

CLIENT: Motorcycle Importer and Retailer

PROJECT SCOPE: Conversion of petrol engine 125cc bike to electric

PROJECT TARGET: Feasibility Study

RESULTS: Demonstrator model produced and road-registered

Whilst looking for a donor bike for a conversion project we met the team at Sinnis Motorcycles, who are based in Brighton and import a range of motorcycles and scooters from China. They have established a network of almost 100 dealers across the UK.

They shared a similar philosophy to us and it wasn't long before their Marketing Director asked if they could lend us one of their demonstrators to convert to electric.

This turned out to be a pretty simple conversion, retaining the existing loom, and integrating the key-switch and cut-out switch with the electric drive. The position of the motor, and the fact we were only running at 36v, meant we needed a lay-shaft carrying a sprocket between the motor and rear-wheel, but otherwise it all went together well requiring no modification to the bike

The conversion was built using high specification lead-acid batteries which proved the capability but unfortunately didn't give anything like enough range. By changing over to a good lithium pack there would be scope for more performance and range but it was felt at that time (2011) that the cost of an electric conversion could not be justified. This was a shame as many people expressed in interest as "it looks like a motorcycle and not a scooter".

It remains a relatively simple conversion though, which we could easily resurrect one day.



Weald Technology Ltd has won awards for engineering and innovation in low-carbon and sustainable transport. Our collaborative design and engineering projects are used to generate industry-relevant STEM activities that inspire the UK's next generation of engineers and scientists.

**For further information please call
Phil Edwards on 01825 761890 email: info@weald-tech.co.uk**