grasscrete

# CASE STUDY

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| **PROJECT:** | **University of Buckingham<br>Hunter Street, Buckingham, England** |
| **CLIENT:** | **The University of Buckingham** |
| **FUNCTION:** | **Parking** |
| **ARCHITECT:** | **Peter Dann and Partners** |
| **MAIN CONTRACTOR:** | **Bernard Sunley and Sons Limited** |
| **SUB-CONTRACTOR:** | **Chantry Contractors Limited** |
| **SYSTEM:** | **GRASSCRETE GC1 (100mm thick)** |
| **QUANTITY:** | **2400 m²** |
| **CONSTRUCTED:** | **1983** |

In 1983 Grass Concrete Limited were contacted by Architects Peter Dann & Partners with a new 140 car parking space requirement for students.

A site had been identified as an island formed from natural meander in the River Great Ouse with an access connection to be made via a bridge to the main campus area. The nature of the site made it an ideal venue for organised canoeing with good all round visibility along the river. The isolated nature of the site did, however, pose a few design headaches.

Cut off from the rest of the campus by the river, a temporary bridge structure would be required to cater for the loading of construction traffic. A permanent structure of limited load capability would eventually provide traffic movement on to the island.

Converting a natural landscape into 140 car parking spaces would ordinarily call for a significant increase in demand on the surface water drainage network if a sealed paving layer were to be used. The isolated nature of the site meant, however, that pipe work could not be brought back to the campus infrastructure. A solution to this was the adoption of a porous surfacing system, which would enable filtration both naturally to water table and also via land drains into the river.

Given the long narrow profile of the island, good parking management would be essential in order to maintain maximum use. The ability to delineate individual parking bays was, therefore, an essential requirement.

The third factor was the aesthetic impact on the site of mass parking. It was thought desirable that the appearance of the area should maintain the overall aspect of a natural landscape.

The ideal solution to these criteria was found with GRASSCRETE, the unique cast on site paving featuring steel reinforcing mesh within the cellular concrete structure, which therefore resists differential settlement in heavily trafficked areas.

With a drainage capability approaching 90% that of normal grassland, the paving layer was able to accept surface water without the need for a piped system.

Though providing an overall grassed environment, Grasscrete's network of soil pockets are continuously surrounded by concrete ribs. Further delineation was provided by casting integral solid concrete strips across each bay at 2.40 metre centres. This involved the simple omission of a 200mm module strip from the plastic void formers.

Instead of concrete bollards, tree planting was used to provide further subtle definition and to give height to an otherwise linear perspective of the site. This was easily achieved by forming planters within the Grasscrete.

Actual construction commenced in December 1983 and after a break for adverse weather conditions completion was achieved in March the following year with the occupation taking place almost immediately.

**THE CONSTRUCTION PROCESS**

**CAST AREAS SHOWING TREE PITS**

**SOME YEARS LATER**
**The car park in use with the bay divisions clearly visible**