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Beak Street

TN03 - Preferred option assessment

Produced for Shaftesbury PLC

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Report

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Executive Summary

The objective of this report is to further develop the preferred option that emerged from The Beak Street Study and to refine the analysis to determine the impacts and benefits.

Beak Street is an exceptionally narrow street in Soho with limited footway provision. It currently carries a significant flow of traffic throughout the day as well as accommodating servicing and loading for businesses. As a result, the streetscape is poor and the environment is uncomfortable for pedestrians.

There are a number of committed or developing schemes in the area including the West End Project in Camden, Oxford Street and Regent Street which seek to manage traffic to achieve an improved street environment. If treated in isolation there is a risk that adjoining neighbourhoods including Soho may experience an adverse impact. Therefore it is considered that measures to proactively manage traffic within Soho and support the strategy of traffic reduction across Soho are desirable. The Beak street proposals presented in this note are aimed at contributing to this strategy.

A Beak Street concept study has been undertaken which identified a number of options for consideration. The preferred option identified for development extends the Carnaby Street and Kingly Street Pedestrian Zones to cover Beak Street from Upper James Street to Warwick Street, and also Upper John Street. The result is that Beak Street functions exactly how it does today from 7am – 11am and this allows the Soho servicing activity to exit the area efficiently. Outside of these hours the zone would operate as a pedestrian space, with some ad hoc arrangements in place for access to private garages and particular servicing requirements within the zone.

Public realm enhancements would be enabled within the zone and the significantly reduced traffic flow on the rest of the street brings the potential for pedestrian and streetscape enhancements there as well.

Other proposed traffic interventions include:

- The closure of the southern end of Marshall Street to create a new public space
- Potential signal timing changes at other exit points out of Soho (Denman Street and Great Marlborough Street)
- The reversal of Bridle Lane to reduce the reassignment of traffic through Golden Square

The reassignment impact of the scheme is assessed under two scenarios, one assuming a degree of traffic reduction and a worst-case without. The analysis demonstrates that reassigned vehicles disperse based on their destinations resulting in each exit point catering for approximately one additional vehicle per minute. It is anticipated that this is an acceptable level of impact given the dramatic degree of change enabled in the Beak Street area.

1 INTRODUCTION

1.1 BACKGROUND

1.1.1 Shaftesbury PLC has commissioned Norman Rourke Pryme's (NRP) Traffic and Transportation Team to assess and develop further the preferred option emerging from NRP's Beak Street Study (ref 6611/TN01/1.2).

1.1.2 Beak Street is a key westbound exit route out of the Soho area onto Regent Street and is often congested owing to the low capacity of the exit, friction along the route caused by kerbside activity and pedestrian activity, and peaks in traffic demand. The street is also busy with pedestrians, many of whom walk in the carriageway as the narrow footways are often congested and impassable for the mobility impaired.

1.1.3 The Beak Street Study identified and assessed a range of options to improve the pedestrian environment and enable public realm enhancements on Beak Street with acceptable levels of impact on servicing and other streets. The study recommended the following options for further development:

- Option 2 – point closure of Beak Street
- Option 3A – point closure of Beak Street with Pedestrian Zone on Upper John Street
  - Including A2 (Great Marlborough St) and A4 (Denman St) wider network improvements
- Option 3B – point closure of Beak Street with Pedestrian Zone on Upper John Street
  - Including A2 (Great Marlborough St), A4 (Denman St) and A3 (Glasshouse St) wider network improvements

1.1.4 Each of these options include the following additional measures:

- Closure of southern end of Marshall Street
- Footway widening and a raised surface treatment on the remaining sections of Beak Street

1.1.5 The study considers the benefits and impacts of these options and through discussion with stakeholders, Option 3A with the proposed Pedestrian Zone timings to align with the existing Carnaby and Kingly Street restrictions has been initially identified as the preferred arrangement. The preferred version of Option 3A provides a Pedestrian Zone from Upper James Street to Warwick Street including upper John Street. The reversal of Bridle Lane is retained in the proposals to minimise the impact at Golden Square. Vehicles would be permitted to pass through Beak Street and Upper John Street for the proposed times of 7am-11am to align with Carnaby Street and Kingly Street, but the final timings for this zone would be subject to agreement with stakeholders.

Figure 1: Existing traffic arrangement and detailed survey extents

Figure 2: Beak Street (view towards Regent St)

2 DATA ANALYSIS

2.1 PREVIOUS ANALYSIS

2.1.1 The Beak Street Study used detailed CCTV footage to analyse traffic movement, pedestrian activity, cycling activity, kerbside activity and to create a bespoke traffic model to forecast the reassignment impact of the various options. Traffic collisions were also analysed.

2.1.2 The key findings include:

- Traffic movement:
  - Traffic flow on the western end of Beak Street is highest during the morning peak but the flow along the eastern half is highest during the evening and weekend peaks during which approximately half of the flow turns left onto Upper James Street. This could be a result of the high pedestrian flows during these times.
  - The dominant source of traffic flow entering Beak Street is Lexington Street (particularly during the evening and weekend peaks).
- Pedestrian activity:
  - During the pedestrian peak period (17:00-19:00) there were 1807 eastbound and 1319 westbound pedestrian movements
  - In that same period, 21% of pedestrians chose to walk in the carriageway with 58% using the northern footway and 21% using the southern footway
- Cycling activity:
  - Approximately 100 cyclists per hour use Beak Street in the evening peak period
- Kerbside activity:
  - Activity is generally low on Beak Street itself but there is a considerable amount of illegal loading activity taking place
  - A significant proportion of vehicles (From 34% during the Saturday peak to 65% during the Morning peak) have a journey purpose within the local network. The rest are passing through without stopping and could use other routes.

2.2 TRAFFIC REASSIGNMENT

2.2.1 The traffic reassignment analysis undertaken on Option 3 as part of the Beak Street Study included changes to Brewer Street and Glasshouse Street to create a new exit point out of Soho onto Regent Street. Approximately 100 vehicles per hour were calculated to use this new exit. Further reassignment analysis of Option 3A which includes the preferred design variations is presented in this note.

2.2.2 Two traffic reassignment scenarios have been analysed:

- Worst Case: - 100% of traffic is reassigned onto other streets
- Traffic Reduction: - Half of the traffic without a journey purpose within the local network is removed with the remain traffic reassigned. (Note that the detailed data analysis undertaken for the original study identified the exact percentage of vehicles passing through the study area in each of the peak periods that stopped at any point on the kerbside or entered service yards).

2.2.3 The Traffic Reduction scenario assumes that the vehicles that are passing through the local network (i.e. have no journey purpose there) could choose other routes and 50% of these vehicles avoid the study area entirely as a result of the changes.

2.2.4 Given that the Pedestrian Zone would permit access along the length of Beak Street from 7am-11am (Mon-Sat) there would be no reassignment during the Morning Peak hour. However, the Lunchtime, Evening and Saturday peak hours would see traffic reassigned.

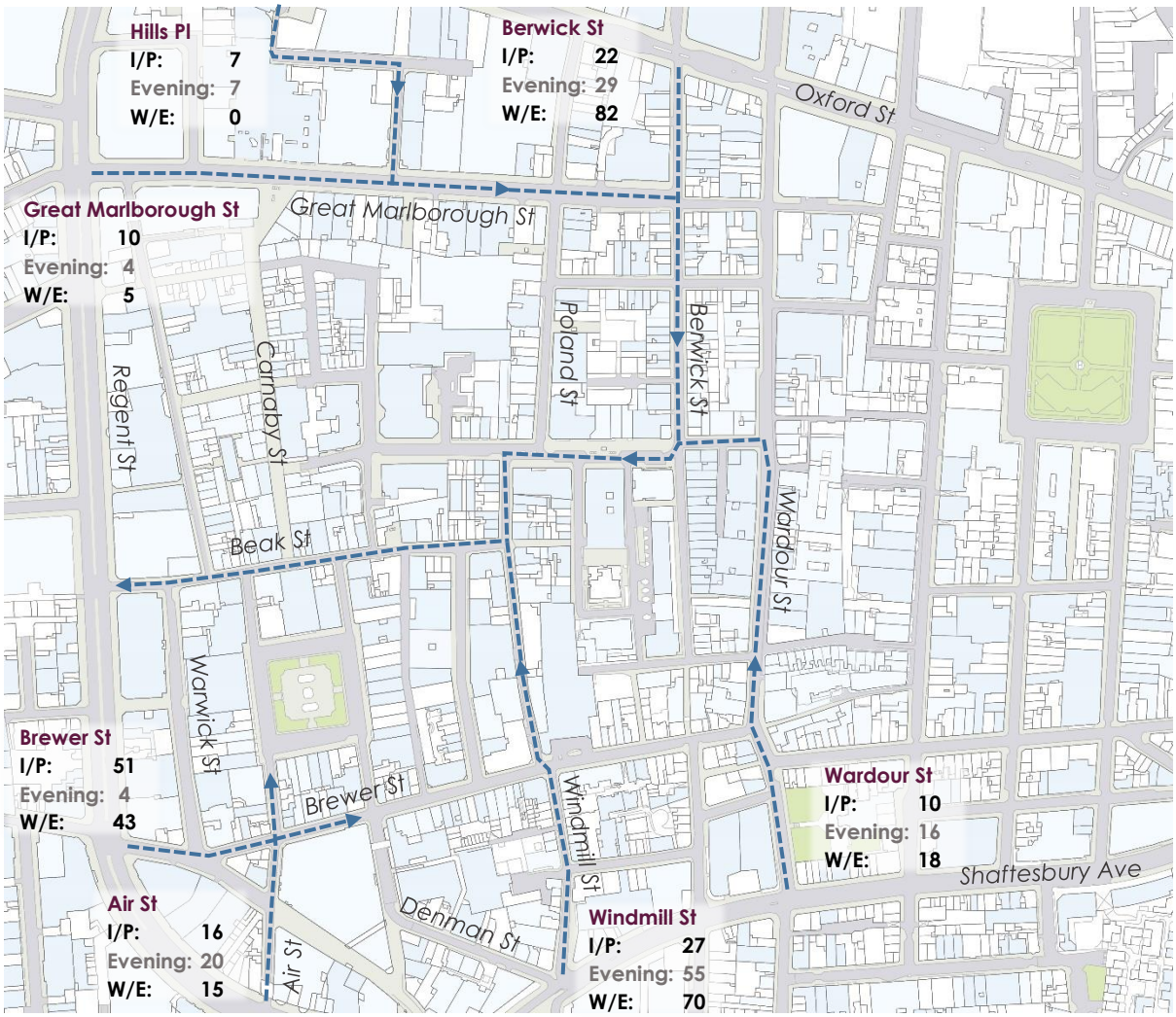
2.2.5 Table 1 summarises the degree of reassignment for each of the scenarios.

Table 1: Traffic flow reassigned in each scenario by peak hour

Peak hour	Worst Case	Traffic Reduction	
	Flow to reassign to local network	% with trip purpose	Flow to reassign to local network
Interpeak (13:00-14:00)	154	47%	113
Evening (17:15-18:15)	167	47%	123
Weekend (Sat 19:30-20:30)	219	34%	147

2.2.6 Figure 3 shows the current traffic flows where the vehicles that would be impacted by the Pedestrian Zone restrictions enter Soho and the number of vehicles from each origin point. The vehicles that access Beak Street via Warwick Street are removed from this assessment as they would not be impacted by the proposals.

Figure 3: Current traffic flows exiting Soho via Beak Street by peak hour (pcus)



2.2.7 This shows that the majority of vehicles that chose to exit Soho via Beak Street enter from the south. Shaftesbury Avenue being is a greater origin than Regent Street. The low flow entering from Brewer St in the evening peak appears to be an anomaly in the survey and could be expected to be similar to the other time periods.

2.2.8 The resulting traffic reassignment is summarised in Figures 4 and 5 for the two scenarios. This demonstrates that the assignment and associated impact is distributed across the four exit points and the various routes between them. While the Worst Case would see approximately an extra vehicle per minute at each of the exits (lower at Poland Street), the Traffic Reduction scenario sees under one vehicle every minute.

Figure 4: Worst case scenario traffic reassignment (range across peak hours)

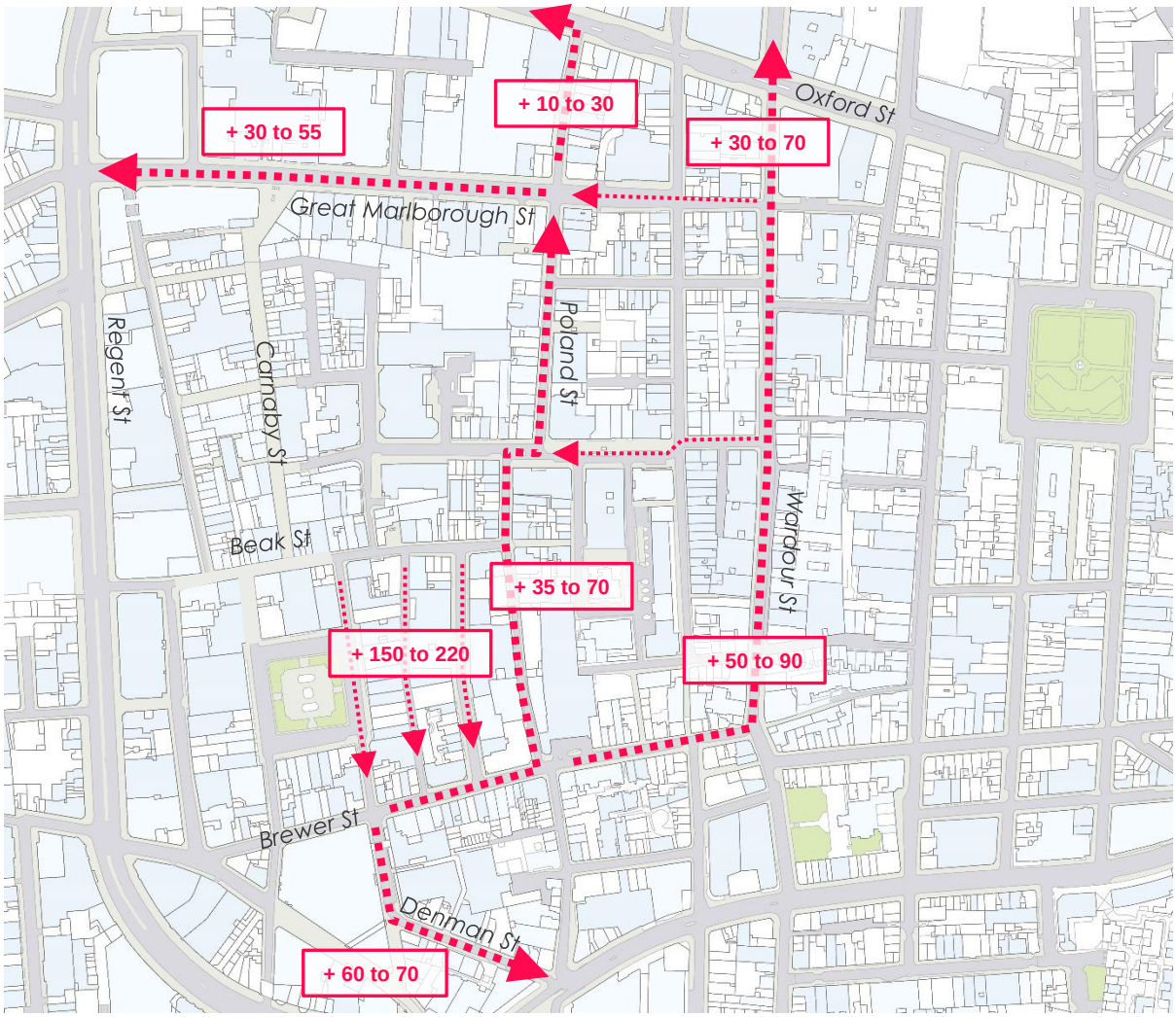
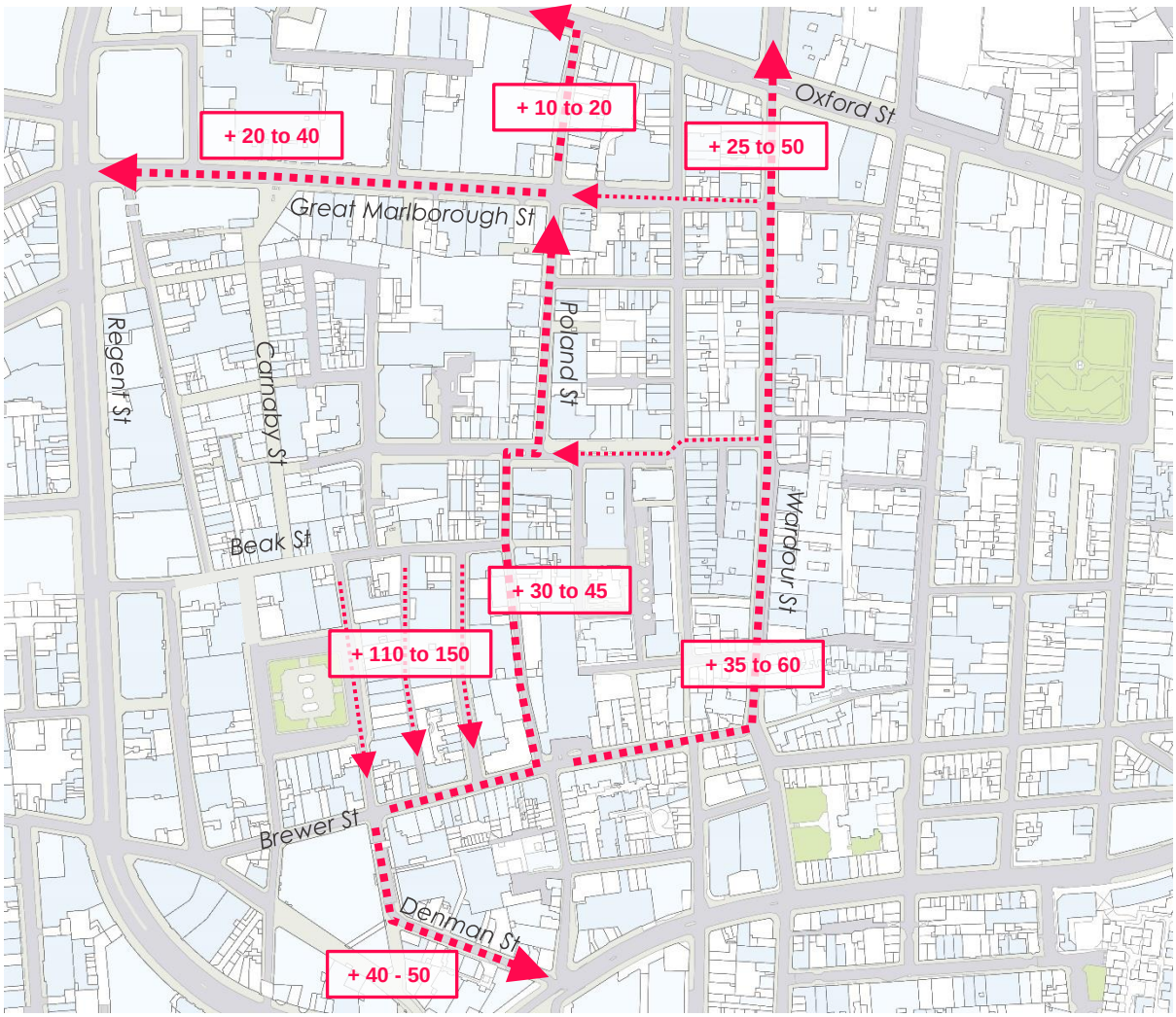


Figure 5: Traffic reduction scenario traffic reassignment (range across peak hours)



2.2.9 Although the Worst case Scenario is presented for reference, it is not considered to be a realistic outcome given the complex routes the through traffic would be forced to take. Even the Traffic reduction scenario could be over estimating reassignment as it does not take account of:

- Other schemes in the district also limiting access through Soho and discouraging through traffic
- Peak shifting – by aligning the restriction timings to other Pedestrian Zones in the area, a strategy of encouraging as much servicing as possible to occur between 7am – 11am emerges and this could reduce the degree of reassignment outside of these hours
- Complex circulatory traffic movements – owing to the high proportion of taxis in the district in the afternoon and evenings, it is possible that Beak Street is being used as part of routes for taxi circulation for fare seeking.

3 DESIGN DEVELOPMENT

3.1.1 The Beak Street concept design has been updated to reflect the preferred option and can be found in Appendix A. The changes are listed below in sections.

3.2 EASTERN SECTION

3.2.1 There are no access restrictions proposed between Lexington Street and Upper James Street. The changes proposed include raising the carriageway, widening footways, two half-on/half-off footway loading pads where appropriate, and creating a cul-de-sac at the southern end of Marshall Street. Figure 6 shows the concept layout.

3.2.2 The newly created public space at the southern end of Marshall Street includes proposals for three small trees and some cycle parking.

Figure 6: Eastern section proposals

3.3 PEDESTRIAN ZONE SECTION

3.3.1 The proposed Pedestrian Zone extends from Upper James Street to Warwick Street and includes Upper John Street. The carriageway width is proposed at a consistent width of 3m which enables some footway widening (approximately 80cm on each side) and the whole surface is raised to footway level. Figure 7 shows the concept layout.

3.3.2 The proposed bollards would be removed from 7am – 11am to allow through traffic to pass along the street and to join from Carnaby Street, Kingly Street and Upper John Street. The proposed bollards at the eastern end would have to be manually removed to obtain 24hr access for the private access off Beak Street and this could be managed by Shaftesbury. If stakeholder engagement reveals that provision for additional loading is required, the bollards could be relocated westwards slightly to create a loading bay. However, the preferred location is at the eastern most point of the Pedestrian Zone to ensure through traffic on Beak Street all turns left onto Upper James Street during the hours of operation without creating confusion.

3.3.3 The proposed bollards on Upper John Street have been carefully located to enable 24hr access to the private garage there and also potentially allow some loading activity outside of 7am – 11am. The southern end of Upper John Street would be made two-way to allow vehicles to exit the private garages outside of 7am – 11am. During the 7am – 11am time period vehicles exiting the private garages would be expected to follow the existing traffic flow directions. Given the low flow in and out of the private access, this is not expected to cause issues.

3.3.4 The proposed bollards at the western end of the Pedestrian Zone are set back 10m from the end to create a loading facility for use outside the 7am-11am.

Figure 7: Pedestrian Zone section proposals

3.4 WESTERN SECTION

3.4.1 There are no access restrictions proposed in the western section of Beak Street between Warwick Street and Regent Street. The only change proposed is the raised carriageway at the Beak Street junction with Warwick Street. Figure 8 shows the concept layout.

Figure 8: Western section proposals

4 CONCLUSIONS AND NEXT STEPS

4.1.1 The full Beak Street Study report presents analysis of benefits and impacts of each option. This analysis is summarised in Table 3 for the preferred Option 3A.

4.1.2 The analysis demonstrates that that preferred option creates a moderate level of traffic reassignment in the Soho area except between 7am-11am when there is no reassignment. However, this moderate level of reassignment is dispersed onto a variety of streets such that the impact at each location is relatively minor with less than one extra vehicle per minute at the alternative Soho exit points. The proposals facilitate the large amount of servicing throughout Soho between 7am – 11am by allowing vehicles to exit Soho using Beak Street.

4.1.3 Using the same option assessment criteria as the Beak Street Study, it is considered that this option delivers a balance of benefit against impact that is likely to be acceptable to the majority of stakeholders. Table 3 summarises the impacts based on the Traffic reduction scenario.

Table 2: Preferred option assessment against key criteria

Criteria	Impact	Score
Traffic	Moderate traffic displaced onto other streets during hours of closure. Likely that traffic will be discouraged from moving through Soho by this proposal. Option to further consider times of closure as means of limiting / mitigating impacts.	-1
Kerbside	Capacity reduced but remaining capacity on street would be adequate to meet existing needs. Full access maintained during the key morning loading period.	-1
Public realm	Potential for public realm improvements in Pedestrian Zone and other improvements elsewhere	+2
Pedestrians	Large expansion of Pedestrian Zone. Wider footways and step-free crossings. Fewer stopped vehicles to navigate around. Traffic free sections.	+2
Cycling	Potential for cyclists to pass through Pedestrian Zone	+1
Safety	Removed vehicle-pedestrian conflicts on Beak Street but potential for displacement of issues	0
Resilience	Improvements to complementary exit points are recommended along with this option	0
Flexibility	Pedestrian Zone could be suspended for events / works etc reverting the street back to existing	+1
Deliverability	Potential stakeholder concerns owing to relatively low levels reassignment on sensitive streets. Assuming "Typical Soho Street" palette of materials then higher quality materials for the Pedestrian Zone, delivery cost is estimated at £2.5m	-1

4.1.4 Following stakeholder engagement and possibly a trial period, if it is determined that the proposed scheme does not fully meet the requirements then the proposals can be adjusted with a significant amount of flexibility. This could include alterations to the proposed Pedestrian Zone restriction to permit varying degrees of access by time of day or vehicle type which would limit the impacts of traffic displacement.

4.2 NEXT STEPS

4.2.1 The following investigations are likely to be required as part of the next stage of the project:

- A potential trial on site to refine timings and extent of the Pedestrian Zone and provision of loading facilities on Beak Street and its connecting streets
- Development of preferred scheme concept designs on Beak Street and the complementary network changes using topographical survey data including vehicle swept path assessments
- Development of detailed kerbside restrictions and signing strategy within the study area
- Development of public realm proposals and enhancements at the key access points to Kingly Street, Kingly Court and Carnaby Street, and also the new public space on Marshall Street
- Engagement with key stakeholders on the proposals, in particular the timing and extents of the restrictions for the kerbside activity, the Restricted Parking Zone and Pedestrian Zone
- Integration with emerging proposals for adjacent schemes such as East Mayfair and Oxford Street
- Liaison with TfL and WCC on the potential for changes to the signalised junctions and associated traffic modelling requirements at:
    - Great Marlborough Street / Regent Street
    - Beak Street / Regent Street
    - Denman Street / Shaftesbury Avenue

APPENDIX A – CONCEPT DESIGN