and award winning design would be likely to complement the existing skyline and serve as a landmark for the East Manchester area.

- Ecology – The ecological surveys and assessment of the site indicate that the development would not have a detrimental effect on any protected species in the vicinity or on the Ashton Canal, a locally designated site of nature conservation interest. In addition the development would not have a detrimental effect on any bird habitats or populations.
- Cultural Heritage – There are a number of Listed Buildings within 2km of the turbine. However the effect on the setting of these structures would be minimal given the context in which they are already situated, surrounded by structures as diverse, in terms of range of uses, scale and style, as the City of Manchester Stadium, the Asda retail centre, modern apartment blocks, gasometers and the ‘B of the Bang’ sculpture.
- Noise – Increased levels of noise would with one exception fall well within noise standards, although noise levels at the closest property to the south of the turbine are predicted to exceed noise standards by 0.5dB during the night, at wind speeds of 8m/s and above. However this worst-case situation would only occur when the receptor is downwind of the turbine i.e. when the wind is from the north which would occur only 2.4% of the time. In addition, government guidance suggests that a 1dB difference in noise level is not perceptible under normal conditions.
- Air Quality – For each year of its operation the wind turbine would directly prevent the emission of 3,597 tonnes of carbon dioxide, 63 tonnes of sulphur dioxide and 17 tonnes of nitrogen oxides. As such the development would contribute both to improved air quality in the North West of England and also contribute towards achieving national targets to reduce carbon dioxide.
- Risk – There are a number of potential risks that might be associated with the construction and operation of the turbine, however the design of the turbine, its location and proposed construction methodology would combine to ensure these risks do not constitute a risk to public safety.
- Shadow Flicker effects – The operation of the turbine would give rise to shadow flicker effects at certain residential properties particularly to the south west and south east of the turbine. These effects can be fully mitigated and as such no adverse effect on amenity from shadow flicker would arise from the operation of the wind turbine.
- Electromagnetic and Radar effects – The turbine may potentially interfere with TV & Radio reception at some properties however if this occurs it can be fully mitigated. The turbine may also affect the operation of one microwave telecommunication link, however should any interference occur this can also be mitigated. No affect on radar or air traffic control would occur as a result of the operation of the turbine.
- Transportation and Access – The construction or operation of the turbine would not have a detrimental effect on transportation corridors around the

Sportcity site. Traffic impacts would be limited to the construction phase of the development and would generally be low in comparison to existing levels of traffic on the adjacent A6010 and A662. Delivery of turbine components by abnormal loads would require liaison with the Highway Authority and the local police force but would occur over a very short period of time.

Balance of impacts

- 2.1.10 The assessment of impacts has demonstrated that any potential adverse effects of the turbine can be mitigated and that there are real and continued benefits to Manchester resulting from this development. There is also a very real and recognised need for this development, to contribute towards local and national targets to increase the capacity of renewable electricity generation and also towards local and national targets to decrease carbon dioxide emissions.
- 2.1.11 These reasons provide a very strong argument in favour of granting permission for this development, and we strongly urge Manchester City Council as the Local Planning Authority to grant this development planning consent, subject to planning conditions to mitigate potential impacts. If you would like to contact Manchester City Council to comment and/or express your support for these proposals, please send your comments to the addresses below:

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website: <http://www.manchester.gov.uk/planning/publicaccess/>