1. **Reason for report**

This report makes proposals for continued use of the The Hill Multi Storey Car Park in the light of discovery of weak structural elements and Bromley town centre car parking capacity requirements.

2. **RECOMMENDATION(S)**

The Executive is invited to confirm which of the following three options they wish to pursue to ensure the continued use of The Hill MSCP:-

**Option 1** – Approve a sum of £75,000 to be included in the Council’s 2010/11 Capital Programme to fund temporary propping of a weak slab and erecting fencing along the perimeter of the whole building at The Hill Multi Storey Car Park.

**Option 2** - Approve a sum of £280,000 to be included in the Council’s 2010/11 Capital Programme to fund the cost of propping a weak slab and part strengthening parapets at The Hill Multi Storey Car Park.

**Option 3** –Approve a sum of £1,142,000 to be included in the Council’s 2010/11 Capital Programme to fund full strengthening of The Hill Multi Storey Car Park.
Corporate Policy

1. Policy Status: Existing policy.
2. BBB Priority: Quality Environment. Prosperous and Thriving

Financial

1. Cost of proposal: Estimated cost Option 1 £75,000, Option 2 £280,000, Option 3 £1,142,000
2. Ongoing costs: Recurring cost. One off costs of strengthening works and ongoing minor maintenance funded from revenue.
3. Budget head/performance centre: Parking maintenance budget and capital programme
4. Total current budget for this head: £178,000, £0 (proposed new capital scheme)
5. Source of funding: Existing revenue budget 2010/11 and capital receipts

Staff

1. Number of staff (current and additional): 2 fte
2. If from existing staff resources, number of staff hours: 2 fte (as above)

Legal

1. Legal Requirement: No statutory requirement or Government guidance.
2. Call-in: Call-in is applicable

Customer Impact

1. Estimated number of users/beneficiaries (current and projected): The Hill MSCP serves many thousand of customers each year in their use of Town Centre facilities, the availability of car parking will broadly impact on Town Centre businesses.

Ward Councillor Views

1. Have Ward Councillors been asked for comments? No.
2. Summary of Ward Councillors comments:
3. COMMENTARY

Background

3.1 The Hill Multi Storey Car Park (MSCP) is located in Bromley Town Centre. Access to the car park is from Beckenham Lane. The car park was constructed in 1982 and was extended in 1995 to provide an additional 100 parking spaces. The car park comprises reinforced precast concrete columns supporting post tensioned concrete slabs. It is one of three Council owned and operated multi storey car parks in Bromley town centre. Over recent years faults have become evident with the top slab and parapets and these need repair.

3.2 Environment Policy Development and Scrutiny Committee received this report at the meeting held on 24th August 2010 and requested an enhanced review of options, considering broader possible solutions including the availability of alternative parking resources in the town centre and the impact of interim measures. This report includes this further information.

Bromley Town Centre Car Parking Capacity

3.3 A quantitative analysis of town centre car parking capacity has been undertaken. This considered all public parking; the five town centre’s multi storey car parks, the surface car parks and on-street parking. The analysis accounted for the current restricted capacity of The Hill MSCP and the impact of proposals to advance development of opportunity site K (Westmoreland Road MSCP) from August 2012, as part of the Council’s Town Centre Area Action Plan. Opportunity site K is proposed for mixed use cinema led development with re-provision of public parking as part of the town centre wide car parking strategy.

The review identified the following:-

a) The current restricted capacity indicates no shortfall of car parking capacity, although during the Christmas peak the car park is at or very close to capacity meaning some drivers may be forced to queue or find alternative car parking.

b) Partial closure of The Hill MSCP to allow for repairs also indicates no shortfall of car parking capacity (weekday or Saturday) except at the Christmas peak, when the shortfall could be exacerbated by up to 120 spaces.

c) Partial closure of The Hill MSCP at the same time as full closure of Westmoreland Road MSCP would result in an absolute shortfall of spaces on a normal Saturday and during the Christmas Peak.

d) Full closure of Westmoreland Road MSCP but with The Hill MSCP available at full capacity would result in a significant shortfall of car parking capacity only during the Christmas peak.

3.4 The contribution made by The Hill MSCP to overall town centre car parking capacity, particularly during the Christmas peak, justifies the need to continue with it’s in service operation to avoid a significant car parking capacity shortfall during the redevelopment of site K. Ideally should The Hill MSCP be strengthened this work would need to be completed prior to, or at the very least avoiding, the Christmas peak and prior to the vacant possession of Westmoreland Road MSCP.

3.5 Following the meeting of Environment Policy Development and Scrutiny Committee held on 24th August 2010 a further review of alternative parking options has been undertaken that would lead to relieving town centre capacity issues during the short to medium term, these included increasing the capacity of the Civic Centre MSCP, working with private suppliers to increase
spaces, a further review of use of The Hill MSCP site and Christmas park and ride. The following four sections describe the findings of the review.

3.6 Capacity at the Civic Centre could be increased by adding floors however it is understood there may be planning difficulties in respect of a previous Council commitment to local residents not to increase the height of the structure. There does not appear to be any documentary records that would support this view. There are also issues regarding stairwell sizes & means of escape as well as strengthening the foundations and ground floor columns which would need to be addressed in adding new floors. Traffic management would be an issue when concentrating more parking at a site which suffers queuing already at peak times.

3.7 It may be possible to provide a park and ride in order to increase parking supply during the Christmas period, similar to the service provided between 1996 and 2008. The previous service used the car park at Norman Park, which can accommodate 170 vehicles plus there is a potential overflow using the smaller car park at the Hook Farm Road entrance which could accommodate a further 70 vehicles, although passengers would have to walk to the main site to catch the bus. There are no other suitable sites near Bromley Town Centre. However, it should be noted that passenger numbers on the park and ride service decreased dramatically between 2004 and 2008 resulting in the Council heavily subsidising the service and eventually withdrawing the service.

3.8 It is unlikely that any other private car park operator would be in a position to increase their supply within the timescales required (i.e. prior to closure of Westmoreland Road car park). Although both Sainsbury’s and the Glades have longer term aspirations to increase parking supply, this would require an application for planning permission and financing to be in place which are outside of the control of the Council.

3.9 An option has been investigated to demolish The Hill MSCP and provide a replacement surface level car park. It is estimated this option would provide approximately 350 spaces (40% of current capacity) however this level of spaces and associated estimates of costs may indicate this option is not fully feasible.

Structural Faults

3.10 The car park has two main structural faults that require attention to ensure the car park can continue in operation:-

a) Weak top slab as a result of corroded anchorages and post tensioned strands.
b) Weak masonry parapets that are not adequately tied to the main concrete structure.

Top Slab

3.11 Routine structural inspection of the car park had identified cracked concrete at a joint in the top slab. The design and detailing of the joint has allowed unchecked water ingress in the past and this is believed to have led to the problems evident today. Detailed intrusive inspection revealed that the post tensioning system, at points where it is anchored at the joint, had corroded raising concerns about the safety of the top slab. If corrosion advanced too far then reinforcing strands could break and the slab could fail. Accordingly, as a precautionary measure, the top floor was closed to vehicles in February 2008 whilst investigatory studies were completed to review whether any further measures needed to be implemented. The studies confirmed that no further floors needed to be closed and that major propping was not required straight away provided measures were taken to strengthen the structure as soon as possible. A regime of regular monitoring was implemented and as a short term risk management measure, two temporary props were installed near the joint in Spring 2009.
**Masonry Parapets**

3.12 In a separate incident in March 2009 the brickwork parapet located over the main entrance/exit became dislodged (believed to be as a result of a low speed vehicular collision) and the car park was closed temporarily whilst the parapet was made safe and structural investigations undertaken.

3.13 It was identified that metal ties designed to connect the masonry parapet to the main structure had been displaced at the time of construction and were ineffective. Further investigation indicated this is a widespread problem affecting the whole of the car park.

**Options to overcome Structural Faults**

3.14 Option studies have been undertaken to investigate ways of dealing with the weak slab and parapets. Six options were investigated including a do minimum propping option, utilising the existing concrete but with revised tendon stressing (2 variations), provide steel beams as passive support, utilising the existing concrete but with carbon fibre strengthening, demolish the slab and re-build using reinforced concrete.

3.15 Five options were investigated to deal with weak parapets including fitting barriers (two options), strengthening (two options) and do minimum (strengthen above entrance, interim protective fencing elsewhere).

3.16 A scheme to strengthen both the slab and the parapets was drawn up in April 2009. The preferred scheme includes removing the weak slab and re-building with a new reinforced concrete slab and parapet strengthening by drilling in steel reinforcing bars with an estimated outturn cost of £1,142,000. This includes a sum of £216,000 for waterproofing the slab to help prevent future problems with water ingress. This is option 3 identified in Appendix 1.

3.17 A draft programme was drawn up to complete full strengthening works by October 2011, the original date that opportunity site k (Westmoreland Road MSCP) was to be taken out of service. More recently however, it has to come to light the handover of opportunity site k may now be undertaken in August 2012.

3.18 This opens up the possibility to delay car park strengthening by a similar period of time but only if the risks evident at the car park are adequately controlled. Recent monitoring of the top slab has shown visual signs of new cracking and accordingly consideration needs to be given to installing further propping to reduce the impact of the risk of sudden slab failure. At the same it would be prudent to implement measures to mitigate the risks presented by the condition of the parapets. In this respect consideration should be given to closing off parking bays adjacent to the entrance/exit of the car park and closing off a 3 metre safety zone around the perimeter of the building where pedestrians have access (option 1 in Appendix 1). The estimated cost of implementing option 1 is £75,000. These measures would need to be implemented immediately and would extend the life of the car park for between two and five years. However, use of a large amount of temporary fencing may have a significant negative impact on the aesthetics of the structure and visitors’ perception of Bromley Town Centre.

3.19 As an alternative, it would be possible to minimize the length of temporary fencing installed by strengthening those parapets adjacent to public access areas (option 2 in Appendix 1). The estimated cost of implementing option 2 is £280,000 and although this too would only extend the life of the structure by 2 to 5 years (involves temporary propping), it would significantly reduce the negative visual impact of temporary fencing. It would also offer time to affirm the longer term future of the car park and would retain the potential for full strengthening to be undertaken at a later date.
Discussion

3.20 The table at Appendix 1 seeks to draw together the key elements of the issues surrounding The Hill MSCP, i.e strengthening solutions, car parking capacity issues and cost.

3.21 The catalyst driving car park refurbishment work (if any) is the need to provide adequate town centre parking capacity. The Hill MSCP makes a key contribution to town centre capacity but the sensitivity of this contribution is heightened by the impending re-development of opportunity site K, Westmoreland Road MSCP.

3.22 From a safety perspective, the car park has weak elements and plans to deal with these elements need to be put in place immediately to ensure the Council can continue to show it is taking reasonable care according to it’s legal responsibilities as occupier/owner of the car park. This is identified as Option 1 in Appendix 1 and includes installation of temporary fencing along the whole perimeter of the building. It is possible this option may introduce an overall negative impact on the town centre.

3.23 This report further identifies the Council could either implement a do minimum interim measures approach involving slab propping and partial parapet strengthening (Option 2 in Appendix 1) at an estimated cost of £280,000 or full strengthening (Option 3 in Appendix 1) at an estimated cost of £1,142,000.

4. POLICY IMPLICATIONS

4.1 Environmental Services Portfolio Plan 2010/13 Outcome 3 – Improving Transportation - Continue implementing the traffic element of the Bromley Town Centre Area Action Plan, including a strategy to meet parking demand after the planned closure of Westmoreland Road MSCP

4.2 Local Economy Portfolio – Vibrant Town Centres - The project will make a contribution to maintaining the vibrancy and vitality of Bromley Town Centre and it’s future development in regard to retail, leisure and business opportunities. Appropriate car parking facilities will encourage customers to visit Bromley which in turn will help established businesses to continue to weather any prolonged economic downturn and in better times will help make the Town Centre more attractive to new investment and hence be well placed to take advantage of future upturns in the economy. A healthy business and retail base will enhance opportunities of employment and will help ensure Bromley does not lose ground to it’s near neighbour retail competitors.

5. FINANCIAL IMPLICATIONS

5.1 The report identifies options for the continued use of The Hill MSCP. The table below provides an estimate of the cost for undertaking each of the options.

| Option | Year/Spend  
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5.2 It is requested that capital receipts be used to fund the cost of the preferred option and for the scheme to be added to the capital programme.

5.3 Additional bays will have to be closed during the proposed works for options 2 and 3. The potential loss of income from these closures is estimated to be around £16k for Option 2 and £35k for Option 3. It is expected that half of this income will be met from parking income as a result of displaced parking in other bays and savings will be found to offset the remaining half.

6. LEGAL IMPLICATIONS

6.1 The Council as owner and operator of the car park has duties under law to provide and maintain premises so that they do not pose risks to the safety of their employees, other persons using the premises as a place of work, visitors and the public at large, specifically according to:-

a) The Health and Safety at Work etc Act 1974, sections 2, 3 and 4.

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<th>Non-Applicable Sections:</th>
<th>7. Personnel Implications</th>
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<td>Background Documents:</td>
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