SNOW HILL CAR PARK EXPANSION, ST HELIER: OPTIONS STUDY

OPTIONS STUDY REPORT

January 2013

States of Jersey Transport and Technical Services

MINISTER'S STATEMENT

I am delighted to present this 'Snow Hill Car Park Options Study' which explores how the aspiration to provide more shopper parking at Snow Hill could become a reality.

Many schemes for increased parking at Snow Hill have been proposed in the past, including schemes which would provide huge numbers of new spaces but these would not be respectful to the neighbouring residents in Regent Road, or appropriate to the heritage of the Fort Regent fortifications and would lead to congestion at the roundabout.

This time, by working with key political stakeholders, relevant authorities and the Chamber of Commerce through a structured process, it has been concluded that a single additional parking floor could be created in the ravine to provide an extra 90 spaces, which would not be overbearing on the residents of Regent Road and would not require excavation of the heritage ravine. The modest traffic generation would also be acceptable. From approval of funding, construction could start after about eighteen months and the new spaces could be available in a little over two years.

Before any development would begin, I would ensure full consultation with the neighbouring residents and other stakeholders would be undertaken and that appropriate mitigation through design would be incorporated into the scheme.

The estimated total cost to deliver the new car park is about £4.8M. I am keen to see more shopper spaces provided on the edge of the heart of St Helier, to provide an economic stimulus to town centre trade. The Car Park Trading Account is heavily committed to funding of ongoing repairs and renewals of the existing multi-storey car parks, however, I believe that an investment of £2.4M from the fund, (which would equate to the cost of an equivalent standard multi-storey car park), would be justified and affordable. To enable the project to be initiated I would look for match funding of £2.4M as an economic stimulus project.

In addition to presenting this project, I will be proposing that in conjunction with the Treasury Minister, a high level working group is set up to progress this concept, which would allow additional shopper parking to be provided at this central site, in a short timescale.

Kevin Lewis,
Minister for Transport and Technical Services

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EXECUTIVE SUMMARY

The Sustainable Transport Policy includes a commitment by Transport and Technical Services to carry out a review of the potential to increase shopper parking at Snow Hill; this document fulfils that commitment.

Snow Hill Car Park currently provides 68 short stay public parking spaces which are very popular with shoppers, because it is the closest surface public car park to the main shopping streets in Town. Increasing the number of spaces for shoppers would provide a welcome stimulus to the town centre retail economy.

Expansion of the car park has been examined on a number of occasions and as part of this study these previous schemes were reviewed. Generally they were found not to meet current expectations in terms of planning, heritage and design standards.

Three parking expansion concepts however were felt to be worthy of further consideration:

- An automated car park system, where vehicles are mechanically stacked on 'shelving'
- A multi-storey car park, keeping below the level of the houses in Regent Road
- A single additional deck linked to Regent Road, without ramps which hence avoids losing spaces from the existing car park

Each of these have been developed to a basic layout stage and outline costs have been estimated.

These current concepts were considered by key political, stakeholders, relevant authorities and the Chamber of Commerce at a workshop on 22 October 2012. They considered the economics, finance, operation and neighbourhood issues of car park expansion at Snow Hill in general and for each of the concepts specifically. The main points raised at the workshop are recorded in this report.

At the end of the workshop, a vote was taken which showed unanimous preference for a single deck structure with entry and exit directly from the ramp that feeds Regent Road.

This scheme offers about 90 additional spaces at a total cost of around £4.8M. Although the stakeholders felt this would not be an overdevelopment of the site and therefore that it was the most appropriate concept, the fact that the capital cost per new space provided is high was a concern.

A more rigorous cost estimating process had confirmed that at current prices the scheme could be expected to cost £4M to construct. Allowing for design and planning fees and inflation, an out-turn expenditure of £4.8M could be expected. The consultation, planning permission and construction period could be expected to take just over two years. The car park extension would take about nine months to construct during which the existing car park would need to be closed for safety reasons.

After careful consideration of the predicted financial status of the Car Park Trading Account, the TTS Minister has proposed a contribution from the fund of £2.4M, equivalent to the normal cost per multi-storey car park space. For the scheme to proceed, economic stimulus match funding would be required.

Snow Hill Car Park: Aerial View

INTRODUCTION

Snow Hill Car Park provides convenient, short stay parking which is particularly valued by shoppers because of its proximity to the town centre. It is one of the Island's more popular car parks and is often full with shoppers queuing for spaces to become available. The potential to increase parking capacity at this location has been explored in recent years and a number of engineering and architectural studies have been undertaken resulting in a variety of concept schemes for consideration. None of these however has been developed to business case or implementation stage.

The States of Jersey Sustainable Transport Policy adopted in 2010 includes a commitment to:

"..carry out a review of the proposal for increased shopper parking at Snow Hill in conjunction with Jersey Property Holdings, subject to the availability of funding for feasibility studies, and bring recommendations to the States by the end of 2012"

Transport and Technical Services has therefore commissioned a 'fast track' review of the options previously identified with the aim of preparing a plan of the most viable option for consideration for funding, further development and potential implementation.

MISSION STATEMENT

The Options Study Mission Statement is agreed as follows:

"Snow Hill Car Park currently provides 68 short stay public parking spaces which are very popular with shoppers because it is the closest surface public car park to the main shopping streets in Town. Increasing the number of spaces for shoppers would provide a welcome stimulus to the town centre retail economy.

The Options Study aim is to rationalise the many past studies to develop a viable town centre economic stimulus scheme that would provide increased shopper parking at Snow Hill Car Park which is easy to use, and, practical to operate, to take forward for consideration by the States Assembly.

The study will take into account that the site is a valuable walking and cycle link into the town centre which needs to be maintained as an attractive route. The site is a heritage feature with residential surroundings and the scheme will need to be sustainable and respectful to the surrounding environment It is recognised that there is potential for wider development in the area which the scheme could contribute benefits to, such as further development of Fort Regent and the proposed Route du Fort Police Headquarters. The study will identify potential opportunities for wider benefit, but will not provide a wider area "development plan."

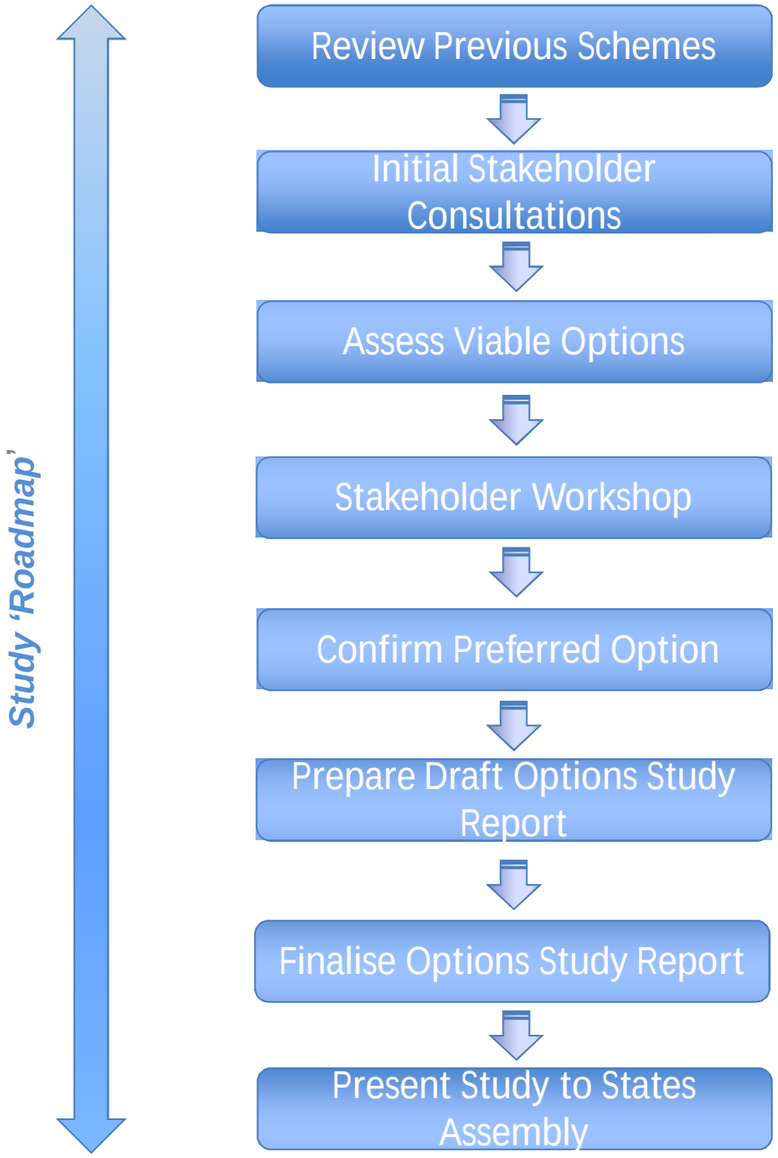
STUDY PROCESS

The study process adopted is summarised by the 'Road Map' opposite and comprised the following key activities:

- Review of previous proposals and viability assessment of existing concept schemes
- Review of the adjacent rock face stability and its implications for car park options
- Identification of key constraints to car park expansion options
- Consultations with key stakeholders and a workshop to gather views
- Identification and development of a Preferred Concept for consideration by the States Assembly
- Production of an Outline Cost Plan for the Preferred Concept

This Option Study Report summarises the study and provides details of the preferred option for increasing shopper parking at Snow Hill. If the scheme progresses further, a full feasibility study will be required to establish a project brief and budget.

Snow Hill car park currently provides 68, three hour shopper spaces



SNOW HILL CAR PARK

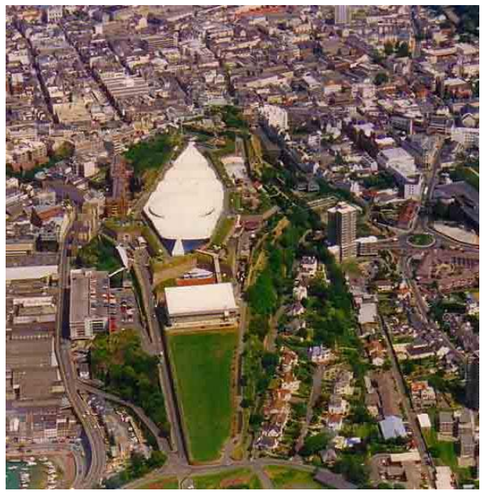
Snow Hill car Park is conveniently located in the south-east quadrant of St Helier, close to the town centre. It lies to the south of the one-way road, Hill Street, which runs along the base of La Mont de la Ville.
Pedestrian access is gained from both Snow Hill, at the northern (town centre) end of the car park, and from Green Street roundabout, at the southern end of the car park. Vehicular access is restricted to the south, from the roundabout only.

The car park lies within the landmark and character setting of Fort Regent and is situated at the foot of a large, steep sided rocky outcrop, on which the historic fortifications are located. The rock outcrop creates a series of edges that are important in separating the main part of St Helier from the Havre des Pas area.

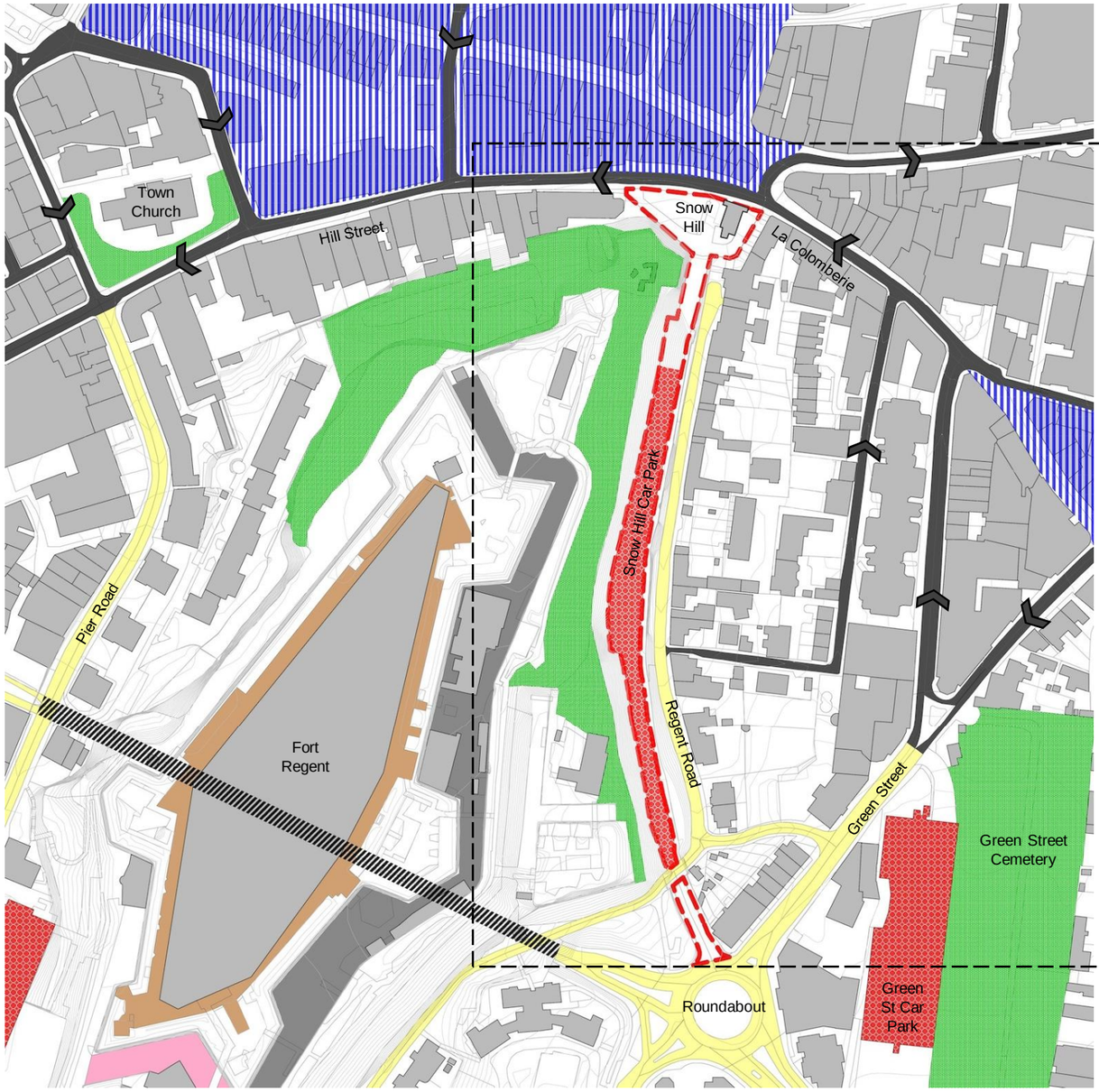
To the west of the car park is important open space, associated with the Fort and set at a high level. To the east is Regent Road, a quiet residential street set at a higher level, some 5 to 12 metres above the car park.

Green Street Multi-storey Car Park is situated approximately 50m southeast of the Snow Hill Car Park entrance and has a total of 608 parking spaces. The car parks are separated by Green Street, a busy two-way road.

Snow Hill car park is very popular with short stay shoppers as it provides a convenient parking location for easy access to the town centre. The car park's current layout provides a total of 83 spaces; 68 three hour shopper spaces and 15 dedicated permit holder only spaces. At its northern end, the car park also provides spaces for 85 motor cycles.



Aerial photograph - context view



Existing site plan

Snow Hill aerial photograph (site in red)

Pedestrianised town centre
Important open space
Public car parks
Route of tunnel
Lower ramparts
Fort Regent perimeter
Existing buildings
One-way traffic
Two-way traffic

SITE CONTEXT

History

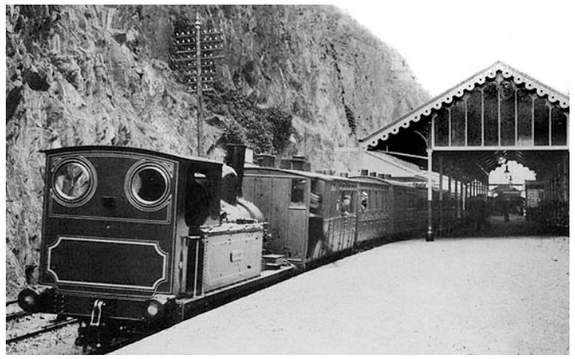
The site of the Snow Hill car park site dates back to at least the 18th Century and the western rock face is thought to form part of the original Georgian fortifications. More recently the car park has accommodated a number of transportation uses, including a railway station, bus terminus, and cable car station before being used solely for parking.

Car Park Layout

The car park is long and narrow and is bounded on the eastern side by a combination of near vertical natural rock faces, retaining walls and the remnants of the old railway station. On the western side the enclosure is much higher and comprises natural rock faces and masonry walling, much of which is covered in vegetation. Rock-fall netting and a rock-catch canopy have been installed along a large section of the rock face as a precautionary measure against falling rocks. More significant 'active' rock face stabilisation works have been undertaken at Snow Hill to address past instability issues.

The high walls on each side of the car park give the impression of the car park being set within a narrow ravine. In the wider northern section of the car park spaces are arranged in two rows with a central aisle and a turning area. In the narrower southern section there is enough width for one sided parking only. Over recent years various changes have been made to optimise the parking arrangement and the current layout represents the maximum number of spaces that can be provided within the existing site footprint.

The old railway bridge at the car park entrance restricts headroom to 4.3m for vehicles entering the car park.



'Carteret' locomotive at Snow Hill Station, set for Gorey

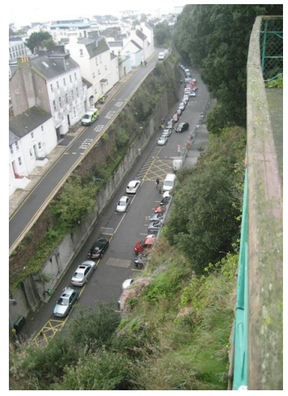
1873 Snow Hill looking south-east

Current day aerial view

'Cavern 'entrance & JEC Substations on western rock face

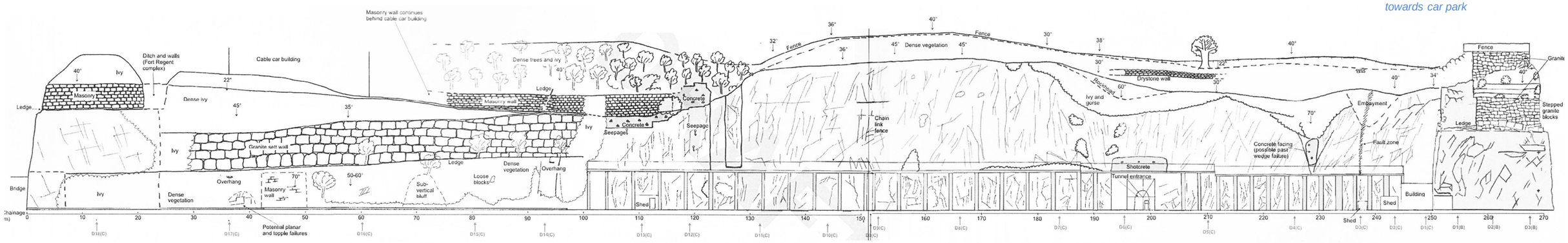
Bus station turntable in the early 1960's

1973 with cable car & historic pillar mouldings



View south-east from Fort Regent

View from La Motte Street towards car park



Existing western rock face drawing

CONSTRAINTS TO DEVELOPMENT

The Snow Hill Car Park has many features and issues that must be carefully taken into account in the planning and design of any increase in parking spaces on the site:

Green Street Roundabout

The highway geometry of the existing car park entrance does not meet current standards and has some traffic safety concerns. The available capacity of the roundabout is limited but should be able to accommodate up to 150 additional car parking spaces.

'Cavern' Access

Within the car park is the main access to 'The Cavern' surface water drainage system. There is also access to the emergency escape shaft and access shaft to the service tunnel headings. Access to all three of these by high maintenance plant and vehicles must be maintained as part of any new proposals.

Pedestrian / Cyclist Routes

Snow Hill Car Park forms an important and well used pedestrian and cycle route between the town centre and the Route du Fort and Havre des Pas areas with a recent survey confirming about 220 pedestrians and 40 cyclists typically use it each morning. The proposals must maintain and enhance the existing route and make it appealing for pedestrians and cyclists to use both during the day time and in the evenings.

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Residential Neighbours

Regent Road above the eastern rock face is a predominantly a residential street. Any additional parking development must respect the setting of this quiet street and respond to any potential visual impact on properties or traffic concerns of residents.

Heritage Value

The site sits in a ravine which was part of the original fortification of Fort Regent and has significant historical value. The site also includes two potential listed structures – the Snow Hill Terminus and steps and the Snow Hill Railway Bridge built in 1873/4. Regent Road above also has a number of potential listed buildings.

JEC Substations

Any proposed development will need to accommodate the two existing JEC substations at the north end of the site, including the underground cable network supporting these.

Rock Face Maintenance

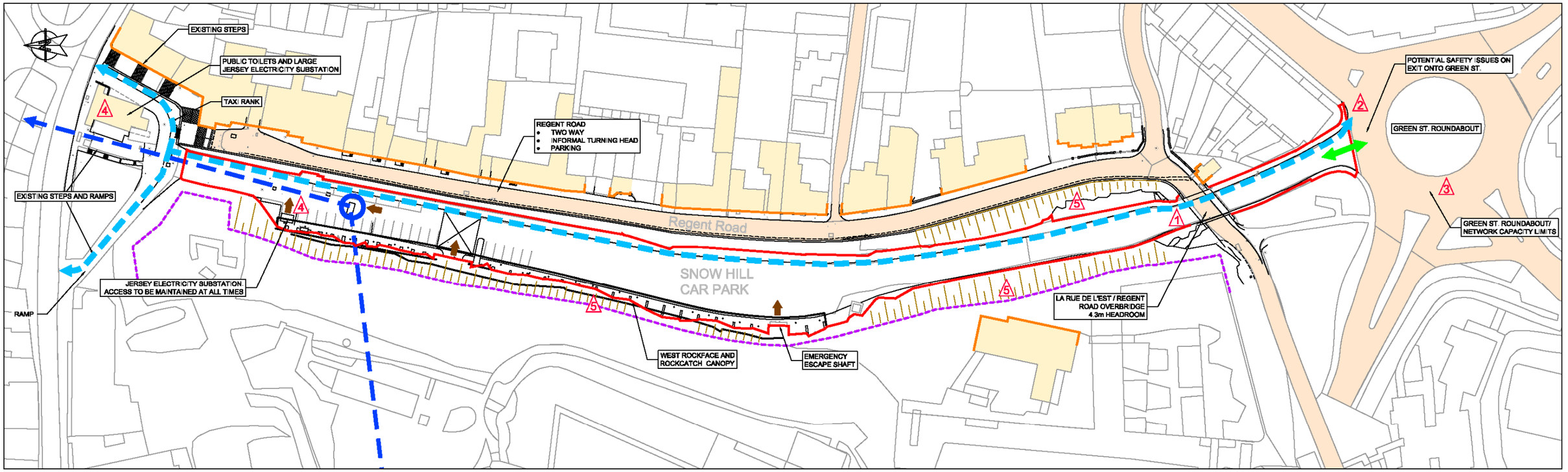
The eastern and western rock faces have measures to protect cars and people from possible falling rocks. The proposals must maintain access for future maintenance, replacement or enhancement of these protection measures.

Regent Road

Current Stabilisation Work

Cavern Access & JEC Substation

Listed Structures



PREVIOUS SCHEMES ASSESMENT

As part of the Masterplan Study, a number of schemes that had previously been considered for the expansion of the car park were reassessed against the identified site constraints and the current viability criteria. The schemes were also compared on the same basis with a new option of providing a simple single deck car park extension without ramps. Appendix 1 contains the results of the viability assessment, the conclusions of which are summarised as follows:

- The previous schemes were generally large scale and would impinge into the ravine with significant consequent landscape impacts
- The schemes would require access ramps between levels. Due to the tight, narrow nature of the site these could not be accommodated without significant compromise to the car park layout or excavation into the existing rock faces
- Ramps would significantly impair access to the essential drainage infrastructure housed in the 'Cavern', associated access shafts and tunnels and the existing JEC substations
- Multi storey schemes prove generally uneconomic with a capital cost that is unlikely to be affordable
- Schemes that provide more than 150 spaces could have unacceptable traffic impacts.
- The schemes would generally restrict access to the rock faces and prevent the current maintenance regime. This would require major stabilisation of the rock faces which would be extremely expensive

By comparison with the previous schemes considered, the assessment demonstrated that a single level scheme without ramps would be the most likely to meet all of the viability assessment criteria, although some mitigation measures would be required

DEVELOPED SCHEME REQUIREMENTS

The assessment of previous schemes confirmed that concept options taken forward for further development would need to meet the following essential requirements:

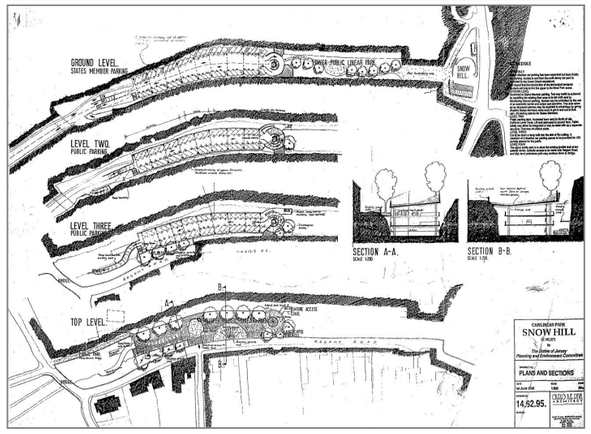
- Provide clear unrestricted access to the 'Cavern ' and utility infrastructure with a minimum of 4.3m headroom above the existing car park level
- Be limited to between 100 and 150 spaces to avoid unacceptable traffic impacts on Regent Road and Green Street Roundabout.
- Allow access to the ravine rock faces for inspection and maintenance works
- Be contained below the level of Regent Road to avoid unacceptable visual and neighbourhood impact
- Maintain a safe, secure and attractive pedestrian route through the existing car park to support the Sustainable Transport Policy
- Provide a solution that is both affordable and economically credible
- Create an environment that minimised the potential for anti-social behaviour

To ensure full and comprehensive consideration of viable design options, the following scheme concepts were selected for further development and detailed consideration at a Stakeholder Workshop:

- An automatic car parking system scheme that would fit the ravine space
- A multi-storey scheme to maximise additional spaces but be contained below the level of Regent Road
- A single level scheme without ramps

PREVIOUS SCHEMES

The 1995 Three Level Scheme

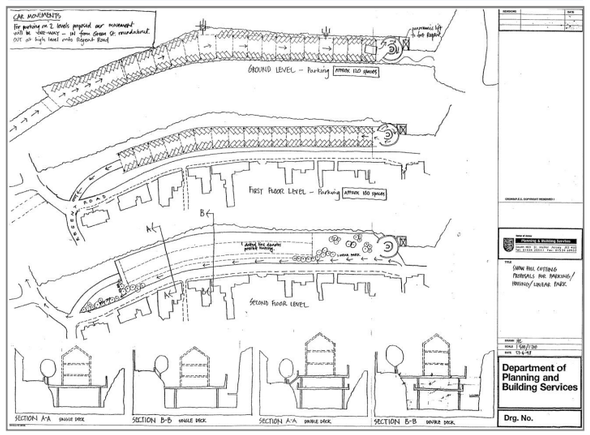


No. Spaces 67 Approx Cost £6.7m

Key Issues

- Insufficient space available to accommodate the ramps required to provide clear headroom for the 'Cavern' access
- Substandard ramp layout due to limited width of site
- Insufficient space available to allow for the 4 lanes of traffic at entry/exit
- Could not easily accommodate pedestrian/cycle route at ground level
- High cost per new space
- Loss of ground level spaces

The 1998 Two Level Scheme

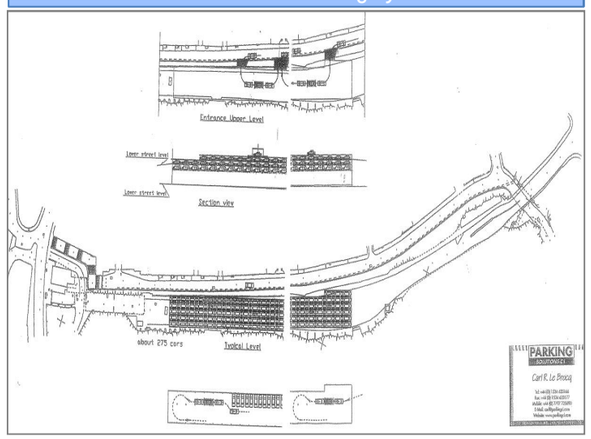


No. Spaces 100 Approx Cost £6.3m

Key Issues

- Would not provide adequate access to the 'Cavern' and service tunnel
- Insufficient space to accommodate ramps and maintain access standards
- Change to residential character of Regent Road
- Does not maintain acceptable pedestrian and cycle route at ground level
- High cost per new space

The 2002 Automatic Car Parking System Scheme

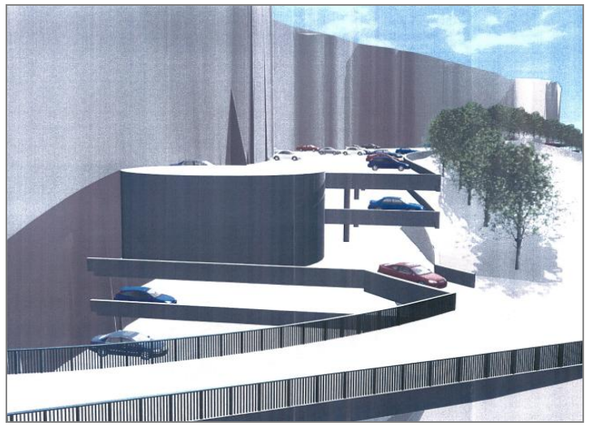


No. Spaces 192 Approx Cost £12m

Key Issues

- Number of additional spaces provided could lead to safety and traffic issues on Green Street Roundabout
- Could impede access to the east and west rock faces for maintenance
- Unproven system for shopper parking with risks of delays to shoppers due to car drop-off and pick-up procedures
- Impact on Regent Road's residents could be significant
- High capital cost, high cost per new space and high operating costs

The 2004 Five Level Scheme



No. Spaces 350 Approx Cost £12.6m

Key Issues

- An overdevelopment of the site with unacceptable impacts on Regent Road and the heritage of the ravine
- Number of spaces provided could lead to safety and traffic issues on Green Street Roundabout
- Ramps would preclude access to the Cavern
- Pedestrian and cycle route not viable at ground level
- High capital cost and high cost per space
- Risk of enclosed space attracting night-time anti-social behaviour

DEVELOPED CONCEPT SCHEMES

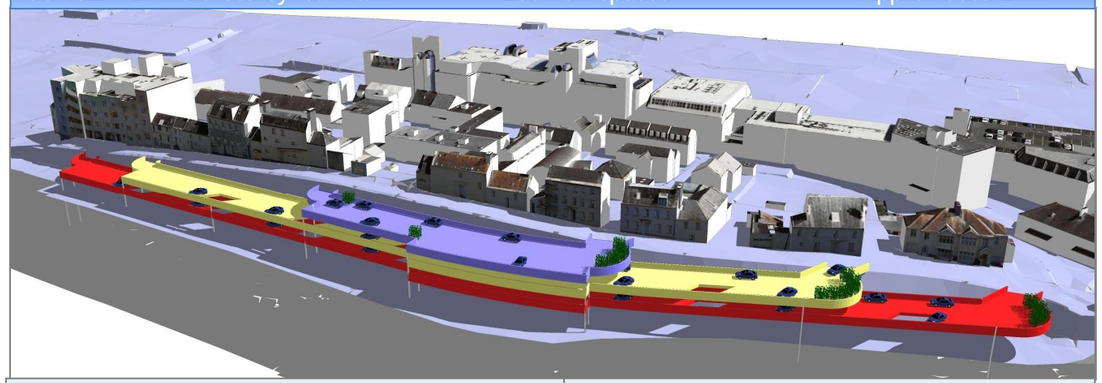
Following completion of the assessment of the previous schemes and generation of scheme viability criteria, four new concept schemes were developed for presentation and further review at a Stakeholders Workshop. The concepts are shown below, together with the key issues identified.

CONCEPT A: Automated Car Park — 110 new spaces — Approx Cost: £7m

Key Issues

- This system successfully used for residential and office developments
- Enclosed housing required for parking equipment
- Entirely separate from existing car park
- Accessed from Regent Road by long bridge link to accommodate queues
- Estimated capacity 110 new spaces (some small loss of existing spaces on ground for columns)
- Operational problems for shopper use: manned operation required to ensure efficient vehicle drop-off/pick-up
- Planning initial view that green roof and high quality cladding required
- Building mass would remove daylight and attractiveness of ground floor pedestrian/cycle route
- Most suited to private sector operation
- Potential for commercial concession on a bid basis

CONCEPT B: Multi-Storey Car Park — 150 new spaces — Approx Cost: £7m



Key Issues

- Entirely separate from existing car park
- Multiple accesses/exits from narrow Regent Road, would need detailed assessment
- Use of Regent Road as access to each level would intensify use of existing quiet residential street
- Estimated capacity 150 new spaces (some small loss of existing spaces on ground for columns)
- Initial Planning concern is potential over-development of site
- Building mass would reduce daylight and attractiveness of ground floor pedestrian route: permanent artificial lighting would be required
- Police concern that it would attract evening crime

CONCEPT C: Single Deck Car Park (one-way) — 75 new spaces — Approx Cost: £3m

Key Issues

- Entirely separate from existing car park
- Separate entry and exit: traffic leaving the car park would use Regent Road as its exit route.
- Estimated capacity 75 new spaces (some small loss of existing spaces on ground for columns)
- Use of Regent Road as access would increase traffic on an existing quiet residential street
- Planning view - potentially reasonable development, subject to residential access issue
- Greater surveillance of site reduces risk of increased crime
- Light wells would maintain daylight and retain attractiveness of ground floor pedestrian/cycle route

CONCEPT D: Single Deck Car Park (two-way) — 90 new spaces — Approx Cost: £4m

Key Issues

- Estimated capacity 90 new spaces (some small loss of existing spaces on ground for columns)
- Single access/exit from Regent Road would avoid an increase in traffic on an existing quiet residential street
- Surveillance of site reduces risk of increased crime
- Light wells would maintain daylight and attractiveness of ground floor pedestrian route
- Requires replacement integral rock fall protection canopy
- Planning view - potentially reasonable development

CONSULTATIONS

Initial consultations were held with key authority stakeholders to identify principal issues and to inform the development of concept options. The issues identified are summarised as follows:

Traffic and Transportation

- The existing car park forms an important route for pedestrians and cyclist s to town
- The existing car park exit onto Green Street roundabout is a safety concern and additional traffic on this junction could be problematic
- Green Street roundabout has capacity to take a small increase in off-peak traffic

Car Park Operations

- On average the existing car park is usually around 80% occupied and is full at peak shopping times
- No significant crime problems at the existing car park following CCTV installation and lighting upgrade.

Planning / Heritage

- Snow Hill car park lies within the Fort Regent Character Area designation in the Island Plan
- The ravine dates from 17th Century, and has significant historical interest , although allocation of additional parking at this location is included in the Island Plan
- Car park options with significant 'massing' above Regent Road level would not be acceptable due to the likely impacts on Regent Road

TTS Infrastructure

- The eastern rock face is in generally good condition although the western rock face requires maintenance stabilisation
- Developments which abut the rock faces are likely to require major stabilisation systems which would increase costs dramatically

Parish of St Helier

- The ramp up to Regent Road from Green St could be used for moderate additional parking access traffic
- Residential section of Regent Rd is unsuitable to accommodate significant additional traffic because of its quiet residential character and narrow road width

STAKEHOLDER WORKSHOP

Workshop Objectives

A workshop was held on 22 October 2012 to which key political, stakeholders, relevant authorities and the Chamber of Commerce were invited. The objective of the workshop was to discuss the expansion of car parking at Snow Hill in general and identify the key issues and concerns of the stakeholder groups.

The developed concept schemes were also presented to stakeholders and discussion groups held to canvass their views on more parking provision and to agree upon a preferred option.

Workshop Process

The workshop was opened by the Minister for Transport and Technical Services, who explained the Sustainable Transport Policy commitment (to review proposals for increased shopper parking at Snow Hill by the end of 2012) and set out of the Mission Statement for the Masterplan Study (as set out in Section 1.0)

A presentation was given which described the site and highlighted the challenges for parking expansion in a residential heritage setting. An overview of the previous schemes was given, followed by a detailed description of the four developed concepts:

Concept A - **An Automated Car Park System,** that could provide 110 new spaces.

Concept B – **A Multi-storey Car Park,** with several accesses and exits on Regent Road and could provide 150 new spaces.

Concept C – A Single Deck Car Park, with one-way circulation and car park traffic using the residential section Regent Road (75 new spaces).

Concept D – A Single Deck Car Park with two-way circulation which would avoid car park traffic using the residential section of Regent Road (90 new spaces).

Upon completion of the presentation, the workshop participants were split into facilitated discussion groups focussed on the following topics:

- Parking Concepts
- Funding
- Planning and Heritage
- Neighbours

The key findings of each discussion group were presented to the workshop collective for further discussion before participants voted for their preferred development concept.

Key Workshop Issues

The key issues arising from the workshop discussion groups are set out in Appendix 2 and are summarised as follows:

Parking Concepts

- Concept A: Automatic Car Park System – significant concern was expressed whether an automatic parking system would be suitable for a public, shopper car park because of the relatively slow process to drop-off and pick-up vehicles
- Concept B : Multi Storey Car Park – considered to be an over development of the site which, whilst providing the most spaces, would also have the largest impacts on the neighbourhood
- Concept C: Single Deck (one-way) - generally preferred over Concepts A and B but with significant concerns over the additional traffic that would result on the residential section of Regent Road
- Concept D: Single Deck Option (two way) – generally preferred as a self contained scheme at a scale which minimises impacts, particularly on Regent Rd.

Funding

- Providing additional parking at Snow Hill would result in a relatively expensive construction cost per additional space but the scheme could have regeneration and economic benefits
- The scheme should be shown to provide value for money before funding is committed – this should however also consider the economic impacts of not providing additional parking

Planning and Heritage

- The significance of the heritage issues are not fully defined and further research and assessment is required to ensure the impacts of any proposal is fully understood
- From a heritage point of view it would be preferable to retain the ravine and not to develop at this location

Neighbours

- Concept B, the multi-storey option has the most significant impact on Regent Road with multiple entrances and exits whereas Concept D, the two-way single deck has the most limited impacts
- Security and 'safety by design' are critical to the success of the expansion option
- Car park expansion should match the demand for spaces
- The scheme must not prejudice proposals to improve access to Fort Regent

Workshop Outcome

Following the conclusion of the group discussions participants were asked to rank the developed concepts presented in order of preference, taking into account all of the constraints, issues and concerns raised. The votes cast were weighted with first preference votes receiving a weighting of 4 down to least preferred schemes receiving a weighting of 1. ***Table 1*** opposite summarises the scores and preferred concept ranking.

At the conclusion of the workshop there was unanimous preference expressed for Concept D: Single Deck Car Park (two –way) with Concept C: Single Deck Car Park (one-way) being the second preference.

Automated Parking Systems: Supplementary Information

During the workshop participants identified that the automated parking system option presented as Concept A was a 'designer desk study' only, rather than a supplier proposal. Consequently participants questioned whether the costs quoted for this concept would benefit from input by commercial suppliers of automated parking systems. To address this the two main suppliers of such systems were invited to provide outline proposals for a fully automatic car park expansion at Snow Hill. Only one of the suppliers replied to the invitation. **Appendix 3** shows this proposal which would provide 110 new spaces.

Whilst the supplier proposal has not been subject to detailed viability verification, the price provided has confirmed that the cost presented for Concept A was realistic, taking into account the building costs of the parking enclosure and the supplier equipment installation costs.

The suppliers quotation therefore validates the views expressed by the majority of workshop participants that an automatic system would offer no significant operational or economic advantage over a traditional parking scheme.

	Weighted Score	Preference Ranking
CONCEPT A: Automated Car Park	14	4
CONCEPT B: Multi-Storey Car Park	27	3
CONCEPT C: Single Deck Car Park (one-way)	33	2
CONCEPT D: Single Deck Car Park (two-way)	44	1

Table 1: Workshop scores and Concept ranking

PREFERRED CONCEPT

The preferred concept is a new single deck car park extension that would provide an extra 90 spaces within a two-way circulation arrangement that would not require traffic to use the residential section of Regent Road. The new deck would provide a clear 4.3m (14ft) headroom above the existing car park to allow for access to the essential drainage and electricity infrastructure. Entry and exit from the new car park would be from Green Street via the ramp to Regent Road. The existing ground level parking would remain unaffected, although there would be a small loss of parking to accommodate structural columns.

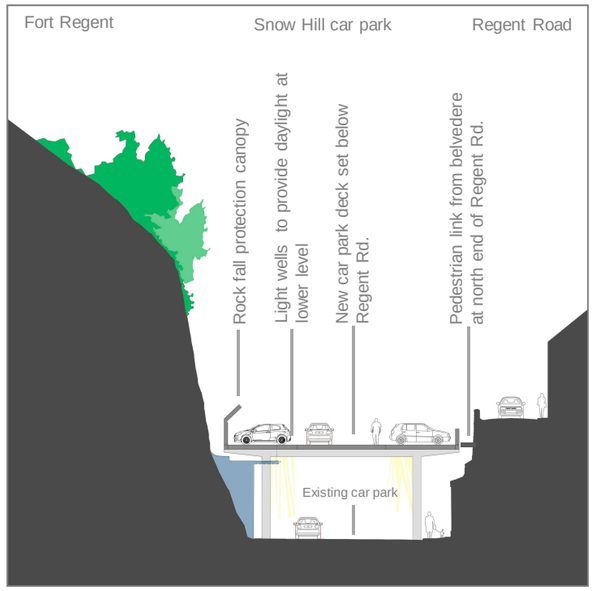
The new car park deck would allow access to the adjacent rock faces for maintenance with a replacement rock fall canopy incorporated on the western edge. Light wells incorporated into the deck design would ensure the ground level pedestrian route remains attractive to use and to minimise the risk of anti-social behaviour. Permeable flanks would also allow natural light to reach the ground floor and provide ventilation. Supplementary lighting would ensure a safe feel to the walking route.

At the northern end of the new upper deck of the car park there would be a turning area for cars and a pedestrian link onto Regent Road. A belvedere would provide views over St Helier and the opportunity to have interpretation boards explaining the heritage of the Fort and Regent Road. Staircases would also be provided, inter connecting both upper and ground levels to provide fire escape routes if required. The scheme currently does not incorporate a lift between ground and upper level but this could be provided at extra cost if required.

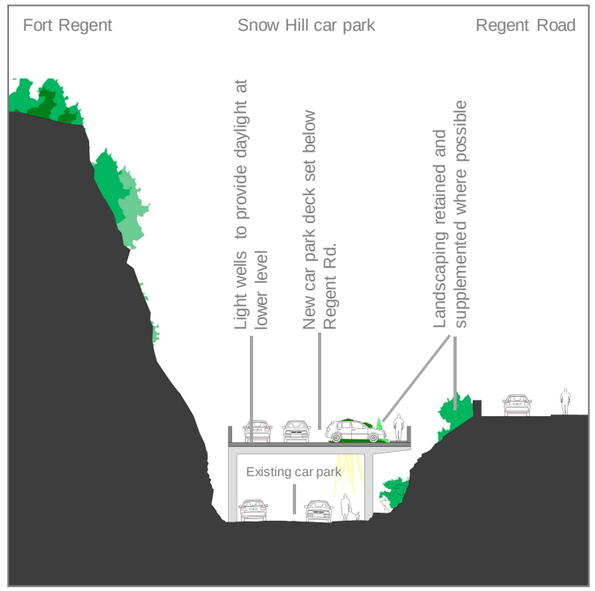
Landscaping would be incorporated into the design to help 'soften' views from Regent Road and to generally enhance the car park.

Automated payment machines would be located at appropriate locations on the deck and variable message signing at Green Street Roundabout and at the existing car park entrance would provide information on the availability of spaces on both upper and ground levels.

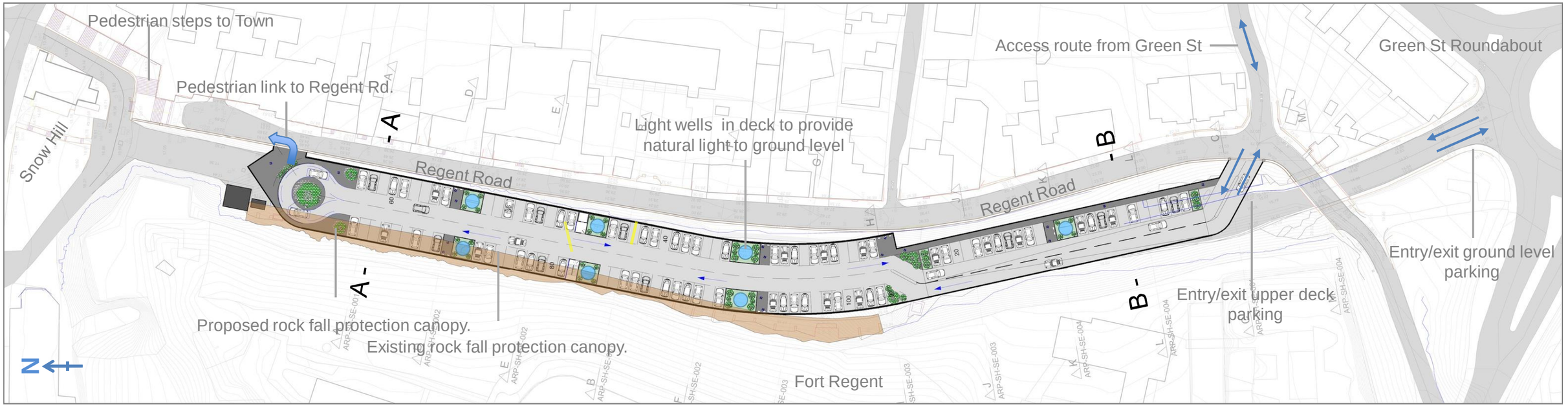
Example of permeable flanks and well lit upper surfaces



Cross section A - A (approaching turning head)



Cross section B -B (near entrance)



Plan of proposed new upper deck car park expansion at Snow Hill

IMPLEMENTATION

Car Park Management

The proposed car parking arrangements would allow the implementation of the Number Plate Recognition scheme, currently on trial in Sand Street car park. This would allow shoppers to stay for longer periods at premium rates and would provide shoppers with flexible options.

Interface with other Developments in the Area

The proposed scheme would provide short stay parking, supporting development of the area for both daytime commerce and overnight parking for residents. The scheme would not prejudice better access to Fort Regent by lift from Snow Hill.

Artist impression of the proposed Snow Hill upper parking deck from the entrance area, looking north

Coloured deck finishes helping designate areas

SCHEME COSTS AND FUNDING

Scheme Costs

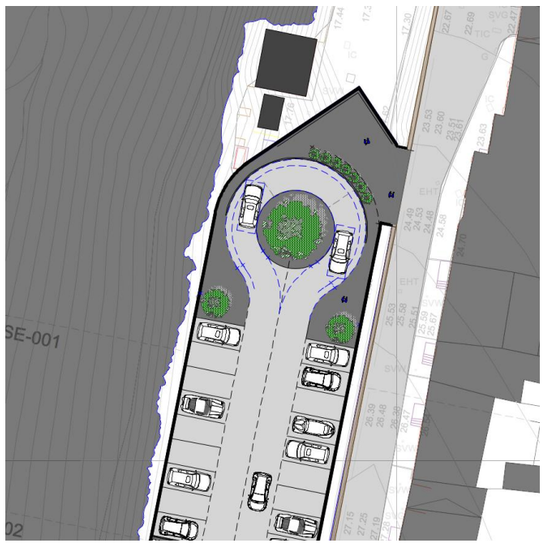
A cost estimate has been developed for the Preferred Concept by local cost consultants, based on typical current construction prices in Jersey. The construction cost of the concept scheme has been estimated at £4.0M at 2012 prices. This would equate to approximately £44k per additional new space provided.

With planning and preparation costs, professional fees and an allowance for inflation over the anticipated duration of the project, the total predicted cost of the scheme at completion is likely to be around £4.8M

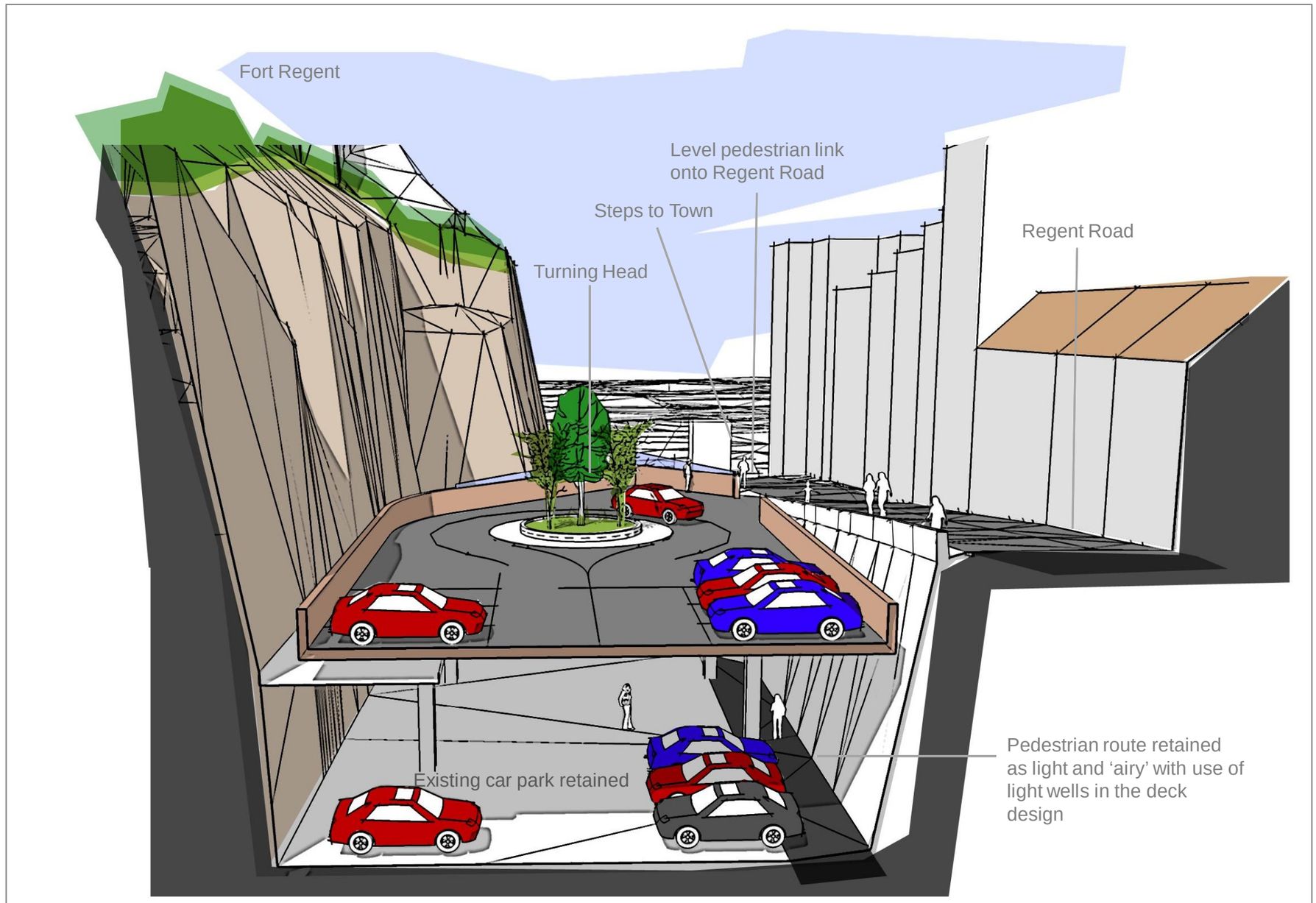
The cost plan for the scheme is based on the concept details only and a full feasibility study and outline design would be required to validate the estimate and firm up costs.

Funding

At the Stakeholder Workshop the Minister for Transport and Technical Services offered to allocate £2.4M to the project (equivalent to approximately £20k per space) from the Car Park Trading Account, provided it was 'match funded' from economic stimulus funding.



Part plan of northern area and turning head



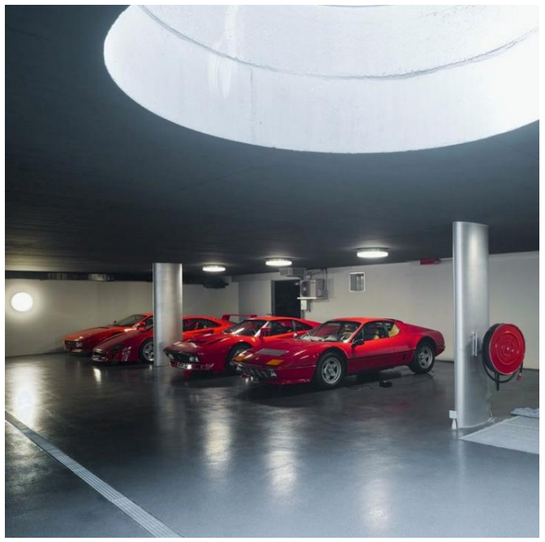
Sectional view at north end of Regent Road showing proposed upper deck turning head

PROGRAMME FOR CONSTRUCTION

With funding availability confirmed, further detailed investigations and studies would need to be undertaken to confirm the feasibility of the scheme. An outline design would then be undertaken followed by public consultation. A planning application and approval would be needed before detailed design and construction could commence.

This process is expected to take about 18 months to complete, provided no undue delays are encountered at the planning stage.

Building is likely to take around nine months to complete during which time the existing ground level car park would need to be closed to ensure safe and economic construction. It has been estimated that the new car park could be operational in just over two years from the approval of funding and commencement of further studies. The final programme for construction however would have to be coordinated with other car park projects to avoid a shortfall of parking arising in this part of town during the works.



Example of circular lightwells

Artist's impression of planter concept incorporating light well to ensure good level of natural light to ground floor

CONCLUSIONS AND NEXT STEPS

Conclusions

This Options Study has been a 'fast track' assessment. It has confirmed that the Snow Hill site has a number of constraints and issues that would require careful consideration during the development of proposals to increase parking at this location. It has also confirmed that the previous schemes considered for increasing parking at Snow Hill are not now viable when assessed against current conditions and constraints.

Of the four newly developed concepts, a single deck car park extension that does not rely on ramps is likely to prove the most economic and acceptable solution for the provision of extra shopper parking spaces at Snow Hill. A scheme for around 90 extra spaces, which matches the additional shopper usage that could be reasonably expected, would also be likely to have the least impact on the surrounding area compared to other concepts considered

At the workshop the single deck concept was unanimously preferred by key stakeholders.

The preferred concept scheme would cost around £4.8M to deliver of which half has been promised by the Minister for Transport and Technical Services from the Car Park Trading Fund, provided it is match funded from economic stimulus.

Whilst there is no doubt that the additional shopper parking at Snow Hill could be provided, the constrained nature of the site means that the cost of developing a new car park at this location would be relatively more expensive than for an equivalent less constrained site. However, Snow Hill car park is the most convenient location for shopper parking, and is a publically owned site that is immediately available with no land purchase costs.

Next Steps

Further studies, planning and design would be required to progress the scheme, once funding is confirmed . The new car park could be operational within just over two years from confirmation of funding.

3D perspective of the Preferred Concept Scheme

APPENDIX 1 - Previous Schemes Assessment Details

APPENDIX 1 - Previous Schemes Assessment Details

PREVIOUS SCHEMES

As part of this masterplan study a viability review of previous concept schemes to increase parking at Snow Hill has been undertaken. The schemes considered were:

- The 1995 Three Level Scheme which could provide approximately 67 additional spaces (Carlo Riva Scheme)
- The 1998 Two Level Scheme which could provide approximately 100 additional spaces (Planning and Building Services Scheme)
- The 2002 Automatic Car Parking System Scheme which could provide up to 192 additional spaces (Parking Solutions CI/Sky Parks West Ltd)
- The 2004 Five Level Scheme which could provide an additional 350 spaces (Arup Rothwell)

In addition a 'Single Level Scheme Concept' without ramps which could provide an additional 65 spaces was also reviewed.

SCHEME COSTS

The costs of the schemes has been estimated based on the outline details developed under the previous studies using current unit construction rates for the construction of the parking decks, access ramps between levels, landscaping and for those schemes that impact on the existing ravine walls, rock face stabilisation. The scheme costs and proportionate breakdown of costs are summarised opposite.

Having established the general costs, the approximate cost per additional space when compared, shows that the 1995 Three Level Scheme would result in the highest cost per additional space provided, due principally to the high proportionate cost of access ramps between levels and the additional cost of the landscaped roof garden. The 2004 Five Level Scheme would result in the lowest cost per additional space due to the significantly greater number of spaces provided. It would however also require a significantly greater capital investment compared to the other schemes considered. The costings demonstrate that a single storey deck scheme would provide the best balance between capital cost of provision and efficiency of cost per space.

SCHEME VIABILITY ASSESSMENT

The viability of the previous schemes was assessed using criteria based on the key issues and constraints identified from consultations with stakeholders as follows:

Transport
- Impact on/ability to maintain the existing pedestrian/cycle route through the car park
- Impact on highway safety and traffic capacity of Green Street Roundabout
- Traffic impact on Regent Road

Planning and Heritage
- Visual Impact on the setting of Regent Road
- Impact of the proposals on the heritage features associated with the ravine fortification and potential listed buildings
- Potential impact on the setting of the northern and southern elevations of the car park

Rock face Stability
- Impact on the ability to maintain the existing eastern and western rock faces and the consequential requirement for additional stabilisation measures

Utilities
- Potential for the scheme to adversely affect maintenance and emergency access to the Cavern surface water infrastructure and the JEC electricity substations

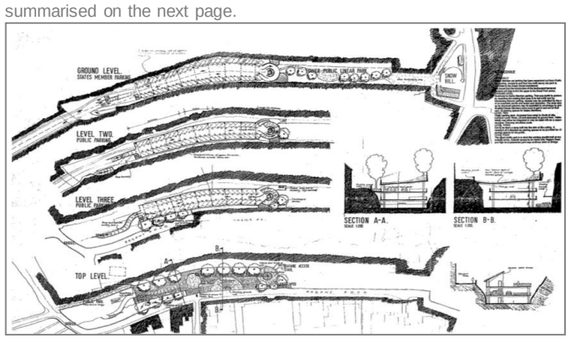
Geometric Viability
- The feasibility of being able to construct the scheme to current best practice geometric and layout standards

Scheme Costs
- An assessment of affordability of the scheme (total cost) and cost efficiency based on the cost per additional space provided

Car Park Operation
- The potential for the scheme to provide a safe, secure and satisfactory experience for car park users
- The suitability of the scheme to be efficiently managed and operated by existing car park management team

Each scheme was scored on each of the assessment criteria as either:
- **viable** – the scheme would be likely to easily meet the requirements of the criteria
- **viable with mitigation -** the scheme would be likely to meet the requirements of the criteria but mitigation measures would be required
- **not viable –** the scheme would be very unlikely to meet the criteria requirements, even with mitigation

The results of the viability assessment on the previous schemes is summarised on the next page.



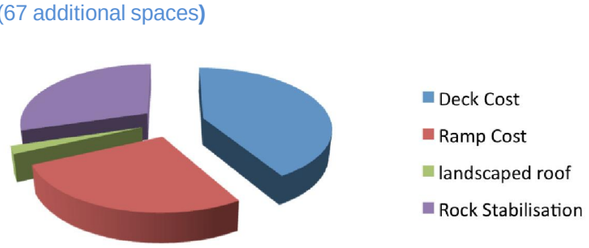
1995 Three Level Scheme

GENERALISED COSTS OF PREVIOUS SCHEMES

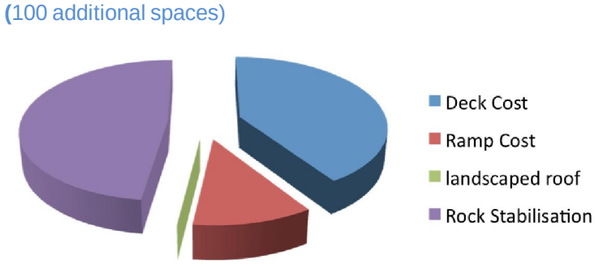
Scheme	No. Additional Spaces	Approximate Cost	Cost per space
The 1995 Three Level Scheme	67	£6.7m	£100k
The 1998 Two Level Scheme	100	£6.3m	£63k
The 2002 Automatic Car Parking System Scheme	192	£12m	£63k
The 2004 Five Level Scheme	350	£12.6m	£36k
Single Level Scheme	65	£2.8m	£43k

Note: schemes which interface with rock face have significant cost penalty due to stabilisation requirements.

THE 1995 THREE LEVEL SCHEME
(67 additional spaces)

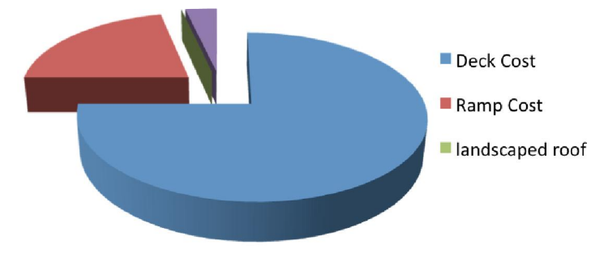


THE 1998 TWO LEVEL SCHEME
(100 additional spaces)



The 2004 FIVE LEVEL SCHEME
(350 additional spaces)

SINGLE LEVEL SCHEME
(65 additional spaces)



APPENDIX 1 - Previous Schemes Assessment Details

VIABILITY ASSESSMENT SUMMARY

The previous schemes were generally large scale and would impinge into the ravine with significant consequent landscape and traffic impacts. The schemes would also require access ramps between levels which, due to the tight, narrow nature of the site, could not be accommodated without sub-standard design or excavation into the existing rock faces of the ravine. Ramps would significantly impair access to the essential surface water infrastructure housed in the Cavern, associated access shafts and tunnels and the existing JEC substations.

Multi storey schemes would prove generally uneconomic and would have an unacceptable traffic impact on Green Street Roundabout and the local highway network. The viability assessment demonstrates that only the single level scheme without ramps would be likely to meet all of the assessment criteria, albeit with some mitigation measures being required.

Viability Criteria	Transport	Planning Heritage	Rock Stability	Utilities	Geometric Viability	Scheme Cost Viability	Public Realm	Car Park Operation
The 1995 Three Level Scheme (67 additional spaces) Not Viable	Pedestrian /Cycle route	Regent Road Impact	Western Face Impact Maintenance/Active	Access to Cavern	Viable Geometry	Total Cost	Open Space	User Experience
	Green St Rbt Safety	Heritage/Ravine Impact	Eastern Rock face Maintenance/Active	Minimum Headroom Maintained		Cost per Space	Streetscape	Management
	Green St Rbt Capacity	North and South Elevations		Access to Substation				
	Regent Road Impact							
The 1998 Two Level Scheme (100 additional spaces) Not Viable	Pedestrian /Cycle route	Regent Road Impact	Western Face Impact Maintenance/Active	Access to Cavern	Viable Geometry	Total Cost	Open Space	User Experience
	Green St Rbt Safety	Heritage/Ravine Impact	Eastern Rock face Maintenance/Active	Minimum Headroom Maintained		Cost per Space	Streetscape	Management
	Green St Rbt Capacity	North and South Elevations		Access to Substation				
	Regent Road Impact							
The 2002 Automatic Car Parking System Scheme (192 additional spaces) Not Viable	Pedestrian /Cycle route	Regent Road Impact	Western Face Impact Maintenance/Active	Access to Cavern	Viable Geometry	Total Cost	Open Space	User Experience
	Green St Rbt Safety	Heritage/Ravine Impact	Eastern Rock face Maintenance/Active	Minimum Headroom Maintained		Cost per Space	Streetscape	Management
	Green St Rbt Capacity	North and South Elevations		Access to Substation				
	Regent Road Impact							
The 2004 Five Level Scheme (350 spaces) Not Viable	Pedestrian /Cycle route	Regent Road Impact	Western Face Impact Maintenance/Active	Access to Cavern	Viable Geometry	Total Cost	Open Space	User Experience
	Green St Rbt Safety	Heritage/Ravine Impact	Eastern Rock face Maintenance/Active	Minimum Headroom Maintained		Cost per Space	Streetscape	Management
	Green St Rbt Capacity	North and South Elevations		Access to Substation				
	Regent Road Impact							
Single Level Scheme (65 additional spaces) Viable with mitigation	Pedestrian /Cycle route	Regent Road Impact	Western Face Impact Maintenance/Active	Access to Cavern	Viable Geometry	Total Cost	Open Space	User Experience
	Green St Rbt Safety	Heritage/Ravine Impact	Eastern Rock face Maintenance/Active	Minimum Headroom Maintained		Cost per Space	Streetscape	Management
	Green St Rbt Capacity	North and South Elevations		Access to Substation				
	Regent Road Impact							

Viable | Viable with mitigation | Not Viable

APPENDIX 2 - Consultations and Stakeholder Workshop Comments

CONSULTATIONS

Key issues arising from the initial consultations undertaken as part of the Masterplan Study

Car Park Operations

- No significant crime problems at existing site following CCTV installation and lighting upgrade
- Estimated 80% average occupancy
- Automatic parking systems would be incompatible with current operational resources

Planning / Heritage

- Fort Regent Character Area designation in the Island Plan
- Massing above Rgent Road likely to be unacceptable
- Additional parking provision is included in the Island Plan in this part of town
- Ravine dates from 17th Century, recorded as a defensive ditch of significant historical interest
- Planning/Heritage preference that rock face is preserved as existing
- An Archaeological Desk Based Assessment would be required with any development option

TTS Infrastructure – rock face

- Eastern rock face is in generally good condition
- Western rock face requires maintenance stabilisation, either active or passive. Active systems would be significantly more expensive than passive
- Options with decks that abut the rock faces are likely to require active rather than passive stabilisation systems, which would increase costs significantly
- £0.5m previously spent on active rock face stabilisation at Walkers Rock (Snow Hill)
- Car Park proposals would require input from a geotechnical engineer to ensure rock face stability is fully examined and appropriate measures included in the design

Parish of St Helier

- Ramp up to Regent Road from Green St could be used for moderate additional parking access
- Residential section of Regent Rd unsuitable for access because of its quiet residential character and narrow road width

Traffic and Transportation

- Car park is important pedestrian link to town, also used by cyclists
- Green Street roundabout exit is a safety concern and additional movements could be problematic
- Green street roundabout has capacity to take small increase in off-peak traffic
- Exit onto Hill Street is not ideal because of additional town centre traffic
- Exit onto La Motte street less of a concern

STAKEHOLDER WORKSHOP COMMENTS

The following key issues and questions were captured by facilitators from the discussion groups at the workshop held on 22nd October 2012. All stakeholders had the opportunity to contribute to each topic discussed.

Parking Attributes

Concept A- Automated Car Park

- Significant concern over the suitability of an automatic system for public shoppers use
- There is no precedent in the Island for such a scheme and a risk whether it could operate successfully
- If automatic parking can't be provided at a cheaper rate than conventional then the only benefit of such a system is efficiency of use of space
- Would provide very secure parking – would this be an attractive offer/could premium be charged?
- There is an opportunity to make more of the green roof – a linear park?
- It could be designed to be more easily dismantled should it need to be removed and ravine restored in future
- If automatic system is unsuitable for shoppers could it be built for commuters/residential with shoppers relocated?
- Such a system would probably be best suited for a private concession operator – charge a premium for convenience (of location) and security

Concept B – Multi-storey

- Biggest concern is impact of traffic on Regent Road with multiple accesses and egress points
- Is there demand for an additional 150 spaces? Would parking not simply relocate from other, less convenient car parks?
- Real concern over security and potential for antisocial behaviour due to lack of surveillance offered.
- Big impact on site setting and heritage – fills entire ravine.
- Makes the most use of the space
- Parish would have greatest difficulty supporting this scheme due to impact on Regent Road.

Concepts C and D – Single Deck options

- Recognised that C and D are two variants of the same scheme
- Concept D generally preferred - self contained and minimises impacts on Regent Road
- Concept D provides more spaces

Funding

- Should the Car Park Trading Account (CPTA) pay anything at all if the scheme is not financially viable?
- Snow Hill is an expensive place to provide additional parking
- Is there an opportunity to charge more for parking at Snow Hill – a premium for convenience: to assist CPTA
- Do any of the options offer value for money – if not should we build it at all?
- Money would be better spent on other, more sustainable transport initiatives
- The scheme could be a catalyst for regeneration
- 75% of people currently live or work in the town and shop when they are in town in any case: can an increase in parking be justified therefore?
- There is a possibility to add development above parking to assist with financial viability
- Offer the vacant space to a third party operator to make best use of.
- What is the economic impact of not providing additional spaces - needs to be considered

Planning/Heritage

- Pedestrians - need to cater carefully for existing pedestrians and cycles. Awareness of the role of this cut as part of the Linear Park and access from Havre des Pas and Town.
- Significance of heritage is as yet not fully defined, Further research required to ensure the impacts of any option are understood as the project develops
- Fort Regent (43 acres) –very important that the impacts are fully explored and understood before decisions made
- Site is Ecological SSI and Geological SSI – impacts need to be understood
- Need to understand Shoppers Parking needs in the round across this part of Town and in the Town as a whole rather than in isolation
- Where is customer base for shoppers – what are the retail trends which we need to take into account. Does Snow Hill provide part of the answer?
- Accessibility a key issue – can we really defend building a new car park in 21st Century without access for all?
- Due care and consideration to resident's amenity in and around Regent Road required
- Gateway, all the options leave the "knuckle" of land to the north out of any consideration. This has the JEC substation, WC's and remains of the cable station base. As such this opportunity to improve the setting and access to any project should be considered
- Is there a Concept E: a 'do nothing' scenario where we make the best use of the existing facilities including reallocation of permit parking to less well used car parks in the vicinity.

Neighbours

Regent Road

- Concept B has most significant impact on Regent Road in terms of increased traffic – multiple access and egress represents significant intensification of use
- There is a risk of queuing traffic on Regent Road – mitigate with real time information signing so that shoppers know when car parks are full
- Opportunity for schemes to provide additional residents parking
- Concept D has perhaps most limited impact
- Queuing for Concept A (mechanical car park) a key worry
- Must control light spill from car park into residents properties – all schemes

Pedestrian/Cycle Route

- Used by wider community – key route from Havre des Pas
- New schemes could provide cover to pedestrians in rain – lighting essential
- Security and 'safety by design' critical avoid 'foreboding' feeling of covered route – needs to be 'self policing'
- Could pedestrians be re-routed along Regent Road?

Commercial Premises/Shops

- Closest public car park to town centre and shops.
- There is a risk of shop closure if parking is too difficult for shoppers – parking within 300m preferred
- Provision should be made which matches the latent demand.
- All schemes would benefit traders

Fort Regent

- Scheme must not prejudice proposals to improve access to Fort Regent in the future
- Access for Fort Regent remains a key issue for its future success.

Other General Issues

- Landscaping must be provided to soften impact of scheme
- An entrance plaza with views over town could be a part of Concepts C and D – potential still for a linear park?
- Could the existing 'ground floor' car park be used for commercial vehicles – to help clear the streets?
- Option A would seem to be inconvenient to users, particularly shoppers – no return to cars part way through stay.
- Police Station – designated spaces?
- Traffic impacts on highway to be carefully considered – could the car park exit onto Snow Hill?
- Is there an opportunity to provide plug in points for electric vehicles?

	Rank	Vote Count	Total	Weighting	Score	Result
Concept A: Automated car park	1		0	4	0	
	2		0	3	0	
	3	111	3	2	6	
	4	1111 111	8	1	8	
				Total	14	4

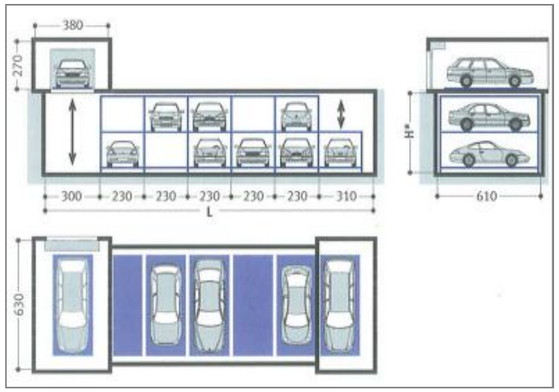
	Rank	Vote Count	Total	Weighting	Score	
Concept B: Multi-Storey without internal ramps	1		0	4	0	
	2		0	3	0	
	3	1111 11	7	2	14	
	4	111	3	1	3	
				Total	17	3

	Rank	Vote Count	Total	Weighting	Score	
Concept C: Single Deck with one-way circulation	1		0	4	0	
	2	1111 1111 1	11	3	33	
	3		0	2	0	
	4		0	1	0	
				Total	33	2

	Rank	Vote Count	Total	Weighting	Score	
Concept D: Single Deck, with two-way circulation	1	1111 1111 1	11	4	44	
	2		0	3	0	
	3		0	2	0	
	4		0	1	0	
				Total	44	1

Workshop participants' voting results

APPENDIX 3 – Automatic Car Park System Supplier Proposal Response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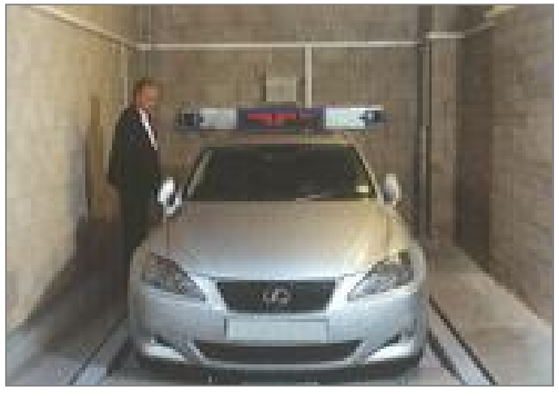

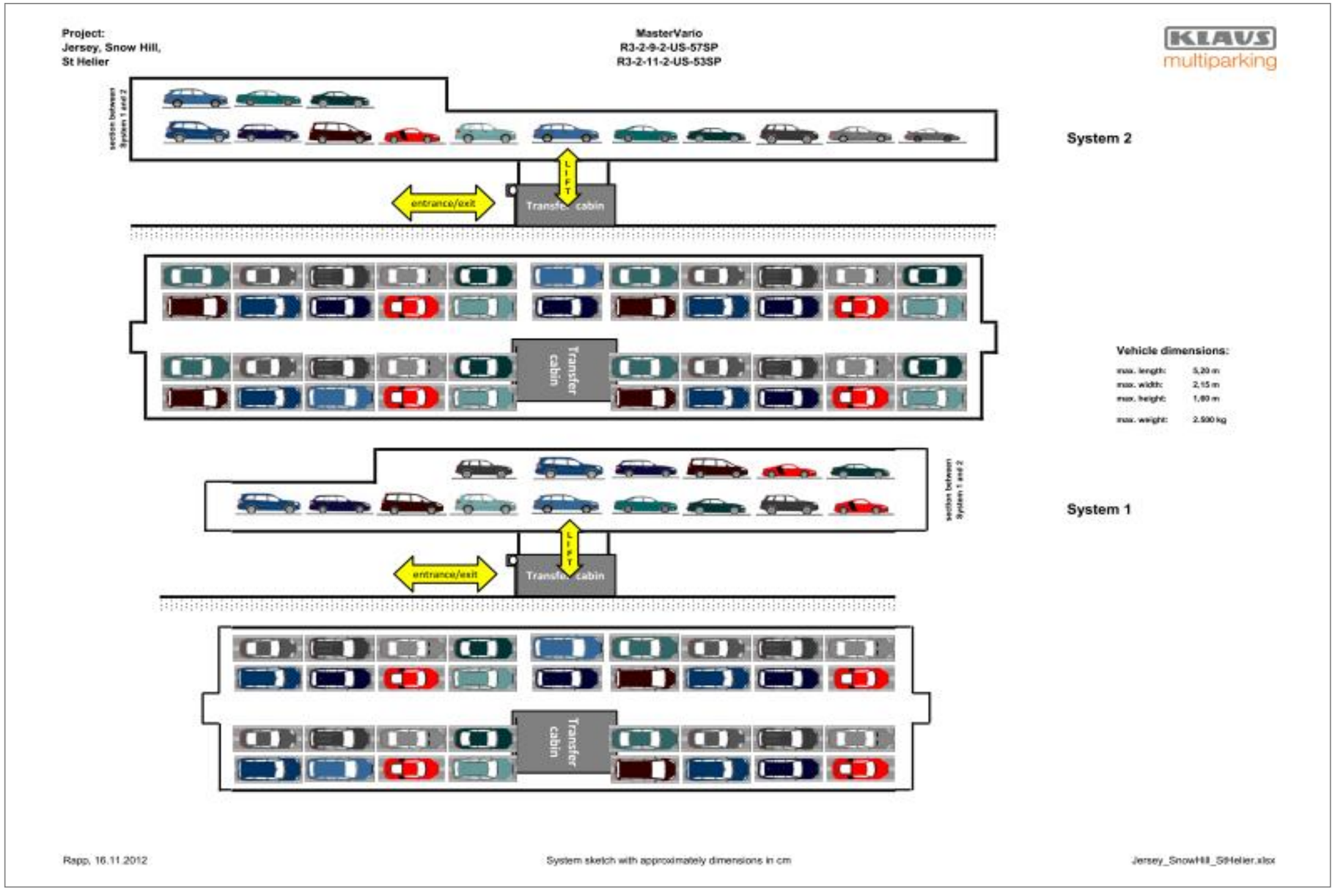
Project:
Jersey, Snow Hill,
St Helier
MasterVario
R3-2-9-2-US-57SP
R3-2-11-2-US-53SP
KLAUS multiparking
System 2
section between System 1 and 2
LIFT
entrance/exit
Transfer cabin
Vehicle dimensions:
max. length: 5,20 m
max. width: 2,15 m
max. height: 1,80 m
max. weight: 2.500 kg
System 1
Rapp, 16.11.2012
System sketch with approximately dimensions in cm
Jersey_SnowHill_StHelier.xlsx

States of Jersey

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