

## Case Study

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A rail station in Central London approached our company to design a dedicated extraction system as they have a fleet of battery powered buggies that are used for general station duties. The buggies use voltaic lead acid batteries which generate hydrogen fume and sulphuric acid vapour during the charging process.

Our solution was to design a system capable of charging the eight buggies simultaneously. As there are different buggy designs our solution attaches a PVC collection hood during the charging process which is wall stored when not in use. A support frame on the underside of the hood provides secure location onto the battery pack footprint. Each extraction hood is then connected to a wall mounted point which then in turn connects to the main collection duct and the extraction fans located externally which vent the fumes safely to atmosphere.



Operation of the extraction fans is via a control panel and inductive signalling from the battery charging circuit. A flow transducer is installed upstream of the fans and in the event of “non flow” being detected by the transducer when power is being supplied to the fan, a switched signal pulse is generated to the site warning alarm.