

Dulwich Foundation Schools' Coach Service Study

Prepared for the Foundation Schools and
the London Borough of Southwark
July 2016



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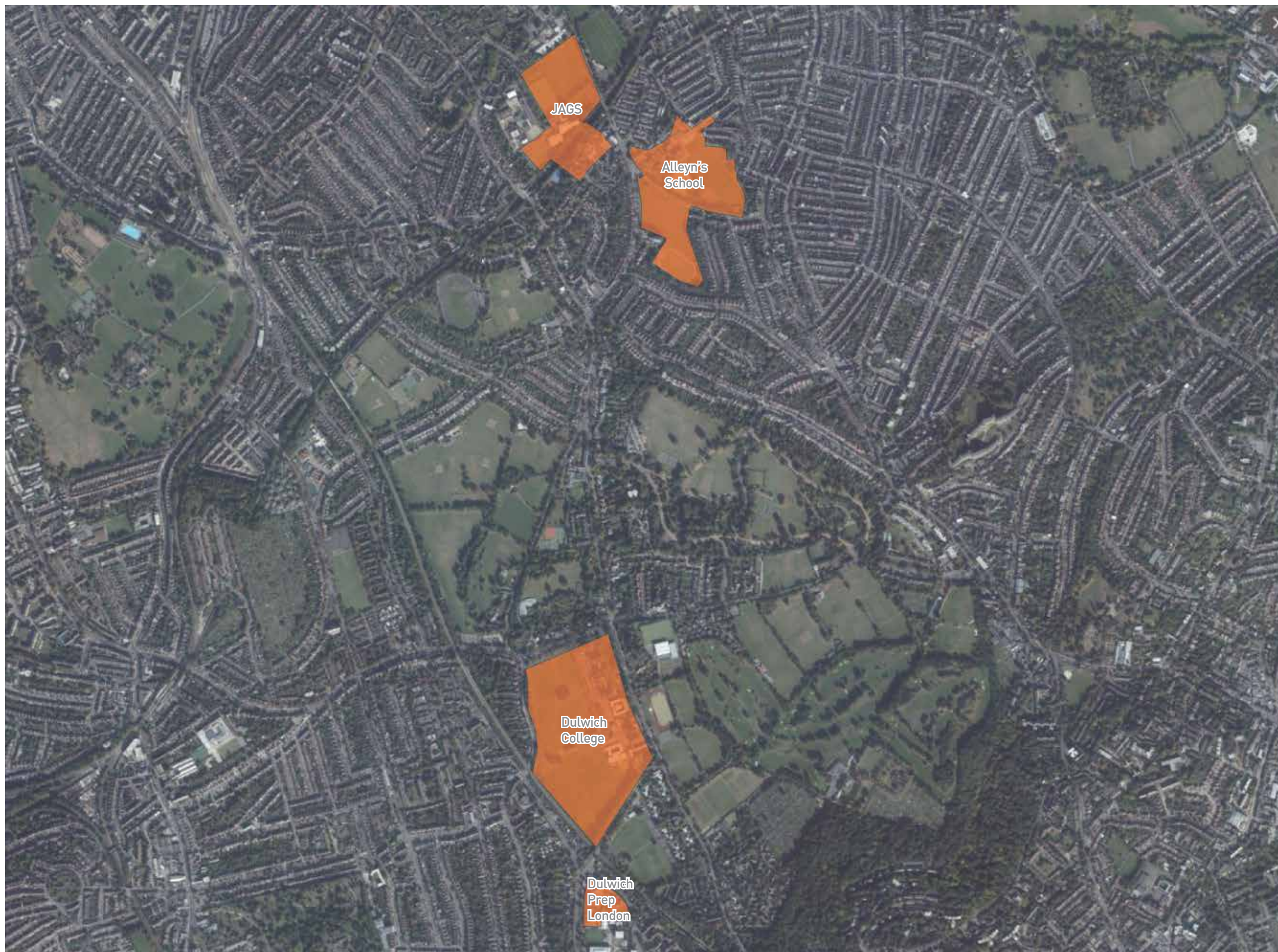
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Aerial view of school locations

Executive Summary

Introduction

Alan Baxter Ltd (ABA) has been commissioned by the Dulwich Foundation Schools and the London Borough of Southwark (LBS) to undertake a study of the Foundation Schools' private Coach Service offered for pupils. The Foundation Schools are Dulwich College, James Allen's Girls School (JAGS) and Alleyn's School. Dulwich Prep London (DPL) is not a member of the Foundation Schools although a limited number of pupils from this school also use the Coach Services.

The purpose of this study is to firstly provide an objective review of the current Coach Service operation understanding the issues and constraints, and secondly present a set of measures that could reduce the impact of the Coach Services on the local area and improve movements in the immediate vicinity of the schools. The report concludes by presenting a high level appraisal of the measures.

Key issues

The key issues have been identified following a detailed analysis of the Coach Service operation and consultation with each of the Foundation Schools, LBS, local ward councillors, Helen Hayes MP for Dulwich and West Norwood and the Dulwich and Herne Hill Safe Routes to School group. Site visits were undertaken over the course of a week in May and conditions were observed during both the AM peak period (7.30am – 9.00am) and PM peak period (3.00pm – 4.30pm).

The key issues are identified as:

- The use of Calton Avenue by coaches when transporting pupils between the Foundation Schools, which impacts negatively on residential amenity and causes road safety concerns for cyclists
- Bunched departure times in the PM peak causing local congestion around Townley Road
- High levels of general traffic meaning the road network surrounding the schools is congested, particularly in the AM peak
- Coach idling - visual intrusion, safety impact and environmental impact in winter when engines are left running, particularly during the PM peak when coaches can arrive from 14:00
- Limited capacity for coach parking on-street around JAGS and Alleyn's School which causes congestion and safety issues, particularly in Townley Road
- General car driver behaviour that causes safety concerns and local congestion, particularly on Townley Road and Alleyn Park adjacent to Dulwich Prep London

The key objectives flow from these issues and are the requirement to minimise the use of Calton Avenue by coaches and the need to reduce congestion on Townley Road. Meeting these objectives will have the most impact on addressing the core concerns raised during consultation and following observations on-site.

Proposed measures

In total 17 measures have been identified that fall under the three headings of coach service alterations, physical interventions (on- or off-street) and travel planning measures. It should be noted that the measures are set out as individual opportunities rather than as an integrated plan for implementation. The final measures adopted, timing and coordination will be for consideration by the Foundation Schools and LBS.

The key measures identified to address the issue of coaches on Calton Avenue are to re route a number of services so that they serve Dulwich College first (Measure 1) and reroute the C2 service so that it stops on Red Post Hill, rather than outside JAGS (Measure 2). The provision of more school specific services have also been suggested as a means of reducing the need to travel between schools and therefore reducing the need to use Calton Avenue (Measure 6). Taken together these options could remove all services from Calton Avenue. However, it is important to note there are a number of dependencies and service or resource implications for each option and these are set out in detail in the body of the report.

The key measures identified to address the issue of congestion on Townley Road are the provision of additional on-street coach parking (Measure 4) and off-street coach parking (Measure 5). This would allow coach arrival times to be staggered in the PM peak and would reduce the number of coaches parked on-street in the vicinity of the schools. Of the sites identified the most promising are Gallery Road, the Trevor Bailey Sports Ground, Crystal Palace Park, Streatham and Marlborough Cricket Club and the TA centre on Upper Tulse Hill. However, each of these carries uncertainties as they are reliant on third parties to deliver.

The full sets of measures are described in Section 6 and a high level appraisal is provided in Section 7.

1.0 Introduction

Alan Baxter Ltd (ABA) has been commissioned by the Dulwich Foundation Schools and the London Borough of Southwark (LBS) to undertake a study of the Foundation Schools' private Coach Service offered for pupils.

The purpose of this study is to firstly provide an objective review of the current Coach Service operation understanding the issues and constraints, and secondly present a set of measures that could reduce the impact of the Coach Services on the local area and improve movements in the immediate vicinity of the schools. The report concludes by presenting a high level appraisal of the measures. It should be noted that the measures are set out as individual opportunities rather than as an integrated plan for implementation. The final measures adopted, timing and coordination will be for consideration by the Foundation Schools and LBS and will no doubt involve consultation locally.

It should be noted that the purpose of this report is not to question the fundamental principle of providing a Coach Service. During consultation with key stakeholders it was generally acknowledged that overall the service helps to reduce congestion on the local road network. However, it is acknowledged by the Foundation Schools and LBS that the service does have significant impacts locally and that these need to be urgently addressed. This report is the first stage in addressing those impacts.

Other transport schemes proposed within the area such as Transport for London's (TfL's) Quietway proposals and LBS' Cycle to School Partnership programme funding bid have been considered within the study.

2.0 Background

2.1 The Foundation Schools

The Foundation Schools are Dulwich College, James Allen's Girls' School (JAGS) and Alleyn's School. Dulwich Prep London (DPL) is not a member of the Foundation Schools although a limited number of pupils from this school also use the Coach Services.

Dulwich College is a boys school with around 1,500 pupils, of whom around 120 are boarders. The pupils are aged between seven and 18. JAGS is a girls school with around 1,000 pupils aged between four and 18. Alleyn's School is a coeducational school with around 1,200 pupils aged between four and 18. DPL is a boys school with around 850 pupils aged between three and 13.

The pupils using the coach service reflect the age range of the school rolls and include young children as well as teenagers.

2.2 Existing Coach Service

The Coach Service currently transports around 1,200 pupils to and from the Foundation Schools every day, across 28 services (with nine additional late services). A full breakdown of the routes is included in Appendix A.

The geographical distribution of pupils is shown in Figure 1, which shows that the service predominately serves south London, from Putney in the south-west to Blackheath in the south-east. A small number of pupils travel from areas to the north with a cluster around Chelsea and a very small number of pupils around the City and Canary Wharf.

The majority of pupils using the coach service, some 65%, are transported less than four miles. Of this 65% only 3.5% of pupils are travelling less than two miles. The bulk of pupils using the services therefore are relatively local but living outside of a reasonable walking distance to the schools. Only a small proportion of coach users travel longer distances, with those travelling more than six miles accounting for 6% of the total and only eight pupils travelling more than nine miles. The average distance travelled by pupils using the coach service is 3.86 miles.

The services are well subscribed with an average occupancy of 96% and around a quarter of services oversubscribed. The B3, C4 and CX for example all have subscription levels over 115%. It should be noted that due to the nature of use of the service the coaches operate within capacity. This is because not all pupils use the service every day. A full breakdown of Coach Service subscription levels is included in Appendix A.

Dulwich College has the highest proportion of Coach Service users between the schools at 39% while JAGS is 30% and Alleyn's School 29%. Only a small proportion of DPL pupils use the service at 2%.

Half of the regular 28 services serve all three Foundation Schools, with the remainder of services dedicated to servicing Dulwich College or JAGS and Alleyn's School only.

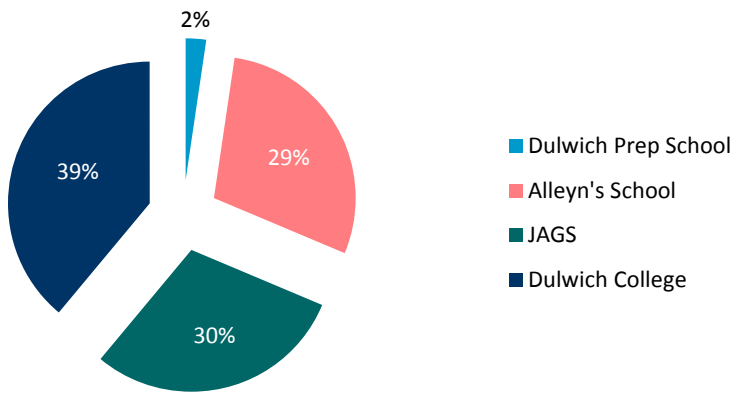


Figure 1 Foundation school coach service demand

The average journey duration across all the services is around an hour in both the AM and PM peak. Given the congested nature of the local highway network the level of journey time variability is high in both peaks with an average variation from one day to the next of 19 minutes in the AM peak and 20 minutes in the PM peak. The extent of delay does not vary significantly between the AM and PM peaks.

The routes that recorded the greatest journey time variability (at least 25 minutes) over the two weeks when data was collected were the G1, G6, G4 and W4 in the AM peak. In the PM peak routes W9, W4, S3, C6, C1 and C2 had a variation of at least 25 minutes. Only route W4 suffered from a high level of variability in journey time in both the AM and PM peaks. A full breakdown of coach journey length and variability is included in Appendix B.

Arrivals are staggered during the morning due to the formal timetabling and delays that naturally occur during the journey. In the afternoon coach departures occur within a short time span, which tends to increase the impact of the coaches in the local area, especially because of coaches arriving early for pick up.

The coaches pick up and drop off at fixed stops in the vicinity of the schools, as shown in Figures 5 and 6. At the home end of the routes the coaches pick up from defined points along their routes. These reflect the catchment of the schools and the density of pupils in any given area.

In the last five years the coach service has remained relatively unchanged in terms of the scale of its operation, with three services being added and one removed. The routeing and timetabling of coaches is monitored from term to term and amended to match catchment and to adjust to congestion on the network caused by road works and other disruptions. However, there are no plans to extend the service in terms of pupil numbers served or services operated.

It should be noted that the recommendations set out in this report relate to the current catchment of pupils. As this will change over time additional measures may become viable over time.

2.3 Reasons for using the coach service and its benefits

Through consultation undertaken by the Foundation Schools it is understood that parents choose to use the coach service as it offers a way of transporting their children safely and directly to the school gates without the perceived risks of children getting lost, diverted or intimidated on public transport. Once children are on the coaches they are perceived to be in the care of the school.

The coach service provides the schools with direct control over transport for those pupils using it, which ensures pupils arrive in good time ahead of the start of the school day.

The coach service offers a significantly more straightforward way of getting children to the school gates than public transport as it is direct, without the need to change between modes or respond to delays or problems on the public transport network. The coach service removes the need for parents to accompany and transport children. This would otherwise be necessary, especially for younger children.

A comparison of public transport journey time and ease of use in comparison to the coach service is set out in Section 2.4.

The coach service provides a valuable alternative to car use for parents. If the service were not provided it is likely, based on National Travel Survey statistics for London, that approximately 28% of the pupils using it would then travel to and from school by car instead. This would result in around 340 additional cars on local streets at peak times.

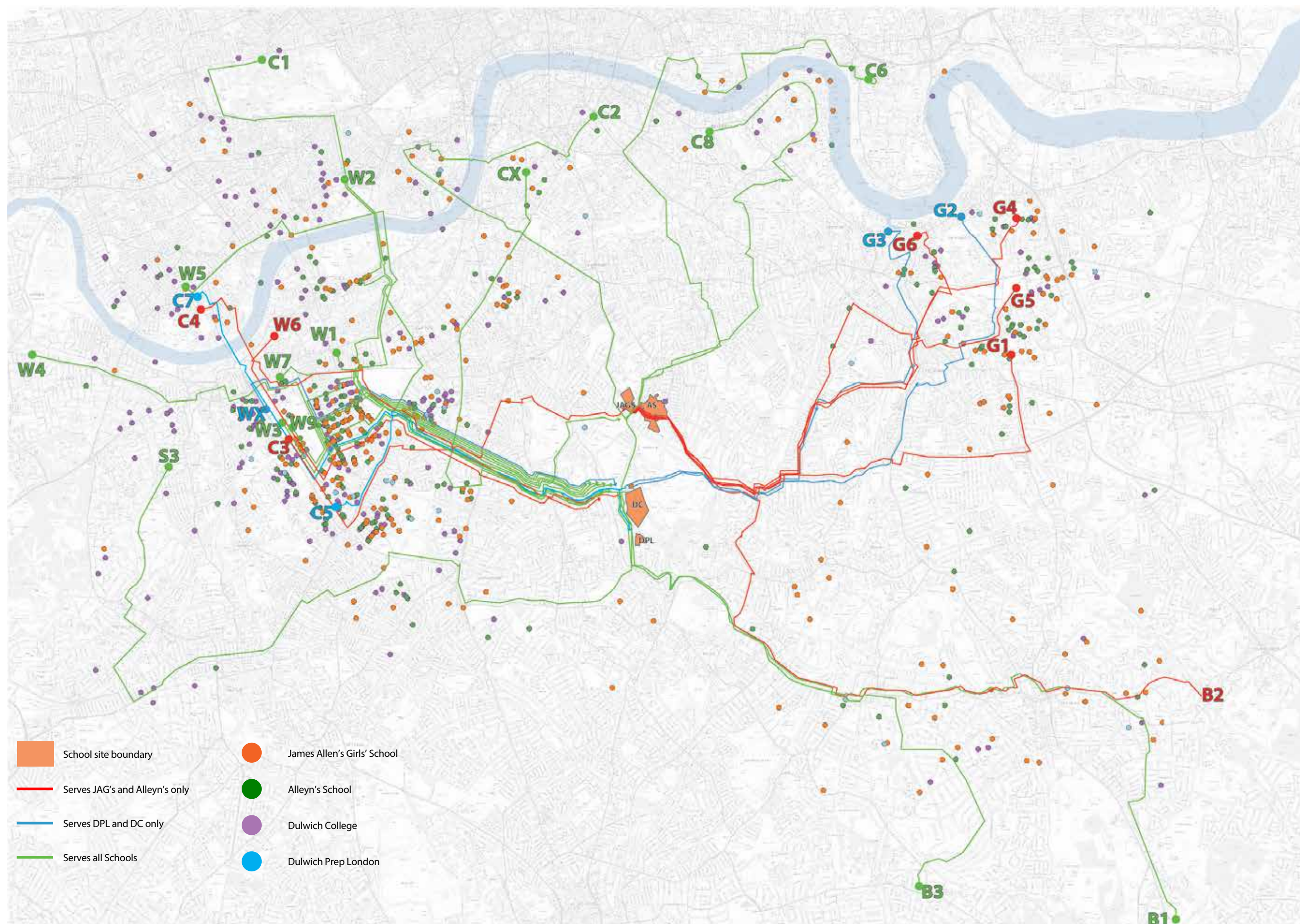


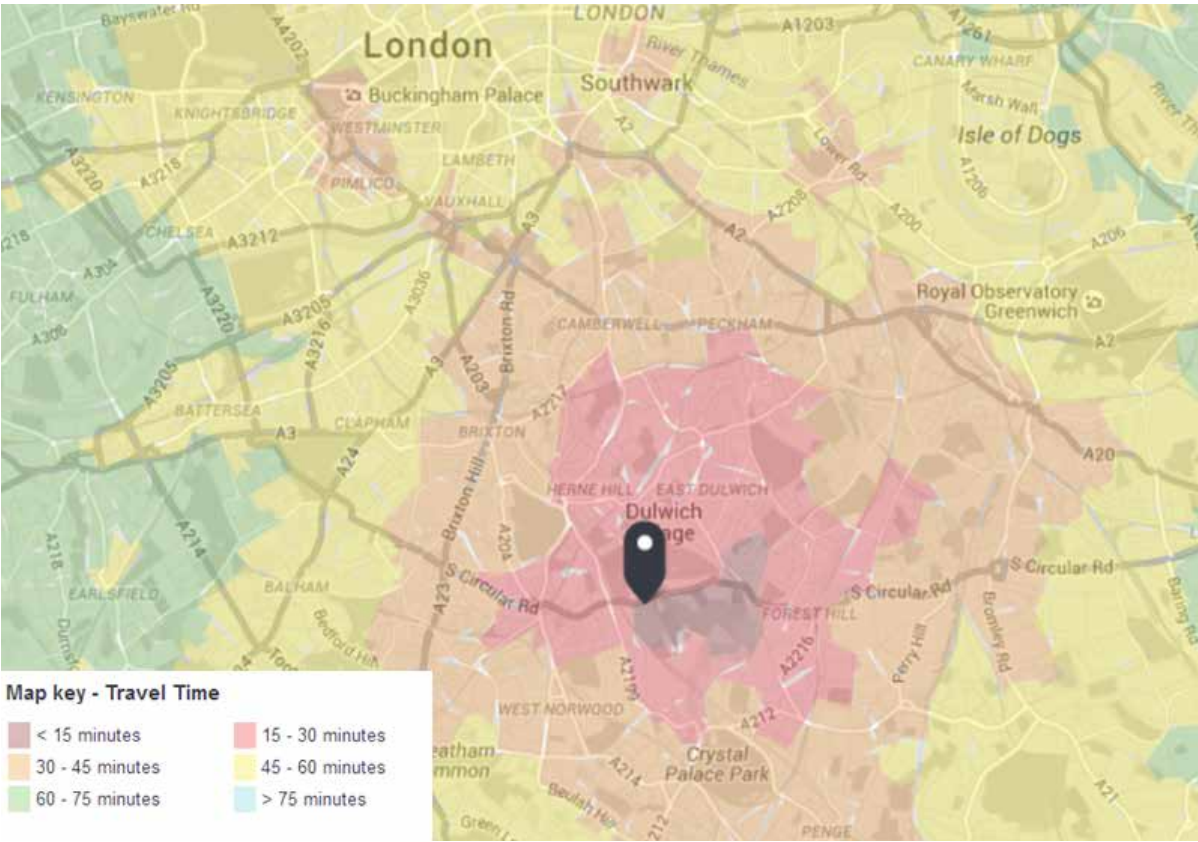
Figure 2 Existing Coach Service routes and school catchment

Alan Baxter

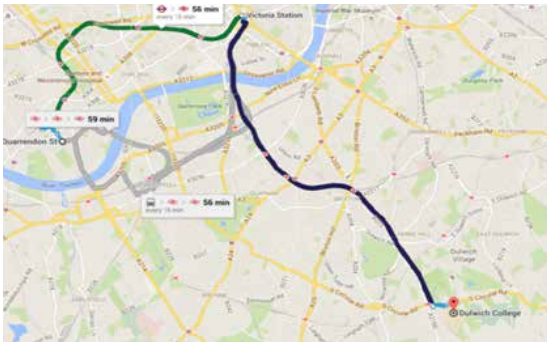
2.4 Public Transport Accessibility

Transport for London (TfL) Travel Time Mapping has been undertaken for public transport journey times to Dulwich College and JAGS / Alleyn’s School. This is shown in Figures 3 and 4. Comparing the Coach Service with alternative methods of travelling to and from the Foundation Schools via public transport shows that in most cases the Coach Service offers the most direct method of travel to school, and with similar average journey time durations.

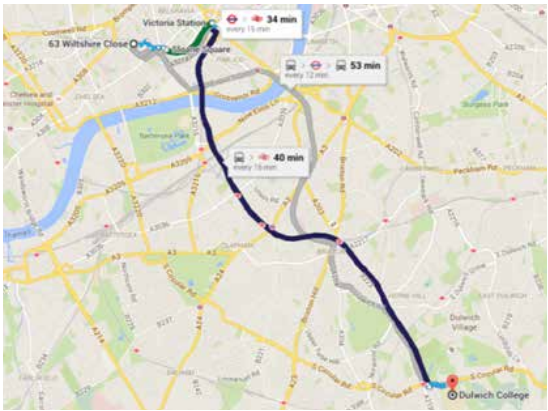
From the areas where there is the highest concentration of coach users (i.e. Clapham, Bromley, Blackheath) travelling to school via public transport would generally require complicated journeys often requiring multiple changes using bus, train and underground services. As noted in Section 2.2 the coach service is used by around 31% of Dulwich College students, 29% of Alleyn’s School students and 36% of JAGS students. Therefore, despite the complicated nature of some of the public transport journeys it is apparent that many pupils do travel to and from the Foundation Schools using public transport from these areas of demand or are dropped off by car.



TfL Travel time mapping



From Fulham



From Chelsea



From Bromley



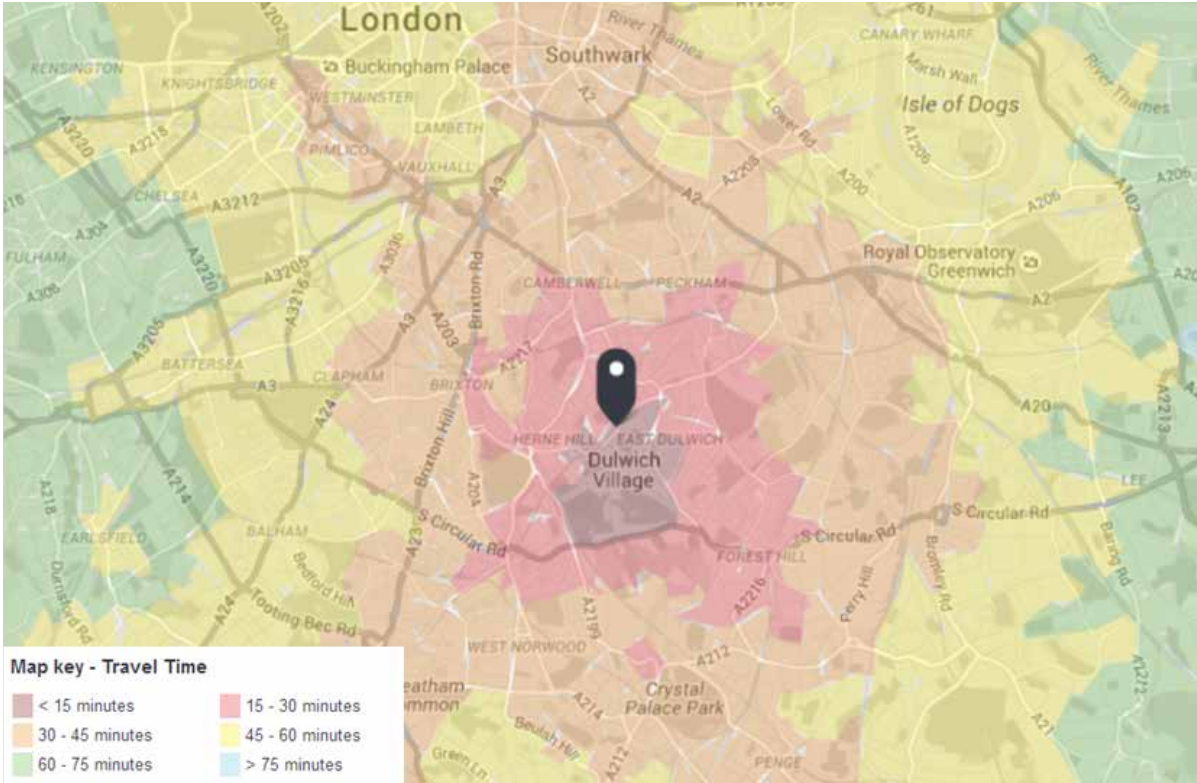
From Greenwich



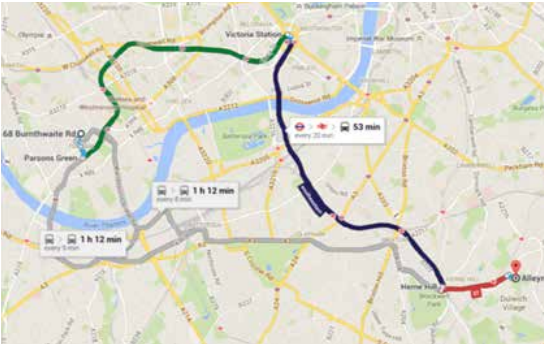
From Clapham

Figure 3 Journey time analysis for public transport to Dulwich College

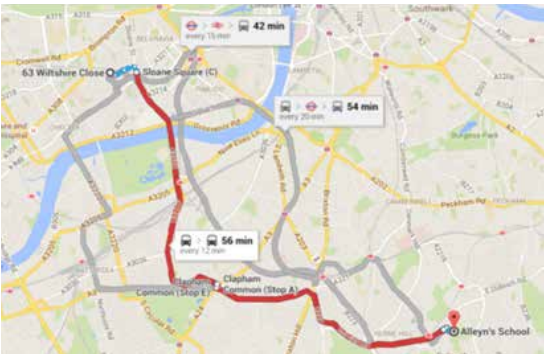
In some instances public transport offers a comparable service to the Coach Service. For example the public transport route from the Bromley area to Dulwich College is via one train to West Dulwich Station and offers a quicker alternative without the need to change services. From the Clapham area to JAGS / Alleyn's School, a single bus service runs regularly which offers a direct alternative without any changes although in practice the journey time is likely to be slower than the coach service.



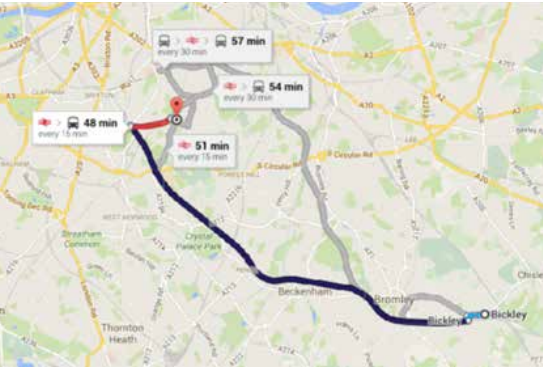
TfL Travel time mapping



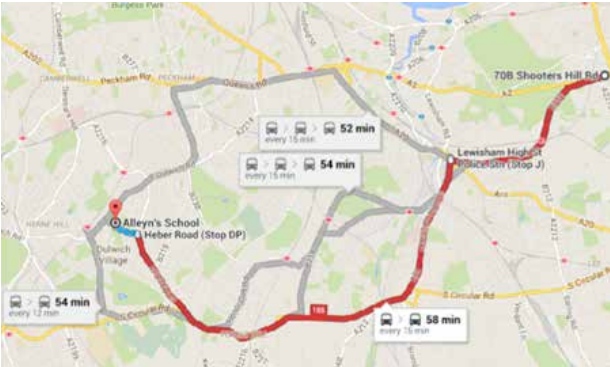
From Fulham



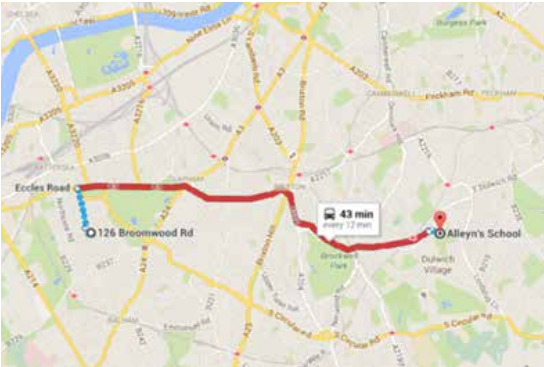
From Chelsea



From Bromley



From Greenwich



From Clapham

Figure 4 Journey time analysis for public transport to JAGS / Alleyn's School

2.5 Local Coach Service Routeing

The existing coach service routes are shown in Figures 5 and 6.

In the area around the Foundation Schools the routes used by the Coach Services are frequently congested with high volumes of traffic, particularly during the AM peak. The coaches get caught up in this congestion and in some locations exacerbate it, for example on Townley Road where stopped coaches reduce the available carriageway width for general traffic. However, it should be noted that this in turn is often caused by other vehicles parked in the coach bays.

Calton Avenue is used by coaches serving JAGS/Alleyn's first and Dulwich College second as this is the most direct route between the schools and is the only route that delivers acceptable journey times with current routeing. The alternative option of diverting coaches via Lordship Lane has been investigated but proven unfeasible as it results in significantly lengthened journey times. Calton Avenue is a more residential street and carries less traffic than the other routes that the coaches use. In addition Calton Avenue is the route of proposed Quietway 7, which will encourage more cycle traffic to use it. For these reasons Calton Avenue is considered particularly sensitive to coach traffic. For coaches serving Dulwich College first, Gallery Road is used as the connecting route. This is a less sensitive route as it is less residential in nature.

Travel time between sites is approximately 10 minutes by Calton Avenue / College Road and 25-30 minutes by Lordship Lane / Dulwich Common. Walking between sites via College Road takes approximately 20 minutes.

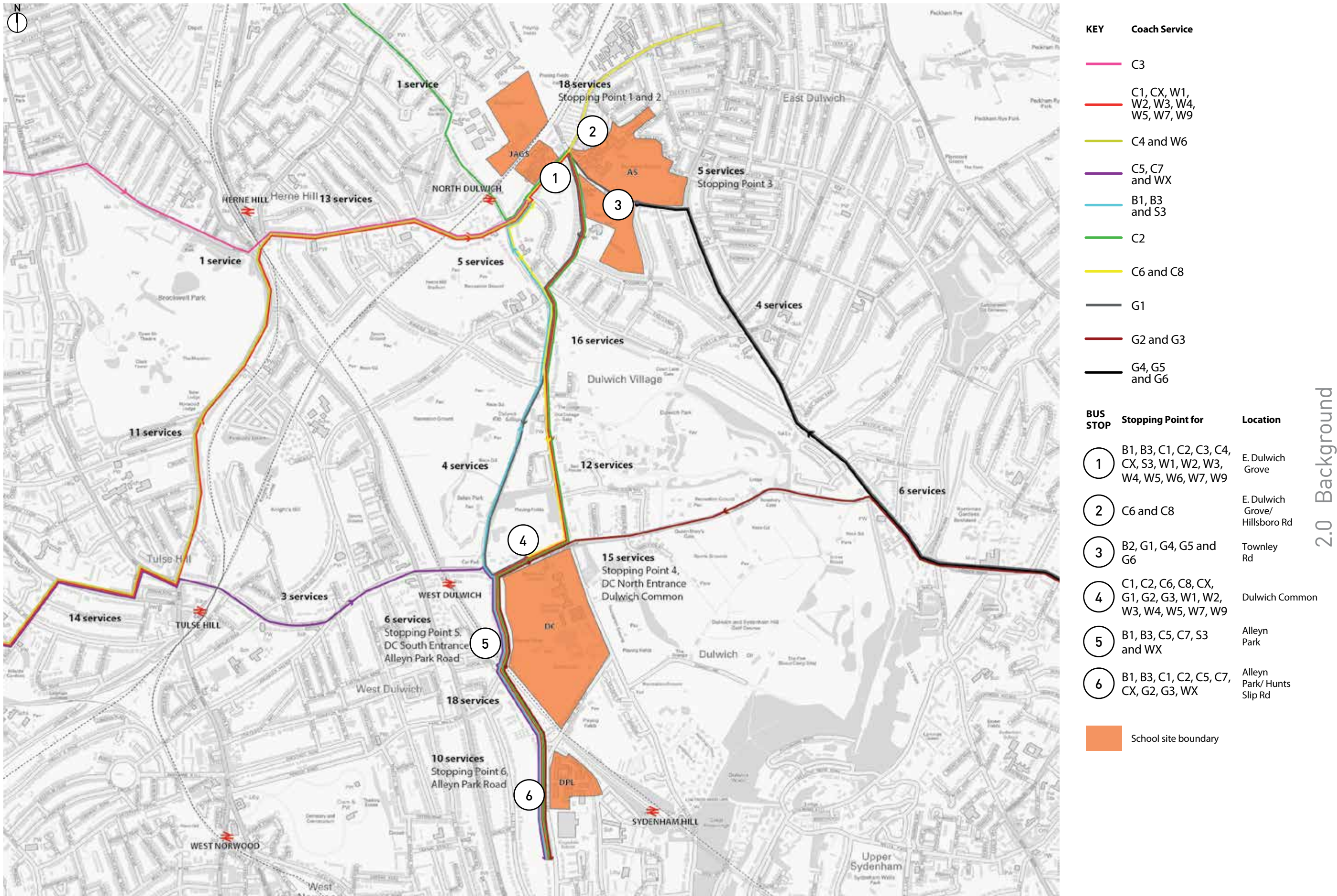


Figure 5 Coach Service AM peak routing

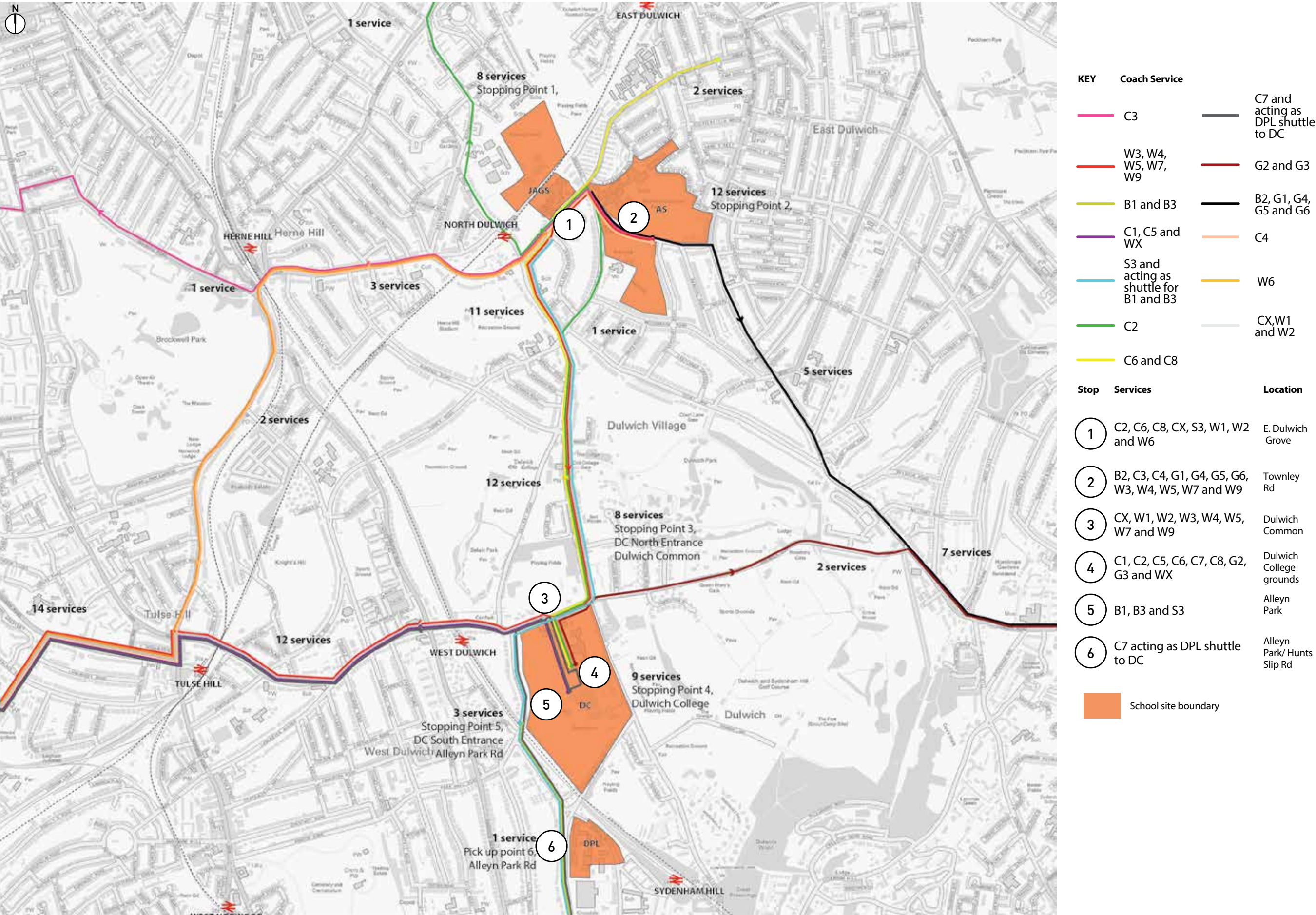


Figure 6 Coach Service PM peak routing

3.0

Summary of Consultation

In the course of undertaking the study consultation has taken place with each of the Foundation Schools, LBS, local ward councillors, Helen Hayes MP for Dulwich and West Norwood and the Dulwich and Herne Hill Safe Routes to School group. In addition community feedback from workshops undertaken by LBS in relation to the Quietway proposals has also been reviewed.

A consistent point made throughout discussions with local stakeholders was that the coach service overall is seen as positive in that it reduces traffic on the local road network by providing an alternative to car use. However a number of stakeholders made the point that this benefit was reduced by the negative impact the coaches have on the local environment and in particular in locations that are more residential in character, such as Calton Avenue.

The proposed Quietway along Calton Avenue was raised as a significant area of concern as it was noted that the presence of coaches would reduce the attractiveness of the route for cyclists.

Local councillors and Helen Hayes suggested that the coach service itself results in a wider and growing catchment area and that this means pupils are being transport from more distant locations and contributing to significant congestion locally. The profile of the pupil catchment using the coach service has been discussed in Section 2.2 and shows that the majority of pupils (65%) are travelling less than four miles with only 6% travelling more than six miles.

The issue of coaches parking up in local streets was raised. This causes congestion, is visually intrusive and idling engines can impact negatively on air quality, particularly during the winter months. This was raised as a particular concern outside JAGS on East Dulwich Grove and Townley Road outside Alleyn's School. The coaches parked outside JAGS were also felt to reduce visibility for those vehicles leaving the site.

Congestion outside the school gates more generally was raised by those consulted, with the negative impacts of pupil pick up and drop off seen to be exacerbating problems of congestion and reducing road safety. It was acknowledged that this is a common problem outside schools across the UK.

Some stakeholders reported that coaches occasionally park in poor locations that block access or crossings and negotiate junctions in a way that was felt to be unsafe which in turn reduces the attractiveness of walking and cycling in local streets. The issue of drivers smoking outside school gates was also noted as a concern along with a general perception of the coaches being overly dominant, particularly in the PM peak.

The concerns raised by stakeholders have informed the measures proposed later in this report.

4.0 Overview and Context

As is common throughout much of London, Dulwich's street network was largely constructed in the 19th century. The urban grain around the schools is also relatively coarse, meaning there are a limited number of available routes. Whilst the streets have a high quality character, road capacity is limited and unable to accommodate modern levels of traffic without congestion during peak hours. The limited rail network and lack of underground services in the area also means that surface transport is dominant, which exacerbates demand for the limited road space.

The area is also home to a significant number of schools in addition to the Foundation Schools including Bessemer Grange Primary School, Charter School, Herne Hill School, Judith Kerr Free School, Dulwich Village Infant School, Dulwich Wood Primary School, Dulwich Village CofE Infant School, Rosendale Primary School, Rosemead Preparatory School, Oakfield, Dulwich Wood Primary School and Kingsdale Foundation School. The new Charter School is due to open on the Hospital site on East Dulwich Grove within the next two years. Kingsdale School also runs a coach service that operates on Alleyn Park. Overall there is significant vehicle movement which in the AM peak coincides with journey to work movement.

This exceptional concentration of schools brings with it high levels of vehicle traffic as well as demand for buses, walking and cycling. The Coach Service plays an important role in ensuring that the overall levels of vehicle traffic associated with the Foundation Schools is reduced as far as possible.

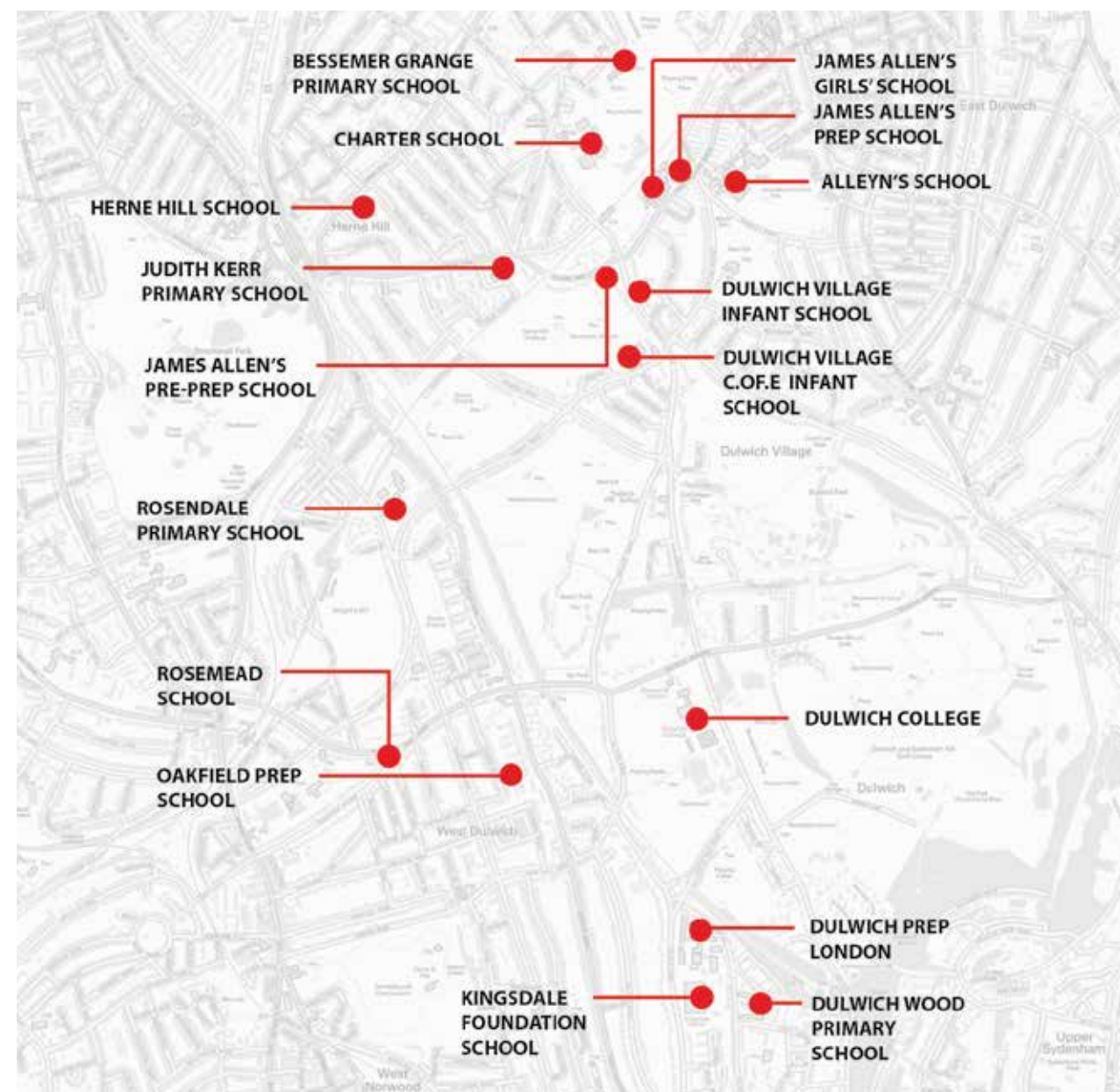


Figure 7 Schools in the Dulwich area

4.1 Recent Improvements, Proposed Schemes and School Initiatives

The Townley Road / East Dulwich Grove junction has recently undergone significant improvement to make it safer for pedestrians crossing. The scheme included footway widening and additional crossings.

As set out above in Section 2.5, Calton Avenue is proposed to form part of Quietway 7. This will involve changes to parking to improve visibility at junctions, footway widening and improvements to pedestrian crossing points, changes to carriageway markings as well as a package of improvements to the Dulwich Village / Calton Avenue junction in order to reduce vehicle / cyclist conflict and make it easier for cyclists to cross Dulwich Village safely. While this will encourage more cyclists to use Calton Avenue it has increased the focus on the competing demands placed on streets within the area including that for parking, traffic movement and the coaches. These proposals have been the subject of public consultation. At the time of writing the outcome of that consultation and the programme for delivering the improvements has not been confirmed by LBS.

As well as transport improvement schemes, the local schools are also taking active steps to reduce their impact on the local area. For example Alleyn's School has a Gold accredited Travel Plan, which focuses on minimising travel by car and improving road safety and JAGS has engaged banksmen to ensure the movement of cars and coaches is safe around the school gates at peak times. Dulwich College provides and manages off-street parking as well as staff supervision and control of coach drop off on-street. DPL has a walking bus (where school staff walk children to the school) that departs from the Alleyn Head pub car park every morning. This encourages parents to drop their children off remotely, which reduces congestion outside the school.

5.0 Existing Site Conditions

Site visits were undertaken on the 5th, 10th and 11th of May on East Dulwich Grove, Townley Road and Calton Avenue, the 10th of May on Dulwich Common and Alleyn Park outside Dulwich College and 13th May on Alleyn Park and Hunts Slip Road outside DPL. Conditions were observed during both the AM peak period on the network (7.30am – 9.00am) and PM peak period (3.00pm – 4.30pm) for school pick up.

The site visits observed general traffic conditions, noted areas of congestion, potential road safety issues, the primary movement of vehicles and pedestrians, the movement of coaches and interactions between coaches, general traffic, pedestrians and cyclists. Analysis of traffic survey data was also undertaken. The comments made during the consultation with various stakeholders in the area is also considered and included within the analysis set out below. In addition community feedback from workshops undertaken by LBS in relation to the Quietway proposals has also been taken into account, which is particularly relevant to the area around JAGS and Alleyn's School.

5.1 JAGS and Alleyn's School: East Dulwich Grove / Townley Road / Calton Avenue

During the AM peak the coach services arrive in a staggered pattern as a result of journey time variability. In general the coaches cause limited disruption to other road users, including pedestrians.

Eleven coaches use Calton Avenue in the AM peak period. As highlighted above Calton Avenue is sensitive to coach traffic as it is lined with residential properties on both sides for much of its length and is on the route of the proposed Quietway 7. The street also carries a lower level of background traffic. An analysis of traffic count data provided by LBS demonstrates that Dulwich Village carries 1,187 vehicles in the AM weekday peak. In comparison Calton Avenue carries 521 vehicles. Despite Calton Avenue carrying less than half the number of vehicles of Dulwich Village overall, it carries a higher number of cyclists at 129 (13% of traffic) in comparison to 100 (5% of traffic). This highlights the important function Calton Avenue already has for cyclist movement.

This issue of coaches in Calton Avenue has caused significant concern locally, particularly with regard to the congestion caused and potential conflict posed between coaches and cyclists. Coaches also cause concern at the junction with Calton Avenue, Court Lane and Dulwich Village. This is a busy junction with a high volume of pupils passing through it on foot.

In the area more generally congestion is largely caused by the high volume of background traffic. As highlighted in Figure 9 congestion was noted due to the number of parents dropping pupils off close to the school entrances..

As would be expected there is a high level of pedestrian movement between the school sites and coach stopping points. However, the recently improved crossing facilities at the East Dulwich Grove / Townley Road junction provide a safe route. The primary areas of pedestrian movement are shown in Figure 9.

During the PM Peak, there are short and intense periods of high activity at both school sites. The coaches often arrive as early as 2pm and wait outside the schools which is visually intrusive and due to insufficient kerb side waiting space, can cause general congestion as the available carriageway width is narrowed (see Figure 8). This



Figure 8 Congestion on Townley Road caused by coach parking

is highlighted in Figure 10. In addition there are significant safety issues associated with waiting coaches. For example vehicles leaving the JAGS site are unable to exit in either direction safely as coaches interfere with sightlines.

Adjacent to Alleyn's School on Townley Road up to 12 coaches occupy the coach bays along both kerblines where there is only capacity for seven. With coaches parked on opposite kerblines, outside of the coach parking bays, the effective width of the carriageway is reduced to only a single vehicle.

Although relatively low volumes of free flowing traffic were observed during this PM period, conflict between on-coming vehicles often occurs due to coaches parking outside of the coach bay. Vehicles either have to manoeuvre around each other between the parked coaches or reverse back to allow oncoming vehicles through. This also causes queueing back across and beyond the zebra crossing outside the gates. This often means vehicles travel on the wrong side of the pedestrian island, which has significant safety issues.

Disruptions and conflicts on Green Dale during the PM Peak are caused by parents double parking within the carriageway, parking adjacent to the school gates, and queueing to turn around at the cul-de-sac. The coach operations do not impact on this.

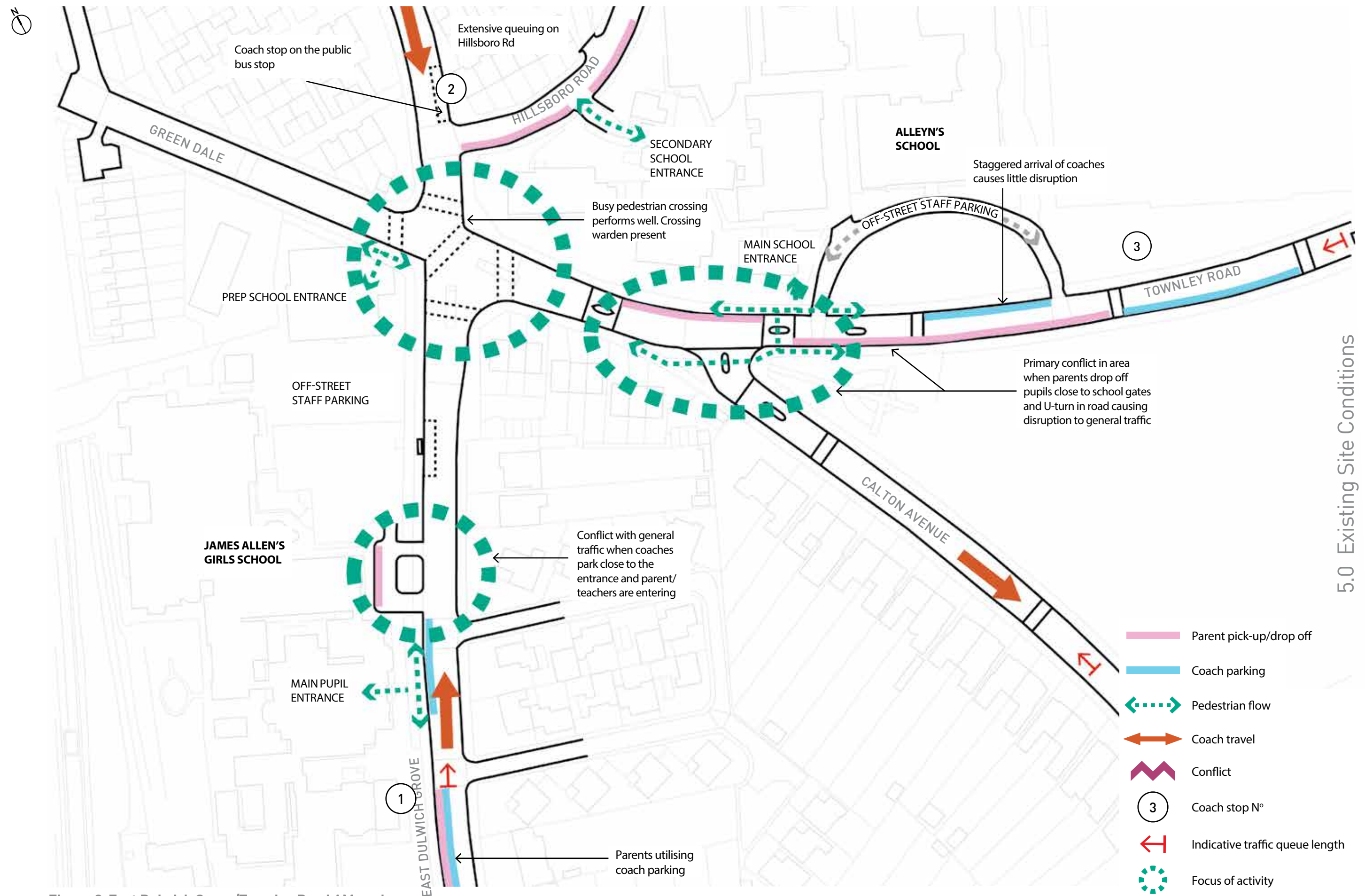


Figure 9 East Dulwich Grove/Townley Road AM peak

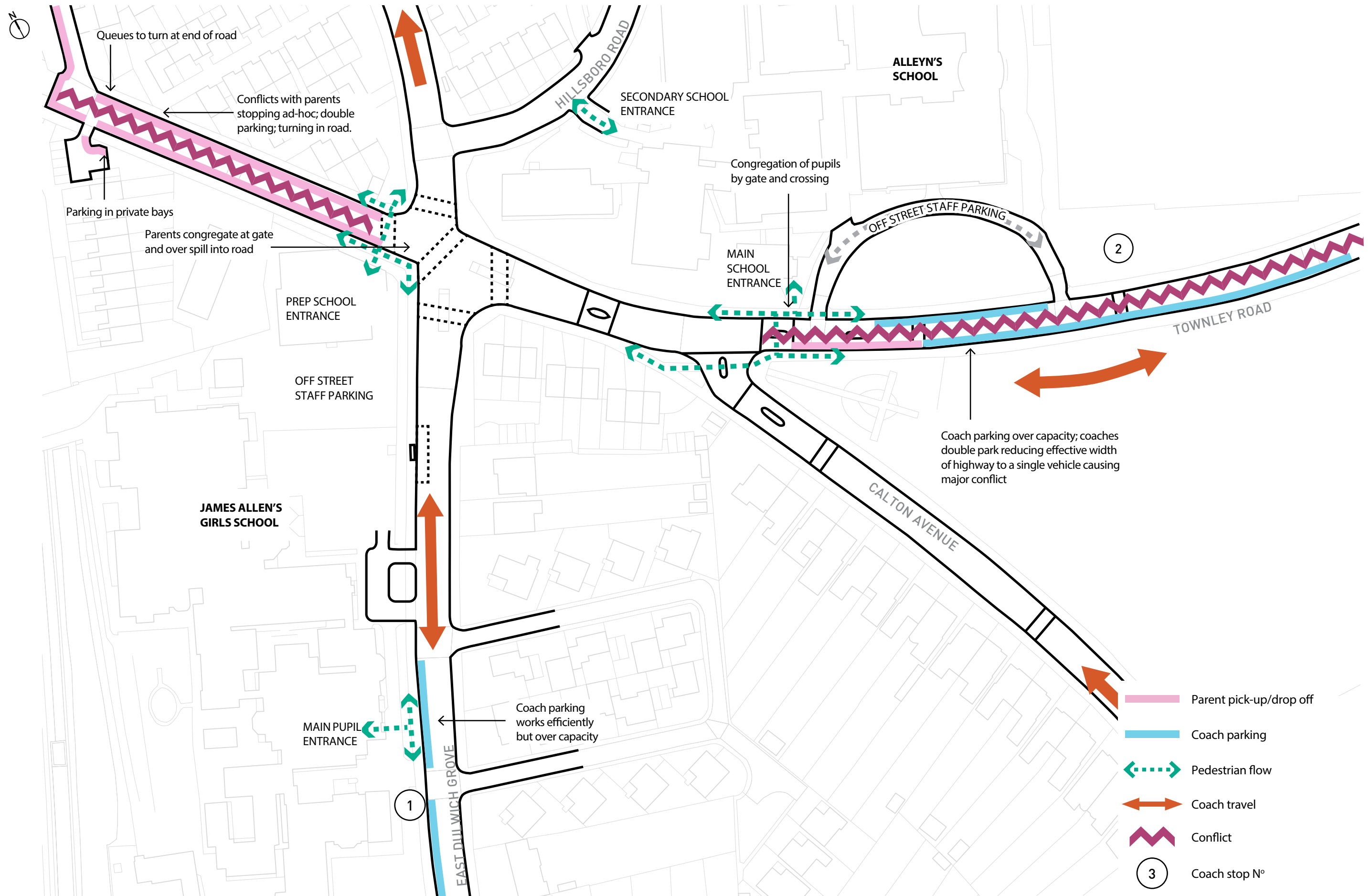


Figure 10 East Dulwich Grove/Townley Road PM peak

5.2 Dulwich College: Alleyn Park / Dulwich Common

Dulwich College is bounded to the north by Dulwich Common, which forms part of the A206 South Circular. Traffic volumes are high and this causes congestion in the AM period. Coaches to the school drop pupils off at stopping points both on Dulwich Common and Alleyn Park, as shown in Figure 12. In general the operation of the coaches was not observed to cause any additional congestion and drop off arrangements worked efficiently.

During the PM period a number of services make use of the school grounds with around nine services waiting on-site before departing. This ensures that the problems of coaches waiting on the highway that are observed at JAGS and Alleyn's School do not materialise around Dulwich College. It should be noted that if these nine services were to be removed from the site then this would likely have a negative impact on surrounding streets, particularly Alleyn Park where the bulk of the waiting is likely to take place.

In terms of pedestrian movement, significant movements of pupils were observed on Dulwich Common and Alleyn Park. In particular, crossing Dulwich Common is difficult given the high volumes of traffic. Traffic tends to approach the Dulwich Common / Alleyn Park junction at speed, which is a concern given the volume of pupils using the crossing.

Parent pick up and drop off was not observed to cause significant disruption during either the AM or PM peaks around Dulwich College.



Figure 11 Coach drop off causes minimal congestion problems on Alleyn Park

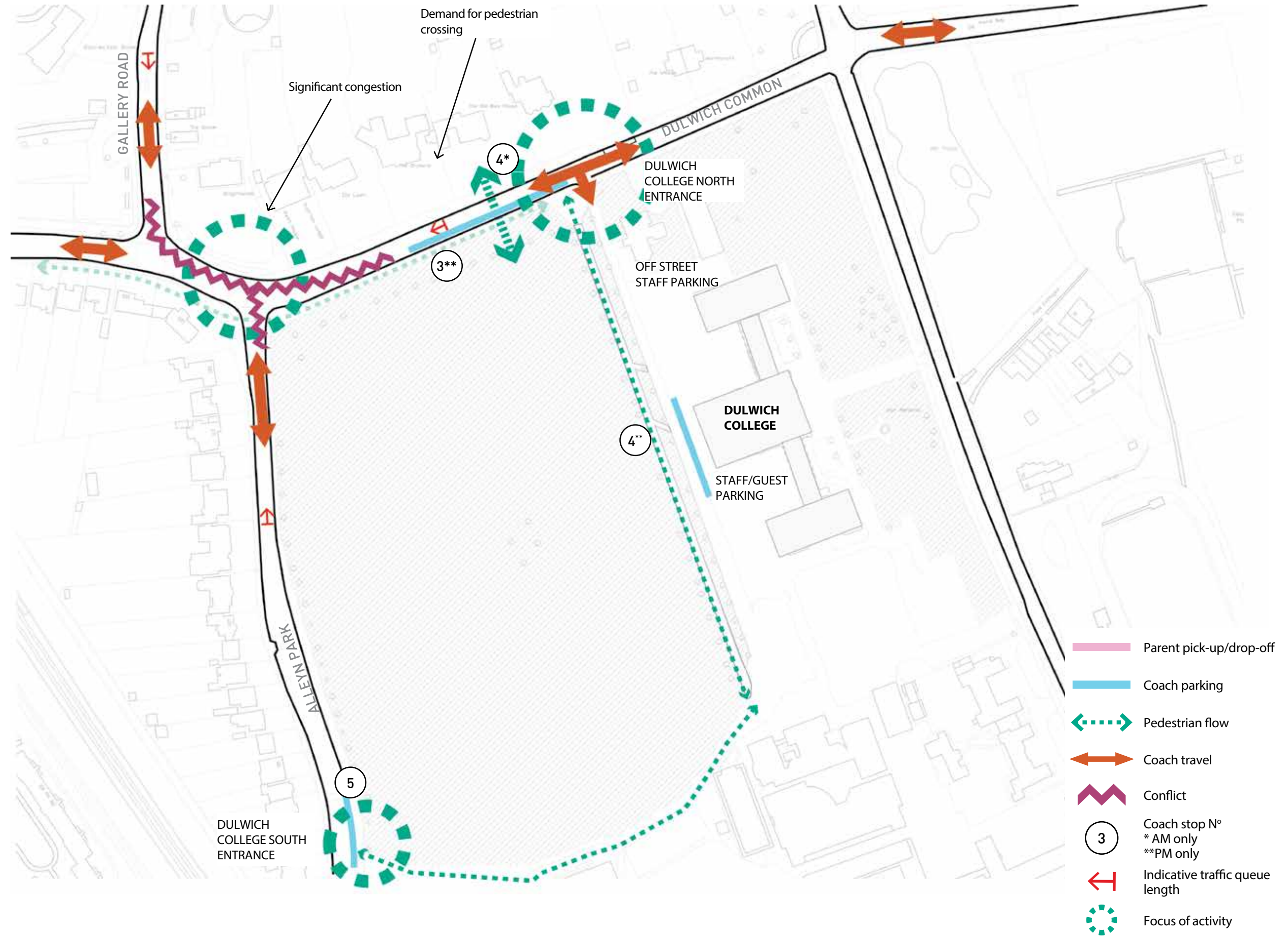


Figure 12 Dulwich Common/Alley Park AM + PM Peak

5.3 Dulwich Prep London: Alleyn Park / Hunts Slip Road

A relatively high number of coaches (around 10 services) stop near DPL in the AM peak. In general the coaches were not observed to cause significant congestion. A number of the coach services also stop outside the Alleyn Head pub in the morning to allow pupils to use a walking bus that originates there. However, this departs at 8.15am and any services later than that travel on to the stopping points closer to the school.

Alleyn Park also serves the Kingsdale Foundation School as well as Dulwich Wood Primary school and is very congested in the AM due to high volumes of general traffic and a significant presence of parents dropping off pupils, as highlighted in Figure 14. The biggest problem observed was parent drop off, which resulted in double parking, blocking of visibility to and from junctions including Hunts Slip Road and private accesses. A number of two or three point turns were observed on Alleyn Park as drivers sought to avoid congestion or turned in the street to continue with their journey once their children were dropped off. This reduces the attractiveness of the street for those dropping off their children on foot or by bike. Crossing at the Hunts Slip Road junction requires caution due to parking around the junction and reduced visibility.

Those coaches that arrive too late to drop pupils off at the walking bus can get caught up in the congestion outlined above when dropping off pupils. This can briefly exacerbate the existing problems with vehicles having to cross into the opposite side of the carriageway or wait until traffic in the opposite direction has cleared.

The issues noted above are less pronounced in the PM peak although it was observed that parents are parked longer as they wait for their children to leave school. There is only one minibus service that originates within the school and no coaches wait on-street at this location. Therefore, coaches have only a modest impact on Alleyn Park in the PM.

Although double parking was observed on Alleyn Park in both the AM and PM some spare capacity was observed on Hunts Slip Road.



Figure 13 Congestion on Alleyn Park

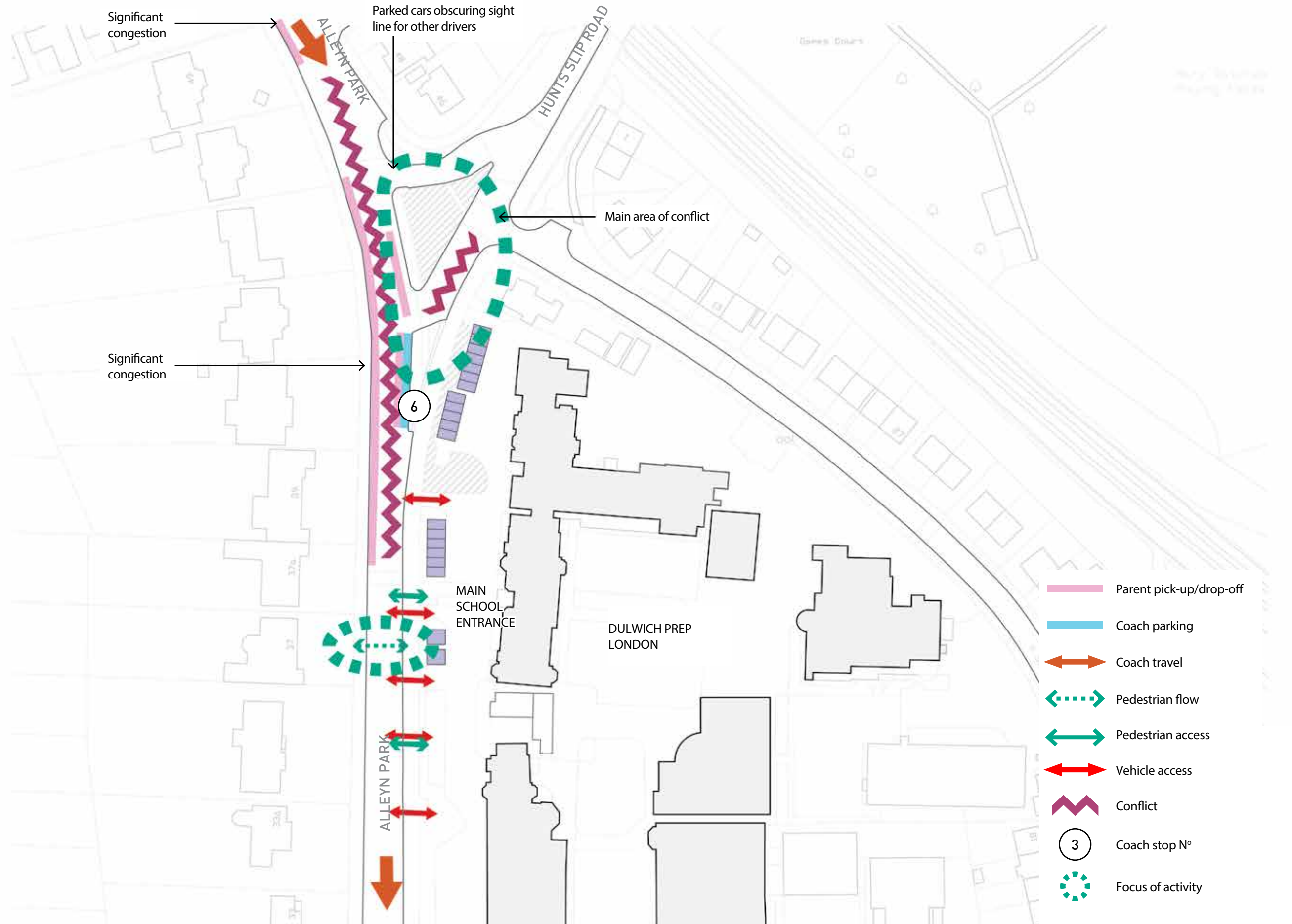


Figure 14 Allyn Park/Hunts Slip Road AM + PM peak

5.4 Summary of Key Issues and Constraints

Taking into account the key issues observed on-site, comments raised during the consultation with various parties and feedback from the community during the workshops undertaken by LBS regarding the Quietway proposals, the key issues are identified as:

- The use of Calton Avenue by coaches when transporting pupils between the Foundation Schools, which impacts negatively on residential amenity and causes road safety concerns for cyclists
- Bunched departure times in the PM peak causing local congestion around Townley Road
- High levels of general traffic meaning the road network surrounding the schools is congested, particularly in the AM peak
- Coach idling - visual intrusion, safety impact and environmental impact in winter when engines are left running, particularly during the PM peak when coaches can arrive from 14:00
- Limited capacity for coach parking on-street around JAGS and Alleyn's School which causes congestion and safety issues, particularly in Townley Road
- General car driver behaviour that causes safety concerns and local congestion, particularly on Townley Road and Alleyn Park adjacent to Dulwich Prep London

5.5 Summary of Key Objectives

Flowing from the issues and constraints identified above, the key objectives of this study are to minimise the use of Calton Avenue by coaches and reduce congestion on Townley Road. These have been the key issues raised locally and noted during site visits.

6.0

Potential Opportunities and Interventions

The following section provides discussion of potential measures that the Foundation Schools could implement to reduce the impact of the Coach Services and improve movement during pick-up and drop-off periods. The deliverability of the measures vary with some requiring third party land or changes to waiting and loading restrictions, while others would entail operational complexities that may outweigh the benefits.

Each measure is introduced with the key issue or issues it addresses before the detail of the measure is explained. For each measure any potential negative impacts are also set out clearly in order to allow a balanced appraisal of its benefits.

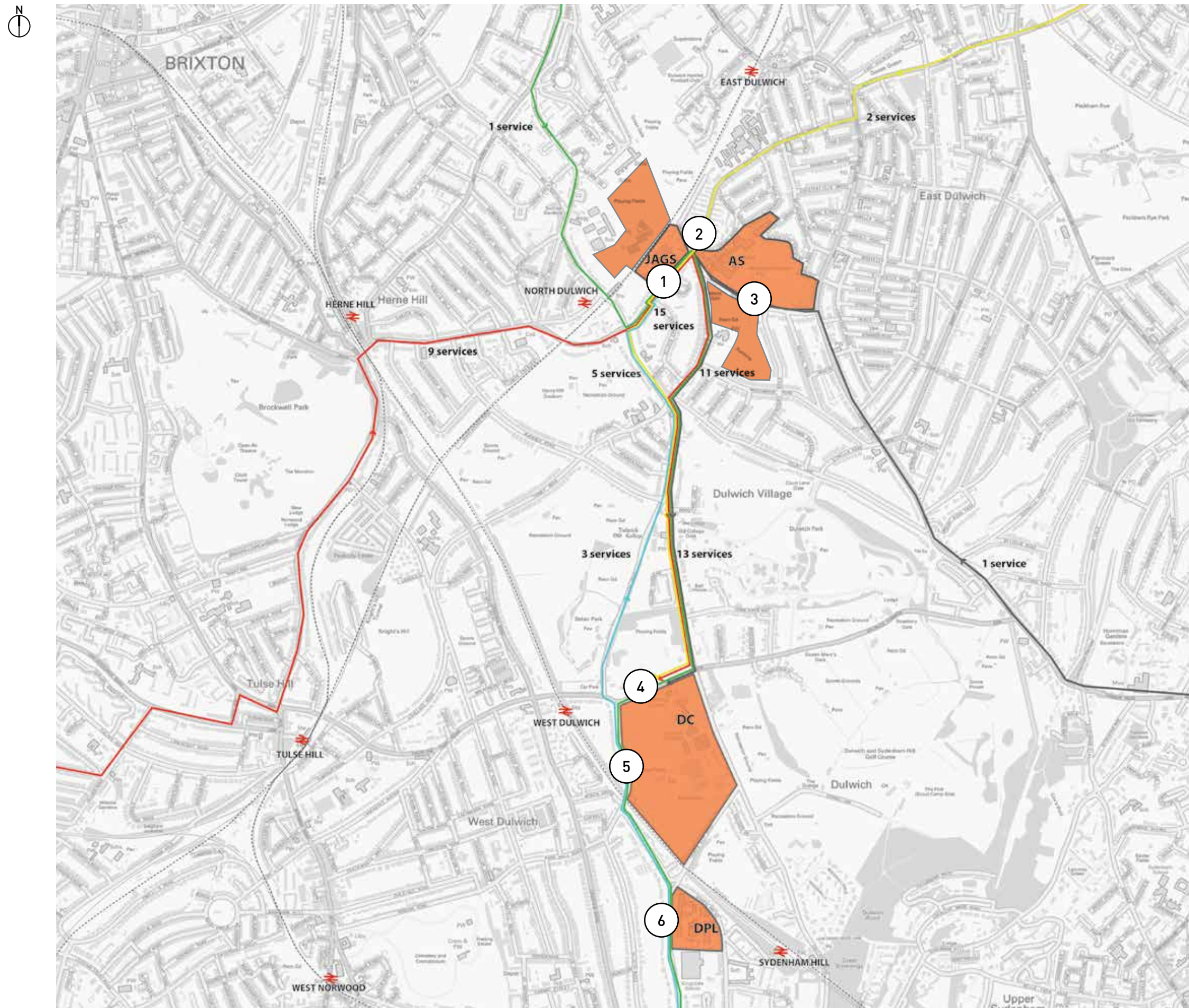
A high level appraisal of the full range of measures is set out in Section 7.

6.1 Coach Service Alterations

There are a number of opportunities to improve the operation of the Coach Services to reduce the impact on the local area.

6.1.1 Local Re-Routeing of Services

The existing routeing of inter-school services are shown in Figures 15 and 16. There is the potential to re-route some of the services within the vicinity of the JAGS and Alleyn's School, away from Calton Avenue.



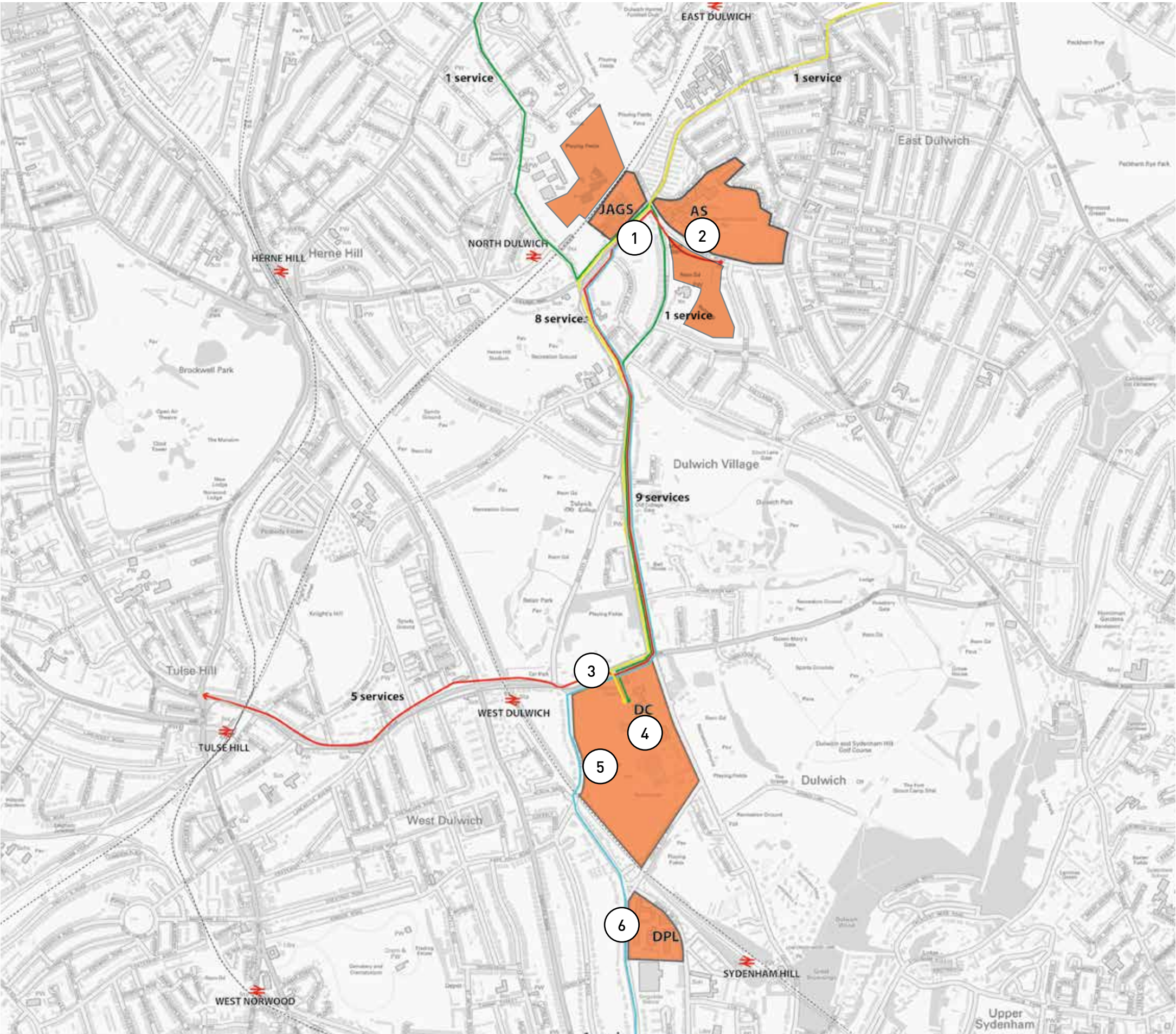
Key	Coach Service
—	C1, CX, W1, W2, W3, W4, W5, W7, W9
—	C2
—	G1
—	C6 and C8
—	B1, B3 and S3

Stop	Stopping Point for	Location
1	C1, C2, CX, W1, W2, W3, W4, W5, W7, W9, B1, B3 and S3	E. Dulwich Grove
2	C6 and C8	E. Dulwich Grove/ Hillsboro Rd
3	G1	Townley Rd
4	C1, C6, C8, CX, G1, W1, W2, W3, W4, W5, W7 and W9	Dulwich Common
5	B1, B3 and S3	Alleyn Park
6	C1, C2, CX, B1 and B3	Alleyn Park/ Hunts Slip Rd

	School site boundary
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6.0 Potential Opportunities and Interventions

Figure 15 Existing inter-school service routeing AM



Key	Coach Service
—	W1, W2, W3, W4, W5, W7 and W9
—	C2
—	C6 and C8
—	S3 and acting as shuttle for B1 and B3
—	CX, W1, and W2

Stop	Services	Location
1	C2, C6, C8, CX, S3, W1 and W2	E. Dulwich Grove
2	W3, W4, W5, W7 and W9	Townley Rd
3	W1, W2, W3, W4, W5, W7, W9 and CX	Dulwich Common
4	C2, C6 and C8	Dulwich College grounds
5	B1, B3 and S3	Alleyn Park
6		Alleyn Park/ Hunts Slip Rd

	School site boundary
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Figure 16 Existing inter-school service routing PM

Measure 1: Route services via Dulwich College in advance of JAGS / Alleyn's School in the AM peak

This measure relates to the issue of coaches in Calton Avenue

Many of the services which serve both JAGS / Alleyn's School and Dulwich College use Calton Avenue as the most direct route between sites, when serving JAGS / Alleyn's School first in the AM peak. If services C1, CX, W1, W2, W3, W4, W5, W7, W9 and G1 were reorganised to serve Dulwich College first as shown in Figure 17, this would remove the need to use Calton Avenue as coaches can arrive at JAGS via Dulwich Village. The routing of the coaches once all pupils are dropped off would be agreed with the coach operators to ensure they avoided Calton Avenue.

During the AM peak, this amendment would allow services on Calton Avenue to be reduced by nine from the south-west and one from the south-east. However, this measure would result in an additional 220 Dulwich College pupils needing to cross Dulwich Common in the morning. Therefore this measure would need to be accompanied by the provision of a formal pedestrian crossing in the vicinity of the College. This would also benefit the significant number of pupils already observed crossing Dulwich Common. Any new crossing would need to be agreed with and provided by Transport for London.

As there are no crossings directly serving the school and none between the signalised junction of Dulwich Common / College Road and West Dulwich Station, a distance of 620m, such a crossing would be a valuable facility for the wider area. Alternatively the existing Toucan crossing near to the Dulwich Common / College Road junction could be relocated further west towards the school. However, this would reduce the ease of crossing the road at the junction unless a formal pedestrian crossing phase was then introduced at the junction.

An alternative in the short term to a new or relocated crossing would be to drop pupils on College Road, to the north of Dulwich Common so that pupils could make use of the existing crossing at the College Road / Dulwich Common junction. However, the footway on Dulwich Common at the crossing is relatively narrow and is already heavily congested with pupils from Dulwich College and other nearby schools as well as residents. The footway is also shared with cyclists,

who use it once they have left the on-carriageway cycle lane on Dulwich Common. The addition of 220 pupils would exacerbate this congestion and would have significant road safety implications. The footway is wider, around 5m, further west along the street, which emphasises the need for a new or relocated crossing.

This measure would result in pupils arriving later at JAGS / Alleyn's School, which would need careful consideration in terms of route timing given Alleyn's school start time of 8.20am.

Overall route journey length is not significantly affected. It is noted that congestion is worse northbound on Dulwich Village than southbound in the AM peak and therefore the overall impact on journey time would need to be tested. However, any increase in journey time on Dulwich Village may be offset by reductions in journey time achieved through the route changes, such as by avoiding congestion around Norwood Road and Herne Hill.

Alteration to services W3, W4, W5, W7 and W9 in the PM peak form part of Measure 3.

Measure 2: Route service C2 via Dulwich Village rather than East Dulwich Grove and Calton Avenue in the AM peak

This measure relates to the issue of coaches in Calton Avenue

The C2 service arriving at JAGS / Alleyn's School from the north could be routed away from East Dulwich Grove, south to Dulwich Village as shown in Figure 12. Pupils would be dropped at an additional stopping point on Dulwich Village in the AM peak, potentially making use of the existing bus stop VH which is a five minute walk from JAGS and eight minutes to Alleyn's School. This change would affect 23 pupils from JAGS and 16 from Alleyn's School. Pupils to JAGS would need to cross East Dulwich Grove. Stop VH is served by the P4 bus service, although it is relatively low frequency with a bus only every 10-14 minutes.

Alternatively pupils could be dropped off at stop VB on Red Post Hill. This would involve a shorter walk for pupils and JAGS pupils would not need to cross East Dulwich Grove. However, Alleyn's School pupils would be required to cross East Dulwich Grove and stop VB is busier than stop VH, being served by the P4 and 37 bus services with an average of 11 buses stopping during peak hours.

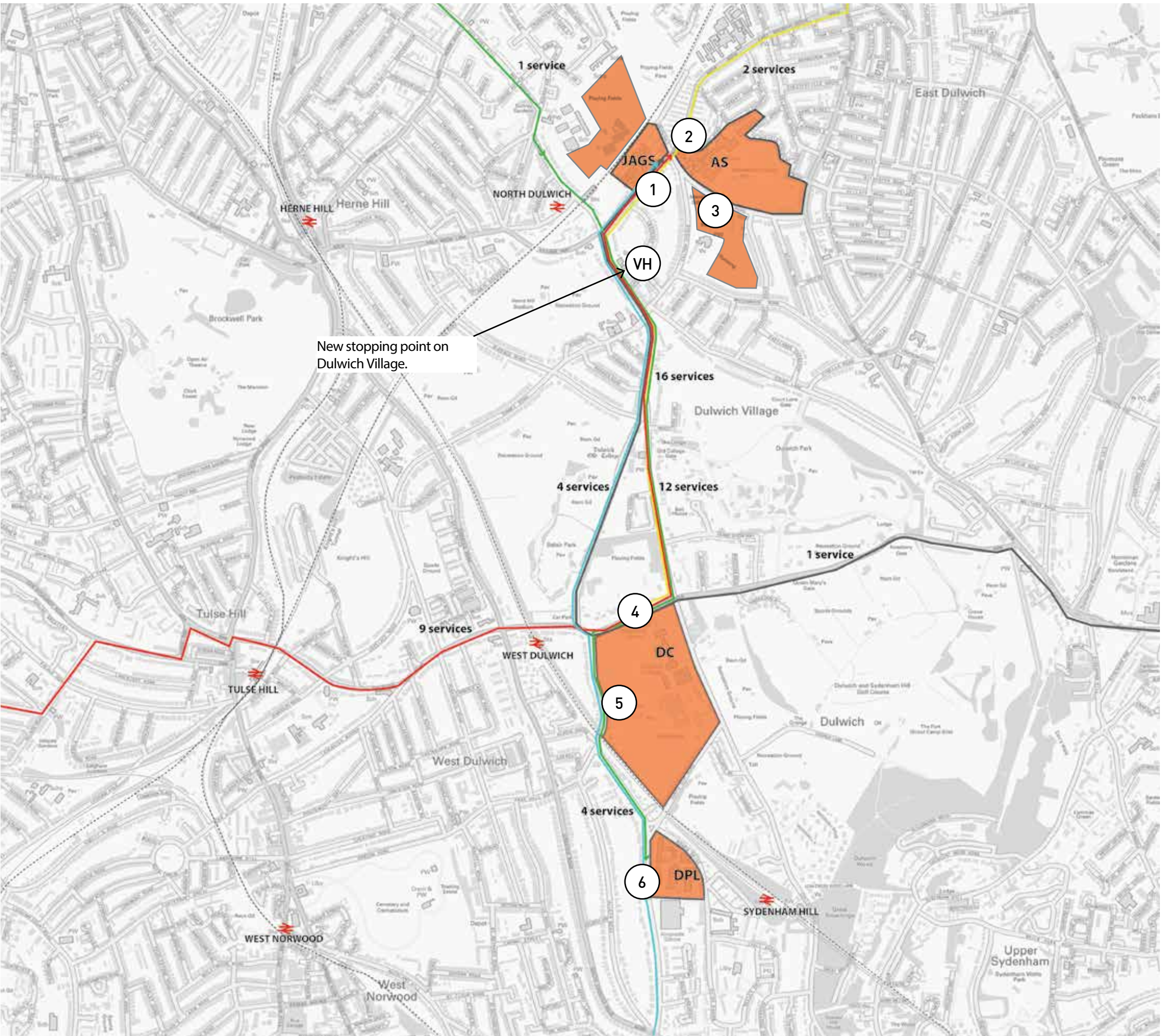
Additional pupil drop off options include:

- Red Post Hill in the vicinity of the JAGS sports ground with pupils then walking through the JAGS site, avoiding the need to use East Dulwich Grove. However, building works are soon to be underway on site, which would make this difficult to manage in the short term, while in the longer term the new layout would make any routing through the site less direct.
- Pupil drop off at the lay by outside North Dulwich station. This would involve pupils travelling further to the schools and would be dependent on the bay being clear of vehicles, which is unlikely to be case during the AM peak.

This measure would reduce services on Calton Avenue by one in the AM peak. In the PM peak this one service would continue to use Calton Avenue to avoid the need to pick up on Red Post Hill, which would result in congestion on the road due to the longer dwell time. It is noted that Red Post Hill is congested in the AM peak with the entrance to the Charter School located off it. However, the stopping of one coach should not significantly worsen existing conditions.

The measure would require JAGS and Alleyn's School pupils to walk further to the school gate than they do currently. Supervision would also need to be provided by the schools, particularly for younger pupils.

The measure may have some impact on service journey time as Dulwich Village around the Calton Avenue junction suffers from congestion in the AM peak. However, it should be noted that coaches currently join Dulwich Village at the Calton Avenue junction in any case and are therefore already caught up in congestion.



Key	Coach Service
—	C1, CX, W1, W2, W3, W4, W5, W7 and W9
—	C2
—	G1
—	C6 and C8
—	B1, B3 and S3

Stop	Stopping Point for	Location
1	B1, B3, C1, CX, S3, W1, W2, W3, W4, W5, W7 and W9	E. Dulwich Grove
2	C6 and C8	E. Dulwich Grove/ Hillsboro Rd
3	G1	Townley Rd
4	C1, C2, C6, C8, CX, G1, W1, W2, W3, W4, W5, W7 and W9	Dulwich Common
5	B1, B3 and S3	Alleyn Park Road
6	C1, C2 and CX	Alleyn Park/ Hunts Slip Rd
VB	C2	Red Post Hill

School site boundary

Figure 17 Potential alternative routing AM

A combination of both Measure 1 and Measure 2 has the potential to divert all coach services away from Calton Avenue in the AM peak with only one service remaining in the PM peak. The number of services using the northern section of Dulwich Village would increase by 12. Dulwich Village is a more appropriate location for coaches than Calton Avenue given its more commercial nature and its existing importance as a north-south traffic corridor. The latter point is underlined by an analysis of traffic counts that demonstrate Dulwich Village carries 1,187 vehicles in the AM weekday peak, of which 70 are heavy vehicles including buses. In comparison Calton Avenue carries 521 vehicles, of which 36 are heavy vehicles including coaches. The traffic counts also demonstrate the important function Calton Avenue already has for cyclist movement, with 13% of all traffic being cyclists in the AM weekday peak.

Measure 3: Start inter-school services at Dulwich College in the PM peak

This measure relates to the issue of congestion caused by coaches in Townley Road in the PM peak

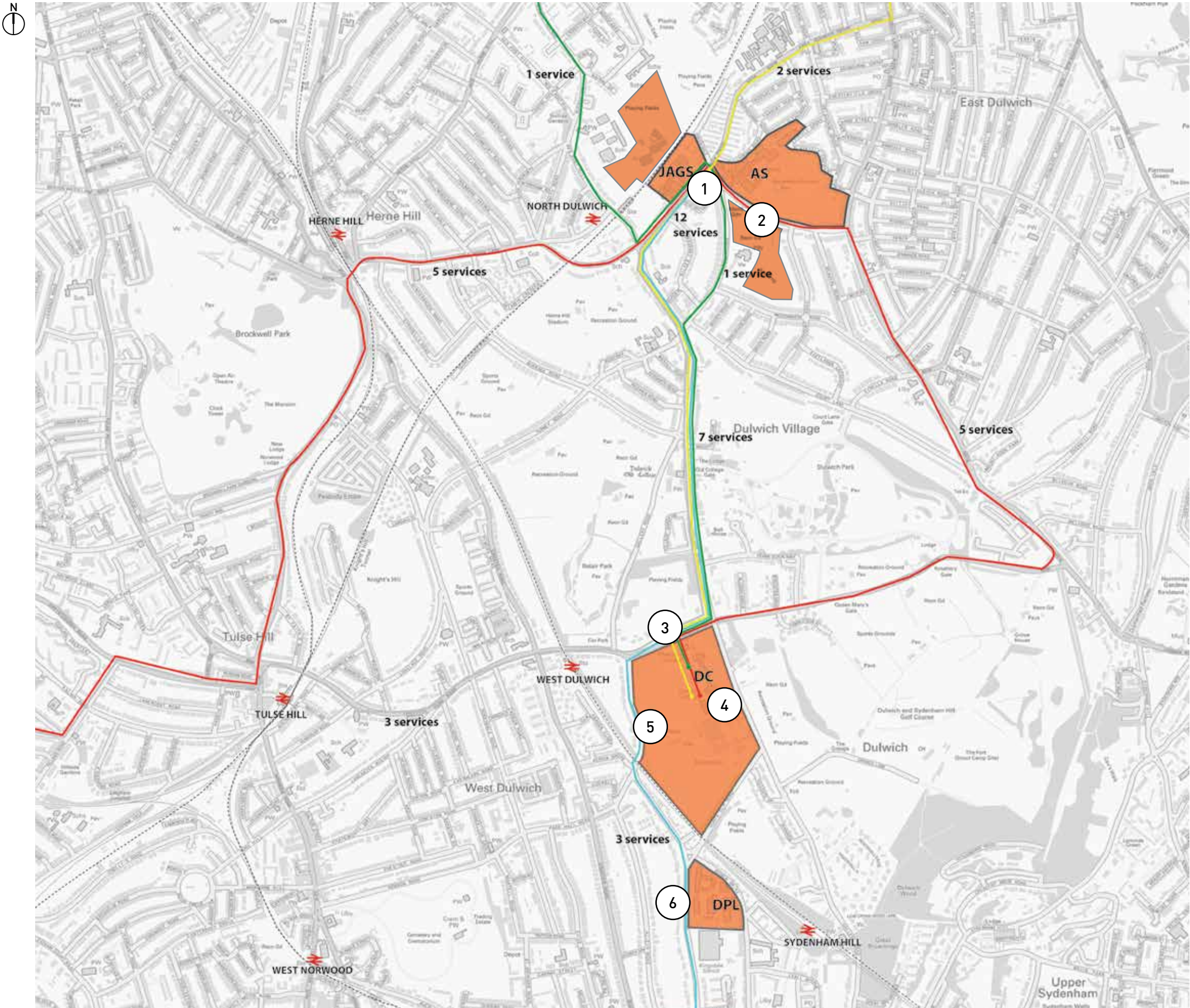
On Townley Road, there is current capacity for up to seven coaches. As discussed in Section 3.1, during the PM peak coach parking is over capacity with up to 12 services all departing from Townley Road simultaneously, five of which are inter-school services.

If the five inter-school services (W3, W4, W5, W7 and W9) departed from Dulwich College first this would alleviate pressure on Townley Road by staggering departures. The total departures from Townley Road would be reduced to seven at any one time, fully occupying the existing capacity for coach parking.

In order to arrive in the right direction on Townley Road the coaches would need to route east on Dulwich Common and north on Lordship Lane. This would add around 1.5 miles to the journey in comparison to the existing route, which would increase the service journey times. The proposal would also require more space to be made available for coaches within the grounds of Dulwich College, which would result in the need for parking to be removed or displaced. The impact of this is discussed as part of Measure 9.

The requirement for additional coach parking space within Dulwich College, which is not available, as well as the lengthened journey time of services that would result mean that this measure is likely to be difficult to deliver in practice.

The alternative PM routeing is shown in Figure 18.



KEY

Coach Service

W3, W4, W5, W7 and W9

C2

C6 and C8

S3 and acting as shuttle for B1 and B3

CX, W1 and W2

Stop

Services

Location

1

C6, C8, CX, S3, W1 and W2

E. Dulwich Grove

2

W3, W4, W5, W7 and W9

Townley Rd

3

W1, W2, W3, W4, W5, W7, W9 and CX

Dulwich Common

4

C2, C6 and C8

Dulwich College grounds

5

B1, B3 and S3

Alleyn Park

6

Alleyn Park/ Hunts Slip Rd

School site boundary

Figure 18 Potential alternative routing PM

6.1.2 Consolidation of Services

The potential to reduce the number of coaches travelling between schools by consolidating pupils onto school-specific coaches or shuttle buses services has been considered.

During the AM Peak period 14 of the 28 services travel through Dulwich Village between the three Foundation Schools, 11 of which arrive at JAGS or Alleyn's School first and the remaining three arrive at Dulwich College first.

During the PM peak 11 of the 28 services travel through Dulwich between the three Foundation Schools, eight of which depart from JAGS / Alleyn's School and three depart from Dulwich College. Services S3 and W3 are already acting as shuttle services between schools for B1, B3 and C1, respectively.

In order to significantly reduce coach numbers 11 services in the AM peak and eight in the PM peak would need to be consolidated in the vicinity of JAGS and Alleyn's School. As already noted these streets are congested and no suitable sites have been identified off-street to allow this to take place. Therefore this measure has not been considered further.

6.1.3 Coach Operation Improvements

There are potential opportunities to improve the operation of the Coach Services to reduce their impact on the local area.

Measure 4: Additional on-street coach holding locations

This measure relates to the issue of congestion caused by coaches in Townley Road in the PM peak

On Townley Road, there is current capacity for up to seven coaches to park at any one time. As discussed in Section 3.1, during the PM peak coach parking is over capacity with up to 12 services all departing from Townley Road simultaneously causing congestion and road safety issues.

Coaches frequently arrive in advance of the departure time, often as early as 2pm. This is a particular issue on Townley Road where coach parking is over capacity and occupies so much of the carriageway.

Staggering the services would allow the number of coaches waiting on-street at any one time to better match the available coach parking capacity. At least five coach services would need to be staggered so that they did not arrive on Townley Road until 4.05pm or later.

This measure would only be effective if the coach operators committed to only bringing coaches into the area just prior to the agreed departure time and therefore it would need to be considered in conjunction with alternative waiting locations. Potential on-street waiting locations are considered below.

Gallery Road

An on-street coach holding location that could be considered for formal coach parking is Gallery Road, where some drivers do already park before moving on to the schools. A formal coach parking bay would provide drivers with a convenient location close to the schools. However, no driver amenities are available. The provision of driver facilities such as a toilet and enclosed waiting area are likely to require planning permission.

In tandem with alternative coach parking locations tighter restrictions and enforcement on Townley Road would ensure coaches do not park for long periods of time in the vicinity of the school. Liaising with LBS to introduce restricted coach parking times adjacent to schools would aid the enforcement of idling coaches.

However, it must be recognised that restricting coach parking adjacent to the schools will only displace the issue to potentially more sensitive and congested areas if alternative facilities are not provided, as suggested above and in Measure 5.

The potential additional on-street coach parking location is shown in Figure 19.

Measure 5: Additional off-street coach holding locations

This measure relates to the issue of congestion caused by coaches in Townley Road in the PM peak

Dulwich Park

Dulwich Park has two potential locations; its entrances at Old College Gate on College Road or the Rosebury Gate entrance on South Circular Road. Only the Old College Gate currently has permitted vehicle access but it is unlikely to be able to accommodate any coaches within the available parking. The park itself has facilities for drivers to use. Permission for such use would be required from the Dulwich Estate. Such use is likely to be unpopular with existing park users.

The Grove Pub

The Grove Pub on Dulwich Common / Lordship Lane is a potential location for off-street coach parking where driver facilities could also be provided. The site has capacity for five to seven coaches. However we are aware that this site is likely to be redeveloped in the medium term and therefore this is not a long-term solution. Furthermore planning permission is likely to be required as well as changes to the boundary wall to Dulwich Common, reducing its attractiveness as a short term solution.

Crystal Palace Bus Station

Crystal Place bus station is served by eight public bus routes during the day, with a further five services stopping on Crystal Palace Parade. As well as bus stops the station contains around 15 bus stands.

If access were possible to these stands this would provide a readymade off-street holding area with driver facilities. The potential for access would need to be discussed with Transport for London, the organisation that oversees bus services in London, and would depend on the spare capacity available within the station. Given the high number of bus routes serving the site it is unlikely that significant spare stand capacity would be available for coaches.

The location is also some 4-5km from the school and therefore coaches will incur congestion when travelling to the school sites, increasing the risk of delays to the service.

Streatham and Marlborough Cricket Club, Dulwich Common

There is a small parcel of land where Dulwich Common joins South Circular Road to the east, adjacent to the South circular Road / Lordship Lane junction which is used as parking for Streatham and Marlborough Cricket Club. Dulwich Common also provides access to the Camber Lawn Tennis Club and Grove House.

There is the potential to utilise this parking lot as a coach holding point and it has capacity for up to six coaches. However, this would require the existing access to be removed, with two additional access points provided to accommodate access and egress of coaches. One of the accesses would be within 20m of the South Circular Road / Lordship Lane Junction and would interrupt a short section of advisory cycle lane, albeit with limited functional use. These additional accesses onto the South Circular Road would require approval from TfL. Vehicle tracking would be required to confirm safe access and egress onto the site, in order to ensure coaches do not disrupt traffic on the South Circular.

There is available capacity to accommodate driver facilities, or drivers could potentially utilise the tennis club. The site is within good proximity to all of the schools sites and requires relatively modest redevelopment. The changes could offer wider benefits to the tennis and cricket club in terms of improved access and parking.

Deliverability of this option would depend on securing agreement with the land owner.

Crystal Palace Park

There is the potential to utilise the existing public coach parking facilities in Crystal Palace Park which serves the National Sports Centre. Parking is provided for 12 coaches, however there is additional capacity within the parking lot to accommodate additional coaches subject to availability. The sports centre offers facilities for the drivers to use.

As a public car park and one which services the National Sport Centre, reliability and certainty of available spaces cannot be guaranteed, particularly in the PM and in the case of a sports event taking place. The location is also some 4-5km from the school and therefore coaches will incur congestion when travelling to the school sites, increasing the risk of delays to the service.

Deliverability of this option would depend on securing agreement regarding access and use of the existing facilities with the land owner. As discussed above the area is unlikely to be available during sporting events.

T.A. Centre, Upper Tulse Hill

An additional potential location for a coach holding point is at the 253 Provost Company Royal Military Police T.A. Centre, a military recruitment centre located on Upper Tulse Hill. The centre has a generous hardstanding area for parking and training that is accessed via Upper Tulse Hill. The hardstanding could potentially accommodate up to six coaches. Coaches would be required to turn within the hardstanding area and return out of a single access. A detailed tracking exercise would be required to confirm this is achievable. Drivers would potentially be able to utilise facilities within the centre.

The hardstanding is only likely to be available when training and other events are not taking place and there may be additional security considerations given the site's use.

The site is situated 2.5-3km away from either JAGS and Alleyn's or Dulwich College. Coaches will encounter some congestion when travelling to the school sites, increasing the risk of delays to the service.

Deliverability of this option would depend on securing agreement with the land owner.

Trevor Bailey Sports Ground

Car parking is currently provided for the pavilion at the Trevor Baily Sports Ground, accessed off the South Circular Road. In its current arrangement the hard-standing area is not sufficient to accommodate coaches on-site. However, if the area of the former tennis court to the east of the pavilion were to be used there is sufficient capacity for approximately 11 coaches. There is the potential for drivers to utilise the facilities provided within the pavilion.

The location is in good proximity to all of the Foundation Schools and removes idling coaches from on-street locations which may impact on local residents. Development of the site may offer potential wider improvements to users of pavilion and sports ground in terms of improved access and parking.

This land is leased by Dulwich College, however its development would require planning permission. The potential planning issues related to this change of use would require careful consideration and engagement with LBS.

The potential additional off-street coach parking locations discussed above are shown in Figure 19 opposite.

Integration of on- and off-street coach holding locations into the Coach Service operations

The use of on- or off-street coach holding locations allows coaches to be more accurately staggered. In order to operate efficiently the coaches would need to be coordinated to ensure they arrived in a staggered pattern. This would need to be planned carefully through timetabling. The aim would be for coaches to only remain in the area around the schools for long enough to collect pupils before moving off on their routes.

The management of the holding areas and control of coaches may require supervision that would need to be provided by the schools or via agreement with the coach operators.

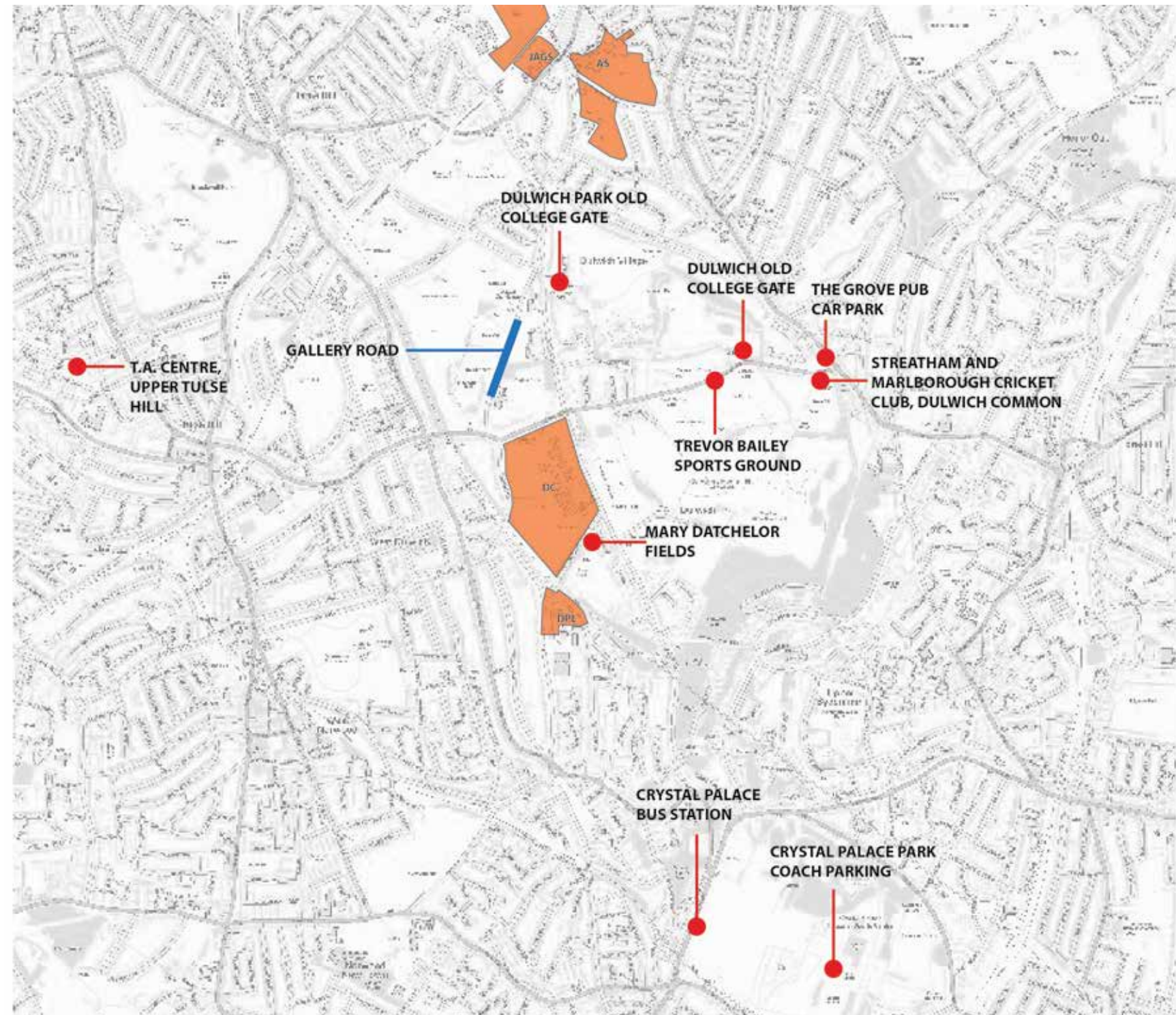


Figure 19 Potential additional on and off street coach parking

The provision of on- or off-street parking locations would also allow for some flexibility when there are visiting coaches to the schools, with coach arrivals adjusted accordingly to ensure coach parking demand on-street was not exceeded. As discussed in Measure 8 tighter restrictions and enforcement of the on-street coach parking restrictions is also recommended.

6.1.4 Provide School Specific Services

Measure 6: School Specific Services

This measure relates to the issue of coaches in Calton Avenue

Just under half of the Coach Services are school specific services, generally servicing JAGS and Allyn's School together or Dulwich College and DPL together. Increasing the number of school specific services could potentially reduce the number of services travelling between school sites and through sensitive areas.

Analysis of the routes servicing all schools from each area of demand highlights has been undertaken to determine the feasibility of increasing the number of school specific services.

Within the area around Fulham, Battersea and Clapham (see Figure 14), nine routes serve all foundation schools. These are routes C2, S3, W1, W2, W3, W4, W5, W7, and W9. Split over these routes there are 220 pupils from Dulwich College, 108 from JAGS, 122 from Allyn's School and two from DPL (see Appendix C for a detailed breakdown of school use of each service). This suggests there is sufficient demand from each of the schools to support at least one specific service for each school (where DPL would be accommodated on Dulwich College services).

These nine services could be reformed to provide four Dulwich College services, two JAGS services, two Allyn's services, with one remaining all schools service. This would therefore reduce the number of services travelling between school sites by eight.

However it should be noted that in planning individual school services the pick up routes will not be as efficient, which will result in the services having to cover longer distances, increasing overall coach mileage. The revised services are also likely to result in children having to travel further to pick up points, start journeys earlier and travel for longer.

Within the area around Bromley (see Figure 14) the B1 and G1 serve JAGS and Allyn's (note G1 serves two Dulwich College pupils during the AM peak) and B1 and B3 serve all schools. Split over these routes there are 17 pupils from Dulwich College, 34 from JAGS, six from Allyn's School and seven from DPL. This analysis suggests there is not sufficient demand to support single school specific coaches from the Bromley Area.

Within the area around Greenwich and Blackheath, the coach services at present are all school specific services.

Routes C2, C6, C8, CX serving Lambeth and Southwark (see Figure 14) serve all Foundation Schools. Split over these routes there are 52 pupils from Dulwich College, 59 from JAGS, 41 from Allyn's School and four from DPL. Although there is the potential demand to support school specific coaches within this area the dispersed catchment for each of the schools means that school specific services would not be efficient in terms of routeing. This would potentially have a significant impact on the distance covered by the route, introducing a significant time penalty and reducing the attractiveness of the service.

In summary the number of services that travel between schools could be reduced by up to eight through providing school specific services from the dense cluster of pupil that live in areas around Clapham to the west of the school sites. However, this is likely to have negative impacts in terms of increased bus mileage and a reduced quality of service for users. Some of the routeing inefficiencies could be reduced by increasing the number of coaches. However, this would erode the benefit of the measure and result in an increase in overall coach numbers.

A further consideration is that mixed school coaches tend to be popular with parents as it allows siblings in different schools to travel together. The coaches also provide a positive social aspect for pupils, encouraging mixing across the schools and fostering a greater community spirit.

A more detailed breakdown of the numbers of pupils of each school carried across the services discussed above is set out in Appendix C.

6.1.5 Miscellaneous Measures

Measure 7: Remote Pick-Up and Drop-Offs

This measure relates to the issues of coaches in Calton Avenue, congestion caused by coaches in Townley Road in the PM peak and general levels of congestion in streets surrounding the school sites

An alternative approach to bringing services directly to the schools is to provide services to remote drop-off / pick-up points at key transport nodes such as London Bridge and Victoria station where pupils would then use public transport as a first or last-leg of the journey to and from school.

This is potentially feasible for pupils travelling from Fulham, Chelsea or Bayswater to Victoria or those further to the north and east of the Thames to London Bridge. However, the number of pupils that live this distance (four miles and over) from the school sites is relatively low and pupils at this distance are mostly focused on areas to the south, as set out in Section 2.1. Pupils from the Bromley area would be able to travel directly to West Dulwich, near to Dulwich College, as set out in Section 2.2. However parents are unlikely to accept this arrangement as pupils would not be in the 'care' of the school for the entire journey. Such an approach would also be difficult for younger pupils for whom the schools would need to provide supervision or retain specific younger child coach services.

Given the low numbers and the practical issues set out above, this measure is not considered feasible.

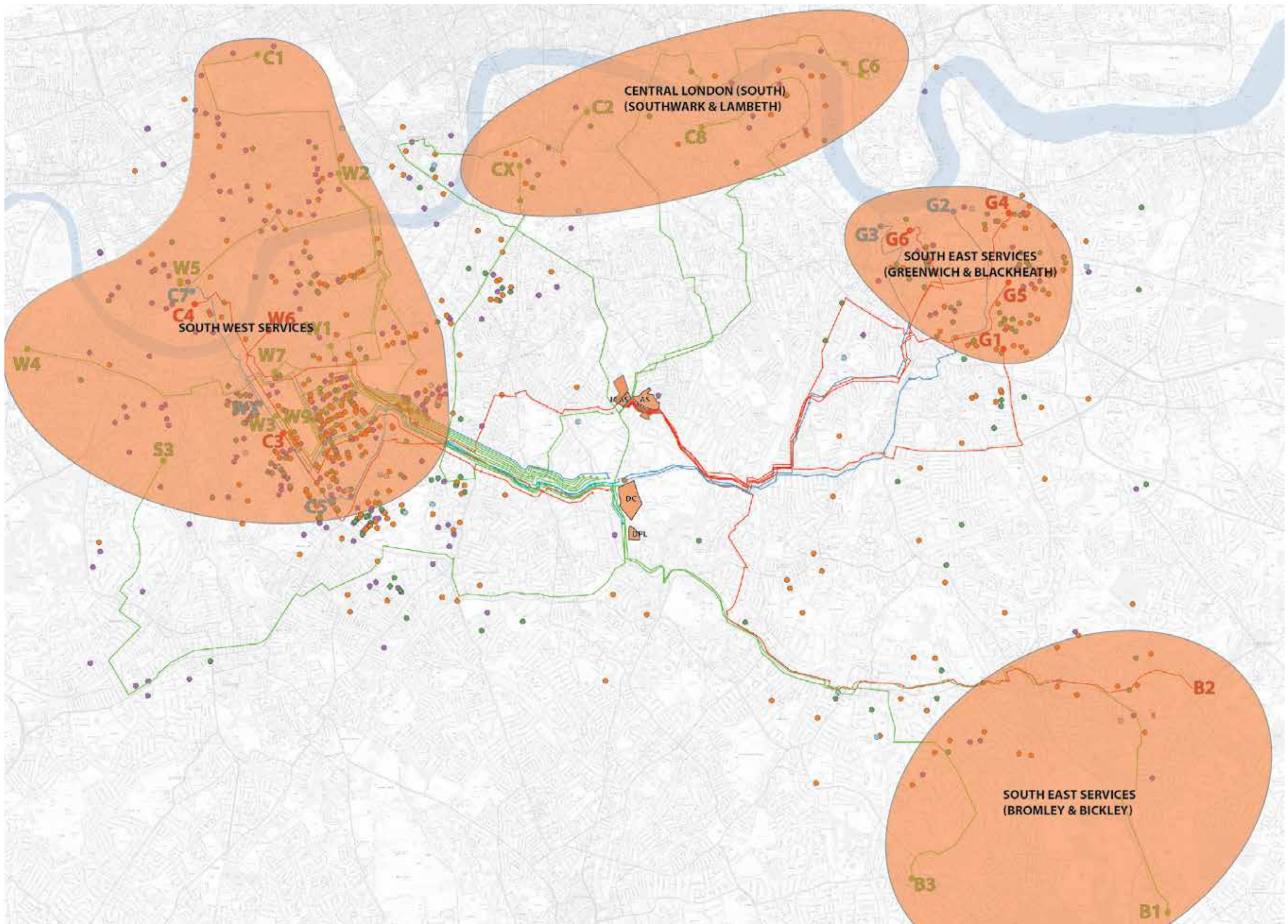


Figure 20 Existing coach demand

6.2 Potential Physical Interventions

The following sections summarises potential physical interventions that could be implemented.

6.2.1 Alleyn's School

Measure 8: Changes around Alleyn's School

This measure relates to the issues of general levels of congestion in streets surrounding the school sites and the limited capacity of coach parking on-street around JAGS and Alleyn's School, particularly in Townley Road

There are a number of potential measures to reduce the impact of the coach services on Townley Road, adjacent to Alleyn's School.

Up to seven coach services could be accommodated on-site through widening the carriage drive in front of the main school building. However, the negative impacts of this measure in terms of the setting of the school building, the consequent need to reduce staff parking on-site and the need to enlarge access onto Townley Road outweigh the benefits of it in terms of reducing impacts on Townley Road. It should also be noted that the loss of staff parking on-site would increase demand for parking in the local streets throughout the day.

The Townley Road carriageway could be widened on its south-westerly side by around 1.5m in order to provide sufficient width between parked coaches to accommodate two-way vehicle flow. This would require the loss of green space in order to accommodate the footway and the additional land provided would need to be adopted by LBS in order to allow for parking restriction to be enforced. The changes are also likely to require the diversion of underground services and would be subject to planning permission. Furthermore for those periods where there are no coaches parked on-street the additional width would encourage faster vehicle speeds outside the school, which is not desirable.

The introduction of additional double yellow lines around the school would restrict parking by both coaches and parents. This would require additional enforcement by LBS' parking enforcement team.

These measures are shown in Figure 21.

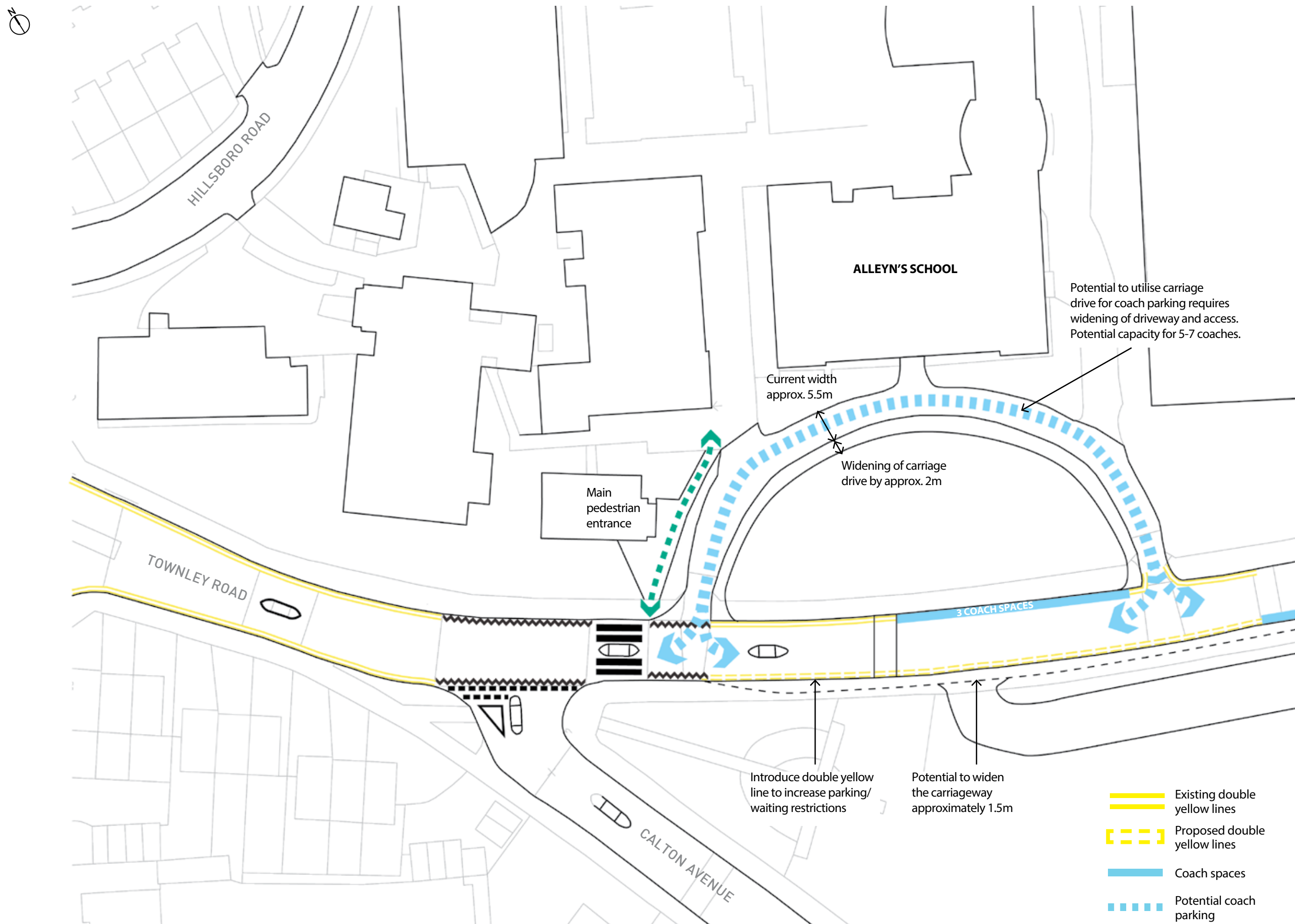


Figure 21 Townley Road Potential Opportunities

Alan Baxter

6.2.2 Dulwich College

Measure 9: Changes within Dulwich College

This measure relates to the issues of general levels of congestion in streets surrounding the school sites and the bunched departure times in the PM peak causing local congestion around Townley Road

As highlighted above Dulwich College already accommodates up to nine coaches on-site with significant benefits in terms of congestion relief for local streets. The provision of additional on-site coach parking would facilitate the re-routeing of coaches as set in Measure 2, the consolidation of coach services as set out in Measure 4 or the holding of coaches to aid delivery of Measure 5.

However, in order to deliver additional space for coaches there would be the need to reduce staff and visitor parking or to relocate the parking displaced elsewhere on-site. This would require careful coordination with the College's broader estate management strategy, which is already reviewing the use of the space for parking purposes because of significant safety concerns around coach and vehicle conflict with the large number of pupils on foot. Given the significant space already set aside for coaches within the College grounds it is not felt that additional parking would be deliverable. Alternative on- and off-street coach parking locations are considered in Measures 4 and 5.

6.2.3 Dulwich Prep London

Measure 10: Changes to Alleyn Park

This measure relates to the issues of general levels of congestion in streets surrounding the school sites

The main issues at DPL relate to the congestion caused by the high density of schools in the area and the subsequent traffic generated. To mitigate this there is the increase enforcement of existing parking restrictions adjacent to the school on Alleyn Park during pick-up and drop-off times. This would require liaison with LBS, who would need to review the need for enforcement in this location in the context of the broader demands on their enforcement service.

Designating Hunts Slip Road as a Park and Stride location and extending the existing Alleyn Head pub walking bus service could supplement the parking restrictions set out above, these are considered in more in Section 5.3.

The introduction of a raised table at the Hunts Slip Road and Bowen Drive junction would improve pedestrian access to the school. This would require liaison with LBS, who would need to review the request and assess against its other street improvement priorities.

These potential measures support LBS's Cycling Strategy proposals for Alleyn Park and Hunts Slip Road.

These measures are shown in Figure 22.

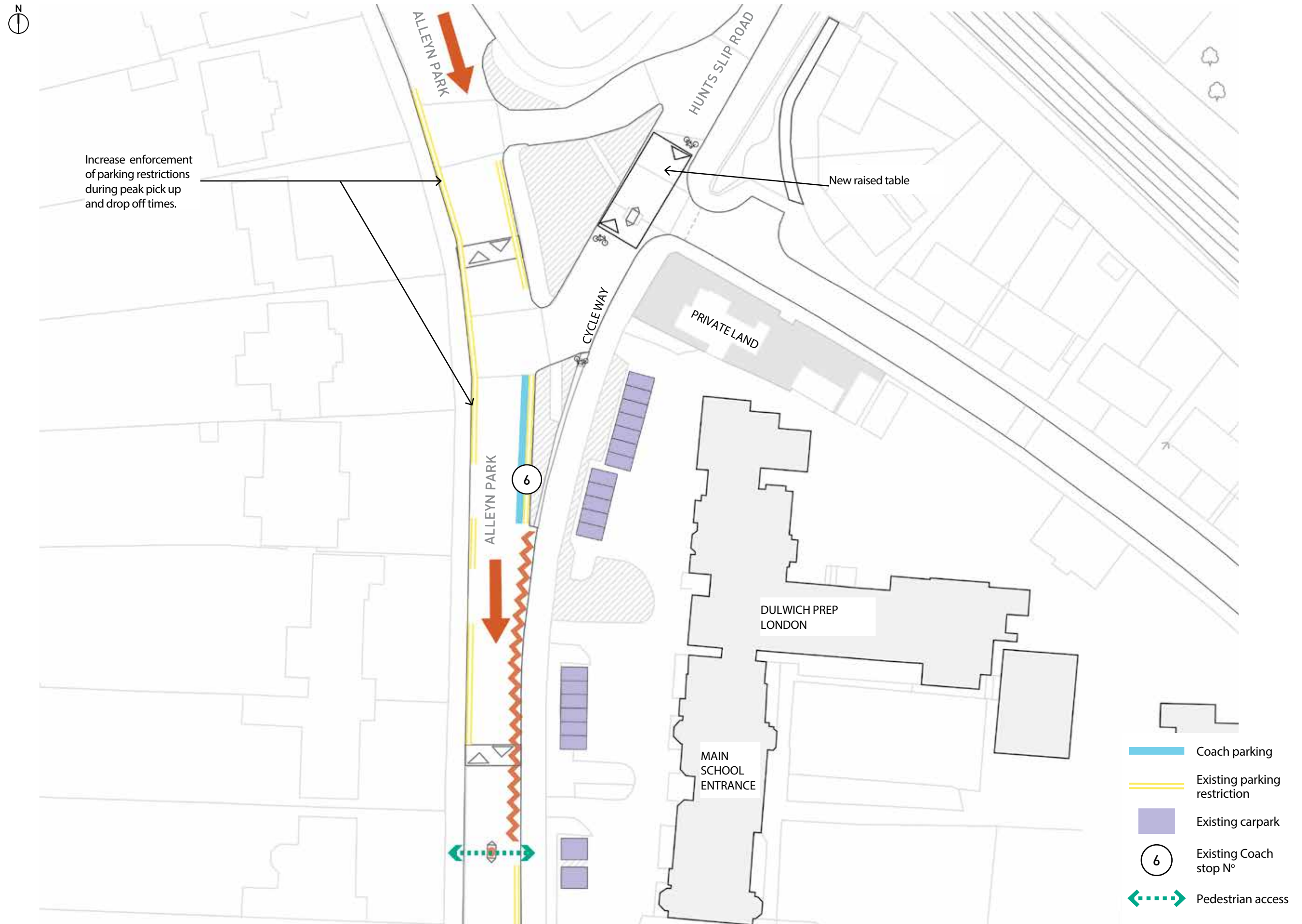


Figure 22 Alleyn Park/Hunts Slip Road

6.3 Travel Planning Measures

During our site visits we observed significant congestion in the vicinity of the schools with examples of double parking, stopping on both school keep clear markings and pedestrian crossing zig zags, as well as u turning in unsafe locations. These activities, particularly outside Alleyn's School on Townley Road and on Alleyn Park outside Dulwich Prep lead to a less safe environment for those parents who chose to walk and cycle to get their children to school.

The coach services are both caught up in this congestion and exacerbate it, particularly during school closing time when coach movements are less staggered and as a result more coaches are parked up in local streets. Ways to reduce the impact of the coaches are set out in the previous sections.

This section considers travel planning measures that may be used to improve safety, promote and support walking and cycling and reduce congestion outside the school gates.

Measure 11: Park and stride

This measure relates to the issues of general levels of congestion in streets surrounding the school sites

Park and stride involves parents parking away from the school gates and walking their children the final leg of the journey to and from school. The benefits of this include:

- Reducing congestion outside the school gates
- Improving the environment and air quality around the school
- Encouraging a more active, healthier journey to school
- Enabling pupils to develop spatial awareness and road safety skills
- Allowing pupils to develop as independent travellers
- Improving safety for all pupils

In order to help define the area where parents should park, a drop off and pick up 'exclusion zone' could be considered outside particularly sensitive locations where congestion is most significant and the impacts of pupil drop off by car most clearly impact on the quality of environment and safety. Alleyn's School and DPL are most negatively affected.

For Alleyn's School it is suggested that Townley Road between Calton Avenue and Dovercourt Road could be designated a drop off and pick up 'exclusion zone'. Parents wishing to drop their children off would make use of Hillsboro Road, Calton Avenue, Dovercourt Road, Beauval Road and Townley Road (outside of the excluded area). It is understood that Alleyn's School already operate a similar measure and that Hillsboro Road is designated by Alleyn's School as a location for dropping off and picking up pupils to the junior school.

For Dulwich Prep it is suggested that Alleyn Park between Hunts Slip Road and Little Bornes could be designated a drop off and pick up 'exclusion zone'. Parents wishing to drop their children off would make use of Hunts Slip Road, Bowen Drive, Rouse Gardens, the Alleyn Head car park and Alleyn Park (outside of the excluded area).

It is understood that the Alleyn Head car park is already used by the school as the starting point of a walking bus that leaves at 8.15am. Such use could be extended, for example by becoming a remote reception area, as discussed below. Coordination with the Kingsdale Foundation School and Dulwich Wood Primary would be necessary in order to ensure the proposals benefitted all schools.

Measure 12: Remote reception areas

This measure relates to the issues of general levels of congestion in streets surrounding the school sites

In addition to general park and stride, where parents take their children to the school gates, remote reception areas may be created. These are points where teachers or other school staff receive pupils and then form a walking bus to take pupils safely to school. This allows parents to quickly drop their children off, removing the time penalty of the more remote location. Where possible this would make use of existing car parks or off-street areas that are lightly used during school hours or it can also take place on-street if numbers are managed to ensure no groups become so large that they block the footway.

In proximity to DPL, there is the potential to extend the existing use of the Alleyn Head car park as a remote reception area. There is the potential for an additional reception area along Hunts Slip Road which has relatively wide footways for pupils to congregate with a member of staff and a good provision of on-street parking for parents to use.

At JAGS and Alleyn's there is the opportunity to utilise St Barnabas Church on Calton Avenue. There is ample capacity within the carriageway drive for pupils to congregate with a member of staff; parents would be required to use on-street parking to drop-off and pick-up children. This would reduce the number of parents dropping children off outside of the school gates causing conflicts with vehicles and pedestrians. However, this will attract more car traffic associated with the schools to Calton Avenue. Furthermore, deliverability of this option would depend on securing agreement with the land owner.

Measure 13: Informal school access routes

This measure relates to the issues of general levels of congestion in streets surrounding the school sites

In order to minimise congestion caused by parents dropping off and picking up their children and to make it easier for parents to avoid the 'exclusion zone', agreed routes to school for drivers can be agreed. These would be devised based on the location of parents. For example for Alleyn's School parents to the north east of the school would be encouraged to travel down East Dulwich Grove and Hillsboro Road east bound before re-joining East Dulwich Grove at Glengary Road. For Dulwich Prep parents to the west would be encouraged to travel along Robson Road, Park Hall Road, Alleyn Park and then Hunts Slip Road. Potential routeings are shown in Figure 24 and 25.



Figure 23 Walking Bus

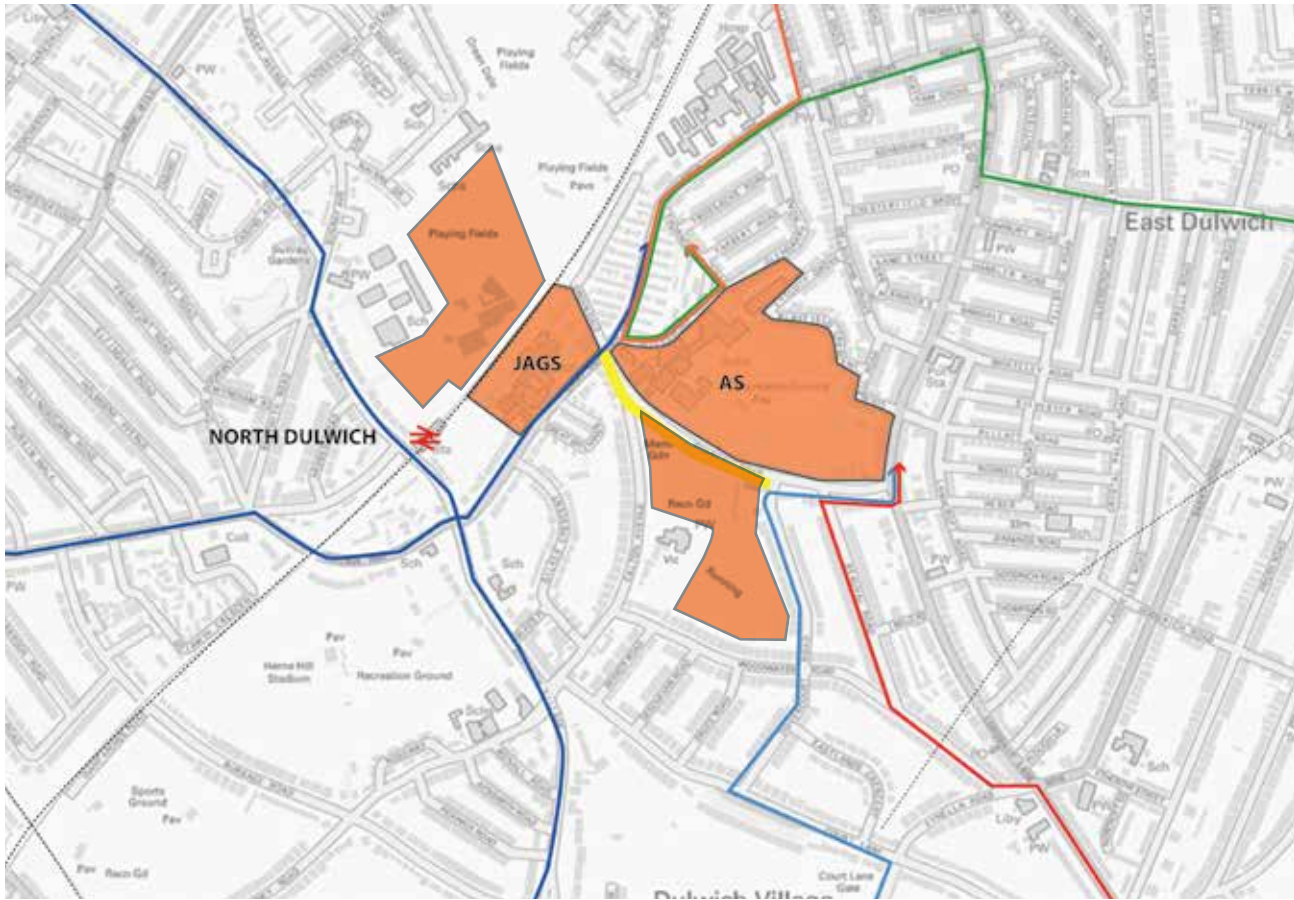


Figure 24 Informal school access routes JAGS and Alleyn's School

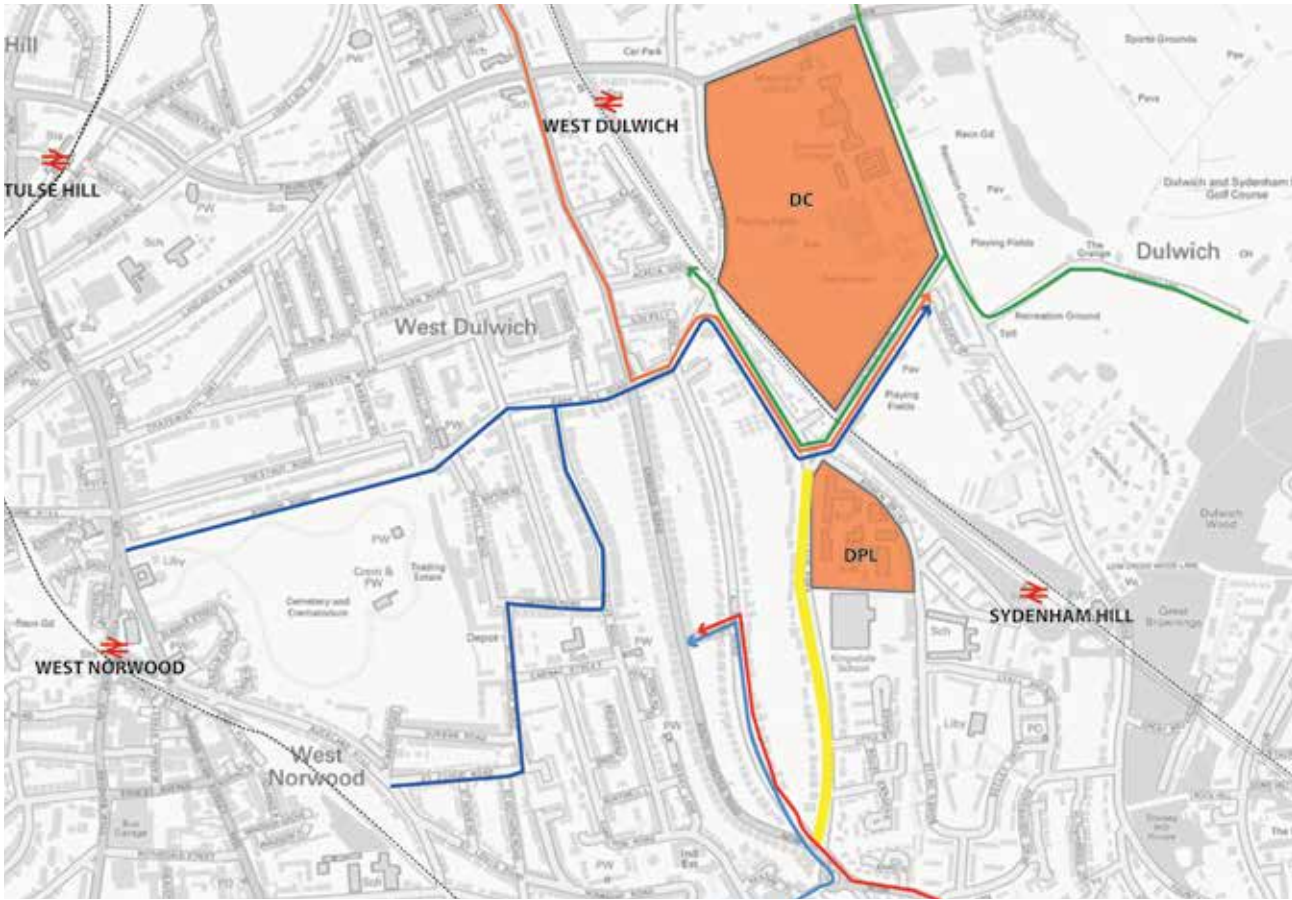


Figure 25 Informal school access routes DPL

7.0

Appraisal of Measures

The list of measures set out above have been appraised against the following criteria:

- Deliverability: is the measure deliverable without recourse to third party land and without significant resource or other impacts (green), deliverable without recourse to third party land but with resource complications or deliverable only with third party approvals or third party land that may be available (yellow), deliverable without recourse to third party land but with significant resource implications or deliverable only with third party approvals or third party land that is unlikely to be made available (red)
- Traffic movement: does the measure have a negative (red), neutral (yellow) or positive (green) impact on traffic movement in the local streets
- Road safety: does the measure have a negative (red), neutral (yellow) or positive (green) impact on road safety in the local streets
- Operation of the coach service: does the measure have a negative (red), neutral (yellow) or positive (green) impact on the operation of the coach service in terms of journey time, journey distance and attractiveness of service to users
- Impact of coaches on the local environment: in relation to issues such as visual intrusiveness and air quality does the measure increase harm (red), have no impact (yellow) or reduce the harm (green) caused by coaches on the local environment

	Deliverability	Traffic movement	Road safety	Operation of the coach service	Impact of coaches on local environment
Coach service alterations					
Measure 1: Route services via Dulwich College in advance of JAGS / Alleyn's School	Yellow	Green	Green	Yellow	Green
Measure 2: Route service C2 via Dulwich Village	Green	Green	Green	Yellow	Green
Measure 3: Start inter-school services at Dulwich College in the PM peak	Green	Green	Green	Red	Yellow
Measure 4: Additional on-street coach parking					
Gallery Road	Yellow	Green	Green	Yellow	Yellow
Measure 5: Additional off-street coach parking					
Dulwich Park	Red	Green	Green	Yellow	Yellow
Grove Pub	Red	Green	Green	Yellow	Green
Crystal Palace Bus Station	Red	Green	Green	Yellow	Green
Streatham and Marlborough Cricket Club	Yellow	Green	Green	Yellow	Green
Crystal Palace Park	Yellow	Green	Green	Yellow	Green
TA Centre, Upper Tulse Hill	Yellow	Green	Green	Yellow	Green
Trevor Bailey Sports Ground	Yellow	Green	Green	Yellow	Green
Measure 6: School Specific Services	Green	Green	Green	Red	Yellow
Measure 7: Remote Pick-Up and Drop-Offs	Yellow	Yellow	Yellow	Red	Yellow
Potential physical interventions					
Measure 8: Changes around Alleyn's School	Red	Green	Yellow	Yellow	Yellow
Measure 9: Changes within Dulwich College	Red	Green	Green	Yellow	Green
Measure 10: Changes to Alleyn Park	Yellow	Yellow	Green	Yellow	Yellow
Travel planning measures					
Measure 11: Park and stride	Yellow	Yellow	Green	Yellow	Yellow
Measure 12: Remote reception areas	Yellow	Yellow	Green	Yellow	Yellow
Measure 13: Informal school access routes	Yellow	Yellow	Green	Yellow	Yellow

Taking into account the appraisal above, Measure 1 and Measure 2 offer significant benefits in terms of removing coaches from Calton Avenue and score highly for deliverability by the schools. However, for Measure 1 the delivery of a new crossing on Dulwich Common would be essential unless pupils were dropped off more remotely from the College, on College Road. The new crossing would need to be agreed with and delivered by Transport for London. For Measure 2 pupils to JAGS and Alleyn's School would be dropped remotely from the school, which would entail some supervision, particularly for younger pupils.

Measure 6 could reduce the number of services moving between the schools, however the school specific routes would reduce routeing efficiency and result in a significantly poorer level of service to users.

The provision of on- and off-street coach parking as part of Measure 4 and Measure 5 would bring significant benefits in terms of improving traffic movement and road safety in Townley Road as well as reducing the impact of coaches on the environment. Of the sites identified the most promising are Gallery Road, Crystal Palace Park, Trevor Bailey Sports Ground, Streatham and Marlborough Cricket Club and the TA centre on Upper Tulse Hill. However, each of these carries significant uncertainties in terms securing agreement of the landowner or from LBS in the case of Gallery Road.

The travel planning measures (11 to 13) build upon the positive work already being done by the Foundation Schools and DPL in terms of managing travel demand and would help to improve road safety in the immediate vicinity of the schools. The success of the measures relies on continuing to engage parents as well as potentially making changes to existing school Travel Plans.

Measures 3, 7, 9 and 10 score poorly in the appraisal and are not likely to be deliverable. Measure 8 and Measure 9 would have a significantly negative impact on the operation of the coach service. Measure 9 and Measure 10 would involve alterations to the school grounds at Alleyn's School and Dulwich College that are not considered acceptable. The positive impacts of these measures are not considered to outweigh the problems identified.

The relatively modest changes proposed in Measure 10 would require agreement from LBS and would need to be considered in the context of their wider priorities.

7.1 Conclusion

This study has undertaken a detailed analysis of the operation of the coach service based on routeing and timetable information, usage statistics and journey times provided by Dulwich College. Site visits during the critical AM and PM peak periods were undertaken over the course of a week, which allowed conditions outside the schools to be assessed and the impact of the coaches understood.

Consultation with key stakeholders was held, including with ward Councillors and the local MP, so that the views of the local community, as well as the schools is properly understood and incorporated into the work underpinning the study. In addition the views of the local community as expressed through the workshops undertaken by LBS with regard to the Quietway proposals were also reviewed.

Following analysis of this information it has been determined that the key objectives the study must meet are to minimise the use of Calton Avenue by coaches and reduced congestion on Townley Road. In particular the issues caused by coaches in Calton Avenue are a key concern locally.

Minimise use of Calton Avenue by coaches in the AM peak

Measure 1 and Measure 2 offer the most deliverable opportunities to reduce the number of coaches using Calton Avenue.

The issues to note in relation to these measures are:

- Measure 1 would require be an additional 220 pupils to be dropped off on Dulwich Common, for which a new or relocated pedestrian crossing would be required. Pupils would arrive later at JAGS and Alleyn's School unless the timetable was adjusted accordingly
- Measure 2 would require 39 pupils of JAGS and Alleyn's School to walk further to reach the schools from Red Post Hill. In total 16 Alleyn's School pupils would then need to cross East Dulwich Grove

Reduced congestion on Townley Road in the PM peak

Measure 4 and Measure 5 offer significant potential to reduce congestion on Townley Road.

The issues to note in relation to these measures are that:

- All sites would need agreement from third parties in order to deliver. Although the Trevor Bailey Sports Ground is leased by Dulwich College it is likely that a change of use for coach parking over part of it would require planning permission
- Service timetables would need to be amended to reflect the staggered profile of arrivals required at Alleyn's School
- Some pupils would need to wait on-site longer after school for their coach to arrive
- Changes to coach waiting restrictions on Townley Road would be required to compliment the holding area proposals
- New accesses to land and driver facilities would require financial investment

Appendix A

Full Breakdown of Coach Routes

Route	Areas Covered	Schools Served	Coach Capacity	Users AM	Users PM	Total Users	Total Occupancy	DC	JAGS	Alleyn's	DPL
B1	Keston/Orpington/Bromley/Beckenham	All	49	38	41	44	90%	16	18	4	6
B2	Chislehurst/Bromley/Beckenham/Sydenham	JAGS/Alleyn's	49	35	36	39	80%	-	28	11	-
B3	West Wickham/Beckenham	All	17	17	19	20	118%	1	16	2	1
C1	Bayswater/Kensington/Chelsea/Pimlico/Clapham	All	30	28	28	32	107%	22	4	4	2
C2	Borough/Lambeth/Westminster/Victoria/Stockwell	All	53	52	53	59	111%	17	23	16	3
C3	Tooting/Balham/Clapham	JAGS/Alleyn's	79	80	80	88	111%	-	35	53	-
C4	Wandsworth/Clapham	JAGS/Alleyn's	53	53	55	61	115%	-	9	52	-
C5	Tooting/Balham/Clapham	DC/DPL	57	54	62	62	109%	56	-	-	6
C6 *nb1	Canary Wharf/Wapping/Shad Thames	All	16	11	11	11	69%	3	4	4	-
C7	Fulham/Wandsworth	DC/DPL	25	17	17	17	68%	16	-	-	1
C8 *nb2	Bermondsey/Rotherhithe/Surrey Quays	All	25	25	21	26	104%	10	9	7	-
CX	Kennington/Clapham/Streatham Hill	All	49	46	58	60	122%	22	23	14	1
G1	Lee/Hither Green	JAGS/Alleyn's (DC AM only)	49	27	24	27	55%	2	14	11	-
G2	Blackheath	DC/DPL	49	36	38	38	78%	35	-	-	3
G3 *nb3	Greenwich/Blackheath/Lewisham/Brockley	DC/DPL	25	19	21	21	84%	21	-	-	-
G4	Blackheath/Lewisham	JAGS/Alleyn's	49	34	36	37	76%	-	15	22	-
G5	Blackheath/Lewisham	JAGS/Alleyn's	70	58	57	63	90%	-	26	37	-
G6 *nb3	Greenwich/Blackheath/Lewisham/Brockley	JAGS/Alleyn's	25	20	19	20	80%	-	8	12	-
S3	Wimbledon/Mitcham/Streatham/Crystal Palace	All	49	43	43	45	92%	22	13	10	-
W1	Battersea/Clapham/Wandsworth	All	49	42	42	44	90%	26	11	7	-
W2	Chelsea/Battersea	All	49	45	48	49	100%	23	13	13	-
W3	Wandsworth/Clapham	All	79	76	63	78	99%	29	20	29	-
W4	Putney/Wandsworth	All	53	51	51	53	100%	39	6	8	-
W5	Fulham/Chelsea/Clapham	All	53	51	50	54	102%	27	17	10	-
W6	Wandsworth/Clapham	JAGS/Alleyn's	53	53	58	60	113%	-	50	10	-
W7	Wandsworth/Clapham	All	49	40	39	41	84%	18	15	8	-
W9	Wandsworth/Clapham	All	53	49	53	56	106%	14	9	33	-
WX	Wandsworth/Clapham	DC/DPL	84	88	83	88	105%	82	-	-	6
Total			1340	1188	1206	1293	96%	501	386	377	29
							TOTAL OVER SUBSCRIBED	12 43%			

*nb1 this route is temporarily a minibus due to Cycle Highway Roadworks and we hope will return to its original form as part of C8 route

*nb2 this route will increase to 49 seats when re-joined with C6

*nb3 G3 was combined with route G6 but seperated due to logistical problems

Route	Areas Covered	Schools Served	Coach Capacity
Wandsworth Late	Clapham/Balham/Tooting/Wandsworth	All	79
Putney Late	Clapham/Wandsworth/Putney	All	79
Wimbledon Late	Wimbledon/Mitcham/Streatham/Crystal Palace	All	16
Kensington Late	Stockwell/Pimlico/Victoria/Kensington/Chelsea/Bayswater	All	16
Blackheath Late	Brockley/Lewisham/Blackheath/Greenwich/Surrey Quays/Rotherhithe	All	49
Orpington Late	Sydenham/Beckenham/Bromley/Orpington	All	16
Borough Late	Clapham/Kennington/Lambeth/Westminster/Borough	All	25
Chelsea Late	Clapham/Battersea/Chelsea/Fulham	All	49
Canary Wharf Late	Bermondsey/Shad Thames/Canary Wharf	All	on demand taxi

Appendix B

Coach Service Journey Time

AM	PM
>20min	>20min

Route B1	AM Departure	AM Arrival DPL	AM Arrival DC	AM Arrival JAGS/Alleyn's	PM Departure	Final Drop Off
19th April	06:53	07:53	07:56	08:06	16:00	17:13
20th April	06:53	08:01	08:03	08:14	16:00	17:19
21st April	06:53	07:54	07:55	08:04	16:00	17:19
22nd April	06:53	07:52	07:53	08:02	16:00	17:34
25th April	06:53	07:53	07:54	08:01	16:00	17:15
26th April	06:53	08:05	08:06	08:20	16:00	17:20
27th April	06:53	08:01	08:02	08:15	16:00	17:18
28th April	06:53	08:04	08:05	08:22	16:00	17:28
29th April	06:53	07:56	07:57	08:04	16:00	17:23

RANGE	00:00	00:13	00:13	00:21	00:00	00:21
AVERAGE	06:53	07:57	07:59	08:09	16:00	17:21
DURATION	AM	01:04:40	01:06:00	01:16:47	PM	01:21:00

Route B2	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:20	08:15			16:05	16:46
20th April	07:20	08:20			16:05	16:44
21st April	07:20	08:12			16:05	16:46
22nd April	07:20	08:16			16:05	16:51
25th April	07:20	08:12			16:05	16:46
26th April	07:20	08:10			16:05	16:52
27th April	07:20	08:15			16:05	16:47
28th April	07:20	08:00			16:05	16:53
29th April	07:20	08:20			16:05	16:48

00:00						
RANGE	00:00	00:20	00:00	00:00	00:00	00:09
AVERAGE	07:20	08:13	#DIV/0!	#DIV/0!	16:05	16:48
DURATION	AM	00:53:20	#DIV/0!	#DIV/0!	PM	00:43:07

Route B3	AM Departure	AM Arrival DPL	AM Arrival DC	AM Arrival JAGS/Alleyn's	PM Departure	Final Drop Off
19th April	07:10	07:55	07:57	08:10	16:00	17:12
20th April	07:10	07:53	07:55	08:07	16:00	17:13
21st April	07:10	07:54	07:56	08:08	16:00	17:10
22nd April	07:10	07:52	07:54	08:09	16:00	17:08
25th April	07:10	07:55	07:56	08:11	16:00	17:14
26th April	07:10	07:55	07:56	08:12	16:00	17:09
27th April	07:10	07:56	07:58	08:12	16:00	17:14
28th April	07:10	07:58	08:00	08:15	16:00	17:10
29th April	07:10	07:54	07:56	08:11	16:00	17:11

RANGE	00:00	00:06	00:06	00:08	00:00	00:06
AVERAGE	07:10	07:54	07:56	08:10	16:00	17:11

Route C1	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:10	07:55	08:13	08:16	16:10	17:15
20th April	07:10	08:10	08:25	08:28	16:23	17:44
21st April	07:10	08:00	08:25	08:17	16:15	17:20
22nd April	07:10	07:56	08:12	08:14	16:21	17:36
25th April	07:10	08:05	08:23	08:26	16:15	17:21
26th April	07:10	07:56	08:07	08:11	16:11	17:27
27th April	07:10	08:10	08:23	08:25	16:14	17:40
28th April	07:10	07:56	08:14	08:16	16:15	17:38
29th April	07:10	07:55	08:04	08:06	16:20	17:22

RANGE	00:00	00:15	00:21	00:22	00:13	00:29
AVERAGE DEP/AR	07:10	08:00	08:16	08:17	16:16	17:29
DURATION	AM	00:50	01:06	01:07	PM	01:13:13

Route C2	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:06	08:01	08:15	08:20	16:05	17:21
20th April	07:06	08:01	08:15	08:20	16:05	17:26
21st April	07:06	08:04	08:20	08:24	16:05	17:26
22nd April	07:06	07:58	08:07	08:11	16:05	17:48
25th April	07:06	08:01	08:14	08:18	16:05	17:23
26th April	07:06	08:04	08:13	08:18	16:05	17:24
27th April	07:06	08:05	08:16	08:21	16:05	17:22
28th April	07:06	08:01	08:17	08:18	16:05	17:25
29th April	07:06	07:54	08:18	08:19	16:05	17:30

RANGE	00:00	00:11	00:13	00:13	00:00	00:27
AVERAGE	07:06	08:01	08:15	08:18	16:05	17:27
DURATION	AM	00:55:00	01:09:00	01:12:47	PM	01:22:13

Route C3	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:31	08:18			16:00	16:45
20th April	07:31	08:19			16:00	16:48
21st April	07:31	08:17			16:00	16:42
22nd April	07:31	08:23			16:00	16:55
25th April	07:31	08:18			16:00	16:41
26th April	07:31	08:16			16:00	16:40
27th April	07:31	08:11			16:00	16:47
28th April	07:31	08:15			16:00	16:39
29th April	07:31	08:16			16:00	17:28

RANGE	00:00	00:12	00:00	00:00	00:00	00:16
AVERAGE	07:31	08:17	#DIV/0!	#DIV/0!	16:00	16:49

Route C4	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:15	08:21			16:00	16:48
20th April	07:15	08:08			16:00	16:58
21st April	07:15	08:16			16:00	16:54
22nd April	07:15	08:14			16:00	17:05
25th April	07:15	08:21			16:00	16:58
26th April	07:15	08:12			16:00	17:01
27th April	07:15	08:17			16:00	16:59
28th April	07:15	08:10			16:00	16:56
29th April	07:15	08:06			16:00	17:18

RANGE	00:00	00:15	00:00	00:00	00:00	00:24
AVERAGE	07:15	08:13	#DIV/0!	#DIV/0!	16:00	17:01
DURATION	AM	00:58:53	#DIV/0!	#DIV/0!	PM	01:01:07

Route C5	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:34		08:10	08:12	16:10	16:37
20th April	07:34		08:01	08:03	16:10	16:32
21st April	07:34		08:01	08:04	16:10	16:40
22nd April	07:34		07:58	08:00	16:10	16:34
25th April	07:34		08:08	08:10	16:10	16:38
26th April	07:34		08:00	08:02	16:10	16:39
27th April	07:34		08:02	08:04	16:10	16:43
28th April	07:34		08:10	08:11	16:10	16:45
29th April	07:34		08:01	08:04	16:10	16:34

RANGE	00:00	00:00	00:12	00:12	00:00	00:13
AVERAGE	07:34	#DIV/0!	08:03	08:05	16:10	16:38
DURATION	AM	#DIV/0!	00:29:27	00:31:33	PM	00:28:00

Route C6	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:10	08:08	08:23		16:05	17:01
20th April	07:10	08:10	08:19		16:05	17:25
21st April	07:10	08:03	08:16		16:05	17:06
22nd April	07:10	08:05	08:24		16:05	17:52
25th April	07:10	08:09	08:15		16:05	17:05
26th April	07:10	08:10	08:28		16:05	17:07
27th April	07:10	08:00	08:10		16:05	17:25
28th April	07:10	08:09	08:24		16:05	17:13
29th April	07:10	08:01	08:11		16:05	17:06

RANGE	00:00	00:10	00:18	00:00	00:00	00:51
AVERAGE	07:10	08:06	08:18	#DIV/0!	16:05	17:15
DURATION	AM	00:56:07	01:08:53	#DIV/0!	PM	01:10:33

Route C7	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:25		08:05	08:08	16:05	16:58
20th April	07:25		08:10	08:13	16:05	16:51
21st April	07:25		08:01	08:03	16:05	16:47
22nd April	07:25		08:05	08:07	16:05	16:51
25th April	07:25		08:08	08:10	16:05	16:58
26th April	07:25		08:02	08:05	16:05	16:54
27th April	07:25		08:01	08:03	16:05	16:55
28th April	07:25		08:03	08:05	16:05	16:48
29th April	07:25		08:05	08:08	16:05	16:55

RANGE	00:00	00:00	00:09	00:10	00:00	00:11
AVERAGE	07:25	#DIV/0!	08:04	08:06	16:05	16:53
DURATION	AM	#DIV/0!	00:39:27	00:41:53	PM	00:48:00

Route C8	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:30	08:15	08:27		16:05	17:05
20th April	07:30	08:14	08:28		16:05	17:06
21st April	07:27	08:13	08:23		16:05	17:02
22nd April	07:29	08:16	08:24		16:05	17:12
25th April	07:34	08:15	08:33		16:05	17:05
26th April	07:33	08:13	08:23		16:05	17:06
27th April	07:30	08:15	08:25		16:05	17:06
28th April	07:38	08:23	08:36		16:05	17:00
29th April	07:28	08:14	08:27		16:05	17:01

RANGE	00:11	00:10	00:13	00:00	00:00	00:12
AVERAGE	07:31	08:15	08:27	#DIV/0!	16:05	17:04
DURATION	AM	00:44:20	00:56:20	#DIV/0!	PM	00:59:47

Route CX	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:23	08:08	08:25		16:00	17:01
20th April	07:23	08:15	08:34	08:39	16:00	17:02
21st April	07:23	08:07	08:26	08:30	16:00	16:57
22nd April	07:23	08:10	08:25	08:29	16:00	16:56
25th April	07:23	08:07	08:20		16:00	16:48
26th April	07:23	08:17	08:40		16:00	16:55
27th April	07:23	08:10	08:20	08:24	16:00	16:50
28th April	07:23	08:09	08:25	08:29	16:00	16:55
29th April	07:23	08:10	08:23	08:27	16:00	16:59

RANGE	00:00	00:10	00:20	00:15	00:00	00:14
AVERAGE	07:23	08:10	08:26	08:29	16:00	16:55
DURATION	AM	00:47:20	01:03:27	01:06:40	PM	00:55:53

Route G1	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:14	08:00	08:15		16:00	16:51
20th April	07:14	08:45	08:55		16:00	16:44
21st April	07:14	08:12	08:02		16:00	16:51
22nd April	07:14	08:16	08:05		16:00	16:48
25th April	07:14	08:10	08:05		16:00	16:37
26th April	07:14	08:15	08:10		16:00	16:45
27th April	07:14	08:00	08:15		16:00	16:53
28th April	07:14	08:05	08:20		16:00	16:50
29th April	07:14	08:10	08:25		16:00	17:17

RANGE	00:00	00:45	00:53	00:00	00:00	00:40
AVERAGE	07:14	08:12	08:16	#DIV/0!	16:00	16:50
DURATION	AM	00:58:33	01:02:53	#DIV/0!	PM	00:50:40

Route G2	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:13		08:25	08:28	16:00	17:03
20th April	07:06		08:27	08:31	16:00	17:02
21st April	07:12		08:10	08:15	16:00	17:05
22nd April	07:08		08:24	08:29	16:00	17:16
25th April	07:07		08:15	08:18	16:00	17:02
26th April	07:12		08:21	08:25	16:00	17:01
27th April	07:10		08:32	08:36	16:00	17:04
28th April	07:08		08:10	08:14	16:00	17:09
29th April	07:07		08:13	08:16	16:00	17:15

RANGE	00:07	00:00	00:22	00:22	00:00	00:15
AVERAGE	07:09	#DIV/0!	08:19	08:23	16:00	17:06
DURATION	AM	#DIV/0!	01:10:27	01:14:20	PM	01:06:20

Route G3	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:15		08:04	08:08	16:10	16:55
20th April	07:15		08:25	08:29	16:10	16:55
21st April	07:15		08:15	08:20	16:10	16:51
22nd April	07:15		08:20	08:25	16:10	17:06
25th April	07:15		08:07	08:12	16:10	16:50
26th April	07:15		08:05	08:09	16:10	16:50
27th April	07:15		08:10	08:14	16:10	16:47
28th April	07:15		08:13	08:18	16:10	16:53
29th April	07:15		08:20	08:24	16:10	16:45

RANGE	00:00	00:00	00:21	00:21	00:00	00:21
AVERAGE	07:15	#DIV/0!	08:13	08:17	16:10	16:52
DURATION	AM	#DIV/0!	00:58:13	01:02:40	PM	00:42:27

Route G4	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:15	08:15			16:00	16:52
20th April	07:15	08:37			16:00	17:09
21st April	07:15	08:15			16:00	16:48
22nd April	07:15	08:08			16:00	17:05
25th April	07:15	08:18			16:00	16:55
26th April	07:15	08:32			16:00	16:52
27th April	07:15	08:33			16:00	16:50
28th April	07:15	08:25			16:00	16:53
29th April	07:15	08:18			16:00	17:05

RANGE	00:00	00:29	00:00	00:00	00:00	00:21
AVERAGE	07:15	08:22	#DIV/0!	#DIV/0!	16:00	16:56
DURATION	AM	01:07:20	#DIV/0!	#DIV/0!	PM	00:56:33

Route G5	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:25	08:30			16:00	16:41
20th April	07:25	08:31			16:00	16:54
21st April	07:25	08:25			16:00	16:48
22nd April	07:25	08:24			16:00	16:43
25th April	07:25	08:20			16:00	16:46
26th April	07:25	08:26			16:00	16:41
27th April	07:25	08:20			16:00	16:41
28th April	07:25	08:21			16:00	16:40
29th April	07:25	08:09			16:00	17:00

RANGE	00:00	00:22	00:00	00:00	00:00	00:20
AVERAGE	07:25	08:22	#DIV/0!	#DIV/0!	16:00	16:46
DURATION	AM	00:57:53	#DIV/0!	#DIV/0!	PM	00:46:00

Route G6	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:15	08:05			16:05	16:55
20th April	07:15	08:36			16:05	17:05
21st April	07:15	08:18			16:05	16:55
22nd April	07:15	08:23			16:05	16:57
25th April	07:15	08:10			16:05	16:52
26th April	07:15	08:05			16:05	16:52
27th April	07:15	08:15			16:05	16:52
28th April	07:15	08:16			16:05	16:52
29th April	07:15	08:25			16:05	16:52

RANGE	00:00	00:31	00:00	00:00	00:00	00:13
AVERAGE	07:15	08:17	#DIV/0!	#DIV/0!	16:05	16:54
DURATION	AM	01:02:00	#DIV/0!	#DIV/0!	PM	00:49:40

Route S3	AM Departure	AM Arrival DPL	AM Arrival DC	AM Arrival JAGS/Alleyn's	PM Departure	Final Drop Off
19th April	06:55	07:57	08:01	08:11	16:00	17:33
20th April	06:55	07:56	08:05	08:19	16:00	17:32
21st April	06:55	08:04	08:11	08:19	16:00	17:30
22nd April	06:55	07:52	07:57	08:05	16:00	17:45
25th April	06:55	07:58	08:04	08:14	16:00	17:33
26th April	06:55	07:57	08:06	08:16	16:00	17:18
27th April	06:55	07:53	08:05	08:15	16:00	17:28
28th April	06:55	07:55	08:04	08:15	16:00	17:10
29th April	06:55	07:52	08:01	08:08	16:00	17:47

RANGE	00:00:00	00:12:00	00:14:00	00:14:00	00:00:00	00:37:00
AVERAGE	06:55:00	07:56:00	08:03:47	08:13:33	16:00:00	17:30:40
DURATION	AM	01:01:00	01:08:47	01:18:33	PM	01:30:40

Route W1	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:22	08:21	08:40		16:00	16:50
20th April	07:20	08:10	08:21		16:00	16:50
21st April	07:24	08:04	08:21		16:00	16:48
22nd April	07:23	08:11	08:28		16:00	17:11
25th April	07:23	08:17	08:32		16:00	16:56
26th April	07:26	08:13	08:29		16:00	16:55
27th April	07:26	08:18	08:32		16:00	16:49
28th April	07:26	08:11	08:37		16:00	16:54
29th April	07:26	08:17	08:29		16:00	17:06

RANGE	00:06:00	00:17:00	00:19:00	00:00:00	00:00:00	00:23:00
AVERAGE	07:24:00	08:13:33	08:29:53	#DIV/0!	16:00:00	16:55:27
DURATION	AM	00:49:33	01:05:53	#DIV/0!	PM	00:55:27

Route W2	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:17	08:09	08:24		16:00	17:02
20th April	07:17	08:06	08:17		16:00	17:00
21st April	07:17	08:07	08:26		16:00	17:03
22nd April	07:17	08:02	08:18		16:00	17:16
25th April	07:17	08:08	08:23		16:00	17:02
26th April	07:17	08:09	08:20		16:00	17:01
27th April	07:17	08:04	08:18		16:00	16:58
28th April	07:17	08:05	08:25		16:00	17:13
29th April	07:17	08:02	08:15		16:00	17:17

RANGE	00:00:00	00:07:00	00:11:00	00:00:00	00:00:00	00:19:00
AVERAGE	07:17:00	08:05:47	08:20:40	#DIV/0!	16:00:00	17:05:47
DURATION	AM	02:40:44	01:03:40	#DIV/0!	PM	01:05:47

Route W3	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:26	08:20	08:39		16:00	16:58
20th April	07:26	08:08	08:23		16:00	17:04
21st April	07:26	08:10	08:22		16:00	16:52
22nd April	07:26	08:11	08:23		16:00	16:53
25th April	07:26	08:10	08:23		16:00	16:59
26th April	07:26	08:06	08:18		16:00	17:04
27th April	07:26	08:12	08:26		16:00	16:54
28th April	07:26	08:08	08:25		16:00	16:56
29th April	07:26	08:08	08:25		16:00	16:53

RANGE	00:00:00	00:14:00	00:21:00	00:00:00	00:00:00	00:12:00
AVERAGE	07:26:00	08:10:20	08:24:53	#DIV/0!	16:00:00	16:57:00
DURATION	AM	00:44:20	00:58:53	#DIV/0!	PM	00:57:00

Route W4	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:10	08:00	08:14	08:17	16:00	17:40
20th April	07:15	08:10	08:30		16:00	17:43
21st April	07:10	08:00	08:15		16:00	17:44
22nd April	07:10	08:00	08:15	08:17	16:00	17:45
25th April	07:10	08:12	08:28		16:00	17:40
26th April	07:10	08:05	08:20		16:00	17:49
27th April	07:25	08:20	08:35		16:00	17:28
28th April	07:10	08:08	08:30		16:00	17:59
29th April	07:10	08:00	08:10	08:12	16:00	17:50

RANGE	00:15:00	00:20:00	00:25:00	00:05:00	00:00:00	00:31:00
AVERAGE	07:12:13	08:06:07	08:21:53	08:15:20	16:00:00	17:44:13
DURATION	AM	00:53:53	01:09:40	01:03:07	PM	01:44:13

Route W5	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:15	08:12	08:27		16:00	17:30
20th April	07:15	08:14	08:29		16:00	17:13
21st April	07:15	08:09	08:31		16:00	17:23
22nd April	07:15	08:07	08:29		16:00	17:15
25th April	07:15	08:15	08:35		16:00	17:25
26th April	07:15	08:10	08:22		16:00	17:20
27th April	07:15	08:09	08:29		16:00	17:20
28th April	07:15	08:10	08:31		16:00	17:30
29th April	07:15	08:10	08:30		16:00	17:30

RANGE	00:00:00	00:08:00	00:13:00	00:00:00	00:00:00	00:17:00
AVERAGE	07:15:00	08:10:40	08:29:13	#DIV/0!	16:00:00	17:22:53
DURATION	AM	00:55:40	01:14:13	#DIV/0!	PM	01:22:53

Route W6	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:25	08:13			16:00	16:33
20th April	07:25	08:03			16:00	16:33
21st April	07:25	08:08			16:00	16:32
22nd April	07:25	08:05			16:00	16:38
25th April	07:25	08:10			16:00	16:35
26th April	07:25	08:06			16:00	16:41
27th April	07:25	08:02			16:00	16:41
28th April	07:25	08:07			16:00	16:24
29th April	07:25	08:03			16:00	16:41

RANGE	00:00:00	00:11:00	00:00:00	00:00:00	00:00:00	00:17:00
AVERAGE	07:25:00	08:06:20	#DIV/0!	#DIV/0!	16:00:00	16:35:20
DURATION	AM	00:41:20	#DIV/0!	#DIV/0!	PM	00:35:20

Route W7	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:24	08:06	08:22		16:00	17:00
20th April	07:29	08:16	08:34		16:00	16:55
21st April	07:27	08:11	08:23		16:00	17:00
22nd April	07:30	08:09	08:26		16:00	17:04
25th April	07:25	08:03	08:15		16:00	17:04
26th April	07:27	08:04	08:16		16:00	16:56
27th April	07:25	08:07	08:21		16:00	16:52
28th April	07:26	08:07	08:21		16:00	16:58
29th April	07:26	08:07	08:28		16:00	17:07

RANGE	00:06:00	00:13:00	00:19:00	00:00:00	00:00:00	00:15:00
AVERAGE	07:26:33	08:07:47	08:22:53	#DIV/0!	16:00:00	16:59:33
DURATION	AM	00:41:13	00:56:20	#DIV/0!	PM	00:59:33

Route W9	AM Departure	AM Arrival JAGS/Alleyn's	AM Arrival DC	AM Arrival DPL	PM Departure	Final Drop Off
19th April	07:28	08:11	08:30		16:00	16:55
20th April	07:27	08:14	08:29		16:00	16:55
21st April	07:27	08:14	08:34		16:00	16:49
22nd April	07:27	08:06	08:21		16:00	16:50
25th April	07:26	08:13	08:23		16:00	16:47
26th April	07:28	08:13	08:28		16:00	16:48
27th April	07:30	08:11	08:33		16:00	16:55
28th April	07:31	08:27	08:37		16:00	16:46
29th April	07:33	08:10	08:20		16:00	17:15

RANGE	00:07:00	00:21:00	00:17:00	00:00:00	00:00:00	00:29:00
AVERAGE	07:28:33	08:13:13	08:28:20	#DIV/0!	16:00:00	16:53:20
DURATION	AM	00:44:40	00:59:47	#DIV/0!	PM	00:53:20

Route B1	AM Departure	AM Arrival DPL	AM Arrival DC	AM Arrival JAGS/Alleyn's	PM Departure	Final Drop Off
19th April	06:53	07:53	07:56	08:06	16:00	17:13
20th April	06:53	08:01	08:03	08:14	16:00	17:19
21st April	06:53	07:54	07:55	08:04	16:00	17:19
22nd April	06:53	07:52	07:53	08:02	16:00	17:34
25th April	06:53	07:53	07:54	08:01	16:00	17:15
26th April	06:53	08:05	08:06	08:20	16:00	17:20
27th April	06:53	08:01	08:02	08:15	16:00	17:18
28th April	06:53	08:04	08:05	08:22	16:00	17:28
29th April	06:53	07:56	07:57	08:04	16:00	17:23

RANGE	00:00	00:13	00:13	00:21	00:00	00:21
AVERAGE	06:53	07:57	07:59	08:09	16:00	17:21
DURATION	AM	01:04:40	01:06:00	01:16:47	PM	01:21:00

Appendix C

School Specific Coach Service Breakdown

South West London

Within the area around Fulham, Battersea and Clapham, nine routes service all foundation schools; services C2, S3, W1, W2, W3, W4, W5, W7, and W9. As the table below shows, there is sufficient demand from each of the schools to support at least one specific service for each school (where DPL would be accommodated on Dulwich College services).

Service	Coach Capacity	Pupils				
		Dulwich College	JAGS	Alleyn's	Dulwich Prep London	Total
C1	30	22	4	4	2	32
S3	49	22	13	10	0	45
W1	49	26	11	7	0	44
W2	49	23	13	13	0	49
W3	79	29	20	29	0	78
W4	53	39	6	8	0	53
W5	53	27	17	10	0	54
W7	49	18	15	8	0	41
W9	53	14	9	33	0	56
Total	464	220	108	122	2	452

These nine services could potentially be reformed to provide four Dulwich College services, two JAGS services, two Alleyn's services, with one remaining all schools service. This would therefore reduce the number of services travelling between school sites by eight.

South East London

Within the area around Bromley two services serve JAGS and Alleyn's B1, G1 (note G1 serves two Dulwich College pupils during the AM peak) and two serve all schools B1, B3. As the table below shows, there is not sufficient demand to support single school specific coaches.

Service	Coach Capacity	Coach Users				
		Dulwich College	JAGS	Alleyn's	Dulwich Prep London	Total
B1	49	16	18	4	6	44
B3	17	1	16	2	1	20
Total	66	17	34	6	7	64

Within the area around Greenwich and Blackheath, the coach services at present are all school specific services.

Central London (South)

All of the routes servicing Lambeth and Southwark (C2, C6, C8, CX) serve all Foundation Schools. While the table below shows there is the potential demand to support school specific coaches within this area. However, the distribution of the demand for each of the schools suggests school specific services from this area likely require such tailored routes such that a route servicing all schools is more efficient in-terms of distance and time.

Service	Coach Capacity	Coach Users				
		Dulwich College	JAGS	Alleyn's	Dulwich Prep London	Total
C2	53	17	23	16	3	59
C6	16	3	4	4	0	11
C8	25	10	9	7	0	26
CX	49	22	23	14	1	60
Total	143	52	59	41	4	156

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