

# Great Queen Street, London

## A best practice walking scheme that increased property values

### Abstract

The Great Queen Street case study is located in Covent Garden, London, England. It is a ground breaking walking and public realm scheme that explained how to remove a traffic signal controlled junction, design shared space and create a small public square which delivered a significant economic uplift to the area. It provides the following lessons for walking schemes as it:

- highlights the benefits of providing Key Walking Routes,
- describes how to remove traffic signals,
- explains how to design a shared space with lots of sharing between vehicles and pedestrians,
- provides measures for visually impaired people and physically impaired people,
- designs best practice benches and bins, and
- creates a significant increase in property values.

### Introduction

Great Queen Street was the most innovative walking scheme in a corridor of improvements that was almost 2km long. This Key Walking Route runs through the Covent Garden and Holborn neighbourhoods from Leicester Square tube station to Holborn Circus. This route was designed, phased, coordinated, and funded by the Clear Zone Partnership (CZP), between the London Borough of Camden, the City of London, the City of Westminster and Transport for London (TfL).

### *Key Walking Routes*

Key Walking Routes aim to provide pedestrian improvements along their entire length as this has been shown by TfL to increase the number of pedestrians and their activity, especially amongst women and the elderly. This is because pedestrians perceive that an entire corridor of improvements are safer and more welcoming than providing isolated measures.

### *The Scheme*

The Great Queen Street scheme is located at the junction with Drury Lane on the border of Camden and Westminster councils. The junction was a simple crossroads with three one-way roads, but with Great Queen Street being a two-way road with a wide entrance that contained a pedestrian island which split the traffic lanes and had a staggered crossing across it. The scheme moved the pedestrian island to the north side of Great Queen Street to create a small public space and so it moved both traffic lanes to the south side so they ran together along their entire length. See Figure 1 which shows the consultation plan with the proposed and existing road layouts and Figure 2 shows how Great Queen Street looked before the improvements.

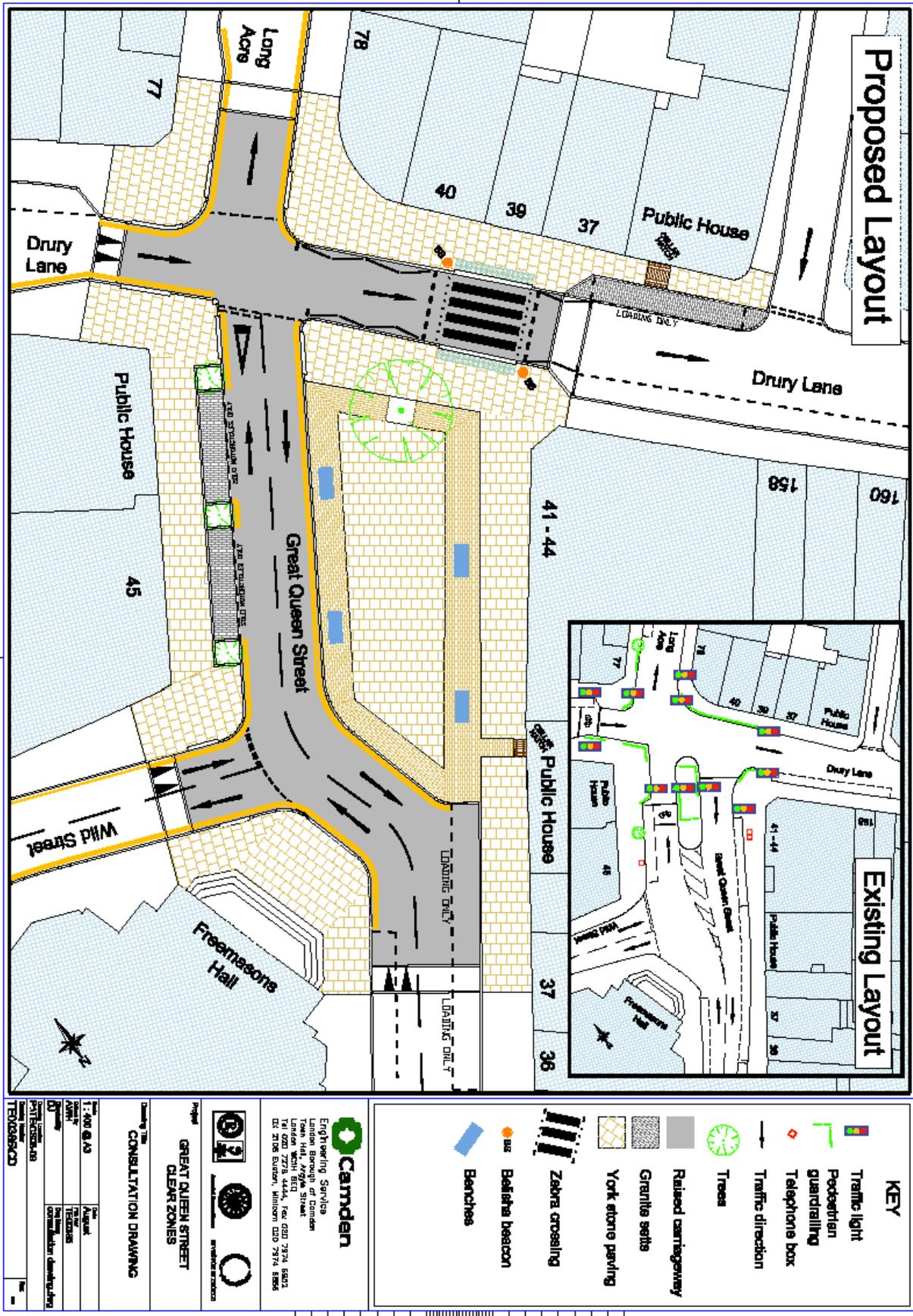


Figure 1: The consultation plan shows the proposed scheme in the large plan and the old road layout in the small, inset box.



*Figure 2: Before the improvements the Great Queen Street junction had traffic signals, a central pedestrian island, guard railings, lampposts, wide roads, narrow footways and poor crossings.*

## **Implementation**

### ***Researching shared space***

Removing the traffic and pedestrian signals encouraged Camden to design a shared space to maintain and improve pedestrian crossing facilities. It was challenging to design an effective shared space because in 2007 there was no guidance or understanding in the UK about how to remove traffic signals or design shared space. Especially as this junction has a lot of sharing with up to 2,500 pedestrians and 788 passenger car units (PCU's) an hour. Thus the author researched 4 shared space schemes nearby (ie Neil Street, Lamb's Conduit Street, Seven Dials, and Liverpool Road in Islington), to compare them and identify which common features made them work. This resulted in Great Queen Street being the first scheme in the UK to explain how to remove traffic signals and design shared space.

The common features in these 4 shared space schemes were: narrow, one-way roads that were up to 100m long, which contained a junction; many active frontages; and the streets often had more pedestrians than vehicles. Traffic was calmed using a range of measures, and were extensively de-cluttered to make crossing the road easier for pedestrians. They had no kerbs, but the footways and carriageways were defined using different paving materials, street furniture and lining. Liverpool Road is slightly different because it only occasionally functions as a shared space due to it being a busier, two-way street (just over 1,000 vehicles an hour in the am peak in 1990), with buses, a taxi rank; with traffic signals at either end, a low kerb; and the only real traffic calming measure being a zebra crossing. These differences reduce the number of pedestrians and times when Liverpool Road is used as a shared space, and cause many people to detour to the zebra crossing.

The traffic levels in these 4 schemes range from very quiet to quite busy roads, suggesting that shared space can work on busier streets if sufficient traffic calming measures are provided. This indicated that it is not low traffic volumes, but low traffic speeds that has the greater influence on making shared space work, which was later confirmed by the Department for Transport's (DfT's) research. The Great Queen Street junction was within the traffic flows in the 4 other schemes and was designed using all the traffic calming measures identified to give the greatest confidence that the shared space would work.

### ***Switching off the traffic signals***

Computer models were built of the traffic light junction, but switching off the signals broke these models. Instead, Camden contacted TfL's traffic signals team who advised conducting a trial for a fortnight. A method statement was written to create a procedure for safely switching the traffic signals off and on during the trial, and in an emergency. Road safety audits were conducted before and after the signals were switched off resulting in the junction being slightly modified beforehand to minimise the likelihood of any collisions. Week one recorded typical traffic flows and week two recorded traffic flows and observed pedestrian flows with the signals switched off. The trial revealed that the junction operated without any congestion or fundamental safety problems.

### ***Designing the shared space***

The shared space was then designed using traffic calming measures from the 4 other schemes to improve safety for all users and provide good crossing facilities. The carriageway was raised for about 70m along Great Queen Street and about 25m along Drury Lane. The slight chicane on Great Queen Street was tightened, both lanes moved together to run side by side, the roads and junctions narrowed, and the push button pelican crossing replaced by a zebra crossing.

### ***De-cluttering***

Virtually all street clutter was removed to maximise pedestrian space and enable walkers to cross the road wherever is convenient. This involved removing 13 traffic signal poles (and additional push button posts), 64 metres of guard railings, numerous traffic signs and bollards, two phone boxes, three parking spaces, a parking meter and two lampposts. Even more pedestrian space was created by using Smarter Street's principles that were developed by the CZP, to design multi-functional spaces and items of street furniture.

### ***Inclusive Public Space***

The 4 shared space schemes also hinted at how to design more inclusive public spaces for visually and physically impaired people. The junction was slightly moved to ensure that all crossing points led to footways on the other sides of the roads and were located on the desire lines. Footways were widened and de-cluttered and the roads narrowed and traffic calmed. The entire scheme was paved in a clear, simple and logical palette of three materials to aid navigation. The road in tarmac, the footways were paved in York stone, and edge spaces (ie the street furniture zone and parking and loading bays), paved in granite setts, so they looked, felt, and sounded correct for their purpose. The street furniture zone was paved in granite setts to highlight this area and also to help guide visually impaired people around the sides of the square to the crossing points.

A low (30mm), kerb was installed as it was considered to provide the best all round solution for separating the footway and carriageway whilst making it easier to walk across it. The low kerb was highlighted by using double yellow or white zig-zag lines to provide colour contrast and prevent parking. The low kerb also provides a tactile and audible edge for pedestrians, vehicles and cyclists, and enabled the junction to be raised to calm motor traffic, and provide gentler ramps down to flush pedestrian crossing points.

### ***Better benches and bins***

After removing all these barriers to walking, pedestrians were further encouraged to use this Key Walking Route and shared space by installing Legible London signs and designing completely new benches and bins. The benches and bins were designed by consulting: 6 Camden departments, the Metropolitan Police, Central St Martin's College of Art and Design and Factory Furniture, and is best practice in 4 mains areas:

- minimising opportunities for crime (The Design Council),
- simplifying street cleaning (Keep Britain Tidy),
- being more inclusive (Centre for Accessible Environments), and
- being PAS68 rated for counter-terrorism use (the Home Office).

### ***Consultation***

Throughout this design process regular meetings were held with major landowners in the vicinity so they fully understood the street design and could contribute their advice. This dialogue helped to achieve a very positive 86% support at public consultation and to secure wayleave agreements so Camden could attach lanterns to landowner's buildings in order to remove lampposts from the area. See Figure 3 of the completed scheme.



*Figure 3: After the improvements Great Queen Street has a small public square surrounded by a shared space, with virtually no clutter to enable pedestrians to cross wherever is convenient.*

## Results

The Great Queen Street scheme was opened in September 2009 and since then it has received the following accolades:

- Shortlisted by the Royal Town Planning Institute (RTPI), as one of London's best new public spaces in 2009.
- Included in the DfT's guidance on how to design shared space (2011, Local Transport Note 1/11).
- Displayed on the Home Office website as an excellent example of de-cluttering.

According to attitudinal research by Westminster City Council in Long Acre (one of the roads running from the Great Queen Street junction) pedestrians now feel that crowding on the footways has fallen by 20% and that motor traffic volumes and speeds have fallen by 27% each (despite there being no restrictions).

### ***Economic uplift***

Camden commissioned JMP consultants to conduct extensive before and after monitoring and to calculate the economic uplift of the scheme. They used the Commission for the Built Environment's (CABE's), "Paved with Gold" methodology. This measured the improvements to the public realm using the Pedestrian Environment Review system (PERs). Then used this score with the multiplier effect from local properties to calculate that the Great Queen Street scheme had created up to £28 million of economic uplift for retail and residential premises within a one block radius. However, the total uplift is likely to be considerably more as it was not possible to calculate the uplift to the many commercial premises nearby (offices, hotels and academic institutions). The Great Queen Street scheme therefore delivered a cost benefit ratio of at least 37 to 1 based on an uplift of £28 million (as no data for commercial premises), as the scheme cost £0.75 million to construct.

## Conclusions

The Clear Zone Partnership designed and built the Great Queen Street scheme which explained: how building Key Walking Routes encourages walking, how to remove traffic signals, create shared space, design inclusive spaces for visually and physically impaired people, minimise street clutter, set new standards in bench and bin design and provide an economic uplift of up to £28 million for retail and residential premises (considerably more if commercial properties are taken into account), with a cost benefit ratio of at least 37 to 1.

*Disclaimer: this paper represents the views of Tim Long, Principal Transport Planner, at the London Borough of Camden, and not those of the London Borough of Camden, the Clear Zone Partnership or Transport for London.*