

Appendix 1

Brighton – North Laine Transport Study

Brighton & Hove City Council

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Introduction – Brighton Station Gateway Project

Scheme Overview

During August and September 2012, a preferred scheme for improving the environment around Brighton Station was developed with the support of representative stakeholder groups.

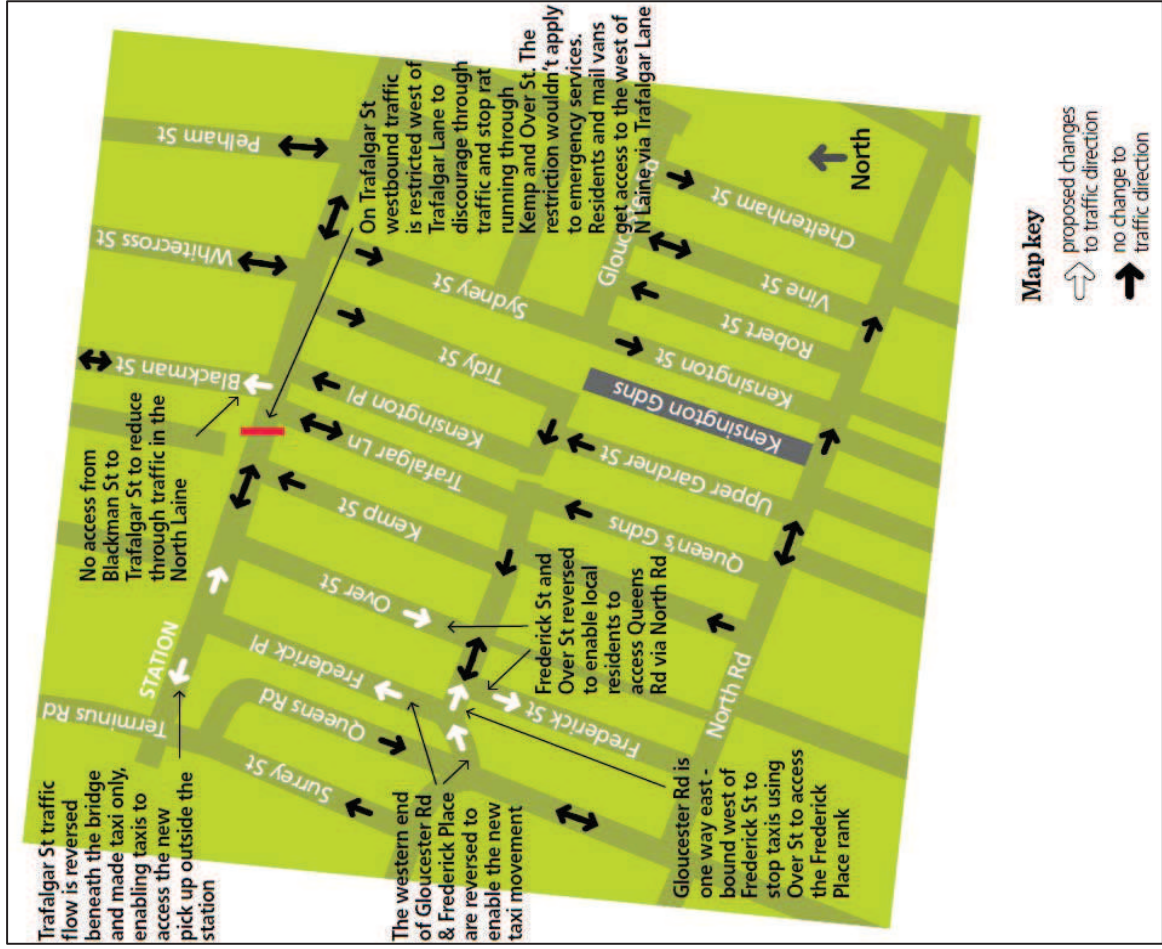
The preferred scheme involved relocating the current taxi rank. The relocated rank would comprise a pick up area outside the station, serviced by a northbound feeder rank on Frederick Place in North Laine. The feeder rank would also utilise the western end of Trafalgar Street (below the Trafalgar Street under-croft). The revised taxi arrangements necessitated alteration of access arrangements for traffic moving in, out and through North Laine.

Consultation on the preferred scheme took place in late 2012. The indicative proposals for the taxi rank and access arrangements included in the consultation can be seen in **Figure 1**.

The consultation process saw a number of concerns raised, primarily from within the North Laine community, as to the negative impact of the Frederick Place taxi rank and associated traffic implications.

This report investigates the feasibility of the suggested taxi arrangement, considering concerns raised during consultation, and where appropriate suggests alternative arrangements that could enable the Frederick Place taxi rank to progress.

Figure 1 - Access Arrangement Proposals for North Laine – Consulted Scheme



Developing the North Laine proposals

Original Scheme

Approval to consult on the proposal shown in Figure 2 was given at Transport Committee in October 2012.

However, between Committee approval to consult, and consultation taking place, the North Laine proposals were adjusted. The original proposal presented at Committee saw vehicular access into North Laine restricted from Cheapside to reduce south-westbound through traffic in North Laine. However, following presentations to the North Laine Community and Traders Associations following Committee, a strong desire was indicated to retain this access from the north.

North Laine Suggested Traffic Changes



Figure 2 - North Laine Original Scheme

Developing the North Laine proposals

Consulted Scheme Proposal

As a result access from Cheapside was reintroduced. However, this created the challenge of managing the southbound traffic reintroduced to North Laine in the streets between Trafalgar Street and Gloucester Road. In a bid to minimise additional traffic on the residential Over and Kemp Streets, and following a brief discussion with Travis Perkins which suggested Trafalgar Lane was only blocked by deliveries for a short period every Friday morning, the revised proposal that would be consulted on was drawn up.

The basis of the proposal was that Trafalgar Lane would provide necessary local westbound access to residents living between Gloucester Road and Trafalgar Lane, whilst the more convoluted route would dissuade rat-running from wider through traffic. An illustrative plan of the consulted scheme is shown in Figure 3. This complements the plan shown in Figure 1.



Figure 3 - Brighton Station Improvements and Taxi Rank Relocation



Consultation Outcomes



Introduction

Consultation on the proposals took place in late 2012. A number of concerns were raised relating to the impact of relocating the taxi rank to Frederick Place. These can broadly be separated into concerns over the actual taxi rank, and concerns over the wider impact of reversing Frederick Place to accommodate the taxi rank on wider North Laine traffic flow.

Taxi Rank Concerns:

The most commonly cited reasons for not supporting the rank were impact on air and noise quality (20 responses), the risk of taxis spilling / the rank spreading into adjacent residential streets (13) and the capacity of Frederick Place to accommodate sufficient numbers of taxis (12). Other concerns mentioned by several different people include a rank being contrary to the North Laine's conservation status (6), concern about the rank obstructing deliveries / servicing / access (6), impact on residents (5), congestion / blockages (5) and possible conflict between vehicles turning right and taxis turning left at the northern end of Frederick Place (5).

Wider Traffic Impact Concerns

29 people were concerned about wider traffic implications of placing a taxi rank North Laine. Most commonly cited concerns included impact on access (13), encouragement of rat running (10), enforcement of any restrictions (9) and increased congestion (4).

44 people were against / concerned about use of Trafalgar Lane as an alternative (to Frederick Place) north – south route through the N Laine. Concerns centred on narrowness of the street to cope with additional through traffic, lack of passing places when the street was blocked by loading vehicles and difficulty of access (due to the tight corner) from Trafalgar Street.

9 people were against the suggested reversal of Frederick Street. Concerns included practical issues associated with turning from Frederick Street into North Road as well as general concerns over air quality impact etc.

Study Objectives



Context

Consultation results were reported back to Transport Committee in January 2013. It was recommended that the suggestion of reversing Frederick Street should be abandoned* but that further work should be undertaken to better understand the wider concerns raised prior to a decision being made as to how the scheme should be taken forward.

*During consultation, residents expressed concerns over increased traffic in Frederick Street and also identified likely conflict between vehicles turning right from Frederick Street into North Road and vehicles queuing in North Road to enter or leave the North Road car park. A series of workshops with residents during the consultation period resulted in general agreement that making the Gloucester Road / Queens Road junction 2 way would provide a better means of ensuring continued access out of the North Lane to the south west.

Aims and Objectives

The aim of the study is to build on the work undertaken to produce the preferred scheme and take into account the concerns raised during the consultation process.

The objective of the study is to :

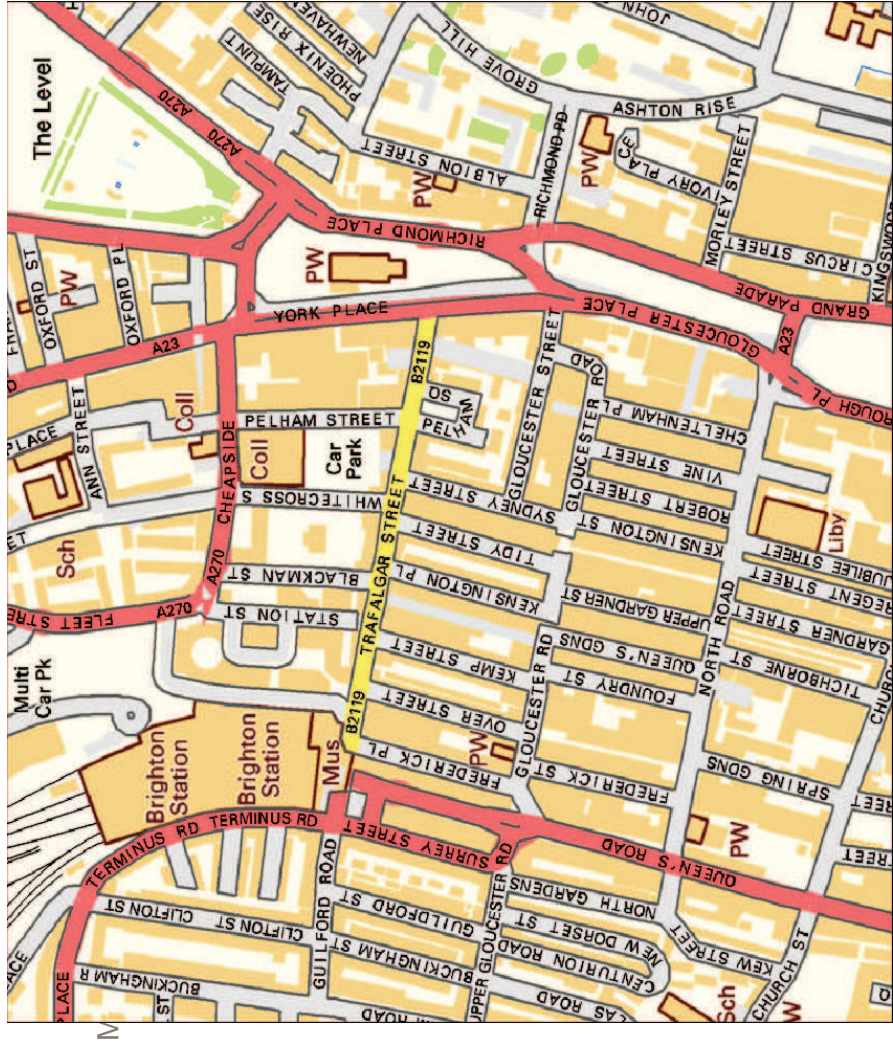
- investigate concerns raised during consultation; and
- where concerns prove to be valid, come up with ways in which problems with the original proposal can be overcome to enable the Frederick Place rank to be accommodated

Study Objectives



Study Area

The study area is the North Laine area of Brighton bounded by Queens Road to the west, Trafalgar Street to the north, York Place / Gloucester Place to the east and Gloucester Road to the south. A map of the area is shown in Figure 4 below.



Study Methodology

➤ Baseline Surveys

Baseline traffic surveys were undertaken to better understand the existing pattern of key movements in the area and to determine the purpose and nature of journeys into North Laine. The survey locations are shown in Figure 5.

Establishing existing patterns of movement provides a benchmark by which other traffic management options in North Laine can be compared.

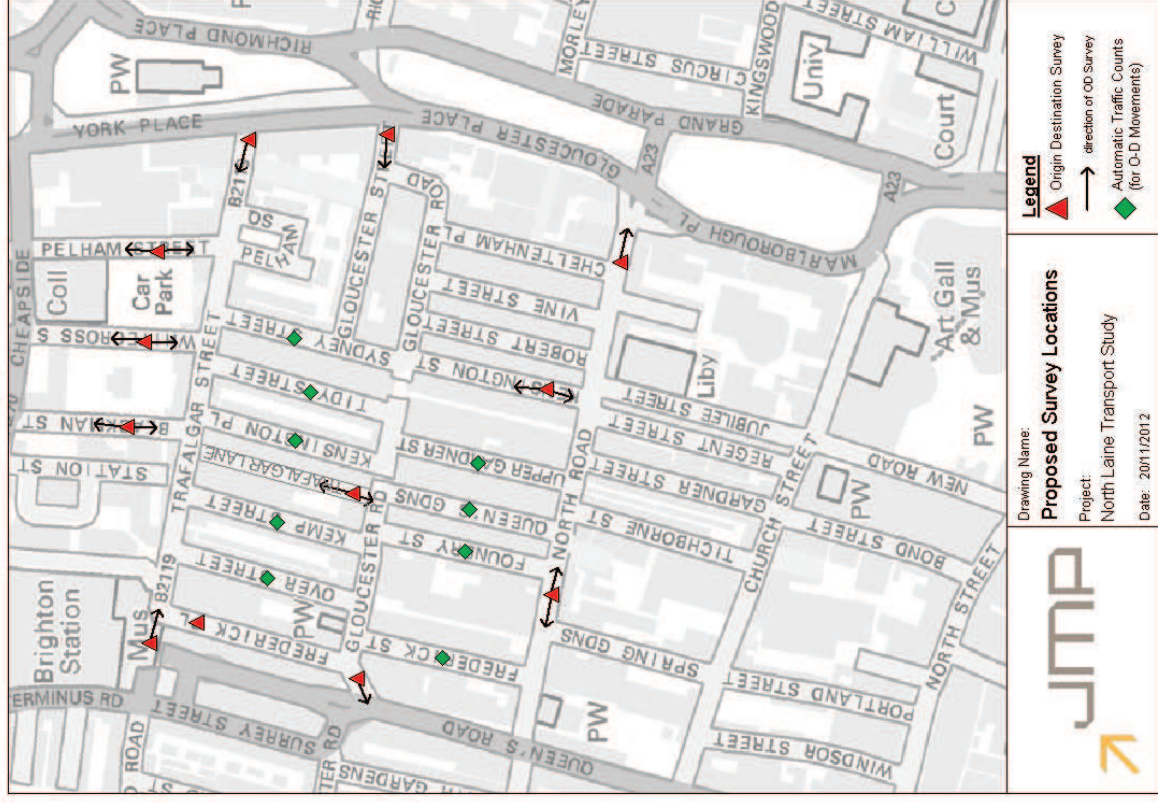
The data collected on a weekday and weekend in December 2012 included:

- Traffic volumes in the North Laine area on a street by street basis collected through automatic traffic counts¹; and
- Traffic routings through the study area collected through origin and destination surveys²

¹Automatic traffic counts are undertaken by running ducts/loops across streets. These count the speed and classification of vehicles passing over the ducts/loops over a specified period.

²Origin and destination surveys are collected by using Automatic Number Plate Recognition (ANPR) cameras. Registration plates are matched in order to determine the numbers of vehicles travelling between two points.

Figure 5 – Survey Locations



Study Methodology

Key Stakeholder Consultation

The consultation outcomes revealed a number of concerns relating to access and movement through the North Laine. In order to obtain further more detailed information on the operations of key users and their thoughts on the proposals, the following groups were consulted:-

- Royal Mail Depot located off Gloucester Road
- Travis Perkins located off Trafalgar Lane
- Occupiers at International House, Claremont House, Aspect House and Albert House with rear parking / servicing yards onto Frederick Place.
- Taxi Groups

We also reviewed the Transport Assessment for the IBIS Hotel which is currently being constructed on Queens Road to understand the likely future pattern of servicing and deliveries on Frederick Place.

Development of proposals for North Laine

Using the data collected through the baseline traffic surveys, stakeholder consultation and site visits, traffic management options for North Laine were developed based on the provision of a taxi feeder rank on Frederick Place / Trafalgar Street and a pick up / set down area on Junction Road.

The development of options was based around assessing the impact on key user groups shown in Table 1 below:-

Table 1 – Key Considerations In Developing Options for North Laine

Residents	Businesses	Taxis	General Traffic
Air Quality Impacts	Delivery and Servicing Impacts	Capacity of feeder rank	Access to North Laine
Change in traffic volumes on residential streets	Access and routing Impacts	Taxi circulation patterns	Local and Strategic Traffic Impacts
		Taxi Management	Road Safety and vehicular conflicts
		Taxi Access to and along the rank	

Existing Conditions – Overview

North Laine - General

North Laine is a shopping and residential district in central Brighton. It is home to a large number of independent retailers, pubs, cafés, theatres and museums, it is regarded as Brighton's bohemian and cultural quarter. Brighton rail station is located to the north west of the North Laine and has been the gateway rail station for Brighton since it was established in 1840.

Frederick Place

Frederick Place currently operates one way southbound and has a mix of frontage activity ranging from service yards and basement car parking for Queens Road properties on the western side to a mix of residential and commercial uses on the eastern side. The Prince Albert pub is located on the corner of Frederick Place and Trafalgar Street. There are double yellow lines running the full length of Frederick Street although informal loading and unloading takes place to the pub drey.



Figure 6 - Gloucester Road, North Laine



Figure 7 - Frederick Place, North Laine



Existing Conditions – Overview

Frederick Place shown in Figure 7 is the proposed location for the new taxi rank. Taxis would join the rank on Frederick Place and then turn left on to Trafalgar Street (under the bridge) before accessing a pick up point in front of the station on Junction Road.

Over Street , Kemp Street, Tidy Street and Kensington Place

Over St, Kemp St, Tidy St and Kensington Place are all residential streets. Over Street and Kemp Street both operate one way northbound and run parallel to Frederick Place whilst Tidy Street and Kensington Place are located further to the east and operate in a south to north loop. Parking is tightly controlled with all streets containing residents parking and some shared permit and 2 hour pay and display bays.

Over and Kemp Street both allow bi directional cycling. A typical layout for these residential streets is shown by the photograph in Figure 8 of Kemp Street

Figure 8 – Kemp Street, North Laine



Figure 9 - Trafalgar Lane, North Laine



Existing Conditions – Overview

Trafalgar Lane

Although Trafalgar Lane is an existing two way route between Trafalgar Street and Gloucester Road, it can only accommodate single way working. A Travis Perkins outlet is located approximately half way along the lane and there are known to be difficulties arising from the loading / unloading and access requirements to this operation. This issue has been considered through a face-to-face consultation meeting with Travis Perkins. The outcomes of the consultation can be found in the minutes in Appendix A but can be summarised as follows:-

- The majority of sales are associated with a vehicle trip with only a small percentage of walk in customers.

- Between a third and a half of all sales, require customers to collect goods from the warehouse. This equates to somewhere between 137 and 206 collections per week.

- The busiest time is mid-morning between 9am and midday.

- When customers collect bulkier items it requires them to stop and load goods on Trafalgar Lane.

- The average loading time is between 5-10 minutes but due to the narrow width of Trafalgar Lane when a vehicle stops to load goods the road is effectively blocked with insufficient room for another vehicle to pass.

- Travis Perkins receive a timber delivery once a week on a Wednesday . Due to the size of the vehicle, the vehicle parks on Gloucester Road. The timber is then unloaded via forklift truck which reverses along Trafalgar Lane



Figure 10 - Trafalgar Lane, North Laine

- Travis Perkins also receive a daily delivery from their central store, which brings general stock. The delivery is made in a 17tonne vehicle and unloading will normally take place on Gloucester Road.

- the predominant movement is north to south with Kemp Street acting as an alternative south to north route through the area.

- Local knowledge dictates the use of the lane at present and vehicles looking to use the lane will see if the lane is blocked by loading vehicles before turning in.

Figures 11 to 14 provide an illustration of Travis Perkins operations.

Existing Conditions – Overview

Figure 11 and 12 - Loading and Unloading on Trafalgar Lane



Figure 13 and 14 - Loading and Unloading from Gloucester Road



Existing Conditions – Parking



The affected North Laine area sits within the wider Controlled Parking Zone Area Y which stretches north as far as New England Street and east to Dyke Road.

116 people living in Kemp St, Frederick St, Over St, Tidy St and Kensington Place have parking permits and all residents may occasionally use visitor permits. There are approximately (bays are not individually marked) 64 resident parking bays in these streets and 22 shared residents parking / pay and display bays.

As such a number of North Laine residents will need to travel to adjacent areas on a fairly regular basis to find a parking bay. This will not impact on a large number of people but is an additional consideration when assessing the impact of access restrictions in North Laine.

Existing Conditions – Speeds

In the consultation, vehicle speeds in North Laine were raised as a concern by residents. In order to quantify this, speed survey data was collected from the Automatic Traffic Count locations.

Figure 4 (see page 11 of the report) identifies the location of these counts and Table 2 (opposite) shows the average speeds for roads in North Laine in the vicinity of Frederick Place for a 24 hour weekday period. The 85th percentile speed (which is the speed that 85% of the traffic is travelling below) has also been calculated, as this is often used by traffic engineers as the primary indicator for modifying speed limits. The results indicate that for all roads other than Over Street, the average speed is less than 20mph for all roads. 85th percentile speeds are below 25mph. The rollout of the 20mph zone for Brighton & Hove from 8 April is likely to reduce speeds further.

Over Street speeds appear to be significantly higher than for other streets, although it is not possible to ascertain why from available data.

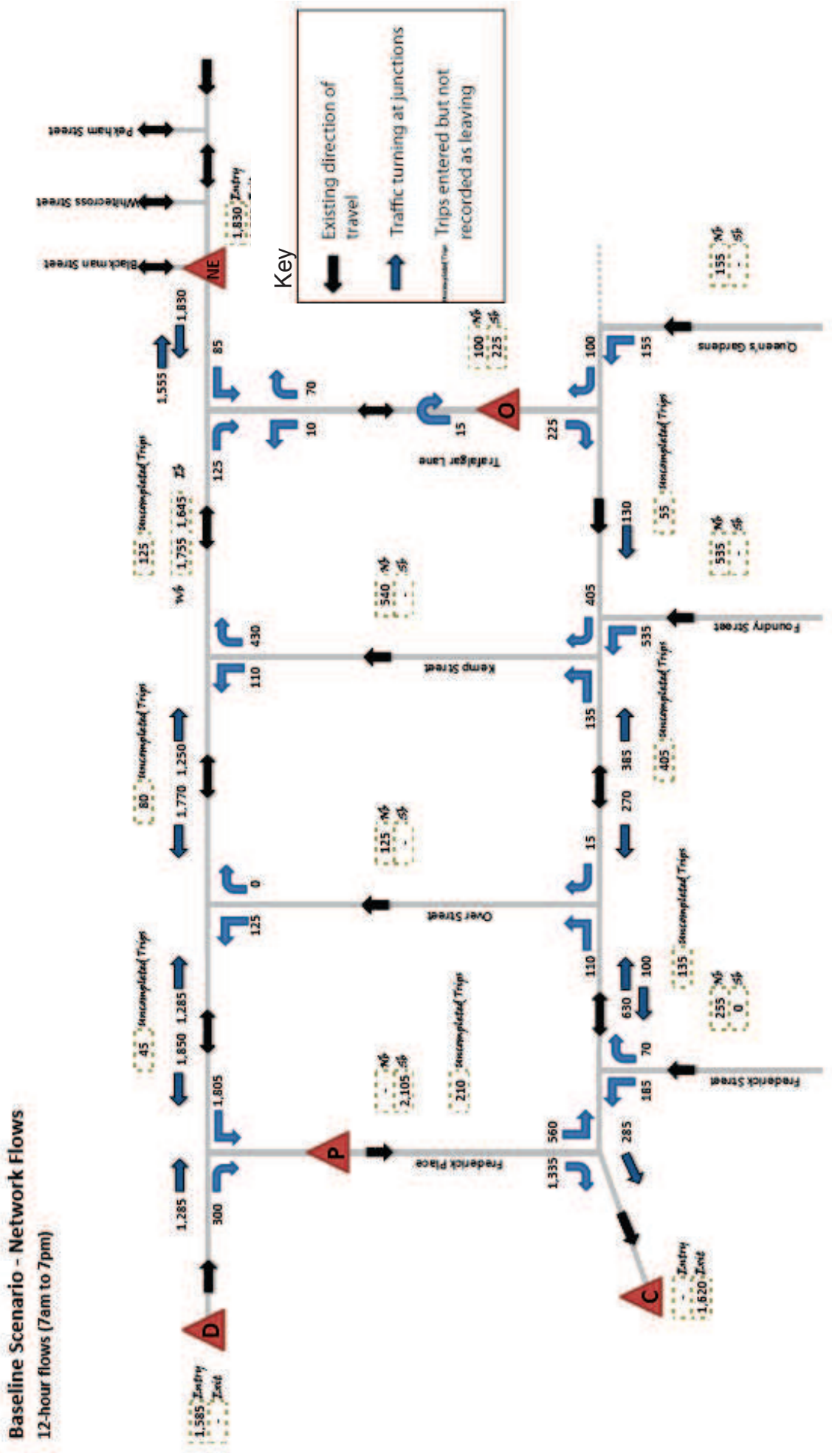
Elsewhere, the data suggests that most drivers are travelling within prescribed speed limits.

Table 2 – Mean and 85th percentile traffic speeds in North Laine

	Mean Speeds (mph)	
	85 th percentile	Average
Foundry Street	21.7	17.2
Frederick Place	23.7	19.3
Frederick Street	22.4	16.4
Kemp Street	20.8	16.8
Kensington Place	15	12.3
Over Street	31.5	25.1
Queens Gardens	20.1	15
Sydney Street	26.4	19.1
Tidy Street	20.1	15.4
Trafalgar Street	19.9	15.7
Upper Gardner Street	17.7	13.1
AVERAGE	21.8	16.9

Existing Conditions – 12 hour Traffic Volumes

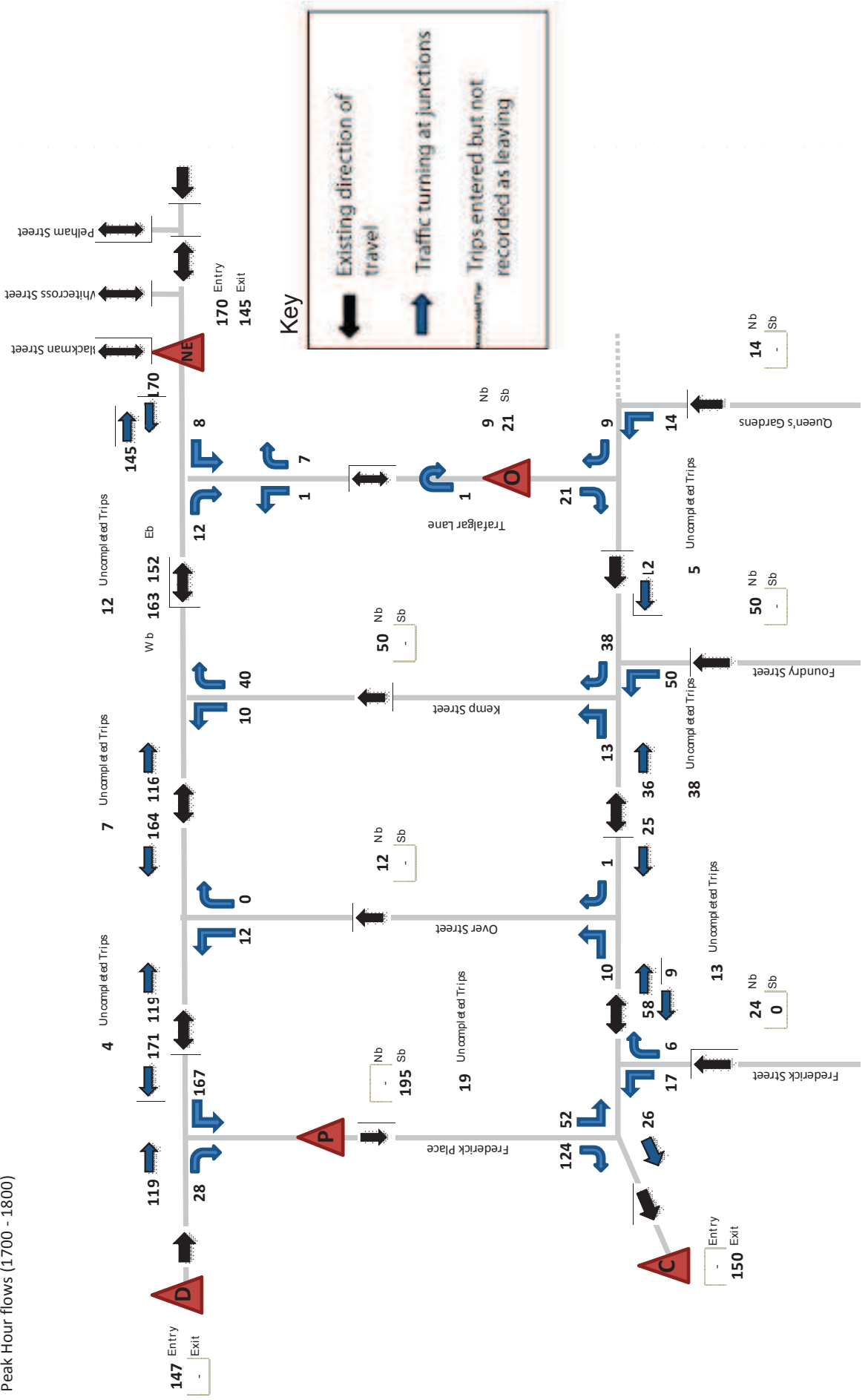
Figure 15



Existing Conditions – Peak Hour Traffic Volumes

Figure 16

Baseline Scenario - Network Flows
Peak Hour flows (1700 - 1800)



Existing Conditions – Distribution of Traffic Volumes across the day



Traffic Volumes vary across the day and hence the impact of the proposals will be different according to the level of background traffic or other traffic on the network. Prior to the analysis it was also important to understand the trip purpose of vehicles that were in North Laine, to differentiate between through trips (direct) which in theory could find an alternative route (previous modelling has identified that east – west trips would divert to North Road / Valley Gardens for instance to avoid North Laine) and essential trips related to residential or commercial / retail needs such as loading and unloading, short and long term parking.

An analysis of the results for the 12hr period for Frederick Place indicates the following:-

58% of trips are direct, taking less than 5 minutes to cross the network,

12% were loading, taking between 5 and 25 minutes ,

15% were short-term parking, between 25 minutes and 2 hours (typical threshold for short stay),

15% were long-term parking, longer than 2 hours

The proportion of direct trips is fairly consistent throughout the day (refer to **Tables 3 and 4** on next page breakdown), although there is a slight increase in the afternoon. This indicates that if these trips could be encouraged to take alternative routes there would be a benefit throughout the day.

Royal Mail vans were also recorded to understand their contribution to overall traffic levels. On Frederick Place, Royal Mail vans only account for 3.6 % of all trips, whilst on Trafalgar Lane (not shown) the figure is 5.8%. The relatively low numbers of trips on Frederick Place and Trafalgar Lane illustrate that there is a dispersed pattern of movements from the Royal Mail site.

Tables of Traffic Volumes



Table 3 - Absolute Trips across 12-hour period – Frederick Place

Hour Starting	Trip Types					Grand Total	Royal Mail Vans
	Direct	Loading	Long-stay	Short-stay			
7	20	12	11	9		52	10
8	51	18	26	19		114	24
9	95	23	45	29		192	11
10	52	25	26	23		126	14
11	77	16	29	28		150	16
12	65	31	15	19		130	2
13	69	13	23	24		129	2
14	82	20	14	28		144	3
15	74	21	7	21		123	3
16	77	27	0	12		118	3
17	99	26	0	9		134	3
18	15	4	0	1		20	1
Total	776	236	198	222		1432	92

Table 4 - Percentage of Trip Types occurring in each hour - Frederick Place

Hour Starting	Trip Types					Grand Total	Royal Mail Vans
	Direct	Loading	Long-stay	Short-stay			
7	3%	5%	6%	4%		4%	11%
8	7%	8%	13%	9%		8%	26%
9	12%	10%	23%	13%		13%	12%
10	7%	11%	13%	10%		9%	16%
11	10%	7%	15%	13%		10%	18%
12	8%	13%	8%	9%		9%	2%
13	9%	6%	12%	11%		9%	2%
14	11%	8%	7%	13%		10%	3%
15	10%	9%	4%	9%		9%	3%
16	10%	11%	0%	5%		8%	3%
17	13%	11%	0%	4%		9%	3%
18	2%	2%	0%	0%		1%	1%
Total	100%	100%	100%	100%		100%	100%

Existing Conditions – Other Key Stakeholders



Royal Mail Operations

The Royal Mail office depot is located between Gloucester Road and North Road and hence could be affected by the proposals. Royal Mail were consulted for their comments and the outcomes of the discussion are contained in Appendix B.

In summary the Royal Mail depot handles both deliveries and collections and operates 24 hours a day. Operations begin on Sunday evenings and finish on Saturday afternoons giving an approximate 6.5 day working week. There are access and egress points to site; one on North Road and two on Gloucester Road. The first entrance on Gloucester Road provides access to the loading bay, the second entrance provides access to an upper parking deck where vehicles are stored overnight. The Gloucester Road entrance is closed at night between 10pm and 6am for security purposes. Key routes that provide access to the North Road entrance include Queens Road, North Road, Spring Gardens and Church Street. These roads along with Foundry Street also provide access to the Gloucester Road entrances from the south. Accessing the Gloucester Road entrances from the north requires use of Gloucester Road, Frederick Place, Over Street, Trafalgar Street and Blackman Street and Whitecross Street. It is thought that Trafalgar Lane is not a key route for Royal Mail vehicles. There are approximately 500 two way vehicles over the 24 hour period. Of these approximately 85% of movements are between 0700 and 1900. Concerns have been raised by residents about the speed of mail vans on residential streets and the desire not to encourage more mail traffic onto residential streets. The evidence from the speed surveys seems to suggest that other than Over Street, traffic speeds are generally in accordance with prescribed limits.

Occupiers at International House, Claremont House, Aspect House and Albert House – Queens Road

Occupiers and facilities managers at these premises were consulted because of the potential impact of the proposals on servicing and access arrangements from Frederick Place.

The outcomes of these discussions were that the rear service yards are used for basement parking and not for deliveries. This is because there are headroom restrictions within each building and a lack of access between the front and rear of the properties for the movement of goods. Deliveries to Budgens for example, are therefore taken from Queens Road.

The only exception is the new IBIS hotel which is under construction. A service yard capable of accommodating a 7.5t truck for laundry and food deliveries is being provided.

Scheme Impacts of Proposed Taxi Feeder Ranks

The study investigated the various issues relating to relocating the taxi rank raised as concerns during the previous consultation.

The key areas of concern can be summarised as follows:

- The operation of the Trafalgar Street / Terminus Road junction
- Taxi Behaviour
- Taxi Pollution
- Taxi Capacity
- Taxi Access to and along the rank on Frederick Place/Trafalgar Street
- Other concerns related to taxis raised by the consultation process.

The meeting concluded that the issues could be addressed as follows:-

1. **Operation of the Trafalgar Street / Terminus Road junction**

Engineering and operational assessments indicate that all movements can be made safely at this junction

2. **Taxi Behaviour**

A marshal at the Frederick Place rank could manage most of the concerns raised associated with taxi behaviour (from taxi drivers creating noise and litter to taxis blocking accesses and circulating in residential streets). A taxi marshal could be employed during the night-time / early morning period (10pm -1am) and also during the weekday peak period (5pm-8pm).

The cost of employing a marshal is likely to be around £20,000 per annum; a funding mechanism would need to be identified. The proposal gained provisional support from representatives of the main taxi operators in the city and the Unite and GMB unions and already operates at the West Street rank in the city.

In addition a suitably enforced 'no right turn' restriction could stop taxis entering Frederick Place from the east, which would overcome concerns about taxis circulating in Over and Kemp Street to access the rank.

3. **Taxi Pollution**

Air Quality Assessments were undertaken using an assessment methodology based on the Local Screening Method set out in the Department for Transport's Design Manual for Roads and Bridges. Using the collected baseline traffic data and a traffic model constructed by JMP to analyse traffic changes NO2 and PM10 concentrations were calculated at a number of receptor locations.

The results indicate that the air quality on Frederick Place would worsen slightly with the taxi rank and also on the neighbouring streets of Kemp, Over and Trafalgar Lane (less than 5%). However concentrations of pollutants would be within National Air Quality Standards (NAQS) objective levels for all traffic management scenarios tested. In addition, the number of days where PM10 concentrations exceeds 50µgm-3 would also be below the NAQS objective level. As there would be no objective concentration exceedances as a result of the changes, specific mitigation measures would not be required. More details can be found in the supplementary air quality report.

Scheme Impacts of Proposed Taxi Feeder Ranks



4. Taxi Capacity

The capacity of the taxi feeder rank on Frederick Place will be governed by the need to provide:-

- Access to the basement car parks on the western side of Frederick Place
- A turning circle to accommodate deliveries to the IBIS hotel under construction
- Access to the Prince Albert pub drey
- Access to off street car parks on the eastern side of Frederick Place
- Possible restriction of taxis immediately outside the Old School House

Once these requirements have been accommodated, the proposed Frederick Place arrangement (Junction Road pick up, Trafalgar Street and Frederick Place taxi feeder ranks) would provide capacity for 21 spaces. This would consist of 13 spaces on Frederick Place, 4 on Trafalgar Street and a further 4 on Junction Road.

Hence this would result in an increase of 4 spaces compared to the current design capacity of the station forecourt rank (17). The new rank arrangement is expected to operate more efficiently than the existing rank, where taxi access in and out of the pick up area is often delayed by traffic signals / the pedestrian crossing over the existing cab access road. Figure 14 shows the proposed layout of the feeder rank

Figure 17 -
Proposed taxi
feeder rank
arrangements



Scheme Impacts of Proposed Taxi Feeder Ranks

Taxi Access to and along the rank on Frederick Place/Trafalgar Street

A series of staged call forward systems could be implemented across the rank to inform taxis when they can / should join each stage of the rank. These could commence in Queens Road before taxis made the decision as to whether to try and join the Frederick Place rank. There would then be a further call forward facility to the Trafalgar Street rank. The technology has been successfully trialled at London Paddington Station and would include the provision of displays and detector loops.

In addition, the taxi marshal would help ensure the rank operates effectively. It is anticipated that a voluntary code of conduct, supplemented by the presence of a marshal at peak times / the evening would be sufficient to ensure the rank operated effectively. If compliance becomes an issue, additional enforcement options could include installation of a camera to enable enforcement of arrangements around the rank. This is likely to have an additional resource implication for the installation and maintenance of the camera, and also for management of any enforcement process. If the proposal was taken forward a means of resourcing this arrangement would need to be identified.

Other concerns - A cab rank will encourage anti social behaviour in North Laine .

The presence of a rank (and so passive surveillance) in Frederick Place should discourage anti-social behaviour in this area. However the presence of a marshal may help mitigate public concern over this issue, especially late at night.

A taxi rank in North Laine is counter to the area's conservation status



The council's conservation officer states that a taxi rank in Frederick Place would not seriously harm its character as part of the North Laine Conservation Area. Any potential harm would be outweighed by the positive effect of removal of the Taxi Rank from under the Brighton Station Canopy on the character and setting of that Grade II* Listed Building and on the West Hill Conservation in which it is located.

The advice comes with the caveat that the Albert Public House on the corner of Trafalgar Street and Frederick Place is Listed and the taxi rank should not run alongside it (the rank does not run adjacent to the pub to avoid conflict with the dray loading area), and that care needs to be taken to ensure that a Frederick Place rank does not lead to displaced traffic having a negative impact on the wider North Laine.

Traffic Management Options – Impact of Consulted Scheme

Testing the Consulted Scheme

Having established that taxis could be accommodated on Frederick Place, the next stage of the study examined the impact of different traffic management options on surrounding streets.

The first option tested was the scheme that formed the basis of consultation. Testing showed that this option would increase southbound traffic on Trafalgar Lane by 448%. This would increase the likelihood of traffic blocking back from Trafalgar Lane onto Trafalgar Street and would also have a significant adverse impact on the viability of the Travis Perkins business.

Diverting these levels of traffic down Trafalgar Lane would realistically necessitate the Compulsory Purchase Order of Travis Perkins, which is not considered an attractive course of action. Consequently this option was not considered further.

The network flow diagram (Figure 20) showing the results of this option test is attached as Appendix D.

Variations on the Consulted Scheme

A number of variations on the consulted scheme were also tested and ultimately discounted:

Consulted Scheme plus Whitecross Northbound Only
The option, which tested the impact of restricting access to North Lane from Whitecross Street to reduce NE to SW movements, still created an increase of around 1000 movements on Trafalgar Lane.

Consulted Scheme – Trafalgar Lane Southbound Only

Making Trafalgar Lane one-way southbound had a negative impact on Travis Perkins and resulted in much higher flows on Kemp Street.

Consulted Scheme – Trafalgar Lane and Queens Gardens Southbound Only

This option was discounted because of its impact on Travis Perkins

Consulted Scheme – Removal of westbound plug on Trafalgar Street

The removal of the suggested westbound ‘plug’ on Trafalgar Street resulted in traffic flow on Over Street increasing from 10 vehicles per hour to over 120 vehicles per hour – a significant increase on the residential street.

Consulted Scheme – Removal of ‘Plug’ with Kemp Street Southbound

This option led to significant increases of traffic on Kemp Street

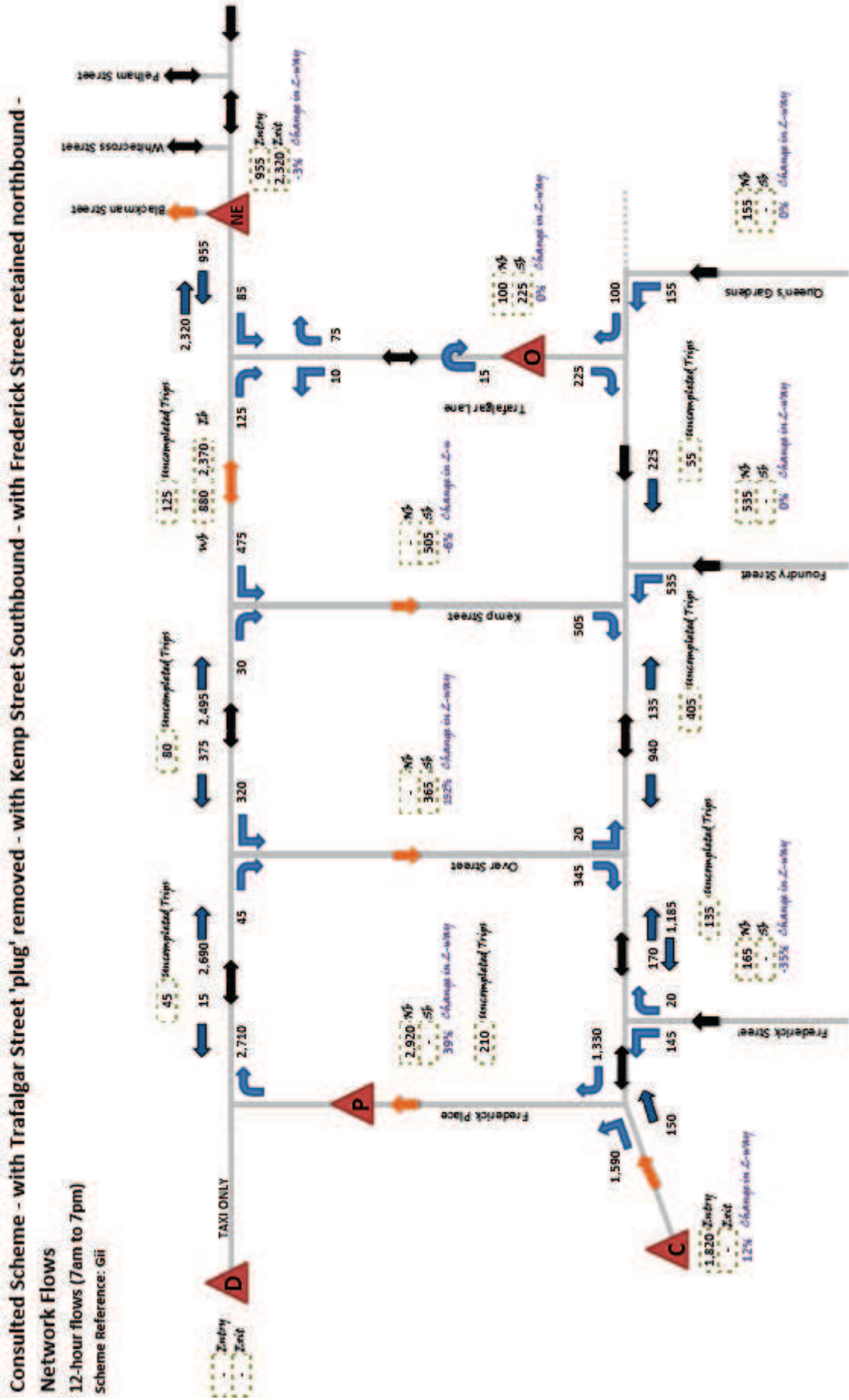
Developing Options


Two alternative Traffic Management options were developed which have potential to be implemented. The options, and their relative benefits and disadvantages, are shown on the following pages.

Traffic Management Options – Preferred Options



Figure 20 – Potential Option 2



Short Description	Advantages	Disadvantages
<p>Potential Option 1</p> <p>Option 1 maintains access from North Laine to Queens Rd via a 2 way Gloucester Rd junction.</p> <p>Access from the north west (via Cheapside) restricted to limit through traffic by making Whitecross & Blackman St one way northbound.</p> <p>Kemp St made southbound to provide local access from the north.</p>	<ul style="list-style-type: none"> Maintains through access for local residents and businesses but discourages some wider through movements Traffic increases on Over Street and Kemp Street are moderate when considering hourly increases: 15vph for Over (1 every 4 minutes); 40vph for Kemp (1 every 1.5 minutes). Postal operations not significantly affected Taxis are less likely to circulate through the North Laine than with Potential Option 2 	 <ul style="list-style-type: none"> Local access into North Laine will be more restricted than at present with no direct access from Cheapside (west) Trafalgar Lane will experience an increase in flows, particularly northbound, so more conflict than currently experienced. Traffic not wishing to use Trafalgar Lane for northbound movements (for example during loading / unloading) would instead be tempted to use Over St (unless access control was considered at the southern end of Trafalgar Lane) Requires engineering solution for Gloucester Road / Queens Road which might require increasing the size of the junction. Cost implication
<p>Potential Option 2</p> <p>Option 2 restricts access from North Laine to Queens Rd. This means residents and businesses can't access the west of the city directly, but also stops any wider through traffic in the North Laine.</p> <p>Kemp Street and Over Street become southbound</p>	<ul style="list-style-type: none"> Discourages all through movements Over Street increases are moderate when considering hourly increases: 20vph for Over (1 every 3 minutes); Kemp Street and Trafalgar Lane flows would be similar to that experienced today Reduction in flows on Trafalgar Street Postal operations not significantly affected 	<ul style="list-style-type: none"> Frederick Place flows would increase by around 800 vehicles per day or 66 per hour. When taxis are added, increase on Frederick Place is further increased. However conflict at the northern end is removed because Trafalgar Street would become one way westbound between Frederick Place and Over Street. Potential issue with taxi's circulating down Over and Kemp Street if they cant find space on the feeder rank as a right turn ban could not be imposed from Gloucester Road to Frederick Place. (This could be partly mitigated by a call forwarding system) Potential for conflict with back of taxi queue increased because of risk of queue jumping – although this could be mitigated by a yellow junction box. Access out of North Laine more restricted than Option 1 and hence longer journeys for residents and businesses for destinations to the south west of North Laine

'User Impacts' of preferred options

Impact on..	Residents	Taxi Operators	Businesses	Travis Perkins	Royal Mail
Access	<p>Option 1 Preferred - Option 2 will restrict access to the Seafront. It has been calculated that to reach the Clocktower / Churchill Square Shopping Centre would require a 1 mile detour from streets such as Over, Kemp and Frederick Place compared to the existing situation.</p>	<p>Option 1 Preferred - Whilst access is not so much of an issue for taxi operators because they can use Trafalgar Street westbound to access the seafront, the absence of a right turn ban from Gloucester Road to Frederick Place for Option 2 could result in some taxi drivers attempting to jump the queue. There is also a greater risk of taxis circulating around North Lane with this option. However this risk could be mitigated to some extent through the use of marshals and enforced through the provision of a yellow box at the junction.</p>	<p>Option 1 Preferred - For the same reasons as residents</p>	<p>Option 2 preferred – This results in less traffic using Trafalgar Lane and hence will be preferred because it has less of an impact on the business</p>	<p>Option 1 Preferred - For the same reasons as residents and retailers. Option 2 is likely to increase delivery times and also increase fuel costs particularly for runs to Seven Dials. However the impact of Option 2 will be ameliorated somewhat by the option of using the North Road entrance. The result is that the Gloucester Road entrance would not be used to the same extent that it is now. It is not known whether this could be accommodated internally within the site</p>
Traffic Volumes	<p>Kemp Street, Trafalgar Lane, Queens Gardens residents are likely to prefer Option 2 because of the lower traffic volumes although this is likely to be offset by the reduced access to the south. All other residents and particularly those on Frederick Place are likely to favour Option 1</p>	<p>Option 1 Preferred - Option 1 results in much lower traffic volumes on Frederick Place and hence reduced conflict with other road users</p>	<p>Option 1 Preferred - particularly for Trafalgar Street retailers who will experience lower volumes. There is a risk that more illegal movements may be made down Sydney Street with Option Gii as residents seek alternative means of accessing Valley Gardens without having to use Preston Circus.</p>	<p>Option 2 preferred – For reasons given above</p>	<p>Unlikely to be concerned about traffic volumes unless it affects delivery times. For this reason Option 1 is likely to be Preferred.</p>

'User Impacts' of preferred options



Impact on..	Residents	Taxi Operators	Businesses	Travis Perkins	Royal Mail
Parking	<p>Option 1 Preferred - Option 2 will restrict access to North Laine and hence parking behaviour may change to reflect the new arrangements. For example restricted access might encourage residents to park further away from their properties as access may be less constrained (such as to the south of North Road or north of Trafalgar Street). This may introduce new parking pressures for residents in adjacent areas.</p>	<p>Not Relevant as taxi drivers will use the feeder ranks</p>	<p>Option 1 Preferred - Any scheme (2) that makes access to pay and display spaces in North Laine more difficult is likely to be viewed unfavourably by businesses.</p> <p>Although most of the existing visitors to North Laine are likely to arrive on foot, bike, by public transport or park in the multi storey car parks such as North Street and Whitecross Street, a proportion of sales are likely to be derived from passing trade. The reduction in permeability of north laine in Option 2 will reduce the propensity for passing trade custom</p>	<p>Travis Perkins benefits from off street parking which normally means that customers are not required to use surrounding pay and display bays. However Option 2 will be preferred because this results in less traffic using Trafalgar Lane and hence has less of an impact on the business</p>	<p>Royal Mail staff benefit from off street parking which normally means that the use of surrounding pay and display bays is not required.</p>

Conclusions and Recommendations

This study has assessed the

- (i) impact of relocating the taxi feeder rank from in front of Brighton Station to Frederick Place; and
- (ii) associated traffic management options required to facilitate its relocation

Taxi Feeder Rank

The study has concluded that it is feasible to locate the taxi rank to Frederick Place and Trafalgar Street provided that a managed system is put in place through a combination of technology and enforcement to mitigate against adverse taxi impacts.

The study also concludes that there would be no adverse impacts on taxi capacity or air quality and that access to properties and basement car parks on Frederick Place could be maintained.

A feeder rank of up to 13 taxis could be provided on Frederick Place with a further 4 on Trafalgar Street and 4 on Junction Road. Although not explicitly modelled, the arrangement is likely to offer significant decongestion benefits to the front of Brighton Station and enables a greater proportion of the station forecourt area to given over to public realm improvements.

The taxi rank proposals are supported by the main unions and taxi operators in the city. However the issue of funding a marshal would need to be resolved.

Associated Traffic Management Options



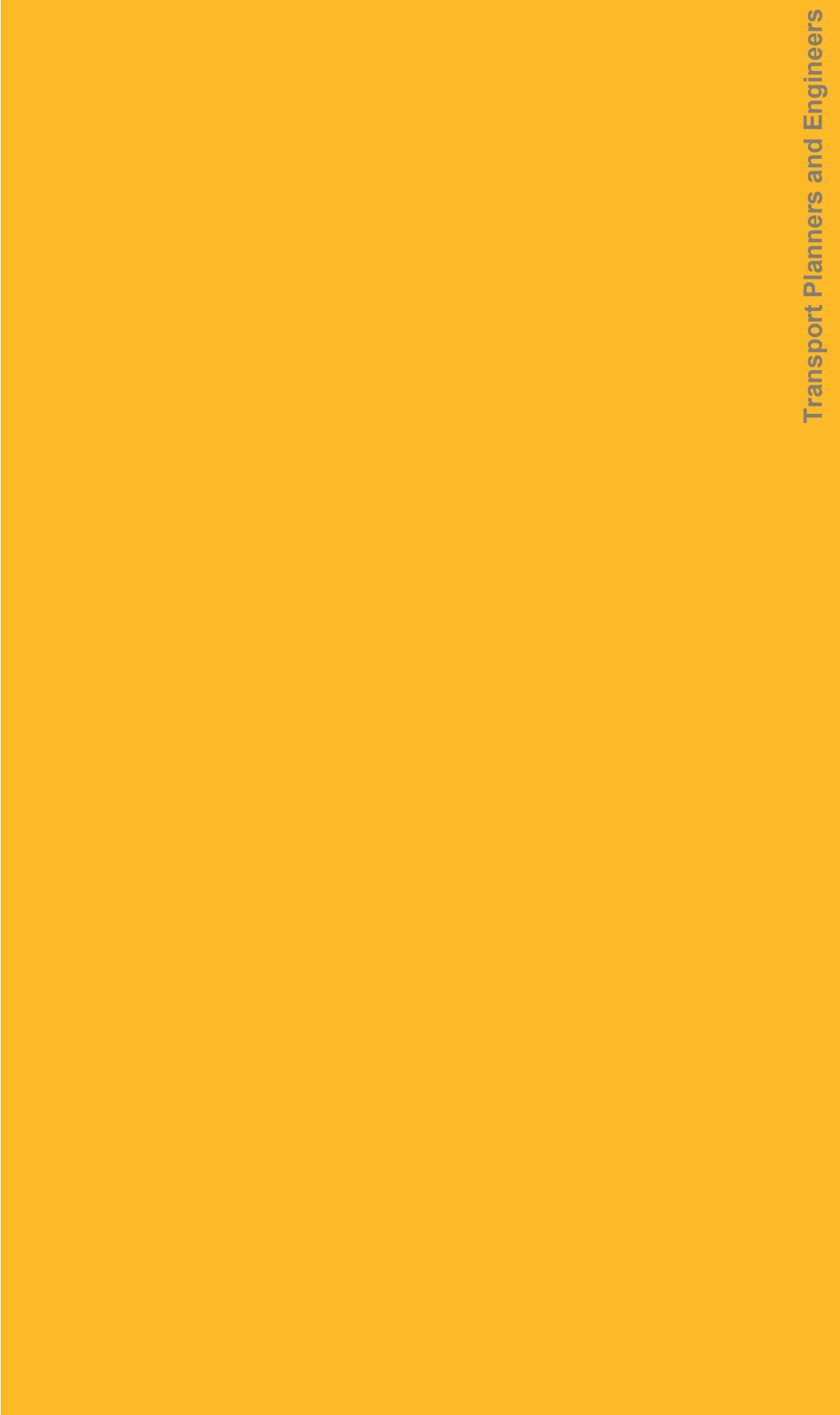
The study has concluded that it will not be possible to take forward the scheme which was consulted on in late 2012 because of the significant adverse impacts on the Travis Perkins business on Trafalgar Lane.

The study also concludes that a trade off will be required between maintaining access to North Laine and reducing the impact of diverting traffic onto residential streets.

Both the shortlisted options, require some form of 'access control' to reduce the number of strategic movements through North Laine. This can be achieved either through reducing the number of through routes in North Laine (option Fiii) or preventing traffic from exiting onto Queens Road from Gloucester Road (option Gii). If these options are taken forward the number of strategic movements can be reduced by between 700 and 850 trips for a typical weekday 7am to 7pm period.

It is inevitable that with the proposed traffic management changes there will be 'winners' and 'losers'. However both the shortlisted options have sought to reduce the impact on Over Street, Kemp Street and Trafalgar Lane. Whilst some of the proportional increases seem large they should be taken in the context that these are from a low base. Furthermore the increases should also be considered from an hourly perspective. For example the worst case option for Kemp Street (Fiii) only amounts to an increase of 1 vehicle per 90 seconds and flows would still be 50% of current day flows on Frederick Place. Overall, option Fiii is likely to be slightly favoured because it seems to offer a wider range of benefits than Option Gii

Ancillary measures such as changes to signing, road treatments and consolidation of deliveries could reduce the impact of the proposals further.



Note of Meeting

Date 6th December 2012

Job No/ Name ST13305 North Laine, Brighton

Present Andy Nicholson, Philip Harding (Travis Perkins), Chris Sibthorpe, Tim Hapgood (JMP).

Subject Travis Perkins Consultation

1. A meeting was held on site at Travis Perkins Trading Co. Ltd, 1-2 Trafalgar Lane, Brighton, East Sussex, BN1 4ES for approximately 1 hour on Thursday 6th December between 13:00 and 14:00. The following topics were discussed and this note provides a record of those discussions.
 - Travis Perkins Operations;
 - Daily / weekly vehicle arrival and departure profile: volume and timings;
 - Vehicle size and routing;
 - Vehicle loading and unloading operations: location, dwell time, handling equipment etc; and
 - Vehicle access problems or issues.

Overview of Travis Perkins' Operations

2. The site was originally a local timber merchant established in 1829. Travis Arnold (Perkins) acquired the site in 1924 and they have been trading from the site ever since.
3. Travis Perkins is open Monday to Friday 07:30 to 17:00 and Saturday 08:00 to 12:00. The site is closed on Sundays.
4. The site serves both commercial and public customers and supplies a range of products including building materials, plumbing and heating, landscaping materials, timber and sheet materials, painting and decorating, dry lining and insulation, doors and joinery, and hand and power tools.
5. The sites functions are split between a customer facing shop with an entrance into the customer car park and a warehouse for customer collections of bulkier items which faces on to Trafalgar lane.
6. Trafalgar Lane is a narrow two way road running north to south in the North Laine area of Brighton. The road connects with Trafalgar Street at the northern end and Gloucester Road at the southern end. There are double yellow lines along the length of Trafalgar Lane.

Customer Trip Generation and Loading / Unloading

7. A week of sales data was supplied covering the period 27/11/12 to 03/12/12. The total number of sales over the six day period was 412. The average number of sales per day Monday to Friday was 77, both account customers and cash purchases. Saturday sales totalled 28. There is very little seasonal variation in trade.
8. The busiest time was estimated to be mid-morning between 9am and midday. At any one time it is normal to have 3-4 customers on-site. Customer vehicles are typically cars or vans up to large transit van size.
9. The vast majority of sales are associated with a vehicle trip with only a small percentage of walk in customers. Between a third and a half of all sales require customers to collect goods from the warehouse. This equates to somewhere between 137 and 206 collections per week. Excluding Saturday's this equates to between 26 and 39 collections per day.

10. When customers collect bulkier items from the warehouse it requires them to stop and load goods on Trafalgar Lane. The average loading time is thought to only be 5-10 minutes. However due to the narrow width of Trafalgar Lane when a vehicle is stopped to load goods the road is effectively blocked with insufficient room for another vehicle to pass. During the site visit a number of customers loaded goods from the warehouse on Trafalgar Lane and twice this caused a blockage to another vehicle. The pictures below illustrate the problems caused by loading on Trafalgar Lane.



11. Travis Perkins have put up signage on the entrance to warehouse to encourage caution when manoeuvring and carrying out loading activities.

Travis Perkins Deliveries

12. Travis Perkins receive a timber delivery once a week on a Wednesday in the early morning (before 9AM) by a 33 tonne vehicle. Due to the size of the vehicle and scaffolding which is in place on a dwelling opposite the entrance to Trafalgar Lane on Gloucester Road, the vehicle parks on Gloucester Road. The timber is then unloaded via forklift truck which reverses along Trafalgar Lane to reach the warehouse. The pictures below illustrate the operation.



13. Travis Perkins also receive a daily delivery from their central store, which brings general stock. The delivery is made in a smaller 17tonne vehicle and usually arrives between midday and 14:00. The vehicle is usually able to reverse in to Trafalgar Lane and unload in the customer car park. If it not possible to reverse in to Trafalgar Lane the vehicle will unload on Gloucester Road.
14. Travis Perkins also occasionally receive irregular deliveries, which are made using a 7.5tonne vehicle.
15. Travis Perkins also have their own on-site flatbed lorry, which they use for making customer deliveries as required. This can be parked in the warehouse without affecting movements along Trafalgar Lane.
16. Commercial refuse collections require Travis Perkins' bins, which are stored in the car park, to be wheeled to Gloucester Road for collection by Veolia. The collection is made on a Wednesday between

6-7am. Other premises based in Trafalgar Lane at the northern end keep their bins on-street and are collected by Biffa via Trafalgar Street usually late on a Thursday.

Vehicle Size and Routing and Access Issues

17. Although Trafalgar Lane is a two way road the predominant movement is thought to be north to south with Kemp Street acting as an alternative south to north route through the area.
18. It is thought that local knowledge dictates the use of the lane at present and vehicles will look to see if the lane is blocked by loading vehicles before turning in. However it is also quite common for vehicles to turn into the lane and then try to reverse out again if the lane is blocked.
19. Royal Mail vans from the depot on Gloucester Road are frequent users of the lane as a through route. Seven Royal Mail vans were counted using the lane (north to south) whilst the site visit took place.
20. Access to the lane from both Trafalgar Street to the north and Gloucester road to the south is tight. Both junctions have substandard visibility. The largest vehicle that can safely traverse the junctions is a large transit van. Although as demonstrated through the Travis Perkins deliveries it is possible for large vehicles to reserve into the lane if necessary.
21. There are no particular issues with parking on Trafalgar Lane due to the double yellow lines and the narrow width of the road naturally prohibiting parking. There are no defined loading / unloading restrictions and traffic wardens are known to be relatively accommodating basing permitted loading time on the size of the vehicle.
22. Trafalgar Lane is also used as a pedestrian and cycle through route and is lined on one side with rear pedestrian accesses to residential properties that face on to Kensington Place.

North Laine Traffic Management Proposals

23. Travis Perkins have made formal representations regarding their concerns about the proposed changes to the road network in North Laine as part of the station improvement programme.
24. The principal concern is regarding the access restriction proposed to the west of Trafalgar Lane on Trafalgar Street. The access restriction would see westbound traffic restricted to emergency vehicles only to discourage through traffic and stop rat running through Kemp and Over Street. If implemented the access restriction would likely cause increased use of Trafalgar Lane as a through route north to south.
25. Travis Perkins believe Trafalgar Lane is highly unsuitable for use as a through route and would not be able to accommodate any increase in traffic. The narrow width of the road and the arrangement of loading on-street outside of the Travis Perkins warehouse already causes the road to become blocked when loading takes place and any increase in traffic would exacerbate the problem further. This in turn would potentially cause wider network management problems in the North Laine area.

Distribution

Name/ Signed Tim Haggood

File Note

Time / Date	10:30am 7 th December 2012
Job No/ Name	ST13305 North Laine Study, Brighton
Present	John Beard, Nicholas Fleet, Peter Patrick (Royal Mail), Chris Sibthorpe, Tim Hapgood (JMP).
Subject	Royal Mail Conference Call

1. A conference call was held with Royal Mail Brighton MPU, North Road, Brighton, BN1 1AA for approximately 1.5 hours on Friday 7th December between 10:30 and 12:00. The following topics were discussed and this note provides a record of those discussions. Prior to the conference call Royal Mail provided details of their inbound and outbound delivery vehicle movements as well as their collections and night time operations.
 - Overview of Royal Mail operations
 - Daily / weekly vehicle arrival and departure profile: volume and timings and data availability.
 - Vehicle size and routing.
 - Vehicle loading and unloading operations: location, dwell time, handling equipment etc.
 - Vehicle access problems or issues.

Overview of Royal Mail operations

2. The Royal Mail depot handles both deliveries and collections and operates 24 hours a day. Operations begin on Sunday evenings and finish on Saturday afternoons giving an approximate 6.5 day working week.
3. The site is situated to the south west of the North Laine area and bordered by Gloucester Road to the north, Foundry Street to the east, North Road to the south and Frederick Gardens to the west. There are access and egress points to site; one on North Road and two on Gloucester Road. The first entrance on Gloucester Road provides access to the loading bay, the second entrance provides access to an upper parking deck where vehicles are stored overnight. The Gloucester Road entrance is closed at night between 10pm and 6am for security purposes.
4. Royal Mail are currently in a seasonal peak, which has resulted in some additional 31 vehicles being hired at the beginning of November in the run up to Christmas.

Trip Generation and Loading / Unloading

5. The data provided on vehicle arrivals and departures is currently being assessed in detail to build a daily and weekly profile. However initial analysis suggests there are close to 500 daily two way (arrival and departure) vehicle movements associated with the site over the 24 hour working period. Building in the current seasonal peak this figure rises to around 560 daily two way vehicle movements. The arrival and departure profile will in part be verified once the data from the traffic surveys has been received and analysed.
6. Time periods with the greatest level of vehicle activity appear to be between 07:00 and 11:00 and 13:30 and 15:00. Night time operations between 22:00 and 06:00 appear to account for some 40 two way vehicle movements.
7. Loading and unloading takes place within the confines of the site. No particular problems were raised, although occasionally unloading may occur on-street on either North road or Gloucester Road depending on the volume of vehicles using the loading bay.

8. Vehicle sizes within the Royal Mail fleet range from small vans (150 cubic feet capacity) and LDV Maxus vans through to larger transit vans and 7.5t and 17t lorries that are used for collections and night time operations.

Vehicle Routing and Access Issues

9. With entrances on both North Road and Gloucester Road serving destinations all over Brighton and Hove Royal Mail vehicle routing varies depending on the day of the week, traffic congestion and vehicle size. Much of the routing chosen is based on local knowledge and drivers will select a route that gets them to their destination as quickly as possible given the time sensitive nature of deliveries and collections.
10. Drivers are not told which route to take, except drivers of 7.5t vehicles which are required to use North Road. It is felt drivers are best placed to judge which route to take based on the prevailing traffic conditions.
11. Key routes that provide access to the North Road entrance include Queens Road, North Road, Spring Gardens and Church Street. These roads along with Foundry Street also provide access to the Gloucester Road entrances from the south. Accessing the Gloucester Road entrances from the north requires use of Gloucester Road, Frederick Place, Over Street, Trafalgar Street and Blackman Street and Whitecross Street. It is thought that Trafalgar Lane is not a key route for Royal Mail vehicles because of its narrow width although vehicles were observed to use this route if the route was clear of vehicles
12. It is also thought there is an approximate 50 / 50 split in vehicles using the different entrances. Except as specified at night when the Gloucester Road entrance is shut.
13. Royal Mail are currently carrying out a review of vehicle routes, which will potentially impact on the current arrangements.
14. It is acknowledged that the current site location presents its own problems, but the site is managed to run as effectively as it can.

North Laine Traffic Management Proposals

15. Royal Mail has concerns that the current traffic management proposals will potentially exacerbate local rat running of traffic. However it is thought the proposals would likely result in less Royal Mail vehicles using Kemp and Over Street.
16. Key routes that are needed for Royal Mail to operate effectively include:
 - Retaining Foundry Street north bound;
 - Gloucester Road two way to allow access to Frederick Place;
 - Frederick Place either north bound or south bound as a route in or out of the area.
17. It was acknowledged that with the proposals that Richmond Place/ Grand Parade/Church Street might become more of an attractive route compared to the A23/St Peters Place/Cheapside / Whitecross Street for inbound movements particularly with increased volumes of traffic on Trafalgar Lane. It was considered that this would not be a significant issue for Royal Mail.

Conference Call Actions

18. Following the conference call Royal Mail has provided number plate and vehicle type information for both their usual Brighton fleet and additional seasonal vehicles. This will be used to verify the records from Automatic Number Plate Recognition (ANPR) data captured as part of the traffic surveys being carried out as part of the North Laine Study. The information from Royal Mail is very helpful and is received with thanks.

Distribution

Name/ Signed Tim Hapgood
