

“ People think they can buy a car park, a facility that has serious risks attached, without employing anyone who knows how to look after it. Naivety is a dangerous thing ”



# A design for life

Life care planning can keep your facility functioning, save money, increase revenue and provide legal protection, reports **Rob Coston**

The closest thing to arranging a regular MOT for a car park is putting life care plan into action. Chris Whapples, a consultant with Pyle Car Parks, is writing guidelines on the subject for the Institution of Civil Engineers. He provides an exhaustive definition: 'A documented, managed approach to the inspection, maintenance and management of a car park structure, drainage and waterproofing, which is normally prepared by the engineer, or other suitably qualified, experienced and competent professional advisor/organisation working under the supervision of the Engineer, agreed with the Owner and Operator and implemented over the entire life of the facility including demolition.'

## Life care and the law

Among other benefits, a life care plan can help to protect the operator against legal disasters. 'The Occupiers Liability Act of 1984 states that every owner operator has a responsibility to maintain their facilities in a safe condition,' says Pyle managing director Russell Simmons. 'If you fail to do that, you are in contravention of the Act and somebody can bring a claim against you. The Health and Safety at Work Act covers employees, and makes similar stipulations.

'What you can do, however, is reassign your liability to a consultant. We state that, subject to the operator using our life care plan system properly, if we miss something then it's our fault legally. That's a big win for local authorities in particular.

'Using a life care plan is recommended by professional bodies including the BPA, Institution of Civil Engineers and Institution of Structural Engineers as a method of taking reasonable care to meet your legal obligations. The courts will recognise the steps you have taken, as will insurers.'

Graeme Middleton, business development manager at Makers, backs this up: 'Even if there are accidents or defects and somebody puts in a claim, from a duty of care perspective the operator can demonstrate that they have taken reasonable care using this living document. They are taken out of the line of fire, and can demonstrate to the public that the facility is a safe environment.

'The companies that get into trouble are the ones that don't take that approach, as an investigation will show that they've suspected a problem for 10 years but made no plans to mitigate it.'

The legal side is very important, but as Whapples points out, the primary reason for implementing a life care plan is ensuring that a car park is safe to use.

That isn't the whole story, though: 'Structural safety is the biggest part of any life care plan, but it's not just about keeping a car park safe.

'It's actually trying to regularise maintenance, and therefore minimise the work you have to do because you deal with each issue at the right time. It's also a management tool that helps you to administer the asset and save money.'

## Special case

'The problem is that most people will design a new structure, put it into service, and then expect it to last for 50 or 60 years without much maintenance. With an office block you can get away with that, so many owners think you can do same with car park,' says Whapples.

'But a car park is an open-sided building and has to carry heavy loads, with the wheels of vehicles directly on the concrete. It wears out. For example, in the winter, vehicles bring in salt and snow from the roads. Salt-laden water is highly corrosive and

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RIGHT: The multi-storey Allhallows car park in Bedford was restored in line with a new life care plan, reopening to the public in April 2014



►► penetrates the concrete. The reinforcing bars then rust and expand, blowing the concrete off the bars.

'You don't see it happening because the corrosion is taking place within the body of the concrete. This "spoiling" can take 20 years, but once it's taken hold it will accelerate quite quickly and within a few years the facility can significantly deteriorate.'

This problem is expensive and disruptive to repair; a life care plan is supposed to monitor a facility for problems like this and solve them in advance with preventative measures or early action, reducing costs in the long term.

## Revenue

As well as reducing costs, Middleton says that it is also a matter of maintaining or increasing revenue. 'A life care plan is absolutely essential for safety. Owners and operators have a duty of care. But from a practical point of view, the majority of owners and operators have a facility attached to an asset like a shopping centre so it's important to maintain footfall (or tyrefall). A full car park means revenue, and an unsafe environment doesn't encourage repeat visits.'

'What encourages people to return to a car park is a good user experience – it should be well lit; feel safe; have good, legible instructions; and have clearly marked pedestrian routes and access. Users spend the most time in the stairwells and lifts, and paying for tickets, so those customer environments should be improved too.'

A life care plan will often include upgrading these areas; for example, Makers breathed new life into an older facility in Bedford town centre, revitalising Allhallows car park as part of wider improvements to the town centre.

However, Simmons points out that investment must always match the capabilities and goals of the business: 'A lot of engineers speak as if "best practice" is the only way to do anything, but that isn't the case in the real world. The strategy we use really depends on client requirements: for example, they might only want the structure for another five years, or an extensive refit might not be commercially viable. You have to work within a budget to ensure standards and safety are maintained but value is still gained from the asset.'

## Understanding first

Ross Carty, marketing manager at Universal Sealants, explains how the company's subsidiary USL StructureCare works to repair facilities in line with life care plans. USL StructureCare has been involved with a number of recent car park projects including the new Neath Port Talbot multi-storey car park in South Wales and Alder Hey Hospital's new car park in Liverpool.

'USL is keen to stress the importance of "understanding the car park structure" before beginning any refurbishment project or selecting the most appropriate deck coating system,' he says. 'Every car park structure is different, in terms of its construction, age, level of use, environment and, of course, previous maintenance regime, so it's essential to arrive at the most appropriate, fit for purpose and functional solution which meets the needs of the structure and the

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expectations of the car park owner/operator.'

For this reason, a key part of the plan is to get together all reference documents relating to the car park, including as-built diagrams and records of inspection and maintenance performed.

'A properly implemented plan will help prevent the propagation of minor defects into potentially more serious structural issues, which of course – once apparent – can lead to loss of parking spaces, lost revenue and even lost customers,' says Carty. 'USL also recommend that to ensure the document is effective and easy to implement, and to avoid any potential dilution, the process should be instigated, prepared and managed by an independent and experienced structural engineer.'

## Have a plan and stick to it

However, Whapples points out that while many managers have a good plan, this doesn't always translate into successful policy: 'Most people aspire to have a life care plan, but after it's completed they put it in a filing cabinet and forget about it. Then they don't get the best use out of it.'

Simmons actually wrote his dissertation on life care because of this. He explains: 'I focused on life care as a case study of something that an industry had tried to implement to raise standards. I was interested in seeing if the implementation had been a success or had been rejected by the commercial market.'

'What I found was that people are more aware of their obligations and how to look after their facilities, but there was still a wide failure to institute life care



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► plans. The conclusion was there had been marginal improvement but there was still a lot of work that needed to be done.’

As a result of work by Simmons and Whapples, Pyle have come up with a way to get around this apathy problem using the internet, as Simmons confirms: ‘We wanted to make having a life care plan much more palatable. People didn’t engage with the concept as they felt it was difficult, expensive and arduous.’

The life care plans that the company had been producing were paper-based; a report that the operator would shelve and ignore. This had to change, because a working document like a life care plan will fail if it is static.

‘We decided to put it on the web via our app, Reportal®, and give clients an iPad that they could use to view the information and update it,’ says Simmons. ‘The iPad is more engaging, so the client will go out, inspect the facility and submit the report more regularly, which means we can keep the recommendations and actions up to date.’

‘The beauty is that we can step back as much as is required. For example, on a new-build the app would be set up and the client could do all of the monitoring, but one of our engineers is keeping an eye on their findings remotely and will act if needed.’

‘So the client doesn’t have to pay for a weekly inspection, as they are doing this themselves. It’s far less money than paying for engineers to look over a brand new structure.’

As this suggests, the amount of attention required from the Pyle team varies according to the particular facility: ‘With some car parks, something comes in every week because they are in a poor condition, but after a rejuvenation scheme far less action is required. Following that, the client can maintain the life care plan with our engineer monitoring remotely.’

As Aristotle put it, ‘Good habits formed at youth make all the difference’. He probably didn’t have car parks in mind, but the principle applies nevertheless.

Applying a life care plan from the beginning means that a car park with a life of 50 years will function safely for this entire period, or even longer, with minimal maintenance. Of course, automobiles have a life of about 10 years, so a facility may actually outlive its usefulness. But that’s certainly better than scrambling for capital to refurbish a collapsing facility.

### Attitude change

Simmons believes that the campaign to encourage life care plans is now paying off. ‘Slowly but surely, there’s an attitude change. More and more owners and operators are becoming aware that adopting a pro-active method of maintaining these structures saves money, compared with reacting to problems as they arise. “A stitch in time, saves nine”... it’s far cheaper in the medium to long term.’

‘Plus the car park will be nicer, which means more people visiting, who in turn think more highly of the service and your brand, whether you are a private operator or a local authority.’

ABOVE: The multi-storey Allhallows car park interior