octavius

In partnership with

sider park parking solution

Making Parking Greener

As the need for car parking spaces grows, finding ways to make parking more efficient and more environmentally friendly is becoming increasingly important.

A more environmentally aware approach can be achieved in two ways: through aspects of the construction process, and through keeping a firm hand on the maintenance and management of car parks.

The Octavius Siderpark modular car park solution can help in both areas, with our quick and easy to erect structures that can be dismantled and used elsewhere when needed. We can also provide sustainable energy sources and electric vehicle (EV) charging solutions; all this can be provided along with full design solutions.

A car park has three main effects on the environment – it takes up space, it is visually intrusive, and searching for a parking space uses fuel and causes pollution, which becomes more concentrated in enclosed car parks.

Up to 10% is a figure often cited as a general estimate for the amount of land given over to car parks in urban areas. Traditional ground level car parks encourage sprawl and can contribute to urban heat islands. The impact of going upwards by adding an extra deck to a parking area can be a low-cost solution with a smaller cost to the environment.

The provision of adequate space and information about the availability of spaces within a car park can overcome much of the searching-for-a-space problem. As for the visual and footprint aspects, underground car parks are expensive to build and maintain. Careful landscaping and sympathetic cladding for above ground car parks can reduce the visual impact, but at a greater cost.

There is no doubt that electric vehicles (EVs) are the future of road transport – the UK Government has commenced a consultation on phasing out the sale of new petrol and diesel cars from 2030. As charging capability is crucial to the parking choices made by EV owners, car park operators that don't install charging stations as standard will be left behind as EVs become more widespread.

Contact our designated car parks team at hello@octavius.co.uk for more information

And, of course, it makes great economic sense to supply or augment charging capacity using solar photovoltaic (PV) panels. Although the initial costs can appear high, the investment will be recovered over time.

In the longer term, it has been suggested that car parks might form giant 'batteries', using the parked EVs as an electricity storage and discharge resource. Trials are underway in Denmark to see if this is a feasible prospect for car parks.

Rainwater harvesting is another efficient utilisation of the flat space offered by car park structures to yield environmental benefits. And the strategic planting of trees in and around car parks can offer shade, absorb pollution and take up water. There is research to suggest that heavily shaded car parks absorb smog-producing ozone, cut overall hydrocarbon emissions from vehicles by 2%, while tree cover also makes a significant contribution to run-off reduction.

Solar PV 'trees' can provide more shade than real trees, while generating clean electricity at the same time. In one such design a car park consists of 25 power-generating solar trees shading 186 parking spaces. The panels produce over 430,000 kWh a year which is used to power offices, provide lighting and recharge EVs.

Sensor lighting solutions are another obvious way of making car parks greener. Motion sensitive lights use far less electricity than 'always on' systems. Scaled lighting can also be employed, with shorter light poles and less intense lighting where pedestrians or bicycles will be, and higher intensity lighting in areas where cars are, to minimise the over-lighting of areas that don't need to be lit.

The solution

Octavius Siderpark modular car parks can be installed directly on top of an existing car park surface without the need to excavate and create foundations – which significantly reduces their carbon footprint. Designs come with multiple solar PV panel and EV charging system options.

Our modular car parks can also be dismantled, relocated and re-erected; which engenders significant carbon savings when compared to the demolition and construction of traditional parking assets.

The system can provide foundation less car parks of up to two storeys above the ground level. A foundation less car park means among other things, you don't have to worry if the ground beneath the car park is an archaeologically sensitive site. If our ground investigations reveal that an area is unsuited to a foundation less car park, ground improvements such as rigid inclusions can offer a cost-effective solution over traditional piling.

The management of run-off can present planning permission challenges, which our modular design has the flexibility to overcome through the specification of permeable surfacing and below-ground attenuation systems – using modular crate systems or more conventional tanks.

Overall, using the Octavius Siderpark modular car park solution means you can be satisfied that you're adopting an environmentally aware approach to managing your car parking challenges

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