Addendum Note

St Giles Circus Road Safety Assessment – Addendum Note

The enclosed Road Safety Assessment (RSA) was prepared in 2012 in support of the original Advertisement Consent application for 1912 sqm of digital internally illuminated intermittent digital LED display to the internal walls, ceiling and floor of the urban gallery in connection with the redevelopment of St Giles Circus site. Advertisement Consent was subsequently approved on 31st March 2015 (LPA Ref: 2012/6863/A).

A professional review of the RSA concludes that the finding of the Assessment are still valid on the basis that the baseline for assessment has not changed since the production of the original document. It is therefore considered appropriate to submit the same RSA in support of a new application for the exact same advertisements as previously approved.

safer roads for everyone

Urban Gallery, St. Giles, Charing Cross Road, London Borough of Camden

Road Safety Assessment

on behalf of Buro Happold

TMS Project No: 1516
Date: December 2012

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Urban Gallery, St. Giles, Charing Cross Road, London Borough of Camden

Road Safety Assessment

1. Introduction

1.1 This report refers to a road safety assessment of the effects of the proposed Urban Gallery at St. Giles Circus, on behalf of Buro Happold. This report is submitted in support of an advertisement consent for 831sqm of LED digital skin to be incorporated within the interior walls of the proposed building.

1.2 TMS Consultancy was established in 1990 to provide specialist consultancy, research and training services in traffic management and road safety engineering. TMS currently provides these services to a wide client base in both the public and private sectors in the UK and internationally. TMS Consultancy has an internationally recognised reputation in this field of work and runs the industry standard RoSPA 2-week Road Safety Engineering (AIP) and 1-week Advanced Road Safety Engineering training courses.

2. Background

2.1 To facilitate the construction of the Tottenham Court Road Crossrail station and the upgrade of the existing LUL station the northern portion of the application site has been temporarily taken over by Crossrail and the majority of buildings to the north of Denmark Place have been demolished.

This application for advertisement consent is submitted in parallel to a wider proposal which includes the provision of two new primary street buildings on St Giles High Street, Andrew Borde Street and Charing Cross Road, plus two smaller buildings on Denmark Place to provide a mix of retail, hotel and restaurant/bar use as appropriate to this Central London location. Tapping into the music heritage of the area the proposals include a flexible basement event space, to be accessed via Denmark Place. In addition to the built environment the proposals incorporate new pedestrian routes through the site, encouraging people away from the exit of Tottenham Court Road and ensuring appropriate dispersal through the local area.

Central to the development proposals is the new urban gallery which will provide publically accessible space to assist in accommodating the predicted increase in footfall following the completion of Crossrail. The urban gallery will be a carefully curated space, providing a mixture of virtual retail opportunities within a managed digital environment.

2.2 The urban gallery is a new publicly accessible space with large screens used as an innovative way of displaying digital messages. It is anticipated that the surrounding area of Andrew Borde Street, Denmark Place and the west side of Charing Cross Road (associated with a theatre development) will become pedestrianised with a regular flow of pedestrians east-west across Charing Cross Road.

2.3 In order to assess the impact of the proposed digital screens upon highway safety, Buro Happold has commissioned TMS Consultancy to carry out an independent study to assess the potential conflict between road users caused by the large digital screens, with a major emphasis on the controlled pedestrian crossing on Charing Cross Road.

3. Site Description

3.1 Charing Cross Road is a major traffic route in London's West End connecting Oxford Street and Tottenham Court Road in the north and Leicester Square and Trafalgar Square in the south. The speed limit is 30mph and the road has street lighting. There are continuous footways on both sides of the road with regular controlled crossings, predominantly located at signal junctions.

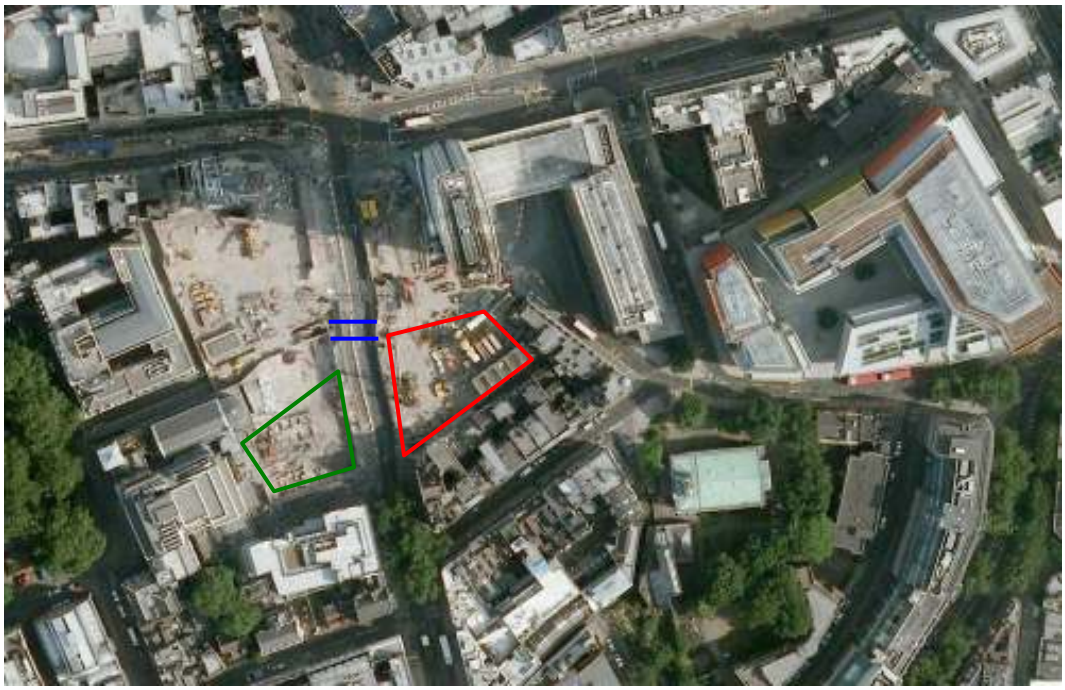
A map of the immediate road network is shown below (note: the temporary diversion of Charing Cross Road is shown on the map):

3.2 Due to the redevelopment of the Underground station, Charing Cross Road is currently diverted (shown above). However, upon completion, Charing Cross Road will return to the previous north-south alignment and connect with Oxford Street and Tottenham Court Road to form a cross- roads signal junction.

3.3 It is proposed that Charing Cross Road will comprise of a bus lane with a general traffic lane northbound and a bus/taxi only lane southbound. Cyclists will also be permitted to use the bus lane.

3.4 There is an existing controlled pedestrian crossing on Charing Cross Road to the north side of the signal controlled junction at Denmark Street. This will be retained and the new stand alone controlled crossing will be located close to the junctions of Andrew Borde Street and Sutton Row; (these two junctions will be removed as part of the scheme in favour of large open public spaces).

3.5 The area of redevelopment and the proposed gallery is shown in red below. The proposed theatre is shown in green with the proposed controlled crossing in blue. The satellite image also depicts the north-south alignment of Charing Cross Road.



3.6 The digital screens will be 10m high and situated 4m from ground level. Shutters on the north and west sides will allow the screens to be visible from the street at certain times of the day. These times will be controlled by LB of Camden. There will be two shutter heights, between 0-4m and 4-14m. it is expected that the luminance of the screens will be controlled by planning conditions from LB Camden.

4. Methodology

4.1 This assessment has involved carrying out a highway survey of the current highway network. A site visit was carried out on Thursday 1st October 2012 at midday to survey the road and observe traffic, pedestrian and cycle movements. The weather conditions at the time were cloudy with rain showers. Traffic, pedestrian and cycle flows along the road were high. Steven Cardno of London Borough of Camden was also present during the site visit.

4.2 It is accepted that the proposed highway layout will differ significantly from what was observed during the site visit, however, the main purpose of the site visit was to gain a feel for the area and an understanding of road user movements.

4.3 The assessment findings have been discussed in the next section of the report and a summary and conclusions section is included in the final chapter.

5. Assessment Findings

5.1 The area surrounding the urban gallery was assessed in an attempt to understand the likely effect of the digital screens on the highway network and road users along Charing Cross Road. The following comments are based on a situation where the shutters at the top and bottom of the façade are open.

5.2 Digital screens are now a common site in London, with a large number of digital screens being installed in advance of the Olympics in addition to more traditional digital advertising screens.

5.3 It is accepted that there will be some distraction caused by the screens. Northbound drivers will be unaffected by the screens as they are driving away from the open building and the screens will be shielded by the building line. However, the predominant users that may be distracted are southbound drivers and this represents a worse care scenario in terms of potential impact. The southbound running lane will be restricted to bus and taxi drivers and it is considered that these users will become accustomed to the digital screens and therefore the 'novelty effect' on these users will diminish over a relatively short time.

5.4 Research on road side advertising suggests that drivers always give priority to the driving environment taking in non-essential information according to road conditions and whether there is sufficient 'spare capacity' to perform such tasks. Where external stimuli are present in demanding circumstances drivers tended to adopt a 'glance' strategy taking repeated short duration views of less than 1 second to either side of the vehicle's path but maintaining awareness of vehicle conditions.

5.5 The screens are situated 4m above ground level and subsequently the screens will not be directly behind the signal heads which are traditionally mounted at 2.4m-3.3m. The visibility angle for drivers means that the digital screen will only be behind the signals from a close distance (approximately 4m). At this distance drivers have already acknowledged the signal and are travelling at low speed. Bus drivers will be seated in a high position and therefore the angle will be more acute and the screens will be positioned further above the signal heads. If the signals are disguised by the digital screens, backing boards can be fitted to the signal heads as optical aids.

5.6 Although pedestrians will also be distracted by the screens, and in particular tourists, it is felt that when the pedestrian phase of the controlled crossing is running their attention will be drawn to the road. It is not thought that the distraction would lead to pedestrians inadvertently entering the carriageway.

5.7 The screens will cast some light over the surrounding square and the eastern footway of Charing Cross Road, and maybe onto the carriageway. However, it is considered that the level of luminance will be low and will not create a glare problem for drivers. As mentioned earlier, the luminance can be controlled by the local authority and if a problem arises, the situation can be easily resolved.

5.8 The main impact on risk and the safety of pedestrians is vehicle speed. If vehicle speed can be kept low, particularly in the area of highest conflict, the risk could be significantly reduced and the result of an injury collision is likely to be slight. Low vehicle speed also allows drivers more time to observe the traffic signals. An effective way of controlling speed is the use of vertical traffic calming. As Charing Cross Road is a major bus route vertical traffic calming would need to satisfy bus operators. As a result it would be necessary to provide shallow ramps and a long speed table. The most effective method would be to raise the proposed controlled crossing onto a long speed table so that vehicle speeds would be lowest at the potential conflict point.

5.9 With a large number of pedestrians predicted to circulate around the square and travel between the underground station and the proposed theatre on the west side of Charing Cross Road, the design of the street scene is crucial to support this environment. It is important to redress the balance between road users so that the area is less traffic dominated, providing a safer and more comfortable environment for pedestrians and cyclists, as is being proposed as part of the wider development proposals.

5.10 This could be achieved by using high quality materials and reducing the amount of conventional highway street furniture, such as pedestrian guard-railing, signing, and road markings. Instead, delineation should be achieved with the use of benches, planters, landscaping and bins strategically located along the length of the street.

5.11 Another aspect of the design that leads to a vehicle dominated environment is the long length of hatched road marking between the north and southbound running lanes. The hatching could be replaced with a raised central median (25mm) which as well as delineating traffic lanes would also provide a pedestrian comfort strip. This would allow able bodied pedestrians to cross away from the controlled facility and also allow for any overcrowding that may occur at the controlled facility.

Example of a central median comfort strip where pedestrian can wait as they cross the road

5.12 It is predicted that the density of pedestrians will grow following completion of the TCR station upgrade and nearby developments. The number of pedestrians can be a crucial factor in driver behaviour and can help to successfully reduce vehicle speed. A more adventurous and ambitious scheme could look to provide a shared space scheme along Charing Cross Road between the junctions of Oxford Street and Denmark Street. A less vehicle dominated street scene with less distinction between carriageway and footway areas could help reduce vehicle speed, give greater priority to pedestrians and cyclists, and consequently reduce the risk of collisions. Similar schemes exist in other areas of London, such as Exhibition Road, and the benefits could be applied to this development area. However, it is understood that such proposals would probably need to meet other strategic public realm and environmental improvements for the area.

6 Summary and Conclusions

6.1 This assessment involved carrying out an independent study to assess the possible risk of impact on public safety as a result of the digital screens associated with an urban gallery. The study involved carrying out a site visit to gain a feel for the area and an understanding of road user movements.

6.2 The street scene was studied to determine the suitability of the area in accepting the innovative digital screens as part of an urban gallery. Pedestrian numbers and flows were estimated and the likely impact of the screens on users was assessed.

6.3 Road users potentially most distracted by the screens would be southbound drivers; however these would be limited to bus and taxi drivers who will become accustomed to the screens over a relatively short period of time. The distraction will also be limited as the screens would only be visible for short periods as drivers travel along the road.

6.4 The signal head associated with the controlled crossing should be visible to drivers as they are mounted lower than the digital screens. If signal masking or visual contrast is an issue, backing boards could be fitted to the signal heads to help make them more prominent to road users.

6.5 Reducing vehicle speeds on Charing Cross Road is vital to reducing risk of pedestrian conflict. This could be achieved by providing vertical traffic calming in the form of a raised speed table at the controlled crossing, thereby ensuring vehicle speed is lowest at the potential conflict point.

6.6 A crucial aim of the scheme should be to reduce the impact of vehicles and create a more pedestrian and cycle friendly environment that is less traffic dominated. The design of the street scene would be crucial in this respect. The use of seating, planting and landscaping should be favoured over the use of traditional street furniture, such as guard-railing, signs and road markings.

6.7 The feasibility of providing a shared space scheme to reduce the visual impact of the road and give more priority to pedestrians should be assessed. This could be a long term improvement option once the gallery and theatre are operational and pedestrian numbers and flows can be quantified.

6.8 Taking into account all of the above factors, it can be concluded that the effect of the screens on users will be acceptable from a road safety point of view. However, additional measures could be adopted to optimise safety by reducing vehicle speed and creating a less traffic dominated street scene.

7. Assessor:

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Signed .....  .....

Date .....9th November 2012.....

Checked by:

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Signed .....  .....

Date .....9th November 2012.....

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