

Officer/Councillor Approval		
Officer Approval	Date	Name
Chief Executive/Deputy Chief Executive	20/1/16	Bill Hunt
Head of Service	15/1/16	Robert Hoof
CMT	18/1/16	
Section 151 Officer	27/1/16	Mike Snow
Monitoring Officer	25/1/16	Andy Jones
Finance	27/1/16	Mike Snow
Portfolio Holder(s)	20/1/16	Councillor David Shilton
Consultation & Community Engagement		
No consultation proposed at this stage.		
Final Decision?		No
Suggested next steps (if not final decision please set out below		

1. Summary

- 1.1. The purpose of this report is to appraise members of the outcome of the structural condition surveys commissioned on the Council's three multi-storey car parks and to set out the intended response. This report will have implications upon the forthcoming draft car park strategy which is due to be submitted to Council in March 2016.

2. Recommendations

- 2.1. That Executive note the outcome of the specialist structural condition surveys of the multi-storey car parks (MSCP) set out at Appendix One.
- 2.2. That Executive agree to fund £120,000 essential remedial repairs to the St. Peters MSCP, Leamington, funded from the Car Park Reserve
- 2.3. That Executive note that the Linen Street MSCP, Warwick is nearing the end of its design life and as it continues to operate will need to be monitored through monthly structural surveys to mitigate the ongoing issues.
- 2.4. That Executive approve a budget of £20,000 to enable detailed feasibility work to be undertaken on options for future provision of appropriate levels of car parking in Warwick town centre to replace the current provision within the Linen Street MSCP. Funded from the Car Park Repairs and Maintenance Reserve.
- 2.5. That Executive note a further report detailing the business case for each option will be presented to members when this work has been undertaken.
- 2.6. That Executive note that the position in respect of the Covent Garden MSCP, Leamington and that proposals to address the issues relating to this car park will be developed as part of the proposed wider development of this area and reported through a future HQ Relocation report.
- 2.7. That Executive agree the principle of reserving car park income surplus from the base budget to cover the future maintenance liabilities of MSCP.

3. Reasons for the Recommendations

- 3.1. Structural engineers, Pick Everard, were commissioned to undertake structural condition surveys for Covent Garden, St Peters and Linen Street MSCPs. Their surveys, summarised at Appendix One, highlighted issues which required further specialist concrete testing which has also been undertaken.
- 3.2. The surveys have demonstrated that the St Peters MSCP is in reasonable condition and with some limited capital investment could continue to provide Leamington with nearly 400 car parking spaces for the next 20 years. However, in order to ensure its continued operation the survey has concluded that remedial works of c£120,000 are required.
- 3.3. It is recommended that essential remedial works including structural repairs, deck coating repairs, Health & Safety works to the split levels and drainage improvements are undertaken as soon as possible. This will put the MSCP into a state of repair that can be maintained through an on-going annual maintenance programme. The funding for these works will be made available through the Car Park Repairs and Maintenance Reserve.

- 3.4. The results of the survey of Linen Street MSCP are significantly different and indicate that it has reached the end of its design life. The car park requires substantial concrete repairs and has steel reinforcement bar degradation throughout with unacceptable levels of section loss to the ramps to decks 8 & 9 and as a result these have been closed from public use. Due to age of construction there are sections of the car park that do not conform to modern health & safety requirements one example would be the timber slats between each parapet which are considered a fire risk. Vehicle impact protection is showing extensive corrosion. The estimated cost to deal with the immediate repairs needed is £439k which would only provide the car park with up to three years additional life. Any short term repair offers no value for money due to the limited extended life. In the next 12 months no repairs will be made to Linen Street but the car park will be structurally inspected on a monthly basis to assess its safety risk for ongoing public use. The cost to inspect is £18k per annum and is funded through existing budgets, it is anticipated that full closure of the car park will be phased in over the coming 12 months, but will be dependent on the inspection results. The benefit of site inspection for next 12 months is that officers will be able to assess all of the possible options through a feasibility study.
- 3.5. Linen Street provides residential parking to 30 vehicles at Martinique Square and there is a serious financial and logistical impact in regards to the residents parking entitlement. There is a short term alternative parking arrangement planned to cope with the displacement of the Martinique Square vehicles when Linen Street closes. But the displacement creates a knock on effect to income derived from other car parks, most notably West Rock. Long term closure of Linen Street could add considerable risk to the vitality of the local economy as loss of parking on this scale will create disproportional displacement of cars throughout the town centre and put further pressure on already well utilised parking locations. An internal options appraisal for Linen Street has identified that the most suitable area for rebuilding the car park is upon the existing footprint and financial modelling will be needed to assess the financial business case. Without design proposals there is no possibility of producing an accurate feasibility study for Council to consider. It is recommended that a procurement exercise be undertaken to appointment a suitable specialist.
- 3.6 The follow on report for Linen Street is necessary as it will take time to procure the necessary specialist companies and develop the options. The purpose of the report will be to give Council a clear understanding of the options and costs for future provision at Linen Street and will be submitted as soon as practically possible.
- 3.7 The results of the Covent Garden report highlighted a number of significant issues, the main concern being ASR (Alkali Silica Reaction) which required further investigative testing. The revised report has now been received and shows that ASR is present throughout the building but at a lower risk than first considered and can be managed in the short term. There are however, substantial costs associated with maintaining Covent Garden for any length of time. As this site is linked to Riverside House relocation it is proposed that Council note the issues from the survey at Covent Garden. A detailed report into the future of Covent Garden will form part of the Riverside House relocation report due later in 2016.
- 3.8 Current maintenance to all car parks is paid through the repairs and maintenance budget of £60k per annum. This fund is not sufficient to deal with the future challenges of the multi-stories or to keep them in a reasonable

standard. It is recommended to Council that future contributions are made to the Car Park Repairs and Maintenance Reserve from any surplus income over the amounts budgeted to cover the future liabilities of any multi-storey car park. Conversely, shortfalls from car park income to the General Fund would also be financed from this reserve.

4. Policy Framework

- 4.1 Fit for the future, supporting the vitality and viability of town centres.

5 Budgetary Framework

- 5.1 The cost of the specialist companies to supply the feasibility study at Linen Street is estimated to be between £10k and £20k. This can be funded from the Car Park Repairs and Maintenance Reserve.
- 5.2 The initial £120k needed for remedial repairs at St Peters can be funded through the Car Park Repairs and Maintenance Reserve.
- 5.3 The Car Park Repairs and Maintenance Reserve is forecast to have an unallocated balance of £182,000 as at 31st March 2016. Proposed increases to car park charges to financial year 2016-2017 are estimated to generate £40k per annum which will be appropriated to this reserve. In addition, any variance to the future budgeted car park income is proposed to be allocated to/from this reserve.
- 5.4 When Linen Street closes the estimated gross loss to car parks income will be £136k. This figure will be higher if we are unable to displace car park users into existing car parks. A full business case will be brought back to members that considers all the options for the Linen Street car park in Warwick.
- 5.5 Consideration needs to be given to funding the long term maintenance of the multi-storey car parks. Ideally funds would be set aside to meet these liabilities (potentially through the use of a sinking fund). However, given the other financial pressures on the Council currently and in the medium term, the Council's Medium Term Financial Strategy has not got the capacity to be able to fund any required contributions on an annual basis. Also, regard needs to be had for other liabilities that the Council has, such as the funding the future maintenance of all municipal assets, for which provision also needs to be made. These issues will be considered further, as part of the forthcoming Car Park Strategy and within future budget reports.

6 Risks

- 6.1 Failure to carry out the required repair programme could lead to structural failures resulting in injury to users or damage to vehicles.
- 6.2 Significant loss of income to the Council when Linen Street Closes.
- 6.3 Once remedial and concrete repairs commence there is a possibility of further defects being discovered which will increase repair costs.

7 Alternative Option(s) considered

- 7.1 Do not fund remedial repairs and ongoing maintenance at St Peters car park. This has been discounted as we have funds in the car parks reserve and have made provision to maintain the fund through car park income.
- 7.2 Do not fund £20k for the feasibility study and allow Linen Street to close with no option to replace the car park in the future. This will leave the Council with no detailed plan as to how we can deal with the future of the Linen Street site as well as the obligation to supply car parking for Martinique Square and potentially the Print Works on this basis it has been discounted.
- 7.3 Bring forward a report detailing the work required at Covent Garden or options appraisal for the site. This has been discounted as there is a wider scheme in respect of the HQ relocation which will consider how best to assess the future of the Covent Garden car park.

8 Background

- 8.1 A survey carried out in June 2014 reported that Linen Street MSCP required a number of essential repairs. Due to the Council no longer having internal engineering department it was agreed to procure suitable expertise to undertake the necessary structural surveys and supply the project manager for any work programme tendered thereafter. The competitive tender was published at the beginning of the year for suitable companies to undertake this project.
- 8.2 In April 2015 the company Pick Everard were commissioned to undertake the structural surveys. It was necessary for all three multi-storey car parks, St Peters, Covent Garden and Linen Street to be surveyed.
- 8.3 The results from the surveys were supplied in July 2015. The findings highlighted structural and health and safety issues at all three sites. More significant problems were highlighted at Linen Street and Covent Garden and to ascertain the extent of the problems, further testing was required at both sites. The testing is now complete at Linen Street and Covent Garden and this report seeks to identify a way forward for from the problems highlighted.
- 8.4 At St Peters MSCP the cost for the immediate repairs was estimated at scheduled rates with Pick Everard at £120k. This figure includes £23k for structural repairs, £8k in deck coating repairs, £57k for H&S works to the barriers and split levels, £10k for Drainage and £22k in contingency and professional fees. Given the level of usage, income generated and its key location to town centre services this work is considered value for money.
- 8.5 Due to the generally good condition of St Peters, Pick Everard has been able to provide a 20 year maintenance plan for the car park. This is a rolling plan of planned preventative maintenance (PPM) and is envisaged to cost £1,335,000 over the twenty year period. This equates to an average of £70k per annum, in this year's car park fees and charges we have allowed for £40k to be allocated for car park repairs and as the car parks already provide a surplus it is proposed that £70k from car park income is set aside each year to fund the PPM for St Peters. This should be funded from the Car Park Repairs and Maintenance Reserve. It will be necessary to review the balance on this reserve, taking into account the contributions to the reserve, and the sums required to meet the work on this car park.

- 8.6 At Linen Street MSCP the cost for the immediate repairs which could only offer an increase of three years' worth of extended life was estimated at scheduled rates with Pick Everard at £439k. This figure includes £139k for structural repairs, £97k for water proofing the top decks, £94k for H&S works to the barriers and stairwells and £109k for minor works, contingency and professional fees. Given the income generated from Linen Street and only a three year period of extended life it has been deemed that there is no financial justification to undertake this work.
- 8.7 The conclusions by Pick Everard indicate that the immediate remedial works are not financially viable so a monthly structural survey will be undertaken to continually assess the safety of the site. It is anticipated that within 12 months the site will be phased into complete closure.
- 8.8 Closing Linen Street will have the following impact;
- The knock on effect to town centre economy and displacement of a minimum of 75 cars to the surrounding area.
 - Loss of income from Linen Street £70k P&D income, £21k season ticket income.
 - 30 dedicated car park spaces to the flats in Martinique Square secured under a 99 year lease with 85 remaining, legal advice obtained has stated that the lease gives rights in the event that the car park is redeveloped, "alternative car parking premises" will need to be re-provided which are "of equivalent or better standard" and are "reasonable proximate" to Martinique Square. The option to buy out the parking lease has been ruled out as we have to compensate for the cost of parking for the next 85 years.
 - The "reasonable proximate" car park will be West Rock which will result in a loss of income of £25k per annum from West Rock. The knock on effect of this would be the removal of season ticket holders and displacement of 30 cars with an additional loss of income of £20k per annum.
 - Estimated net loss to car parks income budget of £136k per annum.
 - Both Linen Street and West Rock provide the significant amount of season ticket and all day parking for key businesses within the town centre. There is already concern from one of these businesses (DCA Design) that the current standard of parking in the town is affecting their plans to expand the business. If parking was lost at Linen Street and season ticket holders displaced this substantially threatens the business case for them staying in town. They currently occupy 4 premises within the town centre and are looking to expand into a fifth.
 - Linen Street also houses the CCTV mainframe for Warwick, cost to move this estimated to be in the 10s of thousands. Further investigation is needed to ascertain the full cost.
 - Linen Street is also the Staff restroom, toilets and IT for Ranger service.
 - The site would also have to be secured to keep out unwanted visitors at an estimated cost of £5k.
 - The estimated cost to demolish the site is £500k and will be difficult due the site being surrounded on three sides.
- 8.9 Linen Street car park is Warwick's only multi-storey car park (MSCP) available seven days per week. Built approximately 50 years ago it has a total capacity of 237 spaces, of which 30 (in the basement level) are made permanently and exclusively available to residents of the adjacent housing at Martinique Square see paragraph 9.9. The Council has also agreed to allocate a further 41 spaces to future residents of an adjacent site (the Warwick Print Works on Theatre Street) should that site be developed for housing.

- 8.10 The design of Linen Street car park means that it is not the most popular in Warwick and occupancy levels are between 50% and 65% due to its the age and design. However, its location to the facilities within Warwick town centre does provide much needed parking to support the local economy.
- 8.11 Officers have undertaken a limited options appraisal of the site to assess the best possible use of space moving forward. As part of this process a market research company was commissioned to gather information from the public to understand what their parking requirements are in Warwick.
- 8.12 The options appraisal carried out in Warwick looked at a number of car park sites to assess what potential they would have in providing increased parking capacity. This appraisal has identified that the most suitable area for rebuilding the car park is upon the existing footprint at Linen Street but due to modern day building standards officers do not believe the same number of parking spaces can be achieved. In addition to the location appraisal financial modelling is being created to assess the financial business case. However, officers are limited in providing specific details to what could replace Linen Street as we no longer possess the design skills internally. The total number of parking spaces that can be supplied will impact the business significantly and officers want to ensure that Council are given as accurate a picture as possible. Officers need to understand what the minimum and maximum numbers of spaces that can be accommodated on the site as without design proposals there is no possibility of producing an accurate cost replacement model for Council to consider. It is recommended that a procurement exercise be undertaken to appointment a suitable company to provide this essential information.
- 8.13 At Covent Garden essential immediate remedial works could be undertaken to extend the usability of the car park by no more than three years and will require an ongoing structural survey to assess the decline building. Alternatively if significant investment was placed into the site it could potential continue for a further 20 years. The cost for this is £814k in immediate remedial and safety works followed by a 20 year maintenance plan for the car park. This is a rolling plan of planned preventative maintenance (PPM) and is envisaged to cost £2,143,000 over the twenty year period. This higher cost is to deal with ongoing preventative measures required to slow the ASR.
- 8.14 Due to the HQ relocation and the wider development opportunities in this area any detailed option on the future of this site will need to come forward as part of a larger development report.

Appendix One

The summary of St Peters car park survey is as follows;

- Chloride ion content in concrete is one of the most common initiators of corrosion of steel reinforcement embedded in concrete. There are negligible levels of chloride to the soffits, columns. However decks are always at greater risk there low to moderate risk in two areas and extremely high levels were recorded on the ramp to deck 3 which indicate a high risk of corrosion to embedded concrete.
- The concrete testing results generally show that at present there is a low risk of corrosion of the reinforcement in the concrete structure. Only the decks have a slightly elevated risk due to the de-icing salts being deposited from cars during the winter months.
- There are patches of reinforcement corrosion and concrete spalling on the lower decks that require rectification to prolong the life of the structure.
- The top deck coverings is in good condition as this is only 2 to 3 years old, there is small split crack noted on the west ramp. Now that a waterproof coating has been installed to the upper decks the avenues for moisture ingress have been reduced.
- Reinforcement and bar corrosion showed 62% with clean rebar and no corrosion, no section loss was recorded from any rebar.
- Apart from one isolated location carbonation to the concrete is not considered to be cause for concern.
- Vehicle impact protection is showing that some corrosion has occurred to the barrier and bolt fixings in the upper deck locations. Treatment should be undertaken to prevent any further deterioration as part of the annual maintenance programme.
- The pedestrian protection at the split levels has a significant gap and under modern day H&S standards poses a potentially dangerous safety issue for young children.
- The numerous hairline vertical cracking is not considered structurally significant but should be considered to be filled with a suitable protective paint. This will prevent further moisture ingress and prolong life to the structure.

The summary of Linen Street car park survey is as follows;

- Chloride ion content in concrete is one of the most common initiators of corrosion of steel reinforcement embedded in concrete. There are negligible levels of chloride to the upper decks however extremely high levels were recorded on floors 1 to 7. These indicate extremely high risk of corrosion to embedded concrete.
- The lack of concrete cover due to the design and age of the car park have led to high levels of chloride ion ingress which in turn has led to section loss to a number of the main reinforcement bars. Overall section loss from the areas tested was no greater than 10% which is in tolerance for a car park of this age but there was up to 30% section loss has been detected in the running lanes and ramps which is cause for concern.
- The asphalt top deck coverings have exceeded their design life and split in a high number of locations allowing water to enter the structure and have caused extensive delamination of the concrete structure. As a result of this finding the top two decks have been closed to vehicles.
- Due to car parks age and design there is a number of areas which fail to meet modern day standards for access. The timber slats between each parapet are considered to be a fire risk.
- Apart from one isolated location carbonation to the concrete is not considered to be cause for concern.

- Vehicle impact protection on all decks is showing extensive failure to the paint coatings and rusting has occurred to the barrier and bolt fixings in many locations.
- The water ingress to open stairwells presents an ongoing health and safety risk and the hand rails do not comply with modern H&S standards.
- The report concludes that Linen Street MSCP has reached the end of its design life and that immediate remedial repairs are required if this is to be maintained as a public use car park. The immediate remedial repairs will only extend the life of the car park by no more than three years. In light of the underlying issues it is necessary to consider decommissioning the site immediately or beginning planning for this after immediate repairs are carried out.

The summary of Covent Garden's car park survey are as follows;

- Chloride ion content in concrete is one of the most common initiators of corrosion of steel reinforcement embedded in concrete. There are negligible levels of chloride to the all decks and therefore the risk of corrosion from chloride is considered to be low.
- There is lack of concrete cover due to the design and age of the car park, modern standards suggest 30mm minimum cover in sections of the car park it is only 10mm. However this has not led to high levels of chloride ion ingress or affected the reinforcement bars.
- The failure of the top deck covering is allowing water to enter the structure and have caused extensive delamination of the concrete structure. Due to the water ingress from the top two floors there is corrosion to the rebar within the ramp to deck 7 and 8 which is cause for concern. As a result of these findings the top two decks have been closed to vehicles.
- Alkali-Silica Reaction occurs when the alkaline pore fluid and siliceous minerals in some aggregates react to form a calcium alkali silicate gel. This gel absorbs water, producing a volume expansion that blows open the concrete. This was noted in the initial testing and a further test was undertaken to assess the extent of the problem. ASR cannot be repaired and can only be slowed by preventative moisture ingress into the concrete and by continuous monitoring to assess the structure.
- The further testing has indicated that ASR is present throughout the structure but at a low level and does not pose an immediate risk. But treatment of the parapets is advised due the nature of the design and location.
- Carbonation to the concrete is not considered to be a cause for concern.
- The drainage system is main contributor to the water ingress to the building and should be refurbished as soon as possible.
- Vehicle impact protection on all decks is showing extensive failure to the paint coatings and rusting has occurred to the barrier and bolt fixings in many locations. It is also does not pass modern standards and would is unlikely to pass load testing against vehicle impact, these should be refurbished.
- The handrails are less than 1m high which is less than current building regulations allow. They are also showing signs of corrosion and should be replaced to meet modern day standards.
- The water ingress to open stairwell within the centre if the car park presents an ongoing health and safety risk and should also have a steel barrier installed to protect pedestrians from moving or parking vehicles.
- The report concludes that Covent Garden MSCP needs immediate remedial repairs if this is to be maintained as a public use car park.