

Job Name: Stag Brewery, Mortlake
Job No: 38262
Note No: TN040 – Final
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Subject: **Consultation Response**

1.1 Introduction

1.1.1 This technical note has been prepared by Stantec to provide further clarification in response to the public and statutory consultations that have been held for the revised Stag Development scheme. These clarifications have been categorised into the following core topic areas and are discussed in more detail within this technical note.

- Car Parking
- Highway Mitigation - Chalkers Corner
- Parking Stress Survey Results
- Preferred Chalkers Corner Option
- Other Highway Improvements
- Pedestrian Improvements
- Towpath Improvements
- Cycle Infrastructure / Parking
- Servicing
- Public Transport Improvements
- Impact on Mortlake Station
- Sheen Lane Crossing
- Impact of Closure of Hammersmith Bridge
- Use of Thames for Construction Waste / Materials and Passenger Services
- Impact of Manor Road Development

1.2 Car Parking

1.2.1 There have been concerns raised over the level of car parking that the development provides, including representations stating that the site is providing too much and other representations that too little parking is provided. Therefore, the development proposals have been developed to

provide parking numbers that comply with the current and proposed Mayoral parking policies. In the original scheme that was consented in January 2020 there were 679 car parking spaces. In the revised scheme the number of car parking spaces has reduced significantly by 186 to 493 spaces, again in line with TfL / GLA aspirations for a lower parking ratio.

- 1.2.2 The proposed residential parking ratio for the site is now 0.33, which is well within the Intend to Publish (ITP) London Plan standards for a development in Outer London, which has a maximum permitted parking ratio of 0.75 for a PTAL of 2-4. The development is therefore policy compliant in terms of parking.
- 1.2.3 The reduction in parking numbers is considered to be a big positive for the revised scheme and has been welcomed by TfL / GLA and LBRuT. In turn the reduced car parking at the site will help to encourage active and sustainable travel modes and reduce the reliance on the private car. This will also reduce the impact of the development on the roads surrounding the development.
- 1.2.4 The applicant has also agreed to fund a Controlled Parking Zone around the development, with neither residents nor businesses of the Stag development being entitled to apply for permits. This will protect parking on surrounding roads for existing residents and ensure that the new development will not impact parking in the surrounding area.
- 1.2.5 Three electric vehicle car club spaces are also proposed on Ship Lane, which will be able to be used by existing residents as well as new residents within the Stag development. In addition, a minimum of 20% of the development car parking will provide active electric charging facilities with the remaining spaces providing passive provision.
- 1.2.6 As part of ongoing monitoring of the car parking spaces within the development, which will be undertaken as part of the Car Parking Management Plan (CPMP), the uptake of car parking spaces will be reviewed regularly. Should there be less demand for car parking spaces then there will be an opportunity for some of these spaces to be repurposed for cycle parking. In addition, if demand for additional disabled spaces arises in the future then these will be provided through the conversion of standard spaces to disabled spaces.

1.3 Highway Mitigation - Chalkers Corner

- 1.3.1 The outcome of the LBRuT Planning Committee meeting held on 29th January 2020 was a resolution to grant planning permission for the masterplan (Application A) and school (Application B) however, it was not felt that the proposed Chalkers Corner scheme (Application C) was required to make Applications A and B acceptable.
- 1.3.2 While the previous Chalkers Corner scheme (Application C) was resolved to be refused at LBRuT's Planning Committee, Application C was kept live as a result of the call-in process, while further assessment of options for Chalkers Corner were undertaken.
- 1.3.3 A number of options were considered for Chalkers Corner as part of the revised scheme, which included the following:
 - Option 1: LBRuT Mitigation Package
 - Option 2: Chalkers Corner 'Light'
 - Option 3: Lower Richmond Road Bus Lane
 - Option 4: Chalkers Corner 'Light' & Bus Lane
 - Option 5: Chalkers Corner Scheme (Application C) – Withdrawn

- 1.3.4 Option 1 LBRuT Mitigation Package identified a need to do something at Chalkers Corner, however, did not provide any scheme and instead recommended a cash sum should be allocated for future improvements at Chalkers Corner, together with an Area Wide Traffic Management Contribution, Highway Improvements and Travel Plan bond. As no option for Chalkers Corner was proposed this was not able to be tested / modelled. However, that is not to say that one of the other options at Chalkers Corner and the other highway improvements could not be captured as part of this option.
- 1.3.5 The area wide traffic management contribution includes measures to support safe and convenient access by foot, bicycle and bus, traffic signal and junction improvements, improvements to Mortlake Station and Barnes Bridge station, signage and wayfinding, bus stop infrastructure, environmental improvement, cycle parking and traffic enforcement. In addition, Highway improvements contribution includes improvements on Lower Richmond Road, Mortlake High Street and Sheen Lane. The highway mitigation package proposed for the development has been agreed with TfL to suitably mitigate the impact of the development. Furthermore, the mitigation package will provide improvements for pedestrians, cyclists and access to bus stops and Mortlake Train Station through improvements to Lower Richmond Road, Mortlake High Street and Sheen Lane. Full details of the highway package proposed is included in the Transport Assessment Addendum – Rev B and summarised in Section 1.6 of this Technical Note.
- 1.3.6 In addition, initial analysis suggested that the Option 3 Lower Richmond Road bus lane would not work on its own. This included a review for different lengths of bus lane, however all analysis suggested that a mitigation would still be required at Chalkers Corner and was subsequently removed from any detailed modelling.
- 1.3.7 Detailed modelling was undertaken for the existing Chalkers Corner layout and Options 2 and 4 using microsimulation software, which was taken through a full TfL VISSIM Model Auditing Process (VMAP) to determine whether any of the above options were feasible and in which case which option would best mitigate the impact of the development on Chalkers Corner.
- 1.3.8 The results concluded that the existing Chalkers Corner layout with no mitigation, would not be acceptable to TfL due to the impact of the development along Lower Richmond Road on general traffic bus journey times and pedestrians and cyclists. The modelling did however show that both Options 2 and 4 would provide mitigations for the development traffic. This has allowed Option 5 - Application C to be withdrawn and will no longer be considered an option.
- 1.3.9 While Option 2 provides general traffic mitigation for the development the benefit to buses with the introduction of the bus lane in Option 4 is considerably greater in both peak periods. This will help to achieve the targets set out in the Intend to Publish London Plan Dec 2019 Policy T1 for 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041.
- 1.3.10 In addition, with the Hammersmith Bridge closure there have also been some changes to bus routes surrounding the Stag Development and Route 533 now travels along Lower Richmond Road through Chalkers Corner and over Chiswick Bridge. The bus lane would therefore also provide significant benefits for bus journey times for Route 533 as well as Route 419, although this would likely be until Hammersmith Bridge is reopened.
- 1.3.11 Further details of each option are provided within the submitted TA Addendum document – Revision B, dated July 2020. In addition, a summary of the modelling output is included in TN041 – Microsimulation Modelling Summary Technical Note, included in Appendix B.

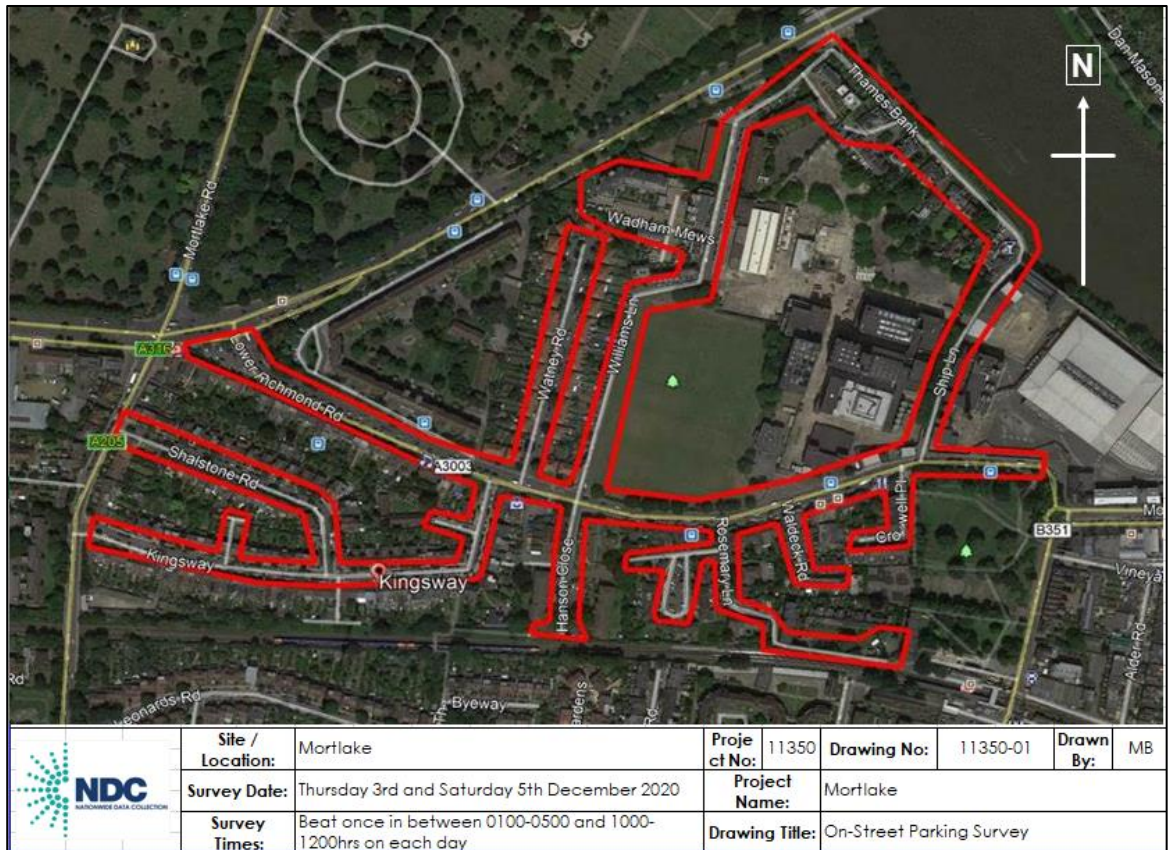
1.4 Parking Stress Survey Analysis

- 1.4.1 At the request of TfL / LBRuT further parking stress surveys have been undertaken in the vicinity of the proposed bus lane to understand the impacts of the loss of parking on Lower Richmond Road as a result of the provision of a 24 hour 7 days per week westbound bus lane on Lower Richmond Road. The parking stress survey was undertaken on both a weekday and weekend and have been used to assess whether there are alternatives locations for residents to park. In total 36 parking

spaces would be lost and residents / commuters who park here would need to park in neighbouring roads to accommodate the bus lane.

- 1.4.2 As agreed with TfL, parking stress surveys were undertaken on Thursday 3rd and Saturday 5th December, both between 10am – midday and 1am and 4am to take a snapshot of parking stress on both days. This is considered to be a robust survey as due to Covid-19 more people are working from home and parking on residential roads is higher than pre-Covid levels. The area included in the parking stress surveys is shown on Figure 1.

Figure 1 – Parking Stress Survey Location



NB, Mapping provided by Nationwide Data Collection

- 1.4.3 The results of the parking stress surveys for each road are shown in Table 1 for the weekday and weekend surveys. Any sections of the road where dropped kerbs, Single Yellow, Double Yellow / Red 'no waiting' restrictions, No loading restriction, bus stops or areas with less than 5m spaces have been excluded from the parking survey results, to ensure a robust analysis of the actual parking available has been captured.
- 1.4.4 Notably new parking permit bays are located on Lower Richmond Road, Shalstone Road, Kingsway and Rutland Close and all of these have been included as available parking bays, which would be the case if a CPZ zone is introduced and existing residents can apply for permits. Disabled parking bays have also been included in the available parking.
- 1.4.5 Private parking located at Hanson Close, Wadham Mews, Rosemary Terrace and Watney Road have also been excluded from the parking survey results as only residents of these housing estates are eligible to park here. Notably the highest level of parking stress was recorded as 61% (159 of 262 spaces) for all private parking.

TECHNICAL NOTE



Table 1 –Parking stress Survey Results

Road	Total Spaces Available	Weekday Daytime Parking Number	Weekday Night Parking Number	Weekend Daytime Parking Number	Weekend Night Parking Number	Weekday Daytime Parking Stress (%)	Weekday Night Parking Stress (%)	Weekend Daytime Parking Stress (%)	Weekend Night Parking Stress (%)	Worst Case Parking Number	Worst Case Parking Stress(%)
Cromwell Place	8	7	8	6	7	88%	100%	75%	88%	8	100%
Hanson Close	20	6	6	6	6	30%	30%	30%	30%	6	30%
Kingsway	118	94	110	82	110	80%	93%	69%	93%	110	93%
Langdon Place	34	15	23	19	21	44%	68%	56%	62%	23	68%
Lower Richmond Rd	36	30	24	25	25	83%	67%	69%	69%	30	83%
Rosemary Lane	16	10	8	10	15	63%	50%	63%	94%	15	94%
Rosemary Terrace	6	4	5	4	4	67%	83%	67%	67%	5	83%
Shalstone Road	67	50	66	38	62	75%	99%	57%	93%	66	99%
Ship Lane	26	23	20	17	17	88%	77%	65%	65%	23	77%
Thames Bank	23	11	3	4	3	48%	13%	17%	13%	11	48%
Waldeck Road	8	5	7	7	7	63%	88%	88%	88%	7	88%
Williams Lane	90	55	57	56	62	61%	63%	62%	69%	62	69%
Total	492	310	337	274	339	63%	68%	56%	69%	366	81%

- 1.4.6 The results of the parking stress surveys indicate that there is spare parking capacity on roads surrounding Lower Richmond Road in the vicinity of a potential bus lane. In total, as a worst-case scenario across all times surveyed there was a parking stress of 81% (366 of 492 spaces). This indicates that with the removal of 36 spaces to implement the bus lane, there would be spare parking capacity on neighbouring roads.
- 1.4.7 The highest parking demand on Lower Richmond Road was during the weekday between 10am – midday. This suggests that commuters are parking here for access to Mortlake Train Station, which would be controlled with the proposed introduction of a CPZ that the applicant has agreed to fund. Residential parking demand is more likely to be indicated in the overnight parking demand which suggested that 69% (25 of 36 spaces) are utilised.
- 1.4.8 The parking stress surveys results therefore conclude that the on-street spaces removed to implement a bus lane can be accommodated on the surrounding road network.

1.5 Preferred Option – Chalkers Corner

- 1.5.1 The results of the microsimulation modelling suggest that both Option 2 – Chalkers Corner ‘light’ and Option 4 - Chalkers Corner ‘light’ and bus lane mitigate the general traffic impacts of the development. However, Option 4 notably has a significant benefit over Option 2 with improvements to bus journey times along Lower Richmond Road.
- 1.5.2 TfL’s Busto data from 2019/20 indicates that buses within the vicinity of the site are currently carrying over 2,200 passengers each weekday. The introduction of the Stag Brewery scheme will increase the number of daily bus passengers by 3,786 per weekday. Therefore, significantly more people will benefit from Option 4 with the introduction of the bus lane.
- 1.5.3 While 36 parking spaces will be lost as a result of the bus lane the parking stress survey undertaken suggests that there is spare capacity on surrounding roads for displacement of this parking. While this would disbenefit residents along Lower Richmond Road due to longer walking distances to their vehicles, the benefits to a significant number of bus passengers is considered a greater overall wider benefit, which would in turn help to encourage sustainable travel in the area. This will also help to achieve the targets set out in the Intend to Publish London Plan Dec 2019 Policy T1 for 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041.
- 1.5.4 The preferred option for the scheme is therefore Option 4 – Chalkers Corner ‘light’ and bus lane.

1.6 Other Highway Improvements

- 1.6.1 A package of transport measures have been proposed for the development, which includes bus, pedestrian, cycle and highway improvement works. The highway works package includes proposed improvements along the Lower Richmond Road corridor including Mortlake High Street and extending down Sheen Lane towards the level crossing. These works focus on enhancing Healthy Streets for the pedestrian and cycle environment and by slowing speeds and improving pedestrian and cycle crossing facilities, further enhancing the safety as part of vision zero and in particular creating a suitable environment for a new secondary school.
- 1.6.2 The specific proposals to be funded by the applicant as part of the highway package are shown on drawing numbers 38262 - 5514 - 021C and 38262 - 5514 – 023E, which are included in Appendix C and include the following:
- A New 20mph speed limit enforced between Williams Lane and Bulls Alley including Sheen Lane, between the Mortlake High Street / Lower Richmond Road junction and the Sheen Lane level crossing. A number of physical measures are proposed to help manage speeds including junction entry treatments, carriageway narrowing and provision of a textured tarmac resin to differentiate the area of speed restraint. Potentially, tabletops to comply with TfL requirements

for buses could be installed at pedestrian crossing points by the school and on the “Green Link”, which runs north – south between Mortlake Green and the Thames.

- A new signalised crossing provided just to the west of the new access road to the school to improve access for pupils needing to cross Lower Richmond Road. This will be a pelican crossing;
- Moving of Bus Stop P further to the east to align with the new crossing point and encourage pedestrians to cross at the crossing rather than informally;
- The existing signalised crossing point adjacent to Ship Lane is relocated to align better with the Green Link. This also requires the removal of one of the Bus Stops;
- Extension of the two lanes on the Lower Richmond Road arm of the Sheen Lane mini-roundabout so as to provide more capacity for those heading from west to east across the roundabout. This will reduce the tendency for the eastbound traffic movement through the junction to become blocked when the level crossing barriers are down;
- Provision of ‘KEEP CLEAR’ markings on the Sheen Lane mini-roundabout to free up the roundabout when the level crossing is down;
- Provision of an informal crossing point on the east side of the roundabout enabled by providing a kerb buildout on the corner to slow traffic and improve pedestrian/vehicle inter visibility at this location;
- Provision of a new zebra crossing to serve a desire line to the eastern portion of the development and help to reduce speeds on Mortlake High Street
- Possible enlargement of the central reserve and narrowing of traffic lanes, again to improve the pedestrian environment by slowing vehicle speeds.
- Provision of a new right turn lane on Mortlake High Street to provide for right turners into the development car park at the current junction with Vineyard Path.
- Tightening of radii and footway build-out at Vineyard Path Junction.
- Relocation of bus stops and bus stands on Mortlake High Street to allow for the new access points and the new crossing.
- Improve safety of surrounding roads to ensure the development targets TfL’s vision zero policy to reduce collisions on roads.

1.6.3 These extensive packages of improvements were agreed with LBRuT / TfL as part of the original approved Stag Development as adequate Highway Improvements for the development. While there is an increase in the number of pedestrians and cyclists, there is a reduction in the number of vehicles generated by the revised development. The Transport Assessment and Addendum highlights that even with the additional pedestrians and cyclists that these measures provide suitable mitigation for the development. These improvements would also address a significant proportion of those measures identified by the borough as part of their Area Wide Traffic Management measure.

1.6.4 All these modifications whilst part of the highway strategy also widely benefit the Healthy Streets agenda and will encourage active travel, including walking and cycling. Many of the proposed changes are aimed at reducing vehicle speeds, increasing the permeability across Lower Richmond Road and improving the public realm and safety within the surrounding area. As part of the original scheme a Healthy Streets assessment was undertaken for Chalkers Corner, Lower Richmond Road and Mortlake High Street and this was agreed as appropriate with TfL and LBRuT. This Healthy Streets Assessment has subsequently been updated for the Chalkers Corner ‘light’ scheme.

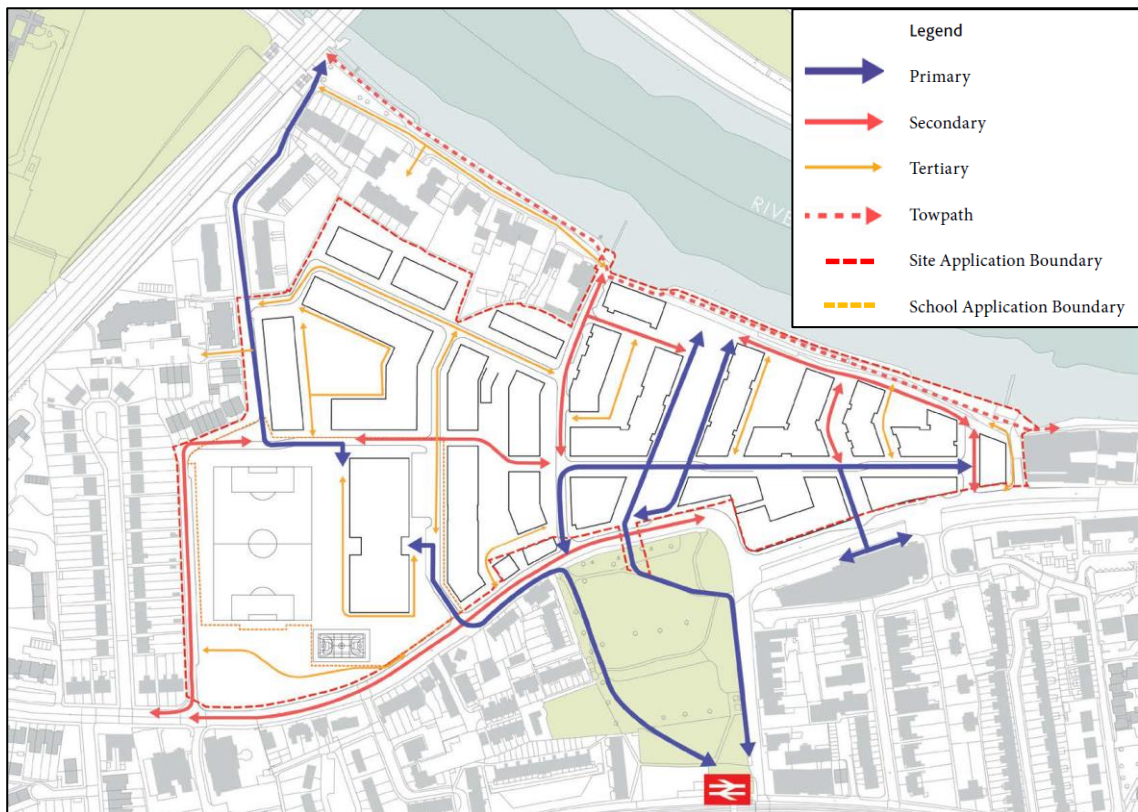
1.6.5 The Healthy Streets tool was used to compare the existing layout with the proposed development highway improvements. Due to the size of Chalkers Corner this was divided into two, to provide an assessment of the eastern and western sections of the junction. The proposed improvements have been assessed against the 10 healthy streets indicators and the results are detailed in Figure 2.

Figure 2 Healthy Streets Assessment

Healthy Streets Indicator	Mortlake High Street (East)		Mortlake High Street (West)		Lower Richmond Road		Chalkers Corner (East)		Chalkers Corner (West)	
	Existing layout	Proposed layout	Existing layout	Proposed layout	Existing layout	Proposed layout	Existing layout	Proposed layout	Existing layout	Proposed layout
Pedestrians from all walks of life	45	45	48	56	46	56	46	54	42	45
Easy to cross	40	40	43	57	47	63	43	53	43	50
Shade and shelter	50	50	50	67	50	50	33	50	33	33
Places to stop and rest	53	53	60	67	53	53	47	67	33	33
Not too noisy	40	40	33	40	53	53	40	53	40	40
People choose to walk, cycle and use public transport	45	45	48	56	46	56	46	54	42	45
People feel safe	45	45	50	59	48	59	48	58	42	45
Things to see and do	58	58	42	50	50	50	33	50	33	33
People feel relaxed	46	46	49	56	47	55	46	53	41	42
Clean Air	42	42	33	50	50	58	33	50	33	42
Overall Healthy Streets Check score	46	46	47	56	48	56	45	54	41	44
Number of 'zero' scores	5	5	4	3	4	4	2	2	4	4

- 1.6.6 The new proposals at Chalkers Corner seek to improve on all of the Healthy Streets indicators. The design of the junction is anticipated to reduce queuing on Lower Richmond Road and improves crossing points for pedestrians and cyclists. This helps to provide a more relaxed environment, encourage walking and cycling and make it easier to cross the junction.
- 1.6.7 There have been a few additional improvements to the Lower Richmond Road and Mortlake High Street proposals since the original application, which include signalisation of the pedestrian crossing by the school and widening of the crossing by Mortlake Green. The results show that the proposals result in an improvement to the Healthy Streets indicators on all roads, except for the eastern side of Mortlake High Street, where the indicators have not changed. This is however notably further away from the development. In addition, further work will be undertaken as part of the Detailed Design stage, which will identify if further pedestrian and cycle improvements could be implemented, which would improve on the Healthy Streets design check undertaken as part of the Concept Design.
- 1.6.8 As per the Original approved scheme walking and cycling are still the principal modes considered within the Transport Strategy for the Stag Development. Street design is crucial in providing an appropriate environment and sense of place. Permeability of the site for walking and cycling is crucial and hence the streets have been designed to slow vehicle speeds, where they are permitted, and to provide areas where vehicles are either not allowed or the access is controlled.
- 1.6.9 There is no vehicle access along the riverfront, with the exception of delivery and servicing vehicles, whose access will be strictly controlled both through design and management arrangements. The pedestrian and cycle routes are therefore at the heart of the placemaking design for the site.
- 1.6.10 The walking and cycling strategy for the site is encompassed within the wider design and landscape of the site. It is envisaged that the site will have a high level of on street activity with walking and cycling providing the best way to travel through, to and from the development tying in with the offsite improvements, keeping in line with TfL Healthy Streets, active travel and vision zero.
- 1.6.11 Figure 3 below shows the proposed network of pedestrian routes through the Site and how this link into the wider networks.

Figure 3 Internal Pedestrian Routes



1.6.12 As set out in the revised application the key features of the pedestrian network are as follows:

- Provision of the new “Green Link” which will run north-south through the Site providing a 30-38m car free link between Mortlake Green and the River.



- New “high street” running east- west parallel to Mortlake High Street and linking Ship Lane in the west with Mortlake High Street at the eastern end of the Site. Traffic limited to servicing vehicles and will allow cycles to use this as a through route in either direction.
- New pedestrian promenade, running parallel to the towpath but at a higher level above the flood level. This will be primarily be a pedestrian route but will also provide an informal route for cycles.
- Ship Lane will continue as a public highway but will be considerably enhanced as a pedestrian route through the provision of wider footways.
- New east-west pedestrian cycle route to the north of the school.

1.6.13 External to the development the main desire lines for pedestrians are discussed below with the following improvements proposed:

- Station and south along Sheen Lane – new wide signalised toucan crossing facility and improvements through the level crossing.
- To various bus stops located along Mortlake High Street and Lower Richmond Road –new pedestrian crossings, including signalised crossing outside the school and zebra on Mortlake High Street.
- To the river towpath, including Thames Path. – Various new connections to this route, including via Williams Lane, Ship Lane and the “Green Link”.

1.6.14 In addition, TfL have a pedestrian improvement scheme at the junction of Upper Richmond Road / Sheen Lane. The applicant has agreed to a contribution towards the delivery of this scheme, which will further improve the pedestrian environment around the development and improve safety for pedestrians in line with the Mayors Healthy Streets and vision zero targets.

1.6.15 Overall, it is considered that the proposed pedestrian improvements and contributions provide a high level of mitigations and improvements to the surrounding highway network and will significantly improve Healthy Streets with the improved walking environment and safety for pedestrians in the area.

1.7 Towpath Improvements

1.7.1 The character of the Towpath is to be retained and it was also concluded through consultation with LBRuT and Towpath Group that no re-surfacing should be undertaken for the Towpath to prevent high speed cyclists travelling along this route. Instead the developer has agreed to a contribution to LBRuT for improvements to be made to the Towpath.

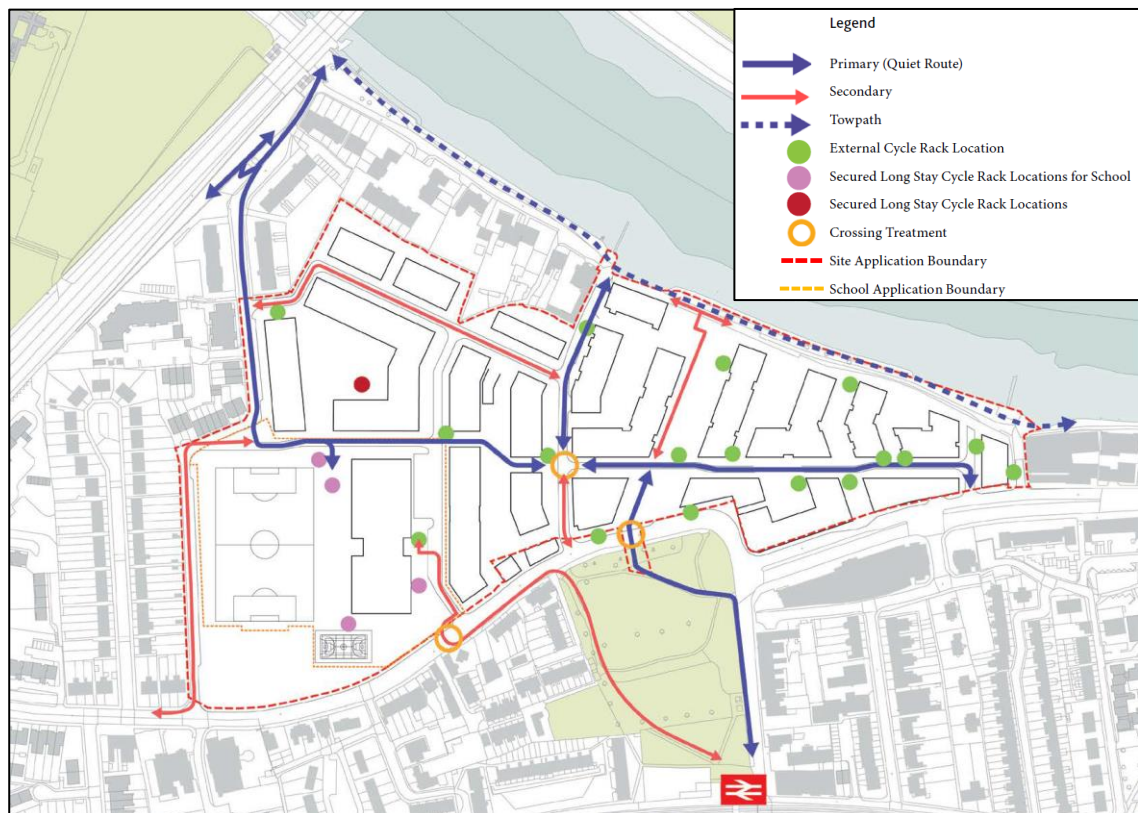
1.8 Cycle Infrastructure / Parking

1.8.1 Cycle parking has been provided in line with the latest Intend to Publish (ITP) London Plan standards, December 2019. Long stay cycle parking is still provided in secure and sheltered areas within the basement and at ground floor and short stay spaces are provided amongst the public realm. In total the number of cycle parking spaces proposed for the development will be in excess of the minimum standards set out in the latest ITP London Plan. This is detailed within the Transport Assessment Addendum – Rev B issued in July 2020.

1.8.2 Figure 4 shows the proposed network of cycle routes through the Site and how this link into the wider networks. The key change from the approved original application is how cyclists travel through the eastern section of the development. Following meetings with key cycling stakeholders, it was considered beneficial to keep cyclists off road for longer within the site. As such, the cycle route

heading eastbound now exits the site in the very eastern corner rather than in line with the proposed crossing, as detailed in the Transport Assessment Addendum.

Figure 4 Internal & External Cycle Routes



1.8.3 In terms of cycle access, the proposed east-west route connects with both the riverside route towards Kew and the TfL Cycle Way along the A316. This in turn provides access to Chiswick to the north across Chiswick Bridge and to Richmond to the South west. For north-south movement the new “Green Link” would provide the main signposted route linking the riverside route with Mortlake Green and onward to the station and the signposted routes along South and North Worpole Way which run either side of the railway line.

1.8.4 Notably, should the westbound bus lane be progressed along Lower Richmond Road this will be permitted for use by cyclists. This will improve safety for cyclists as parked cars are removed along this section of road.

1.9 Servicing

1.9.1 The servicing strategy for the development has not changed from what was agreed in the original consented scheme in January 2020. However full details of the servicing for the development are included in the revised Framework Delivery & Servicing Management Plan (FDSMP). This also includes details of the predicted delivery and servicing trips to be generated by the development.

1.9.2 The FDSMP factors in trips made to the residential aspect of the development as well as the school, retail units and all other land uses within the Site. A mix of formal and informal loading bays have been identified within the Site. These will accommodate service vehicles to both the residential and non-residential elements of the Site as well as refuse vehicles.

1.9.3 The main delivery and servicing area will be the ‘new High Street’ as this is where the main retail area will be. This will also provide access to the main restaurant/bar area on the river front. As part

of the Delivery and Servicing strategy this area will be controlled by the estate management company through the use of rising bollards close to the entrance to the 'new High Street'.

- 1.9.4 An Operational Waste Management Strategy has also been prepared. Waste is a key consideration in the creation of sustainable community as it has environmental, social and economic impacts on the development, in terms of physical infrastructure provision and site operation. This Strategy discusses the relevant waste management policies and targets that the development needs to consider, identifies the expected waste arisings and servicing from the operational phase, and describes the on-site requirements for the storage and collection of waste from the development during its operation. The Strategy has been produced through consultation with LBRuT / TfL and will continue to be developed in coordination with LBRuT going forward.

1.10 Public Transport Improvements - Buses

- 1.10.1 The public transport strategy for the development is based around the bus services operating on Lower Richmond Road and the rail network available from Mortlake Station. While the bus services and rail network remain the same as the original approved application the impact has changed based on the amendments to the proposed development.
- 1.10.2 From discussions with both TfL and LBRuT the main issue regarding buses for this Site is due to the relatively low frequency of Route 419 (up to 4 buses an hour), which runs adjacent to the site. The service does however provide an important link to both Hammersmith (in the east) and to Richmond (in the west) which are considered to be the most important local destinations.
- 1.10.3 In addition, there are a variety of other bus services that can be accessed from the different parts of the Site, albeit requiring walking or cycling a longer distance to a stop. This includes Route 533, which has recently had its service increased to 6 buses per hour and has temporarily been diverted along Lower Richmond Road as a result of the Hammersmith Bridge closure. Considered together these bus services provide direct access to a wide range of destinations.
- 1.10.4 A range of options have been considered for improving the local bus offer and these options can be summarised as follows:
- Diversion of the 209 bus service which provides a service to Hammersmith but which currently terminates at the bus turn facility at Avondale Road to the south west of the Site. This was originally the Council's preferred option and would require the provision of a replacement bus turn facility within the Site, which the applicant has agreed to safeguard the land for;
 - Upgrading the frequency of the 419 bus service. This would be the most straightforward option;
 - Diverting or extending one of a number of other services to the Site that currently terminate in the Richmond area. Again, these options are likely to require the provision of a bus turnaround facility on the Site but would be provided to benefit the wider area and not directly as a result of the development, hence why the turnaround facility is not included within this application.
- 1.10.5 TfL's current position is that, given the uncertainties about the timescales for the Hammersmith Bridge repairs, they are not yet in a position to advise on their preferred strategy to meet the future requirements of the masterplan. Once the opening year of the bridge is known, which will be prior to the actual reopening of Hammersmith Bridge, they will undertake an extensive review of bus services throughout the Hammersmith and Richmond area.
- 1.10.6 To deliver the improvements to bus services in the area TfL have sought a contribution of £3,675,000 from the applicant through a s106 contribution. This contribution has been calculated based on 11 additional buses in the AM Peak and 5 in the PM Peak period. This contribution will be to accommodate the additional bus trips for all land uses, including residential, non-residential

and the school. Further details are included as part of the transport strategy in the TA Addendum – Rev B. This contribution would also be used to provide additional school buses / and general services to cater for the increased bus demand generated by the school and the development. This notably however will be phased with increased school buses / services on Routes 419 and 533 as demand from the school and the development arises.

1.11 Impact on Mortlake Station

- 1.11.1 The nearest National Rail stations to the site are Mortlake station and Barnes Bridge station located approximately 0.34 km and 1.2 km respectively from the southern end of Ship Lane. Given the relative locations Mortlake Station therefore provides the most convenient station for people wishing to travel towards central London. Both stations also provide services to the west, including Richmond, Staines, Winsor & Eton Riverside, Ascot and Reading. Full details are provided in the Transport Assessment document in Section 2.10.
- 1.11.2 Both stations are operated by South Western Railway (SWR). During the peak hours there are a total of 8 trains per hour to London Waterloo from each station, which will be the destination for the majority of the development generated train trips.
- 1.11.3 Network Rail have confirmed that they have no network capacity concerns, which will be aided by the recent rail improvements, including the rolling out of new trains which have provided an increase in capacity from 8 carriages to 10 carriages on the network.
- 1.11.4 In addition, Network Rail has recently realigned platforms at Waterloo, including bringing the old international platforms into use, to enable all 24 platforms to be used by SWR services which allows for an increase in services and reliability.
- 1.11.5 The development is expected to generate 289 two-way rail trips in the AM peak hour and 374 in the PM peak hour. Of these 121 are departing in the AM Peak and 164 arriving in the PM Peak period. In addition, it is likely that a proportion of Underground trips will also use Mortlake Station to access Underground lines, which could generate 116 two-way trips in the AM peak hour and 95 in the PM peak hour. Of these 88 are departing in the AM Peak and 58 arriving in the PM Peak period.
- 1.11.6 Assuming a worst-case scenario where all development generated Train trips are travelling from Mortlake Station towards London Waterloo and 90% of Underground trips also travel towards London, this would equate to an additional 26 passengers per train or 3 per carriage in the AM Peak and 28 passengers per train or 3 per carriage in the PM Peak. With the additional capacity on the rail network with the additional two carriages per train the development trips will be able to be accommodated on the network.
- 1.11.7 Furthermore, this is considered a robust assessment as not all of these trips will be travelling to central London and a proportion of these trips will use Barnes Bridge as an alternative.
- 1.11.8 The Transport Assessment Addendum – Rev B issued in July 2020 also demonstrated that this increase in rail trips does not have a significant impact on either the staircase capacity or the platform capacity at Mortlake Station.

1.12 Sheen Lane Crossing

1.12.1 The Sheen Lane level crossing and footbridge were identified as requiring improvements as part of the original application. An extensive package of measures have therefore been agreed by Network Rail and LBRuT, which the applicant has agreed to fund and include the following:

- Additional bridge signage
- General improvements to the pedestrian bridge

- Moving bollards back on both North and South Worple Way
- Setting back vehicle stop lines
- Improvements to Sheen Lane (as per the original development proposals).

1.12.2 It is considered that the package of measures proposed provide the most suitable and best possible improvements working within the constraints at the level crossing.

1.12.3 Furthermore, in order to manage impacts generated by the level crossing, it is proposed to extend the two lanes on the Lower Richmond Road arm of the Sheen Lane mini-roundabout to provide more capacity for vehicles heading from west to east across the roundabout. This will reduce the tendency for the eastbound traffic movement through the junction to become blocked when the level crossing barriers are down. It is also proposed to implement 'KEEP CLEAR' markings on the Sheen Lane mini-roundabout to free up the roundabout when the level crossing is down.

1.13 Implication of the Closure of Hammersmith Bridge

1.13.1 A technical note has been prepared by Stantec, which provided detailed analysis of the Hammersmith bridge closure on the Stag Development during both the operational and construction phases. A copy of the technical note is included in Appendix A and a summary of the key findings is provided below.

1.13.2 A Task Force has been set up by Department for Transport (DfT), which includes members of Transport for London (TfL), Greater London Authority (GLA), LBHF and LBRuT for the reopening of the bridge. While no start dates have been confirmed, the Task Force were confident that they would be able to agree on a funding package and begin work shortly. Studies undertaken to date for the bridge re-opening have suggested that construction on the bridge would take 5 years and 4 months before it would be fully operational and open to all traffic. Details of the programme are shown below:

- 66 Working days to start of ferry contract – service commencement targeted for spring 2021.
- 4 months to understand condition of all pedestals – possible controlled opening to pedestrians and cyclists.
- 7 months emergency stabilisation – Open to pedestrians and cyclists for a limited period.
- 21 months permanent stabilisation – open to pedestrians and cyclists.
- 30 months strengthening – open to previous traffic loading.
- **Total time to full bridge re-opening – 64 months (5 years and 4 months)**

1.13.3 The note has concluded the following points

- Total traffic increase through Chalkers Corner is low with an increase of 1.4% and 1.3% in the AM and PM peaks respectively following the bridge closure.
- Development traffic predicted to use Hammersmith Bridge is minimal in both peak periods.
- School Catchment suggests no school children would use Hammersmith Bridge.
- Chalkers Corner proposals provide adequate mitigation for the fully constructed development.
- Bridge likely to be open before the development is fully operational if funding is agreed before May 2022.

- Phased opening of the development will begin in 2023, however majority of vehicle trips not on network until 2027.
- Phased development trips and construction trips will be less than total trips generated for fully operational development.

1.13.4 With the mitigation proposed at Chalkers Corner, highway improvements proposed along Lower Richmond Road, Mortlake High Street and Sheen Lane, the suggested limited number of vehicles that would use Hammersmith Bridge and small overall impact on traffic volume through Chalkers Corner, the implications of the bridge closure is considered to be no significant change to that presented in the TA and ES documents, which is based on a worse case full development traffic distribution.

1.13.5 While the bridge is likely to be re-opened before the development is fully operational, this would not be case during the construction period. However, during the construction phase the routes available to the development show that a low number of construction vehicles will be impacted by the closure of Hammersmith Bridge. In addition, after the peak construction year (2023), the amount of development construction traffic will reduce and will be outside of peak hours. Based on the phasing and yearly accumulation of predicted development traffic, the traffic generated by the development once fully operational would not be greater than any time during construction when less of the development is operational. Therefore, the conclusions that the mitigation for Chalkers Corner are adequate for the scheme once fully operational would also remain for the construction phases of the development.

1.14 Use of Thames for Construction Waste / Materials & Passenger Transport

1.14.1 A number of responses have asked for more details on the use of the Thames during the operation and construction phase for the development. Notwithstanding the constraints regarding the commercial use of this part of the river, the potential for the possible extension of river boat services from Putney to the stag was discussed with officers of TfL and the Chief Operating Officer of Thames Clipper (TC). These discussions confirmed that the provision of a service from the Stag was unlikely to be viable. A number of factors were highlighted:

- Bridge height is a key issue. TC vessels (approx. 150 capacity) currently have some difficulty clearing both Wandsworth and Putney bridges at certain times of day due to a combination of low bridge height and high tide. Heading further west with existing TC vessels is not considered feasible as the channel depth worsens and navigating bridges at high tide is difficult and subsequently restricts the service timings. Hammersmith (south) bridge has a main navigational arch clearance of 3.6m, which is not sufficient for existing TC vessels. The use of smaller vessels was not considered to be viable.
- Unattractive journey time due to the combination of the speed restriction and the river alignment. These would combine to give an unattractive journey time of circa 30 minutes between the Stag and Putney.
- Difficulty of providing access to the Site from the navigable channel; and
- Temporary closure of Hammersmith Bridge for river traffic.

1.14.2 For these reasons the potential use of the river to provide a commercial river bus service was discounted.

1.14.3 It is considered however that as part of the Contractors Construction Logistic Plan (CLP) the use of the River to bring and remove materials to / from the site will be investigated further. This will form part of the planning conditions for the development, as with the original approved application.

1.15 Impact of Manor Road Development

- 1.15.1 The impact of the recently approved Manor Road development adjacent to North Sheen Station, was raised during the consultation process. A review of the submitted Transport Assessment and Addendum has shown that the development is only predicted to generate 62 and 56 two-way vehicular trips in the AM and PM peaks respectively. The low vehicular trip generation can be largely attributed to the car-lite nature of the development. Due to the proximity of the development (over 1.5km) and traffic distribution in all directions only a proportion of these development trips will impact on Chalkers Corner and Lower Richmond Road. It is therefore considered to be a negligible impact on roads and junction adjacent to the Stag Brewery development.
- 1.15.2 The Manor Road development will also generate additional rail trips on the South Western Railway train line, via North Sheen Station, with the trips shown to be 72 and 55 two-way train trips in AM and PM peaks respectively.
- 1.15.3 Assuming a worst-case scenario where all development generated trips are travelling from North Sheen Station towards London Waterloo, this would equate to an additional 9 and 7 passengers per train or less than 1 per carriage in the AM Peak and PM Peak respectively. With the additional capacity on the rail network the additional development trips for both the Manor Road and Stag Development will be able to be accommodated on the network.

1.16 Conclusion

- 1.16.1 This technical note has been prepared by Stantec to provide further clarification in response to the public and statutory consultations that have been held for the revised Stag Development scheme. These clarifications have been addressed for each core topic area and have been discussed in detail within this technical note.
- 1.16.2 The highway mitigations proposed for the development have been agreed with TfL to be adequate to mitigate the impacts of the development. This has included several options which have been tested using VISSIM Microsimulation software for Chalkers Corner and Lower Richmond Road. This also included testing of the previous Chalkers Corner scheme that formed Application C in the Original application. As a result of the highway modelling alternative suitable mitigations for Chalkers Corner and Lower Richmond Road were determined, which has allowed Application C to subsequently be withdrawn and is no longer included as an option.
- 1.16.3 The results of the microsimulation modelling suggest that both Option 2 – Chalkers Corner ‘light’ and Option 4 - Chalkers Corner ‘light’ and bus lane mitigate the general traffic impacts of the development. However, Option 4 notably has a significant benefit over Option 2 with improvements to bus journey times along Lower Richmond Road. Furthermore, significantly more people will benefit from Option 4 with the introduction of the bus lane.
- 1.16.4 While 36 parking spaces will be lost as a result of the bus lane a parking stress survey undertaken for the surrounding roads suggests that there is spare capacity for displacement of this parking. While this would disbenefit local residents along Lower Richmond Road due to longer walking distances to their vehicles, the benefits to a significant number of bus passengers is considered a greater overall wider benefit, which would in turn help to encourage sustainable travel in the area. This will also help to achieve the targets set out in the Intend to Publish London Plan Dec 2019 Policy T1 for 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041. The preferred option for the scheme is therefore Option 4 – Chalkers Corner ‘light’ and bus lane.
- 1.16.5 In addition, a package of transport measures has been proposed for the development, which includes bus, pedestrian, cycle and highway improvement works. The highway works package includes proposed improvements along the Lower Richmond Road corridor including Mortlake High Street and extending down Sheen Lane towards the level crossing. In addition, level crossing improvements, which have been agreed with LBRuT, TfL and Network Rail. These works focus on enhancing Healthy Streets for the pedestrian and cycle environment and by slowing speeds and

improving pedestrian and cycle crossing facilities, further enhancing the safety as part of vision zero and in particular creating a suitable environment for a new secondary school.

- 1.16.6 This technical note has also concluded that there is spare capacity on the South Western Train Network to accommodate both the Stag Brewery Development and recently consented Manor Road development. In addition, that the bus contribution requested and agreed with TfL is adequate to provide additional bus services to meet the future demand of the development, including the school.
- 1.16.7 The impact of the Closure of Hammersmith Bridge was also raised as an issue by LBRuT and a study has been undertaken as part of this technical note, which has concluded that the bridge closure has only had a minor impact on traffic levels on the roads surrounding the Stag development. In addition, the study has concluded that only a minimal amount of development traffic would use Hammersmith Bridge. This concluded that the mitigations proposed for the development would remain adequate during construction and for both the partially built out scenarios and fully built scheme, should the bridge remain closed.
- 1.16.8 Initial studies for the use of the Thames for Construction Waste / Materials and Passenger Services has shown that the section of Thames adjacent to the development to not to be suitable. However, as part of the Contractors Construction Logistic Plan (CLP), which would form part of the planning conditions for the development, the use of the River to bring and remove materials to / from the site will be investigated further.

Appendix A – Closure of Hammersmith Bridge Technical Note TN039

Appendix B – Microsimulation Modelling Summary Technical Note TN041

Appendix C – Highway Mitigation Option Plans