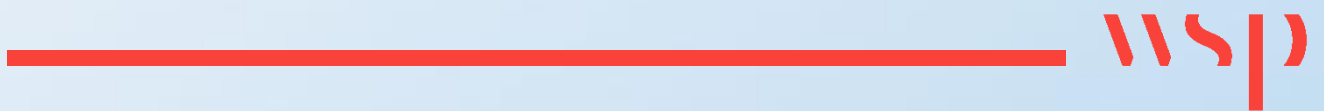


Appendix H

RSA1 DESIGNERS RESPONSE





Twickenham Riverside

DATE:	27 October 2020	CONFIDENTIALITY:	Public
SUBJECT:	Wharf Lane two-way working: response to LBRuT Highways comments		
PROJECT:	Twickenham Riverside	AUTHOR:	Tim Gabbitas
CHECKED:	Tim Gabbitas	APPROVED:	Tim Gabbitas

WHARF LANE TWO-WAY WORKING: RESPONSE TO LONDON BOROUGH OF RICHMOND UPON THAMES HIGHWAYS COMMENTS

Introduction

This technical note relates to the proposed introduction of two-way traffic working at the north end of Wharf Lane, including at the junction with King Street.

Comments on the latest design options for this arrangement have been provided by London Borough of Richmond upon Thames (LBRuT) Highways team. These are provided below in full.

WSP has responded to these comments such that an informed decision can be made on whether to incorporate this option into the wider Twickenham Riverside masterplan strategy.

LBRuT Highways Comments

The comments received from LBRuT Highways team are re-produced below in full for reference.

BACKGROUND

A Stage 1 (Feasibility Stage) independent Road Safety Audit was carried out on the WSP design by our consultants PCL.

The audit identified a number of road safety issues associated with the proposed introduction of two-way working arrangements in both Wharf Lane and Water Lane. At present, a one-way system operates with traffic entering via Water Lane and exiting via Wharf Lane.

The safety audit identified issues with the conversion of both Wharf Lane and Water Lane to two-way narrow roads and the risk of collisions between vehicles from opposing directions and in particular difficulties for cyclists. The audit also identified difficulties at both roads' junctions with King Street. The narrow junction mouths at both locations may result in collisions between vehicles travelling in opposing directions, or with vulnerable road users- pedestrians or cyclists. The swept path analysis for both junctions shows overlap between vehicles entering and exiting the junctions.

Officers assessed the safety audit comments and concluded that, although there are safety issues at both roads and junctions, the issues at Wharf Lane junction are the most concerning, because they are more difficult to mitigate through design modifications. This is due to the lack of physical space available between existing building footprints on either side. The buildings on both sides also limit inter visibility between turning traffic, pedestrians and cyclists. Junction inter visibility is much better at Water Lane than at Wharf Lane.

As you know, the Wharf Lane junction is currently a narrow one-way (Exit Only) arrangement with a well-used contraflow cycle lane. Even operating as it does now with a one-way arrangement, there is a long

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history of vehicles cutting the café corner, posing a risk to both pedestrians and cyclists (shared pavement on the cafe side) and regular pavement damage as a result. To address this, officers have placed a bell bollard on the pavement in King Street - see the photo below. Officers accept that some carriageway widening at both junctions will help two-way flow to operate, but this is taking further valuable space from pedestrians at this busy town centre location. This carriageway widening may also require some expensive underground utility plant diversions, as there are nearby utility boxes evident.



Wharf Lane /King Street junction current arrangement - note the bell bollard behind the pole

In response to officers' concerns, WSP responded by accepting that there is a safety issue at this junction, but they considered that the risk is low because:

- The very low traffic volumes that would be using Wharf Lane in the future
- The slow speeds that vehicles would be travelling at when either approaching the junction to turn left into Wharf Lane from King Street (due to the sharp turn, restricted visibility and raised table), or when approaching the junction to turn left into King Street from Wharf Lane (due to the give way line at the junction, restricted visibility and raised table)

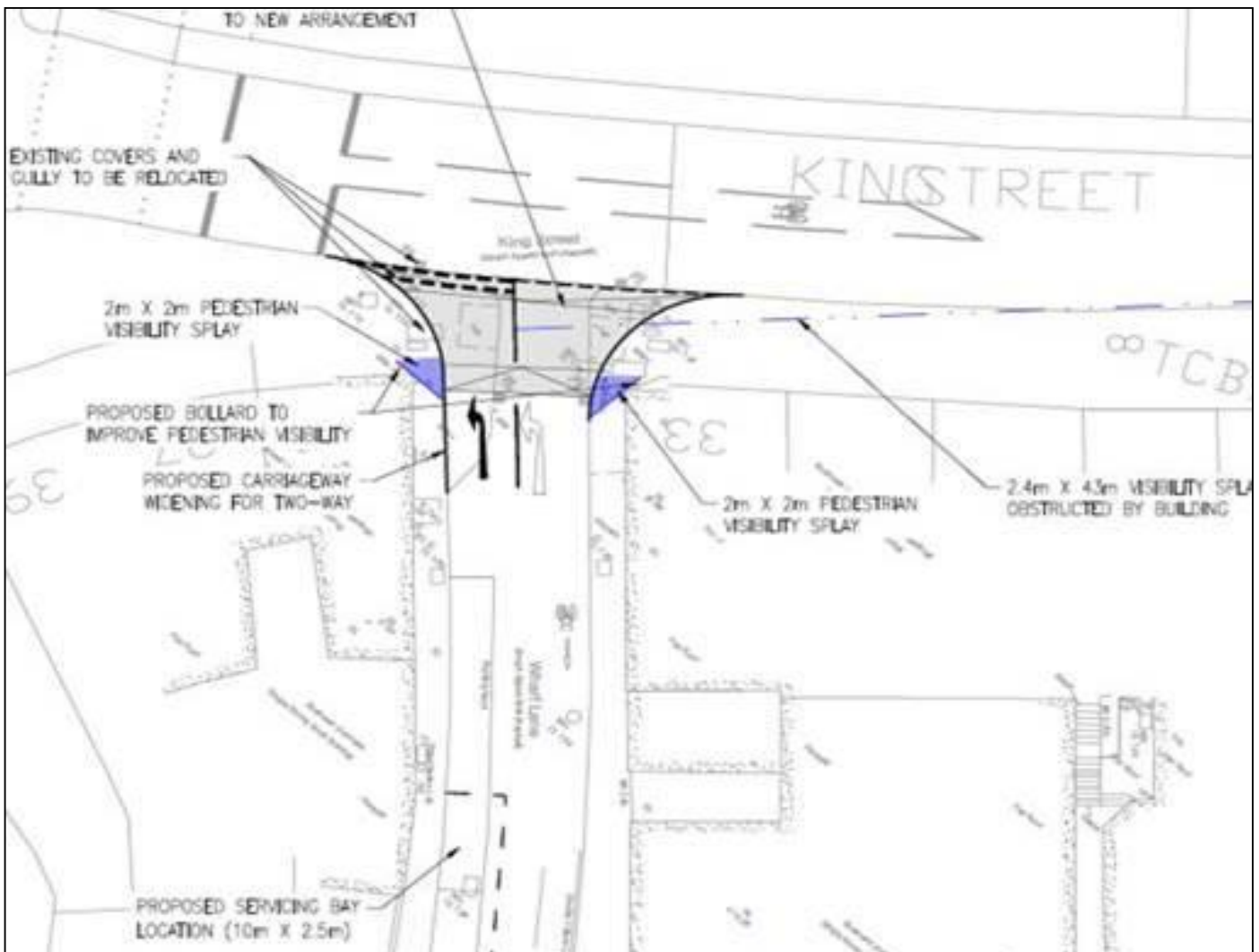
In addition and as set out by the architects, the benefits of introducing two-way traffic working on Wharf Lane to the wider masterplan are significant. Furthermore, at a recent meeting the architect indicated that Option 1 may not be feasible at all.

Following discussions with officers, WSP made some amendments to the Wharf Lane design to help reduce the risks, including the following suggested amendments:

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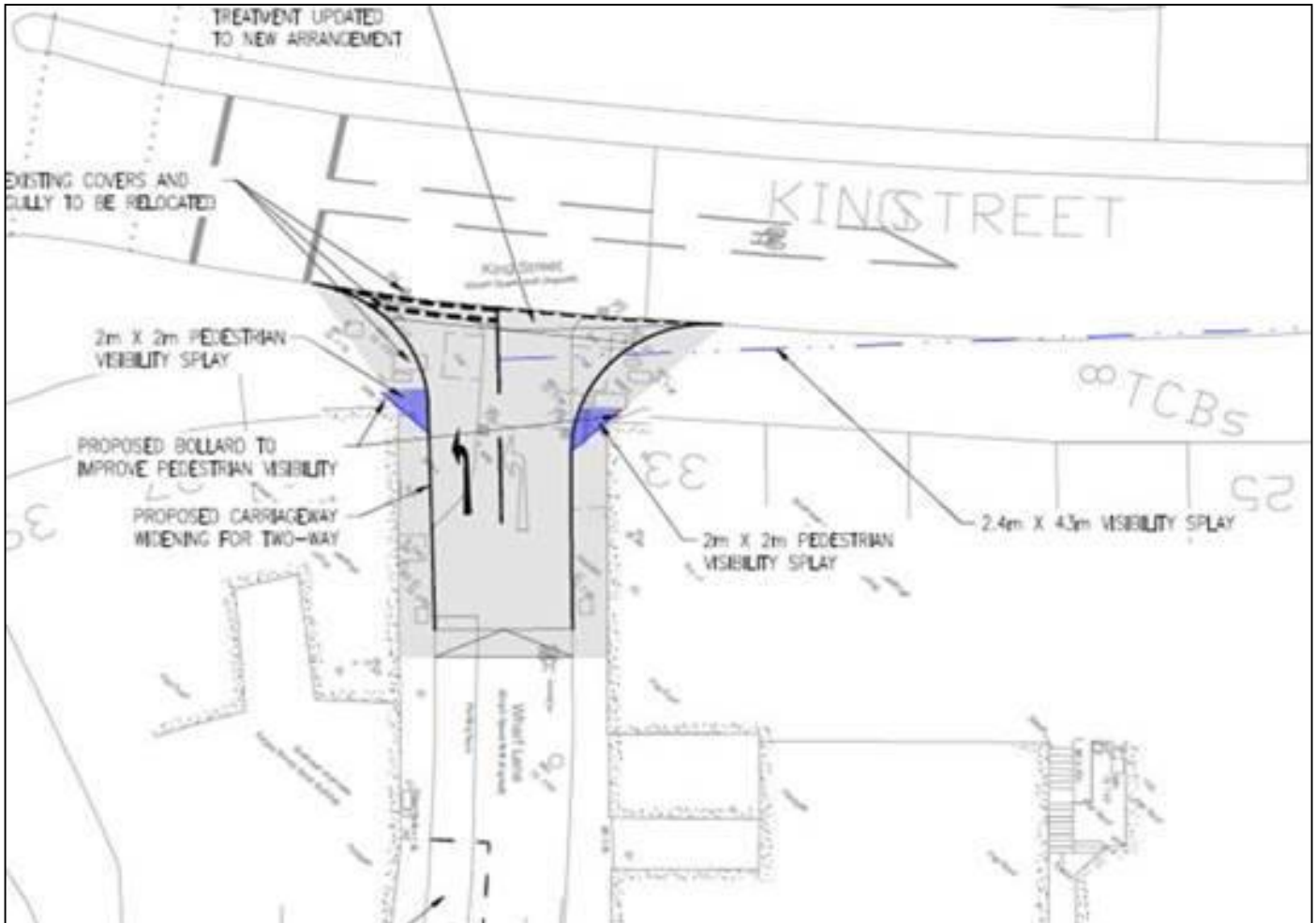
- Reduce the servicing bay in Wharf Lane from 15m to 10m - a further five metres away from the Wharf Lane junction. This helps tracking movements and reduces the risk of pavement encroachment on the opposite side
- An extended carriageway widening/raised table. This will provide additional space for pedestrians.



Option 1 standard raised table

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Option 2 Extended raised table

As can be seen from the tracking diagram below, moving the loading bay further away from the junction assists vehicles to position themselves to turn left out of the junction; however, there is still a risk of vehicle encroachment onto the opposite pavement at the loading bay location. Officers recommendation is to relocate the bay south of the service road junction.

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Tracking at the Wharf Lane loading bay

STRATEGIC ROAD NETWORK

King Street is part of London's Strategic Road Network (SRN). TfL has an oversight role in respect of activities on, or impacting the SRN. As a result, the Council is required to formally notify their scheme and works proposals in respect of their impact on the SRN to TfL for their approval.

Schemes of this nature where the only change is to side junctions are classed by TfL as low/medium category interventions, where a submission to their Network Assurance Team may or may not be required. Furthermore, the number of vehicles that will be using both junctions is relatively low. However, the proximity of both junctions to traffic signal junctions and the tracking shows encroachment onto an advance cycle stop line at Wharf lane, as well as potential blocking of the junctions by turning movements at the junctions suggests that once the design is finalised it should be discussed with TfL's Networks Assurance Team to confirm that a formal submission is not required.

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CONCLUSION

WSP have made some amendments to the Wharf Lane design to reduce the risk, however there is still insufficient width for vehicles passing each other in opposite directions to do so safely. The relocation of the loading bay to south of the service road junction, would largely address this risk in Wharf Lane road, but this would still be problematic at the junction with King Street. WSP accept that this is still a safety concern, but advise that the low volumes of vehicles using the junction, combined with the fact that they will be travelling at low speeds helps reduce the risk to an acceptable level.

Officers partially agree with this assessment, however vehicles turning left into Wharf lane would have very limited sight lines into the road until they have committed to the turn. This could result in reversing manoeuvres which could cause potential conflict with pedestrians and cyclists. Intervisibility between pedestrians on King Street and vehicles exiting Wharf lane are poor.

In summary, officers accept that the mitigation measures proposed by WSP have helped address the safety concerns and also accept that the number of vehicles making the turning movements are low, but there are still safety concerns about two way movements, the lack of visibility and potential conflict between vehicles and pedestrians and cyclists at this junction.

Should the Council decide to proceed with the two-way working arrangements at both junctions, notwithstanding the safety concerns, then the following next steps are suggested.

- Reduce the risk at the Wharf Lane junction by reducing the number of vehicles using the road.
- Reduce the risk at the Wharf Lane junction by reducing the size of vehicles that will be using the road, especially refuse vehicles which require more space for turning movements.
- Reduce the risk at the Wharf Lane junction by limiting service movements to off peak hours
- Reduce the risk to Wharf Lane junction and within Wharf lane itself by relocating the loading bay south of the service road.
- Carry out an independent Stage 2 (Detailed Design) safety audit of the final design
- Submit the final layout design to TFL for confirmation that there are no strategic road capacity or traffic signal issues to resolve.



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WSP Response

Our responses to the suggested next steps are provided below in turn:

REDUCE THE RISK AT THE WHARF LANE JUNCTION BY REDUCING THE NUMBER OF VEHICLES USING THE ROAD

Following the implementation of the Twickenham Riverside masterplan proposals, which include closing the Embankment to general traffic between Water Lane and Wharf Lane, traffic flows on Wharf Lane are expected to reduce significantly.

The masterplan proposal currently envisage physically preventing general traffic from accessing the Embankment between the Eel Pie Island servicing area (adjacent to the Eel Pie Island footbridge) in the east and the southern end of Wharf Lane in the west. This would be achieved through the use of fixed bollards / street furniture / planters, etc., together with removable or retractable bollards to allow for managed and restricted vehicular access (further details provided below).

Traffic flow data collected by Systra in March 2019 showed the following traffic flows on Wharf Lane during the peak hours. The numbers in brackets show the proportion of these vehicles that were observed either turning from Wharf Lane into the service road, or turning from the service road back onto Wharf Lane:

- Weekday AM peak hour 27 (including 8 accessing or egressing the service road)
- Weekday PM peak hour 55 (including 9 accessing or egressing the service road)
- Weekend AM peak hour 40 (including 12 accessing or egressing the service road)
- Weekend PM peak hour 63 (including 9 accessing or egressing the service road)

The development proposals are anticipated to generate 1 additional service vehicle trip during both the AM and PM peak hour based on a consolidated and managed servicing strategy. Removing the 'through traffic' movements from the above figures (i.e. traffic not accessing or egressing the service road) and allowing for the additional service vehicle trips generated by the development would result in the following future traffic flows on Wharf Lane (the % net change when compared with the existing flows is provide in brackets):

- Weekday AM peak hour 9 (-67%) – or 1 trip every c.7 mins
- Weekday PM peak hour 10 (-82%) – or 1 trip every c.6 mins
- Weekend AM peak hour 13 (-67%) – or 1 trip every c.5 mins
- Weekend PM peak hour 10 (-84%) – or 1 trip every c.6 mins

It should be noted that some of the existing vehicular traffic accessing the service road may be removed in the future following additional management of the King Street retail units servicing activity (subject to discussions with M3).



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The development proposals also envisage the creation of a small number of new surface parking spaces in the southern section of Wharf Lane. The final number has yet to be determined but is likely to be in the region of 4-6 spaces. These will not generate a significant number of additional trips along Wharf Lane, with perhaps 1 or 2 additional peak hour trips as a worst-case scenario.

In addition, spaces for approximately 30 cars to park are provided within existing development to the west of Wharf Lane. Continued access to these spaces would be required along Wharf Lane following the redevelopment of the riverside site. Again, this small number of private parking spaces would not generate a significant number of peak hour trips.

Based on the above, it can be seen that future vehicle flows using a two-way Wharf Lane arrangement would be significantly lower than existing flows using the road, thereby going some way to offsetting any negative impacts for pedestrians and cyclists following the introduction of two-way traffic flows and the widening of the bell mouth junction with King Street.

Such low two-way traffic movements on Wharf Lane would result in a very low occurrence of traffic turning left from King Street having to wait to give way to oncoming traffic heading northbound.

Furthermore, the design team is now considering permitting restricted access along the Embankment between Water Lane and Wharf Lane for servicing activity. This may only be required for weekly residential refuse collection activity, and possibly in connection with the existing Iceland supermarket deliveries, some of which are made using an articulated lorry. In addition, occasional over-sized deliveries on articulated low-loaders associated with Eel Pie Island may require managed access along the Embankment to exit onto King Street via Wharf Lane (although it may be possible for this movement to be accommodated on Water Lane). This restricted access would require a degree of management by the site facilities management team, and has the potential to further reduce service vehicle trips on Wharf Lane generated by the development, which could use Water Lane to both access and egress the site.

REDUCE THE RISK AT THE WHARF LANE JUNCTION BY REDUCING THE SIZE OF VEHICLES THAT WILL BE USING THE ROAD, ESPECIALLY REFUSE VEHICLES WHICH REQUIRE MORE SPACE FOR TURNING MOVEMENTS

As stated above, the design team is considering permitting restricted access along the Embankment between Water Lane and Wharf Lane for larger servicing vehicles, including Richmond refuse collection trucks. This would be carefully managed to ensure the aspiration for a pedestrianised space along the Embankment is not compromised, with the use of rising bollards or similar combined with restricted hours of access for servicing vehicles ensuring that the impact would be minimised.

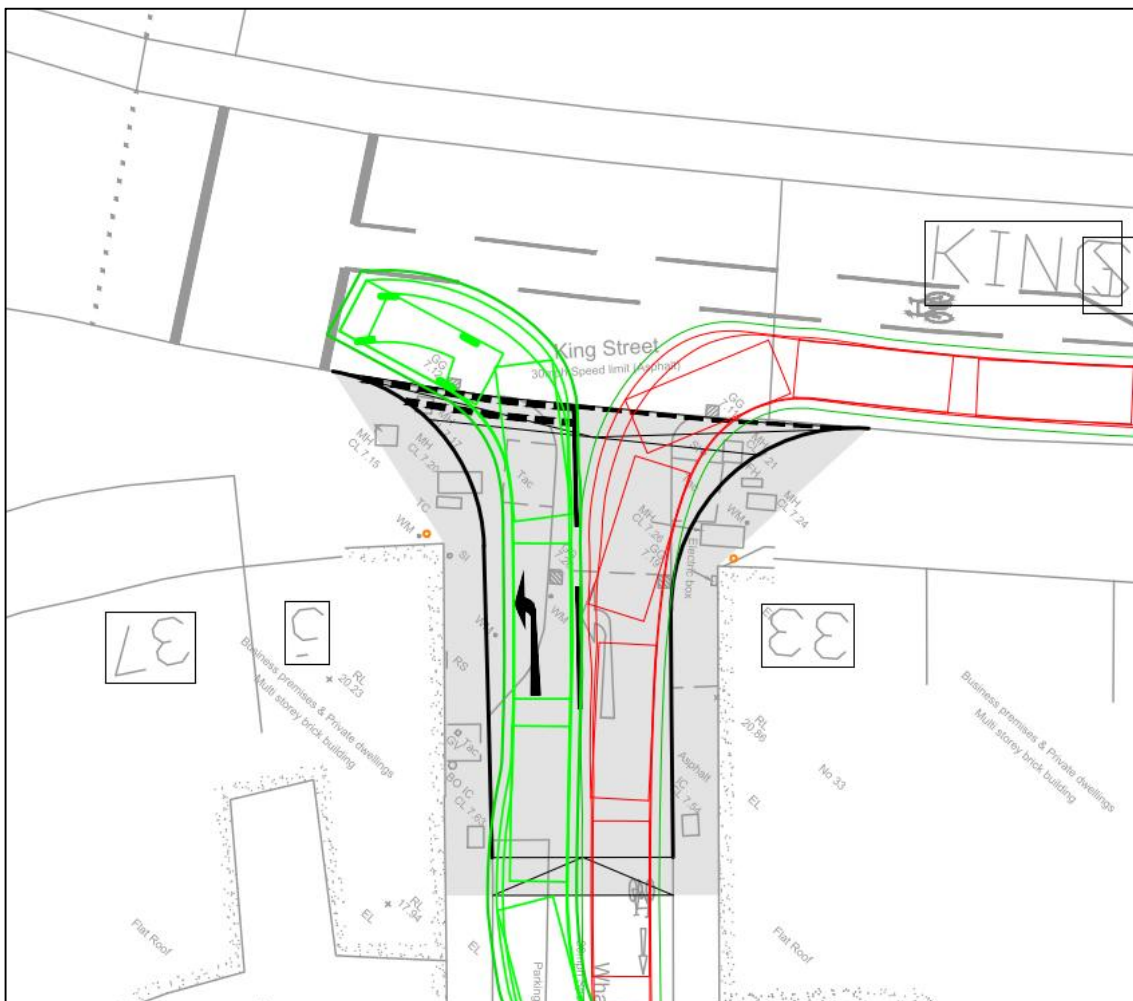
Permitting larger servicing vehicles to access Wharf Lane via the Embankment would negate the need for them to turn into Wharf Lane from King Street, allowing a ban on larger HGVs travelling southbound along Wharf Lane from King Street to be introduced. This would alleviate the concerns regarding the vehicle tracking of larger trucks turning left from King Street into Wharf Lane and potentially clashing with oncoming

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northbound traffic. Appropriate signage would need to be installed on King Street to enforce a ban on larger HGVs turning into Wharf Lane. It should also be noted that the larger HGVs requiring access to Wharf Lane would be regular (e.g. weekly refuse collection, or daily deliveries to Iceland), meaning drivers would be aware of the access restrictions and would know to use the Embankment route to access Wharf Lane.

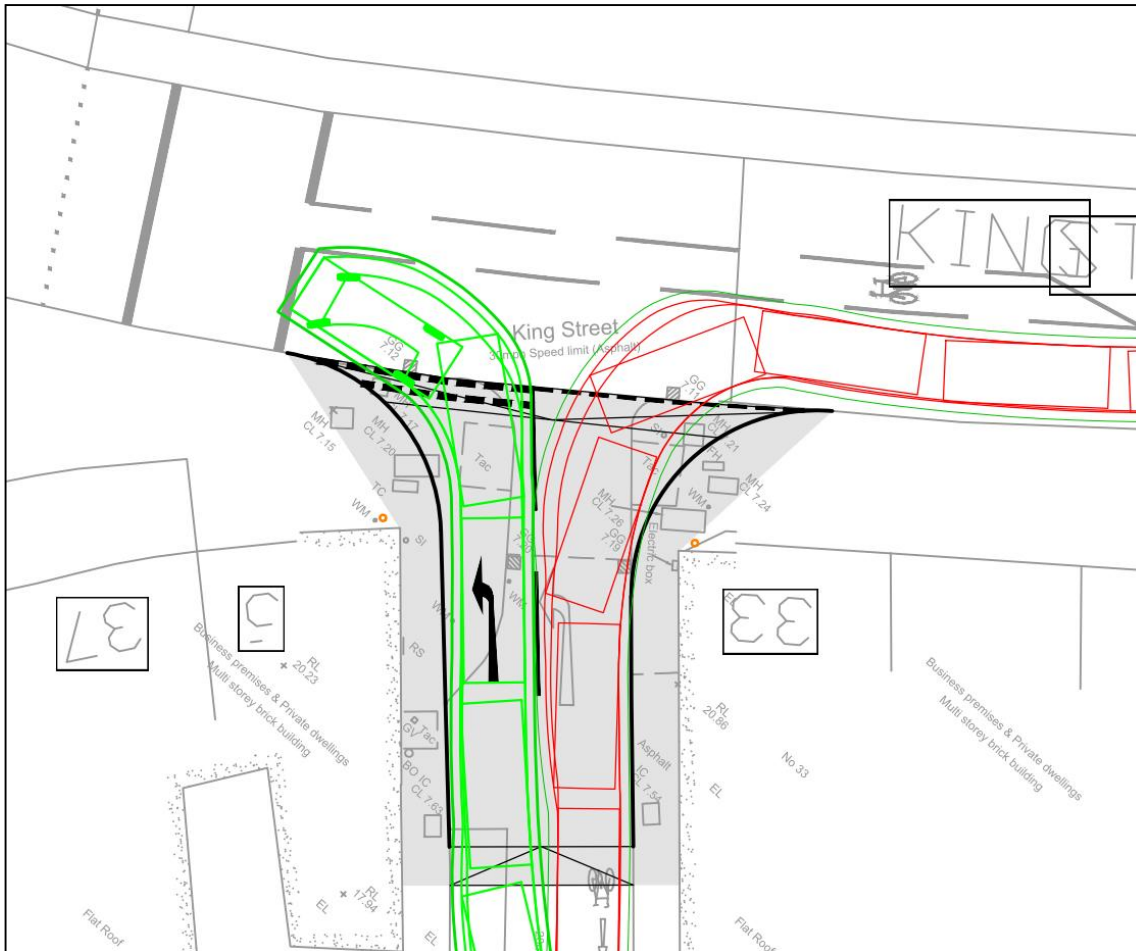
It should be noted that the tracking movements for large cars and 3.5t panel vans at the proposed King Street / Wharf Lane junction arrangement can be made without clashes (see extracts below). It is only the larger trucks (7.5t box van, 10m rigid and Richmond refuse collection trucks) that would potentially collide with any oncoming traffic. Banning the left-turn into Wharf Lane from King Street for any vehicles larger than a 7.5t box van would therefore significantly improve safety at the junction by reducing the risk of vehicles having to wait or reverse back onto King Street to give way to oncoming traffic.



Vehicle Tracking (extended raised table option) – Large Car

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Vehicle Tracking (extended raised table option) – 3.5t Panel Van

REDUCE THE RISK AT THE WHARF LANE JUNCTION BY LIMITING SERVICE MOVEMENTS TO OFF PEAK HOURS

As stated above, the servicing activity associated with the Riverside Masterplan will be subject to a comprehensive Delivery and Servicing Plan (DSP), which will seek to consolidate and manage servicing activity in order to reduce the impact on the surrounding streets. WSP is currently developing this plan, which will be submitted as part of the planning application.

The DSP will set out any timing restrictions for servicing activity, ensuring that service vehicle movements can be timed outside the peak hours as required.

We are also in discussions with M3, who manage the servicing activity associated with the existing retail units along King Street adjacent to the site. They have confirmed that the majority of servicing activity takes place at the front of the units, on King Street, and that only the Iceland supermarket uses Wharf Lane and



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the service road for regular servicing activity. We will continue to discuss further management of the servicing activity associated with the King Street units with M3 to help minimise the impact of this activity on Wharf Lane.

REDUCE THE RISK TO WHARF LANE JUNCTION AND WITHIN WHARF LANE ITSELF BY RELOCATING THE LOADING BAY SOUTH OF THE SERVICE ROAD

The design team is currently looking into accommodating the loading bay currently shown in the northern section of Wharf Lane to a new location south of the service road. This will provide additional space in the northern section of Wharf Lane close to the junction with King Street for safely accommodating two-way traffic movements and ensuring there is no pinch point created that could negatively impact pedestrians and cyclists.

CARRY OUT AN INDEPENDENT STAGE 2 (DETAILED DESIGN) SAFETY AUDIT OF THE FINAL DESIGN

Noted. This will be carried out once a detailed highway design for the proposed changes to Wharf Lane has been completed.

SUBMIT THE FINAL LAYOUT DESIGN TO TFL FOR CONFIRMATION THAT THERE ARE NO STRATEGIC ROAD CAPACITY OR TRAFFIC SIGNAL ISSUES TO RESOLVE

Noted. The final layout design and any other relevant supporting information will be submitted to TfL for review and comment. In order to minimise planning risk, it may be appropriate to engage with TfL prior to the production of detailed design information in order to present the concept layouts and to obtain initial feedback.



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