

CASE STUDY

Value Engineering in Car Park Refurbishment

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PROJECT

Allhallows MSCP, Bedford

STRUCTURE

Multi-storey Car Park

CLIENT

Bedford Borough Council

CONTRACT VALUE

£2,350,000

CONTRACT



Innovative DESIGN ENGINEERING by Makers ensured the commercial viability of the refurbishment of Bedford's Allhallows multi-storey car park.

The successful 10 year 'Parking Charter' between Bedford Borough Council and Makers Construction saw the Allhallows scheme at the heart of the town's £8.8m gateway regeneration project.

The multi-storey car park was suffering from significant repair issues estimated to be in the region of £1.5m and at the time of contract award, Makers was tasked with reducing the overall repair cost by at least 25%.

Makers employed a series of innovative techniques which resulted in a cost reduction to below the required 25% as well as being able to offer the partnership a fixed price lump sum for all the structural repairs.

Allhallows was subject to a full repairing refurbishment including lighting, new lifts and the introduction of a 43MW photovoltaic generating system on the exposed top deck.



Before



After

T : 08458 994444
F : 01543 480676
E : sales@makers.biz
W : www.makers.biz

Makers Office Building 4,
Shenstone Business Park
Lynn Lane, Shenstone, WS14 0SB

Registered in England No: 6348341 Registered Office as above

Association Membership



Accreditations

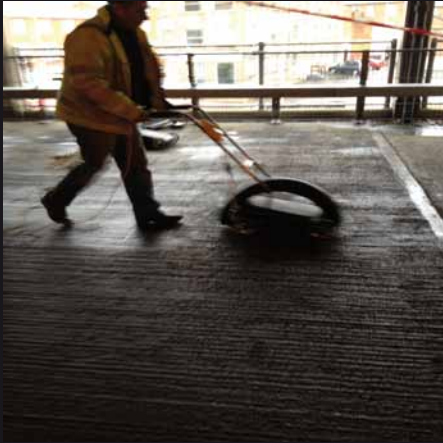


CASE STUDY

Cost Savings through Value Engineering

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- EMAD (Electro Magnetic Anomaly Detection) was used to identify & map the break locations in the steel reinforcement, pinpointing required areas of repair and additional steel reinforcement without the need to excavate all joints throughout the structure.
- Repair Design - Makers' innovative design approach included the installation of new steel rods across the top of daywork joints to increase the bearing capacity of the structure.
- Corrosion Control - The use of a migratory corrosion inhibitor has protected the areas subject to anodic reaction following the repairs.
- Cost Savings through Value Engineering achieved cost reductions & improved quality including saving £211,000 on cladding & curtain walling & £101,000 on lift improvements.
- Re-designing to Add Value: Changing the entire top deck to photovoltaics increased power generation capacity to 43MW and also saved £35,000 by not having to install new handrails and additional security barriers, all leading to reduced investment payback time for the power generating equipment.
- Design with Versatility for Change of Use: A totally secure free-standing solar power generation station on the entire top deck can be re-located for future use should parking capacity increase.



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