

ELEMENTS
ENERGY

Cilybebyll Hydro

Green Infrastructure Statement and Biodiversity Enhancement Statement

Full name	<i>Adam Cropper</i>
Company name (if applicable)	<i>Elements Energy Ltd</i>
Date form completed	<i>01/12/25</i>
Address of application site	<i>Plas Farm, Cilybebyll, Pontardawe, Neath, SA8 3JQ</i>
Description of proposal	<i>Installation of 25kW Hydro Scheme</i>
Description of surrounding land use.	<i>Agricultural land used for grazing animals. Woodland.</i>

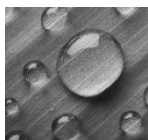
Impact

The site is impacted by the development in the following ways. The intake area will be disturbed during the build and have a small permanent concrete and steel weir installed. This is on a natural small waterfall/cascade and is around 2m² in area. The woodland along the first 40meters will have an overground pipe which is overground to avoid impacting tree roots (a buried pipe would put the adjacent trees at risk from root damage during construction).

The powerhouse and outfall are existing and therefore there is not impact, the project is just installing a second turbine within the powerhouse building which already has a sump and pipework ready for its installation.

Mitigation

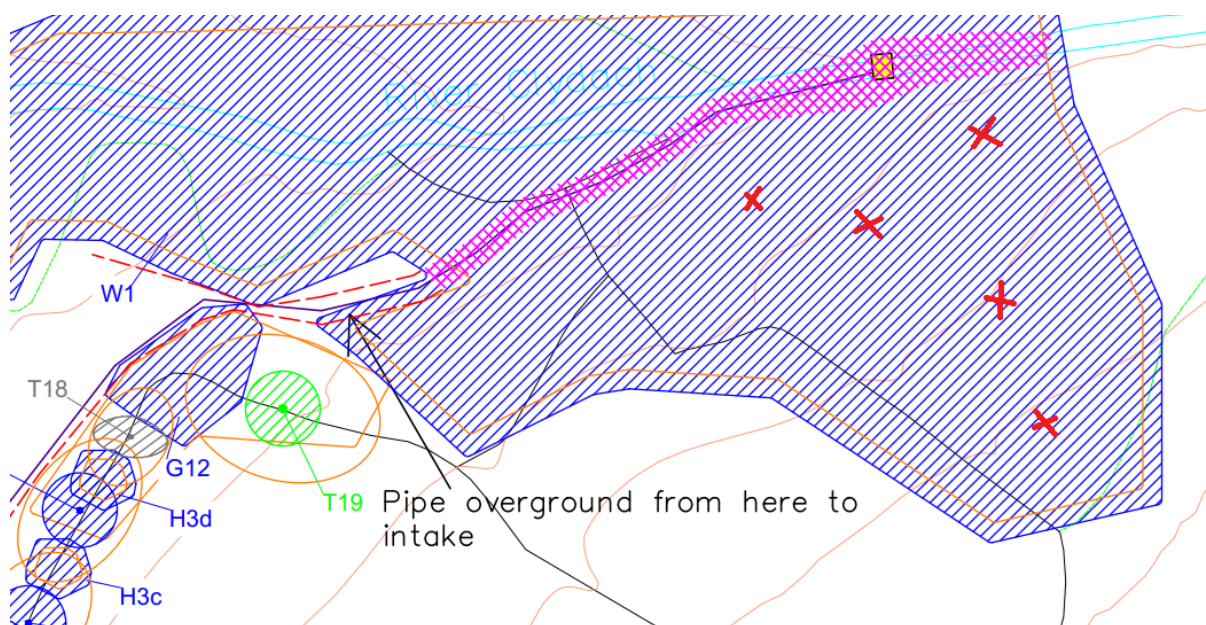
The scale of the intake is kept small via the use of a Coanda self-cleaning screen which minimises the intake size required. The first 40m of pipe will be installed above ground.



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Compensation

To compensate for the impacts a set of bird boxes will be installed through the woodland adjacent to the intake area. This will provide nesting sites for local bird populations. The project itself reduces the use for fossil fuels by reducing the sites electricity demand from the grid network and also from exporting electricity to the grid network. The calculated annual generation is 64.5 MWh of renewable electricity, equivalent to the annual consumption of 16 average homes, and preventing the emission of around 30 tonnes of CO₂ annually.

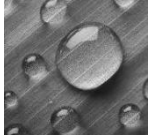


Locations of proposed bird boxes on trees adjacent to the intake (red crosses)

The bird boxes will be installed sufficiently high up on trees to ensure safety from ground predators.

Biodiversity Enhancements

Biodiversity Enhancement	Yes, we will provide this	Location	Info (e.g. type of bird box)
Bird box	Yes	Patch of woodland to the south of intake	RSPB sparrow terrace box



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			<i>RSPB Apex bird box</i>
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Conclusion

Based on the information provided above, this development will result in a Green Infrastructure and Biodiversity Net Benefit upon completion.