



**KENDRICK SCHOOL
LONDON ROAD, READING**

**TRANSPORT ASSESSMENT
June 2019**

Prepared for: Kendrick School

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1. INTRODUCTION

Introduction

- 1.1 TPS Transport Consultants (TPS) has been appointed by Kendrick School to prepare a Transport Assessment to accompany a planning application for a proposed school extension at Kendrick School, Reading.

Development Details

- 1.2 Kendrick School is located to the southeast of Reading town centre. The site is bound by South Street to the north, Sidmouth Street to the east, London Road to the south and East Street to the west. Residential properties, services and offices surround the site in all directions. The proposed site layout is provided at **Appendix A**, whilst the site location is provided in **Figure 1.1**.

Figure 1.1: Site Location



(Source: Google)

- 1.3 The main school access is on East Street, along the western boundary of the school site. There is a further, staff only entrance, taken from A4 London Road on the southern boundary of the site. The access locations are indicated on **Figure 1.1**.
- 1.4 The proposal seek to increase the capacity of the school, providing nine additional classrooms and ancillary uses. The proposals will see the school move from three-form entry (96 pupils) to four-form entry (128 pupils). The first four-form entry intake is anticipated to be in September 2020, expanding in stages each year thereafter by 32 students until 2024. This will result in numbers on roll in Years 7 to 11 increasing from 480 to 640 by 2024 (i.e. an overall



uplift of 160 pupils. As a consequence of the development proposals staff numbers will increase by 10 FTE, from 67.29 to 77.29.

- 1.5 As a consequence of the development proposals there will be a rationalisation of car parking spaces. Currently 76 parking spaces are provided across the school, this will reduce by 15 spaces, as can be seen on the layout provided at **Appendix A**.

Scoping with Reading Borough Council

- 1.6 In order to inform the preparation of this Transport Assessment, a scoping note was prepared and submitted to Reading Borough Council (RBC). The Scoping Note, provided at **Appendix B**, sought to agree the trip generation and distribution methodology and the requirements for operational assessment.
- 1.7 Correspondence with the RBC Development Control Manager, also provided at **Appendix B**, confirmed the methodology was appropriate and required consideration be given to the impact of the loss of onsite parking.
- 1.8 This Transport Assessment has been prepared with reference to the agreed methodology and correspondence with RBC.

Report Structure

- 1.9 Following this introductory section:
- **Section 2** – sets out the national and local policy context relating to the development proposals;
 - **Section 3** – details the accessibility of the site via non-car modes of travel;
 - **Section 4** - provides an assessment of the local highway network surrounding the site and an analysis of accidents for the most recent 5-year period;
 - **Section 5** – sets out the trip generation for the development proposals;
 - **Section 6** – considers the operation of the highway network as a consequence of the development proposals;
 - **Section 7** - considers the access, parking and servicing arrangements of the proposals; and
 - **Section 8** - provides a summary and conclusion.



2. POLICY CONTEXT

Introduction

- 2.1 This section of the Transport Assessment outlines the relevant national and local policy in relation to the development proposals.

National Policy

National Planning Policy Framework (NPPF- DCLG, February 2019)

- 2.2 The revised National Planning Policy Framework was published in February 2019 and sets out the government's planning policies for England and how these are expected to be applied. This revised Framework replaces the previous National Planning Policy Framework, published in July 2018.
- 2.3 The NPPF continues to encourage development through the planning system, with a presumption in favour of sustainable development.
- 2.4 The NPPF states that "Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe" (Paragraph 109). Whilst Paragraph 110 sets out what development proposals should seek to do:
- Give priority first to pedestrian and cycle movements, both within the scheme and connecting with neighbouring areas; and second – so far as possible – to facilitate access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
 - Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
 - Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;
 - Allow for the efficient delivery of goods, and access by service and emergency vehicles; and



- Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

2.5 This Transport Assessment will demonstrate that the development proposals take full advantage of existing facilities for sustainable travel, will not result in a significant traffic impact on the local road network and, therefore, satisfy the requirements of NPPF.

Local Policy

Reading Borough Local Development Framework – Core Strategy

2.6 The document sets out Reading Borough Council's adopted planning strategy for the Borough of Reading. The Core Strategy sets out how planning and development will achieve the 2020 vision for Reading. The Core Strategy was adopted in 2008 and altered in 2015.

2.7 The following policies are considered pertinent to this application:

2.8 Policy CS4 – Accessibility and Intensity of Development:

- The scale and density of development within the Borough will be related to its level of accessibility by walking, cycling and public transport to a range of services and facilities. Sites will be assessed in terms of their level of accessibility to a defined district or local centre with a good range of facilities by pedestrian routes, and to a bus stop served by a strategic bus service. Unless it can be demonstrated that the accessibility of a site is to be significantly upgraded, for example, by providing high quality pedestrian routes or providing access to good public transport services, any new development must be at a scale, density and intensity appropriate to that level of accessibility as set out in other policies in this document, other Development Plan Documents or Supplementary Planning Documents.

2.9 Policy CS22 – Transport Assessments:

- Planning permission will not be granted unless development proposals make appropriate provision for works and contributions to ensure an adequate level of accessibility and safety by all modes of transport from all parts of a development, particularly by public transport, walking and cycling, in accordance with an agreed transport assessment submitted as part of the application.

2.10 Policy CS23 – Sustainable Travel and Travel Plans:



- Planning permission will not be granted for major development proposals unless there is a commitment to implement measures to promote and improve sustainable transport facilities, such as through provision to encourage walking, cycling and the use of public transport; and through agreed travel plans, safe routes to schools, safe routes to parks and similar measures.

2.11 Policy CS24 – Car / Cycle Parking:

- Maximum car parking standards and cycle parking requirements will be applied in relation to the accessibility of locations within the Borough to sustainable transport facilities, particularly public transport.

2.12 The development proposals will comply with the policies identified in the Core Strategy, as this Transport Assessment will demonstrate, the school is well located to take advantage of existing infrastructure to undertake trips by sustainable modes. Similarly, the accompanying Travel Plan identifies measures that will be implemented to encourage and increase sustainable travel amongst pupil and staff.

Reading Borough Local Plan

2.13 The emerging Reading Borough Local Plan contains the policies for how Reading will develop up to 2036. It identifies the amount of development that will take place, the areas and sites where development is expected to be accommodated, and where it will be restricted. It also sets out policies for how planning applications will be decided in the Reading Borough.

2.14 The Local Plan was submitted to the Secretary of State on Thursday 29th March 2018, beginning of a process of public examination that took place during 2018. The following policies have been identified as of relevance to the development proposals.

2.15 Policy CC6 – Accessibility and Intensity of Development:

- The scale and density of development will be related to its level of accessibility by walking, cycling and public transport to a range of services and facilities, with the densest and largest scale development taking place in the most accessible locations. Unless it can be demonstrated that the accessibility of a site is to be significantly upgraded, for example, by providing high quality pedestrian routes or providing access to good public transport services, any new development must be at a scale, density and intensity appropriate to that level of accessibility.

2.16 Policy TR1 – Achieving the Transport Strategy:



- Proposed development should contribute appropriately to meeting the objectives of the most up-to-date Local Transport Plan or any successor document, including sub-strategies, specific projects identified and the local action plans;
- Planning permission will not be granted for major development proposals unless there is a commitment to implement measures to promote and improve sustainable transport facilities, such as through provision to encourage walking, cycling and the use of public transport; and through agreed travel plans, safe routes to local facilities and services, including schools and parks, and similar measures; and
- All development proposals should make appropriate provision for works and contributions to ensure an adequate level of accessibility and safety by all modes of transport from all parts of a development, particularly by public transport, walking and cycling, in accordance with any agreed transport assessment submitted as part of the application.

2.17 Policy TR3 – Access, Traffic and Highway:

- In determining proposals involving a new or altered access onto the transport network, improvement works to the transport network, the creation of new transport infrastructure or the generation of additional trips on the transport network, consideration will be given to the effect on safety, congestion and the environment. Development will only be permitted where:
 - i) Accesses and works to the highway comply with the adopted standards of the Transport Authority;
 - ii) The development would not have a material detrimental impact on the functioning of the transport network; and
 - iii) The proposals would not be detrimental to the safety of users of the transport network, including pedestrians and cyclists.

2.18 Policy TR4 – Cycle Routes and Facilities:

- Developments will be expected to make full use of opportunities to improve access for cyclists to, from and within the development and to integrate cycling through the provision of new facilities. Development of new facilities for cycling, such as cycle hire points and cycle parking, will be acceptable.

2.19 TR5 – Car and Cycle Parking and Electric Vehicle Charging:



- Development should provide car parking and cycle parking that is appropriate to the accessibility of locations within the Borough to sustainable transport facilities, particularly public transport.

2.20 This Transport Assessment will demonstrate how the proposals accord with the emerging Local Plan policies. Opportunities for sustainable travel have been identified and will be encouraged through the implementation of the accompanying Travel Plan. This Transport Assessment will also demonstrate that the development proposals are not anticipated to result in a detrimental impact upon the operation of the highway network.

3. SITE ACCESSIBILITY

Introduction

- 3.1 This section of the Transport Assessment considers the accessibility of the site, particularly by non-car modes, focusing on how staff and pupils will be able to access the school by means other than private car. The central location means there is ample opportunity (and existing infrastructure for walking, cycling and use of public transport, locally).

Pedestrian Accessibility

- 3.2 Guidance provided by the Institute for Highways and Transportation (IHT) with regards to preferred maximum walking distance by journey type is summarised in **Table 3.1**. Two kilometres is typically considered to be the maximum distance that staff are willing to walk to work, or pupils will walk to access education facilities. **Figure 3.1** shows these recommended walking catchments.

Figure 3.1: 2km Walking Catchment



(Source: OSM, QGS)

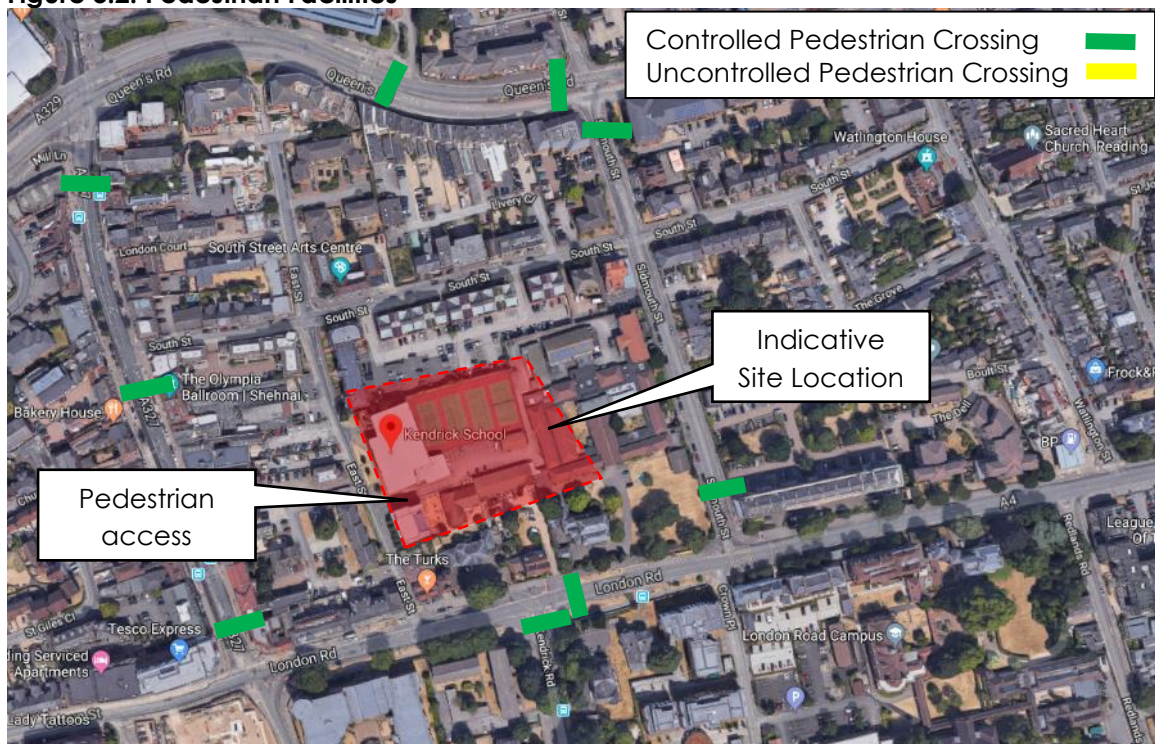
Table 3.1: IHT Walking Guidelines

Criteria	Commuting/ School
Desirable	500m
Acceptable	1000m
Preferred Maximum	2000m

(Source: IHT)

- 3.3 Given that the site is an existing school and close to Reading city centre pedestrians are well catered for. Roads within the immediate vicinity of the site include London Road, East Street, South Street and Sidmouth Street.
- 3.4 London Road is subject to a 30mph speed limit in the vicinity of the site, has footways on both sides of the road and has the benefit of street lighting. In addition, roads in the immediate vicinity of the site have signalised pedestrian crossings with dropped kerbs and tactile paving, these include; Kendrick Road, London Road, Sidmouth Street and the A327. These pedestrian crossings would facilitate pupils walking to and from the proposed school from the immediate area.
- 3.5 **Figure 3.2** shows the location of pedestrian crossing facilities in close proximity to the site; this indicates that the school has good connectivity with the surrounding area for those travelling on foot.

Figure 3.2: Pedestrian Facilities

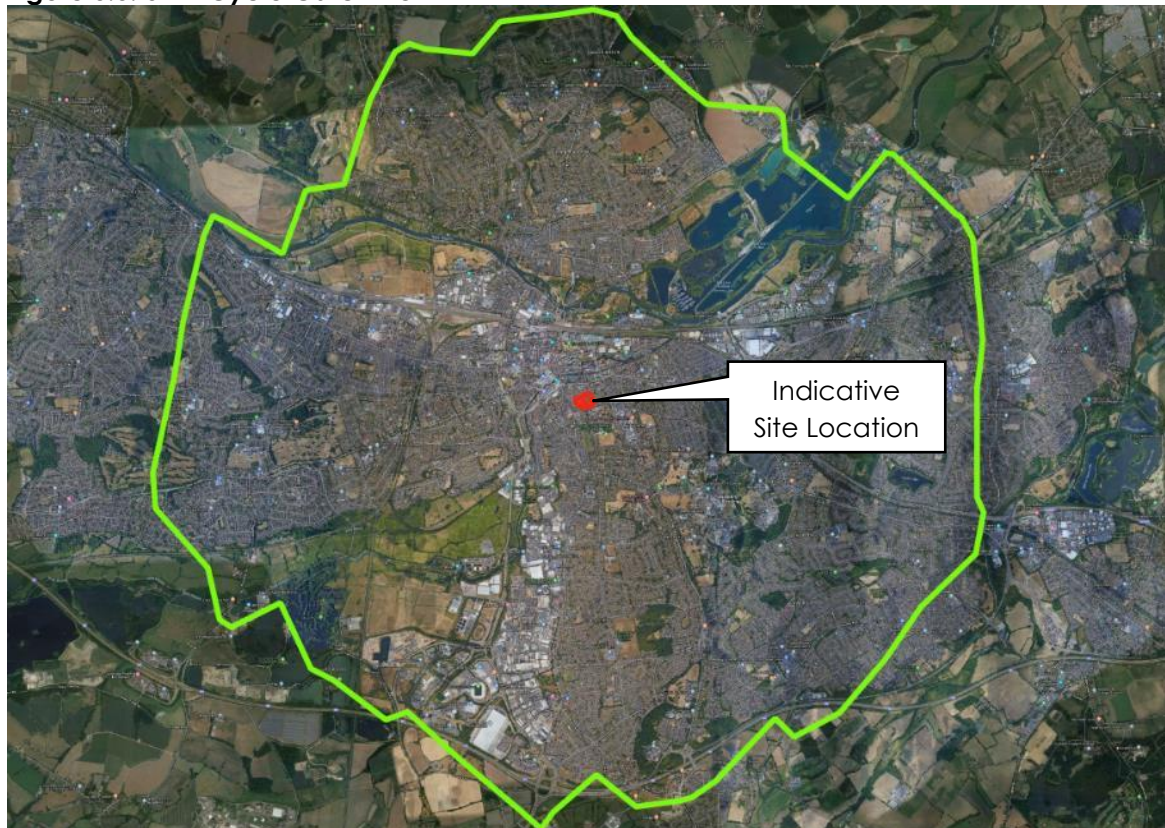


(Source: Google Maps)

Cycling Accessibility

- 3.6 Cycling can substitute for short car journeys, particularly those of less than 5km and, therefore, may be a viable mode of transport for some. **Figure 3.3** shows a 5km cycle catchment from the site.

Figure 3.3: 5km Cycle Catchment



(Source: OSM, QGS)

- 3.7 Given the central location within Reading, there are a number of advisory routes for cyclists in the vicinity of the school, including London Road, Crown Street, Redlands Road and King's Road, as shown in an extract from the Reading Cycle Map, below at **Figure 3.4**.

Figure 3.4: Reading Cycle Map



(Source: Reading Borough Council)

Public Transport Accessibility

Bus

- 3.8 IHT's 'Planning for Public Transport in Developments' report sets out that the distance that an individual might walk to access a bus service is dependent upon the frequency and level of service available. It is suggested that 500m is the maximum distance staff / pupils might walk to access a bus service bus stop on a high frequency corridor, whereas in a town or city centre the maximum walking distance would be just 250m. **Table 3.2** shows the IHT guidelines for the recommended maximum walking distances to bus stops.

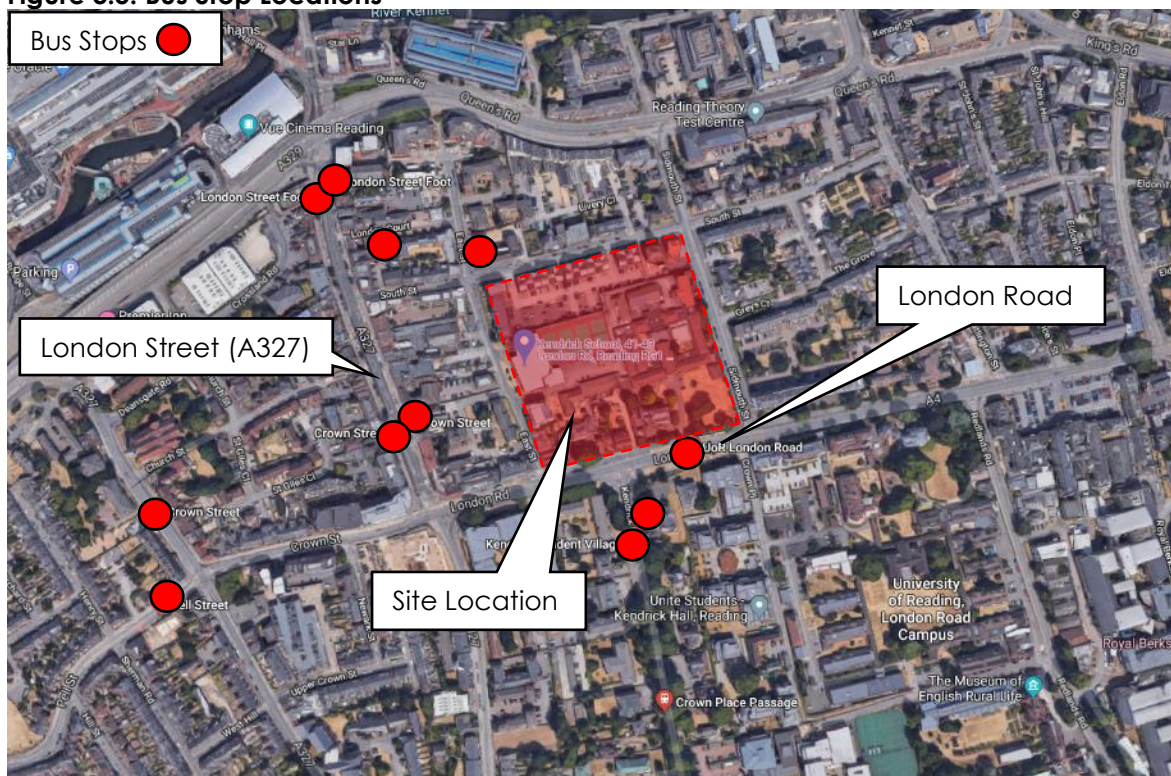
Table 3.2: Recommended maximum walking distances to bus stops

Situation	Maximum Walking Distance
Core bus corridors with high-frequency services	500 metres
Single high-frequency routes	400 metres
Less frequent routes	300 metres
Town/city centres	250 metres

(Source: IHT)

- 3.9 There are a number of bus stops in close proximity to the site. The closest bus stop is located on London Road, directly outside the south boundary of the development; there are further bus stops on the London Street (A327) approximately 250m from the school and Kendrick Road, approximately 210m from the school. **Figure 3.5** illustrates the location of the bus stops.

Figure 3.5: Bus Stop Locations



(Source: Google Maps)

- 3.10 The stops on London Road benefit from a flag pole, timetable information and they are also lit. Stops on London Street have a shelter, timetable information, a flag pole and are street lit, as well as having live bus time information. The services, along with their frequency and route are summarised in **Table 3.3**.

Table 3.3: Local Bus Service Summary

Bus Service	Route	Frequency		
		Weekday	Saturday	Sunday
London Road				
3	Reading – Aborfield - Workingham	20-30 min	20-40 min	-
3B	Reading - Bracknell	60 min	60 min	60 min
9	Central Reading – Shinfield Park	60 min	60 min	-
10	Reading – Spencers Wood	30 min	20 – 40 min	60 min
10a	Central Reading – Thames Valley Science Park	30 min	30 min	-
19a	Central Reading – Loddon Bridge	60 min	60 min	-
19b	Central Reading – Lower Earley (Asda)	60 min	60 min	-
19c	Loddon – Central Reading	60 min	60 min	-
London Street (A327)				
5	Central Reading – Northumberland Avenue	8-9 min	10 min	20-30 min
6	Central Reading – Whitley Wood	10 min	10 min	20 min
6a	Central Reading – Tesco Distribution Centre	6/day	6/day	6/day
7	Reading – Three Mile Cross – Riseley - Fleet	60 min	60 min	4/day
11	Central Reading – Coley Park	20 min	20 min	30 min
21	Central Reading – Lower Earley	15 min	15 min	30 min
21a	Central Reading – University	15 min	-	-
Kendrick Road				
981	Caversham Heights – Lower Earley - Bulmershe	Afternoon school service		

(Source: Public Transport Operators)

- 3.11 As can be seen from the above, the school is very well served by bus services to a range of surrounding residential areas within the catchment of the school, and is likely a contributing factor to the proportion of staff (2%) and pupils (30%) using the bus services currently.

Rail



- 3.12 The closest train station is Reading; located some 1km to the northwest of the school, and served by CrossCountry, GWR and South Western Railway. The journey to the train station takes around 13 minutes on foot, around 6 minutes by bike or 12 minutes by bus. The travel survey showed that 7% of staff and 36% of pupils currently travel by train.
- 3.13 The station is likely to be a choice for staff commuting, with regular services arriving and departing to and from a range of local stations for example: London Paddington, Slough, Maidenhead, Twyford, Tilehurst, Pangbourne and Reading West.

4. LOCAL HIGHWAY NETWORK

Introduction

- 4.1 This section of the Transport Assessment provides a summary of local highway network surrounding the site. In addition, accident trends on the local highway network over the latest 5-year period will be assessed to demonstrate that there are no road safety issues in the vicinity of the site.

Existing Highway Network

- 4.2 A description of the local highway network in the immediate vicinity of the site is provided hereafter; for ease, it is also shown in **Figure 4.1** below.

Figure 4.1: Local Highway Network



(Source: Google)

East Street

- 4.3 The main school access is taken from East Street, which runs along the western boundary of the site. East Street is approximately 180m in length and runs broadly north – south between London Road to the south and South Road to the north. The carriageway is 2.6m wide and



subject to a one-way (northbound) restriction. There are double yellow lines on both sides on East Street, between London Road and South Street.

- 4.4 As East Street continues northwards, north of South Street, the carriageway widens, to approximately 6.5m, and two-way traffic is permitted. Double yellow parking restrictions are continued, with two marked areas of parking permitted on the eastern site of East Street. The southernmost area (measuring 22m) permits parking with a pay and display 08:00 – 20:00 for 3 hours, with no return two hours, the northern area of parking (21m) is permit holder parking only.

South Street

- 4.5 South Street runs broadly east – west to the north of the school. It is the main route through a crossroad junction with East Street. South Street is approximately 5.6m and 470m long, running between Watlington Street to the east and the A327 to the west, with South Street is the minor approach to a priority T-junction.
- 4.6 Between the A327 and Sidmouth Street, South Street is subject to a 30mph speed limit, between Sidmouth Street and Watlington Street a 20mph speed limit is enforced. There are speed bumps to calm traffic speeds between the junctions with the A327 and Sidmouth Street.
- 4.7 On-street parking is provided along South Street in marked out areas, which are on both sides of the carriageway. Between the A327 and East Street, on-street permit parking is permitted only on the northern side of the carriageway for 50m. Pay and display restrictions are in place along South Street between the East Street crossroads junction and crossroads junction of Sidmouth Street, pay and display is required between 08:00 – 20:00 every day for 3 hours with no return in 2 hours. To the east of the Sidmouth Street junction, on the southern side of the carriageway, parking on South Street is permitted for both permit holders and for pay and display for a maximum stay of 3 hours, although outside of the pay and display permitted hours (10:00 – 16:00), permit holders are only permitted.

Sidmouth Street

- 4.8 Sidmouth Street runs along the eastern boundary of Kendrick School. Sidmouth Street is some 350m in length and runs broadly north – south, it is 9.1m wide and subject to a 30mph speed limit. At the southern terminus of Sidmouth Street, it connects with A4 London Road via a signalised junction. To the north of the site on Sidmouth Street, it meets A329 Queen's Road at a signalised junction.



- 4.9 On-street parking is permitted on both sides of the carriageway in marked out areas (130m area, pay and display is permitted 08:00 – 20:00 for 3 hours with no return in 2 hours along the western side of the carriageway, whilst on the eastern side of Sidmouth Street it is permit holder parking only. Along the eastern boundary of Kendrick School, a no loading restriction is in place between 08:15 – 09:15 and between 16:15 – 17:15. Double yellow lines enforce a no stopping at any time along both sides of the carriageway outside of the marked-out parking bays.

A4 London Road

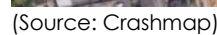
- 4.10 A staff only entrance to Kendrick School is provided from A4 London Road, which runs along the southern boundary of the site. A4 London Road runs broadly east – west.
- 4.11 A4 London Road is subject to a one-way (westbound) restriction. Although A4 London Road is one-way in the vicinity of the site, there is a short bus lane which permits eastbound travel between the A327 and Kendrick Road. An area of on-street parking is available to the west of the staff entrance on A4 London Road, this area measures approximately 58m and is reserved for permit holder parking only.
- 4.12 Along the carriageway, a no loading restriction is in place and there are double yellow lines on both sides of the carriageway in the vicinity of the School.
- 4.13 A327 London Street
- 4.14 The A327 London Street runs north-south to the west of the site, with a one-way traffic restriction southbound. The one-way restriction runs from the A327 London Road / A329 Queen's Road junction in the north to the A327 Mount Pleasant / A327 Southampton Road junction, 840m to the south.
- 4.15 A contra-flow bus lane is provided between the A327 London Street / A4 London Road / A4 Crown Street / A327 Silver Street junction. There are areas of parking provided adjacent to the highway on the A327 London Street, which are subject to a pay and display restriction, between 08:00 – 20:00, which permits a maximum stay of 3 hours, with no return in 2 hours.

A329 Queen's Road

- 4.16 The A329 Queen's Road forms part of the Inner Distribution Road, a ring-road around Reading town centre. More broadly, the A329 runs east – west between Wentworth in Surrey, to Thame in Oxfordshire.

- ## Accident Analysis

- ### Figure 4.2: Accident Study Area



- Table 4.1: Accidents by year and severity**

Severity	2014	2015	2016	2017	2018	Total
A4 London Road						
Slight	3	2	1	3	0	9
Serious	0	0	0	0	0	0
Fatal	0	0	0	0	0	0
A4 London Road / Eldon Road – Priority T-junction						
Slight	1	1	0	1	0	3
Serious	0	0	0	0	0	0
Fatal	0	0	0	0	0	0
A4 London Road / Crown Street / A327 – Signalised Crossroads						
Slight	0	0	0	0	1	1



Serious	0	0	0	1	0	1
Fatal	0	0	0	0	0	0
Kendrick Road / A4 London Road – Priority T-junction						
Slight	1	0	0	0	0	1
Serious	0	0	0	0	0	0
Fatal	0	0	0	0	0	0
A327 / South Street – Priority T-junction						
Slight	0	0	1	0	0	1
Serious	1	0	0	0	0	1
Fatal	0	0	0	0	0	0
A329 Queen's Road / Mill Lane / A327 – Signalised Crossroads						
Slight	1	2	1	2	1	7
Serious	0	0	0	0	0	0
Fatal	0	0	0	0	0	0
South Street / Sidmouth Street – Crossroads						
Slight	0	5	0	1	0	6
Serious	0	0	0	0	0	0
Fatal	0	0	0	0	0	0
Sidmouth Street						
Slight	0	0	1	2	0	3
Serious	0	0	0	0	0	0
Fatal	0	0	0	0	0	0
A329 Queen's Road / Sidmouth Street						
Slight	2	1	0	0	1	4
Serious	0	0	0	1	0	1
Fatal	0	0	0	0	0	0
Sidmouth Street / A4 London Road – Signalised Priority T-junction						
Slight	0	0	0	1	0	1
Serious	0	0	0	0	0	0
Fatal	0	0	0	0	0	0
Total	9	11	4	12	3	39

(Source: Crashmap)

- 4.20 As can be seen from **Table 4.1**, a total of 39 accidents have been recorded within the study area in the most recent five-year period, this equates to an average of 7.8 accidents per year. Thirty-six of the accidents recorded within the study area were slight, whilst the remaining three were serious, no fatal accidents were recorded in the study area.
- 4.21 Given that the accident study area incorporates a number of key routes to the south of the town centre, the number of recorded accidents does not suggest an existing threat to road safety close to the site. Similarly, there have been no accidents recorded on East Street, or specifically, in the vicinity of the main school access. It is therefore considered that, the highway network in the vicinity of the site has any existing road safety issue, to which the development proposals could exacerbate.



5. TRIP GENERATION AND DISTRIBUTION

Introduction

- 5.1 This section of the Transport Assessment considers the likely trip generation associated with proposed extension. As agreed with RBC, the uplift in trip generation associated with the increase in pupil and staff numbers, has been determined through a travel survey of existing pupil and staff travel choices (480 pupils and 67.29 FTE staff).

Trip Generation

Existing Mode Split

- 5.2 In order to understand travel habits associated with current pupil and staff, a travel survey was undertaken in May 2019. Pupils and staff were asked to identify how they currently travel to and from the school. **Table 5.1** and **5.2** summarises the current mode split, whilst the results of the survey are provided at **Appendix C**.

Table 5.1: Kendrick School Pupil Mode Split

Mode	Mode Split
Bus	30%
Train	36%
Walk	10%
Car Passenger (just me)	14%
Bicycle	3%
Scooter	0%
Car Passenger (with other Pupils)	4%
Other	3%
Total	100%

(Source: Kendrick School)

Table 5.2: Kendrick School Staff Mode Split

Mode	Mode Split
Bus	2%
Train	7%
Walk	5%
Car Driver Alone	50%
Bicycle	12%
Car Driver with Drop Off	20%
Car Share with Colleague	0%
Scooter / Motorcycle	0%
Other	4%
Total	100%

(Source: Kendrick School)



- 5.3 As can be seen in **Table 5.1**, at present a total of 18% of the 480 pupils travel by car, which equates to 86 pupils arriving by car, this includes 20 pupils who indicated that they travel to school as part of a car share with other pupil passengers. The majority of existing pupils travel to school by sustainable modes of travel, indeed 66% (317) of pupil's travel by bus or train. As can be seen in **Table 5.2**, 50% of staff identified that they travel to school by car alone, this equates to 33 FTE staff travelling by car.

Trip Generation

- 5.4 As a consequence of the development proposals the school will accommodate an additional 160 pupils and 10 FTE staff. **Table 5.3** applies the current pupil and staff mode splits (**Table 5.1** and **5.2**) to the proposed uplift to understand the likely increase in trips types to the school.

Table 5.3: Pupil and Staff Uplift by Mode

Mode	Pupils		Staff	
	Mode Split	Pupils	Mode Split	Staff
Bus	30%	48	2%	0
Train	36%	58	7%	1
Walk	10%	16	5%	1
Car Driver Alone	14%	22	50%	5
Bicycle	3%	5	12%	1
Car Driver with Drop Off	0%	0	20%	2
Car Share	4%	6	0%	0
Scooter / Motorcycle	3%	5	0%	0
Other	0%	0	4%	0
Total	100%	160	100%	10(FTE)

(Source: Consultant Calculation)

- 5.5 As can be seen in **Table 5.3**, it is anticipated that as a consequence of the uplift in pupils' numbers, an additional 28 pupils would arrive by car, including 6 who would arrive as part of a car share with other pupil passengers. In addition, the uplift in staff would result in an additional 7 FTE staff arriving by car.
- 5.6 In order to derive a trip generation, and likely arrival and departure profile, based on the anticipated mode split of the additional pupils and staff, the following assumptions have been made:
- All pupils and staff arrive in the AM peak hour and depart in the afternoon peak hour i.e. the hour following the end of the school day;
 - All car share trips depart from the school with a single occupant; and



- All 160 pupils and 10 full time equivalent staff will be in attendance (not away with illness, training or school trips).

5.7 The number of pupil and staff vehicle trips are summarised in **Table 5.4** below.

Table 5.4: Pupil and Staff Vehicle Trip Generation

	AM			Afternoon		
	Arrival	Departure	Two-Way	Arrival	Departure	Two-Way
Pupil	28	28	56	0	28	28
Staff	6	0	6	0	6	6
Total	34	28	62	0	34	34

(Source: Consultant Calculation)

As can be seen in **Table 5.4**, it is anticipated that as a consequence of the development proposals and uplift in pupil and staff numbers there would be an additional 62 two-way trips in the AM peak hour and 34 two-way trips in the afternoon peak hour.

Trip Distribution

- 5.8 As part of the pupil and staff travel survey, undertaken in May 2019, home postcode data was gathered. This has been used to derive a likely distribution associated with the uplift in pupils and staff at the school.
- 5.9 The postcode data has been used to create two gravity models, one for pupils and one for staff, identifying the likely arrival and departure routes, taking into consideration the one-way restrictions discussed in **Section 4**. **Table 5.5** summaries the likely distribution of pupils, by route, whilst the gravity model is provided at **Appendix D**.

Table 5.5: Pupil Distribution

Arrival		Departure	
Route	%	Route	%
A4 London Road W - East Street N	38%	East Street N - South Street E - Sidmouth Street N - A329 Queen's Road E	58%
A3290 N - A4 London Road W - East Street N	28%	East Street N - South Street W - A327 S	28%
Eldon Road S - A4 London Road W - East Street N	17%	East Street N - South Street E - Sidmouth Street N - A329 Queen's Road W	12%
Kendrick Road N - A4 London Road W - East Street N	12%	East Street N - South Street W - A327 S - Crown Street W	2%
A329 Queen's Road W - Sidmouth Street S - A4 London Road W - East Street N	6%	-	-
Total	100%	Total	100%

(Source: Consultant Calculation)



- 5.10 **Table 5.6** the likely distribution of staff, by route, whilst the gravity model is provided at **Appendix D**. To provide a worst case assessment, it has been assumed that all staff will access and egress the school via the main school access on East Street.

Table 5.6: Staff Distribution

Arrival		Departure	
Route	%	Route	%
Kendrick Road N - A4 London Road W - East Street N	38%	East Street N - South Street E - Sidmouth Street N - A329 Queen's Road E	45%
A4 London Road W - East Street N	35%	East Street N - South Street W - A327 S	29%
A329 E - A327 S - South Street E - Sidmouth Street S - A4 London Road W - East Street N	13%	East Street N - South Street W - A327 S - Crown Street W	13%
A3290 N - A4 London Road W - East Street N	11%	East Street N - South Street E - Sidmouth Street N - A329 Queen's Road W	11%
Eldon Road S - A4 London Road W - East Street N	5%	East Street N - South Street E - Sidmouth Street S - A4 London Road W - Kendrick Road S	2%
Total	100%	Total	100%

(Source: Consultant Calculation)

- 5.11 The pupil and staff distribution are shown in **Figure 5.1 - 5.3** of the flow diagrams provided at **Appendix E**, whilst the anticipated uplift in flows are shown on **Figures 5.4 - 5.6**.

Materiality

- 5.12 In order to determine where further assessment of the impact of the development proposals is required, a materiality assessment has been undertaken (in terms of the anticipated uplift in movements as a consequence of the development).
- 5.13 As agreed through scoping discussions with RBC (**Appendix B**), junctions on the road network that would experience an uplift of 30 or more two-way trips as a consequence of the proposals will be subject to further assessment. **Table 5.7** summarises the materiality of the development proposals, based on the flow diagrams provided at **Appendix E**.

Table 5.7: Materiality Assessment

Junction	Development Trips	
	AM	PM
A4 London Road / East Street – priority T-junction	34	0
Kendrick School Access / East Street – priority T-junction	62	34
East Street / South Street – crossroads junction	29	34
South Street / A327 – priority T-junction	8	11
South Street / Sidmouth Street – crossroads junction	22	23



Sidmouth Street / A329 Queen's Road – priority T-junction	21	23
Sidmouth Street / A4 London Road – priority T-junction	28	0
Eldon Road / A4 London Road – priority T-junction	26	0
Kendrick Road / A4 London Road - priority T-junction	34	0

(Source: Consultant Calculation)

5.14 As can be seen from Table 5.8, it is considered that the development will have a material impact upon at:

- Kendrick School Access / East Street priority T-junction;
- A4 London Road / East Street priority T-junction;
- East Street / South Street crossroad; and
- A4 London Road / Kendrick Road priority T-junction.

5.15 The impact of the addition of trips associated with development proposals, upon junction operation, will be considered further in the following section of the Transport Assessment.

6. OPERATIONAL ASSESSMENT

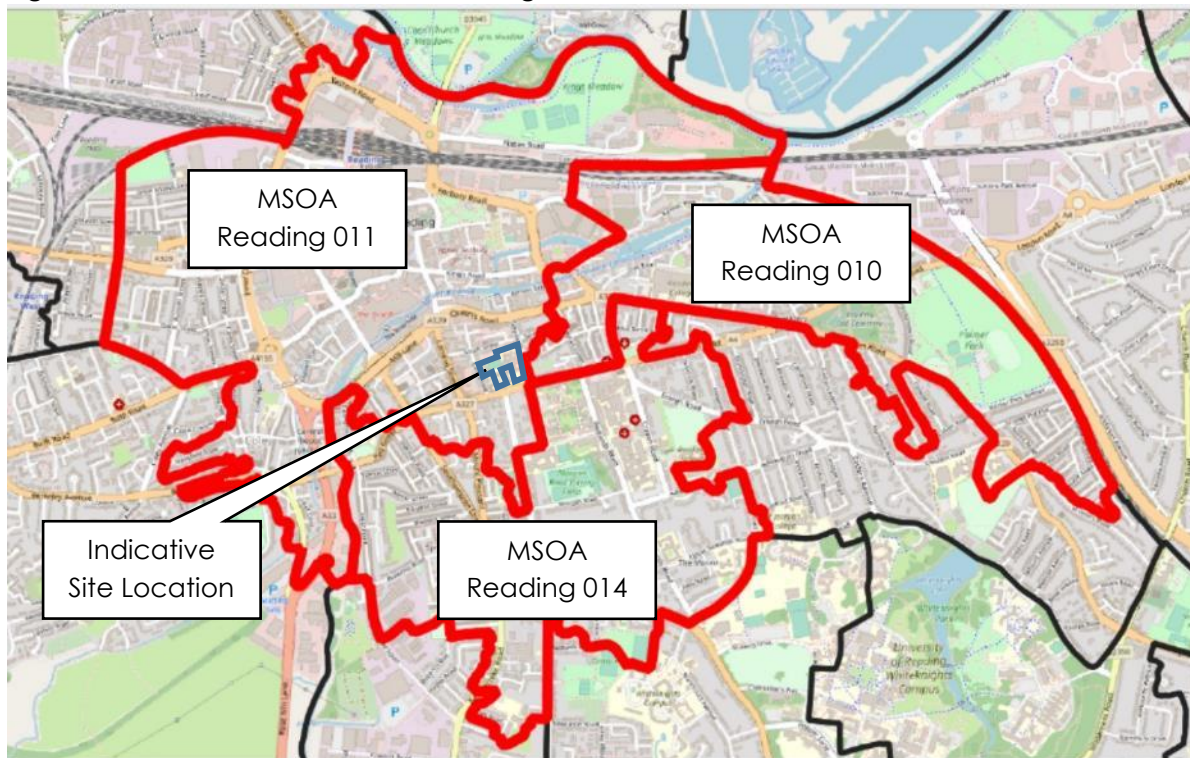
Introduction

- 6.1 At the time of preparation, owing to school holidays, it was not possible to gather the neutral base traffic data. Therefore, the result of the operational assessments will follow in an Addendum to this Transport Assessment.
- 6.2 Notwithstanding this, the following Section identifies the growth factors, committed development flows and operational assessment scenarios that will be considered.

Traffic Growth

- 6.3 Base traffic flows (2019) will be factored to a design year of 2024 (when the uplift up pupil numbers has reached 160), using National Traffic Model forecasts, factored with TEMPRO. As can be seen in **Figure 6.1**, the site is located within MSOA Reading 011 but is also located on the boundary of MSOA Reading 010 to the east and MSOA Reading 014 to the south of the site, therefore, the growth factors for the three areas have been averaged. The AM and PM levels of TEMPRO growth for AM and PM scenarios are shown in **Table 6.1**.

Figure 6.1: MSOA Boundaries Surrounding the Site



(Source: QGIS, NOMIS, Google)

Table 6.1: Traffic Growth

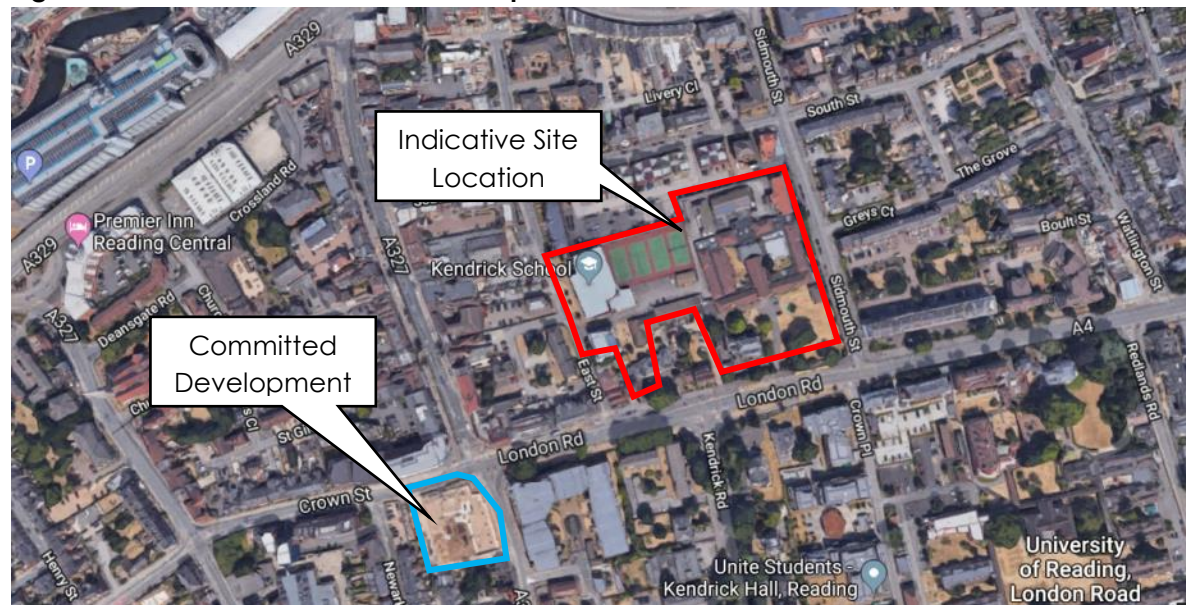
MSOA	AM (2019 – 2024)	PM (2019 – 2024)
MSOA Reading 010	1.0896	1.0835
MSOA Reading 011	1.0908	1.0817
MSOA Reading 014	1.0928	1.0861
Average	1.0910	1.0837

(Source: TEMPRO)

Committed Development

- 6.4 Following scoping discussions with RBC, it was requested that consideration was given to an approved residential development located approximately 220m west of the site on the corner of Crown Street and A327 Silver Street.
- 6.5 The residential development (planning reference: 170794) comprises 79 flats and 54 car parking spaces, with vehicular access being undertaken from A327 Silver Street on the eastern site boundary. The Transport Statement provided for the committed development is provided at **Appendix F**. **Figure 6.2** identifies the location of the approved residential scheme.

Figure 6.2: Extent of Committed Development



(Source: Google and Reading Borough Council Planning Portal)

- 6.6 The trip rates and resultant trip generation for the residential development on A327 Silver Street, taken from the submitted Transport Statement, are summarised in **Table 6.2** below.



Table 6.2: Committed Development Trip Generation

	AM			PM		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Trip Rate	0.073	0.201	0.274	0.190	0.110	0.300
Trip Generation	6	16	22	15	9	24

(Source: Submitted Transport Statement, Reading Borough Council)

- 6.7 As can be seen in **Table 6.2**, the development is anticipated to generate some 22 two-way trips in the AM peak hour and 24 two-way trips in the PM peak hour. Vehicular access to the scheme is taken from A327 Silver Street. Traffic flows on A327 Silver Street are restricted to one-way southbound only. In addition, given the one-way restrictions on both London Road, London Street and Crown Street, all arrivals to the site will be via either London Road or London Street. All departures will be via A327 Silver Street to the south.
- 6.8 To distribute vehicle trips arriving to the residential site, through the network considered in this Transport Assessment, existing turning proportions will be applied, once neutral base data has been obtained.

Assessment Scenarios

- 6.9 As identified in **Section 5**, the following junctions will be subject to operational assessments:
- Kendrick School Access / East Street priority T-junction;
 - A4 London Road / East Street priority T-junction;
 - East Street / South Street crossroad; and
 - A4 London Road / Kendrick Road priority T-junction.
- 6.10 Junction modelling software will be used to assess the operation of these junctions. The junction modelling software, JUNCTIONS 8, predicts the RFC on each approach and resultant traffic queue length. A RFC value of less than 0.85 is generally accepted as indicating that a junction is operating within theoretical capacity. Where RFC values exceed 1.0, the results should be treated with caution as traffic queues and delays are affected exponentially.
- 6.11 The following scenarios will be modelled in the 2019 and 2024 peak hours:
- Base + Committed; and
 - Base + Committed + Development.



7. PARKING

Introduction

- 7.1 This section of the Transport Assessment considers the proposed parking at the site, and considers the impact of the loss of 15 parking spaces as a consequence of the development proposals.

Parking Proposals

- 7.2 As has been discussed, historically, the School benefits from a total of 76 parking spaces across the site. As can be seen from the existing layout, provided at **Appendix A**, a total of 39 parking spaces are accessed via the main site entrance on East Street, with a further area of 16 parking spaces provide on the south west of the school grounds, accessed from A4 London Road, and 20 spaces in the south east of the school grounds, also accessed from A4 London Road.
- 7.3 As a consequence of the development proposals 15 parking spaces will be lost across the school site, taking the total available on-site parking to 61 spaces. The spaces that are lost are from the central area of parking accessed from East Street. As can be seen from the proposed layout, provided at **Appendix A**, all but four spaces are lost within the central parking area, with eight spaces being provided on the school frontage on East Street.
- 7.4 The location of the spaces which will be lost as part of the proposals will be lost from the central parking areas within the school, although a total of 12 spaces will be subsequently provided on the western boundary of the school on East Street.

Parking Standards

- 7.5 Consideration has been given to Reading Borough Council's Revised Parking Standards and Design SPD (adopted in 2011) which sets out the parking standards for new developments in the Borough. The parking standards for the D1 Secondary Education are summarised in **Table 7.1** below.

Table 7.1: RBC Parking Standards

Cycle Parking (Minimum)	Vehicle Parking (Maximum)
10% of building users (FTE Staff and Students) up to 500, plus 7% for building users in the range 501 - 1000	1 space per 2 FTE Staff

(Source: RBC Revised Parking Standards and Design SPD)



- 7.6 If the site was a new development, based on current standards, a total of 39 car parking space would be permitted based upon the anticipated 77.29 FTE staff based at the site following the school expansion.
- 7.7 Anecdotal evidence provided by the school suggests that the current car parking across the site is underutilised, hence development proposals which seek to reduce on site parking provision by 16 spaces to a total of 66 spaces.



8. SUMMARY AND CONCLUSION

Summary

8.1 This Transport Assessment has been prepared to accompany a planning application for extension to Kendrick School, London Road, Reading. The following summarises the key findings:

- The proposals have been demonstrated to accord with both national and local transport policy, being located in an area that is well connected with the surrounding residential catchment, offering opportunities for walking, cycling and public transport trips to the site;
- An analysis of historic accident data suggests that there are no accident trends that might be exacerbated by the addition of development traffic;
- A pupil and staff travel survey has been used to determine the current modal split of pupil and staff at the school. The modal split data has been applied to the proposed uplift of 160 pupils and 10 FTE staff, to determine the number of vehicle trips associated with the development proposals. It is anticipated that the uplift in pupils and staff will result in an additional 62 two-way vehicle trips in the AM peak hour and 34 two-way vehicle trips in the afternoon peak hour;
- The development trips have been distributed on the highway network based on the existing home postcodes of pupil and staff, taking into consideration one-way restrictions on the streets surrounding the site;
- The expansion is anticipated to result in a material impact upon the following junctions:
 - Kendrick School Access / East Street priority T-junction;
 - A4 London Road / East Street priority T-junction;
 - East Street / South Street crossroad; and
 - A4 London Road / Kendrick Road priority T-junction.
- Operational assessment will be undertaken once neutral base flows have been obtained. An addendum to this Transport Assessment will be provided; and
- Consideration has been given to the loss of 16 parking spaces.



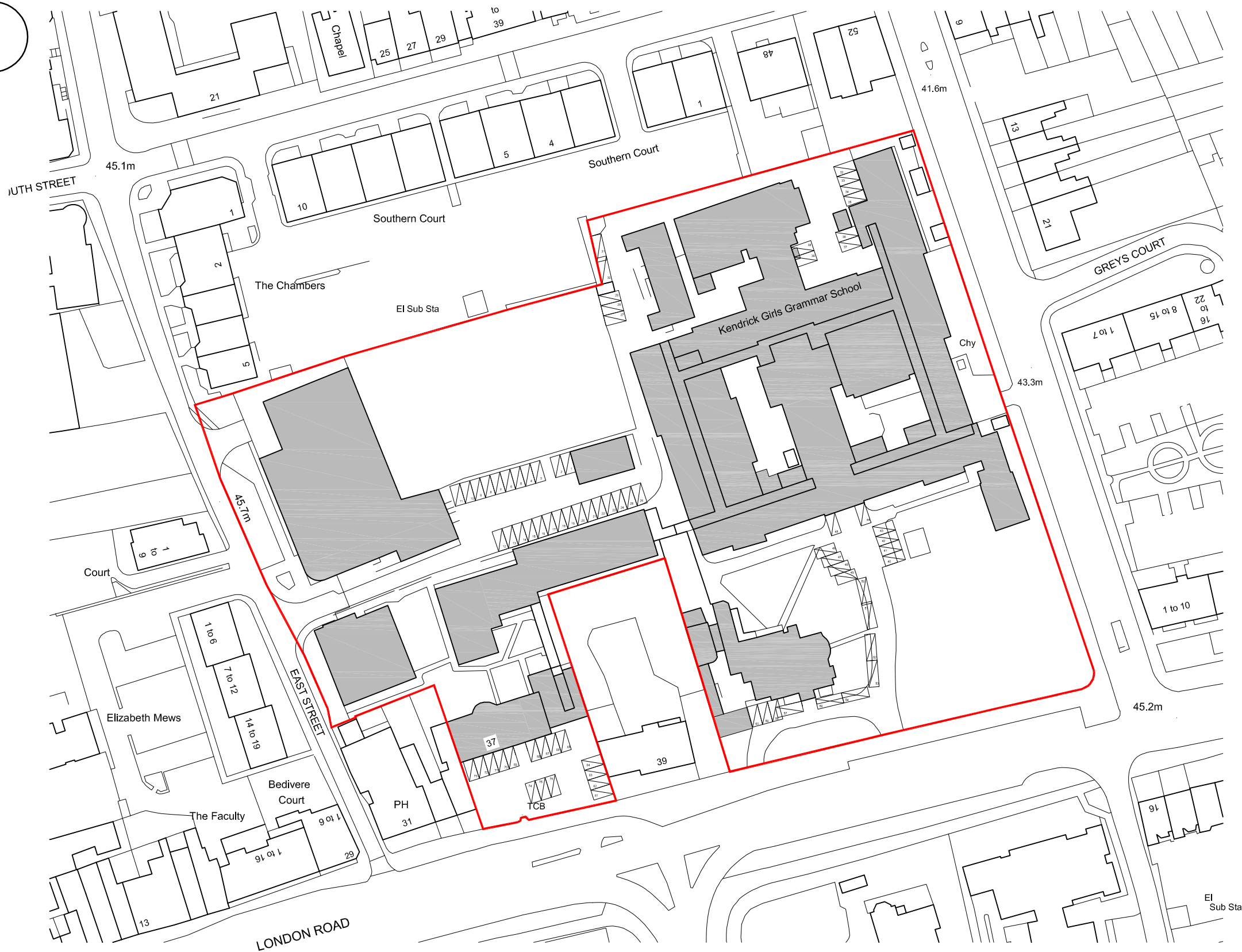
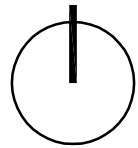
Conclusion

- 8.2 Given the above, it is considered that the proposed development will not result in a severe impact on the operation of the transport network. Consequently, in line with the National Planning Policy Framework, there are no highway grounds why the development proposals should not be granted planning consent.



Appendix A

Existing and Proposed Site Layout Plan



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EXISTING PARKING SPACES: 76

Existing Site Plan

Kendrick School

CLIENT: Kendrick School	PROJECT: Kendrick School
ADDRESS: 41 London Road Reading RG1 5BN	TITLE: Existing Site Plan
SCALE: 1:1000	PURPOSE OF ISSUE: Pre-Planning
JOB NO. 31459	DRAWING NO. SK 02
	DATE 09.02.2019
	REVISION 1



The contractor is responsible to ensure that no products are to be utilised that do not comply with relevant British and/or European Standards and/or Codes of Practice, CDM Regulations, Construction Regulations, or which are known or suspected at the time of product selection and/or construction to be deleterious to health and safety or to the durability of the work or not in accordance with good building practices.

The contractor is responsible for checking dimensions, tolerances, levels and references. This drawing is to be read in conjunction with all relevant consultants or specialists drawings. Any discrepancy to be notified to Baily Garner LLP and rectified before proceeding with the works on site or shop drawings.

Where an item is covered by drawings to different scales, the larger scale drawing is to be worked to.

This drawing and the copyrights and patents therein are the property of Baily Garner LLP and may not be used or reproduced without consent or attribution.

A3



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DATE	8/4/19
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Appendix B

RBC Scoping Discussions

George Hewitt

From: Cook, Darren <Darren.Cook@reading.gov.uk>
Sent: 05 June 2019 15:00
To: George Hewitt
Cc: Charlotte Green; Georgina Stares
Subject: RE: Kendrick School proposed extension highways scoping
Attachments: Transport Assessment Scoping Note.docx

Good Afternoon George,

Thank you for the attached scoping note in relation to the Kendrick School development.

I am happy with the scope as presented although there should also be a section on the impact to on-site parking given some of the pre-app proposals included the loss of existing on-site car parking.

There is not a significant amount of committed development within the vicinity of the site that would impact the development and therefore the only site that should be included is that located on the corner of Silver Street and Crown Street which is currently under construction. The planning reference for this proposal is 170794.

I hope that the above is of use to you but if you have any further questions please do not hesitate to contact me.

Kind regards,

Darren Cook
Transport Development Control Manager
Transport | Directorate for Economic Growth and Neighbourhood Services (DEGNS)

Reading Borough Council
Civic Offices
Bridge Street
Reading
RG1 2LU

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07814 169457

[Website](#) | [Facebook](#) | [Twitter](#) | [YouTube](#)



From: George Hewitt [mailto:george.hewitt@tpsconsultants.co.uk]
Sent: 30 May 2019 14:24
To: Cook, Darren
Cc: Charlotte Green; Georgina Stares
Subject: RE: Kendrick School proposed extension highways scoping

This is an EXTERNAL EMAIL. STOP. THINK before you CLICK links or OPEN attachments.

Good Afternoon Darren,

Following my previous emails regarding the scoping note for the proposed extension of Kendrick School, London Road, Reading, have you had any chance to review it? If so, do you have any comments regarding the scoping?

Do you have any comments? If you have any further questions, please do not hesitate to contact me.

Many thanks,

George Hewitt
Graduate Transport Planner

www.tpsconsultants.co.uk

travel planning | development planning

telephone: 01924 664638

TPS Transport Consultants Ltd
Stonebridge Court, 151-153 Wakefield Road, Horbury, Wakefield, WF4 5HQ

From: George Hewitt
Sent: 16 May 2019 14:17
To: 'darren.cook@reading.gov.uk' <darren.cook@reading.gov.uk>
Cc: Charlotte Green <charlotte.green@tpsconsultants.co.uk>; Georgina Stares <georgina.stares@tpsconsultants.co.uk>
Subject: Kendrick School proposed extension highways scoping

Good Afternoon Darren,

I have been given your details by Brian Conlon and I was wondering if it would be possible to scope out the highways implications of a proposed extension to Kendrick School on London Road, Reading.

I have attached a scoping note which seeks to scope the following:

Person trip generation;
Trip distribution;
Accident data; and
Highway capacity assessments.

Would you be able to come back to me regarding the attached note, so we can progress our report?

If you have any questions, please do not hesitate to contact me.

Kind Regards,

George Hewitt
Graduate Transport Planner

www.tpsconsultants.co.uk

travel planning | development planning

telephone: 01924 664638



Client:	Kendrick School
Project:	Kendrick School Extension
Our ref:	P1304
Date:	May 2019

Introduction

TPS Consultants (TPS) has been appointed to prepare a Transport Assessment to support a forthcoming application for an extension to Kendrick School, located on London Road, Reading. The proposed extension to the School will provide a new 3-storey classroom block, which will include 9 classrooms and other ancillary uses (dining hall, toilets and offices).

As part of the extended education facilities, Kendrick School anticipates an uplift in pupil numbers with the proposed annual intake of pupils increasing from 96 pupils to 128 pupils from September 2020, this increased level of pupil intake will continue until 2024, when it is anticipated that there will be a total of 640 pupils at the school.

The purpose of this note is to agree the scope of the Transport Assessment with Reading Borough Council Highways team. Based on previous experience of preparing Transport Assessments for similar school extensions, we would seek to agree the principles of our approach in the following areas, which are discussed further in this note:

- Person trip generation;
- Trip distribution;
- Accident data; and
- The intended scope of highway capacity assessments, including junctions to be assessed, traffic growth rates, committed developments and modelling scenarios.

Person Trip Generation

A pupil and staff travel survey is currently underway at the school. The results will provide the current mode split for staff and pupils. It is intended to apply this mode split to the uplift in staff and pupils to derive the person trip generation associated with the expansion.

Trip Distribution

Trip distribution for the Transport Assessment will be calculated using the results of the pupil and staff travel survey. The results of the survey will provide postcode data for the pupil and staff catchments, this catchment data will then be used to create a gravity model which will show the distribution.

Accident Data



We will seek to obtain accident data from Reading Borough Council for the most recent 5-year period (2014 – 2018) for the network identified from the trip distribution. Accident data will be assessed to determine whether there are any existing road safety issues which the proposed uplift in staff / pupils might exacerbate.

Highway Capacity Assessments

The aforementioned methodology will be used to identify junctions on the road network that would experience an uplift of 30 or more two-way trips as a consequence of the proposals, with this being considered an appropriate materiality threshold.

Junctions which are likely to experience this level of impact will be subject to capacity assessments, using industry standard junction modelling software, whilst OS data will be used to measure the geometries of each of the identified junctions.

As part of the highway capacity assessments, TEMPRO will be used to determine a factor for traffic growth. A factor for five-year growth (2019-2024) will be calculated for the AM and PM peak periods and this will be subsequently used within the junction modelling and shown in associated network flow diagrams.

In regards to committed development, we would seek confirmation from Reading Borough Council as to what committed development would need to be included within the junction modelling. The distribution of committed development trips would be taken from the submitted traffic information from each development, to be robust.

The junctions will be assessed for the following scenarios:

- Base 2019 Traffic Flows + Committed Development (AM and PM);
- Base 2024 Traffic Flows + Committed Development (AM and PM);
- Base 2019 Traffic Flows + Committed Development + Development (AM and PM); and
- Base 2024 Traffic Flows + Committed Development + Development (AM and PM).

Should the results of operational assessments indicate that the development proposals will have an undue impact on the capacity of the local highway network, we would seek to identify the appropriate mitigation.



Appendix C

Kendrick School Travel Survey Results – Pupils and Staff

Kendrick School Staff Travel Survey

Respondents: 65 displayed, 65 total

Status: Closed

Launched Date: N/A

Closed Date: 24/05/2019

1. How do you USUALLY travel to work?

	Response Total	Response Percent	Points	Avg
Car driver alone	28	50 %	n/a	n/a
Car driver with adults / children I drop off elsewhere	11	20 %	n/a	n/a
Car share with colleague(s)	0	0 %	n/a	n/a
Bus	1	2 %	n/a	n/a
Train	4	7 %	n/a	n/a
Scooter / Motorbike	0	0 %	n/a	n/a
Cycle	7	12 %	n/a	n/a
Walk	3	5 %	n/a	n/a
Other, please specify view	2	4 %	n/a	n/a
Total Respondents		56	100 %	
(skipped this question)		9		

2. Please provide your home postcode in full.

Total Respondents	56
(skipped this question)	9

3. If you drive to work, where do you park?

	Response Total	Response Percent	Points	Avg
School car park	46	98 %	n/a	n/a
On the road outside school	0	0 %	n/a	n/a
Other, please specify view	1	2 %	n/a	n/a
Total Respondents		47	100 %	
(skipped this question)		18		

4. Do you have any comments to make about your journey to work? We are specifically interested in any issues / concerns you have and suggestions for how these might be overcome.

Total Respondents	37
(skipped this question)	28

Kendrick School Student Travel Survey

Respondents: 442 displayed, 442 total

Status: Closed

Launched Date: N/A

Closed Date: 24/05/2019

1. How do you USUALLY travel to school?

		Response Total	Response Percent	Points	Avg
Bus		113	30 %	n/a	n/a
Train		134	36 %	n/a	n/a
Walk		37	10 %	n/a	n/a
Car passenger (just me)		53	14 %	n/a	n/a
Cycle		7	2 %	n/a	n/a
Scooter		0	0 %	n/a	n/a
Car passenger (with other students)		15	4 %	n/a	n/a
Other, please specify	 view	12	3 %	n/a	n/a
Total Respondents		371	100 %		
(skipped this question)			71		

2. Please provide the first part of your home postcode.

Total Respondents	370
(skipped this question)	72

3. What school year are you in?

		Response Total	Response Percent	Points	Avg
Year 7		62	17 %	n/a	n/a
Year 8		51	14 %	n/a	n/a
Year 9		38	10 %	n/a	n/a
Year 10		49	13 %	n/a	n/a
Year 11		34	9 %	n/a	n/a
Year 12		80	22 %	n/a	n/a
Year 13		56	15 %	n/a	n/a
Total Respondents		370	100 %		
(skipped this question)			72		

4. Do you have any comments to make about your journey to school? We are specifically interested in any issues / concerns you have and suggestions for how these might be overcome.

Total Respondents	116
(skipped this question)	326



Appendix D

Gravity Model

Student Gravity Model

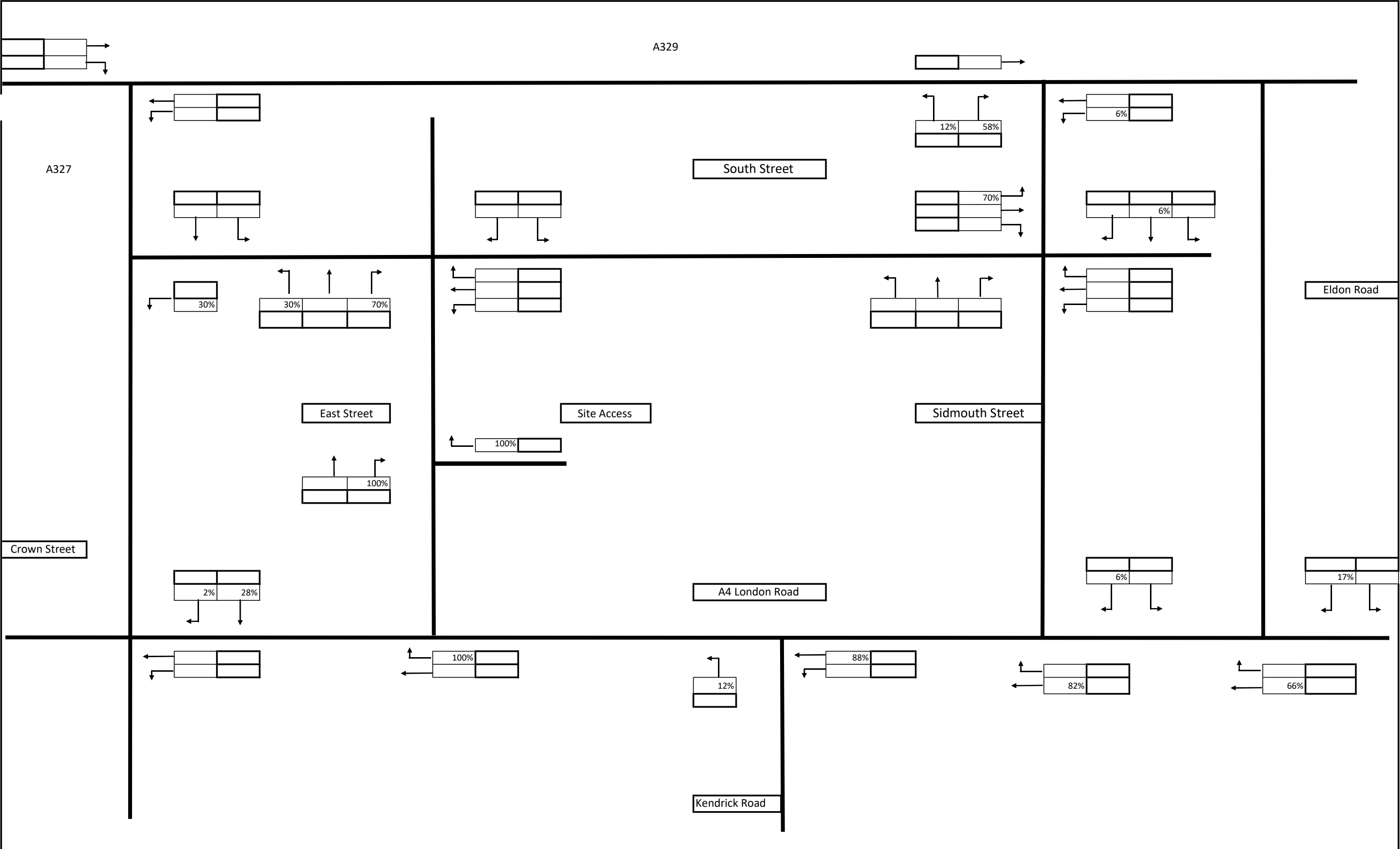
	Number	Prop	Arrival	Departure	Prop	
GU15	5	1%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	1%	
GU16	3	1%	A3290 N - A4 London Road W - East Street N	East Street N - South Street W - A327 S	1%	
GU17	3	1%	A3290 N - A4 London Road W - East Street N	East Street N - South Street W - A327 S	1%	
GU19	1	0%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	0%	
GU47	1	0%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	0%	
GU51	2	1%	Kendrick Road N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E	1%	
OX10	3	1%	Eldon Road S - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - Watlington Street N	1%	
OX11	1	0%	A329 W - Sidmouth Street S - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - Watlington Street N	0%	
OX49	1	0%	Eldon Road S - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - Watlington Street N	0%	
RG1	30	8%	A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E	8%	
RG10	12	3%	A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E	3%	
RG12	11	3%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	3%	
RG2	20	6%	Kendrick Road N - A4 London Road W - East Street N	East Street N - South Street W - A327 S	6%	
RG21	2	1%	Kendrick Road N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 W	1%	
RG22	2	1%	Kendrick Road N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 W	1%	
RG23	1	0%	Kendrick Road N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 W	0%	
RG24	1	0%	Kendrick Road N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 W	0%	
RG26	5	1%	Kendrick Road N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 W	1%	
RG27	2	1%	Kendrick Road N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 W	1%	
RG30	14	4%	A329 W - Sidmouth Street S - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 W	4%	
RG31	11	3%	Eldon Road S - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 W	3%	
RG4	45	12%	Eldon Road S - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - Watlington Street N	12%	
RG41	27	7%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	7%	
RG42	8	2%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	2%	
RG45	2	1%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	1%	
RG5	14	4%	A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E	4%	
RG6	74	20%	A4 London Road W - East Street N	East Street N - South Street W - A327 S	20%	
RG7	8	2%	Kendrick Road N - A4 London Road W - East Street N	East Street N - South Street W - A327 S - Crown Street W	2%	
RG8	6	2%	A329 W - Sidmouth Street S - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 W	2%	
RG9	6	2%	A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - Watlington Street N	2%	
SL1	6	2%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	2%	
SL2	1	0%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	0%	
SL3	5	1%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	1%	
SL4	2	1%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	1%	
SL5	2	1%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	1%	
SL6	23	6%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	6%	
SL8	1	0%	A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	0%	
UB2	1	0%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	0%	
UB8	1	0%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	0%	

	Arrivals	Departures	
28%	A3290 N - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E - A3290 S	27%
12%	Kendrick Road N - A4 London Road W - East Street N	East Street N - South Street W - A327 S	28%
17%	Eldon Road S - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E	9%
6%	A329 W - Sidmouth Street S - A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 E - Watlington Street N	15%
38%	A4 London Road W - East Street N	East Street N - South Street E - Sidmouth Street N - A329 W	12%
		East Street N - South Street E - Sidmouth Street N - A329 E - A4 London Road E	7%
		East Street N - South Street W - A327 S - Crown Street W	2%
			100%
100%			

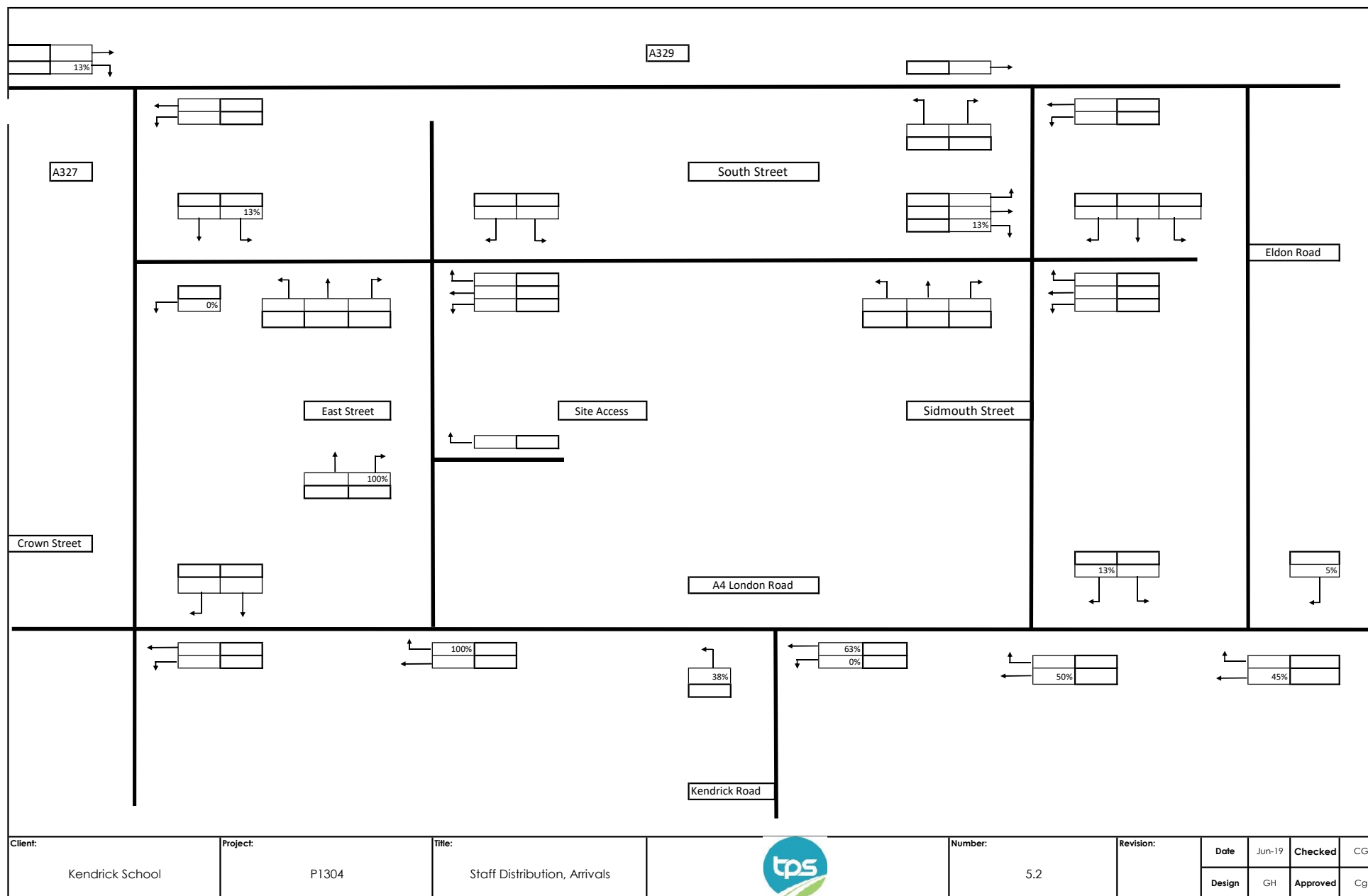


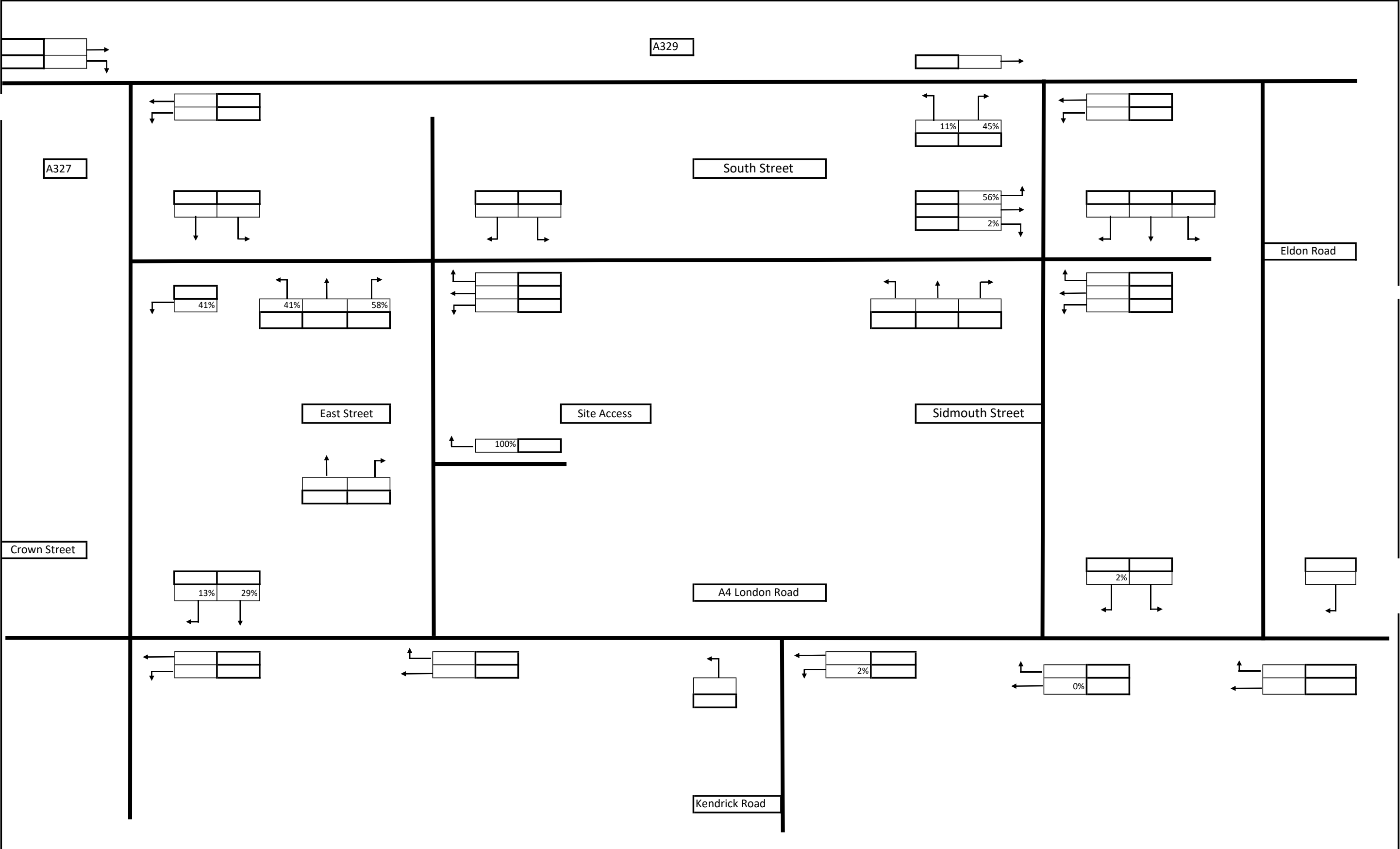
Appendix E

Network Flow Diagrams

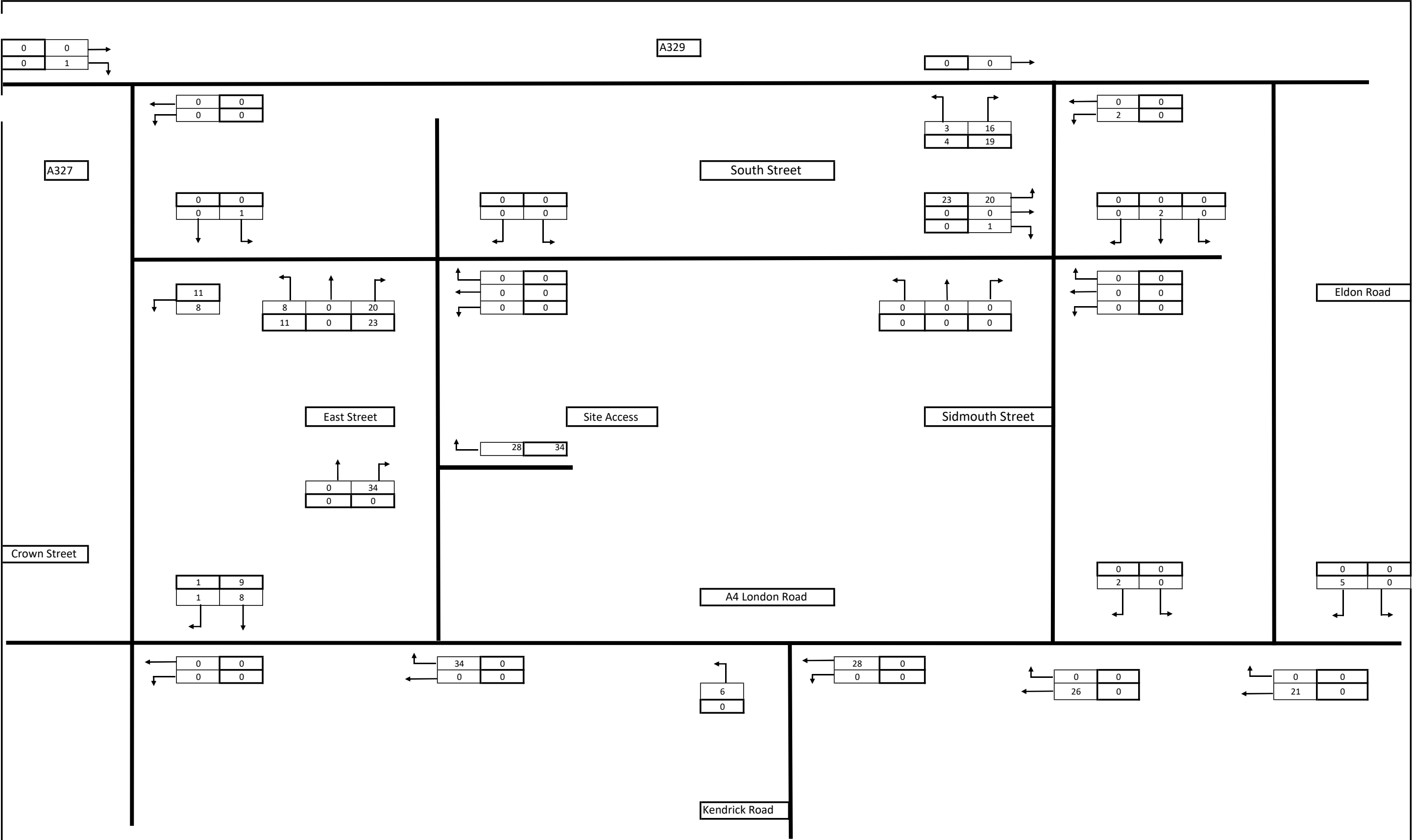


Client: Kendrick School	Project: P1304	Title: Pupil Distrbution		Number: 5.1	Revision:	Date	Jun-19	Checked	CG
						Design	GH	Approved	Cg





Client: Kendrick School	Project: P1304	Title: Staff Distribution, Departures		Number: 5.3	Revision:	Date	Jun-19	Checked	CG
						Design	GH	Approved	Cg



Client:	Project:	Title:		Number:	Revision:	Date	Jun-19	Checked	CG
Kendrick School	P1304	Total Development Trips		5.6		Design	GH	Approved	Cg



Appendix F

Committed Development Transport Assessment



TRANSPORT STATEMENT
Silver Street and Crown Street, Reading

Prepared for: Thomas Homes Ltd
Issue 2: 12 May 2017
Ref: TR8170238/MB/DW/005

5.0 Traffic Impact

- 5.1 The site is currently used as a hand car wash and a car park and therefore generates some traffic. It also has planning consent for 84 assisted living homes with associated car parking. The below assessment can therefore be considered robust, as the proposed trip generation will be presented without subtracting the trip generation from the existing or consented land uses.
- 5.2 The TRICS database is the UK's national system of trip generation analysis. To determine appropriate vehicle trip rates the TRICS database was interrogated using the following criteria:
- 03 – Residential
 - C – Flats Privately Owned
 - Calculate Trip Rates for Vehicles
 - Regions – All in England Except Greater London
 - Weekday Only
 - Edge of Town Centre Sites Only
- 5.3 Affordable housing generates a slightly lower vehicle trip generation on average than private housing. The TRICS assessment is based solely on private housing and is therefore robust. The full TRICS report is provided in Appendix F and the average trip rates are shown in Table 1.

Table 1: Trip Rates

Period	Trip Rates (Vehs per Dwelling)		
	Inbound	Outbound	Two-Way
AM Peak (08:00 to 09:00)	0.073	0.201	0.274
PM Peak (17:00 to 18:00)	0.190	0.110	0.300
Daily (07:00 to 19:00)	1.272	1.348	2.620

- 5.4 Using the trip rates in the table above, it is estimated that that proposed 79 flats will generate the number of vehicular trips shown in Table 2.

Table 2: Traffic Generation – 79 Flats

Period	Trip Generation (Vehs)		
	Inbound	Outbound	Two-Way
AM Peak (08:00 to 09:00)	6	16	22
PM Peak (17:00 to 18:00)	15	9	24
Daily (07:00 to 19:00)	100	106	207

- 5.5 It is evident from the assessment above that the development will result in a modest increase in vehicular traffic during the peak hours, equating to less than one vehicle every two minutes on average, and less over the course of the day. As discussed earlier, as the development is replacing both an existing and a consented use, the net trip generation of the development proposals will be lower than that stated.
- 5.6 The development proposals will also remove two existing accesses onto the public highway which will provide safety benefits for all road users.