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# Strand Aldwych Project

## TN07 Scheme Design Summary

Produced for Westminster City Council

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Technical Note

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# 1 INTRODUCTION

## 1.1 BACKGROUND

1.1.1 NRP has been commissioned by Westminster City Council (WCC) to undertake concept design and traffic modelling in support of the Strand Aldwych Project. The scheme seeks to deliver transformational change around the Strand-Aldwych gyratory by creating a world class public space on Strand between Arundel Street and Lancaster Place.

1.1.2 This technical note sets out the design process that has led to the proposed scheme layout, which is due to go forward to Stage 2 initial design.

## 1.2 PRELIMINARY STUDY

1.2.1 In 2016 a Vision document for Strand-Aldwych was produced by Publica that set out the public realm vision for the Aldwych area. This included a number of options to improve the public realm, which required changes to the existing gyratory layout at Strand-Aldwych. This report was followed by a Concept Study document (NRP, 2016) that assessed 7 options and provided initial technical analysis for each of them, including impact on public realm, pedestrian amenity, cycle amenity, kerbside provision and junction capacity.

1.2.2 Any proposed scheme would need to match the objectives set out by Transport for London's (TfL) Healthy Streets Approach, which has at its core the Mayor's statement,

*"…'Healthy Streets' aims to reduce traffic, pollution and noise, create more attractive, accessible and people-friendly streets where everybody can enjoy spending time and being physically active and ultimately to improve people's health" (Sadiq Khan, Guide to the Healthy Streets Indicators, 2017).*

1.2.3 Having reviewed each of the proposed concept options it was agreed with stakeholders the creation of a new public space on Strand would be the preferred deliverable of the scheme as it would provide a significant upgrade on the existing urban environment, and meet many of the 10 Healthy Streets Indicators. Therefore, it was decided that two preferred options should be progressed. These were:

- Do Minimum option. Aldwych two-way for traffic. Strand two-way for buses and cyclists only.
- Do Maximum option. Aldwych two-way for traffic. Strand between Lancaster Place and Surrey Street a pedestrian zone. Strand between Surrey Street and Arundel Street, and Melbourne Place, open to buses, cyclists and access. This is to provide a loop for the buses that currently terminate on Aldwych. It also provides stand space for these buses.

1.2.4 The initial assessment of each of the concept options found that the two options above were able to deliver the maximum public realm improvement, whilst maintaining an appropriate level of traffic capacity and kerbside provision on the surrounding highway network.

## 1.3 BUSINESS CASE

1.3.1 A business case was put together as part of a WCC TIF bid to Central Government that set out the benefits and costs of the Do Minimum and Do Maximum options. Preliminary traffic modelling was undertaken in order to assess the impact on bus journey times for both of these options. It was concluded that the Do Maximum option delivered significantly better results than the Do Minimum Option. The reason for this was due to the traffic capacity restrictions at the junction of Strand, Aldwych and Lancaster Place.

1.3.2 The Do Minimum option required buses to access/egress Strand east of Lancaster Place. In order to do this safely, traffic coming southbound on Aldwych and northbound on Lancaster Place would have to stop to allow the buses to proceed. The traffic modelling showed that this did not provide enough green time for vehicles on Aldwych and Lancaster Place. This would generate large queues and result in significant delay to bus journey times on routes that did not travel on Strand (assuming existing volumes of traffic and no reassignment onto alternative routes).

1.3.3 Figure 1.1 shows the method of control for the Strand/ Aldwych junction with buses using Strand. Figure 1.2 shows the method of control without buses using Strand. In these figures NRT stands for No Right-Turn.

**Figure 1.1: Strand/Aldwych junction proposed method of control with buses**

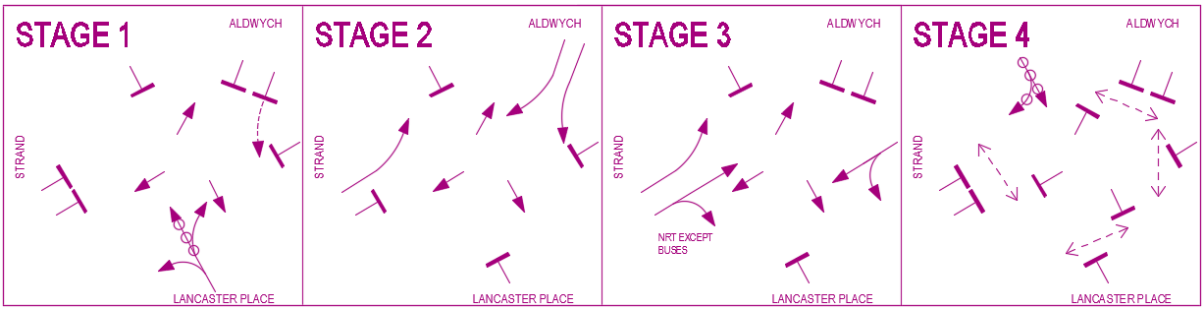
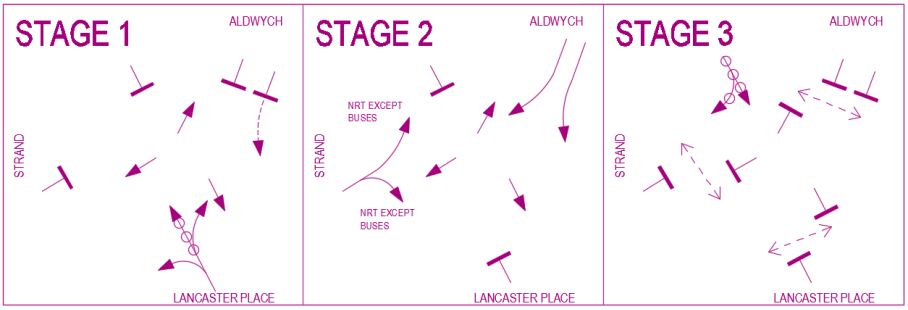



**Figure 1.2: Strand/Aldwych junction proposed method of control without buses**




1.3.4 The requirement to have Stage 3 for bus access to/from Strand in Figure 1.1 results in a reduction in green time Stages 1 and 2 compared to the method of control shown in Figure 1.2.

1.3.5 The performance of the junction, shown using degree of saturation (DoS) results for the Strand/ Aldwych junction with and without buses using Strand, is summarised in Table 1. The degree of saturation is a measure of junction capacity, where 100% is at capacity. Where an approach is greater than 100% this means that not all of the predicted traffic will be able to pass through the junction, which will generate large queues and thus have a significantly detrimental impact on journey times of all vehicles.

**Table 1: Degree of saturation results Strand/ Aldwych junction with and without buses on Strand**

| Approach | Buses using Strand | | Buses not using Strand | |
|---|---|---|---|---|
| | AM peak | PM peak | AM peak | PM peak |
| Strand westbound | 100-110% | 100-110% | 70-80% | 80-90% |
| Aldwych southbound | 100-110% | 100-110% | 70-80% | 80-90% |
| Lancaster Place northbound | 100-110% | 90-100% | 80-90% | 80-90% |

# 2 SCHEME DESIGN

## 2.1 BACKGROUND

2.1.1 The proposed scheme design was based on the following key principals:

- create a new, high quality, public space;
- maintain or improve pedestrian crossing amenity;
- maintain or improve cycling amenity;
- **maintain or improve bus journey times;** and
- **provide sufficient traffic capacity so that traffic is not required to reassign away from the Strand-Aldwych gyratory onto alternative routes**.

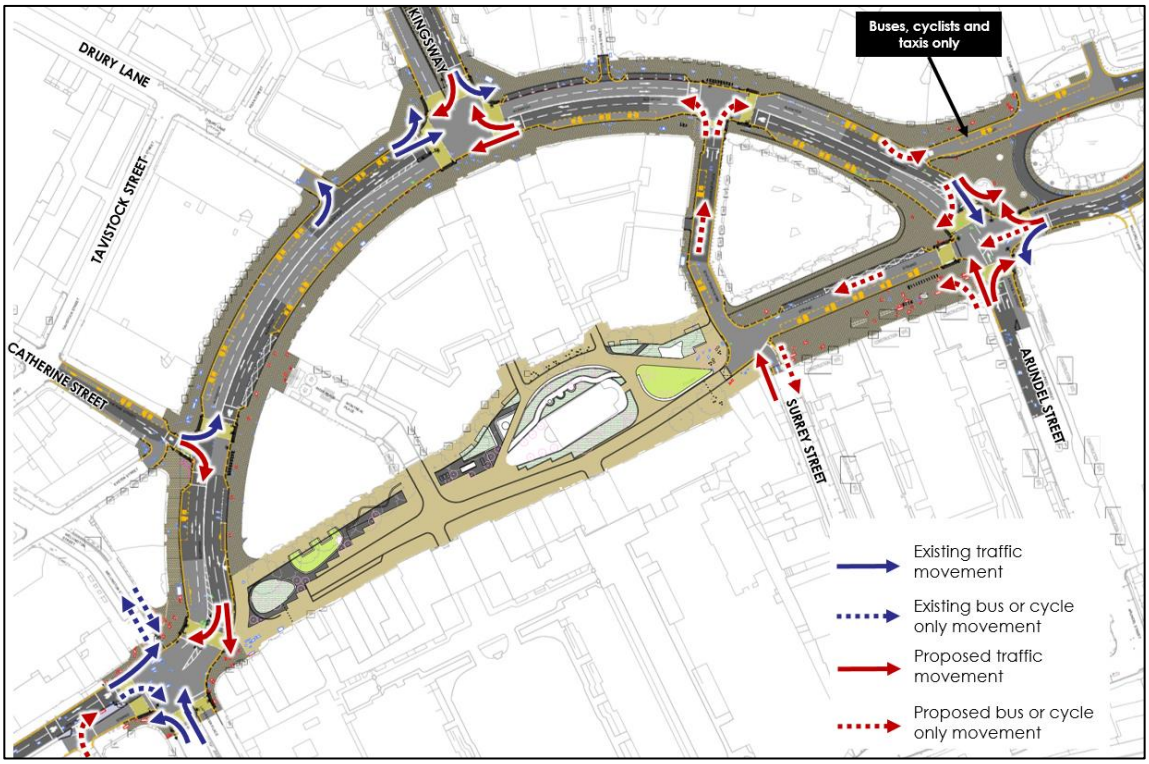
2.1.2 The last two points have been highlighted as these are requirements set by external stakeholders who have a statutory authority on the management of the highway network. The Aldwych gyratory carries 23 bus services, with a total of nearly 200 buses moving around the gyratory in the peak hours. Therefore, the scheme has to demonstrate to TfL that there is an overall improvement (or nil-detriment) to bus operation and journey times. If this was not delivered then there is a risk that TfL would find it difficult to support the scheme without further mitigation.

2.1.3 The traffic capacity for the proposed scheme must ensure that vehicles do not have to reassign to other parts of the highway network in order for the scheme to operate successfully. TfL manage the Transport of London Road Network (TLRN) and oversee the Strategic Road Network (SRN). TfL would not permit traffic to be reassigned from Strand/Aldwych to other parts of the TLRN or SRN. Neighbouring boroughs (specifically Camden and the City) would also not agree to a scheme that puts additional traffic onto these other borough streets.

2.1.4 Therefore, the scheme design must especially meet these two objectives, whilst delivering the best possible design for all road users.

2.1.5 The proposed design with traffic movements is shown in Figure 2.1.

**Figure 2.1: Proposed design for the Strand/Aldwych junction**



### 2.2 ALDWYCH CARRIAGEWAY

2.2.1 The carriageway width on Aldwych is a constraint because both sides are tree lined, and the tree pits cannot be moved. Two lanes of traffic are required in both directions in order to provide suitable traffic capacity. In addition, a lane of bus stops is required in both directions.

2.2.2 Therefore, providing bus and/or a cycle lanes is not possible as it would result in junctions operating over capacity and/or traffic reassignment outside of the study area.

### 2.3 STRAND/ ALDWYCH/ LANCASTER PLACE JUNCTION

2.3.1 The existing and proposed design for the Strand/ Aldwych junction is shown on Figure 2.2.

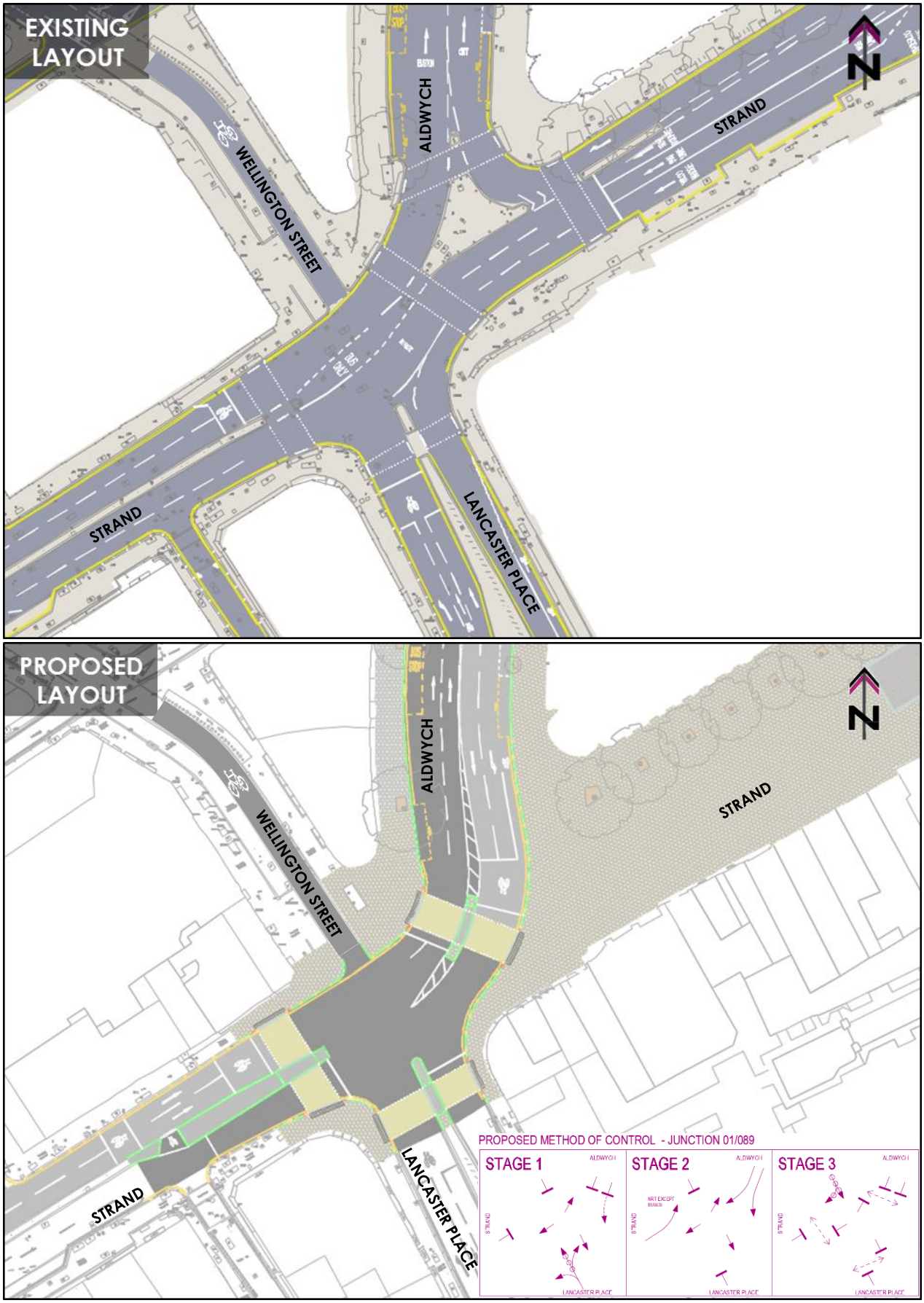
2.3.2 The proposed design:

- Includes the Savoy Street-Wellington Street link, which joins the East-West Cycle Superhighway (CS3) to Quietway 1 on Wellington Street.
- Retains the Quietway 1 layout between Lancaster Place-Wellington Street.
- Reduces the number of lanes for westbound/southbound traffic.
- Removes the existing vehicle merge on the northbound exit onto Aldwych.
- Provides wider pedestrian crossings around the junction to increase pedestrian capacity and reduce delay.

2.3.3 Cycling infrastructure has been considered in detail. It is not possible to introduce cycle early release (CER) because it would result in one or more approaches operating over 100% capacity, which would result in significant traffic congestion or reassignment onto alternative routes.

2.3.4 Section 1.3 described why buses using Strand would have a significant impact on junction capacity and thus journey times. This is the same reason why cyclists are not permitted to turn right from Lancaster Bridge into the public space. For this to occur safely the southbound traffic movement from Aldwych to Lancaster Place would not be able to run in Stage 1 of the method of control. Instead, Lancaster Place northbound would need to run on its own and would provide a cyclists-only right-turn to access the public space. The impact of this is that the southbound traffic movement from Aldwych to Lancaster Place would operate with a DoS of 159%, which would generate significant queues and increases to journey times, and result in traffic reassignment onto alternative routes.

**Figure 2.2: Existing and proposed design for the Strand/Aldwych/ Lancaster Place junction**



## 2.4 CATHERINE STREET/ ALDWYCH JUNCTION

2.4.1 The existing and proposed design for the Catherine Street / Aldwych junction is shown on Figure 2.3.

2.4.2 The proposed design:

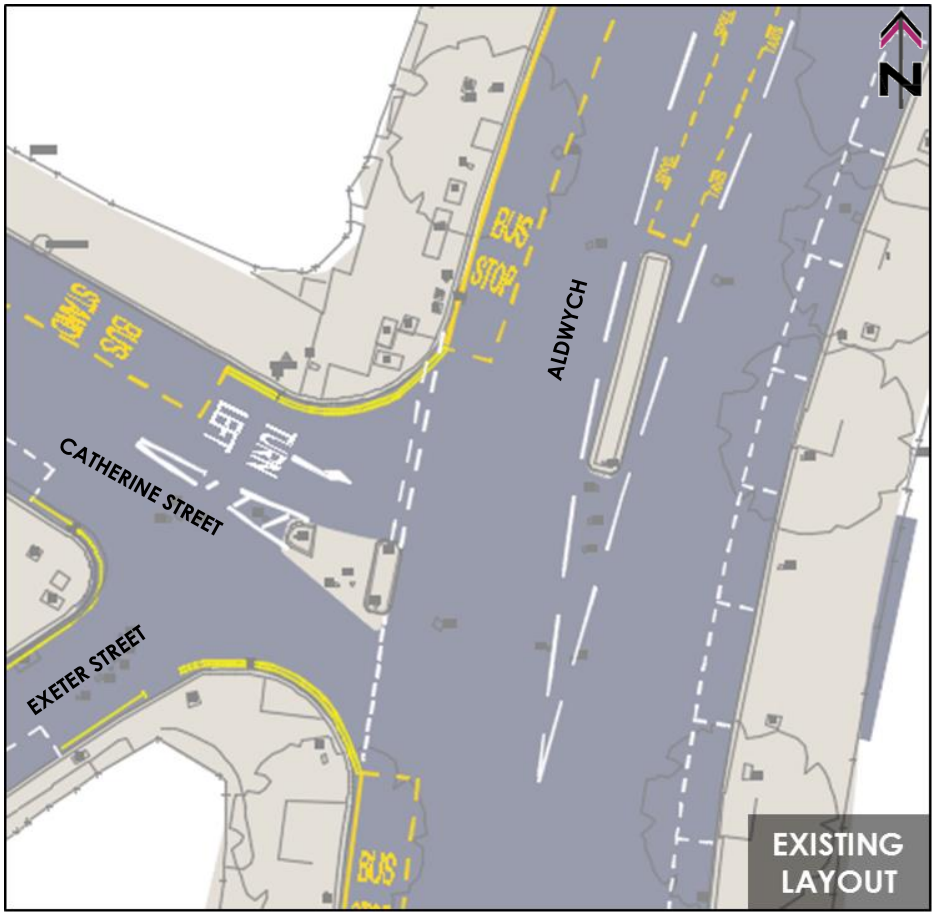
- Intends that Catherine Street is one-way southbound between Tavistock Street and Aldwych. This means there is no left-turn or right-turn into Catherine Street from Aldwych.
- Removes the existing conflict between vehicles and pedestrians and provides pedestrian crossings over Catherine Street and Aldwych (north).
- Removes the existing conflict between northbound cyclists and left-turn vehicles.
- There is no crossing on Aldwych (south) because the kerbside provision on the west of Aldwych needs to be retained to provide a tour bus stop, double yellow line outside of the One Aldwych hotel, and a rank for 2 taxis.
- Provides footway widening on both sides of Aldwych.
- Provides ASLs on each approach.

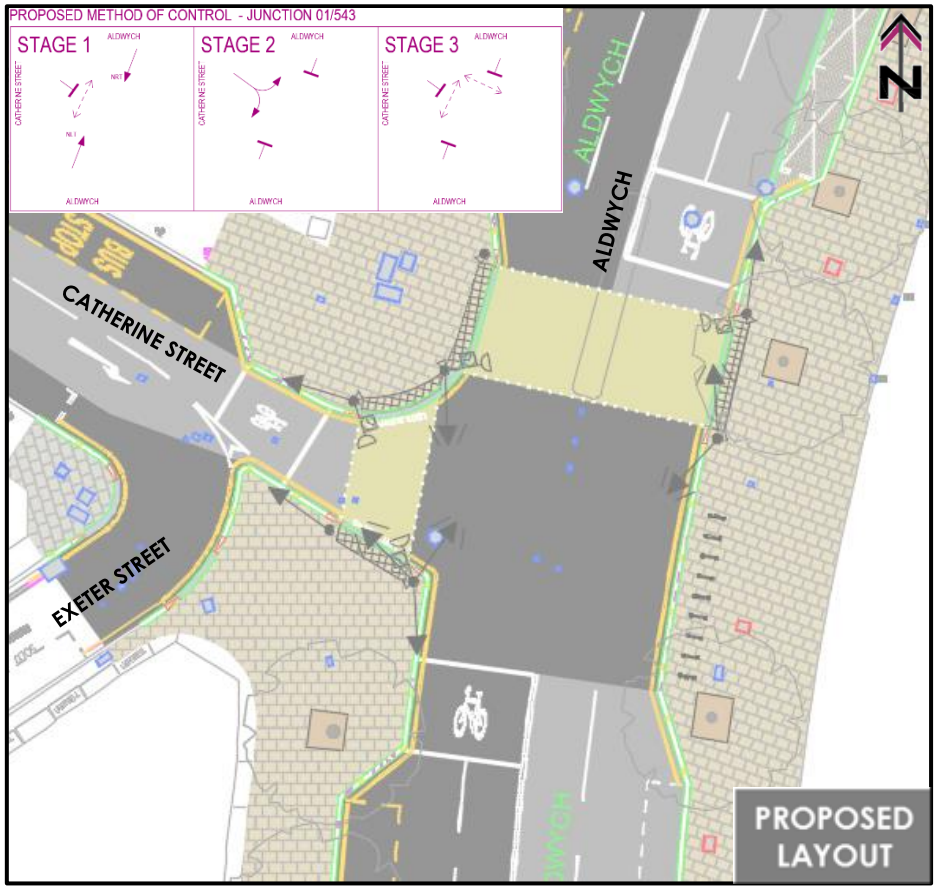
2.4.3 The decision to make Catherine Street exit only to Aldwych is due to the high pedestrian volume at this location. The proposed operation allows significant footway widening in the vicinity of the Novello Theatre and the tour bus stop, which both generate significant numbers of pedestrians at various times of the day. It also means that the pedestrian crossing can run at the same time as traffic on Aldwych. This provides a long green man time, which is a considerable benefit to pedestrians at this location. If the northbound left-turn were permitted from Aldwych to Catherine Street, this pedestrian crossing would only show a green man for 6 seconds in every 2 minute cycle. This is likely to result in injudicious and potentially hazardous crossing behaviour, similar to the current conditions.

2.4.4 The impact of making Catherine Street exit only is that traffic that currently turns left into Catherine Street (and Exeter Street) will have to reassign to Drury Lane. However, this does not necessarily mean that traffic flow increases on Drury Lane, because of the net effects of other traffic route changes. More details are set out in Section 7.2.

2.4.5 It is not possible to introduce cycle early release (CER), because it would result in one or more approaches operating over 100% capacity, and result in significant traffic congestion or reassignment onto alternative routes.

**Figure 2.3: Existing and proposed design for the Catherine Street/Aldwych junction**



## 2.5 KINGSWAY/ ALDWYCH JUNCTION

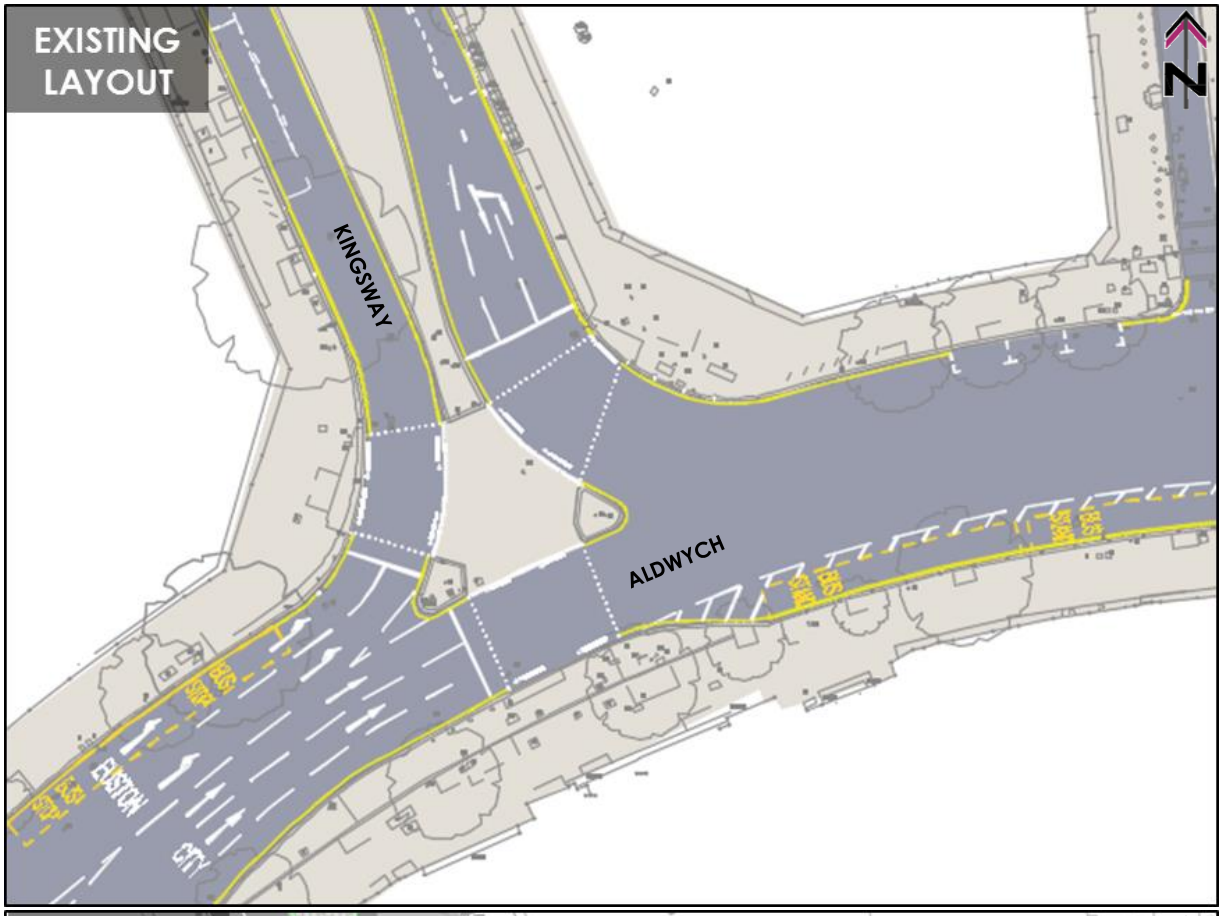
2.5.1 The existing and proposed design for the Kingsway/ Aldwych junction is shown on Figure 2.4.

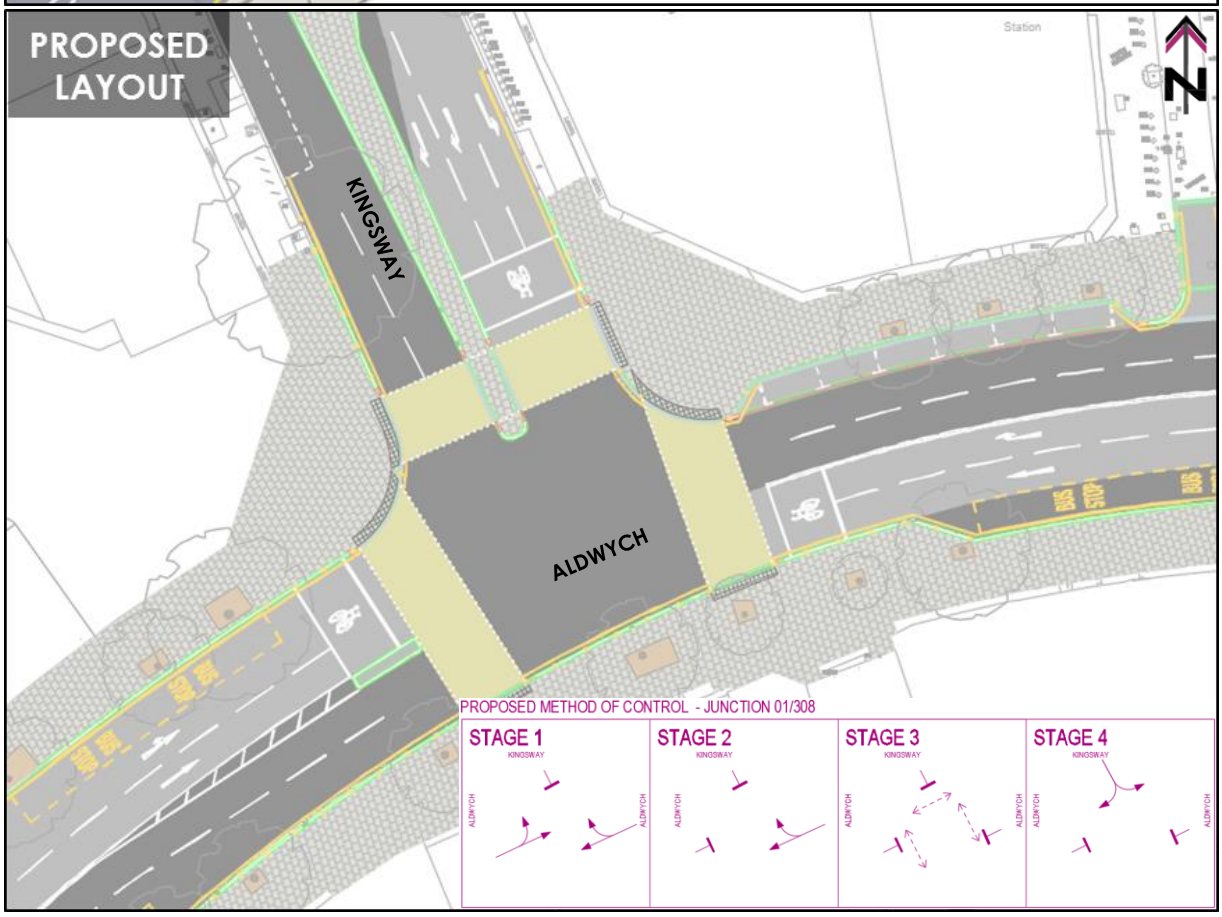
2.5.2 The proposed design:

- Maintains a similar layout on the Kingsway southbound approach and extends the offside flare lane to improve capacity and provides two lanes that turn right onto Aldwych.
- Provides two lanes in each direction on Aldwych (currently 5 lanes eastbound).
- Introduces an all-red pedestrian stage with single phase, straight-over crossings, which replaces the existing staggered arrangement.
- Provides a dedicated right-turn lane for westbound traffic travelling to Kingsway.
- Introduces ASLs on all approaches.
- Provides footway widening on the north-west and north-east corners of the junction.
- Narrows footway on south side of Aldwych. The minimum footway width is between 5-6m, which is considered suitable for this location. The footway narrowing is required to facilitate two traffic lanes in each direction.

2.5.3 It is not possible to introduce cycle early release (CER), because it would result in one or more approaches operating over 100% capacity, and result in significant traffic congestion or reassignment onto alternative routes.

**Figure 2.4: Existing and proposed design for the Kingsway/Aldwych junction**



### 2.6 MELBOURNE PLACE/ ALDWYCH JUNCTION

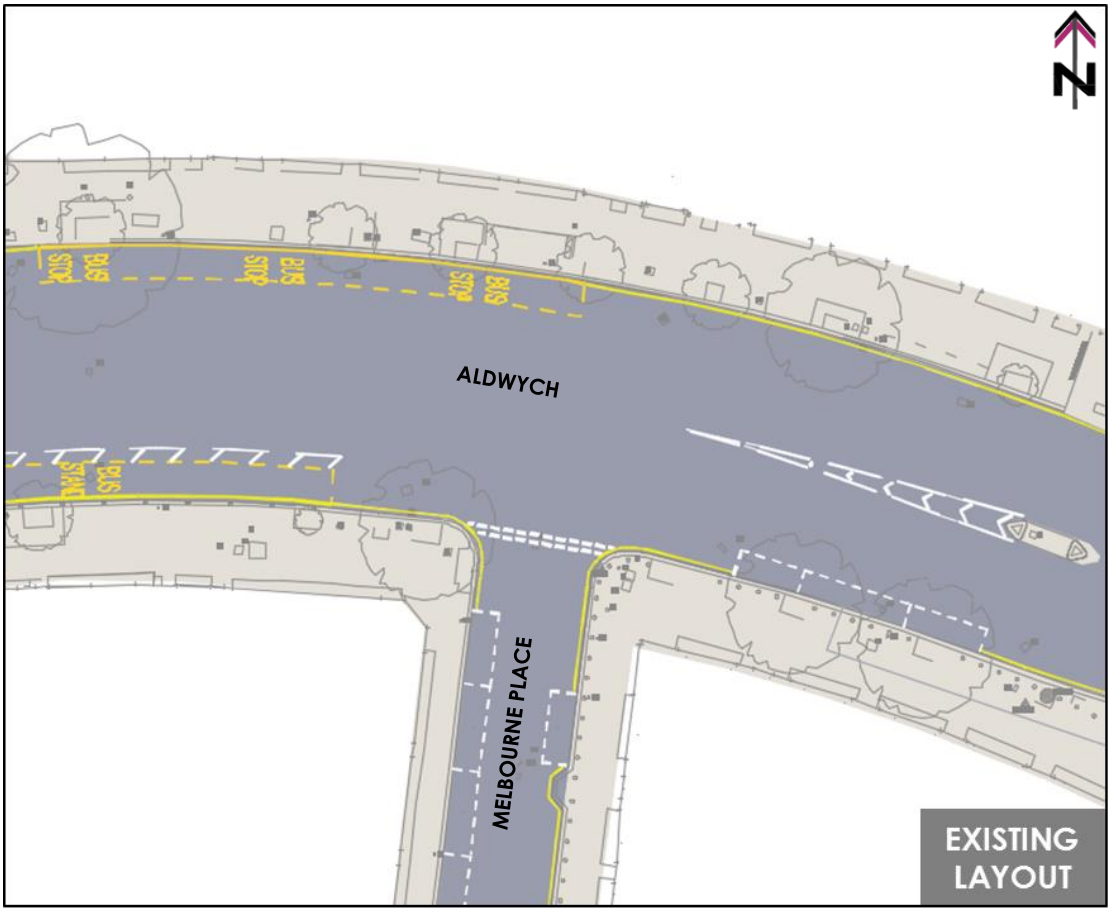
2.6.1 The existing and proposed design for the Melbourne Place/ Aldwych junction is shown on Figure 2.5.

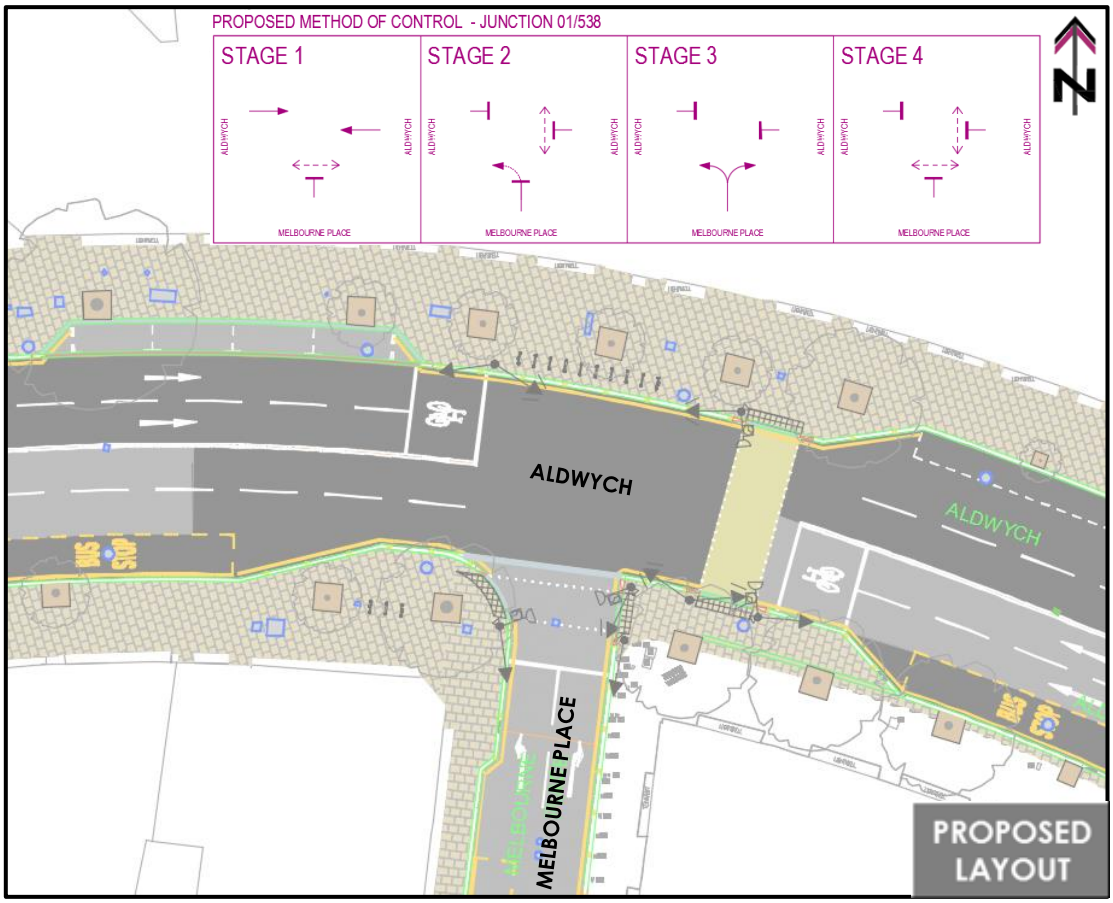
2.6.2 The proposed design:

- Provides two lanes in each direction on Aldwych (currently 5 lanes eastbound).
- Provides two lanes on Melbourne Place. The right-turn lane will be demand dependent and only called when required. The exact detail of how the demand will be detected will be determined at Stage 2 design. It is likely to be either be a loop in the road or infrared detection on the signal pole aspect.
- Introduces pedestrian crossings over Aldwych (east) and Melbourne Place. There is no crossing proposed over Aldwych (west) for two reasons. Firstly, two pay by phone bays would be lost on the northern side of Aldwych because a pedestrian crossing would push back the stopline for traffic. Secondly, the method of control proposes that the Aldwych traffic and the Melbourne Place pedestrian crossing run at the same time in Stage 1 and then Melbourne Place is left-turn only in Stage 2, with the crossing over Aldwych running at the same time. It is only when the right-turn from Melbourne Place is demanded that there is an all-red pedestrian stage (Stage 3). Providing one crossing over Aldwych is deemed appropriate as it is on or close to the desire line for pedestrians.
- Provides footway widening on northern and southern sides of Aldwych.

2.6.3 A cycle early release (CER) has not been included as it would detrimentally impact the operation of junctions adjacent to this.

**Figure 2.5: Existing and proposed design for the Melbourne Place/Aldwych junction**



## 2.7 STRAND/ ALDWYCH/ ARUNDEL STREET JUNCTION

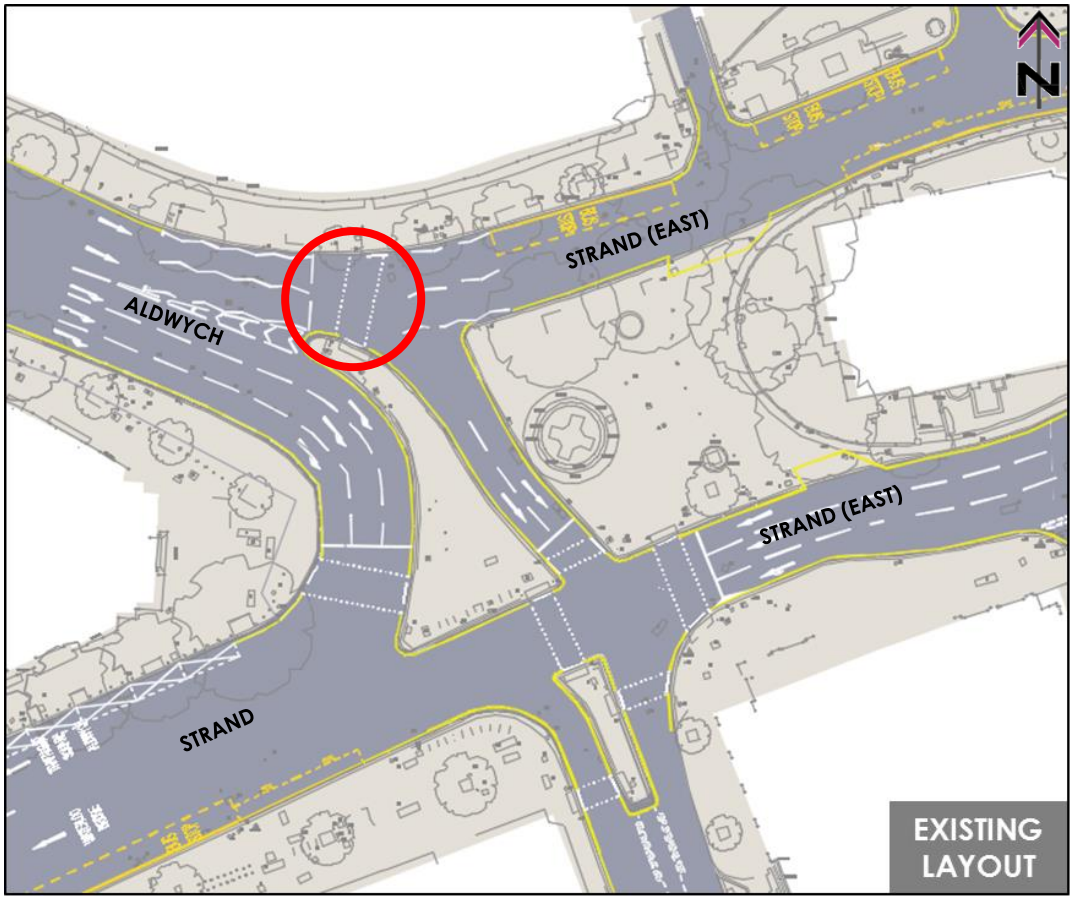
2.7.1 The existing and proposed design for the Strand/ Aldwych/ Arundel Street junction is shown on Figure 2.6.

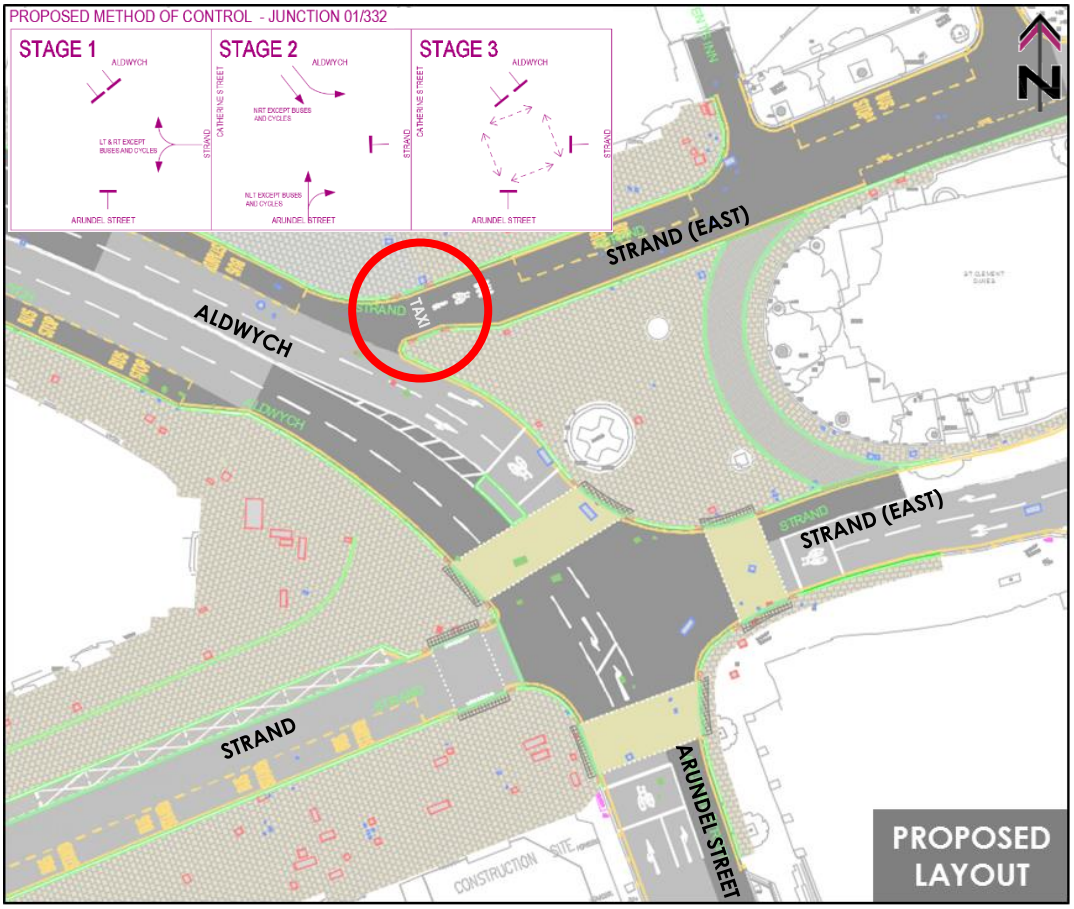
2.7.2 The proposed design:

- Provides two lanes on each approach.
- Limits Strand and Melbourne Place to be bus, cycle and access only in a one-way clockwise direction. This loop is required primarily for bus services that terminate and then start on Aldwych that come from the west (Strand). These buses need a facility that allows them to turn around and that provides stand space. Strand and Melbourne Place can also be used by vehicles servicing Australia House and other adjacent buildings.
- Limits Strand (east) north of St Clement Danes Church to be bus, taxi and cycle only. Access to off-street premises (for LSE and Royal Courts of Justice) will also be permitted. This reduces traffic volumes in this location and is expected to improve the air quality and overall pedestrian amenity.
- Introduces two-way working south of St Clement Danes Church. There will be additional traffic on this link, but there is only useable footway on the southern side of Strand.
- Provides a southbound right-turn pocket for access to Melbourne Place.
- Provides a northbound right-turn to Strand (east).
- Introduces all-red pedestrian stage with single phase, straight-over crossings over all arms. Pedestrian crossings increased in width to improve capacity and reduce delay.
- Provides footway widening on western side of the junction.
- Removes the pedestrian crossing over the north side of Aldwych (shown by the red circle in Figure 2.6 Existing Layout). This is replaced with a courtesy crossing, which has a 5m carriageway width and dropped kerbs (shown by the red circle in Figure 2.6 Proposed Layout).

2.7.3 It is not possible to introduce cycle early release (CER), because it would result in one or more approaches operating over 100% capacity, and result in significant traffic congestion or reassignment onto alternative routes.

**Figure 2.6: Existing and proposed design for the Strand/Aldwych/ Arundel Street junction**



2.7.4 A controlled pedestrian crossing is not proposed to be provided over Strand to the north of St Clement Danes Church (shown by the red circle in Figure 2.6 Proposed Layout). This is due to the following reasons:

- The traffic flow at the proposed location of the crossing is predicted to be ~300 PCUs (a PCU is a Passenger Car Unit, which is a generalised traffic composition used in traffic modelling where a car is 1 PCU, a bus is 2 PCUs etc. It is effectively a measure of the space different vehicle types take up on the road). The traffic flow over the existing crossing is ~900 PCUs. The traffic flow will reduce significantly because the existing crossing location has both traffic heading east to Strand and south to Arundel Street. The proposed crossing will only have the eastbound traffic. Also, the section of carriageway north of the church is proposed to be for bus, taxi and cycle only. The rest of the traffic goes eastbound south of the church.
- The pedestrian flow is predicted to reduce. Currently the pedestrian flow is tidal, with a high northbound flow in the AM peak and a high southbound flow in the PM peak. The majority of pedestrians were observed to be going between Temple Underground station and Houghton Street. Pedestrian movements throughout the day are shown on Figure 2.7, and it can be seen that this movement (shown within the dashed red line) is one of the dominant pedestrian flows.

**Figure 2.7: Aldwych Board Presentation, Publica 2015**


- Pedestrians observed using the crossing over the north side of Aldwych are going to/from the east, and using the western footway on Arundel Street. Under the proposed scheme this route will be quicker and easier for pedestrians. They will be able to stay on the west side of Arundel Street, cross over Strand and then cross over Aldwych using the crossing at the junction with Melbourne Place.

- The TfL document SQA-0647 sets outs the criteria for when a pedestrian crossing can be removed. One of these is that it is below the $PV^2$ criteria. This is a function of pedestrian flow (P) and vehicle traffic flow (V). In the current situation the pedestrian flow is ~900 and the vehicle flow is ~1000 (including cyclists). This gives a $PV^2$ value that would support a pedestrian crossing ($1.07*10^9$). Under the proposed scheme, if it is assumed that the pedestrian flow is unchanged (~900), the vehicle flow is predicted to reduce to ~300 vehicles. This gives a $PV^2$ value that would support removing a pedestrian crossing ($8.83*10^7$). In addition, as set out previously, the pedestrian flow at this crossing is likely to be lower as there will be an improved alternative route.
- The other criteria for removal is that it meets one or more of the following:
  i. There is no greater than average proportion of elderly pedestrians or school children.
  ii. Vehicle flows are considered to be low or there are large gaps in traffic due to surrounding junctions or crossings providing enough time to cross the road.
  iii. Adjacent crossings provide adequate gaps in the traffic, such as on a one-way street with an all-round pedestrian stage at the start of the round.
  iv. Pedestrian flows are low and it may be more beneficial to both vehicle and pedestrians to provide an alternative crossing facility such as a central refuge island or Zebra crossing.
  v. There is opportunity to consolidate two nearby facilities into one facility.
- In this case, the pedestrian crossing meets criteria i), ii) and iii). The upstream junction at Aldwych/ Melbourne Place has a pedestrian stage and/or a stage when traffic is turning left only out of Melbourne Place. This will provide a gap in the traffic for pedestrians to cross. The section of carriageway will be one-way eastbound at the proposed informal crossing location.

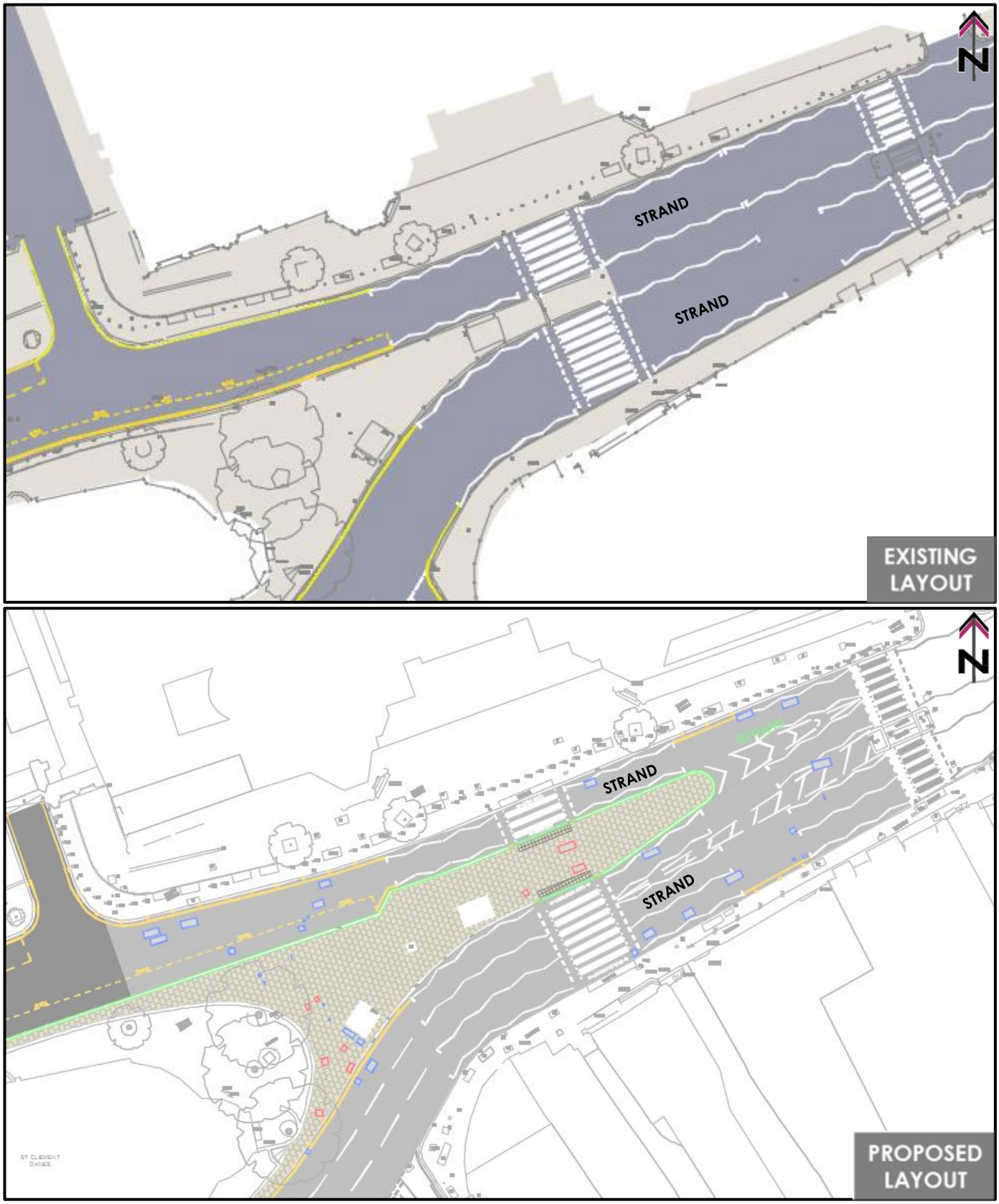
## 2.8 STRAND EAST

2.8.1 The existing and proposed design for Strand east outside the Royal Courts of Justice is shown on Figure 2.8.

2.8.2 The proposed design:

- Provides two-way working to the south of the central median. North of the median is one-way eastbound (as existing).
- Widens the existing median to 7m between the Zebra crossings. This has been done because the Zebra crossing north of the median has one-way traffic but the Zebra to the south has two-way traffic. It is important that there is a suitable separation between the two crossings so that pedestrians are aware they are separate entities and must adapt behaviour.
- Provides a gap in the zig-zag markings to allow taxis to perform a U-turn. This U-turn occurs currently and needs to be retained because there is a taxi rank north of St Clement Danes Church.

**Figure 2.8: Existing and proposed design for Strand east**



## 2.9 STRAND PUBLIC SPACE

2.9.1 The existing and proposed design for the Strand public space is shown on Figure 2.9.

2.9.2 The proposed design:

- Defines the public space as a formal Pedestrian Zone, permitting restricted vehicle entry for access only.
- Provides an access road south of St Mary Le Strand Church that runs from Melbourne Place to Montreal Place. 24 hour access is required to Montreal Place due to resident and hotel parking spaces below Marconi House. Access to Bush House (east and west) will also be provided.
- Allows vehicle admission beyond the access road only at specific times. This is required for servicing of the retail units on the south side of Strand at the western end.
- Permits cycling, but it will be as an area of shared use with pedestrians, and thus considerate cycling (or walking with bike) will be encouraged by design and signs. Cycle access/ egress at the junctions to the east and west of the public space will be undertaken informally.

2.9.3 Further information regarding local vehicle and cycle access through the public space is described at Section 8.1.

**Figure 2.9: Existing and proposed design for Strand public space**

# 3 WALKING

## 3.1 OVERVIEW

3.1.1 As detailed in the previous section, the Strand-Aldwych scheme proposes to significantly improve the existing pedestrian amenity by providing:

- widened footways (where possible);
- new pedestrian crossings on Aldwych;
- simplified pedestrian crossings at existing junctions (staggered crossings replaced with straight over crossings where the carriageway can be crossed in a single movement);
- improved footways (as a result of de-cluttering of street furniture); and
- significant new public space.

## 3.2 PEDESTRIAN MOVEMENT

3.2.1 The existing pedestrian movement is shown on Figure 3.1, as presented in the *A Vision for Aldwych* document (Publica, 2016).

**Figure 3.1: Existing pedestrian movement**


3.2.2 The footways on the outside of the Strand-Aldwych gyratory have the highest volume of pedestrians. There are two primary reasons for this. Firstly, there is little active frontage on the inside footway of the gyratory. Secondly, it is difficult to access, with no controlled pedestrian crossings on Aldwych (except at the junctions with Strand (east and west) and Kingsway).

3.2.3 People cross the Aldwych to/from India Place and Melbourne Place despite the poor crossing provision and unsafe traffic conditions, which demonstrates that there is a demand, as well as latent demand (demand that is not there yet) to get across Aldwych.

3.2.4 The primary origins and destinations are Temple underground station, Waterloo Bridge, King's College and Somerset House to the south. Fleet Street to east. London School of Economics (LSE) to the north-east, and Theatreland to the north-west.

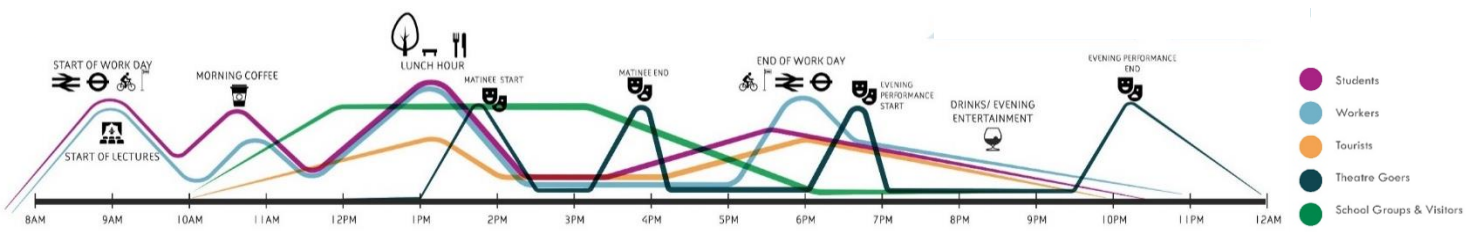
3.2.5 Predicted proposed pedestrian movement is shown on Figure 3.2, as presented in the *Strand Aldwych RIBA Stage 2* document (LDA, 2018).

**Figure 3.2: Proposed pedestrian movement**

3.2.6 Figure 3.2 shows how the new crossings on Aldwych will be used and that they will provide a critical link between the north and south sides of Aldwych. It also demonstrates that the new public space is expected to be well used both as a through route and as a destination.

3.2.7 Figure 3.3 shows the purpose of pedestrians using the Strand-Aldwych currently. It shows that the area is well used throughout the day, with both business and leisure creating a number of peaks between 8am and 11pm. The new public space will support this and create new attractions.

**Figure 3.3: Pedestrian purpose**



# 4 CYCLING

## 4.1 OVERVIEW

4.1.1 Cycle flows were collected as part of the traffic survey undertaken during October 2017. Existing and predicted cycle flows (rounded) are shown in Figures 4.1 and 4.2 for the AM peak and Figures 4.3 and 4.4 for the PM peak.

**Figure 4.1: Existing cycle flows around Strand-Aldwych (AM peak)**


**Figure 4.2: Predicted cycle flows around Strand-Aldwych (AM peak)**

**Figure 4.3: Existing cycle flows around Strand-Aldwych (PM peak)**

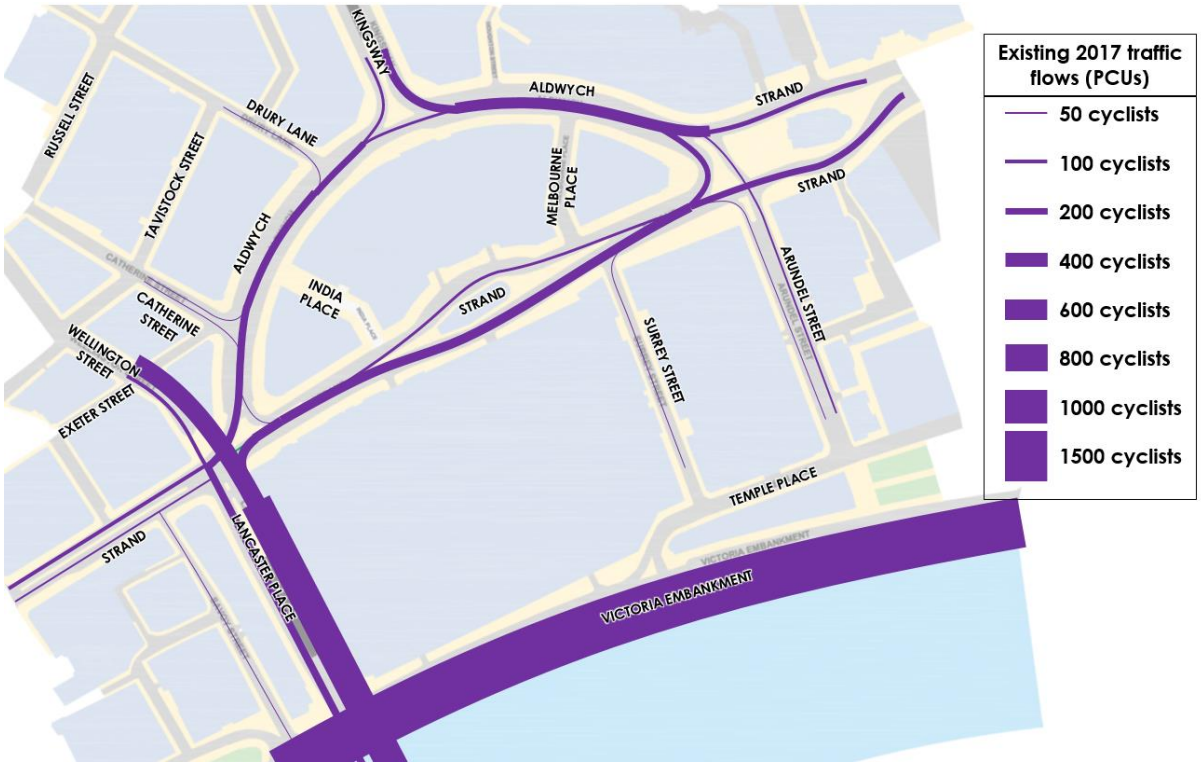
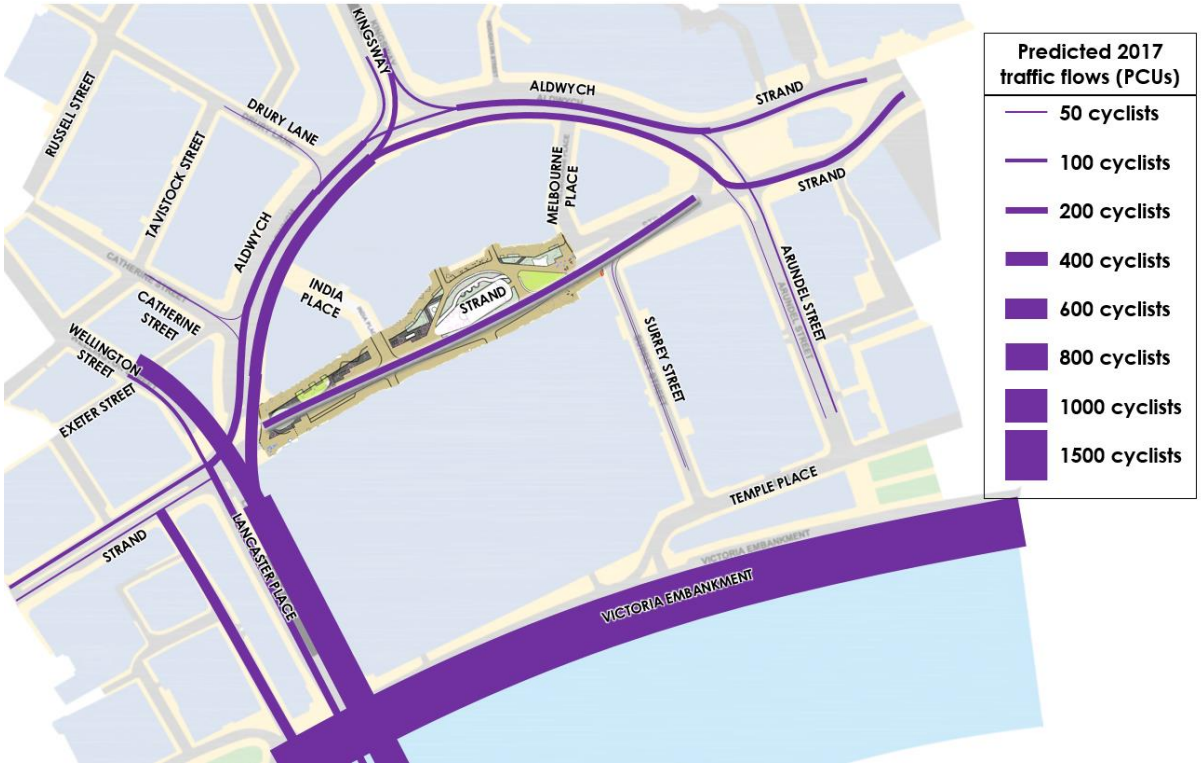



**Figure 4.4: Predicted cycle flows around Strand-Aldwych (PM peak)**



### 4.2 ALDWYCH

4.2.1 The previous section presented the proposed designs and described what facilities have been provided for cyclists. The limitations on junction capacity (and consequent impact on bus journey times, queues and air quality) means that Cycle Early Release (CER) cannot at present be accommodated at the junctions around Aldwych. However, if the traffic flows in the future are significantly lower than those used in the traffic modelling assessment, it may be possible to introduce CER and still have capacity at the junctions to maintain bus journey times. The signal infrastructure will be future-proofed to ensure CER can be retro-fitted as and when appropriate in the future.

4.2.2 A summary is provided at Appendix A of the methods of control and degree of saturation results for each junction with and without CER, and demonstrates the degree to which junction performance and traffic congestion would be significantly affected by this facility.

4.2.3 The overall cycling amenity on Aldwych will improve under the proposed scheme. This is due to the following features:

- Advanced Cycle Stop Lines (ASLs) will be provided on all stop lines.
- Lane widths will be 3.25m or less, which is within the recommended values set out in the London Cycle Design Standard, to encourage cyclists to take a primary lane position.
- The existing carriageway has up to 5 lanes with traffic weaving hazardously along most sections. The proposed scheme will provide two lanes in each direction and minimise this behaviour by providing a more typical road layout.
- The left-hook conflict between turning vehicles and cyclists travelling ahead on Aldwych at the junction with Catherine Street will be removed.
- Cyclists will be able to use the carriageway north of St Clement Danes Church, which will have lower traffic flows than is currently the case.

### 4.3 CYCLE SEGREGATION

4.3.1 It is recognised that the highest grade of amenity for cyclists would be a fully segregated cycle facility around Aldwych. This is because it would provide a safer link between all of the junctions and trip attractors around Aldwych. However, this would have a significant impact on network traffic capacity as it would mean there would only be one traffic lane in each direction around Aldwych. The bus stops (and any other kerbside provision) would have to be floating, with the cycle track going behind the bus stops. Furthermore, some of the junctions would require an additional traffic stage, meaning time lost to general traffic in order to allow cyclists to safely access or exit the cycle track.

4.3.2 Another option would be to provide a segregated cycle track through the public space. The reasons why this is not appropriate are set out in the section below. In addition to these the junctions at either end of the public space (Strand/ Aldwych and Strand/ Aldwych/ Arundel Street) would require an additional stage in the method of control to allow cyclists to safely access or egress the public space. This would significantly impact bus journey times and may cause traffic to reassign to other parts of the highway network.

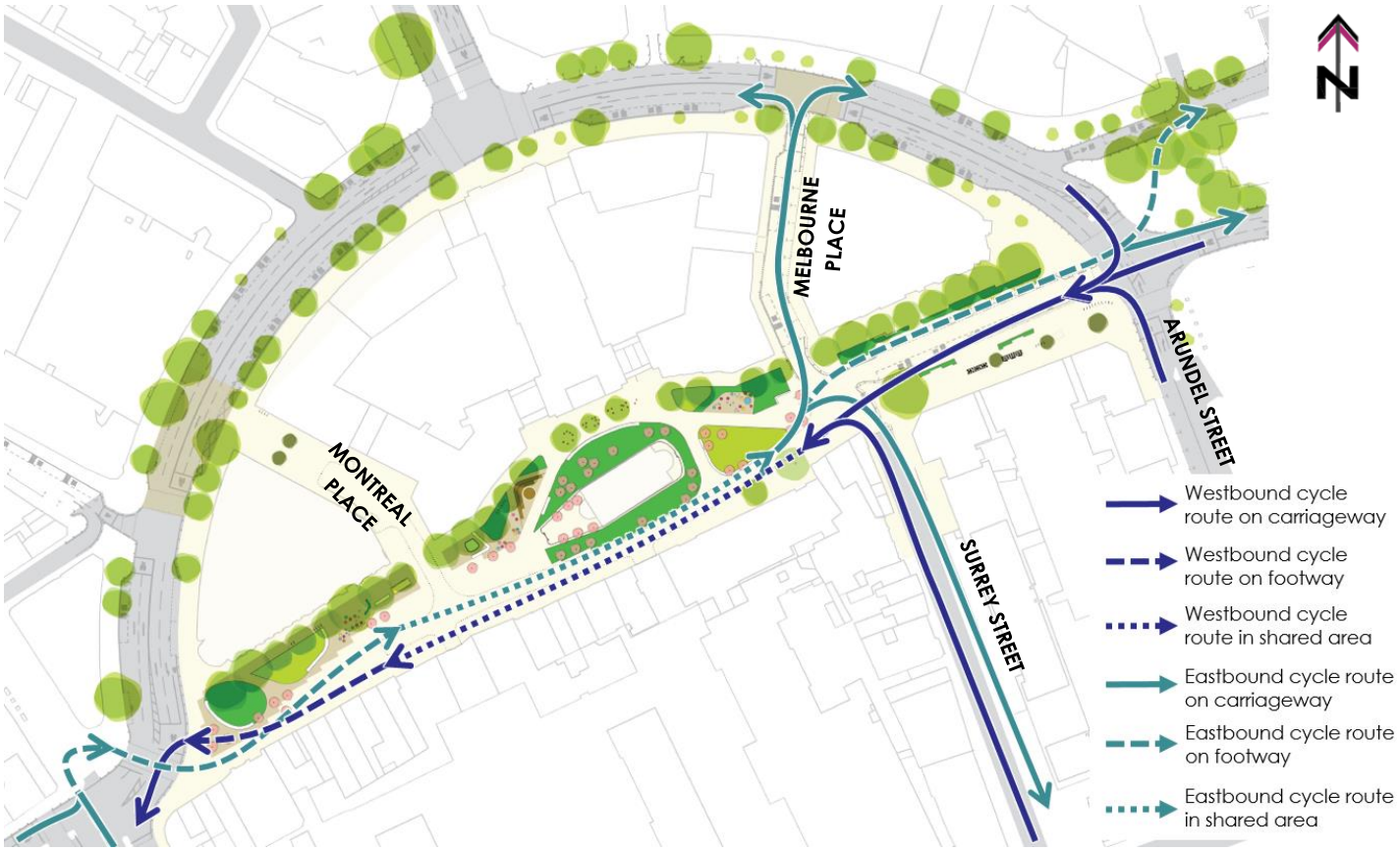
4.3.3 A reduction to a single lane in each direction on Aldwych would approximately halve the available capacity. This would result in heavily congested traffic conditions.

## 4.4 STRAND PUBLIC SPACE

4.4.1 Cycling will be permitted in the public space as it will be as an area of shared use with pedestrians, and thus considerate cycling (or walking with bike) will be encouraged by design and signing. In areas of pedestrian-cyclist shared use the perception of reduced safety is an important issue for consideration because it has a bearing on user comfort, especially for vulnerable users. It is not proposed to prohibit cycling in the space, as cycling will be a key mode of access to the area, and to facilitate access for disabled people who cycle.

4.4.2 Access and egress at the junctions to the east and west of the public space will happen informally. At the Strand/ Aldwych junction cyclists leaving the space will be able to move into the ASL on Aldwych southbound during the all red pedestrian stage. They can then proceed with traffic. Access to the public space from this junction would require cyclists to walk with their bike over the crossings. At the Strand/ Aldwych/ Arundel Street junction cyclists entering the space will be able to do so as part of the proposed method of control. Cyclists leaving the public space could use Melbourne Place or Surrey Street, or walk with their bike to the Arundel Street junction. The access arrangements are summarised in Figure 4.5.

**Figure 4.5: Proposed cycle routes through Strand public space**




4.4.3 The public space is intended to be used year round by pedestrians, cyclists and permitted vehicles. Access to the space by bicycle will be encouraged and ample cycle parking will be provided. The public space will be both an origin or destination for cyclists and thus access to it from particular directions may require cyclists to walk with their bike for the last few metres of their journey.

4.4.4 The space has not been designed to facilitate cyclists to use it as a through route, as this tends to be associated with higher than average cycling speeds. Due to the anticipated high number of pedestrians using the public space, a conflict between users is not desirable. The design of the space will mean that the access road to the south of St Mary-le-Strand Church is less likely to be used by high volumes of pedestrians and thus cycling in that zone would reduce conflict. However, to the east and west of that zone cyclists would be required to walk with their bike or cycle with care, depending on the preference and requirements of the cyclist. The interaction between pedestrians, cyclists (and access vehicles) in the public space would be monitored to ensure the space is operating as intended.

4.4.5 The Dutch Design Manual for Bicycle Traffic (CROW, 2006 and 2016) states that pedestrian precincts that are closed to cyclists often form a major barrier while the areas also accommodate a great many destination points for cyclists. Bicycle inclusive policy ensures that these destinations remain accessible to cyclists. The document provides suggestions on the volume of pedestrians (per metre per hour) and the associated cycle amenity.

- <100 pedestrians/m/hr: no delineation, shared area.
- 100-200 pedestrians/m/hr: marking out of a cycle route, with or without height difference, depending on pedestrian volume.
- >200 pedestrians/m/hr: prohibit cyclists.

4.4.6 It is likely that the number of pedestrians per metre per hour will be greater than 100 and even 200 at peak times. Therefore, the proposed scheme design both of the public space and access to it is appropriate and balanced given the predicted level of conflict between different users of the space.

4.4.7 It is acknowledged that signs requesting cyclists to dismount are unpopular with cyclists and potentially discriminate against disabled people who cycle. Therefore, the project team is exploring different types of sign that may be appropriate. For example Figure 4.6 shows TSRGD Diagram 956, which shows a route for shared use by pedal cycles and pedestrians only.

**Figure 4.6: TSRGD Diagram 956**

4.4.8 This could be used on the footway sections to the east of Melbourne Place and to the west of Montreal Place.

4.4.9 In the space between Melbourne Place and Montreal Place, the shared use sign 956 cannot be used because motor vehicles will also be permitted, although the traffic flow is likely to be very low as it will be limited to servicing and access. This zone can be signed using TSRGD Diagram 618.3C, shown in Figure 4.7.

**Figure 4.7: TSRGD Diagram 618.3C**


4.4.10 There is a plate in the TSRGD that can be used with Diagram 619 ("Motor vehicles prohibited"), that has text that states "for access to off-street premises" (Part 3, 15 (e) (iv)). However, it appears that this text cannot be used on the sign shown in Figure 4.7 (618.3C). If it is considered that the text regarding off-street premises is more appropriate, permission should be sought from the DfT to use this on Pedestrian & Cycle Zone sign 618.3C.

4.4.11 In addition to this sign, it may be appropriate to have signs that remind cyclists that it is a shared use area with pedestrians and thus due consideration should be taken. The document *Cycle Network Signing, Technical Information Note No. 05* (Sustrans, July 2013) provides examples of cycle friendly pedestrian zone signs. These are shown in Figure 4.8.

**Figure 4.8: Example of cycle-friendly pedestrian zone signs (Figure 25 from *Cycle Network Signing, Technical Information Note No. 05* Sustrans, July 2013)**

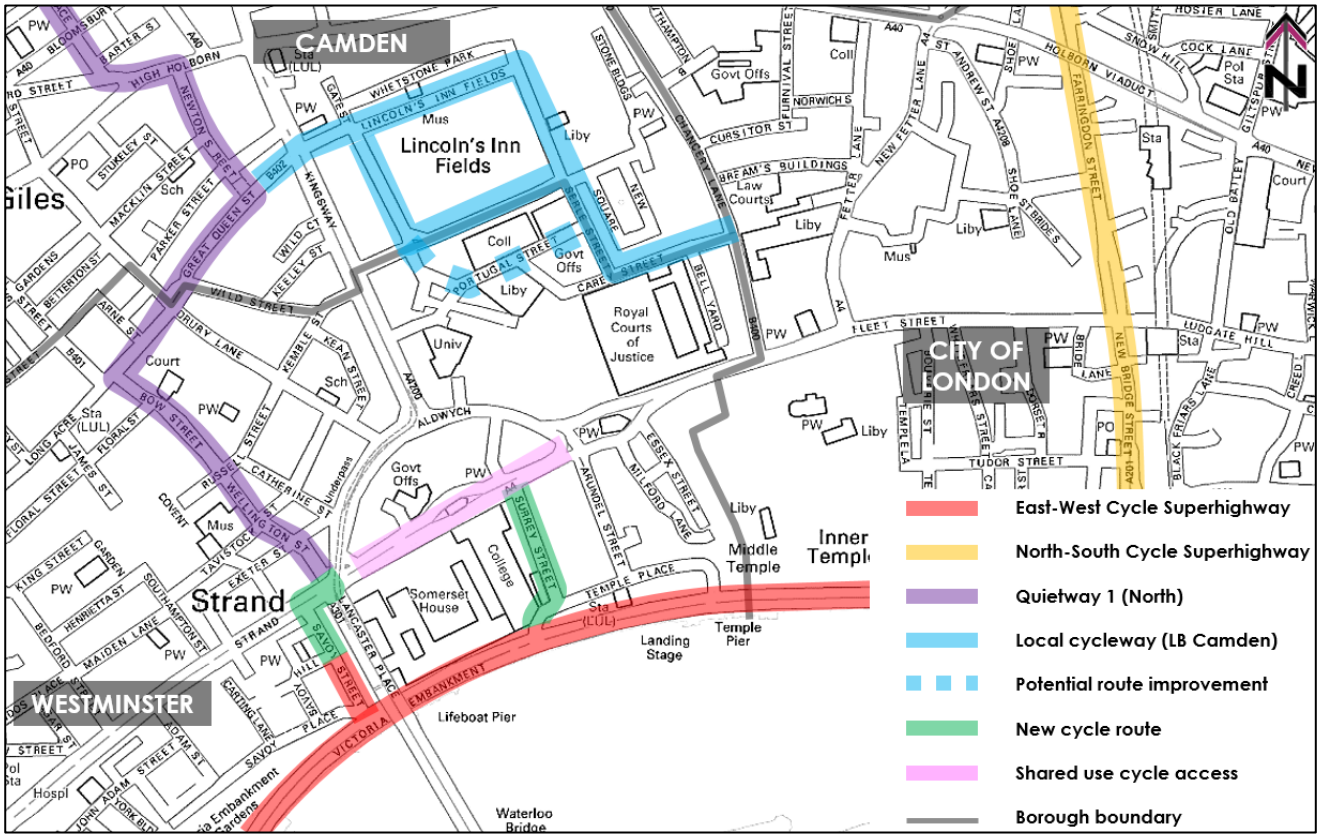

4.4.12 These are not TSRGD compliant signs but are used for information. There are similar signs from across the world that could be reviewed and discussed with the DfT if a variation on the above is deemed preferable.

## 4.5 FORMAL CYCLE ROUTES IN THE AREA

4.5.1 Strand-Aldwych has a number of high quality cycle routes that already provide formal, recognised east-west and north-south links. The routes are listed below and shown in Figure 4.9:

- East-West Cycle Superhighway
- North-South Cycle Superhighway
- Quietway 1 (North)
- Quiet route (Local cycleway, London Borough of Camden)

**Figure 4.9: Existing and proposed cycle routes around Strand-Aldwych**




4.5.2 Figure 4.9 also shows the new cycle route on Savoy Street that provides a formal link between the East-West Cycle Superhighway and Quietway 1 on Wellington Street. Surrey Street is proposed to be one-way northbound with a contra-flow southbound cycle facility. This provides a two-way link between the public space and the East-West Cycle Superhighway on a street that will have low traffic volumes.

4.5.3 The requirements to maintain adequate road traffic capacity, in relation to bus journey times and traffic reassignment, mean the design of Aldwych facilitates cyclists on-carriageway with ASLs, and informal access to Strand. Figure 4.9 shows that there are suitable alternative routes around Aldwych that provide higher grade facilities for cyclists travelling in all directions through the area. It was agreed with TfL cycling officers at concept design stage that these other facilities mean that fully segregated facilities would not be necessary, recognising the competing demands for space and road capacity. Cyclists who choose to travel on Aldwych will still have improved facilities and highway layout compared to the existing situation.

4.5.4 Use of the Kingsway tunnel has been considered. This is one-way northbound and provides a route for motor traffic only (cyclists are prohibited) between Waterloo Bridge and Kingsway. If this tunnel was closed to motorised vehicles there would be ~500 PCUs that would need to reassign, including one bus route, and it is likely they would use the surface route around Aldwych instead. This would result in junctions operating over capacity and creating delay and congestion that would not benefit any road users, including cyclists and pedestrians.

4.5.5 If the tunnel were to be used by motorised vehicles and cyclists, it would be an unpleasant and unsafe facility. There is limited road width in the tunnel, meaning the cycle lane would only be 1m wide. There is insufficient space to have motor vehicles and two-way cycling. There are two alternative routes between Waterloo Bridge and Kingsway. One is around the Aldwych (which would have a shorter and more direct southbound route in the proposed scheme). The other is using Quietway 1.

4.5.6 Therefore, it is not considered appropriate, feasible or of significant benefit to propose the tunnel as a cycle route.

## 5 PUBLIC TRANSPORT

### 5.1 BUS ROUTES

5.1.1 There are 23 bus routes that use the Aldwych gyratory, which results in nearly 200 buses/hour traveling around it during peak periods. The two-way working of the gyratory will mean that buses travelling southbound from Kingsway to Lancaster Place or Strand will have a much shorter travel distance.

5.1.2 Services 6, 9, 87 and 23 currently loop around the Aldwych gyratory, and this movement will be facilitated in the proposed scheme by using Melbourne Place.

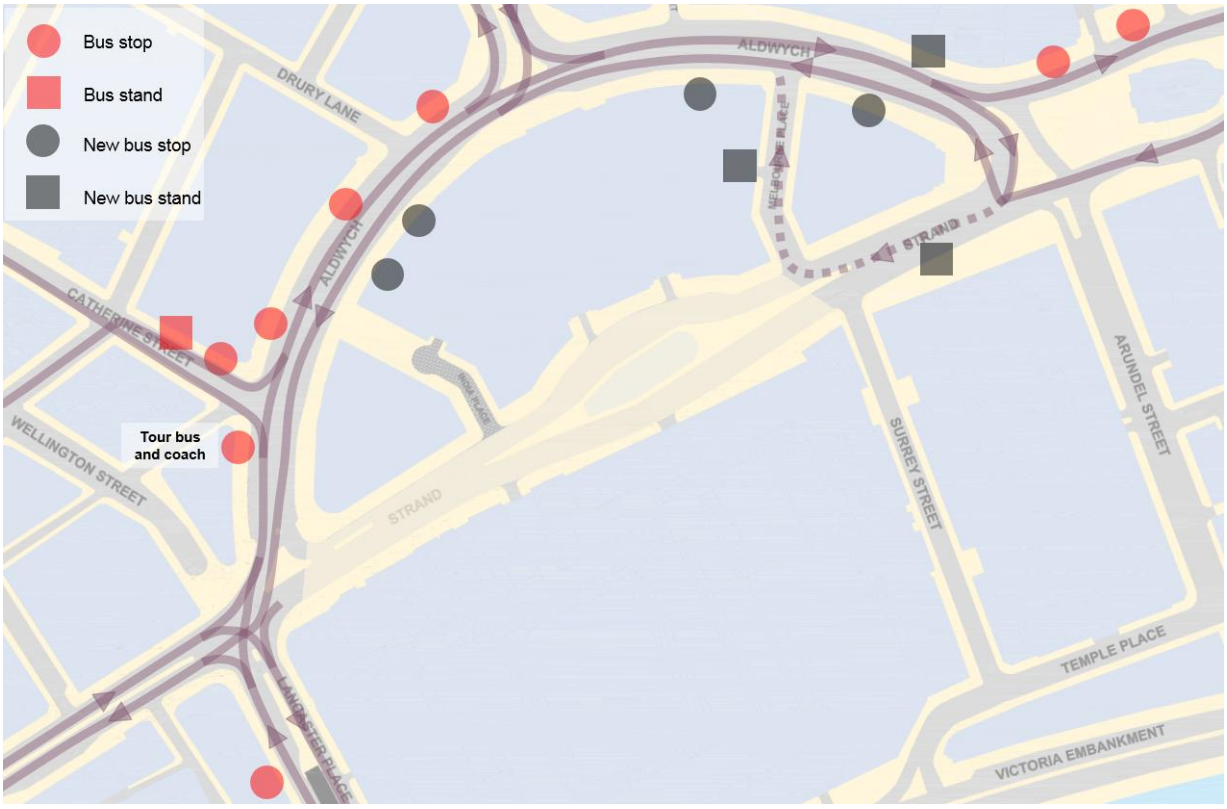
5.1.3 One of the benefits of two-way working is that the bus routes will all travel on the same section of carriageway, meaning that the stops of both directions with be on the same road.

5.1.4 The traffic modelling shows that the bus journey times generally improve or stay the same compared to the Future Base (do-nothing) scenario. The only routes where there is a likely to be a disbenefit, if traffic demand remains as existing, are the four terminating, looping routes. This is due to those services passing through more junctions (and thus incurring delay) than is currently the case.

### 5.2 BUS STOPS AND STANDS

5.2.1 The proposed bus stop and stand locations are shown in Figure 5.1.

**Figure 5.1: Proposed bus stop and stand locations**




5.2.2 On Aldwych the London tour bus stop and TfL bus stops C, D, E, F, L and M are retained in their existing locations. The existing westbound stops on Strand are relocated to the southern side of Aldwych.

5.2.3 There are currently 9 bus stands around Aldwych. This number has been retained and they will be located on Aldwych (x2), Strand (x5) and Melbourne Place (x2).

5.2.4 Any changes to bus routes and stops will be subject to a separate consultation to be held by Transport for London (TfL).

# 6 TAXIS

## 6.1 TAXI RANKS

6.1.1 The taxi ranks currently located around Aldwych can accommodate 37 taxis. Under the proposed scheme there will be capacity for 34 taxis. However, survey data shows that there is spare capacity for 6 taxis. This means that the net impact on taxi bays is neutral.

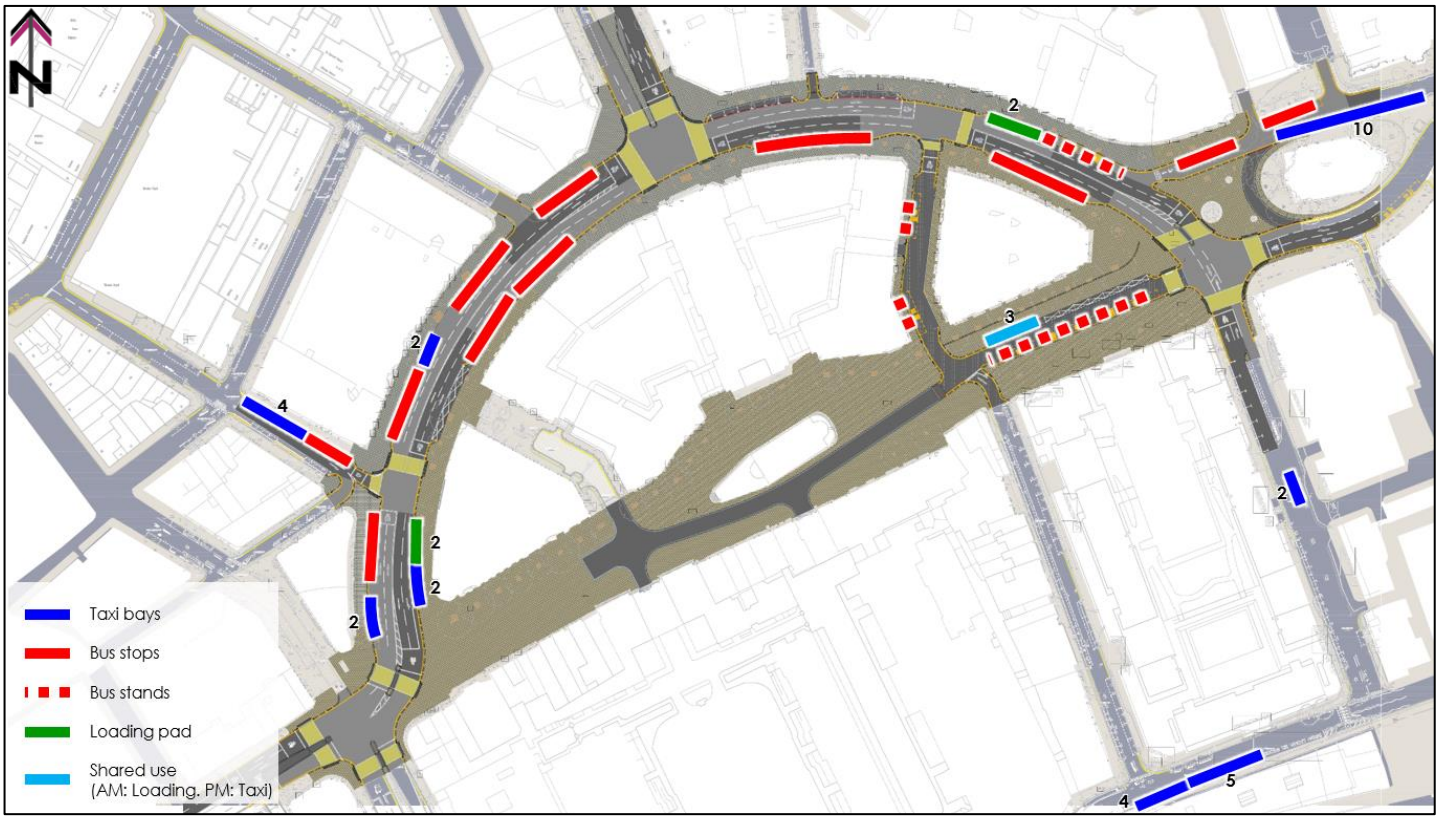
6.1.2 The taxi bays (x9) being relocated are those in the middle of the carriageway on Aldwych. Two of these will be relocated to the kerbside outside the Waldorf Hilton. Four of these will be located to Catherine Street, where the RV1 stop/stand is currently located. TfL have stated that this stop/stand can be shortened to provide a rank for four taxis. This offers a similar level of taxi provision to the businesses on Aldwych to that which currently exists.

6.1.3 The proposed rank on Catherine Street will be a rest/ operational rank. The rank on Aldwych will be an operational rank.

6.1.4 It is proposed to have a shared use taxi rank on Strand, adjacent to the diplomatic bays outside Australia House. This bay will allow loading at certain times and taxis at other times. It was considered necessary to do this as this taxi facility is a direct replacement for the rest/ operational rank that is currently on Strand and is well located for the convenience of facilities on Strand.

6.1.5 Kerbside provision for taxis is shown in Figure 6.1.

**Figure 6.1: Kerbside provision for taxis**




## 6.2 TAXI ROUTES

6.2.1 To access certain destinations taxis will need to take different routes compared to now. The key ones are Catherine Street, Drury Lane, Exeter Street, Russel Street and Tavistock Street. This is described in further detail in Chapter 8.

# 7 KERBSIDE PROVISION

## 7.1 SINGLE YELLOW LINE (LOADING & RESTRICTED PARKING PERMITTED)

7.1.1 The proposed scheme is due to remove all single yellow line on the Strand-Aldwych gyratory. This is due to the proposed two-way operation of Aldwych removing space available and replacing it with bus stops. Strand will be a Pedestrian Zone, which means the single yellow line in this location will be removed.

7.1.2 Within the whole study area there is single yellow line capacity for 140 car spaces for night and some weekend parking only. Under the proposed scheme this would reduce to 48 car spaces. Recognised Westminster parking occupancy data has been assessed and this shows that the 90$^{th}$ percentile occupancy of the single yellow lines is 122 cars. This gives a net loss of 74 car spaces that are currently utilised most of the time.

7.1.3 This issue has been considered by Westminster City Council (WCC) and it was concluded that the benefits of the scheme are considerable, which therefore means the loss of single yellow line, though not desirable, is justified. Adjacent areas that have single yellow lines, such as Lincoln's Inn Fields, are potential alternative locations for this type of parking.

## 7.2 PAY BY PHONE PARKING

7.2.1 The proposed scheme is due to remove 27 pay by phone bays from the current capacity of 119 bays. Survey data shows that the 90$^{th}$ percentile occupancy of the pay by phone bays is 117 cars. This gives a net loss of 25 spaces that are currently utilised most of the time.

7.2.2 This issue has been considered by WCC and it was concluded that the benefits of the scheme are considerable, which means the loss of pay by phone bays, though not desirable, is justified. There may be scope to relocate some of these bays to the Resident Parking bays on Surrey Street as these bays are underutilised. However, this cannot be confirmed until the proposed developer scheme for 180 Strand is finalised.

## 7.3 RESIDENT PARKING

7.3.1 The proposed scheme is due to remove two Resident Parking bays on Strand (Zone G) from the current capacity of 37 spaces. Survey data shows that the 90$^{th}$ percentile occupancy of the Resident Parking bays is 26 cars, which shows this parking could be relocated to Surrey Street, which is also within Zone G.

## 7.4 OTHER

7.4.1 The number of designated loading, disabled, diplomatic and coach parking will remain unchanged from the existing allocation.

7.4.2 A summary of proposed kerbside provision is shown on Figure 7.1.

7.4.3 Table 2 provides the following information for each street and restriction type:

- Existing capacity
- Proposed capacity (with scheme in place)
- 90th percentile surveyed occupancy
- Difference between proposed and existing capacity
- Difference between proposed and 90th percentile existing occupancy

**Figure 7.1: Proposed kerbside provision**

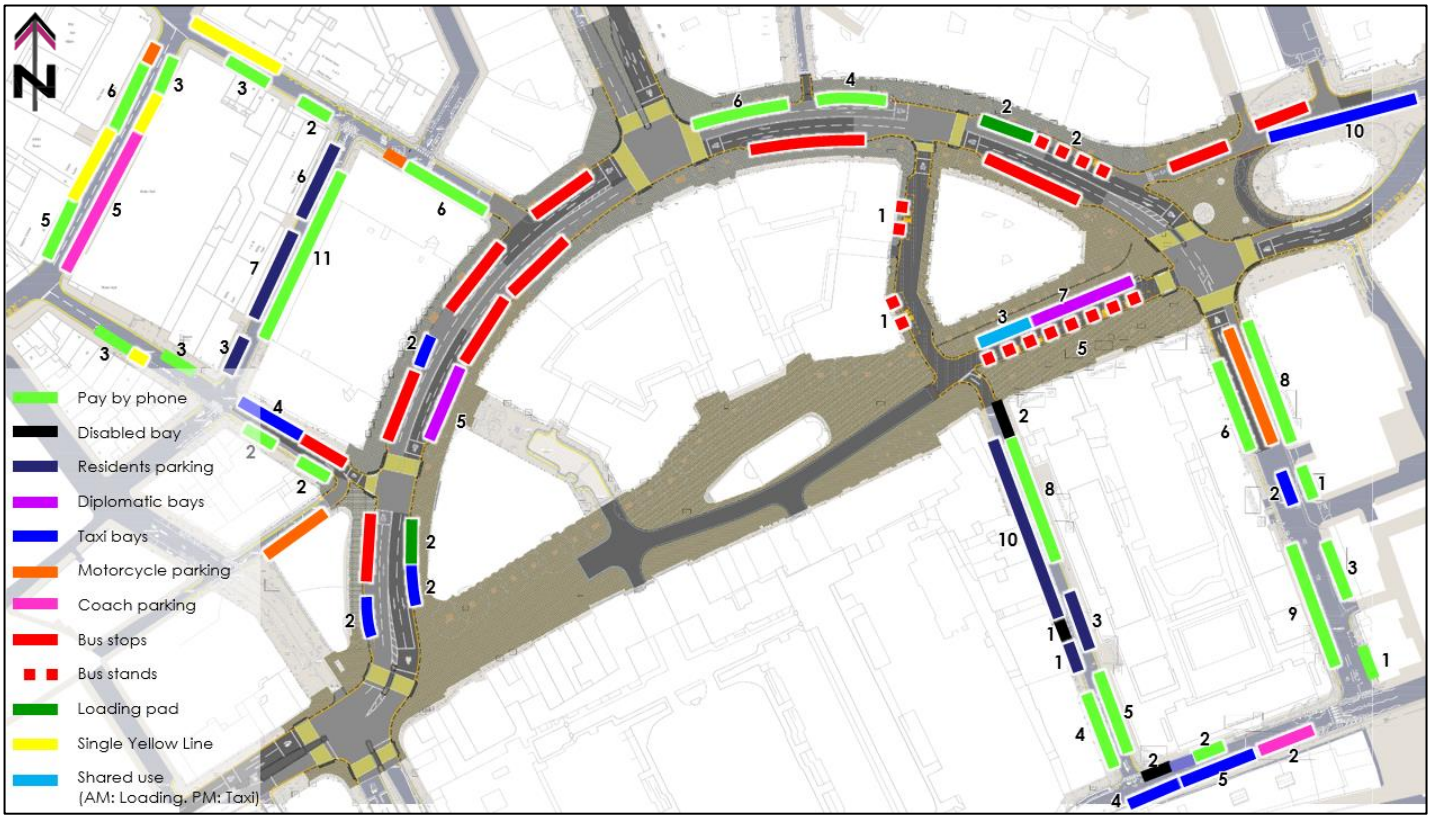



**Table 2: Proposed kerbside capacity comparison with existing capacity and 90th occupancy**

| Location | Taxi | | | Pay by phone | | | Resident | | | Disabled | | | Diplomatic | | | Coach parking | | | Motorcycle | | | Single Yellow Line | | | Loading bays | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Existing capacity | Proposed capacity | 90th %tile | Existing capacity | Proposed capacity | 90th %tile | Existing capacity | Proposed capacity | 90th %tile | Existing capacity | Proposed capacity | 90th %tile | Existing capacity | Proposed capacity | 90th %tile | Existing capacity | Proposed capacity | 90th %tile | Existing capacity | Proposed capacity | 90th %tile | Existing capacity | Proposed capacity | 90th %tile | Existing capacity | Proposed capacity | 90th %tile |
| Aldwych | 13 | 6 | 13 | 17 | 10 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 29 | 0 | 4 | 0 |
| Strand (Aldwych) | 3 | 3 | 3 | 7 | 0 | 7 | 2 | 0 | 2 | 0 | 0 | 0 | 7 | 7 | 6 | 0 | 0 | 0 | 12 | 0 | 11 | 21 | 0 | 21 | 4 | 0 | 4 |
| Strand (east) | 10 | 10 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 20 | 0 | 0 | 0 |
| Melbourne Place | 0 | 0 | 0 | 13 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 8 | 0 | 0 | 0 |
| Catherine Street | 0 | 4 | 0 | 11 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 0 | 0 | 0 |
| Tavistock Street | 0 | 0 | 0 | 11 | 11 | 11 | 16 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 |
| Drury Lane | 0 | 0 | 0 | 11 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 | 7 | 7 | 6 | 0 | 0 | 0 |
| Surrey Street | 0 | 0 | 0 | 17 | 17 | 15 | 19 | 19 | 8 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 8 | 0 | 0 | 0 |
| Temple Place | 9 | 9 | 4 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 6 | 6 | 2 | 9 | 9 | 6 | 0 | 0 | 0 |
| Arundel Street | 2 | 2 | 2 | 16 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 24 | 18 | 10 | 10 | 10 | 2 | 2 | 2 |
| Russell Street | 0 | 0 | 0 | 14 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 8 | 6 | 6 | 6 | 9 | 9 | 9 | 0 | 0 | 0 |
| **TOTAL** | **37** | **34** | **31** | **119** | **92** | **117** | **37** | **35** | **26** | **3** | **3** | **3** | **12** | **12** | **11** | **10** | **10** | **10** | **54** | **42** | **42** | **140** | **48** | **122** | **6** | **6** | **6** |
| **Difference between proposed and existing capacity** | | **-3** | | | **-27** | | | **-2** | | | **0** | | | **0** | | | **0** | | | **-12** | | | **-92** | | | **0** | |
| **Difference between proposed and 90th %ile existing occupancy** | | | **3** | | | **-25** | | | **9** | | | **0** | | | **1** | | | **0** | | | **0** | | | **-74** | | | **0** |

# 8 LOCAL TRAFFIC REASSIGNMENT

## 8.1 OVERVIEW

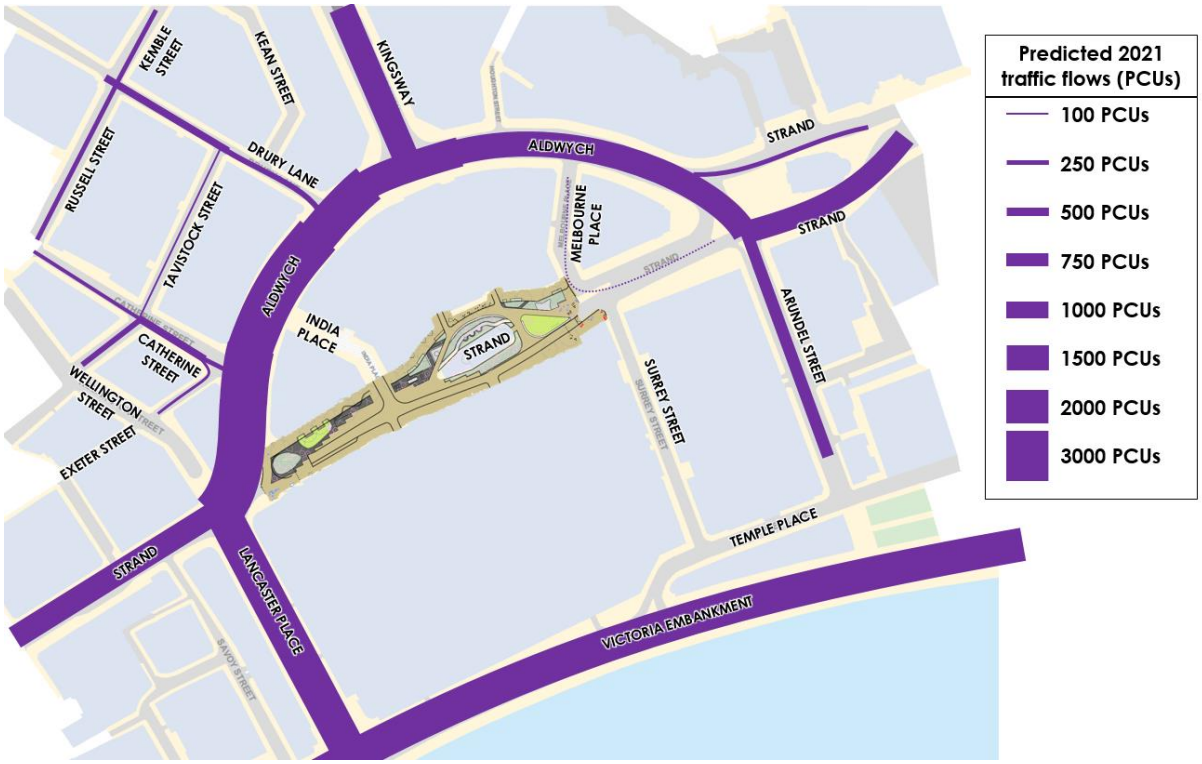
8.1.1 Traffic flows were collected as part of the traffic survey undertaken during October 2017. Existing and predicted cycle flows are shown in Figures 8.1 and 8.2 for the AM peak and Figures 8.3 and 8.4 for the PM peak.

**Figure 8.1: Existing traffic flows around Strand-Aldwych (AM peak)**


**Figure 8.2: Predicted traffic flows around Strand-Aldwych (AM peak)**

**Figure 8.3: Existing traffic flows around Strand-Aldwych (PM peak)**


**Figure 8.4: Predicted traffic flows around Strand-Aldwych (PM peak)**



### 8.2 NEW TRAFFIC MOVEMENTS

8.2.1 In the proposed scheme, eastbound traffic from Strand and Lancaster Place will continue to travel on Aldwych in the same way as existing flows. The only difference is that general traffic will travel south of St Clement Danes Church. Bus, taxi and cycles only will be able to use the road north of the church. Westbound traffic from Fleet Street and Arundel Street will also use Aldwych, as Strand will be closed to through-traffic.

8.2.2 The following new movements will be introduced (see Figure 2.1):

- Westbound right-turn from Aldwych to Kingsway.
- Southbound right-turn from Kingsway to Aldwych.
- Northbound right-turn from Arundel Street to Strand (east).
- Right-turn from Catherine Street to Aldwych.
- Left-turn from Melbourne Place to Aldwych.

8.2.3 The right-turn into Drury Lane will be prohibited. If this movement was allowed, it would block ahead traffic from proceeding westbound on Aldwych, which would have a significant impact on the operation of the junction with Kingsway. Therefore, it was considered preferable for this traffic to reassign via Kingsway and Kemble Street.

8.2.4 Catherine Street will be one-way southbound only, exiting onto Aldwych in both eastbound and westbound directions (see Section 2.4).

8.2.5 Providing two-way traffic operation on Aldwych and appropriate traffic capacity means that vehicles do not need to reassign to roads away from the study area. Any traffic reassignment is kept localised and on borough (WCC) roads.

### 8.3 PROPOSED TRAFFIC ROUTES

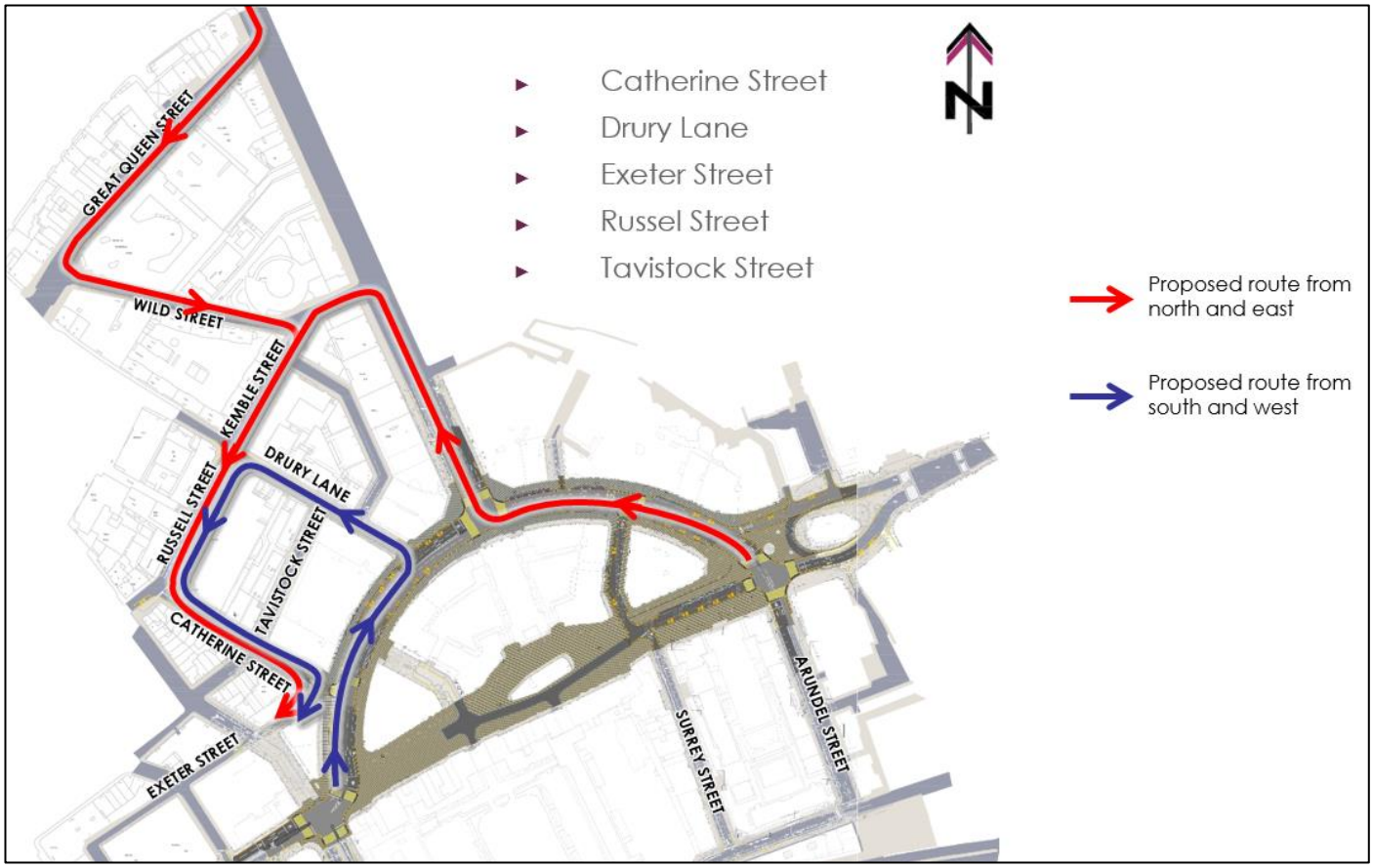
8.3.1 The left-turn from Aldwych to Catherine Street will not be permitted in the proposed scheme. An alternative route for eastbound traffic is available via Drury Lane and Russell Street to access Catherine Street.

8.3.2 Traffic coming from the east will no longer be able to access Drury Lane or Catherine Street directly from Aldwych, as the right-turn into these streets will be prohibited. An alternative route for westbound traffic is available via the right-turn into Kingsway and left onto Kemble Street.

8.3.3 The current traffic patterns show that a significant proportion of traffic that currently turns left into Catherine Street and Drury Lane come from the east. Therefore, the net impact on the traffic flow on Drury Lane is not predicted to be significant (potentially less than 2 additional vehicles per minute). Added consideration should be given to the presence of St Clement Danes Primary School that is located on Drury Lane.

8.3.4 The proposed new routes that vehicles would have to take to access Catherine Street, Drury Lane, Exeter Street, Russel Street and Tavistock Street are shown on Figure 8.5. Kemble Street might expect to experience an increase in traffic flow of approximately 200 PCU/hr in the peak hours.

**Figure 8.5: Existing and proposed routes to Catherine Street and adjacent streets**



# 9 LOCAL ACCESS

## 9.1 BACKGROUND

9.1.1 It is recognised that the peninsularisation of Strand-Aldwych and creation of the two-way street around Aldwych with limited direct turning provision will mean that local and immediate kerbside access for key buildings will be affected. The key locations identified and assessed as part of the feasibility scheme development stage and initial consultation exercise include:

- Properties on Strand, including ME Hotel, Marconi House, Australia High Commission, Bush House;
- Properties on Aldwych, including One Hotel, Waldorf Hilton Hotel, The Delaunay Restaurant

## 9.2 STRAND PUBLIC SPACE

9.2.1 The new public space along Strand will be a Pedestrian Zone but vehicular access will be allowed to off-street premises. These will include Bush House accesses (east and west), and the accesses on Montreal Place. The signage for this is set out in Section 4.3.

## 9.3 STRAND, MELBOURNE PLACE AND SURREY STREET

9.3.1 Access will be permitted for authorised vehicles to Strand, particularly those wishing to access the diplomatic parking bays on outside the Australia High Commission, and for servicing on Melbourne Place. The kerbside bays on Surrey Street will be limited to local access only from the junction with Temple Place. Egress from Melbourne Place will be permitted in both the eastbound and westbound directions.

## 9.4 MARCONI HOUSE

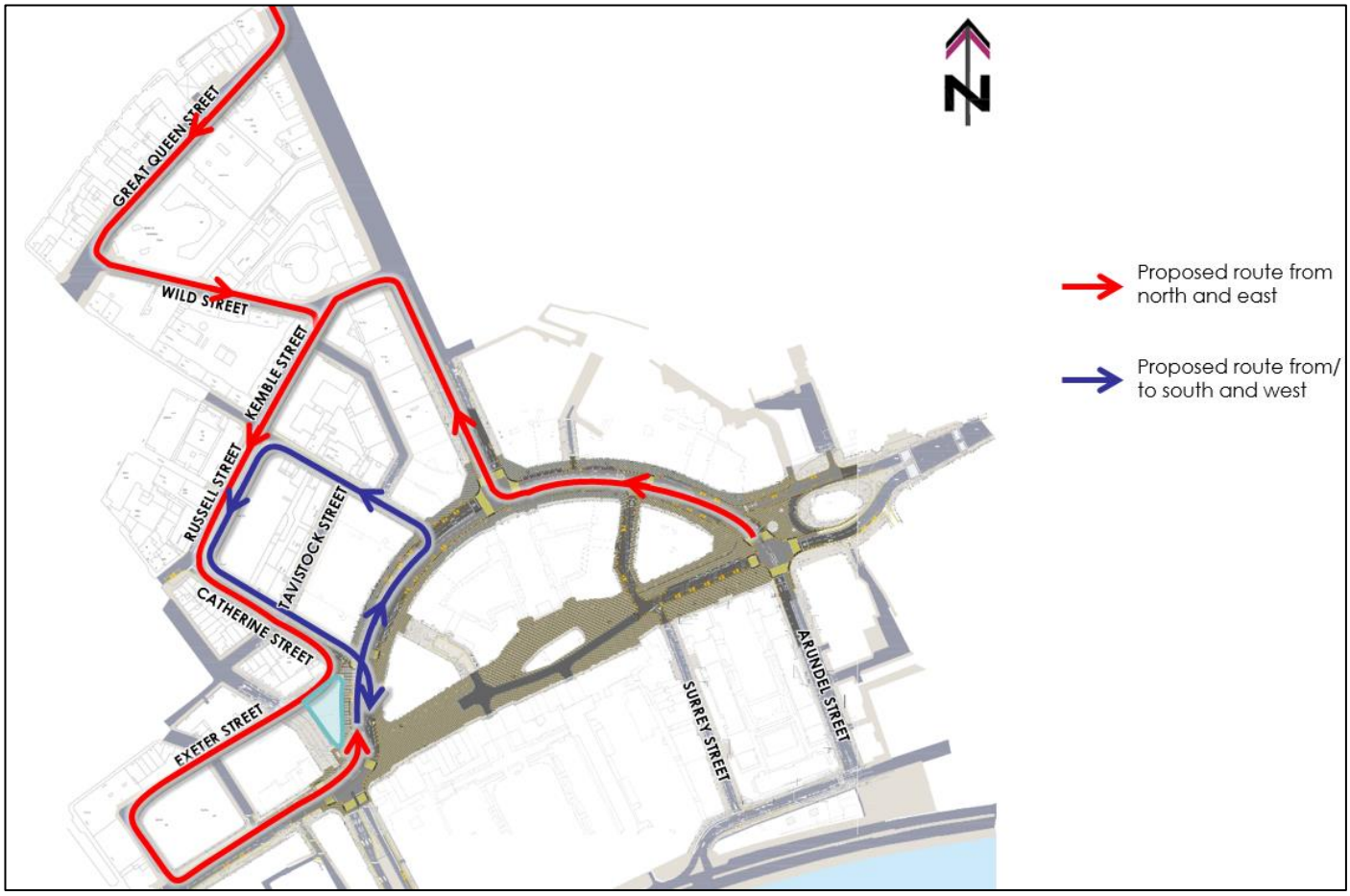
9.4.1 Access to Marconi House and its associated parking bays will be undertaken through the new public space. Vehicles can access this from Aldwych, Strand (east), Arundel Street or Surrey Street.

## 9.5 ONE ALDWYCH HOTEL

9.5.1 The proposed scheme means that the routes to access/egress the front of the One Aldwych Hotel will change depending on the direction of traffic approaching or leaving the hotel.

9.5.2 The new routes to and from the hotel frontage are shown on Figure 9.1. If a route is not shown it means it will be the same as existing.

**Figure 9.1: Proposed routes to and from frontage of One Aldwych**




## 9.6 WALDORF HILTON HOTEL

9.6.1 The proposed scheme means that the routes to access/egress the front of the Waldorf Hilton will change depending on the direction of traffic approaching or leaving the hotel.

9.6.2 The new routes to and from the hotel frontage are shown on Figure 9.2. If a route is not shown it means it will be the same as existing.

9.6.3 Servicing to the rear of the Waldorf Hilton is undertaken on Tavistock Street. Figure 9.3 shows the access to and from Tavistock Street for the existing and proposed situations. Figure 9.3 demonstrates that introducing the right-turn out of Catherine Street provides a shorter route for vehicle coming from the south and west. This route was chosen as it was observed to be the one used by vehicles servicing the Waldorf Hilton.

**Figure 9.2: Proposed routes to and from frontage of Waldorf Hilton**

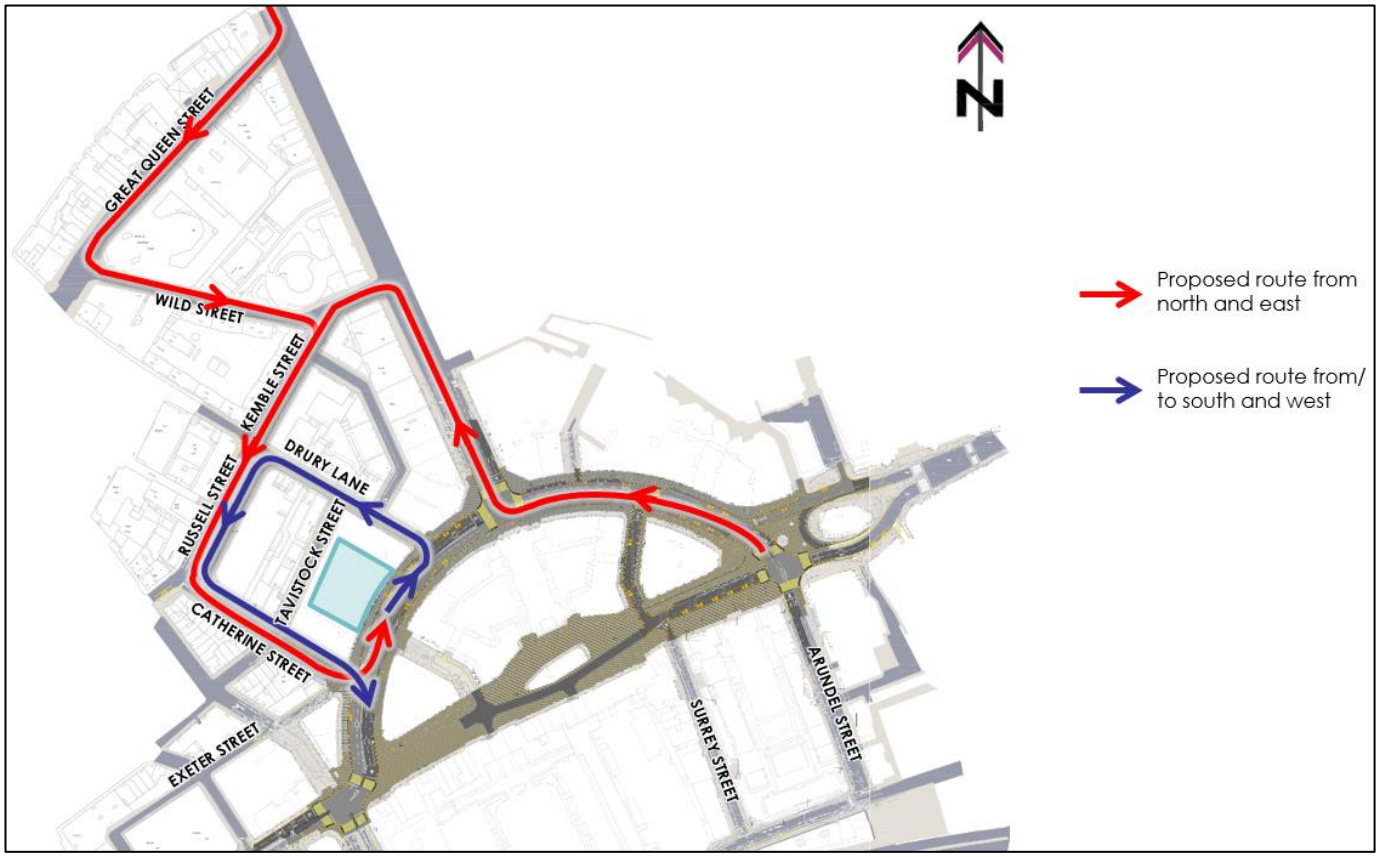
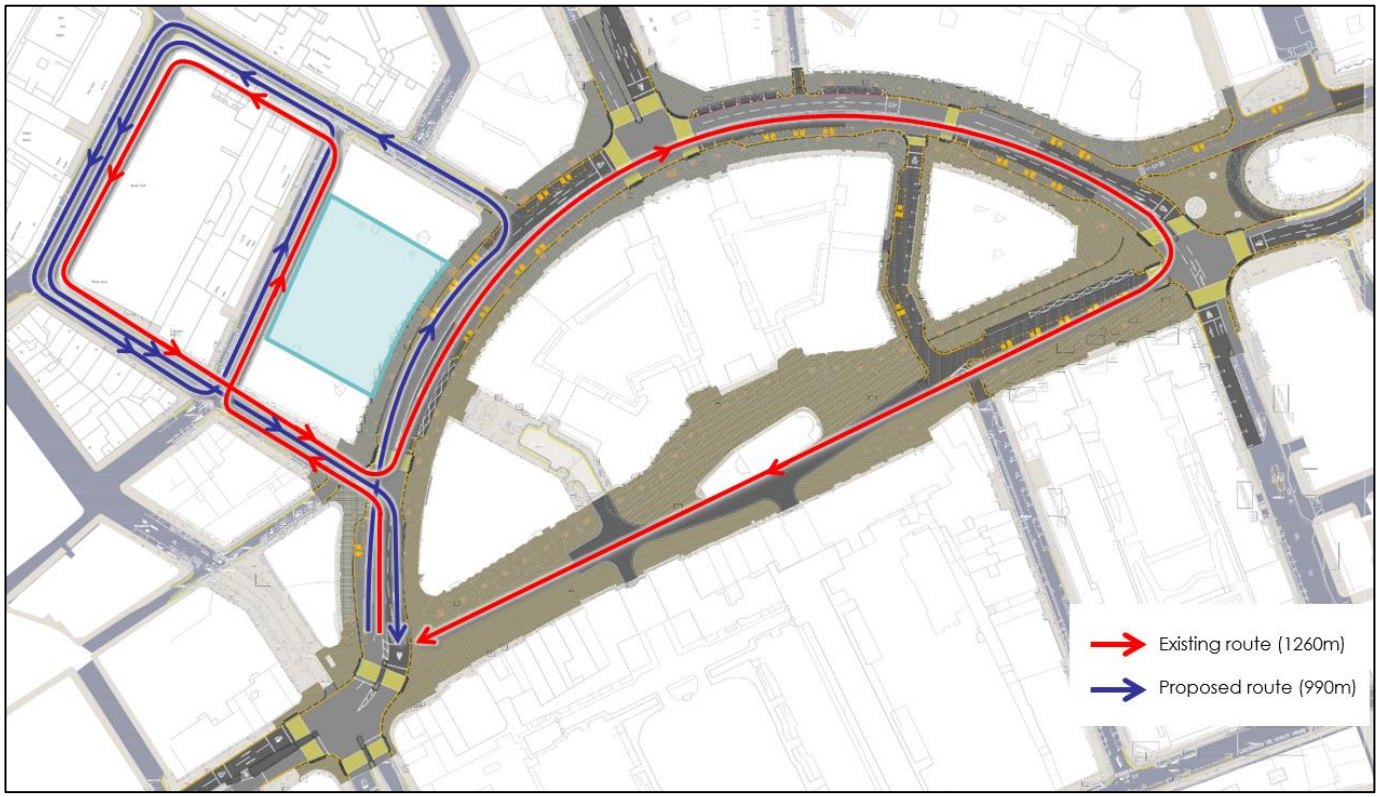



**Figure 9.3: Proposed routes to and from Tavistock Street**

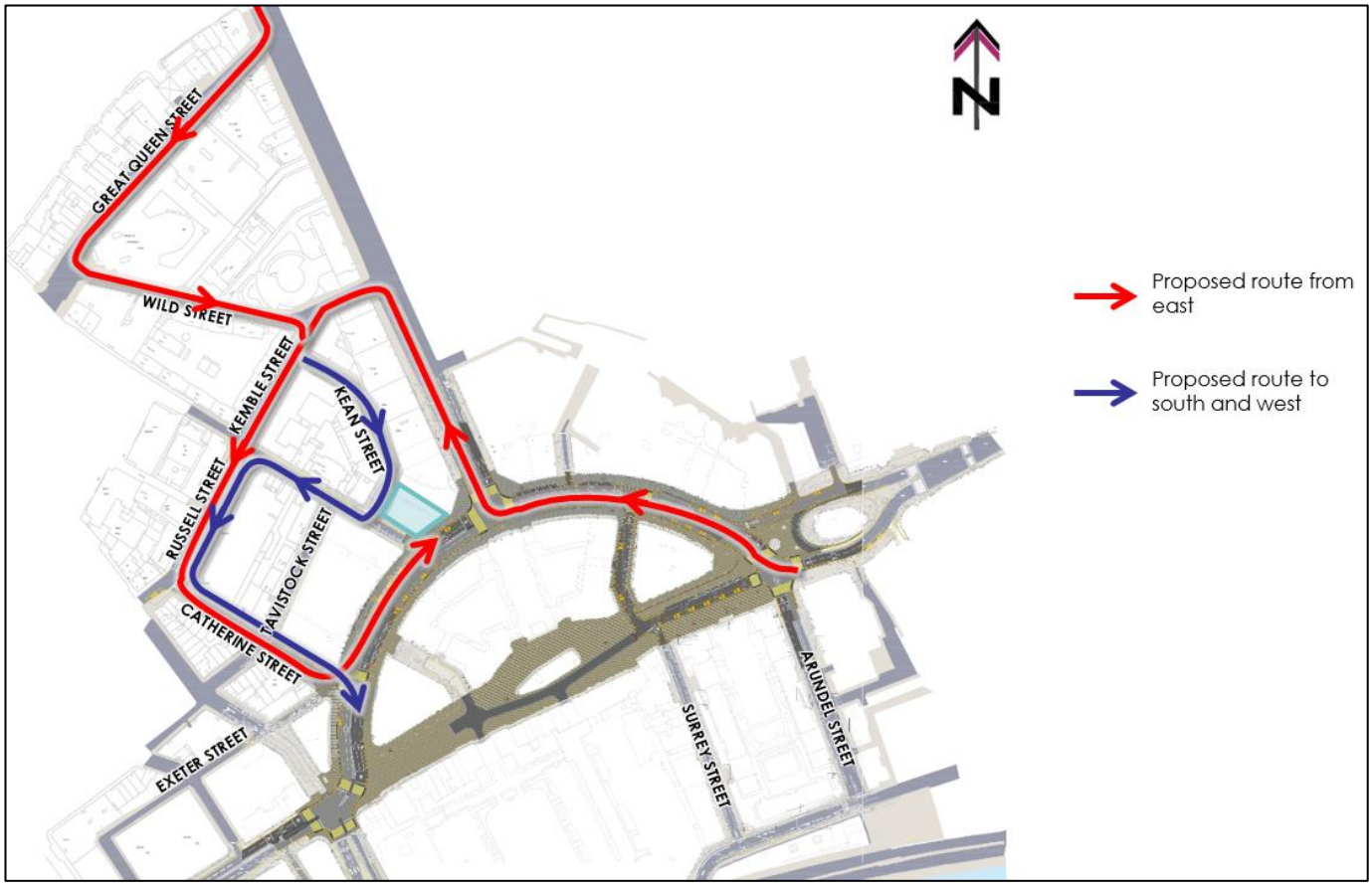


### 9.7 The Delaunay Restaurant

9.7.1 The proposed scheme means that the routes to access/egress the front of the Delaunay Restaurant will change depending on the direction of traffic approaching or leaving the restaurant.

9.7.2 The new routes to and from the hotel frontage are shown on Figure 9.4. If a route is not shown it means it will be the same as existing. A route via Kean Street is shown as this is where the restaurant is serviced from.

**Figure 9.4: Proposed routes to and from The Delaunay Restaurant**



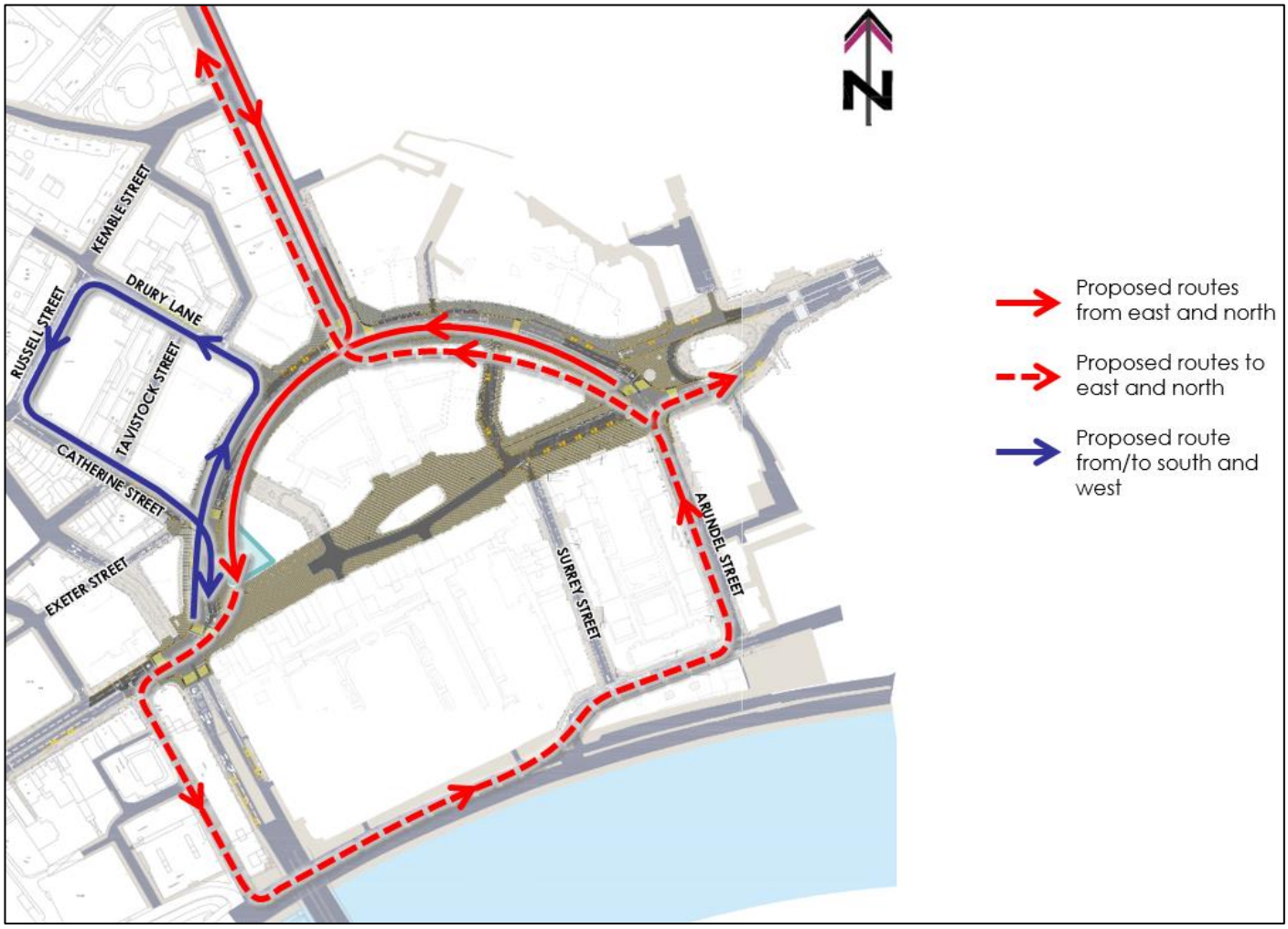

### 9.8 ME London Hotel

9.8.1 The proposed scheme means that the routes to access/egress the front of the ME London will change depending on the direction of traffic approaching or leaving the hotel.

9.8.2 The new routes to and from the hotel frontage are shown on Figure 9.5. If a route is not shown it means it will be the same as existing.

9.8.3 ME London Hotel also has a valet parking service where residents' cars are taken from the front of the hotel and parked under Marconi House on Montreal Place. This would follow the same route as the dashed red line shown in Figure 9.5. At the top of Arundel Street cars would turn left on to Strand and access Montreal Place from the public space. There is an alternative route for this, which is to proceed westbound on Strand and perform a U-turn at the junction of Savoy Court/ Exeter Street. The distance for these two routes is very similar, and so it would depend on local traffic conditions as to which route is preferable.

**Figure 9.5: Proposed routes to and from frontage of ME London**




9.8.4 It should be noted that a new controlled pedestrian crossing will be provided across Aldwych at the junction with Catherine Street. This will provide a safe place for people to cross Aldwych, which means they will be able to access frontages on either side on the north-west section of Aldwych regardless of which side of the road they are on. However, there will be people who require direct access to these frontages, and the routes shown in Figures 9.1-9.5 can be used.

# APPENDIX A – CYCLE EARLY RELEASE ASSESSMENT