# Key Issues

The case study will focus on the following aspects:

- The site lies within a Site of Special Scientific Interest (the Gwent Levels – Redwick and Llandevenny SSSI) and adjacent to the Severn Estuary SPA/SAC/Ramsar site. Information required to support the planning application agreed with Natural Resources Wales (NRW) and Newport City Council Biodiversity Officer due to proximity to European designations and location of the turbine within SSSI.

- Landscape and Visual Impact - cumulative impact due to proximity of existing turbines at the nearby Tesco Distribution Centre, as well as other proposed turbines in the area.

- Archaeological evaluation within SSSI and area of known peat deposits.

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# Purpose of the project

- Development of 1.5MW wind turbine of up to 100m tip-height

- Client: RES

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# Description of the project

The Development is situated within the Gwent Levels and within Newport City Council. The site is currently used for grazing. The Gwent Levels are an area of low-lying estuarine alluvial wetland and intertidal mudflats adjoining the Severn Estuary. They are archaeologically rich and a Historic Landscape of Outstanding Historic Interest. They are also an important wetland resource. Most of the Levels are crossed by artificial drainage channels, known as ‘reens’. The Development comprises: a single turbine; electrical substation kiosk and electricity transformer kiosk at the base of the turbine; crane hard-standing area; on-site track; access to public highway; underground cabling, temporary construction compound; and signage.
Lessons learnt
During the site selection process the proximity of the site to the Severn Estuary SSSI, Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar site was identified. The site also lies within the Gwent Levels – Redwick and Llandevenny SSSI. Detailed studies and consultation were undertaken to determine whether the project could be sensitively designed and mitigation measures developed to enable the site to be developed for wind energy. The layout was finalised based on environmental and technical constraints defined from consultation and field surveys.

Consultation was undertaken with Natural Resources Wales (NRW), Newport City Council Biodiversity Officer and RSPB early on particularly with regard to the scope, timing and methodology of ornithology surveys and potential cumulative impacts. The potential for impacts on the SSSI was fully considered in the EIA process. Measures to safeguard the SSSI were proposed and a monitoring programme was produced in consultation with NRW to ensure that water quality and the aquatic invertebrate and flora communities would be protected. The layout included buffer distances for bat habitats and reens, and the length of site tracks and reen crossings were kept to a minimum. Although NRW originally objected to the application, this was withdrawn following provision of further information and on-going dialogue.

The turbine would sit less than a kilometre from turbines at Tesco.

Lessons learnt cont.
Other wind energy schemes were considered distant such that cumulative issues related only to a much wider landscape setting.

Taking into consideration landscape and visual impacts (and in particular cumulative visual impacts associated with the existing turbines at the Tesco) it was decided that the final layout should compromise a single turbine (two turbines were originally proposed). In relation the turbines at Tesco, the Development was designed so that the proposed turbine would be of complementary scale and would appear alongside these two turbines to create a coherent group. In order to minimise visual and landscape impacts the decision was also taken not to include a control building. Early consideration of visual impact and cumulative impacts in particular was therefore key in influencing the site design.

A detailed gradiometry survey was carried out across the proposed turbine location, followed by a trenched evaluation. Glamorgan Gwent Archaeological Trust and NRW were consulted regarding the methodology for the evaluation as the site was within the SSSI, and consent was obtained from NRW for these works. A number of conditions were attached to safeguard the special interests of the SSSI. Close consultation with NRW was key in terms of programming of the evaluation within SSSI.

Planning consent for the scheme was granted in November 2013 by Newport City Council.

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