

Summary of Alternative Sites

The following text has been taken from the *Planning Design and Access Statement* that was submitted alongside the Environmental statements and Planning Applications for the three solar schemes on the Councils estate to demonstrate the context in which these sites were selected.

The council turned its attention to the development of ground mounted solar and wind turbine renewable energy technologies, after discounting at this stage anaerobic digestion and biomass combined heat power technologies because on their own or combined, they will not generate the same level of power as solar and wind technologies. This is discussed in more detail below under 'Renewable Energy Technologies Assessment'. However, the intention is that the solar and wind could be enhanced in the future by the integration of other renewables.

The council therefore undertook a search of all of its land holdings as a first step towards identifying areas of land with the potential to accommodate large scale renewable energy development. It was decided early on in the process to exclude land not within council ownership i.e. the only alternative sites considered were those in the Council's ownership, because the additional costs and time involved in acquiring the land would be likely to have an adverse impact on financial returns and introduced too many risks to the project. Furthermore, the council does not own any land within urban areas suitable for this type of development.

The council identified 6 possible sites within their ownership.

These were:

- (i) Nene Park,
- (ii) Sewage Farm, Hall Lane, Wittering;
- (iii) Splash Lane, Castor;
- (iv) America Farm;
- (v) Morris Fen Farm; and
- (vi) Farms of Newborough.

Each site was assessed against a basic criteria set out below based on a desk top assessment. Those sites that met the criteria underwent a more detailed feasibility assessment to identify the potential developable area, the type of renewable energy development, i.e. solar and wind, and the energy generation output.

- (i) Land lease issues (i.e. length of leases);
- (ii) Size of the site (in terms of its viability for large scale renewable energy projects);
- (iii) Proximity to aviation sites;
- (iv) Presence of any designated protected, landscape, conservation and heritage areas;
- (v) Proximity to settlements; and
- (vi) A high level assessment of flood risk.

Nene Park (426 hectares)

This site is considered to be of a sufficient size, however, the development would be fragmented in order to generate significant output which would increase its visual impact. In addition, it is subject to a 999 year lease to the Nene Park Trust. Most of the site falls within the River Nene Functional Floodplain (Flood Zone 3b). This is considered to be a major constraint to any development on this site as flood mitigation measures would need to be developed and agreed with the Environment Agency. Flood mitigation could involve raising the panels so that they are not submerged in the event of a flood. However, the site falls within the Nene Valley high amenity landscape area (Policy PP15 of the Adopted Planning Policies DPD) and therefore, it was considered raising the structures would have an adverse impact on the visual amenities of the area. Furthermore, the site is a County Wildlife Site and part of it is also located on Ferry Meadows Country Park, and on a designated Scheduled

Monument. It is also wholly within one of the 12 recently designated Nature Improvement Areas (NIA) in the UK.

It was therefore decided that this site was not suitable for large scale renewable energy development.

Sewage Farm, Hall Lane, Wittering (2 hectares)

This site is located a sufficient distance from Wittering Village, and the housing and employment allocation to the east of the site would mean that the visual impact on the landscape for solar development would be less of an issue. To the south of the site is an Area of Historic Landscape and Parkland and sites of national nature conservation importance (Sites of Special Scientific Interest (SSSI)). However, the site was considered to be of a sufficient distance away so as not to have an adverse impact on these designated sites. Overall, despite the apparent merits of this site, it was considered that the site is too small for a large scale solar renewable energy project and too close to RAF Wittering dwellings for wind energy development. For these reasons, the site was discounted.

Splash Lane, Castor (216 hectares)

This site is also subject to a 999 year lease to the Nene Park Trust. The main constraint to this site is archaeology, with significant parts of the site located on a Scheduled Monument. The site used to be a Roman settlement and was one of the major zones of extra Mural Suburban and Industrial Development. Vast quantities of Roman pottery has also been found. The site is also on Ermine Street which was the main road up to Lincoln City; again a Roman road. As a result, it was considered that the development of the site would not be acceptable or would require significant buffer zones to protected areas and therefore render it too small for large scale renewable energy. In addition, the site falls within the Nene Valley high amenity landscape area (Policy PP15 of the Adopted Planning Policies DPD) and is in the Floodplain. It is also part of a County Wildlife Site and Nature Improvement Area and most of the site is Grade 2 agricultural land. As such, this site was discounted.

America Farm: (35 hectares)

The site is not located within any landscape designations and there are no sites of known archaeology within the site boundary. However, the site is located near to the Flag Fen, part of which is a Scheduled Monument. The majority of the site is classified as Grade 1 agricultural land with small areas of Grade 2 and 3, however it was considered that a justification for the use of agricultural land could be demonstrated. The site is located within the Minerals and Waste Local Development Framework (LDF) safeguarded, however, as the proposal does not involve mineral extraction or waste management, there would be no impact on this safeguarded area.

America Farm has a single tenant farmer who has a lifetime tenancy that can be rescinded after 3 months after the grant of planning permission. The site is located approximately 1km to the north of the Nene Valley Washes Ramsar, SPA and SSSI which supports populations of wintering wildfowl and waders which are internationally important. Given this distance, it was considered that the potential for the site to be used by significant numbers of foraging wildfowl and waders is low. The site is traversed by a series of land drains and there are several farm buildings with the potential to support bats and barn owls. However, it was considered that the introduction of a buffer zone could protect any potential habitats.

Most of the site falls within the River Nene Functional Floodplain (Flood Zone 3b). This is considered to be a major constraint to any development on this site as flood mitigation measures would need to be developed and agreed with the Environment Agency. Flood mitigation could involve raising the panels so that they are not submerged in the event of a flood however this will need to be investigated with the Environment Agency.

On balance, it was considered that the potential constraints could be overcome. Even with the introduction of buffer protection zones around identified habitats, the site would still be of a significant size to deliver a renewable energy development. Therefore, it was considered to take this site forward to detailed feasibility stage.

Morris Fen Farm (109 hectares)

There are 2 tenant farmers on this site; one with a year left on the lease and the other who has a lifetime tenancy that can be rescinded after 3 months of the grant of planning permission. The site is not located within any landscape designations, and although there is one site of known archaeology within the site boundary, (find spot of a prehistoric flint) this find spot itself was considered to be of negligible significance.

There is a 132kV over head line that crosses the site. It was considered that the cable could be buried. To the north of the site there is a high pressure gas main; a series of drains traverse the site; there are 5 residential properties on or adjacent to the site; and there is a pond on the site that has the potential to support great crested newts. However, it was considered that the introduction of a buffer zone could protect any potential habitats.

The site is located approximately 6km to the northwest of the Nene Valley Washes Ramsar, SPA and SSSI which supports populations of wintering wildfowl and waders which are internationally important. However, as with America Farm, it was considered that the potential for the site to be used by foraging wildfowl and waders is low.

The majority of the site is classified as Grade 2 agricultural land and the site is located within the Minerals and Waste Local Development Framework (LDF) safeguarded area. However, as with America Farm, it was considered that a justification for the use of agricultural land could be demonstrated and as the proposal does not involve mineral extraction or waste management, there will be no impact on this safeguarded area.

Most of the site falls within the River Nene Functional Floodplain (Flood Zone 3b). This is considered to be a major constraint to any development on this site as flood mitigation measures would need to be developed and agreed with the Environment Agency. Flood mitigation could involve raising the panels so that they are not submerged in the event of a flood however this will need to be investigated with the Environment Agency.

On balance, it was considered that the potential constraints could be overcome, and therefore, it was decided to take this site forward to detailed feasibility stage.

Farms of Newborough (1066 hectares)

There are 6 tenant farmers affected all of whom are on a variety of leases. The site is also of a sufficient size for renewable energy development. The site is not located within any landscape designations however, there are several Scheduled Monuments within and in close proximity to the site boundary, and there are several non-designated archaeological sites within the site including medieval boundary stones and WWII defenses. It was considered that with careful design and siting, physical impacts can be avoided.

There is a series of drains that traverse the site and there is a pond on the site that has the potential to support great crested newts. However, it was considered that the introduction of a buffer zone could protect any potential habitats.

Most of the site falls within the River Nene Functional Floodplain (Flood Zone 3b). This is considered to be a major constraint to any development on this site as flood mitigation measures would need to be developed and agreed with the Environment Agency. Flood mitigation could involve raising the panels so that they are not submerged in the event of a flood however this will need to be investigated with the Environment Agency.

The site is located approximately 6km to the northwest of the Nene Valley Washes Ramsar, SPA and SSSI which supports populations of wintering wildfowl and waders. It was considered that the potential for the site to be used by significant numbers of foraging wildfowl and waders is low.

All of the farms of Newborough that amount to 1066 hectares are classified as Grade 1 and 2 agricultural land while the application site, some 203 hectares, is classified as Grade 2 agricultural land. The site is located within the Minerals and Waste Local Development Framework (LDF) safeguarded area. However, as with America Farm and Morris Fen Farm, it was considered that a justification for the use of agricultural land could be demonstrated and as the proposal does not involve mineral extraction or waste management, there will be no impact on this safeguarded area.

It was therefore considered that the constraints associated with this site could be overcome and it was decided to take this site forward to detailed feasibility stage.

Renewable Energy Technologies Assessment

The Council, through the ESCo team, considered a range of renewable energy initiatives, including solar and wind farms, anaerobic digestion and biomass CHP plants. In response to comments raised by consultees during the pre-planning application consultation, straw burning has also been considered. It was concluded that solar and wind farms represented the best deal in terms of amount of MW per acre of land, i.e. the largest capacity plant for the least amount of land take. The findings for each technology are briefly set out below:

- **Anaerobic Digestion:** a 0.5MW plant would take around 2.5 acres of land and cost around £1.5m / MW. However, the council could not guarantee the quality and regular supply of feedstock since for an AD plant, consistent and regular feedstock is required to ensure that the plant operates at optimum yield. Furthermore, the council could not be satisfied that there would be sufficient feedstock available for multiple AD plant installations. The council believes that there may be potential for AD plant(s) in the future once the feedstock issue has been resolved. Additionally, the returns of an AD plant are not at the same level as that of other options considered.
- **Biomass CHP:** Similar to AD with regards the feedstock issue and investment returns.
- **Straw burning:** A straw burning facility of the same comparison would require a tonnage capacity in excess of 50,000 tonnes of straw to be annually produced. To deliver a similar amount of MW per acre of land, using the 900 acres, an average 116 hesston bales / per acre would need to be produced.

It was therefore made clear in the 10th July 2012 report to the Council's Cabinet that *"To make significant inroads into the generation of renewable energy the council must now strategically focus on the delivery of large scale generation projects, in particular, off site wind and ground mounted solar projects."*

The alternatives considered may be added as the development progresses to supplement the current proposals, but for the reasons set out they are not considered to be a viable alternative.

The full *Planning Design and Access Statements* for the three sites can be found on the council's planning portal via the links below:

- America Farm:
<http://plandocs.peterborough.gov.uk/NorthgatePublicDocs/00881484.pdf>
- Morris Fen:
<http://plandocs.peterborough.gov.uk/NorthgatePublicDocs/00881475.pdf>
- Farms of Newborough:
<http://plandocs.peterborough.gov.uk/NorthgatePublicDocs/00881463.pdf>