Twickenham Riverside

DATE:	17 December 2021	**CONFIDENTIALITY:**	Confidential
SUBJECT:	LBRUT Transport Comments Review - WSP Response		
PROJECT:	Twickenham Riverside	**AUTHOR:**	Tim Gabbitas / Tom Edwards
CHECKED:	Tim Gabbitas	**APPROVED:**	DRAFT

[1] OVERVIEW

This document has been produced by WSP in response to the London Borough of Richmond upon Thames (LBRUT) document *"Twickenham Riverside – highways comments feedback to applicants (November 2021)".*

Comments have been raised by the LBRUT Case Officer with respect to transport and highways matters in relation to the submitted planning application for the redevelopment of Twickenham Riverside (planning reference 21/2758/FUL).

The Executive Summary of the LBRUT document states the following:

> *'Based on the information submitted to date, the scheme and the proposed works in principle, cannot be supported on highway grounds. It is strongly recommended that there is collaborative working between the applicant and the Borough Engineers and LPA (including the Transport Planner) to address the outstanding matters and issues identified in this document.'*

The document outlines 12 key perceived issues or outstanding questions associated with the development proposals. The 12 respective headings are outlined herein for ease of reference:

- Safety
- Trip Generation and new layout
- S278 Works
- Turning space
- Servicing
- Car Parking
- Cycle Facilities
- Refuse Arrangement
- Pedestrians
- Travel Plan
- Demolition and Construction
- Lack of Detail

The document then provides an in-depth review of the proposed masterplan layout and associated transport deliverables submitted as part of the application, structured and presented in the following order:

1. Executive Summary
2. Water Lane Layout
3. The Embankment Layout
4. Wharf Lane Layout

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A meeting was held between the Twickenham Riverside design team and the LBRUT on 15th November 2021, during which some of the key transport issues were discussed and clarifications/solutions provided by WSP and Hopkins Architecture; notwithstanding this and in the interests of completeness, this document provides a full response to the highways feedback received. The following sections provide a response to LBRUT highways comments, with each section set out to address each respective heading identified within the LBRUT response document.

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[2] WATER LANE LAYOUT

a. Is this a left turn only or will it allow right turn? It is recommended that only left turn manoeuvres are made only due to visibility.

Response:

- This is correct, the junction will be left-turn only for egress movements from Water Lane. The existing junction arrangement allows vehicles approaching in a westbound or eastbound direction along King Street to turn into Water Lane and this arrangement is maintained in the proposed layout.

b. Due to the pedestrianisation of Church Street, there is a need for a loading bay on Water Lane, where it meets King Street and Church Street. (The need for this is recognised in the CMS (para. 3.3) for the construction stage, however, not for the operational stage).

Response:

- This is noted and has also been identified as a requirement to address. Through RIBA Stage 4, WSP and the wider design team have incorporated a loading bay facility in the northern section of Water Lane in close proximity to Church Street, as suggested above.
- As such, the above concern regarding requirement for a loading bay is being duly addressed for both the construction and operational stages.

c. Conflict between vehicles, if there is a vehicle trying to left into Water Lane, whilst one trying to exit turning left:

Response:

- The vehicle tracking that has been produced to support the proposed junction design demonstrates that 2 large cars, large vans or 7.5t box vans can pass each other when travelling in opposing directions without any risk of conflict. Similarly, a refuse collection truck or large rigid truck can pass a large car or van without conflict. It is only in the unlikely event of 2 large trucks or a large truck and a 7.5t box van passing one another at the junction bellmouth that one vehicle would be required to give way to let the other vehicle pass. This is considered acceptable based on the low likelihood of this happening regularly, the adequate visibility at the junction, and the desire to minimise the size of the bellmouth for the benefit of pedestrians and other road users.
- It should also be noted that vehicle flows are forecast to be low on the northbound approach to the Water Lane junction following the proposed removal of parking on the Embankment.
- The removal of some existing on-street parking will facilitate two-way traffic movements along Water Lane. In the unlikely event that two larger vehicles (e.g. Refuse Truck and Rigid Truck) travelling in opposite directions meet on Water Lane, there are regular passing places between on-street parking to allow vehicles to pull-in and allow traffic to pass. If conflict occurred at the junction itself, visibility is sufficient for drivers to allow a vehicle to egress before accessing.

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d. Fire appliance and refuse vehicles use both sides of Water Lane for access and manoeuvring.
   i. How will this impact traffic movement of other vehicles wanting to travel north / south along Water Lane and those manoeuvring at the southern end of Water Lane?
   ii. What happens if refuse vehicles are parked north of Eel Pie Island bridge (or other vehicles) – how will vehicles (particularly servicing) manoeuvre around them (either for turning or to access the Embankment restricted access area)

Response:

- Traffic flows along Water Lane will be significantly reduced when compared with existing levels due to the removal of parking along the Embankment; notwithstanding this, the proposed layout for two-way traffic working along Water Lane has been developed to ensure that there is sufficient space for vehicle travelling in opposite directions to pass one another through the introduction of regular passing places between on-street parking bays (see drawing SK-67_P01).
- Extensive vehicle tracking for a variety of vehicle types has been undertaken to illustrate that two-way movements can be accommodated along Water Lane, and that service and other vehicle can manoeuvre between Water Lane and the Embankment, even when refuse vehicles are occasionally parked at the top of the slip way.

e. Arboricultural implications to the impact of the new turning on the tree in King Street.

Response:

- Further assessment of the junction geometry is being undertaken as part of Stage 4 works and the impact on the tree is being further reviewed.
- The scheme landscape architects (LDA) will be providing further input and review with regards to the assessment of arboricultural impact here and confirming the extent of the root protection zone. This will be further detailed within the Stage 4 deliverables.

[3] THE EMBANKMENT LAYOUT

a) How is vehicular traffic going to be restricted in this area? Confirmation is required as to whether this will be through the use bollards or a gateway. If the former, will be electronically operated?

Response:

- Additional details on the management of vehicular access along the Embankment are currently being considered in terms of hours of operation and the form of physical barrier that will be installed. At this stage, it is likely that manually-operated barriers will be installed at each end of the restricted zone, similar to the existing arrangement at the western end of Church Street. Full details will be provided with the Stage 4 deliverables.
- Information will be also made available to stakeholders with regards to a TMO once this has been validated with the LBRUT.

b) Clarity is required as to who will be responsible for operating the barrier/gateway on The Embankment and what hours it will be open and closed. For example, articulated HGVs will need the gate to be open should they need to service any part of the site.

Response:

- The Council will be responsible for operating the barriers each day, as they do for the barrier that has been installed at the western end of Church Street. The hours of operation are still being discussed and finalised with the Council, but it is currently anticipated that vehicular access will be permitted from 7am – 10am daily. Full details will be provided with the Stage 4 deliverables.

c) Need confirmation that any servicing will abide by any new Traffic Management Order that specifies when the gate can and cannot be opened.

Response:

- This is confirmed. The hours of operation and terms of the TMO will be clearly stipulated through signage, the Council website and will be enforced by traffic management at the LBRUT.
- There will be a booking procedure in place whereby occasional requirements for larger vehicles out of hours (e.g. articulated lorries occasionally generated by Eel Pie Island) to facilitate access along the Embankment in liaison with the Council where there is reasonable need.

d) Will there be a barrier immediately north of the slipway at the eastern end of The Embankment? This is relevant because the applicant's tracking drawing shows that vehicles collide with it when they turn at the southern end of Water Lane.

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Response:

- There are currently no plans for bollards or barriers to be installed immediately north of the slipway, as per the current arrangements. The barrier will be located to the west of the footbridge / Eel Pie Island servicing area, well away from the slipway. It should be noted that the red line on the plan shown to the east of the slipway is not a barrier, but a boundary line.

e) The existing cycleway must be maintained in both directions, which is a vital east-west link for cyclists in Twickenham. This is not indicated on the plans.

Response:

- The route along Wharf Lane and the Embankment will be signed as a cycle route, as per the existing situation.
- The removal of existing parking and part-closure of the Embankment to vehicular traffic will significantly improve conditions for cyclists when compared with the current situation, with vehicle flows along Wharf Lane and the Embankment forecast to be significantly lower than they are at present.

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[4] WHARF LANE LAYOUT

a) There is insufficient width to allow a vehicle turning left out of Wharf Lane to move into the right-hand lane of the King Street/Cross Deep signalised junction without blocking the left-turn lane.

Response:

- This is no different to the existing situation, whereby vehicles (including HGVs) temporarily block the nearside lane on King Street when egressing onto the offside lane. It should be noted that future demand to make this movement will be significantly lower than it is today due to the removal of parking and new access restrictions on the Embankment.
- The risks for vehicle conflict at the junction of Wharf Lane / King Street are considered to be low for two key reasons:
- The very low traffic volumes that are forecast to use Wharf Lane in the future following the closure of the Embankment and removal of existing parking
- 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)

b) It is unclear whether a vehicle turning left out of the junction can get into the left turn lane while there is stationary vehicular traffic in the right-hand lane of the Cross Deep/King Street signalised junction.

Response:

- Vehicle tracking showing the left-turn from Wharf Lane onto King Street demonstrates that the majority of vehicles making this movement (cars, vans and small 7.5t trucks) can do so without encroaching into the offside (ahead) lane on King Street. Tracking drawing SK-69_P01 illustrates this movement for a large car and a 7.5t box van.
- Some vehicles larger than a 7.5t box van, including a refuse collection vehicle and 10m rigid, would need to encroach into the offside cycle lane (but not traffic lane) when turning from Wharf Lane into King Street, and would therefore need to wait for oncoming cycles in the offside lane to give way to allow for this movement to be made.
- Only larger articulated lorries (16.5m) would need to encroach into the offside traffic lane when turning left into the nearside lane on King Street. This movement is anticipated to be generated very infrequently (c.1 movement per day associated with the Iceland store), and would require drivers to wait for oncoming traffic to give way before proceeding to make the turn.
- It should be noted that this is no different to the existing situation, and that future traffic flow making this movement will be significantly lower than it is at present following the closure of the Embankment and

removal of existing parking. Tracking drawing SK-70_P01 illustrates this movement for a 10m rigid truck, a refuse collection vehicle and an articulated lorry.

c) Vehicles turning left will block the entry to Wharf Lane - A 7.5t box van cannot turn into Wharf Lane, if there are cars queuing to turn left out of Wharf Lane:

Response:

- It is acknowledged that a 7.5t box van turning left into Wharf Lane would have to give way to a car egressing onto King Street in the unlikely event that these vehicle types would meet at the junction travelling in opposite directions. Whilst there are some safety concerns associated with this, on balance it is considered to be acceptable for the following reasons:
- Vehicle speeds in each direction would be low. Vehicles approaching the junction along Wharf Lane would be slowing down to give way to traffic on King Street and because of the traffic calming features (including raised table) and restricted visibility. Similarly, vehicles turning left from King Street into Wharf Lane would need to slow down to make the turn onto the raised table.
- Future traffic flows on Wharf Lane are forecast to be extremely low following the removal of parking and introduction of access restrictions on the Embankment. A small number of private parking bays (c.20) are located to the west, accessed via Wharf Lane, and some servicing activity associated with the King Street retail units (noticeably the Iceland store) is also accessed via Wharf Lane. The development proposals provide a further 3 parking bays (including 1 Blue Badge bay), together with a loading bay on Wharf Lane and a servicing area behind the Water Lane building. The traffic flows associated with this activity are anticipated to be very low (c.10-15 total peak hour vehicle movements generated by the proposed development)
- WSP accept the suggestion that this could be 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.
- Vehicle speeds and flows are both expected to be low on the access and egress to Wharf Lane. Good visibility is achievable in both east and westbound directions once a vehicle has reached the stop line on egress from Wharf Lane. Low traffic flows will largely mitigate against the likelihood of vehicle conflicts, with the low vehicle flows confirmed by existing servicing data and forecast future servicing activity generated by the proposed development.
- On the rare occasions two larger vehicles such as two 7.5t box vans are undertaking opposite vehicle movements across the junction, visibility of vehicles at the junction stop line will ensure oncoming vehicles travelling westbound along King Street will clearly the see the intent of the vehicles egressing Wharf Lane and will therefore have adequate time to slow down and facilitate cohesive two-way movement at the junction.

d) Pedestrians will incur a reduced footway width along Wharf Lane because of the widening of the carriageway to facilitate two-way traffic. This is particularly noticeable at the point where it meets River Lane and could be dangerous when vehicles need to turn in and out of this junction. It is also noticeable at which pedestrians pass the rear of 35-39 King Street on the footway on the western side of the road.

- Has a pedestrian comfort assessment been undertaken?

Response:

- A standalone Pedestrian Comfort Assessment has not been undertaken for the scheme; however, an Active Travel Zone assessment has been undertaken (contained within the Transport Assessment) which is in-keeping with the latest Transport for London guidance for new developments. Within this assessment, existing levels of pedestrian access, comfort, and safety have been thoroughly assessed for the proposed site and presented within the Transport Assessment.
- It should be noted that the proposals for Wharf lane would see the existing footway width along the east side of the carriageway maintained following the introduction of two-way traffic movements. The western footway width would reduce slightly, from c.1.7m to c.1.4m, but it should be noted that the existing on-street parking on this side of the carriageway would be removed in future. It should also be noted that the proposed design would see the introduction of a larger raised table, which would extend significantly further south along Wharf Lane when compared with the current arrangement. This will ensure lower traffic speeds and facilitate improved pedestrian crossing of the road. See drawing SK-65_P01, which shows the existing and proposed carriageway and footway widths at the northern end of Wharf Lane.
- Vehicle traffic on Wharf Lane is also forecast to be low following the closure of the Embankment and removal of existing parking, with around 10-15 two-way vehicle movements forecast during peak hours. Water Lane is considered to be the primary pedestrian access route into the site given its relationship to Twickenham town centre and railway station, and a generous new pedestrian route will be provided in this location adjacent to Water Lane. The lower traffic flows on Wharf Lane in the future will create an enhanced environment for pedestrians, despite the slight narrowing of the footway on the west side of the road.

e) Concerns about the removal of the cycle contraflow lane in Wharf Lane, particularly because of the high-quality existing link with King Street. The reduced footway width and removal of the current cycle slip-road could force cyclists to have to dismount.

Response:

- Two-way access will be achievable for cycles within the new design with the two-lane arrangement allowing cyclists to access and egress Wharf Lane in the same direction of travel as vehicle traffic, thereby reducing conflicts. Removal of parking to the northern section of Wharf Lane will effectively widen the available road width, facilitate a two-way traffic arrangement, and fundamentally improve the route for cyclists. The enhanced traffic calming at the junction and along Wharf Lane (with implementation of an extended raised table) combined with significantly reduced vehicular traffic will improve safety for cyclists travelling in both directions.

- The new two-way design for Wharf Lane should not encourage cyclists to dismount, with the extended raised table at the north end of the road allowing for easy crossing for cyclists approaching from the west and travelling southbound along the road.

f) The existing bend at the southern end of Wharf Lane as it meets the Embankment is blind. Cyclists currently have an off-road slip to negotiate the bend, which is not retained. Cyclists could conflict with cars and HGVs when the latter are having to turn in the road at this location because the gate/barriers on the Embankment are operating.

Response:

- The proposals will result in very low vehicle movements along the southern section of Wharf Lane, including using the turning head on the Embankment. This should provide a significantly enhanced environment for cyclists as they navigate the blind bend. Traffic speeds on the approach to the turning head (when approaching from the north) will be extremely low given they will be approaching a dead-end. Similarly, traffic speeds when leaving the turning head to travel north along Wharf Lane will be low, with vehicles having just turned around.
- When the Embankment is open to allow a small number of service vehicles to access Wharf Lane via Water Lane, traffic speeds will be low as vehicle approach the sharp right-turn onto Wharf Lane. In addition, the design of the public realm along the Embankment has been developed to encourage low traffic speeds and give priority to pedestrians and cyclists.

g) Because of the narrow carriageway on Wharf Lane, there should be a weight restriction placed on vehicles turning left into and using Wharf Lane of 7.5 tonnes and that it is made a left-in, left-out only junction, and that this weight restriction apply at off-peak times.

Response:

- WSP support the proposal and proposed this arrangement when developing the revised junction layout and the introduction of two-way vehicle movements.
- Notwithstanding this, the formality of implementing the two-way access and associated vehicle restrictions will need to be confirmed with the Council and will be reviewed as part of the TMO.
- 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. 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.
- 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.

- The need for HGV lorries servicing Iceland and Superdrug (within the operational hours of the TMO) will need to be retained as per the current arrangement.

h) Servicing the Wharf Lane building: The tracking drawing shows that the vehicle has to swing over to the western side of the carriageway to egress the layby and that its nearside wheels touch the northern edge of the inset business parking bays that the 45 degrees to the carriageway.

Response:

- The tracking drawings referred to (SK-52-TR9) is for a refuse collection vehicle, which will approach Wharf Lane from the south via the Embankment. It should be noted that this is the only service vehicle anticipated to approach the service bay from this direction, with smaller 7.5t box vans and other vans approaching from the north via King Street.
- With the refuse collection vehicle approaching from the south and pulling into the service lay-by, it will need to swing across to the western side of the carriageway on egress given Wharf Lane will be accommodating two-way traffic movements. Given the very low traffic flows forecast to be using Wharf Lane in the future and infrequent occurrence of a refuse collection vehicle needing to make this movement, combined with the good visibility along Wharf Lane in either direction and low traffic speeds that are anticipated, this egress movement is considered to be safe.
- It should be noted that the refuse collection vehicle's nearside wheels do not touch the kerb at the northern edge of the angled parking bays; this is simply the body of the vehicle, which very slightly overhangs the edge of the kerb as the vehicle manoeuvres into the service bay to park.

i) Can service (and service vehicles) manoeuvre into and out of the private access road to the west of Wharf Lane – this is not shown on the Swept Plans.

Response:

- The private access road to the west of Wharf Lane can accommodate 20-30 parked cars in marked bays or private drives. These parking bays are associated with existing development to the west, including the King Street units that back onto this road.
- The narrow road is not suitable to accommodate large service vehicles, and on-site observations suggest that vans are the largest vehicles to regularly require access, with the vast majority of vehicles parked along the road being cars.
- The proposals will not reduce accessibility between Wharf Lane and the private road when compared with the existing situation.
- Drawing SK-68_P01 has been produced to illustrate access and egress movements for a small van between Wharf Lane and the private access road.

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[5] SERVICE ROAD LAYOUT

a) The swept paths show service vehicles cannot make manoeuvre without overhanging the narrow footway on the northern side of the service road and at the back edge of the existing turning circle. This needs to be addressed given that a lot of residents living in flats above 1-33 King Street have rear pedestrian accesses and rely in this footway. The refuse truck manoeuvre is reliant on the gates being opened. It is suggested the gates are removed, and bollards are installed further south.

Response:

- It should be noted that the vast majority of service vehicles forecast to use the service road will be smaller vans and 7.5t box vans. These vehicle types will be able to turn around at the eastern end of the service road using the turning head provided and without the gates on the southern arm of the turning head having to be opened. The vehicle tracking for this turning movement shows that the body of the front of the 7.5t box van would very slightly overhang the footway on the north side of the carriageway as it turns. The vehicle wheels would remain on the carriageway at all times. Visibility for the driver whilst turning will be good along the service road in both directions, and the driver would have clear sight of any pedestrians or other road users whilst making the turning manoeuvre, thereby ensuring they would wait until the footway is clear before proceeding with the turn.
- The larger refuse collection vehicle would also be required to overhang the footway on the north side of the carriageway whilst turning, including when reversing into the turning head and when travelling in forward gear to turn to face west along the service road. In order to undertake this manoeuvre safely, it will be recommended that banksmen are used to ensure the footway is clear of any pedestrians before the vehicle turns around.
- It should also be noted that, whilst some pedestrian flows are forecast along the service road, including those generated by the flats at 1-33 King Street, these flows are anticipated to be very low and this route would not be a key desire line for general pedestrians travelling through the area; notwithstanding this, the safety of all pedestrians and other road users is paramount, and alternative solutions will be considered, including considering the use of smaller refuse collection vehicles along this road.
- WSP are continuing to review the refuse vehicle turning movement with Hopkins and LDA to improve safety for pedestrians and other road users and will present update layouts in January 2022.

b) A plan is required for the proposed highway and public realm works, showing the existing highway boundary to allow officers ascertain what areas need to be adopted, what works will take place on existing highway, and the existing highway that requires stopping up to enable the development to be built.

Response:

- This plan is in the process of being finalised with the design team through Stage 4 and has been included within the drawing packages associated with this document.

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[6] ROAD SAFETY AUDIT – STAGE 1

a) Para. 1.2.10 states, "*the plans did not include any reference to the features listed below…. pedestrian and cyclist features on The Embankment*".
   i. Was the existing cycle route not highlighted to the consultants?

Response:

- The scope of the original Stage 1 Road Safety Audit was agreed with LBRuT,and was focused on the proposed new junction arrangements at the north end of Water Lane and Wharf Lane to allow both roads to accommodate two-way traffic movements.
- LBRuT and WSP are in the process of extending the current scope and instructing a revised Stage 1 RSA to include the southern sections of Water and Wharf Lanes and the Embankment within the application boundary.

b) The plans listed in the Appendix of the Road Safety Audit do not list any of the turning areas at the south of Water / Wharf Lane – were these considered as part of the Audit?

Response:

- As above, LBRuT and WSP are in the process of extending the current scope and instructing a revised Stage 1 RSA to include the southern sections of Water and Wharf Lanes and the Embankment within the application boundary.

c) The following table provides a summary of the key factors and recommendations from the Safety Audit (first two columns). The third column identifies whether the recommendations have been incorporated into the scheme. This needs to be addressed.

Summary	Recommendation	Proposed in the scheme?
Narrow 2-way road a) risk of collisions b) insufficient width to pass c) cyclists at particular risk on Wharf Lane	Ensure pinchpoint are minimised to ensure there is sufficient width for vehicles to pass safely.	Recommendation has not been met - Water Lane is not of sufficient width to allow vehicles to pass as shown in drawings TR1; TR2;
Insufficient width at junction mouths resulting in collisions to those travelling in opposite direction & with pedestrians.	• Retain one way arrangement Or • Provide bell bollards / physical features on corners	Recommendations not met – bell bollards not shown on drawings
Risk of collisions from vehicles reversing and turning	Allow sufficient turning space	Recommendation not met - Not sufficient area as shown in drawing TR13; TR12; TR11; TR10.
Kerb line on edge of bench (King Street) – potential risk	Sight kerb line aware from street furniture	Recommendation not followed – drawing TR6 still shows bench on corner of road.
Those with sight impairments – risk of conflict with traffic	Provide high contrast tactile paving	No details provided.

Response:

- Narrow 2-way road: our responses to this point are provided in sections 2 and 4 above.
- Insufficient width at junction mouths: see responses in sections 2 and 4 above. In addition, bell bollards will be introduced on the junction corners, as recommended in the Road Safety Audit. This will be illustrated and demonstrated on updated swept-path analysis vehicle tracking and layout drawings.
- Risk of collisions from vehicles reversing and turning: our responses to this point are provided in sections 2 (d) and 5 above.

- Kerb line on edge of bench: the drawing shows the existing topographical base mapping, which includes the existing curved bench beneath the tree. This bench and any other existing street furniture that would clash with the proposed junction layout will be removed.

c) Appendix H of the TA provides the applicant's response to safety audit

i. The applicant's conclude Wharf Lane junction would be low risk because of low traffic volumes. Details have been provided outlining the traffic movements along Wharf lane (when removing through movements – essentially using survey data of vehicles using service road) and considering the trips from the development:
   - Weekday AM peak – 9 (1 trip every 7 minutes)
   - Weekday PM peak – 10 (1 trip every 6 minutes)
   - Weekend AM peak – 13 (1 trip every 5 minutes)
   - Weekend PM peak – 10 (1 trip every 6 minutes

   - Do the above traffic movements consider the service area / car park to the west of Wharf Lane? – the report refers to 30 spaces? Does this include the car park, garage etc……?
   - What is the movement in peak hours including this access road / car park

Response:

- The figures above are vehicle trip generation forecasts associated with the development proposals and existing servicing of the King Street units only. They do not include any traffic flows generated by the car parking provision accessed via the private access road to the west of Wharf Lane. As stated in the Transport Assessment, these 20-30 parking spaces are not anticipated to generated significant traffic flows due to low turnover of these spaces (they are not public parking spaces). Adding these low flows to the overall total would not significantly affect the numbers given above.
- We anticipate the 20-30 parking spaces accessed along the private access road to the west of Wharf Lane to generate only a small number of peak hour vehicle trips (typically 1-3 per hour).

ii. The highway consultants recognise the safety concerns of the 2-way movements, lack of visibility and conflict between vehicles, pedestrians, and cyclists in Wharf Lane, and make the following recommendations:

- Reducing number of vehicles using the road
- Reduce the size of vehicles using the road
- Limiting service movements to off peak
- Relocate loading bay south of the service road (this has been omitted)
- Carry our independent Stage 2 safety audit of the final design
- Submit final layout design to TfL to ensure no strategic road capacity or traffic signal issues to resolve.

- Will the applicants agree to the following:
  i. Ban a left turn into Wharf Lane (from King Street) for any vehicles larger than a 7.5m box van. (This will stop vehicles reversing out if they cannot enter Wharf Lane).
  ii. Limiting service movements to off peak hours only – what discussions have been had with M3?
  iii. Is the Stage 2 safety audit of the final design required now to demonstrate this is a feasible option
  iv. Submit final layout design to TfL to ensure no strategic road capacity or traffic signal

Response:

- i: Yes, this is already proposed. Vehicles larger than a 7.5t box van would be banned from turning left into Wharf Lane from King Street.
- ii: Discussions on how best to manage servicing of the King Street units from Wharf Lane / the service road are ongoing, but it is the intention to manage this activity to take place outside peak hours wherever possible. Servicing associated with the proposed development would be managed and timed to take place outside peak hours.
- iii: the design is currently being developed in detail, after which a Stage 2 Road Safety Audit will be undertaken.
- iv: the final layout design will be submitted to TfL for review and comment once it is complete.

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[7] TRIP GENERATION

a) Para 6.2.3 of the TA considers the net traffic generation impact of the proposed development.
   i. What is the impact (gross and net) of the new layout (trips along Water and Wharf Lane), taking in account the proposed development and existing business / residents who use Water and Wharf Lane and The Embankment?
      - Number of vehicles (day / hour)
      - Size of vehicles?

Response:

- 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 and Water Lane are expected to reduce significantly.

Water Lane

- Traffic flow data collected by Systra in March showed the traffic flow which entered the site on Wharf Lane and which ultimately departed via either west via the Embankment or east via Bell Lane, both directions ultimately leading back to King Street.

  Of the 40 vehicles travelling south along Water Lane during the weekday peak, 32 travel west via the Embankment towards Wharf Lane with 8 travelling east along the Embankment towards Bell Lane. The 32 trips are largely traveling westbound along the Embankment are largely associated with the parking (which will be removed) and will therefore represent a significant reduction in vehicle trips south of the Embankment.

  Taking into account existing business/residents as raised in the comment, there are understood to be an average of 19 vehicle trips associated with Eel Pie Island over a two day period, thereby up to 9 trips per day. The Systra data illustrates that during the Weekday AM peak and Weekday a total of 1 vehicle and 4 vehicles travels westbound along the Embankment from Bell Lane and the east of the masterplan site which would therefore need to be accommodated on the new Water Lane junction, with the rest of the existing eastbound trips already associated with egress along Bell Lane and Church Street.

  Based on these assumptions, and assuming an unlikely “worst case” scenario that ALL daily Eel Pie Island servicing takes place in either the AM or PM peak, the likely total number of trips travelling north towards the Water Lane junction with King Street in the AM peak would be 10 (9 EPI + 1 east Embankment) and in the PM would be 13 (9 EPI + 4 east Embankment).

Wharf Lane

- Traffic flow data collected by Systra in March 2019 showed the following traffic flows on Wharf Lane during the peak hours, which would ultimately have entered from Water Lane. 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).

- 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 2 spaces. These would 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.

- It is noted that spaces for approximately 30 cars to park are provided within existing development to the west of Wharf Lane, accessed via a private access road. Continued access to these spaces will be retained 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, vehicle flows using the proposed two-way Wharf Lane arrangement would be significantly lower than existing flows, thereby 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.

[8] DELIVERY & SERVICING PLAN

a) The Delivery and Servicing Plan (DSP) states the Wharf Lane building will be serviced from a delivery bay along the northern front of the proposed building.
   i. There is not service bay to the northern front – it is off the west elevation.

Response:

- The loading bay was relocated from the north of the Wharf Lane building to the west. The DSP text will be updated to reflect this.

b) A DSP states the gate to the west of the café will provide access to the gardens for servicing and maintenance and will be opened to allow vehicles larger than 7.5t box van to reverse.
   i. There should be unrestricted access with the turning area – suggest omitting the gates, and if required installing bollards further back.

Response:

- Both a pedestrian gate and a vehicle gate will be provided and operational procedures managed in terms of locking and unlocking to ensure pedestrian safety.

c) Eel Pie Island servicing, the DSP and TA state:
   i. States larger vehicles currently park and carry out loading and unloading operations along the stretch of the Embankment.
      - It is intended for this to continue?
      - Can a larger vehicle park and unload, whilst other vehicles manoeuvre and turn at the south of Water Lane? Plan TR12 would indicate not.
      - If larger vehicles do park north of the bridge, can larger vehicles access the Embankment during the restricted times? Is there sufficient space?

Response:

- The Eel Pie Island (EPI) servicing arrangements are set to be formalised through a designated EPI servicing area. This has been developed through regular liaison and stakeholder coordination with the Eel Pie Island Association during 2020/21.
- Through swept-path analysis vehicle tracking, it has been demonstrated that larger HGVs can still service the Embankment and turn around whilst the EPI servicing area is in operation or when refuse collection vehicles are occasionally parked at the top of the slipway. Larger vehicles can still access the

Embankment if a refuse vehicle or emergency vehicle is parked along the slipway to the south of Water Lane.

- It should be noted that the proposed Eel Pie Island service area is significantly larger than the current arrangements in this area, with existing car parking spaces removed from the north side of the carriageway and additional dedicated loading / service bays provided for Eel Pie Island servicing activity. Servicing activity, including by occasional larger HGVs, will therefore be able to continue as it does today, albeit with additional space for loading activity to take place, but service vehicles (with the exception of large articulated lorries) will in future be required to turn around at the bottom of Water Lane before egressing back up Water Lane to King Street once two-way traffic working has been introduced.

ii. refers to regular and frequent visits by cars and light good vehicles, occasional deliveries with medium sized rigid lorry vehicles and infrequent deliveries with articular vehicles (para. 4.8.2 of the TA) and Para. 6.5.3 of the TA refers to the average of 19 trips across 2 survey days.
   - Do we know how many of each sized vehicle to ascertain the sufficiency of the spaces provided, turning area, and how this may impact upon traffic movement up and down Water Lane?
   - Was this 19 each day or over 2 days?
   - When was the survey taken – was this March 2020?

Response:

- The number of bays provided has been developed based on a review of regular Eel Pie Island servicing activity, based on both documented servicing movements in the Systra video surveys and suggested servicing activity provided by the EPIA and their Highways Consultant - Paul Mews Associates.
- The EPIA informed us that, typically, up to 5 service vehicles are parked or undertaking servicing activity associated with the Island at any given time. This can increase to 8-10 parked servicing vehicles on very busy days. The vast majority of these vehicles are no bigger than transit vans, and use the existing parking bays (for cars) along the Embankment to park in, including the 3 short-stay loading bays closest to the footbridge.
- It was agreed that 6 dedicated servicing bays would be provided adjacent to the footbridge as part of the masterplan proposals (and increase from the current 3 bays), plus 2 additional bays would be provided at the southern end of Wharf Lane that could also be used by Eel Pie Island tradespeople.

iii. The LBRuT CPZ Review Report (para. 3.24) indicates that servicing surveys were undertaken in March 2020, and 30% of deliveries along the Embankment, took place during the early mid-morning period
   - Provide details of the hours
   - Provide details of the size of vehicles during such hours
   - How does this correlate with the proposed restricted use of The Embankment? – What will be the impact?

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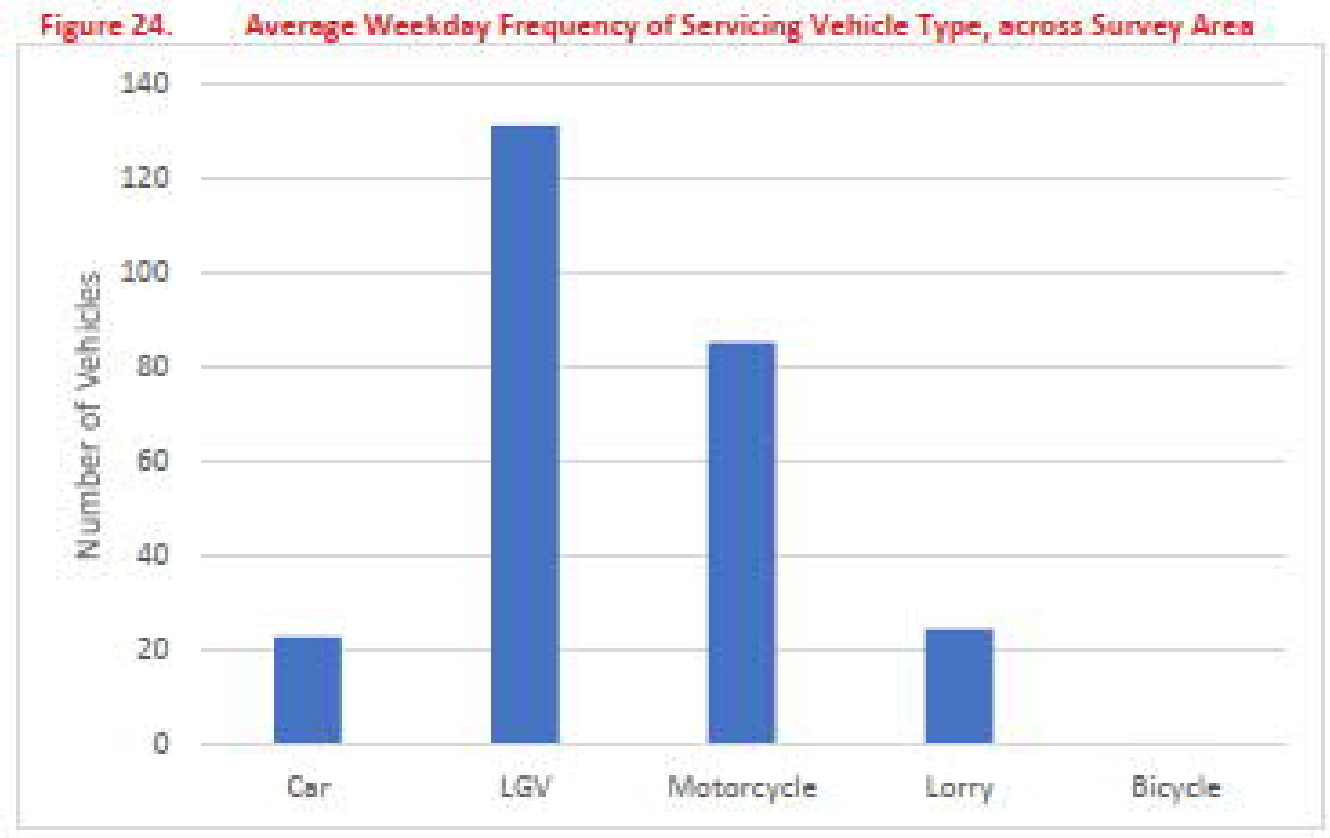
Response:

- The hours are noted to be largely across the morning peak,
- The details of servicing vehicles observed during the 2019 servicing surveys are included below for an approximation of vehicle types.



d) King Street servicing:

i. The report confirms that larger vehicle (over 7.5t) will only beable to access the service road via The Embankment, during time restrictions.

Response:

- This is correct. All servicing activity along the Embankment will be managed within the restrictions of the TMO, the details of which are being finalised through Stage 4 with the LBRUT. The only vehicles larger than 7.5t box vans anticipated to require access to Wharf Lane via the Embankment are the articulated lorry generated by the existing Iceland supermarket, and the LBRuT refuse collection vehicles.

ii. The report (para. 3.6.3) states "*the parking along the western side of Wharf Lane in proximity of the junction with King's Street will be removed and in its place time limited loading will be permitted*".

- This is not shown on the tracking drawings – how will this impact upon manoeuvring of vehicles in and out of Wharf Lane?

Response:

- The parking will be removed which will ultimately increase the available road width along Wharf Lane north of the service road.
- The limited loading will ensure that larger HGV's servicing the King Street units, namely Iceland and Superdrug (as identified through the Systra video surveys in 2020) will be able to service the retail units as per their existing arrangement, parking temporarily on the western side of Wharf Lane to the immediate north of the service road to load and unload during the hours that servicing vehicles are permitted along the Embankment.
- The Council are currently reviewing options for a new loading pad on King Street, which could be used to service the Superdrug store, thereby removing this servicing demand from Wharf Lane / the service road. This would mean, typically, only 1 vehicle per day utilising this part of Wharf Lane for servicing activity (generated by Iceland), which would take place early in the morning during the hours when the Embankment will be open to traffic (7-10am).
- As has been documented earlier in this note, future traffic flows along Wharf Lane are forecast to be very low, and therefore some limited servicing activity on the west side of the carriageway would not have a significant impact on the operation of the road, with vehicles travelling northbound having to give way to southbound traffic passing the parked service vehicle in the unlikely event of two vehicles approaching in opposite directions at the same time.

iii. The documents state that the applicants are in discussion with M3, who manage the servicing for King Street properties, and that all servicing takes place along King Street, except Iceland.

- This does not seem to correlate to Appendix H which lists the number of vehicles that use the service road to the rear of King Street.

Response:

- WSP believes that these vehicles are largely associated with the former car park at the east end of the service road, which is now closed, and are therefore not service vehicles generated by the existing King Street units. LBRuT have confirmed that any allowance for additional vehicles to park here on former car park hardstanding is temporary and these spaces do not represent formal vehicle parking spaces associated with either the most recent existing or proposed layouts.

iv. The TA refers to the servicing of King Street properties – both those at 5-33 and 35 -39 King Street. It states, para. 4.11, *"the ability for businesses located here to operate under business-as-usual circumstances has been retained in the proposal and will be retained during construction".*

- What size vehicles do these properties currently use? How many articulated lorries?
- Isn't the whole of The Embankment be closed during construction?
- If there is any access, would it not be restricted – and therefore, not business as usual?
- How will articulated lorries access and exit Wharf Lane during construction?

Response:

- The existing King Street properties generate only a small amount of servicing activity from the rear via the service road. The only articulated lorries recorded as being generated by these units are those associated with the Iceland and Superdrug stores.
- As stated above, the intention is that Superdrug servicing could take place from the front of the unit on King Street, if a proposed loading bay / pad is introduced close to the junction with Water Lane.
- Iceland deliveries by articulated lorry typically take place once daily, early in the morning. This activity will be accommodated in the proposals, with vehicles accessing Wharf Lane via the Embankment during hours of operation (7-10am).
- The Embankment will be temporarily closed during some construction phases. During this time, a temporary through-route is planned linking Water Lane and Wharf Lane via the service road. This will require a temporary ramp-link to be provided between Water Lane and the eastern end of the existing service road. The link will be designed to accommodate articulated lorries.

v. Have any surveys been undertaken on existing servicing / deliveries?

Response:

- Yes, these are well-documented in the survey data and summary reports prepared by Systra who have been appointed by LBRUT to undertake parking and servicing surveys and analysis. The surveys include both parking, servicing and video surveys across full 24-hour periods (including weekday and weekend) to provide a full picture of existing servicing activity at the site.
- WSP have reviewed the survey information collated and utilised this in informing future servicing strategy and future servicing capacity for the masterplan site.

vi. What is the size of the vehicles that service these properties?

Response:

- Through servicing assessments of King Street units and the masterplan, the design team have assumed the largest vehicle sizes throughout assessment. Through liaison with Savills and LBRuT it is understood that no concerns have been raised in relation to servicing vehicle access.

vii. How many servicing / delivery vehicles are expected during the time restriction access?

Response:

- The number of servicing trips will be minimal throughout the day and where possible will be confined to the periods of operation outlined by the TMO.
- 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. This is in addition to daily servicing trips for Iceland and Superdrug (typically 1 vehicle per day based on the survey results).

viii. Iceland:

- The application omits the fact that the Iceland store at 31-33 King Street has an existing vehicular crossover access to a shuttered ground floor service yard on the eastern side of Wharf Lane.
- What size vehicles do Iceland use?
- Where do Iceland currently service their store – there is a dropped kerb on the east side of Wharf Lane adjacent to the servicing door.
- Can Iceland comply with the restricted hours?
- Where are their lorries going to park?

Response:

- The TMO will be agreed with full transparency and consultation with Iceland to ensure hours of restriction on the Embankment do not impact upon store operation and servicing. The survey results demonstrate that daily Iceland deliveries using an articulated lorry take place in the morning. The operating hours of the Embankment (7-10am) has been timed to coincide with this to ensure Iceland's servicing operations can continue with minimal impact.
- The rear service yard is understood to be used by one home delivery transit van with two to three off-street parking spaces for store staff.
- Iceland and Superdrug lorries will be able to park along the western side of Wharf Lane south of the junction with King Street during the hours that limited loading is allowed. The limited loading will ensure that larger HGVs servicing King Street units, namely Iceland and Superdrug (as identified through the Systra video surveys in 2020) will be able to service the retail units as per their existing arrangement, parking temporarily along Wharf Lane to load and unload during the hours that servicing vehicles are permitted along the Embankment.

The applicant needs to state and detail how Iceland and other commercial units on King Street will be serviced safely by the vehicles that these businesses need.

e) Water Lane servicing: There is currently a loading bay at the northern end of Water Lane.
   i. Who uses this bay?
   ii. What are the implications of its loss?
   iii. How are the commercial properties to the east of Water Lane and Church Street going to be serviced?
   iv. If servicing is intending to take place on street for these units (and the proposed units), what are the implications on traffic flow and manoeuvring?

Response:

- i.
  - The bay is currently used by all nearby businesses in the vicinity of Water Lane/Church Street and King Street for servicing (deliveries/collections etc). The bay is understood to be particularly useful for Church Street as this road is now pedestrianised 10am to Midnight each day.
- ii.
  - The loss of the bay could increase the potential for congestion with servicing vehicles entering Water Lane not being able to have a suitable and safe location to load/unload at this location especially during the 14 hours each day as stated above.
- iii.
  - Servicing of commercial properties in Church Street / Water Lane can be undertaken up to 10am each day in Church Street if required. Servicing of commercial properties at the eastern end of Church Street, near to its junction with Church Lane can be undertaken via the St Georges Place Loading Area throughout the day.
  - If a new loading bay is provided on the south side of King Street, immediately west of the junction with Water Lane, this will maintain some provision for servicing in the immediate vicinity. This proposal is currently the subject of a feasiblity study being led by LBRuT.
  - However after 10am each day when Church Street is pedestrianised, it is appropriate that an area for servicing be retained in the adjacent northen part of Water Lane especially for those vehicles that have committed to turning into Water Lane.
- iv.
  - To mitiage against occasions vehicle congestion affecting the vehicular and pedestrian traffic flows, new loading facilities are in the process of being consdiered and reviewed. This process is led by

LBRUT with input from Hopkins, LDA and WSP. Drawings will be updated and shared to reflec the proposals in due course.

f) The LBRUT CPZ Review Report (Appendix C of the TA) refers to delivery and servicing surveys that were undertaken in March 2020 (para. 3.23 – 3.24), indicating there were 131 light good vehicles (50%), 106 motorcycle deliveries (40%), and a small number of larger vehicles.
   i. How do the above numbers translate in each Water and Wharf Lane of the proposed layout?
   ii. What would be the net numbers on these roads for each sized vehicle, and during specific times?

Response:

- i. & ii.
  - LBRUT have provided the below tables for average data collected for weekday, weekend and event day scenario. The committee report (which is appended to the TA) stated the following *"Light Goods Vehicles (LGVs) were the most common vehicle type recorded during the weekday survey, making up 50% (131 vehicles), of the total number of servicing vehicles recorded over an average daily period. In contrast to this, motorcycles were the most common vehicles recorded undertaking servicing activity for the weekend survey, with 40% (106 vehicles) of all deliveries being undertaken by this mode. A small number of larger vehicles (HGVs/Refuse vehicles) were observed in the area during the surveys".*
  - The figures from this statement were extracted from the tables below, illustrated in this report for ease of reference.

- Average weekday results

Servicing Vehicle Type	King Street	Church Street	Service Road	The Embankment	Water Lane	Wharf Lane	Total
Car	4	2	0	14	3	0	23
LGV	12	44	13	25	26	13	131
Motorcycle	46	2	0	1	36	0	85
Lorry	3	5	5	2	2	7	24
Bicycle	0	0	0	0	0	0	0
Total	**65**	**52**	**18**	**42**	**66**	**20**	**264**

- Average weekend results

Servicing Vehicle Type	King Street	Church Street	Service Road	The Embankment	Water Lane	Wharf Lane	Total
Car	8	1	0	18	5	1	33
LGV	4	30	6	10	13	8	71
Motorcycle	62	2	0	1	41	0	106
Lorry	1	0	3	0	0	5	9
Bicycle	0	0	0	0	0	0	0
Total	**75**	**33**	**9**	**29**	**59**	**14**	**219**

- Average event day results – Church St closed

Servicing Vehicle Type	King Street	Church Street	Service Road	The Embankment	Water Lane	Wharf Lane	Total
Car	40	0	0	16	2	0	58
LGV	5	0	4	6	16	3	34
Motorcycle	40	0	0	0	56	0	96
Lorry	1	0	2	3	1	8	15
Bicycle	0	0	0	0	0	0	0
Total	**86**	**0**	**6**	**25**	**75**	**11**	**203**

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[9] CAR PARKING

a) There are inconsistencies in the TA regarding the level of car parking that will be lost in response to the development. There needs to be clarified and corrected where necessary -
   i. Para. 3.4.18 – refers to the loss of 85 car parking spaces
   ii. Para. 3.4.24 – refers to the removal of 82 parking spaces.
   iii. Table 4-3 (not including the off-streetcar park, M/C or loading bay), shows there are 86 car parking bays, and the scheme will provide 6, resulting in the loss of 80.
   iv. Para. 6.5.2 refers to the removal of 97 parking spaces from a total of 113 available?

Response:

- WSP will note and amend the TA as appropriate
- LRBuT have provided a breakdown on the existing spaces across the CPZ Zone D. This information is included through the summary below.
- The results of the audit found that across the CPZ, in total the existing number of parking spaces comprised the following.
  - 1115 residential spaces (with an additional 160 spaces in Holly Road car park, available for resident permit holders);
  - 285 shared use residential and pay and display/ pay by phone spaces;
  - 190 shared use permit and pay and display/pay by phone spaces; and
  - 79 pay and display/ pay by phone spaces;
  - 44 shared residential and business spaces; and
  - 35 business spaces.

Total: 1748 parking bays (1908 with Holly Road Car Park included)

- Additionally, the following bays are provided within the CPZ which will not have an impact on the parking for permit holders due to their designation.
  - 22 Loading bays;
  - 12 disabled bays
  - 6 car club bays;
  - 2 motorcycle bays (space for 6 and 3 motorcycles to park); and
  - 1 ambulance bay

The total number of parking bays across the CPZ D is therefore **1791 parking bays (1951 with Holly Road Car Park included).**

Embankment Proposals

- The council proposals in vicinity of the Embankment (not including any impact associated with the planning application for Twickenham Riverside) will result in a loss of 85 parking spaces.

Proposed Removal of Spaces

- The following 82 parking spaces are proposed to be removed as part of a scheme to pedestrianize The Embankment, impacting the parking supply on-street:

The Embankment (between Water Lane and Wharf Lane)

- 13 Permit Holder (Resident/Business Permit Holder) spaces
- 5 Business Permit Holder spaces
- 41 Resident Permit Holder/Pay and Display spaces

  Total = 59 spaces

Water Lane

- 10 Resident Permit Holder/Pay and Display spaces
- 4 Pay and Display spaces
- 1 motorcycle bay (for 5 motorcycles)

  Total =15 spaces

Wharf Lane

- 4 Permit Holder (Resident/Business Permit Holder) spaces
- 2 Business spaces
- 1 Pay and Display space

  Total = 7 spaces

Lebanon Park (Outer Zone)

- 1 Resident Permit Holder/Pay and Display space

The Council have advised there is an additional 3x spaces adjacent to the grass knoll to the south of Water Lane which should be factored into the calculations.

Therefore, the total spaces is understood to be **85 spaces**

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Proposed Redesignated Spaces – 80

- 80 spaces are proposed for redesignation – the existing parking space use and the proposed use is outlined below.

Existing spaces

- 38 Permit Holder (Business and Resident/Pay and Display)
- 18 Resident Permit Holder/Pay and Display
- 15 Resident Permit Holder
- 6 Business Permit Holder
- 3 Pay and Display

Proposed spaces

- 37 Resident Permit Holder
- 39 Permit Holder (resident/Business Permit Holder)
- 3 Permit Holder Only (Business and Resident/Pay and Display)
- 1 Licensed Street Trader Bay

Additional Spaces to be provided within the CPZ

- A total of 28 parking spaces will be added to CPZ Zone D. The designation of these spaces and the distance from the Eel pie Island footbridge is shown on the table below.

Parking Space Distance	**Quantity of Additional Spaces**				
	Resident permit	Business permit	Pay and display	Permit (business & resident)	Resident permit / Pay and display
0-250m	2		5		
250-400m	1			1	
400-650m	9				2
650-800m	6	1	1		
Total	**18**	**1**	**6**	**1**	**2**
Overall Total	**28**				

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b) Impact on parking in Twickenham CPZ – Zone D.

i. Para 4.4.12 of the TA states, "*the true impact of the removal of the spaces is not known, and the Council works towards a resolution in this matter*".

- How can officers review the acceptability of this if the impact is unknown? What happens if it is unacceptable? The LPA cannot determine an application with heads of terms that may not mitigate the impact.

Response:

- LBRUT have advised that the removal of the spaces will take place on or after the changes to the controlled parking zone (CPZ), Zone D are undertaken. This will be by way of Experimental Traffic Orders which allow for such changes to be implemented and monitored initiately over the first six months of operation. It will also involve consultation with all properties within the zone. If it is established that further changes to the zone are warranted, then all options will be explored to progress these.

ii. Para. 4.4.16 of the TA states the CPZ would only be at 79% capacity (using survey data from between 1am – 5am), if 82 car parking spaces were lost along Twickenham Riverside.

- Is it appropriate to use the whole zone for parking displacement? What will be the walking distances? Will this still comply with the Standards?

Response:

- LBRUT have advised that it was felt appropriate to review the entire scheme to see what changes could be made to improve its operation in light of the removal of the spaces. The removal of the spaces on The Embankment will mean that parking for visitors will need to be sought elsewhere in this zone which covers a wide area across Twickenham town centre. Visitors to the town centre will be encouraged to use the car parks, particularly Arragon Road and Holly Road which are situated between 400m and 650m of the site.
- The map which shows the walking distances has been appended to this report.

iii. Para 3.15 of the LBRUT CPZ Review committee report, states improvements are needed to car parks (Arragon Road, Holly Road, Church Road and York Road) to mitigate the loss of on-street business permit holder parking in Twickenham Riverside. Such recommendations include lighting, wayfinding, re-lining bays, pedestrian walkways, dropped kerbs,

- Is the applicant intending to implement such as part of any consent, secured via a S106?
- Has a costing plan been produced for such works?

Response:

- The works will be undertaken as part of the annual work programme and funded from existed parking budgets.

c) Electric Vehicle Charging Points:

i. 4.4.20 – "*the Council will take ownership of delivering EVCP within the proposed development in accordance with their ongoing review*".

- What does this mean? Is any intended as part of this scheme?

Response:

- No EVCP's are currently proposed as part of the scheme given the proposals are largely car-free aside from some accessible bays.

d) Please confirm the car park on site (rear of King Street) is completely disused, with no spaces leased out.

Response:

- LBRUT have advised that the car park to the rear of King Street is disused; however, currently there seems to be some unauthorised parking that takes place, and it has been subject to fly tipping. The Council is currently exploring options with their managing agent for this car park, which will likely result in relocation of the existing heras fencing to allow for some parking spaces (likely three) for use of the retail units the Council currently lease to Superdrug and The Works, with use of these spaces only lasting as long as their leases. There are other locations these retailers can park.

[10] CYCLE PARKING

a) There are currently 4 stands (8 spaces) on site (and 6 stands – 12 spaces – to the SE corner of the application site)

Response:

- This is correct. There are further short stay cycle parking spaces just beyond the defined boundaries of the masterplan along King Street.

b) The scheme generates the need for 45 short stay spaces (residential and commercial) and 8 replacement spaces – total 53. The scheme provides 42 short stay spaces, resulting in a shortfall of 11 spaces. Figure 4-7 of the TA, shows an uplift of 2 just outside the SE corner of the site). This would still result in a shortfall of 9 spaces.

- Wider suitability of cycle parking for both short-stay and long-stay is being reviewed between WSP and the scheme architects as part of Stage 4 design works.
- Revised plans for the masterplan site indicating both short-stay, long-stay and the level of oversize/non-standard cycle parking will be shared for review with the LRBUT in due course.
- WSP have been working with Hopkins, LDA and Skelly & Couch to revise cycle parking layouts to accommodate an appropriate mix of cycle types for both long and short-stay cycling, and for both residential and commercial stores. Several workshops have taken place and the resultant revised drawings will be shared accordingly upon completion.

c) Water Lane
   a. The scheme should provide 3 long stay commercial spaces – 7 are provided.
   b. The scheme should provide 37 long stay residential spaces – 28 are provided, a shortfall of 9.

- Wider suitability of cycle parking for both short-stay and long-stay is being reviewed between WSP and the scheme architects as part of Stage 4 design works.
- Revised plans for Water Lane will be shared for review with the LRBUT in due course.
- Hopkins have increased the overall total of cycle parking within both Wharf Lane and Water Lane. As outlined above, several workshops have taken place and the resultant revised drawings will be shared accordingly upon completion.

d) Wharf Lane:
   a. The scheme should provide 7 long stay commercial space and 39 long stay residential space.
   b. The scheme provides 46 spaces – this meets the residential provision.
   c. A combined approach for the long stay spaces is not accepted. The London Cycling Design Standards require separate provision for mixed use developments, with residential being secure, with access for residents only.

Response:

- Wider suitability of cycle parking for both short-stay and long-stay is being reviewed between WSP and the scheme architects as part of Stage 4 design works.
- Final designs are yet to be confirmed but an increased provision is set to be provided, including for oversize bicycles.
- Revised plans for Wharf Lane will be shared for review with the LRBUT in due course.
- Hopkins have increased the overall total of cycle parking within both Wharf Lane and Water Lane.
- Josta have formally confirmed to Hopkins that their proposed josta racks will be fully operational within the confines of the existing cycle store sizes. Notwithstanding this, Hopkins are in the process of liaising with Skelly & Couch over basement wall infrastructure to increase cycle store capacity.
- Hopkins have advised that Short-Stay cycle parking will be located in well-overlooked locations, which are expected to have presence of CCTV and will be well lit.

e) The scheme provides no space for nonstandard bikes – as required by the London Cycling Design Standards.

Response:

- Several cycle workshops have taken place between WSP and Hopkins Architects, with input from LDA and Skelly & Couch. Final designs are yet to be confirmed but an increased provision is set to be provided, including for oversize bicycles following guidance provided by the LCDS.
- Revised plans for the masterplan site indicating both short-stay, long-stay and the level of oversize/non-standard cycle parking will be shared for review with the LRBUT in due course.

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[11] REFUSE & RECYCLING

Building	Required	Provided
Wharf Lane	34 bedrooms = 2,380L Therefore: 5 bins: • 3 x 1100L bins • 2 x 1100L recycling bins	5 bins are provided in a storage area for residential (confirmed in DAS 222): 4 bins in separate units on Wharf Lane. • 1100l for commerical What arrangement are proposed for the commercial waste collection?
Water Lane	32 bedrooms = 2240L Therefore: 5 bins • 3 x 1100L bins • 2 x 1100L recycling bins	• 4 bins in one storage area – residential • 2 bins in a storage area – retail • 4 bins in a storage area – café • The 4 bin storage area is insufficient for residential. • All are 1100l bins? • How is the refuse / recycling separated? • What are the arrangements for collection?

Response:

- The requirements for general refuse are 70L per residential dwelling.
- The scheme architects have advised that the 32-bedroom development within Water Lane will provide 2x 1100L bins in total.
- The scheme architects have advised that the 34-bedroom development within Wharf Lane will provide 3x 1100L bins in total.
- The developer and property managing agents will be responsible for residential waste collection for both Wharf Lane and Water Lane, whilst commercial tenants will be responsible for arranging their own management procedure and waste collection.

b. Need clarity as to whether all the bins used by occupants of this building will be presented for collection in the dedicated area east of the back edge of the service layby or whether Operatives will have to enter the bin store itself.

- LBRuT have advised that the details of operation and management and will continue to be consulted and agreed with the LBRuT Highways team through Stage 4.

c. Who will be responsible for moving the bins from the store to the collection area and how they will do this given the level difference?

Response:

- As above, the developer and property managing agents will be responsible for residential waste collection for both Wharf Lane and Water Lane, whilst commercial tenants will be responsible for arranging their own management procedure and waste collection.

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[12] FRAMEWORK TRAVEL PLAN

12. Framework Travel Plan:

a) The Travel Plan appears to be written when the scheme was in draft, with inconsistencies and inaccuracies, which need to be corrected.

Response:

- The Travel Plan has been updated to ensure it is consistent with the wider planning documents. WSP will submit the updated Travel Plan.

b) Para. 1.4.8 – refers to the residential schedule not being fully developed (but then later on in the document it lists the correct schedule). All documents associated to a planning application should know what the scheme is proposing.

Response:

- As above, The Travel Plan has been updated to ensure it is consistent with the wider planning proposals and documents. WSP will submit the updated Travel Plan.

c) Para. 3.6.15 – refers to the loss of 85 parking spaces, however, the TA refers to the loss / removal of 82 and 97. What is it?

Response:

- LBRuT have confirmed that the reference number should be 82. This will be reflected in the updated Travel Plan.

d) Para. 3.6.15 states:
   a. six bays (to be confirmed) along the embankment will be dedicated to EPI
   b. three bays along Wharf Lane provided for EPI – there are only 2.
   c. One bay for disabled badge holders along Wharf Lane – no there is not.

Response:

- a) Correct, there will be a total of 6x formalised bays, the size of which were deemed preferential to the EPIA during stakeholder meetings held in 2021 and have thus been designed accordingly.
- b) There will be a total of 2 bays provided along Wharf Lane for longer stay use for Eel Pie Island in proximity of the Island. The third bay indicated will be a loading bay facility.
- c) There is to be one accessible bay to the north of the Wharf Lane building adjacent to the building and within a compliant distance of the residential and commercial building cores.

e) Para. 7.2.13 – refers to the provision of cycle parking spaces for non-standard bikes in the public realm – where are these?

Response:

- It is the intention that the Sheffield Stands being provided will be suitable for all oversized bicycle types as well as standard bicycles.

f) Incorporate showers in the offices to encourage more sustainable travel

Response:

- There will be shower facilities provided as part of the ground floor commercial development in the Wharf Lane building. There are rooms for showers to be included within the fit out of the Water Lane and Wharf Lane building.

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[13] ACTIVE TRAVEL ZONE

a. Para. 5.6.2 of the TA identifies key areas of improvement:
   i. Plant more shrubs / planters along London Road to contribute to cleaner air
   ii. Review street lighting to improve saft of pedestrians at Riverside
   iii. Resurface and improve the safety of junctions for pedestrian crossings.

   - Subject to trees approval and the resolution of outstanding matters, it is suggested (i) could be addressed through this application (CAVAT contribution) and (ii) will be part of this application. Do the applicants agree?

Response:

- LBRuT have confirmed that a CAVAT contribution will be made

[14] DEMOLITION & CONSTRUCTION MANAGEMENT PLAN

a) During the demolition / construction stage, how will residential / commercial properties access (and for servicing):
   i. Access the rear service road?
   ii. Access and service Eel Pie Island and properties to the east of the application site, along The Embankment
   iii. Access / service the properties off Wharf Lane (to the west)

Response:

The full construction logistics and management procedures will be subject to review following formal appointment of a Lead Contractor in liaison with LBRuT. The expected procedures for access during construction and demolition are as follows:

i) The rear service road will continue to be accessed via Water Lane / The Embankment / Wharf Lane during demolition / construction until such time as the Embankment is closed. At this point, a temporary ramp-link will be provided directly between Water Lane and the eastern end of the service road to maintain access between Water Lane and Wharf Lane.

ii) Eel Pie Island and properties to the east of the application site will continue to be accessed via Water Lane / the Embankment / Wharf Lane until such time as the Embankment is closed during construction. At this point, two-way working will be introduced along Water Lane, and access to the Eel Pie Island servicing area adjacent to the footbridge and to properties to the east of the application site will be via Water Lane only.

iii) Access to the properties to the west of Wharf Lane will continue to be accessed via Water Lane / the Embankment / Wharf Lane initially and until the Embankment is closed during construction. At this point, access will be maintained along the temporary ramp-link between Water Lane and the east end of the service road, with a one-way westbound system operating along the service road providing access to Wharf Lane and the properties to the west of Wharf Lane. Once two-way traffic working has been introduced to Wharf Lane and the temporary ramp-link between Water Lane and the east end of the service road is closed, traffic will use the two-way working on Wharf Lane to access the properties to the west of Wharf Lane.

b) Show turning circles to demonstrate access and turning is feasible during construction.

Response:

- WSP has prepared initial construction access plans and vehicle tracking which will be duly circulated following review with LBRuT.

c) Approval in Principle will need to be obtained for the construction of a basement.

Response:

- The above is noted by LBRuT.

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[15] EQUALITY IMPACT NEEDS ASSESSMENT

Section 9.3 of the LBRUT CPZ Review Report states, "*a separate Equality Impact Needs Assessment will be carried out on the parking, servicing and access proposals should these be progressed to implementation*".

- What happens if this has negative conclusions?

Response:

- As stated under paragraph 9 b i, the parking changes will be implemented by way of Experimental Traffic Orders.
- This provides the opportunity to make changes quickly, if required. Reasonable adjustments will be made to the scheme where possible.

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[16] MATTERS RAISED BY THE PORT OF LONDON AUTHORITY

1. Transport – inconsistencies within the submission.
   i. Number of different descriptions of the potential use of the embankment area for vehicular movements:

Response:

- The restricted use of the Embankment will be managed through a Traffic Management Order, which is subject to final confirmation at this stage. The LBRUT preference is to allow access along the Embankment between 7am and 10am every day so the closure would be 10am to 7am the following day. The Council have advised that they would have personnel from the facilities team (who are based locally at the LBRUT council offices) to open up the Embankment at 7am and then close it at 10am. It is envisaged that this could be incorporated with the Church Street closure at 10am as part of a daily management procedure.

ii. Further information on the traffic management of this area must be provided
   - Require details of potential time limited use of the embankment, including on any proposed timing arrangements
   - Confirmation of the need for traffic marshals
   - Any associated risk assessments.

Response:

- As above, the potential time limits of the Embankment are subject to final confirmation but are suggested by LBRUT to be between 7am and 10am daily.

iii. Need details as to how the traffic management proposals will work in practice to ensure no negative effects are caused to the operations of the existing operational boat yards located on Eel Pie Island. This would be in line with London Plan policy SI15 (water transport) which states that existing boatyard sites, which are essential to London for servicing passenger and other vessels should be protected, and policy T7 (Deliveries, servicing and construction) which states that development proposals should facilitate sustainable freight movement by rail, waterways and road. Local Plan policy LP 18 is also relevant which states in paragraph 5.7.15 that the council will protect existing river-related industrial and business uses and ensure they are not lost to other uses. Given that there are four operational boatyards successfully operating on the island, which provide a range of services for a variety of vessels operating on the tidal Thames, as well as a number of other businesses and river related activities on the island, it is essential that the management of future servicing and delivery needs at this location are clearly set out.

Response:

- This has been discussed in length with the EPIA through several consultation workshops throughout 2020 and 2021. It is recognised that there are occasional requirements for larger vehicle access to access the slipway and along the Embankment. In liaison with LBRUT facilities and management personnel, who will operate the TMO, it will be possible for the EPIA and other stakeholders who require HGV access to request and plan for HGV access to ensure future servicing and delivery needs at this location are protected.

iv. The Road Safety Audit must be secured via planning condition and include full consideration of any safety implications in the proposed turning area at the bottom of Water Lane for servicing vehicles including those servicing Eel Pie Island, particularly with regard to the risk of any interactions with the existing slipway.

Response:

- Noted and agreed. A Stage 2 Road Safety Audit has been commissioned by LBRUT as part of the Stage 4 Highways Consultancy works for WSP and will be available for comment once finalised.

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2. Use of the River through the construction stage

London Plan policy SI15 states that development proposals close to navigable waterways should maximise water transport for bulk materials during demolition and construction phases.

Within the air quality assessment, Appendix E outlines construction mitigation measures, which includes a recommendation to use the river for deliveries to avoid peak hour delivery periods on the adjacent roads. In addition, the FCMP states that once a principal contractor is appointed a more detailed Construction Management Plan will be produced, which will include a General Access Strategy for the construction stage. PLA support such, and recommendation this should be taken forward and confirmed through an appropriately worded condition to include full consideration of the use of the tidal Thames for construction.

Response:

- Noted. A detailed Construction Management Plan will be produced once Lead / Principal Contractor has been formally appointed and will include clear detail on proposed access strategy, routing, phasing programme, construction trips and method of transportation. Within this, consideration will be given to potential use of the River Thames within construction where this is deemed relevant or effective in construction of the masterplan.

3. Access during construction:

The FCMP includes reference to the need to ensure that throughout the construction period, service and emergency vehicle access needs to be maintained for the businesses and residents on Eel Pie Island, particularly the operational boatyards on the island which must be able to continue to operate without any negative effects during this time. This includes the need to take into account that this could include various vehicle movements including articulated vehicles.

Response:

- Noted. Once formally appointed, a Construction Management Plan will be produced outlining clearly the phasing and programme for the site, and the associated management of construction vehicle routing and access, and emergency vehicle routing and access, ensuring that across all phases emergency access to Eel Pie Island and the wider masterplan site can be achieved.

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[17] SUMMARY

17. Summary:

a) Given the extent of information of outstanding matters, it is a recommended a meeting is arranged to discuss these in more detail.

b) If all the outstanding matters can be addressed, the provision heads of terms will include:

- CPZ restrictions
- Traffic Orders and S278 / S38 works
- Car club membership
- Travel Plans – and monies for monitoring
- CMS – and monies for monitoring
- Contributions for Active Travel Zones

c) Please provide a summary of the representations received to date relating to highway matters. Where material, these will need to be addressed in any future Planning Committee Report:

Response:

- A) This is noted. The design team would welcome a meeting to discuss the above in more detail and to ensure that all queries have been satisfactorily addressed.
- B) The design team would also welcome a discussion on the provisional heads of terms.
- C) With regards a summary of transport comments, it is understood that over 150 comments from neighbours were lodged on the application in relation to transport matters. Some residents were concerned that the removal of car parking could make it difficult for visitors to make a journey to the Proposed Development and the wider area. Other residents supported the removal of car parking to enhance the public realm and spaces of social value such as children's playspace and access to green space.

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SUMMARY OF HIGHWAYS RESPONSE POINTS

Cycling

- Layout of the cycle parking
- No capability to park accessible cycles

Highways

- Safety concerns
- Unsafe route for HGV access through pedestrian area
- Pedestrian and cycle safety in response to 2way Water and Wharf Lane
- Safety audits:
  - show the two way Water and Wharf Lane present safety concerns
  - Lack of independent Safety audit for two-way traffic on Water and Wharf Lane
  - Lack of a full Road Safety Audit Stage 1
  - Need for safety audits on all turning areas and two-way traffic
- One way system should remain
- Reduction in pavements in King Street will increase rather than decrease the impact of traffic
- Insufficient and inadequacy of parking / loading / turning spaces for deliveries and disabled access – both for development, existing businesses and Eel Pie Island
- Turning areas for vehicles – impact on open space
- Insufficient junction mouths
- Absence of an Equality Impact Assessment for loss of parking

Traffic

- Unclear how traffic will be controlled
- Excessive traffic generation
- Congestion caused by 2-way system
- Will generate more traffic
- Whole of Twickenham will become at a standstill
- Transport and access plans are untested
- Lack of assessment on the effect on overall traffic flow
- Lack of safety report for 2-way traffic
- The applicants own road safety audit stage 1 report recommended the retention of the 1 way arrangements.
- Loss of access for emergency vehicles

- Transport Assessment insufficient – does not show trip generation for all uses

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Parking	• Not enough provision for displaced parking • Loss of parking and impact on residents, businesses, clubs • Lack of disabled parking provision • Insufficient car parking for residents • How will the loss of parking be managed? • Need to remove the motorcycle parking • A scheme could reduce the level of parking, but keep some, focussing on disabled spaces • Prevent commercial vehicles from blocking the spaces beyond deliveries
Heatham Alliance:	• No connection between Water and Wharf Lane • Pedestrian and cyclist safety • Traffic movement • Need for safety audits • Parking impacts for town centre and need for socio/economic impact considerations • Lack of detail in the construction plan.
Richmond Yacht Club	• Inadequate parking, loading and turning • Pedestrian and highway safety • Lack of disabled person's access • Impact of two-way traffic on Water and Wharf Lane • Reduction in road access
CPRE London	• Do however strongly supper the removal of the parking form the Embankment • Reducing parking can support the mode shift away from the car.
River Thames Society	• There is already a car-free walkway at the river's edge, so any added value from elimination of car-parking is outweighed by the negative impact on the businesses and residents that make Eel Pie Island (EPI) such a special location. • Needs of the ice-cream van • Congestion at the end of River Lane would damage the peace and harmony for all, including those on the river, as well as providing added risks to pedestrians.
The Twickenham Society	• No Socio-economic assessment to back up the removal of so parking – impact on businesses

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Paul Mews Associates on behalf of Eel Pie Island Association

- Lack of detail of the Traffic Regulation Order to allow a proper assessment.
- Loss of loading bay on Water Lane for Church Street and displacement to loading bays by Eel Pie Island.
- Wharf Lane has a 7.5 tonne limit, resulting in further pressure on the proposed loading bays for Eel Pie Island.
- Water Lane junction – impact on trees (lack of information)
- Pinchpoint on footpath adjacent to 31 Church Street and 1a Water Lane – unsafe.
- Lack of speed survey on King Street to demonstrate sightlines are adequate.
- Narrow / unsafe footpaths on Wharf Lane
- Gates in service road limiting turning
- Lack of visibility in Wharf Lane when turning into road – potential for collision / rear shunt collisions
- Potential pedestrian / vehicle conflict
- Road Safety Audit
    - Did not include pedestrian / cyclists on Embankment
    - RSA Team were not presented with vehicle turning diagrams at the bottom end of Water / Wharf Lane
    - Recommendation to retain 1 way system
    - Not in line with Mayors vision zero and policies T2 and T4 of the London Plan
- Parking impact assessment too broad
- Will lead to saturated parking and highway safety impacts in Riverside area
- Assessment against the Road Traffic Regulation Act:
    - Impact on free movement of traffic
    - Access to premises
    - Availability of off street parking

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Those who have written in 'Support' representations, still raise highway matters:

- Parking bays and other obstructions should be removed
- Use of the river for transport should not be forgotten
- Question truck / HGV route – will compromise flexible use of the space adjacent to the river – therefore this should be re-examined.
- HGVs and traffic must be kept to absolute minimum
- Should be no vehicular connection across the SW corner of the site
- Further consideration should be given as to how it connects to the train station and other existing cycle routes.
- Should reinstate the cycle route through the site.
- Need for cycle parking
- Access consultant should be involved to ensure it is fully accessible and inclusive

Richmond Cycling Champaign	• Hope to retain the long-discussed option of segregated cycling on Water and Wharf Lane – however trust the development will be sufficiently successful that such provision is unnecessary. • Welcome inclusion of appropriate levels of cycling parking • Concern that parking for nonstandard bikes receive limited mention
Parking	• Removal of cars from riverside favourable, provided Eel Pie Island residents have alternative places to access homes / business • Disabled parking spaces should be retained and increased • Loss of parking along the river – for residents, businesses and visitors
Traffic flows	• Large lorries should be restricted to certain hours • Routes for large vehicles – tracking? • What will be the impact on traffic flow if drivers cannot park on the riverside? • Potential safety conflicts between vehicles and water sports area

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SUMMARY OF POST-FEEDBACK ACTIONS

The key actions to be undertaken following full review of the highways comments are as follows.

- **LBRUT –** An expanded Stage 1 Road Safety Audit is in the process of being commissioned by LBRUT and undertaken focusing on the full masterplan layout as requested by LBRUT highways.

- **LDA** (Landscape Architects) are continuing to work with Hopkins and WSP to provide additional short stay cycle parking spaces within the layout.

- **LDA, Hopkins Architects** and **WSP** will continue to provide further review of the King Street junction with Water Lane and where necessary undertake minor amendments to ensure both two-way access and tree protection are maintained.

- **WSP** have made contact with TfL in December 2021 to arrange a workshop in January 2022 to talk them through the proposed changes in terms of the two-way working and masterplan layout.

- **Hopkins Architects** will continue to review cycle parking provision through workshops with WSP. So far two further workshops have taken place with WSP in December 2021 to review the layout, which has increased provision for both Wharf Lane and Water Lane buildings and will be circulated in due course.

- **LBRUT** and **Hopkins Architects** will continue to provide information on construction vehicle access routing in accordance with phasing plan in response to comments raised by highways in relation to demolition and construction routing, and retention of emergency vehicle access at all times.

- **WSP** to coordinate a further workshop with Highways, proposed to be in January 2022, to discuss the outcome of the and present further technical drawings and developments where this is helpful and relevant to the comments raised by Highways.

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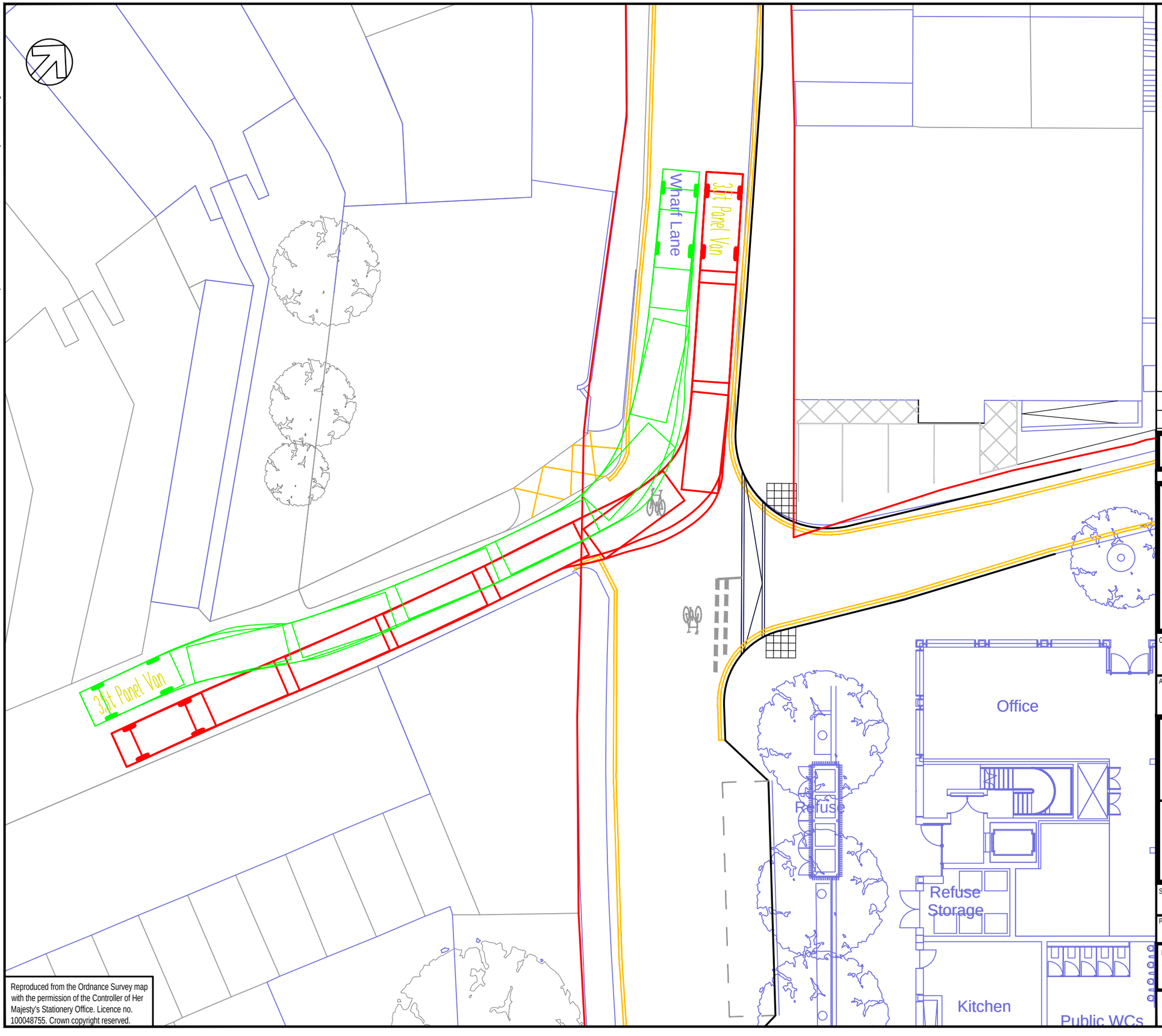
APPENDED DRAWINGS

- **Wharf Lane and Private Access Road Large Car Access / Egress**
  - TK-SK-69-P01
- **Large Car and 7.5t Box Van Egress Wharf Lane**
  - TK-SK-69-P01
- **Richmond Refuse Truck, 10m Rigid Lorry, 16.5m Artic Egress Wharf Lane**
  - TK-SK-70-P01
- **Proposed Highway Arrangement with additional loading bay on Water Lane**
  - TK-SK-71-P01
- **Richmond Refuse Truck swept-path Wharf Lane**
  - TP-SK-52-TR9_P13
- **Walking Catchment Map** - *Parking Proposals in CPZ Area (Zone D) - for Implementation*
  - 109735-sk-008
- **Highway Boundary Plan**
  - TRS-WSP-SW-XX-DR-CV-SK0011 P01 TK-SK-69-P01



DO NOT SCALE

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	09/12/2021	CRJB	FIRST ISSUE	TE	TG

DRAWING STATUS:
S2 - FOR INFORMATION

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wsp.com

CLIENT:
HOPKINS

ARCHITECT:
HOPKINS

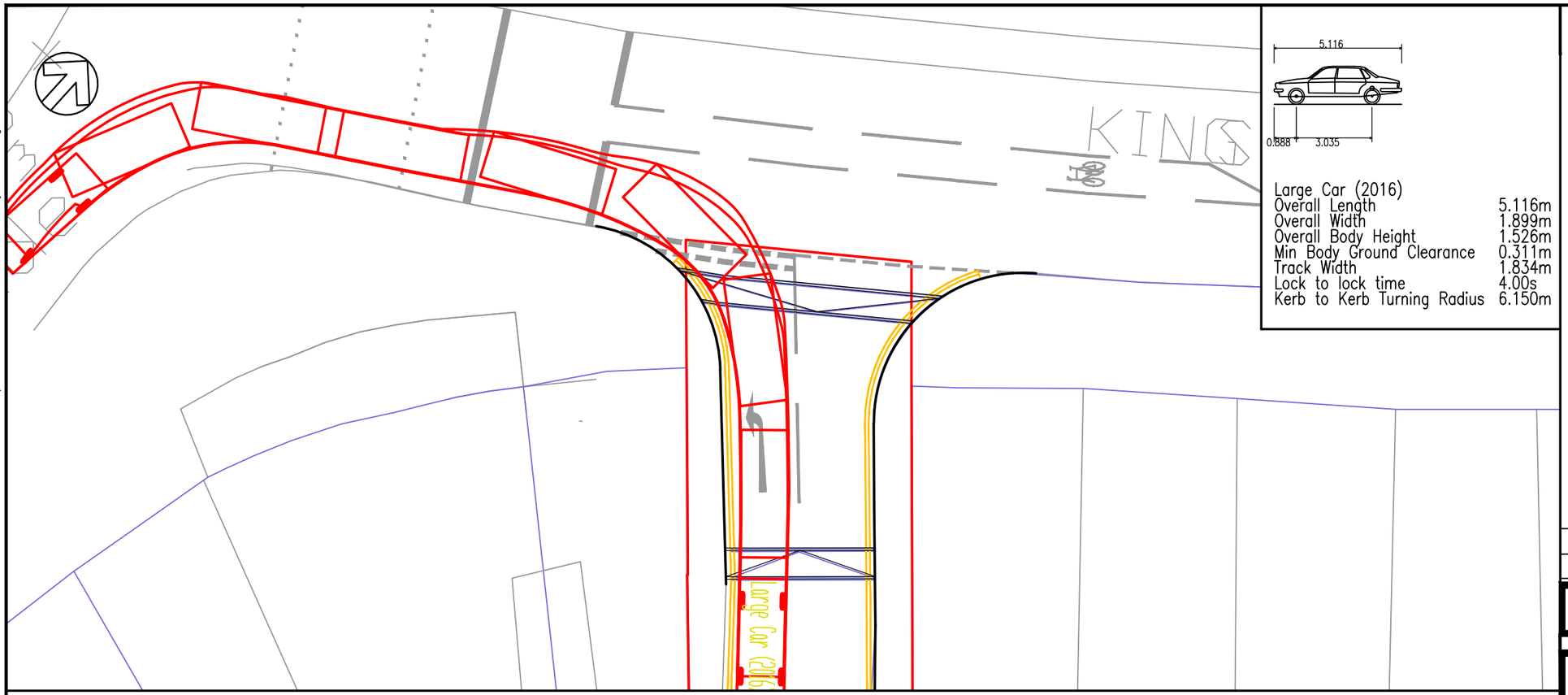
PROJECT:
TWICKENHAM RIVERSIDE

TITLE:
WHARF LANE AND PRIVATE ACCESS ROAD JUNCTION
SMALL VAN ACCESS

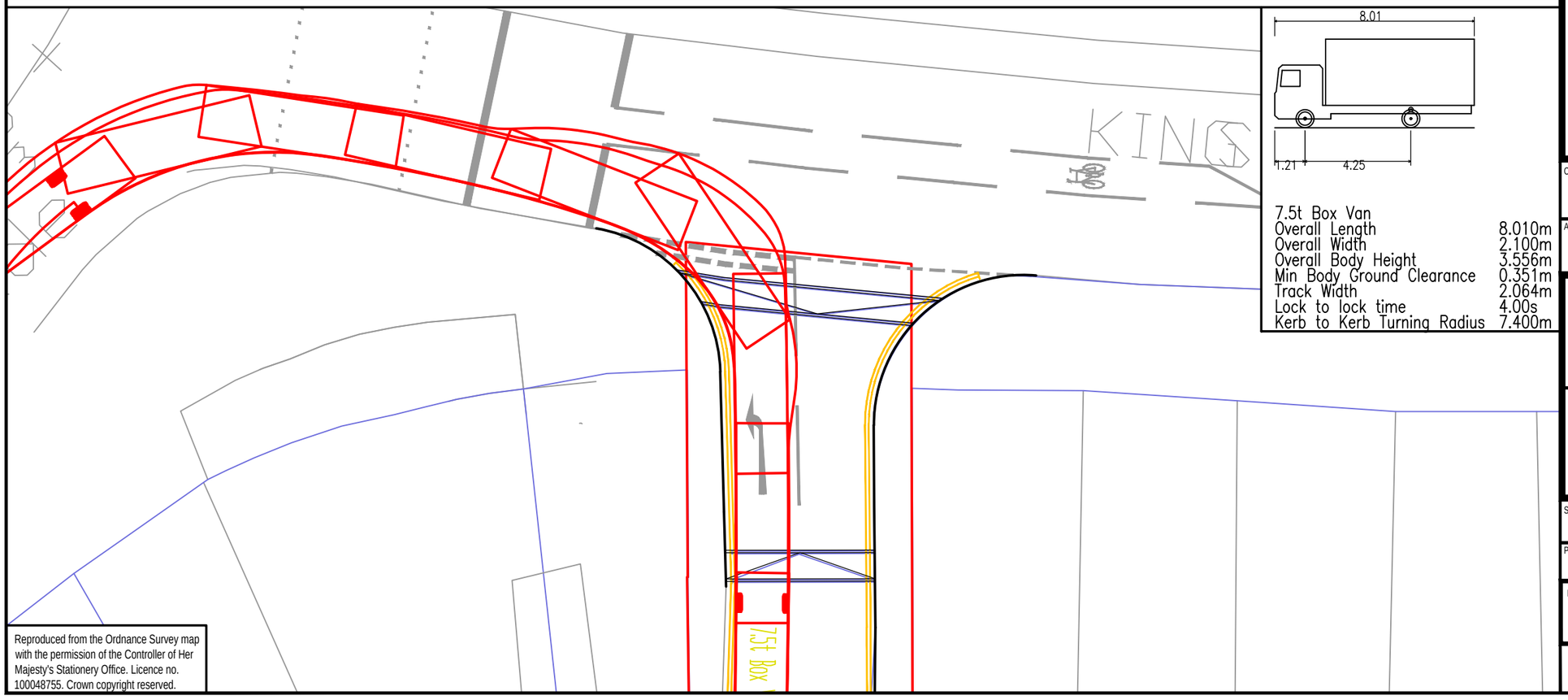
SCALE @ A3:	CHECKED:	APPROVED:
1:200	TE	TG

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70059704	CRJB	CRJB	December 21

DRAWING No:	REV:
70059704-TP-SK-68	P01



Large Car (2016)	
Overall Length	5.116m
Overall Width	1.899m
Overall Body Height	1.526m
Min Body Ground Clearance	0.311m
Track Width	1.834m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.150m



7.5t Box Van	
Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m

DO NOT SCALE

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DRAWING STATUS:
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WSP House, 70 Chancery Lane, London, WC2A 1AF, UK
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CLIENT:
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ARCHITECT:
HOPKINS

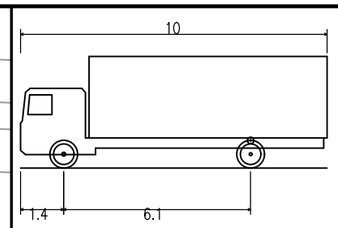
PROJECT:
TWICKENHAM RIVERSIDE

TITLE:
WHARF LANE
7.5T BOX VAN AND LARGE CAR EXIT

SCALE @ A3:	CHECKED:	APPROVED:
1:200	TE	TG

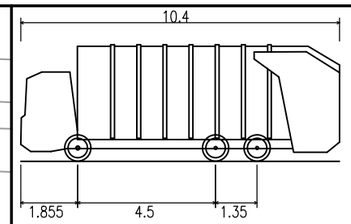
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70059704	CRJB	CRJB	December 21

DRAWING No:	REV:
70059704-TP-SK-69	P01



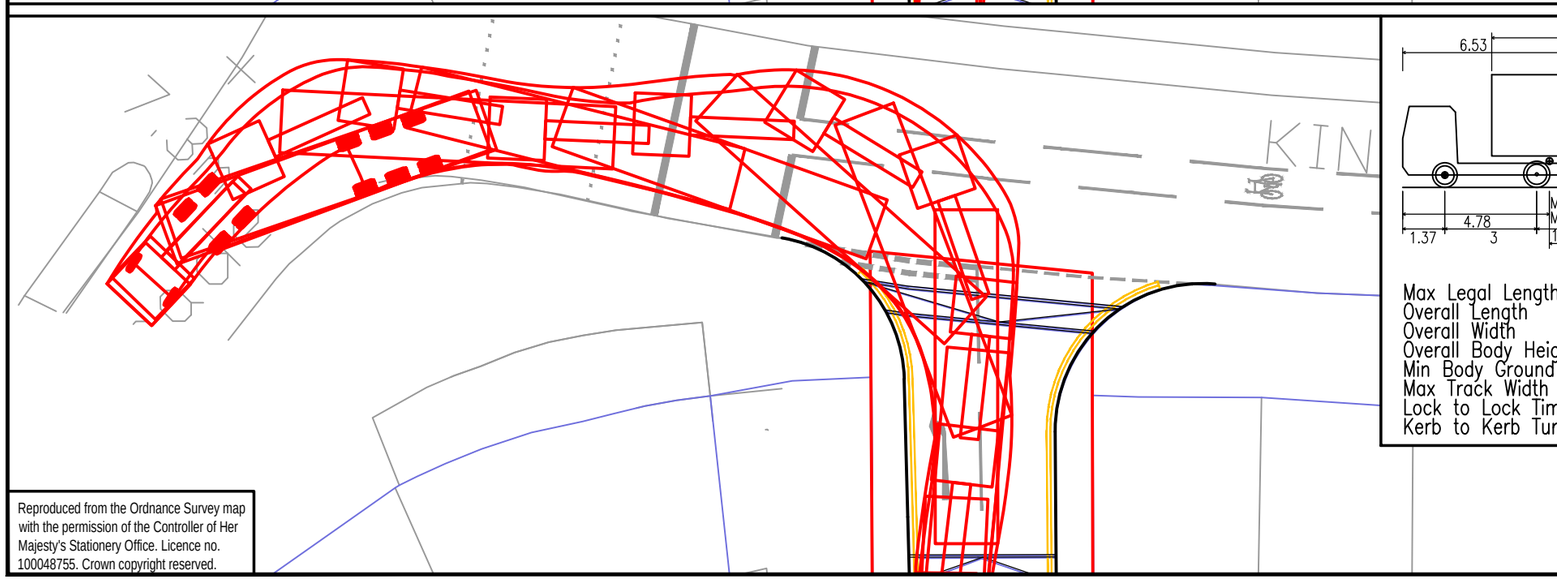
FTA Design HG Rigid Vehicle (1998)

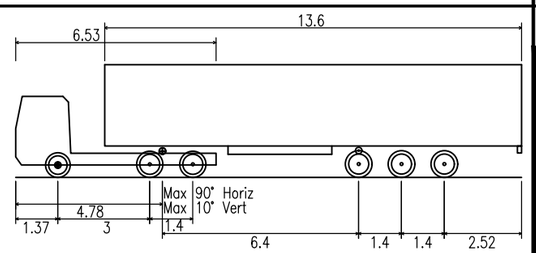
Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.645m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	11.000m



Richmond Refuse Vehicle

Overall Length	10.400m
Overall Width	2.500m
Overall Body Height	3.800m
Min Body Ground Clearance	0.295m
Track Width	2.450m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.350m





Max Legal Length Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	6.530m

DO NOT SCALE

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	10/12/2021	CRJB	FIRST ISSUE	TE	TG

DRAWING STATUS:
S2 - FOR INFORMATION

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK
T+ 44 (0) 207 314 5000, F+ 44 (0) 207 314 5111
wsp.com

CLIENT:
HOPKINS

ARCHITECT:
HOPKINS

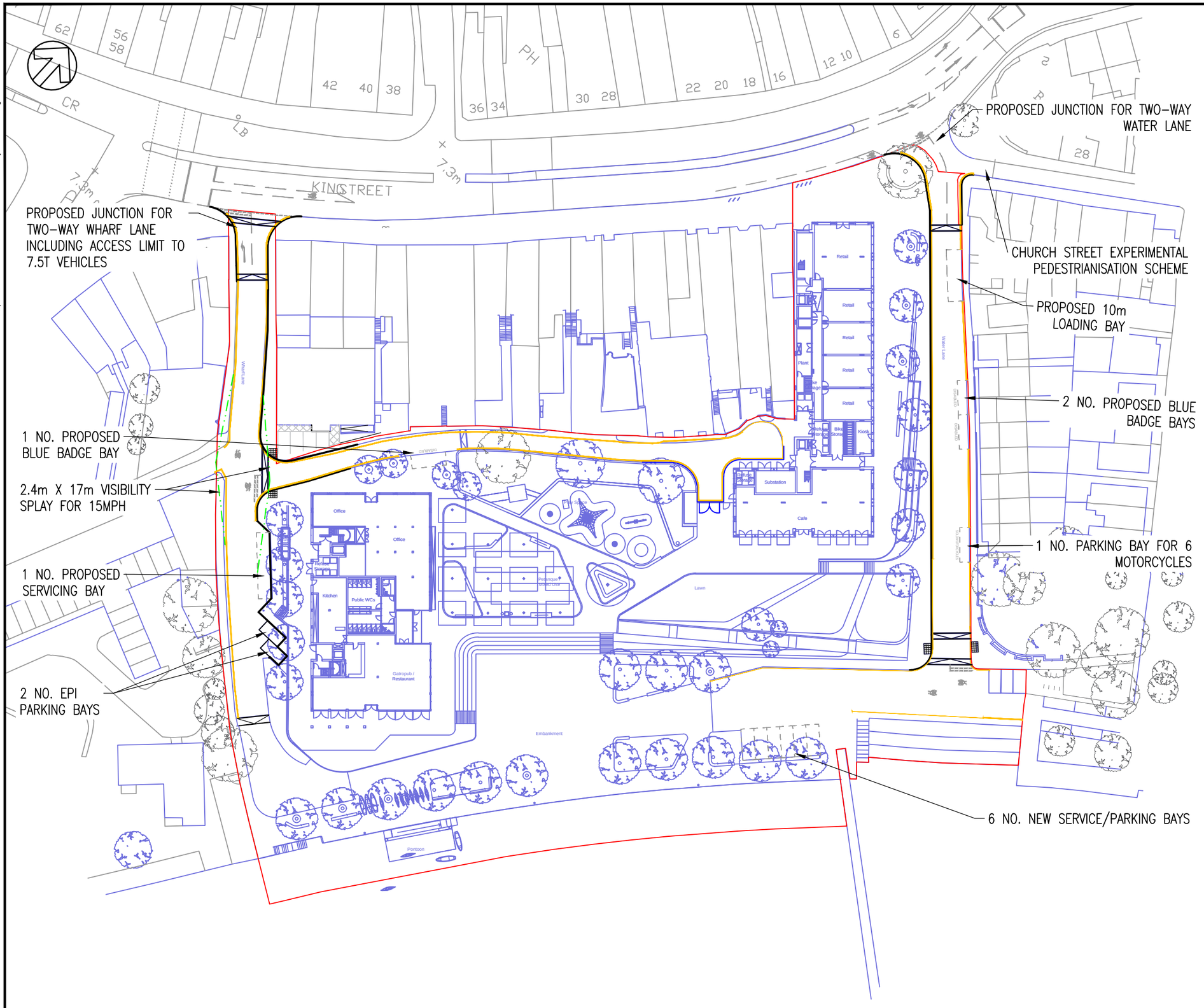
PROJECT:
TWICKENHAM RIVERSIDE

TITLE:
WHARF LANE
10m RIGID, REFUSE AND 16.5m ARTIC EXIT

SCALE @ A3:	CHECKED:	APPROVED:
1:250	TE	TG

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70059704	CRJB	CRJB	December 21

DRAWING No: 70059704-TP-SK-70
REV: P01



DO NOT SCALE

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	17/12/2021	CRJB	FIRST ISSUE	TE	TG

DRAWING STATUS: S2 - FOR INFORMATION

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK
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wsp.com

CLIENT: HOPKINS

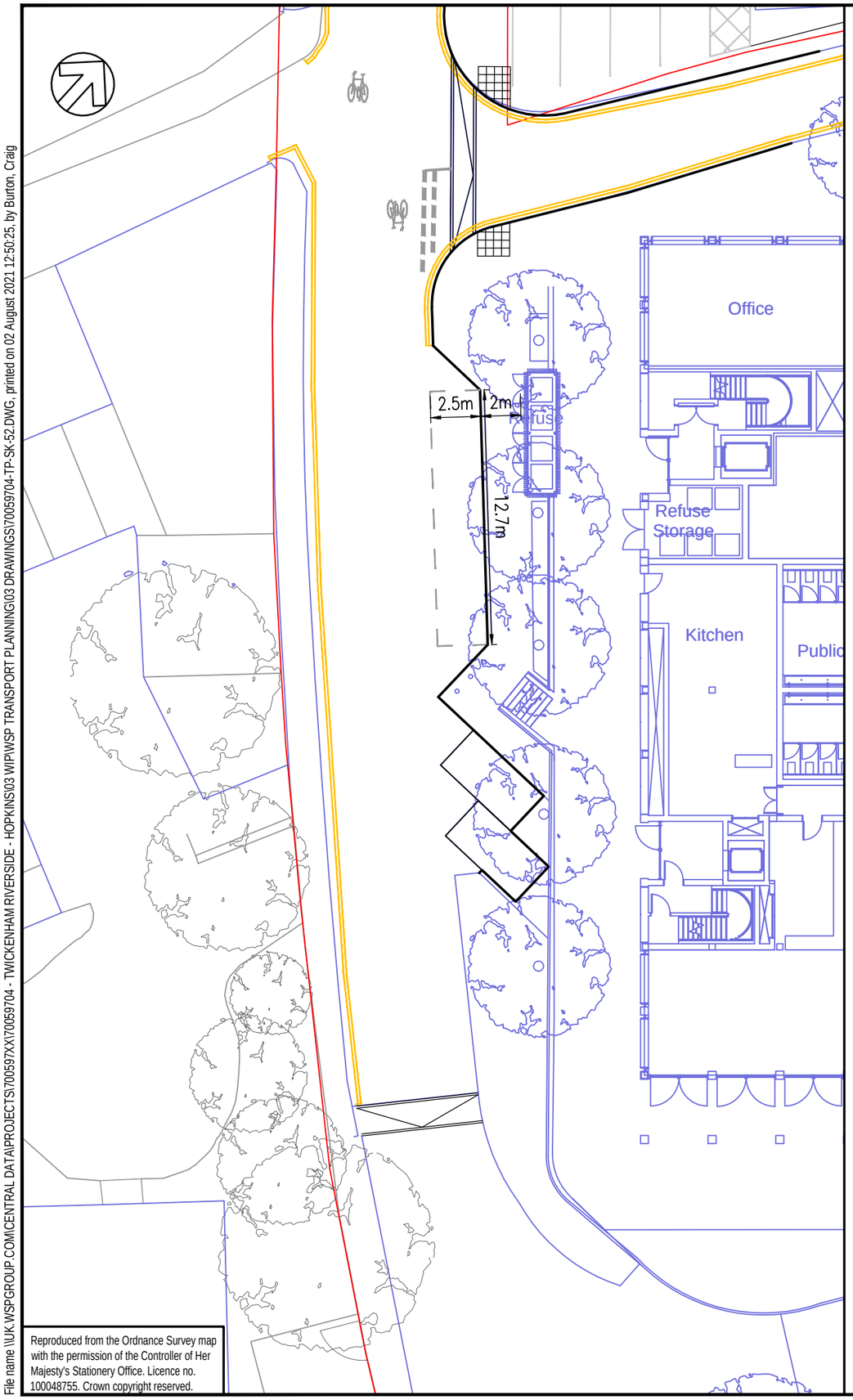
ARCHITECT: HOPKINS

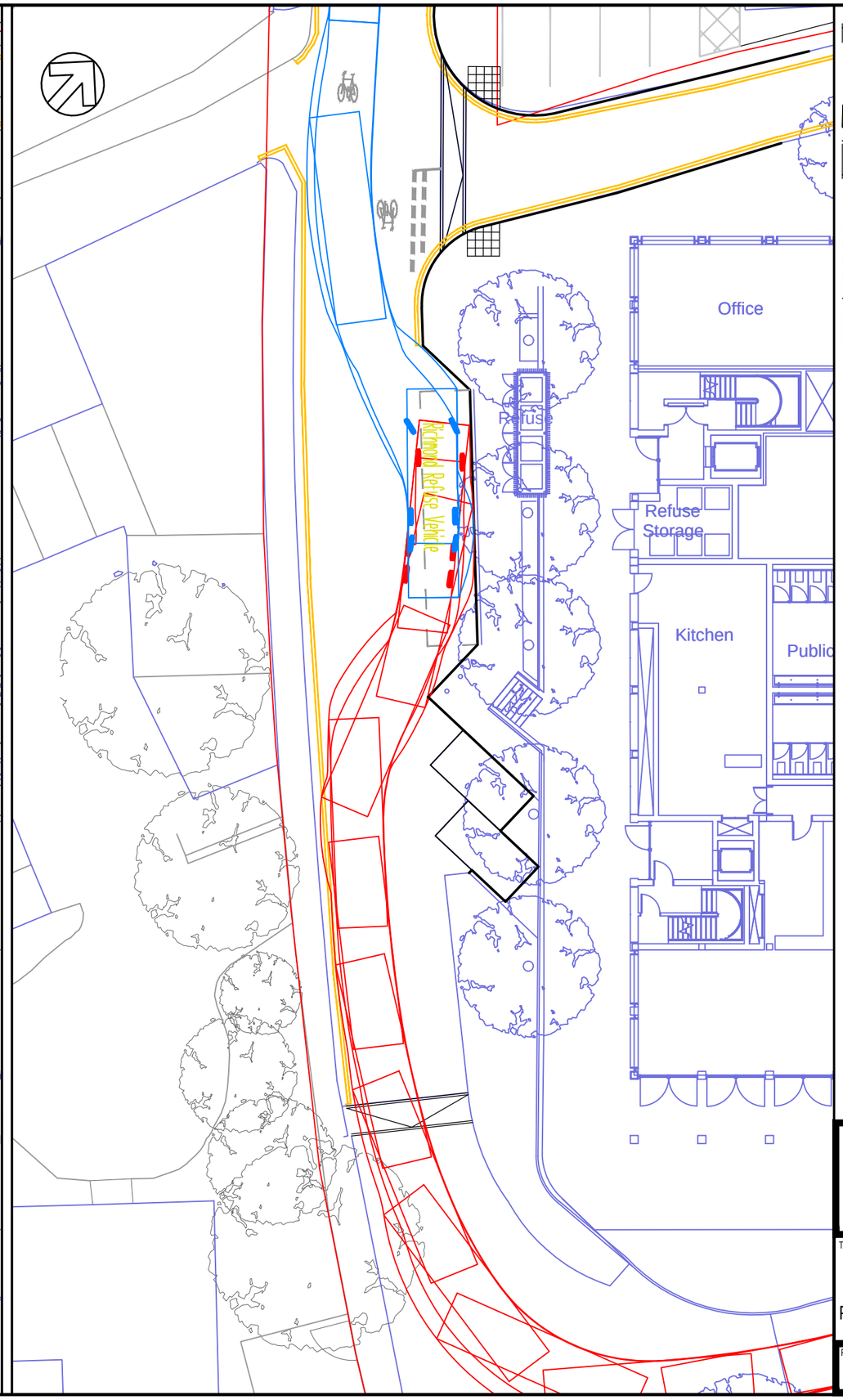
PROJECT: TWICKENHAM RIVERSIDE

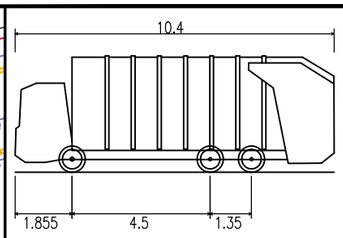
TITLE: PROPOSED HIGHWAY ARRANGEMENT WITH LOADING BAY ADDED TO WATER LANE

SCALE @ A3:	CHECKED:		APPROVED:
1:750	TE		TG
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70059704	CRJB	CRJB	December 21

DRAWING No: 70059704-TP-SK-71 REV: P01







Richmond Refuse Vehicle	
Overall Length	10.400m
Overall Width	2.500m
Overall Body Height	3.800m
Min Body Ground Clearance	0.295m
Track Width	2.450m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.350m

0 1:250 10m

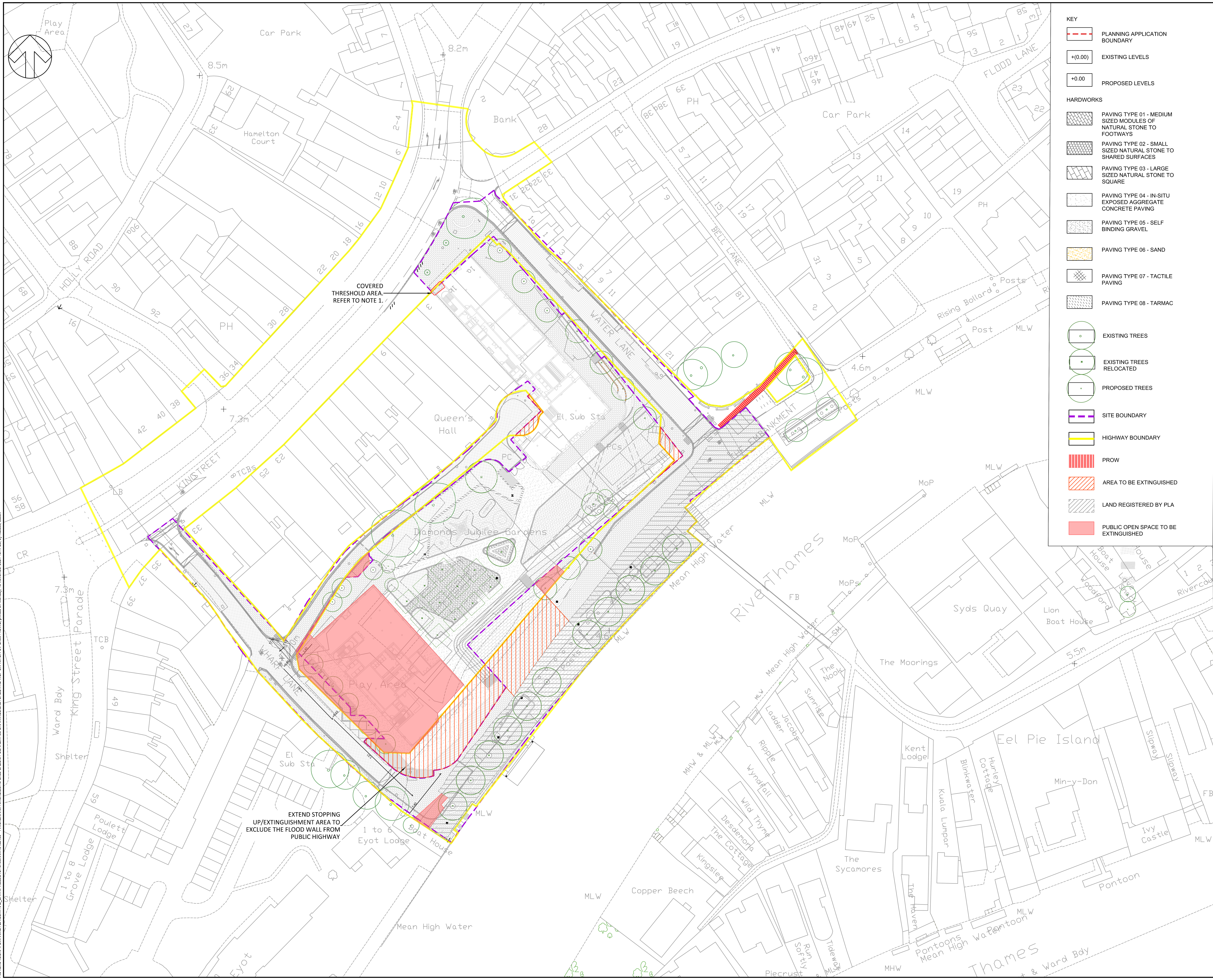
wsp

TITLE:

HOPKINS MASTERPLAN
PROPOSED HIGHWAY ARRANGEMENT
PROP SERVICE RD BAY & FIRE PASSING

FIGURE No:

70059704-TP-SK-52-TR9


KEY
PLANNING APPLICATION BOUNDARY
+(0.00) EXISTING LEVELS
+0.00 PROPOSED LEVELS
HARDWORKS
PAVING TYPE 01 - MEDIUM SIZED MODULES OF NATURAL STONE TO FOOTWAYS
PAVING TYPE 02 - SMALL SIZED NATURAL STONE TO SHARED SURFACES
PAVING TYPE 03 - LARGE SIZED NATURAL STONE TO SQUARE
PAVING TYPE 04 - IN-SITU EXPOSED AGGREGATE CONCRETE PAVING
PAVING TYPE 05 - SELF BINDING GRAVEL
PAVING TYPE 06 - SAND
PAVING TYPE 07 - TACTILE PAVING
PAVING TYPE 08 - TARMAC
EXISTING TREES
EXISTING TREES RELOCATED
PROPOSED TREES
SITE BOUNDARY
HIGHWAY BOUNDARY
PROW
AREA TO BE EXTINGUISHED
LAND REGISTERED BY PLA
PUBLIC OPEN SPACE TO BE EXTINGUISHED
COVERED THRESHOLD AREA. REFER TO NOTE 1.
EXTEND STOPPING UP/EXTINGUISHMENT AREA TO EXCLUDE THE FLOOD WALL FROM PUBLIC HIGHWAY
KING STREET
HOLLY ROAD
WATER LANE
BELL LANE
WHARF LANE
THE EMBANKMENT
FLOOD LANE
Diamond Jubilee Gardens
Queen's Hall
Play Area
River Thames
Eel Pie Island
Syds Quay
The Moorings
Lion Boat House
Car Park
Hamelton Court
King Street Parade
Copper Beech
Mean High Water
1 to 6 Eyot Lodge
Boat House

DO NOT SCALE

NOTES

1. COVERED THRESHOLD AREA NOT INCLUDED IN THE HIGHWAY ADOPTION DUE TO OVER-SAILING LICENSE REQUIREMENTS AND OUTWARD OPENING DOOR

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	21/11/15	JN	DRAFT	TI	TI

DRAWING STATUS: S0 - WORK IN PROGRESS

wsp

Regus House, Southampton Int. Bus. Park, George Curl Way, Southampton, SO18 2RZ, UK
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wsp.com

CLIENT: HOPKINS

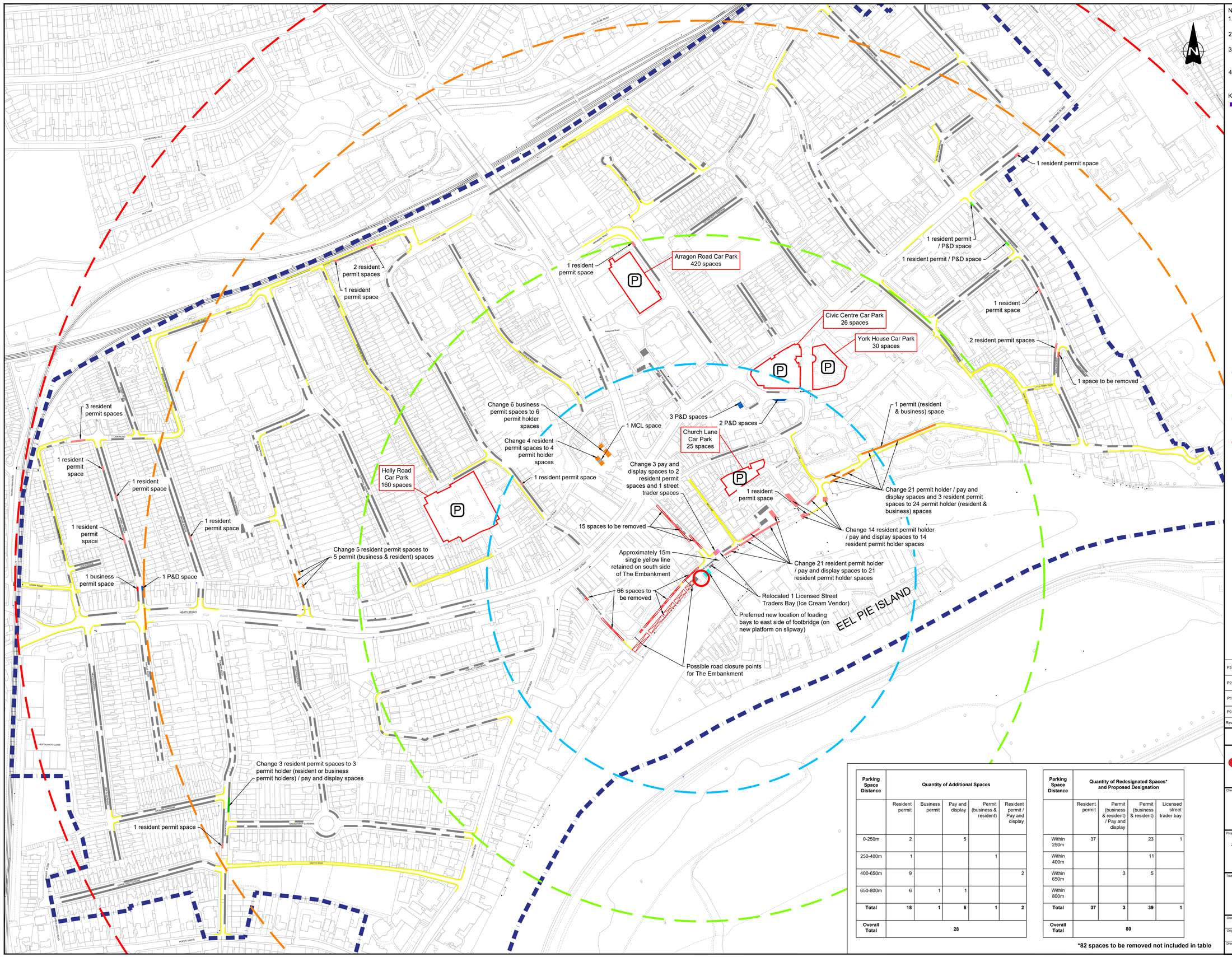
ARCHITECT: HOPKINS

SITE/PROJECT: TWICKENHAM RIVERSIDE PROJECT

TITLE: PROPOSED EXTINGUISHED AREAS LAYOUT

SCALE @ A1: 1:500	CHECKED: TI		APPROVED: TI
PROJECT NO: 70059704	DESIGNED: TI	DRAWN: JN	DATE: November 21

DRAWING No: TRS-WSP-SW-XX-DR-CV-SK0011 REV: P01



Notes:

1. Do not scale from this drawing. If in doubt refer to the project manager for clarification.
2. All dimensions are shown in metres unless otherwise stated.
3. Layout based on Ordnance Survey MasterMap, © Crown Copyright 2018. All rights reserved. Licence number 100022432.
4. Existing bays are based on layout provided by London Borough of Richmond Upon Thames.

Key:

- Zone D Boundary
- Proposed Double Yellow Line
- Resident Permit Holder Space
- Pay & Display
- Business Permit Holder Space
- Existing Space
- Permit Holder Space (Resident or Business Permit Holders)
- Loading Bay
- Resident Permit Holder / Pay & Display Space
- Permit Holder Only (Resident or Business Permit Holders) / Pay and Display Space
- Licensed Street Traders Bay (Ice Cream Vendor)
- Motorcyle Space
- Existing space to be removed
- Embankment distance reference point
- Straight line distance isochrone radius of 250m
- Straight line distance isochrone radius of 400m
- Straight line distance isochrone radius of 650m
- Straight line distance isochrone radius of 800m

Note: Pay & Display Spaces include Pay at Machine and/or Pay By Phone

Parking Space Distance	Quantity of Additional Spaces				
	Resident permit	Business permit	Pay and display	Permit (business & resident)	Resident permit / Pay and display
0-250m	2		5		
250-400m	1			1	
400-650m	9				2
650-800m	6	1	1		
Total	**18**	**1**	**6**	**1**	**2**
Overall Total	**28**				

Parking Space Distance	Quantity of Redesignated Spaces* and Proposed Designation			
	Resident permit	Permit (business & resident) / Pay and display	Permit (business & resident)	Licensed street trader bay
Within 250m	37		23	1
Within 400m			11	
Within 650m		3	5	
Within 800m				
Total	**37**	**3**	**39**	**1**
Overall Total	**80**			

***82 spaces to be removed not included in table**

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P3	03/06/21	Holly Road SY Amendments	ES	EJ	EJ	EJ
P2	19/05/21	CPZ Existing Parking Bays Revision	ES	EJ	EJ	EJ
P1	15/02/21	CPZ parking revisions upto January 2021, as advised by LB Richmond	MIE	JG	EJ	EJ
P0	05/10/20	Initial issue	MIE	CD	EJ	EJ

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Client: **London Borough of Richmond Upon Thames**

Project: **Twickenham Riverside Development Parking and Servicing Proposal**

Title: **Parking Proposals in CPZ Area (Zone D) - for Implementation**

Drawn	Checked	Reviewed	Approved
MIE	CD	EJ	EJ
Original drg. size	**Date**	**Scale**	**Drawing Status**
A1	05/10/2020	1:2000	Information
Drawing Number			**Rev.**
109735-sk-008			P3