

Appendix 9.1 - Transport Assessment Reading Metropolitan



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1 Introduction

- 1.1 This Transport Assessment (TA) has been prepared by Steer on behalf of Hermes Investment Management (the ‘Applicant’) for the an outline planning application with matters reserved with the exception of “Access” “Landscaping” “Layout” and “Scale” for the demolition of all existing buildings and structures; site preparation ; by the redevelopment of the application site for a mix of land uses to include Employment and Business (B1), Residential (C3), Retail (A1) Food and Drink (A3,A4 and A5) Complimentary Social uses (D2) ,car parking, servicing, public and private open space, landscaping, highways, pedestrian and vehicular access and associated works.
- 1.2 The Proposed Development (the “Site”) is known as “Reading Metropolitan”.
- 1.3 The site is located within Reading Borough Council (RBC) with a general location plan shown at Figure 2.1.
- 1.4 A ground floor and basement plan have been provided at **Annex A** for reference.
- 1.5 This TA has been prepared to address comments raised by RBC during pre-application meetings on both Wednesday 25 October 2017 and Friday 24 November 2017 and refers to the response to the EIA scoping letter regarding the redevelopment proposals. The TA outlines the impacts upon the surrounding transport networks as well as the net change in impact upon transport networks in comparison to the 2012 Consented Scheme.
- 1.6 This version of the TA has been prepared following RBC’s initial review of the draft TA and incorporates discussions from both pre-application meetings.

Planning Background

Previous Planning Application

- 1.7 An Outline Planning Application (OPA) was submitted to RBC for the redevelopment of Royal Mail site in February 2011 (LPA Ref: 11/00276/OUT). The application was granted Outline Planning Permission (OPP) in March 2012 by RBC, with the scheme hereafter referred to as the ‘2012 Consented Scheme’.
- 1.8 The 2012 Consented Scheme secured approval for the following:

“All matters reserved with the exception of means of access, for the demolition of existing buildings; site preparation; and redevelopment of the application site for a mix of uses from amongst employment and business uses (use class B1) and residential accommodation (C3); Hotel (C1), retail floor space (A1), food and drink uses (A3, A4 and A5), leisure uses (D2), car parking, public and private open space, landscaping works, highways, access and associated works.”

- 1.9 The permission allowed for an overall gross external floorspace of all uses of 65,095 sqm, which included:
- 40,092 sqm GEA of residential (Use Class C3);
 - 1,286 sqm GEA of retail (Use Class A1-A5);
 - 16,156 sqm GEA of office floorspace (Use Class B1);
 - 4,493 sqm GEA of hotel (Use Class C1);
 - 300 sqm GEA of gymnasium (Use Class D2); and
 - 1,958 sqm GEA of plant space.
- 1.10 The 2012 Consented Scheme OPP was subject to a Transport Assessment (February 2011), Environmental Statement (August 2011) and Framework Travel Plan (February 2011) prepared by Steer. A subsequent Transport Assessment Addendum was submitted in August 2011 to reflect changes in traffic distribution following amendments requested by RBC to vehicular access arrangements at the site which provide a left-in only junction with Caversham Road (the site's western access) and a two-way junction with Troopers Potts Way (the site's eastern access).
- 1.11 Although the previous consent has not been implemented, the transport and highways principles established have been carried through into the current application, where relevant.

Current proposals

- 1.12 The current planning application seeks permission for the following quantum per land use:
- 58,545 sqm GEA of residential (Use Class C3);
 - 1,889 sqm GEA of retail (Use Class A1 and A3);
 - 16,604 sqm GEA of office floorspace (Use Class B1); and
 - 772 sqm GEA of Health and Community Centre (Use Class D1)

Application documents

- 1.13 The full TA should be read in conjunction with the:
- **Annex J:** Framework Residential Travel Plan (December 2018);
 - **Annex K:** Commercial Travel Plan (December 2018); and
 - Chapter 9: Traffic and Transport, forming part of the Environmental Statement.

Report structure

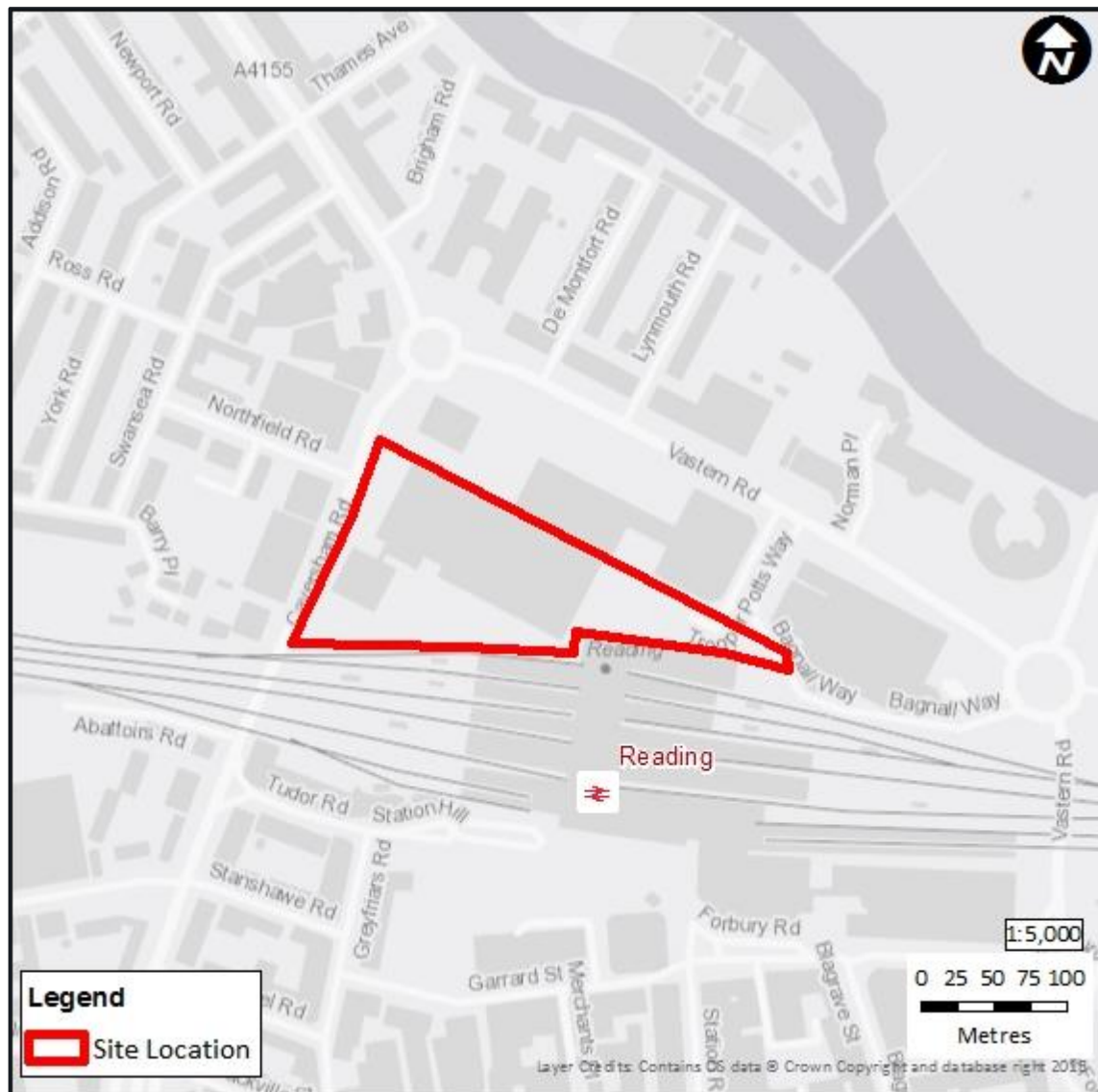
- 1.14 The remainder of this report will be structured as follows:
- **Chapter 2:** describes the existing transport conditions at the site;
 - **Chapter 3:** describes the relevant planning policy context;
 - **Chapter 4:** describes the new development proposals;
 - **Chapter 5:** outlines the multi-modal trip generation forecasts for the development and compares them to those of the 2012 Consented Scheme
 - **Chapter 6:** details the impact of the 2018 Proposed Development on the highway and public transport networks;
 - **Chapter 7:** provides a summary of servicing, deliveries and waste arrangements;
 - **Chapter 8:** details the impact of construction traffic on the highway network;
 - **Chapter 9:** provides a summary of the two travel plan documents; and
 - **Chapter 10:** provides a summary of the TA.

2 Existing Situation

Site Location

2.1 A site location plan can be seen below in Figure 2.1.

Figure 2.1: Site Location Plan



2.2 Following a site visit undertaken by Steer on Friday 6 October 2017 and a further visit on Friday 10 August 2018, the site is still largely vacant following the departure of Royal Mail in June 2009. The disused sorting offices remain on site.

Pedestrian Facilities

- 2.3 The site is currently impermeable for pedestrians. Pedestrians wishing to travel between the north side of Reading station and roads to the west of Caversham Road are required to detour via Vastern Road.
- 2.4 There is pelican crossing of Caversham Road on the western boundary of the site immediately south of Northfield Road.
- 2.5 The improvements to Reading railway station that were completed in 2014 have enhanced connectivity between the area north of the station and Reading town centre towards the south of the station, through the provision of a new walk-through between the two station entrances (available for non-ticket holders). This has significantly reduced the journey time for pedestrians since the 2012 Consented Scheme for accessing the town centre area, as previously pedestrians were required to walk via A329 Vastern Road and Forbury Gardens.
- 2.6 The public realm outside the railway station's northern entrance along Trooper Potts Way has also been significantly improved since 2012, with footway provision on both sides of the carriageway along Trooper Potts Way commensurate with dropped kerbs and tactile paving at all informal pedestrian crossing points. This will benefit site users accessing the new bus stops (NA, NB, NC, ND and NE) for the station and those travelling towards northern destinations including the Thames Path and Christchurch Bridge (for Caversham).
- 2.7 There have also been significant improvements to the A329 Vastern Road / Trooper Potts Way junction, which previously did not provide a pedestrian crossing over the A329 due to the presence of a central reservation. As part of the Reading railway station northern entrance completion, a signalised pedestrian crossing has been provided across Trooper Potts Way and across the A329 east of the junction, with dropped kerbs and tactile paving. This has enhanced the safety of pedestrians leaving the site's eastern access point and crossing the dual carriageway which experiences high traffic volumes.
- 2.8 Christchurch Bridge was completed in September 2015 and provides a pedestrian link over the River Thames between the Thames Path near Lynmouth Road and Christchurch Meadows. This will reduce the journey time for site users to reach Caversham than the 2012 OPP from the site's eastern access, via Trooper Potts Way and Norman Place.

Cycle Facilities

- 2.9 Within the town centre and in the vicinity to the site, there are several signed cycle routes with or without cycle infrastructure, the closest of which being either end of Vastern Road.
- 2.10 There is a cycle hire scheme, operated by On Your Bike and located to the south of the station building.
- 2.11 The completed Christchurch Bridge across the River Thames is appropriate for cyclists and forms part of the North Reading designated cycle route, enabling a shorter journey time to reach Caversham and other northern suburbs of Reading. It links to National Cycle Network Route 5.

Public Transport Facilities

Public Transport Accessibility Level (PTAL)

- 2.12 The site achieves a PTAL rating of 6b ('Excellent' level of public transport services) in the peak AM hour. This is due to the Site's proximity to the station, and therefore access to both rail

and bus connections. The introduction of Crossrail in 2020 will also significantly improve the public transport accessibility of the Site in future years.

- 2.13 The PTAL calculation is set out in **Annex B**.

National Rail services

- 2.14 The improvements to Reading railway station were completed in summer 2014, which comprises five new platforms, two new pedestrian entrances (including the northern entrance adjacent to the site), design of track layout, a new pedestrian link bridge and retail outlets. This has enhanced the public realm at the northern entrance adjacent to the site and provides a pedestrian link to the area south of the station, including Station Road and Friar Street.
- 2.15 The rail service frequencies are outlined in Table 2.1. Frequencies have improved to London Paddington compared to the 2011 TA. A number of new services have also been added, including direct trains to Manchester and Newcastle.

Table 2.1: Reading Station railway services

Destination	Peak frequency	Off-peak frequency
London Paddington*	Every 5 – 10 minutes	Every 5 – 10 minutes
Oxford/ Didcot Parkway	Every 10 minutes	Every 10 minutes
Swindon	Every 12 minutes	Every 12 minutes
Basingstoke	Every 15 minutes	Every 15 minutes
Guildford	Every 20 minutes	Every 30 minutes
Newbury	Every 20 minutes	Every 20 minutes
Bristol Parkway	Every 30 minutes	Every 30 minutes
Cardiff	Every 30 minutes	Every 30 minutes
Bristol Temple Meads	Every 30 minutes	Every 30 minutes
Moreton in Marsh	Every 30 minutes	Every 60 minutes
London Waterloo	Every 30 minutes	Every 30 minutes
Redhill/Gatwick Airport	Every 30 minutes	Every 30 minutes
Bournemouth	Every 60 minutes	Every 60 minutes
Penzance	Every 60 minutes	Every 60 minutes
Newcastle	Every 60 minutes	Every 60 minutes
Swansea	Every 60 minutes	Every 60 minutes
Manchester Piccadilly	Every 60 minutes	Every 60 minutes
Weston-Super-Mare	Every 60 minutes	Every 60 minutes
Paignton	Every 60 minutes	Every 60 minutes

*Note: Fast services only (less than 35 minutes journey time). Additional services are available to London Paddington via stopping services.

- 2.16 Reading railway station is currently subject to further improvements associated with modernising the Great Western route, namely the electrification of the route. This will increase the passenger capacity with new rolling stock and shorter journey times. The station is managed by Network Rail.

Elizabeth Line

- 2.17 Reading railway station forms the terminus for Elizabeth line services on the north-western branch, with the route estimated for completion in December 2019. Peak services will operate every 15 minutes providing a direct connection to stations in central and east London, including Bond Street, Farringdon and Canary Wharf. Off-peak services will operate every 30 minutes. Fast services to London Paddington operated by Great Western Railway will be unaffected by Crossrail services.

Bus services

- 2.18 The public realm and highway improvements adjacent to the railway's station northern entrance have provided new bus stops (NA, NB, NC, ND and NE) which have shelters, detailed public transport and real-time information. These are located next to the site's eastern access on Trooper Potts Way. The following services call at these bus stops: 22, 23, 24, 25, X39, X40 and X80. Reading buses routes 23 and 25, Thames Travel services X39/40 and Carousel service X80 did not previously call near the site at the time of 2012 OPP, enhancing the options for potential bus passengers from the site.
- 2.19 There is also a bus stop on Caversham Road just beside the Site, Caversham Road Fire Station stop. The 27, 29 and 42 services stop at this bus stop.
- 2.20 A summary of these routes is provided in Table 2.2.

Table 2.2: Bus services within 200m of the Site

Route no. (provider)	Destinations	Peak frequency	Off-peak frequency
22 (Reading Buses)	Reading Station – Caversham Heights	Every 60 mins	Every 60 mins
23 (Reading Buses)	Reading Station – Caversham Park – Emmer Green	Every 30 mins	Every 30 mins
24 (Reading Buses)	Reading Station – Caversham library – Chalgrove Way	Every 30 mins	Every 30 mins
25 (Reading Buses)	Reading Station – Peppard Common	Every 30 mins	Every 60 mins
27/29 (Reading Buses)	Caversham Road – Nire Road	Every 30 mins	Every 60 mins
42 (Reading Buses)	Rivermead Drive - Caversham Road – Kenavon Drive	Every 40 mins	Every 40 mins
X80 (Carousel)	Reading Station – Caversham – Henley-on-Thames – Marlow – High Wycombe	Every 60 mins	Every 60 mins
X39/40B (Thames Travel)	Reading Station – Caversham – Woodcote – Henley-on-Thames – Wallingford – Oxford	Every 30 mins	Every 30 mins

- 2.21 Additionally, there are several bus lines operating from the south side Reading Station, which can be easily accessed from the Site via the underpass.

Taxi Services

- 2.22 There is a taxi rank located immediately outside of the northern entrance of Reading railway station and the site's proposed eastern access. There is an additional taxi rank on the eastern side of Trooper Potts Way. Both taxi ranks will be retained as part of the proposed redevelopment. It is not anticipated many site users will undertake journeys by taxi due to the large choice of sustainable modes available within proximity to the site.

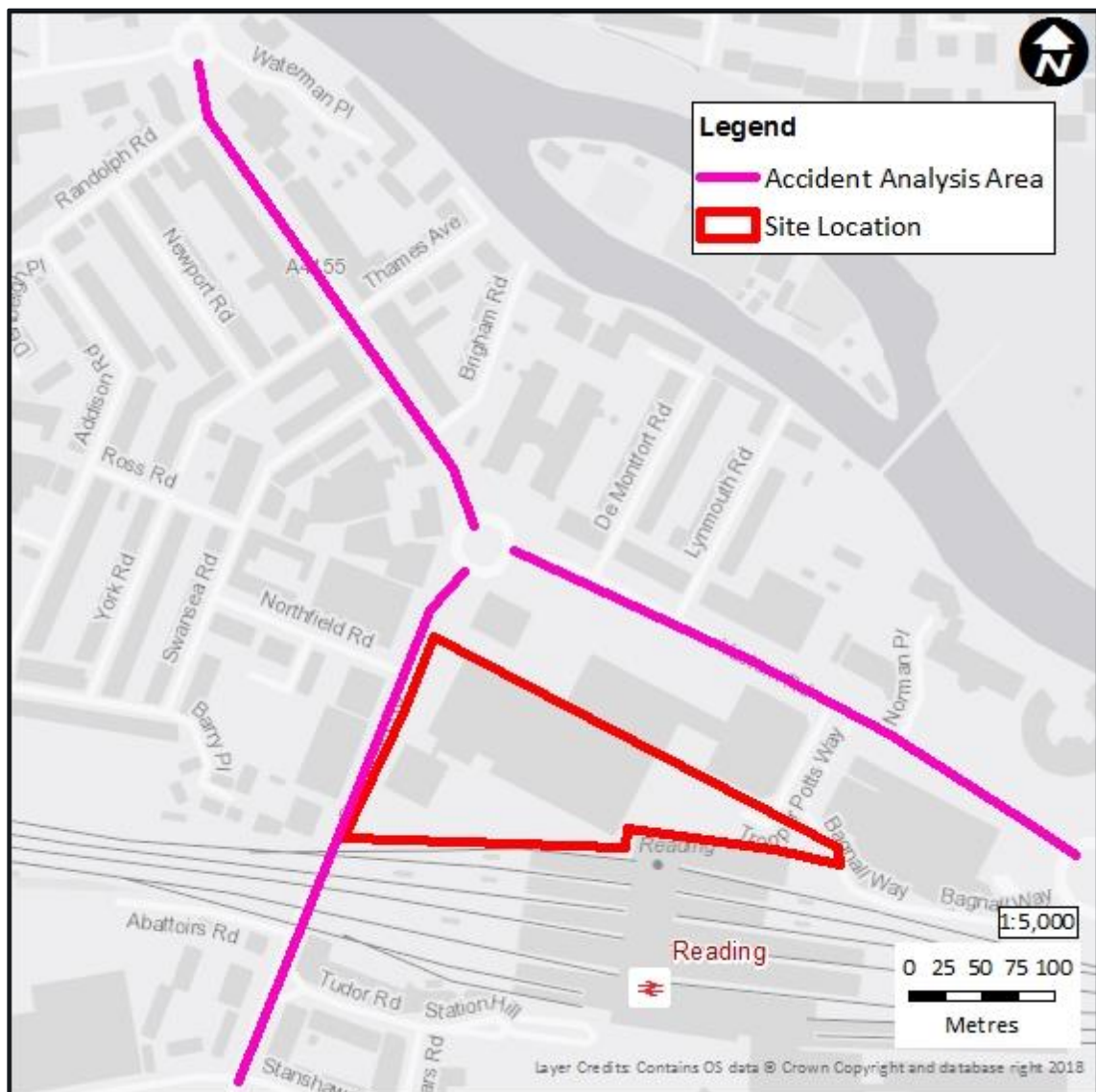
Car Clubs

- 2.23 There are three car club vehicles available in proximity to the Site. One additional car club space has been introduced since grant of the previous consent in 2012. The car club vehicles local to the site are detailed below:
- Co-Wheels Car Club – one vehicle available at Reading Council Magistrates Court car park (12-minute walk from site's western pedestrian access); and
 - Two Carvenient Car vehicles, including one on Garrard Street (5-minute walk from the site) and one on New Bright Street (15-minute walk from the site).

Road Safety

- 2.24 An analysis was undertaken of Personal Injury Accident (PIA) data for the most recent three-year period available from RBC. Figure 2.2 shows the accident analysis area.
- 2.25 Road safety data is included in **Annex C**.

Figure 2.2: Accident Analysis Area



- 2.26 A total of 39 accidents were recorded in and around the site on Caversham Road and Vastern Road in the 36-month period from 01/09/2015 and 31/08/2018. Of these 39, eight were serious and one was fatal. Table 2.3 provides further details.

Table 2.3: Breakdown of Accident Data

Personal Injury Accidents 01/09/2015 to 31/08/2018							
Location	Severity			Involvement Mode			
	Fatal	Serious	Slight	Vehicle	Motorcycle	Cyclist	Pedestrian
A329 Vastern Road between the roundabout junction with B3345 George Street / Bagnall Way / King's Meadow Road, and the roundabout junction with the A4155 Caversham Road;	0	8	17	4	1	18	1
A329 Caversham Road between the roundabout junction with the A4155 Caversham Road and the signalised T-junction with Great Knollys Street	0	0	10	4	1	2	2
A4155 Caversham Road between the roundabout junction with the A329 and the roundabout junction with Richfield Avenue / Waterman Place.	1	0	3	1	0	2	2

- 2.27 The most significant cluster of accidents is on Vastern Road eastbound where the roundabout junction connects to Bagnall Way, George Street and Kings Meadow Road. On this section of road, 12 road traffic incidents have taken place in the most recent three-year period. Of these, nine were slight incidents and four were slight.

Local Highway Network

- 2.28 At present, access to the site is possible from the A329 (Caversham Road) and Trooper Potts Way.
- 2.29 The vehicle entrance from the A329 (Caversham Road) southbound provides access to a small on-site car park running along the western border of the site, and to a larger on-site car park on the site's southern side; this is accessible via an access route between the existing buildings.
- 2.30 An additional entrance is taken from Caversham Road immediately north of the railway viaduct and is used by Network Rail to access and maintain the viaduct.
- 2.31 The vehicle access from Trooper Potts Way provides access to a small on-site car park and on-site servicing yard to the rear of the development. Trooper Potts Way's main carriageway, which is currently owned by Royal Mail, also provides access to Reading station's northern entrance, associated drop-off and car parking facilities.
- 2.32 A separate two-way carriageway is also provided along Trooper Potts Way's eastern side. This carriageway is restricted to bus and cycle use only and supports a series of new bus stops,

which form part of the Reading station transport interchange (See: Section 5.21). This carriageway connects to the priority junction with Bagnall Way, and forms a loop with the main carriageway of Trooper Potts Way, permitting buses to leave in forward gear without turning.

- 2.33 The A329, which is referred to as Caversham Road to the site's west and as Vastern Road to the site's north, forms part of the Inner Ring Road. This route acts as a local distributor road for traffic moving to/from different areas of Reading. The junction between the A329 (Caversham Road) and the A329 (Vastern Road) has been signalised since the application for the 2012 Consented Scheme.
- 2.34 Overall, the Site is considered to be in a beneficial position in relation to the highway network, although it is noted that congestion can represent a significant issue on local major routes, particularly at peak times.
- 2.35 The highway network local to the site remains similar to that at the time of the 2012 OPP, with the only significant difference related to the Trooper Potts Way highway scheme and signalisation of its junction with the A329 Vastern Road. Trooper Potts Way operates a left-out / left-in only arrangement due to the central reservation along the A329 Vastern Road. There is a separate carriageway adjacent to Trooper Potts Way for buses only where the new bus stops are located, which connects to the priority junction with Bagnall Way (which is westbound only and cannot be entered at this point) and the Royal Mail site eastern access outside the station entrance.

Baseline Traffic Flows

- 2.36 The summarised survey data is located in **Annex D**.
- 2.37 Traffic surveys were undertaken by Nationwide Data Collection as part of the February 2011 Transport Assessment prepared by Steer to obtain baseline traffic volumes. These were undertaken in early March 2010 on neutral weekdays and outside of the Easter school holidays, and comprised the following surveys:
- **Automatic Traffic Count (ATC)** survey over a 24-hour 7-day weekly period (2 – 8 March 2010), including speed, classification and direction. Undertaken at the following locations:
 1. Royal Mail Access Road (Trooper Potts Way);
 2. A329 Vastern Road immediately west of signalised junction with Trooper Potts Way (due to central hatched area, distance and guard this was treated as two separate counts, eastbound and westbound); and
 3. A329 Caversham Road immediately south of junction with Northfield Road and the controlled pedestrian crossing (due to the central island this again was treated as two separate counts).
 - **Manual Classified Count (MCC)** survey undertaken on a neutral weekday (Wednesday 3 March 2010) between 07:00 – 10:00 (AM period), 12:00 – 15:00 (lunchtime period) and 16:00 – 19:00 (PM period). Located at the priority junction between Trooper Potts Way / Bagnall Way / Royal Mail Depot site access.
- 2.38 A summary of the 2010 traffic survey data is presented in Table 2.4, including all vehicular movements. The proportion of cyclists and motorcyclists of all traffic is also identified.

Table 2.4: March 2010 Traffic Survey Data Summary

Survey location	AM Peak vehicular flow (08:00 – 09:00)		PM Peak vehicular flow (17:00 – 18:00)	
	Total vehicles	Proportion of cyclists and motorcyclists	Total vehicles	Proportion of cyclists and motorcyclists
ATC Survey*				
Site 1 - Trooper Potts Way (2-way)	76	5%	86	5%
Site 2 - A329 Vastern Road (Eastbound)	1105	2%	595	3%
Site 3 - A329 Vastern Road (Westbound)	780	2%	991	1%
Site 4 - A329 Caversham Road (Northbound)	1418	1%	1273	1%
Site 5 - A329 Caversham Road (Southbound)	1213	1%	1220	1%
MCC Survey				
Site 1 - Trooper Potts Way / Bagnall Way / Royal Mail Depot Site access	107	7%	78	8%

*Note: ATC data presents an average from the 5 individual weekdays (2nd, 3rd, 4th, 5th, 8th March 2010)

2017 Traffic Survey Data

- 2.39 Traffic surveys were also undertaken in October 2017 by Traffic Data Centre in the same format as March 2010, to provide comparative data to assess the change in baseline traffic flows over the duration of seven years. The ATC surveys were undertaken between 11 – 17 October 2017, and the MCC survey was undertaken on Wednesday 11 October 2017.
- 2.40 A summary of the 2017 traffic survey data is presented in Table 2.5.

Table 2.5: October 2017 Traffic Survey Data Summary

Survey location	AM Peak vehicular flow (08:00 – 09:00)		PM Peak vehicular flow (17:00 – 18:00)	
	Total vehicles	Proportion of cyclists and motorcyclists	Total vehicles	Proportion of cyclists and motorcyclists
ATC Survey*				
Site 1 - Trooper Potts Way (2-way)	106	6%	134	6%
Site 2 - A329 Vastern Road (Eastbound)	1022	2%	700	2%
Site 3 - A329 Vastern Road (Westbound)	699	2%	886	2%
Site 4 - A329 Caversham Road (Northbound)	1165	1%	1080	1%
Site 5 - A329 Caversham Road (Southbound)	1132	1%	982	1%
MCC Survey				
Site 1 - Trooper Potts Way / Bagnall Way / Royal Mail Depot Site access	171	30%	210	23%

*Note: ATC data presents an average from the 5 individual weekdays (11th, 12th, 13th, 16th and 17th October 2017)

Net Change in Baseline Traffic Flows

- 2.41 The net change in baseline traffic flows and proportion of cyclists and motorcyclists between 2010 and 2017 is presented in Table 2.6.

Table 2.6: Net Change in baseline traffic flows 2010 – 2017

Survey location	AM Peak vehicular flow (08:00 – 09:00)		PM Peak vehicular flow (17:00 – 18:00)	
	Total vehicles	Proportion of cyclists and motorcyclists	Total vehicles	Proportion of cyclists and motorcyclists
ATC Survey*				
Site 1 - Trooper Potts Way (2-way)	30	1%	49	1%
Site 2 - A329 Vastern Road (Eastbound)	-83	0%	105	-1%
Site 3 - A329 Vastern Road (Westbound)	-81	0%	-105	1%
Site 4 - A329 Caversham Road (Northbound)	-253	0%	-193	-1%
Site 5 - A329 Caversham Road (Southbound)	-81	0%	-238	0%
MCC Survey				
Site 1 - Trooper Potts Way / Bagnall Way / Royal Mail Depot Site access	64	23%	132	16%

- 2.42 Table 2.6 highlights that in the AM peak there has been a decrease in the total traffic volume for A329 Vastern Road and Caversham Road in both directions. Particularly significant is a reduction of circa 250 vehicles northbound on the A329 Caversham Road.

- 2.43 The ATC and MCC survey at Trooper Potts Way demonstrates there has been an increase in traffic flows along the carriageway and turning movements at the priority junction with Bagnall Way and the site access. This change is expected due to the completion of the revised highway layout at the station's northern entrance, operation of the new bus stops, and completion of the expansive cycle hub in the multi-storey car park.
- 2.44 In the PM peak, there has been a decrease in total traffic volume as the same roads in the AM peak (with the exception of Vastern Road eastbound). Similar to the AM peak, Trooper Potts Way and the priority roundabout junction with Bagnall Way has experienced an increase in traffic since 2010.
- 2.45 The 'existing' traffic flows associated with the lawful use of the Site have been omitted from this assessment. Baseline traffic for the Site is based on an analysis of the traffic survey data captured in 2010 and 2017, supplemented with data from the Department for Transport (DfT) from the most recent period.
- 2.46 The baseline traffic flow for the Site on the surrounding road network is shown below in Table 2.7.

Table 2.7: Baseline traffic flow on the surrounding road network (2017)

Highway Link	AM Peak (08:00 – 09:00)	PM Peak (17:00 – 18:00)
Vastern Road	1,762	1,837
Caversham Road North	1,771	2,100
Trooper Potts Way	178	190
Forsbury Road	1,329	1,576
Forsbury Road/Kings Road	1,358	1,611
Caversham Road South	2,312	2,243
Oxford Road	872	1,034

Summary

- 2.47 This chapter has highlighted there have been improvements to the pedestrian and cyclist infrastructure within proximity to the site, and enhancements to public transport services within the acceptable walking distance of the site. These will contribute to the uptake of sustainable modes of travel compared to the 2012 OPP.
- 2.48 ATC and MCC traffic surveys demonstrate that there has been a reduction in existing traffic volumes since 2010 on the A329 for the majority of external links. This supports the rationale presented later in this report for zero underlying traffic growth.

3 Planning Policy and Guidance

Introduction

- 3.1 This chapter considers any change in policy since the 2011 Transport Assessment that must be considered for the proposed redevelopment.
- 3.2 The national, regional and local policy context for the forthcoming development has been revised and updated since the 2012 OPP, and the following documents have been adopted since and will be considered as part of the full Transport Assessment:
- National Planning Policy Framework (NPPF, 2018);
 - Planning Practice Guidance (PPG) - Travel plans, transport assessments and statements in decision-taking (2014).
 - Reading Borough Core Strategy with alteration (2015)
 - Draft Reading Borough Local Plan (2017)
 - Reading Borough Third Local Transport Plan 2011 – 2026; and
 - Reading Station Area Framework (2010)
 - Reading Borough LDF – Revised Parking Standards and Design (adopted October 2011).
- 3.3 RBC is currently in the process of preparing a new Local Plan for the period up until 2036, however it is anticipated this will not be adopted until 2019.

National Planning Policy Framework (July 2018)

- 3.4 The new National Planning Policy Framework was launched In July 2018 and states that the purpose of the planning system is to contribute to the achievement of sustainable development. The three overarching objectives to achieving this are:
- ***“an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;***
 - ***a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities’ health, social and cultural well-being; and***
 - ***an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.”***
- 3.5 To ensure that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development.

- 3.6 Chapter 9 'Promoting Sustainable Transport' sets out the requirement for transport issues to be considered from the earliest stages of plan making and development proposals so that:
- impacts on transport networks can be addressed;
 - opportunities from existing and proposed transport infrastructure, technology and usage can be realised;
 - opportunities to promote walking, cycling and public transport can be pursued;
 - the transport and infrastructure environmental impacts can be assessed and mitigated; and,
 - the design of schemes consider patterns of movements, streets, parking and other transport considerations.
- 3.7 Significant development should be located in locations which are/ can be made sustainable by minimising the need to travel and offering a range of transport modes to reduce congestion, emissions, and enhance air quality and public health.
- 3.8 The following should be considered when assessing development sites:
- sustainable transport modes have been promoted;
 - safe and suitable access to the site can be achieved for all users; and,
 - any significant impacts on the transport network (capacity or congestion), or on safety can be mitigated to an acceptable level.
- 3.9 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.

Planning Practice Guidance (March 2014)

- 3.10 In March 2014, the Department for Communities and Local Government (DCLG) launched this web-based resource for planning practice guidance. It provides advice on travel plans, transport assessments and statements, including guidance on when they are required, and what they should contain.
- 3.11 Paragraph 006 of the 'Overarching principles on Travel Plans, Transport Assessment and Statements' states that: Travel Plans, Transport Assessments and Statements can positively contribute to:
- encouraging sustainable travel;
 - lessening traffic generation and its detrimental impacts;
 - reducing carbon emissions and climate impacts;
 - creating accessible, connected, inclusive communities;
 - improving health outcomes and quality of life;
 - improving road safety; and
 - reducing the need for new development to increase existing road capacity or provide new roads.
- 3.12 The resource goes on to explain that travel plans and transport assessments *"support national planning policy which sets out that planning should actively manage patterns of growth in order to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable."*

Reading Borough Core Strategy with alteration (2015)

- 3.13 Reading Borough Core Strategy states that development must have access to efficient and effective public transport.
- 3.14 The Core Strategy outlines the need for Transport Assessments to be prepared for new developments, to ensure the impact upon the transport network is mitigated.

Draft Reading Borough Local Plan (2017)

- 3.15 The Draft Reading Borough Council Local Plan outlines the requirements for new developments to promote and improve sustainable transport facilities
- 3.16 The Local Plan also sets out the council's objectives for transport, which new development should contribute to.

Reading Borough Third Local Transport Plan 2011 – 2026

- 3.17 The Reading Borough Local Transport Plan (LTP) contains the objectives, policies and schemes intended to improve transport in an area whilst also contributing to wider environmental, social and economic benefits.
- 3.18 The Site falls within the Central Area Action Plan for Reading, the LTP recognises that development within the Central Area will increase strain on the traffic network. One of the plans for the Central Area is for RBC to work with the private sector to secure delivery of integrated transport choices associated with new development
- 3.19 The LTP states that future developments should seek to minimise their impact on the transport network in order to reduce environmental impacts associated with air quality, noise and carbon.

Reading Station Area Framework (2010)

- 3.20 The Station Area Framework outlines broad development principles and guide the planned redevelopment of the area, individual sites, the public realm and new transport infrastructure.
- 3.21 The framework insists that any development in the area must ensure that the impact upon the surrounding road network is acceptable.

Reading Borough Council Local Development Framework – Revised Parking Standards and Design (adopted October 2011)

- 3.22 The parking standards and principles outlined in the above guidance do not vary significantly from the previous version of the guidance (2009) that was used to inform the 2012 Consented Scheme. For clarity the standards from the 2011 guidance are outlined in the following narrative.

Car parking standards

- 3.23 The car parking standards are set as maximums in accordance with city centre zones (the site is located within Zone 1: Central Core Area). Where comprehensive and mixed-use development schemes are likely, developers are encouraged to provide shared parking for facilities which are likely to generate peak parking levels during different periods of the day. Electric vehicle charging points will also be encouraged where appropriate.
- 3.24 The maximum car parking standards per land use are set out as follows:

- **Retail** – public parking will be provided in line with RBC’s current parking strategy (2004), which states public spaces across the town centre should not exceed 8,000 in total. Some private parking may be permitted;
- **Commercial / office** – 1 space per 250 sqm;
- **Health** - 1 space per consulting room and 1 space per GP
- **Community** – Public parking should be utilised
- **Residential** – as set out in Table 3.1.

Table 3.1: RBC Zone 1 residential (Class Use C3) maximum car parking standards (October 2011)

Dwelling type	Bedrooms	Maximum number of parking spaces per unit
Flat	1-2	0.5
	3+	1
House	1	0.5
	2	1
	3	1
	4+	2
Visitor parking	0	0

Note: Should a developer require fewer spaces than are set out in Table 3.1, there would need to be a demonstration that there would be no detrimental highway impact.

- 3.25 For delivery and servicing standards, loading bay requirements for developments within Zone 1 will be based on the merits of the application.

Cycle parking standards

- 3.26 Cycle parking standards for Zone 1 should be applied as minimum standards, and mixed-use developments could share parking provision between uses.

- **Residential;**
 - 1-2 bed flat – 0.5 spaces per unit
 - 3+ bed flat – 1 space per unit
 - 1 bed house – 1 space per unit
 - 2-3 bed house – 2 spaces per unit
 - 4+ bed house – 2 spaces per unit
- **Commercial / office** – 1 space per 200 sqm;
- **Health Centre** - 1 space per 2 staff and 1 stand per consulting room
- **Community Centre** – 1 space per 50m²
- **Retail** – as set out in Table 3.2.

Table 3.2: RBC Zone 1 minimum retail cycle parking standards (October 2011)

Retail type	Long stay (employees)	Short stay (visitor)
A1 Food Retail	1 space per 6 staff	1 space per 300 sqm
A1 Non-Food Retail up to 1000sqm		1 space per 250 sqm
A1 Non-Food Retail over 1000 sqm		1 space per 300 sqm
A2 Financial and Professional Services		N/A
A3 Restaurants and Cafes		1 space per 300 sqm
A4 Eating Establishment		1 space per 300 sqm
A5 Hot Food Take Away		1 space per 300 sqm

- 3.27 The size of motorcycle bays should be 1500mm wide x 2800mm deep. For developments of 10 or more residential units, motorcycle parking provision should be at least 2% of the maximum total car parking provision.
- 3.28 For all developments with **up to 200** regular car parking spaces, three disabled spaces or 5% of total capacity should be provided.
- 3.29 For developments with **over 200** regular car parking spaces:
- **Retail** – three disabled spaces plus 4% of total capacity;
 - **Commercial / office** – six disabled spaces plus 2% of total capacity; and
 - **Residential / hotel** – four disabled spaces plus 4% of total capacity.
- 3.30 For developments of at least 10 residential units in Zone 1-2, developers will be required to support or provide a car club and must have a minimum of two cars. Free memberships should be offered for first six months for residents.

4 Development Proposals

Overview

- 4.1 This chapter details the key transport elements of the proposed scheme and any significant changes since the 2012 OPP.
- 4.2 The proposed site covers circa 2.2 ha comprising the former Royal Mail sorting office, a three-storey office building, other ancillary buildings and surface car parking. The former sorting office operations were transferred to Swindon in 2009 and the buildings have since been let to Network Rail for the process of facilitating Reading railway station improvements, however they will vacate the site once the railway works are complete and the site will be demolished.
- 4.3 The site's boundary remains unchanged from the 2012 OPP, and is bordered to the north by the Vastern Court Retail Park, to the east by Bagnall Way and the multi-storey car park for Reading railway station, to the south by Reading railway station and the Great Western railway tracks, and to the west by the A329 Caversham Road.

2012 Consented Scheme

- 4.4 The overarching permitted scheme following grant of OPP in March 2012 is detailed for reference in Table 4.1.

Table 4.1: 2012 OPP Area Schedule – Illustrative Residential Led Scheme (GEA sqm)

Land Use	Site-wide floor area (GEA sqm)
Residential (C3)	40,902 (308 units)
Retail (A1-A5)	1,286
Office (B1)	16,156
Hotel (C1)	4,493
Health Centre / Gym (D2)	300
Servicing / Plant	1,958
TOTAL	65,095

Proposed Masterplan

- 4.5 The current application includes retail, office, a health centre and a community centre together with residential development. Underground car parking will be provided through the construction of a basement. The retail uses are provided throughout the site fronting public spaces with office and residential uses above. The revised masterplan reflects three phases of development. The ground floor layout is shown at **Annex A**.
- 4.6 The proposed changes in quantum per land use between the 2012 Consented Scheme and 2018 revised proposals are illustrated in Table 4.2, excluding plant / cycle parking / refuse areas.

Table 4.2: Net Change in quantum per land use (GEA sqm) from 2012 Consented Scheme to 2018 Proposed Development

Land Use	2012 Consented Scheme	2018 Proposed Development	Net Change
Residential (C3)	40,902	58,545	17,643
Retail (A1-A5)	1,286	1,889	603
Office (B1)	16,156	16,604	448
Hotel (C1)	4,493	0	-4,493
Leisure Centre / Gym (D2)	300	0	-300
Health/Community Centre (D2)	0	772	772
Total	63,137	80,127	16,990

- 4.7 The consented mix of residential units from the 2012 OPP and the proposed mix of units is presented in Table 4.3.

Table 4.3: Net Change in residential units from 2012 Consented Scheme to 2018 Proposed Development

Type	2012 Consented Scheme	2018 Proposed Development	Net Change
Studio flat	0	79	79
1 bed flat	113	227	114
2 bed flat	181	335	154
3 bed flat	14	6	-8
Town House	0	11	11
Total	308	658	350

- 4.8 The tables demonstrate that overall there is a site wide increase of 16,990 sqm in gross external floor area compared to the previously consented scheme. The hotel and gym/leisure centre uses have been removed and a health/community centre use has been added. It is not known at this stage the exact retail use, however for trip generation assessment purposes within this report a 50% split between A1 (non-food retail) and A3 (cafes and restaurant) has been tested.

Vehicular Access

- 4.9 The vehicular access to the site is proposed to remain as per the arrangements agreed for the 2012 OPP. These access arrangements are designed to eliminate vehicular 'rat-running' through the site, and have been approved in principle by RBC. These arrangements are detailed as follows:
1. **western access** – priority junction with A329 Caversham Road, which will operate as left-in only for vehicles, and contra-flow westbound cycle lane; and
 2. **eastern access** – vehicular traffic for both left-in / left-out movements will be directed to the signalised junction with the A329 Vastern Road via Trooper Potts Way, via the existing access point adjacent to Station Square.
- 4.10 The access arrangements are illustrated in **Annex E**.

- 4.11 The proposals will upgrade the current pelican crossing of Caversham Road south of Northfield Road to include signal controlled crossings for cyclists.
- 4.12 No changes are proposed to the recently signalised junction between Trooper Potts Way and A329 Vastern Road, which will remain left-in / left-out only for general traffic. There will also be no amendments to either taxi rank located at Reading railway station's northern entrance.
- 4.13 Vehicular traffic to all plots can enter the site by either junction, at the most convenient point to that plot, however they will be restricted to exiting the site via the eastern access only. The internal access through the site to connect the eastern and western junctions will permit the two-way flow of traffic east of the north-south internal access road. The internal access roads will provide direct access to all buildings and the basement car park entry.

Pedestrian Access

- 4.14 Pedestrian access will be provided from the same western and eastern access points as for vehicular use, and the site layout will be designed to maximise pedestrian permeability between the two accesses.
- 4.15 The main east-west route through the scheme, The Avenue, will be provided with footways on both sides, connecting with an enhanced Station Square.
- 4.16 The existing controlled crossing of Caversham Road south of Northfield Road will be enhanced to improve conditions for pedestrians as well as accommodating cyclists.

Cyclist Access

- 4.17 Cyclists will be able to use both site entrances for ingress and egress movements, with a dedicated contra-flow westbound cycle lane provided at the western end of the scheme which provides two-way access to/from Northfield Road via the enhanced signal crossing of Caversham Road.

Parking Provision

Car parking

- 4.18 The 2012 Consented Scheme provided parking for 301 spaces in total, with 210 of these located in the basement / semi-basement, and the remaining 91 spaces at street level.
- 4.19 As requested by RBC, the 2018 Proposed Development will provide a significantly lower level of parking with 94 spaces across all land uses. This takes account of enhanced public transport improvements local to the site.
- 4.20 70 spaces in the basement have been allocated to residential use, with the remaining on-street parking divided up for office, retail and community use as well as four dedicated to servicing. Two car club spaces have been provided at street level to allow residents to have access to a vehicle, without the responsibility of owning one.
- 4.21 In accordance with RBC's parking standards, a maximum of 4 car parking spaces will be allocated to the office use.
- 4.22 Eight disabled parking spaces are available on the Site. Two are located at basement level and are designated for residential use. The remaining six at located at street level on Metropolitan Road and The Avenue.
- 4.23 The car parking allocation is set out in Table 4.4.

Table 4.4: Car parking allocation

	Residential	Retail	Health/ Community	Office	Car Club	Servicing	Total
Spaces	72	5	1	2	2	4	86
Accessible Spaces	3	2	1	2	0	0	8
Total	75	7	2	4	2	4	94

Cycle parking

- 4.24 620 cycle parking spaces will be provided within the confines of the site, with spaces per block provided in Table 4.5. The number of spaces provided is in accordance with RBC's Revised Parking Standards and Design guidance (adopted October 2011).

Table 4.5: Cycle parking Spaces

Block	Number of Cycle Parking Spaces
A	250
B	46
C	42
D	68
E	68
F	68
G	44
J	34
Total	620

- 4.25 In recognition of the low levels of car parking provided on the Site, the Applicant proposes to provide in excess of RBC's minimum cycle parking standards for residential development as set out in paragraph 3.26. The minimum requirements for cycle parking spaces are compared with the proposed cycle parking spaces for the development in Table 4.6.

Table 4.6: Comparison of minimum cycle parking spaces requirement with proposed

Land Use	Minimum cycle parking spaces required	Proposed cycle parking spaces
B1 Office	83	83
C3 Residential Flat 1-2 bed	321	481
C3 Residential Flat 3+ bed	6	9
Unallocated	-	47
Total	410	620

- 4.26 The cycle parking spaces will be provided as Josta 2-tier racks, in secure, convenient storage areas with good surveillance. These storage areas are shown in **Annex A**.
- 4.27 Cycle storage areas will be provided in the garden areas of the town house residential units. This will mean that the residents of the town houses will not require access to the cycle parking storage areas in the wider development.

- 4.28 Retail tenants will be expected to provide long-stay cycle parking storage for staff members within the floorspace of their unit. Therefore, at this stage, cycle parking requirements for retail uses are not included in the total cycle parking calculation.
- 4.29 Short-stay cycle parking spaces will be provided on-street throughout the Site, with exact locations to be determined.

Servicing Access

- 4.30 Delivery and servicing vehicles will enter the site either via the eastern or western access depending on the destination within the site, and will exit via the eastern entrance under all circumstances. Buildings would be serviced from the nearest safe kerbside location within the proposed internal road network, with the entrance to the refuse storage areas located adjacent to the kerbside. No servicing will be undertaken from nearby public highways, such as Caversham Road.
- 4.31 Further detail on servicing and waste is provided in Chapter 7.

5 Travel Characteristics

5.1 This chapter examines data related to mode share and trip generation to ascertain the net change in total person and vehicular trip generation between the 2012 Consented Scheme and the 2018 Proposed Development. The following three data sources are considered:

- TRICS analysis for comparable sites;
- census 'Journey to Work' data review; and
- census car ownership data.

5.2 This chapter uses the data sources to forecast the proposed development's multi-modal trip generation and provides a comparison with the 2012 Consented Scheme multi-modal trip generation.

Trip Generation Methodology

5.3 Trip generation has been assessed in terms of peak and daily person trips by all modes.

5.4 The TRICS database (version 7.2.4) has been interrogated for similar sites to the proposed development to demonstrate whether there is a change in total person trips since that presented in the 2011 Transport Assessment. Sites were selected considering their size, location, public transport accessibility and level of car parking provision. Sites within Greater London were excluded from the selection due to different travel behaviour comparative to sites outside of London.

Residential trip rates

5.5 Person trip rates have been derived from the TRICS database for main land use category '03 – Residential' and sub-category 'C – Flats privately rented' for comparative sites with surveys undertaken between 2010 to 2016. Additional sites have therefore been included that did not comprise the 2011 Transport Assessment and provide a more robust reflection of the proposed site. The TRICS output data is attached at **Annex F**, and the total person trip rates have been accepted for use by RBC.

5.6 The total residential person trip rates for peak hours and daily period are presented in Table 5.1, including a comparison with the trip rates used in the 2011 Transport Assessment.

Table 5.1: Net Change in residential total person trip rates between 2011 and 2018 (per dwelling)

	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)			Daily (07:00 - 19:00)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
2011 TA Total Person Trip Rate	0.09	0.49	0.58	0.37	0.20	0.57	2.31	2.31	4.62
2018 Person Trip Rate	0.07	0.37	0.44	0.45	0.20	0.65	2.42	2.50	4.92
Net Change 2011 to 2018	-0.02	-0.12	-0.14	0.08	0.00	0.08	0.11	0.19	0.30

- 5.7 Table 5.1 demonstrates that there has been a marginal increase in person trip rates between the TRICS data used for the 2011 Transport Assessment and the data extracted to replicate more recent surveys from comparative sites, with an increase in daily two-way trip rate of 0.30 per dwelling. There has been a slight reduction of 0.14 two-way trips per dwelling in the AM peak however.

Office trip rates

- 5.8 Person trip rates have been derived from the TRICS database for main land use category '02 – Employment' and sub-category 'A – Office' for comparative sites with surveys undertaken between 2010 to 2016 (including on-site parking provision). Additional sites have therefore been included that did not comprise the 2011 TA assessment and provide a more robust reflection of the proposed site. The TRICS output data is attached at **Annex F**.
- 5.9 The trip rates per 100 sqm are provided in Table 5.2, including a comparison against the office trip rates used to form the 2012 Consented Scheme.

Table 5.2: Net Change in office total person trip rates between 2011 and 2018

	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)			Daily (07:00 - 19:00)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
2011 TA Total Person Trip Rate	2.28	0.17	2.45	0.31	2.11	2.42	12.09	12.09	24.18
2018 Person Trip Rate	2.00	0.16	2.16	0.11	1.73	1.85	10.69	10.51	21.19
Net Change 2011 to 2018	-0.28	-0.01	-0.29	-0.20	-0.38	-0.57	-1.40	-1.59	-2.99

- 5.10 Table 5.2 demonstrates that there is a decrease in total office person trips between the TRICS data used for the 2011 Transport Assessment and the more recent and robust data, of approximately three two-way trips per 100 sqm across the daily period.

Retail trip rates

- 5.11 The indicative proposed scheme provides 1,870 sqm GEA of retail space. For the purpose of trip generation, we have assumed a 50% allocation of space to non-food retail (935 sqm) and 50% to café/restaurant use (945 sqm). The TRICS output data is attached at **Annex F**.
- 5.12 Person trip rates have been derived from the TRICS database for main land use category '01 – Retail' and sub-category 'O – Convenience Store'. The trip rates per 100 sqm are provided in Table 5.3, including a comparison against the retail trip rates used to form the 2012 Consented Scheme.

Table 5.3: Net Change in non-food retail total person trip rates between 2011 and 2018

	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)			Daily (07:00 - 19:00)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
2011 TA Total Person Trip Rate	12.43	10.06	22.49	21.45	21.15	42.6	370.1	370.1	740.2
2018 Person Trip Rate	25.41	23.72	49.13	38.06	38.57	76.62	386.68	386.23	772.91
Net Change 2011 to 2018	12.98	13.66	26.64	16.61	17.42	34.02	16.58	16.13	32.70

5.13 As shown in Table 5.3., there has been an increase in trips generated by the non-food retail use, resulting in an additional 33 two-way trips per day.

5.14 It is assumed that 50% of the trips generated by the retail use of 945 sqm will be linked or pass-by trips and therefore not new trips to the local transport network, which has been agreed in principle with RBC.

Restaurant Uses

5.15 For the remaining 50% of trips allocated to the restaurant use, person trip rates have been derived from the TRICS database for main land use category '06 – Hotel, food and drink' and sub-category 'B – Restaurants'. The trip rates per 100 sqm are provided in Table 5.4 and the TRICS output data is attached at **Annex F**.

5.16 No trip rates were provided for this land use as part of the 2011 Transport Assessment as a restaurant was not previously included as part of the design proposals. It is assumed that the restaurant will not operate in the AM peak period, and therefore no trips will be generated.

Table 5.4: Total person trip rates for proposed restaurant facility

	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)			Daily (07:00 - 19:00)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
2018 Person Trip Rate	0.00	0.00	0.00	2.39	0.98	3.37	14.24	9.47	23.71

5.17 It is assumed that 50% of the trips generated by the restaurant of 945 sqm will be linked or pass-by trips and therefore not new trips to the local transport network, which has been agreed in principle with RBC.

Health Centre and Community Centre trip rates

5.18 A health centre and a community centre will be provided as part of the Site, with a combined area of 772 sqm (GEA).

5.19 Person trip rates as shown in Table 5.5 have been derived from the TRICS database for main land use category '05 – Health' and sub-category 'G – GP Surgeries' as a best representative of the proposed facility. The TRICS output data is attached at **Annex F**.

5.20 No trip rates were provided for this land use as part of the 2011 Transport Assessment as it is a new addition to the proposed development.

Table 5.5: Total person trip rates for proposed health/community centre

	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)			Daily (07:00 - 19:00)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
2018 Person Trip Rate	4.67	2.10	6.77	2.05	3.74	5.78	42.61	42.52	85.13

Mode Share

Residential mode share

- 5.21 The 2011 census data has been extracted under the dataset QS701EW 'Method of travel to work' to help determine the mode share for the residential element of the proposed scheme. The data has been extracted for the output layer local to the site (E00082605).
- 5.22 The 2011 census data is considered a more accurate reflection of travel behaviour for site users rather than TRICS multi-modal data and provides the baseline position at this stage for the trip generation assessments. However, the car driver mode share has been further adjusted to reflect that situation whereby only 11 per cent of 658 residential units will have a car parking space allocated to them and the inability of residents to apply for on-street parking permits. The other modes have been adjusted accordingly.
- 5.23 The original census data mode share and adjusted residential mode share that will form the transport assessments is detailed in Table 5.6.

Table 5.6: Proposed residential mode share for 2018 assessment

Mode	Residential mode share (2011 census data)	Residential mode share (adjusted)	Net change in proportion
Train	26%	31%	5%
Bus, minibus or coach	8%	10%	2%
Taxi	0%	0%	0%
Motorcycle, scooter or moped	1%	1%	0%
Driving a car or van	25%	10%	-15%
Passenger in a car or van	1%	1%	0%
Bicycle	2%	3%	1%
On foot	37%	44%	7%
Other method of travel to work	0%	0%	0%
TOTAL	100%	100%	0%

Commercial mode share

- 5.24 The TRICS mode share is presented in Table 5.7, based on comparative office developments. The mode share has been adjusted however as described below.
- 5.25 Based on the on-site parking strategy, only four car parking spaces will be allocated to the office use on-street. Therefore, the car driver mode share for commercial use has been reduced to account for only one employee and three visitor having access to a car parking space, with the arrivals and departures spread over a two-hour AM and PM peak respectively. The car driver mode share for the AM, PM and daily periods has been calculated based on the proportion of car trips out of the total person trip generation for that time period (obtained by TRICS and as presented in Table 5.2).
- 5.26 For the daily vehicular trip generation, it has been assumed that there will be two sets of both arrivals and departures across the course of the day associated with the car parking spaces, to

account for potential vehicular trips in-between the peak periods (e.g. lunchtime journeys). This results in 11 two-way car driver trips over the daily profile.

- 5.27 The remaining proportion of mode share has been distributed between other modes in consideration of the site's proximity to excellent public transport facilities and the TRICS data. The proposed office mode share is subsequently presented in Table 5.7.
- 5.28 This mode share has also been applied to the Health/Community Centre use.

Table 5.7: Proposed office mode share for 2018 assessment by time period

Mode	Commercial mode share (TRICS data) – all time periods	Commercial mode share (adjusted)
		Daily (07:00 – 19:00)
Underground, metro, light rail, tram	0%	0%
Train	3%	29%
Bus, minibus or coach	5%	31%
Taxi	0%	0%
Motorcycle, scooter or moped	0%	1%
Driving a car or van	30%	0%
Passenger in a car or van	32%	1%
Bicycle	1%	8%
On foot	30%	30%
Other method of travel to work	0%	0%
TOTAL	100%	100%

Retail mode share

- 5.29 The proposed mode share for the retail uses has been extracted from commercial Census journey to work data, as this is considered a more accurate reflection of the travel behaviour from this particular land use. The mode share has been adjusted to reflect the low level of parking on-site (7 spaces are allocated for all retail uses) and is presented in Table 5.8.

Table 5.8: Proposed retail uses mode share for 2018 assessment

Mode	Retail and leisure mode share (Census data)	Retail and leisure mode share (adjusted)
Car Driver	10%	1%
Car Passenger	10%	1%
Bus	25%	30%
Rail	20%	29%
Pedestrians	30%	30%
Cyclists	5%	7%
Motorcyclist	0%	2%

TOTAL	100%	100%
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Census car ownership data

- 5.30 Steer has examined recent trends in Reading, to ascertain whether a lower volume of vehicular trips per household are applicable to the forthcoming development comparative to the 2012 Consented Scheme.
- 5.31 2001 and 2011 census data has been extracted to compare the car ownership ratio for all wards within Reading borough, using the KS017 dataset by ward for 2001 and the QS416EW dataset by ward for 2011. Both of these datasets show the number of households and sum of all private cars/vans per ward (including Abbey ward where the proposed site is located).
- 5.32 Table 5.9 summarises the net change in car ownership over the decade.

Table 5.9: Comparison between 2001 and 2011 Census Data for Car Ownership for Abbey Ward and Reading

Theme	Abbey ward	Reading (all wards)
2001 Census		
Number of households	4197	57,877
Number of cars/vans	3426	62,369
Car ownership ratio	0.82	1.08
2011 Census		
Number of households	6331	62,869
Number of cars/vans	4216	66,681
Car ownership ratio	0.67	1.06
Net Change		
Number of households	+2134	+4992
Number of cars/vans	+790	+4312
Car ownership ratio	-0.15	-0.02

- 5.33 Table 5.9 demonstrates that whilst there has been an overall increase in household numbers and number of private vehicles owned both at the individual ward level for the site and across the borough as a whole, the car ownership ratio has reduced. It is worth highlighting that Abbey ward has experienced a reduction of 0.15 in the ratio of cars owned per household, which is likely to be attributed to improvements in public transport services in central Reading and wards within the inner city. This provides additional justification for reducing the car mode share specific to the office and re-assignment to sustainable modes.

Trip Generation

2012 Consented Scheme

- 5.34 The 2012 Consented Scheme was based on the illustrative residential led scheme and comprised the following quantum per land use:
- Office (Class B1) – 16,156 sqm;
 - Retail (Class A1/A3/A4/A5) – 1,286 sqm;
 - Residential (Class C3) – 40,902 sqm;
 - Hotel (Class C1) – 4,493 sqm; and
 - Health centre / gymnasium – 300 sqm.
- 5.35 The ‘worst-case’ forecast site wide trips for the 2012 Consented Scheme presented in the 2011 Transport Assessment (based on Scheme 3) is detailed in Table 5.10.

Table 5.10: 2012 Consented Illustrative Residential Led Scheme Total Person Trip Generation

Mode	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)			12-hour (07:00 - 19:00)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
Car Driver	130	77	207	84	141	225	1,300	1,300	2,599
Total People	986	382	1,368	503	1,050	1,553	9,427	9,427	18,854

Proposed Development Trip Generation

- 5.36 The forecast site-wide multi modal trip generation for the current application is presented in Table 5.11 which combines all land uses. The trip generation has been calculated based on the total person trip rates and individual mode shares per land use developed in this chapter.

Table 5.11: Forecast site wide multi-modal trip generation

Mode	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)			12-hour (07:00 - 19:00)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
Car Driver	7	26	33	32	16	48	186	191	377
Car Passenger	5	4	10	6	6	12	57	57	115
Bus	148	68	216	95	162	256	1322	1311	2,633
Rail / Underground	150	119	269	154	181	336	1601	1601	3,202
Pedestrians	164	153	317	197	207	404	1876	1882	3,758
Cyclists	33	16	49	22	36	58	298	296	594
Motorcyclist	9	5	14	7	10	17	84	84	168
TOTAL	516	392	907	513	619	1,131	5,424	5,422	10,846

- 5.37 Table 5.11 highlights that circa 377 two-way private car trips are expected from the proposed development over the 12-hour daily profile, with circa 10,846 two-way person trips in total. A large proportion of these trips are assigned to sustainable modes, with over 3,202 daily trips assigned to rail / underground trips, approximately 2,633 to bus passengers and 3,758 journeys made by foot.

- 5.38 Table 5.12 compares the trip generation of the previous consent and the current application. It illustrates that the revised scheme significantly reduces the total number of two-way vehicular and person trips over the AM and PM peak hours and over 12-hour daily profile compared to the 2012 OPP. Therefore, the 2018 Proposed Development will have less impact upon the local transport network than the scheme previously granted consent in March 2012.
- 5.39 The former Royal Mail sorting office which was located on the site up to June 2009 was estimated to generate around 34 two-way trips in the AM Peak and around 46 in the PM Peak via its main entrance from Vastern Road (via Trooper Potts Way). These figures have been deducted from the 'existing' trip generation of the site which was agreed with RBC as part of Royal Mail Group's relocation to Gillette Way.

Table 5.12: Net change in trips between the 2012 OPP and 2018 Proposed Development

Mode	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)			Daily (07:00 - 19:00)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
Car Driver	-123	-51	-174	-52	-125	-177	-1,114	-1,109	-2,222
Total People	-470	10	-461	10	-431	-422	-4,003	-4,005	-8,008

6 Transport Impact

Preamble

- 6.1 This chapter considers the impact of the proposals upon the local transport networks, and a comparison with the forecast impact from the 2012 Consented Scheme.

Highways Impact

- 6.2 The car driver trip generation assessment undertaken in the previous chapter, as highlighted in Table 5.12 has demonstrated that there would be a reduction of 461 two-way car driver trips in the AM peak, 422 fewer trips in the PM peak and circa 2,222 trips over the 12-hour daily period in comparison to the 2012 Consented Scheme.

Vehicular trip distribution

- 6.3 The proposed vehicular access arrangements assume the same layout as the 2012 OPP, with left-in only at the western A329 Caversham Road access, and entry/exit from all parts of the site via Troopers Pott's Way.
- 6.4 The proportion of traffic at each access point is summarised in Table 6.1.

Table 6.1: Assumed distribution of site vehicular traffic per access

Access	AM Peak (08:00 – 09:00)		PM Peak (17:00 – 18:00)	
	Arrivals	Departures	Arrivals	Departures
Caversham Road (west access)	35.3%	0.0%	21.0%	0.0%
Vastern Road (east access)	64.7%	100.0%	79.0%	100.0%

- 6.5 The assigned proportion of site traffic on the highway network is also assumed to be the same based on top ten origin and destination information from 2011 Census Data, as highlighted in Table 6.2. The same proportions are applicable for the AM and PM peak development traffic flows.

Table 6.2: Assigned proportion of site traffic per direction

Movement	South-east	South-west	North-west	North-east	Total
Arrivals	36.5%	29.0%	27.2%	7.3%	100%
Departures	55.4%	23.0%	15.8%	5.8%	100%

Net Change in Proposed Scheme Highway Impact

- 6.6 As part of the 2011 Transport Assessment a highways assessment was undertaken using the 2010 baseline traffic flows (undertaken in March 2010, as presented in Table 2.3 of this report) and the proposed private vehicle flows. The same exercise has been undertaken for the

proposed 2018 scheme vehicular trips. The first analysis looks at the percentage increase in traffic flows against the baseline traffic flows. The second analysis compared the increase in vehicles on the road against the 2012 consented scheme.

- 6.7 The first analysis, looking at increase in traffic flows against the baseline is shown below in Table 6.3.

Table 6.3: Increase in traffic flows against the baseline

Highway Link	AM Peak (08:00 – 09:00)	PM Peak (17:00 – 18:00)
Baseline Traffic Flow		
Trooper Potts Way (north)	150	166
Trooper Potts Way (south)	28	24
A329 Vastern Road (Eastbound)	1043	910
A329 Vastern Road (Westbound)	719	927
A329 Caversham Road (Northbound)	1178	1190
A329 Caversham Road (Southbound)	1134	1053
2018 Proposed Scheme Development Flows		
Trooper Potts Way (north)	26	16
Trooper Potts Way (south)	7	32
A329 Vastern Road (Eastbound)	13	27
A329 Vastern Road (Westbound)	20	21
A329 Caversham Road (Northbound)	3	13
A329 Caversham Road (Southbound)	10	6
% Increase on traffic flow		
Trooper Potts Way (north)	17.3%	9.6%
Trooper Potts Way (south)	25.0%	133.3%
A329 Vastern Road (Eastbound)	1.2%	3.0%
A329 Vastern Road (Westbound)	2.8%	2.3%
A329 Caversham Road (Northbound)	0.3%	1.1%
A329 Caversham Road (Southbound)	0.9%	0.6%

- 6.8 As shown in Table 6.3, the percentage increase in traffic flow generated by the Site is minimal. On Trooper Potts Way, there will be a greater change to traffic flows. This is primarily because the road will represent the key access point for the site, and the only egress for vehicles onto the main arterial routes. Currently the road exhibits a very low usage, mainly being used by buses and taxis accessing the station.
- 6.9 The second analysis, showing the net change in development flows on key points on the local highway network in comparison with the 2012 consented scheme is set out in Table 6.3. The corresponding development traffic flow diagrams, showing vehicle flow from the main access roads during the AM and PM peak is attached at **Annex G**.

Table 6.4: Net change in development vehicular flows between 2012 Consented Scheme and 2018 Proposed Scheme

Highway Link	AM Peak (08:00 – 09:00)	PM Peak (17:00 – 18:00)
2012 Consented Scheme Development		
Trooper Potts Way (north)	105	189
Trooper Potts Way (south)	109	96
A329 Vastern Road (Eastbound)	61	54
A329 Vastern Road (Westbound)	131	200
A329 Caversham Road (Northbound)	31	28
A329 Caversham Road (Southbound)	24	43
2018 Proposed Scheme Development Flows		
Trooper Potts Way (north)	26	16
Trooper Potts Way (south)	7	32
A329 Vastern Road (Eastbound)	13	27
A329 Vastern Road (Westbound)	20	21
A329 Caversham Road (Northbound)	3	13
A329 Caversham Road (Southbound)	10	6
Net Change in Development Flows		
Trooper Potts Way (north)	-79	-173
Trooper Potts Way (south)	-102	-64
A329 Vastern Road (Eastbound)	-48	-27
A329 Vastern Road (Westbound)	-111	-179
A329 Caversham Road (Northbound)	-28	-15
A329 Caversham Road (Southbound)	-14	-37

- 6.10 Table 6.3 demonstrates that there will be a reduction in vehicular traffic associated with the proposed development in comparison with the consented scheme upon all highway links.
- 6.11 Additionally, it should be noted that the eastbound vehicular flows exiting the site from the Station Square access are anticipated to be lower than those agreed in the 2012 Consented Scheme.

Public Transport Impact

- 6.12 The forecast trip generation upon bus and rail networks has been outlined in the previous chapter, which is significantly less than presented in the February 2011 Transport Assessment. This is summarised in Table 6.4.

Table 6.5: Net change in bus and rail trips between 2012 OPP and 2018 Proposed Development

Mode	2012 OPP 12-hour Trips (two-way)	2018 Proposed Development 12-hour Trips (two-way)	Net Change
Bus	6,052	2,633	-3,419
Rail / Underground	3,880	3,202	-678

- 6.13 Compared to the 2012 OPP, there will be a reduction of 3,419 two-way bus journeys over the 12-hour period.
- 6.14 Table 5.1 shows that the Site is projected to generate 256 two-way bus journeys in the PM peak hour. Under the assumption that 60% of residents at PM peak hour elect to use the bus services which make stops directly outside the Site, there is anticipated to be an increase of six passengers per bus stopping directly outside the Site. Given that there is direct, covered pedestrian access to the south side of Reading Station, which offers more than 20 additional bus routes, 60% is considered a reasonable assumption. This increase in bus trips can be easily accommodated on existing bus services.
- 6.15 Compared to the 2012 OPP, there will be a reduction of 678 two-way rail trips over the 12-hour period.
- 6.16 Table 5.1 shows that the Site is projected to generate 336 two-way rail trips in the PM peak. As shown in Table 2.1, there are 80 trains per hour departing and arriving at the station. Therefore, there will be an average increase of four passengers per train. The increase in train trips can be easily accommodated on the existing train services.

Pedestrian and Cyclist Impact

- 6.17 The forecast trip generation upon pedestrian and cyclist modes has been outlined in the previous chapter, which is significantly less than presented in the February 2011 Transport Assessment. The net change is summarised in Table 6.5.

Table 6.6: Net change in pedestrian and cyclist trips between 2012 OPP and 2018 Proposed Development

Mode	2012 OPP Daily Trips (two-way)	2018 Proposed Development Daily Trips (two-way)	Net Change
Pedestrian	4,003	3,758	-245
Cyclists	1,139	1,139	-545

- 6.18 It is proposed to enhance the mitigation proposed for pedestrians and cyclists, compared with the expired 2012 outline consent, to include:
- An enhanced Station Square
 - The Avenue
 - An enhanced crossing of Caversham Road by Northfield Road, to include provision for cyclists.

7 Servicing and Waste Strategy

Refuse

- 7.1 Refuse collections will be undertaken on-street from the internal access road for all buildings. Refuse storage facilities will be provided within the confines of each building, with storage capacity and location provided in accordance with RBC's Waste Operations Service Standards – Appendix A (May 2016).
- 7.2 For the purposes of waste storage and collection:
- Four bin storage facilities will be provided at basement level, three to serve the phase 1 block, and one to serve the phase 3 block. These are shown in the accompanying Masterplan drawings and will be accessed from Caversham Road to the west side and the internal site road to the east;
 - Six bin storage facilities will be provided at grade to service the remaining blocks. These areas will be accessed from the internal site road and Caversham Road to the west side. These storage areas are shown in the floor plans in **Annex A**.
 - Six servicing/delivery bays are proposed on The Avenue.
- 7.3 The minimum requirements for refuse storage according to RBC's Waste Management Guidelines for Property Developers, Architects, Planners and Contractors and BS 5909:2005 guidance are set out in Table 7.1.

Table 7.1: Minimum refuse storage requirements

Land Use	Weekly Arisings (litres)	1,100 litre bin (twice weekly collection)
A1-5 Retail	15,120	6
B1 Office	63,580	29
D1 Health/Community Use	400	0
C3 Residential Flats	-	65
Total	-	100
Use 240 litre bins (twice weekly collection)		
C3 Residential Houses		33
Total		33

- 7.4 The proposed development will provide 118 1,100 litre bins across the Site for the commercial and flatted residential development and 33 240-litre bins for the residential town houses, demonstrating that it meets the minimum requirements for refuse storage. The storage requirements calculated for the Site assume that residential and commercial waste will be collected twice weekly.

- 7.5 In accordance with the Waste Management Guidelines for Property Developers, Architects, Planners and Contractors, the storage bins provided will be swapped round mid-week to enable tenants to access the bins from the front face. Each of the front-facing bins in the storage areas will have a 2m clearance in front, to enable them to be accessed and safely moved.

Deliveries

- 7.6 A Servicing Management Plan will be secured through a planning condition.
- 7.7 Deliveries will be undertaken from dedicated on-street loading bays provided within the site's boundary, accessible via the internal access route. Swept path analyses are shown in **Annex H**. Delivery vehicles will be able to use either access to enter the site, but will exit the site via the eastern access only.
- 7.8 Servicing and delivery vehicles (<7.5 tonne and/or 10m Rigid HGV vehicles) are proposed to enter the site via access junctions at Vastern Road (Plots 1 and 2) and Caversham Road (Plot 3 and the western service yard for Plot 2).
- 7.9 In terms of assessing the future servicing provision on the Site, the illustrative scheme floor areas have been used to make an assessment. The servicing trip rates for the different land uses can be seen in Table 7.2 below. All trip rates are based on previous project experiences and surveys.

Table 7.2: Servicing – Daily Trip Rates

Land Use	Trip Rates (per 100 sqm)		Number of daily trips
	In	Out	
Office	0.5	0.5	1
Retail	2	2	6
Café/Restaurant	2	2	4
Residential	24	23	47
Health/Community	0	0	0
TOTAL	28.5	27.5	58

- 7.10 It is estimated that the proposed Illustrative Scheme development will generate around 58 daily servicing trips across all three Plots. It is anticipated that service and delivery vehicles accessing the site will be no larger than a standard 10m rigid vehicle.
- 7.11 To accommodate the forecast number of daily service trips, four servicing bays will be provided on The Avenue. The servicing bays provided are 2.7m deep and 12m long, to enable vehicles up to 10m long to service the Site. This level of provision is based on previous project experiences and surveys. Furthermore, vehicle tracking has been carried out as part of this assessment which shows sufficient space for both servicing and refuse vehicles to access all parts of the Site via the internal roads.

8 Construction Impacts

- 8.1 The proposed development will require demolition of the existing former Royal Mail Sorting Office buildings and the construction of the Development.
- 8.2 Demolition and construction will require the removal of spoil and materials from the site and the import of building materials.
- 8.3 The proposed indicative phasing of the construction works can be seen in Table 8.1 below.

Table 8.1: Indicative construction programme

Phase	Start	Approximate Duration	Development
Enabling	Q3 2019	18-20 months	-
One	Q1 2020	24-26 months	Block 1A + 1B
Two	TBC	18-20 months	Block 2A + 2B
Three	TBC	22-24 months	Block 3A – 3D

- 8.4 All construction traffic would access and egress the site via a left in/left out turn from Caversham Road. Since the access is located on the A4155, access to the wider area and the Motorway can be made directly via the M4, A329 and A33 and is therefore adequate for HGV vehicles. These routes would seek to ensure minimum disturbance to surrounding occupiers.
- 8.5 Construction traffic and activities associated with the development would be carefully managed to mitigate impacts on the local road network.
- 8.6 All construction traffic entering and leaving the site would be closely controlled ensuring the safety of pedestrians and other road users. Some minor loss of pedestrian amenity would be anticipated, but no additional road crossing delays surrounding the site would be expected and access to all existing bus stops is to be maintained.
- 8.7 Strict monitoring and control of all vehicles entering and existing the site will also be maintained throughout the construction period and will include:
- The setting of specific delivery and collection times;
 - Consolidation of deliveries wherever possible;
 - The requirement for prior authorisation with the logistics manager when visiting the site via vehicle;
 - Pedestrian access will be maintained adjacent to the work at all times; and
 - Ensuring vehicles are clean on leaving the site and the immediate road and pavement surfaces are kept clear of debris.

- 8.8 The number of construction workers on-site at any one time would depend upon the phasing of the development. To minimise traffic on site, staff and the labour force would be encouraged to use public transport. The proximity of the site to Reading station and a number of bus routes should ensure that this is the case for the majority of employees. No parking on the local roads would be allowed and the Contractor/Construction Manager would collaborate to enforce this. Provision would be made within the site for essential on-site parking only. Site personnel would access the site via bio-metric security gates, which would be segregated from vehicular access.
- 8.9 Whilst no long-term road closures are envisaged, short term closures may be required in order to transport abnormal loads or establish and remove cranes. If these are required, they would be undertaken at weekends or during evenings to minimise disruption to traffic and consent would be obtained from Reading Borough Council. Notice would be given by the Contractor in advance of the required closure or diversion dates.
- 8.10 A Construction Environmental Management Plan (CEMP) would be implemented prior to commencement of demolition and construction works. This would be approved and enforced by the Council under a planning condition in the planning permission sought.
- 8.11 There would be an increase of HGV movements during demolition and construction. Management strategies formed as part of the CEMP would be implemented to ensure that any impacts associated with their movements to and from the site are minimised.
- 8.12 These would include a routing agreement to ensure that the most appropriate route is used between the site and spoil processing/disposal site, along with wheel-washing and restricting the hours of operation.
- 8.13 The CEMP would be submitted to RBC (and other relevant bodies) prior to the commencement of the works. Compliance with the CEMP is anticipated to be secured by appropriate planning conditions or obligations, and the obligations contained within it passed onto the main contractors as 'Employer's Requirements' within the contract for the works.

9 Travel Plans

- 9.1 A Residential Travel Plan and Commercial Travel Plan have been developed alongside this Transport Assessment and can be seen in **Annex J** and **K** of this report. The travel plans include overarching objectives aimed at promoting sustainable travel to, from and within the Development. The strategic objectives adhere to:
- Promoting Public Transport;
 - Reducing Car Use; and
 - Encouraging Walking and Cycling.
- 9.2 The implementation of the travel plan and target monitoring will improve Site accessibility and reduce car use by encouraging more sustainable travel options.
- 9.3 More detailed Travel Plans would be secured through the S106 agreement.

10 Summary and Conclusions

Summary

- 10.1 This Transport Assessment has been prepared by Steer on behalf of Hermes Investment Management (the 'Applicant') for the forthcoming planning application to RBC involving the demolition of the existing former Royal Mail site and redevelopment of a mixed-use scheme ('Reading Metropolitan'). The site is located immediately to the north of Reading railway station's northern entrance and to the south of Vastern Court Retail Park.
- 10.2 This revised version of the Transport Assessment has summarised the key elements of the scheme related to transport to address RBC's queries received to date, and it is anticipated that the full Transport Assessment submitted as part of the application will address additional elements of the scheme related to transport. It should be reiterated that the design proposals are currently evolving, and the full Transport Assessment will be based upon the final scheme design submitted for planning.
- 10.3 The indicative development proposals at this stage comprise the following land use:
 - 58,545 sqm GEA of residential (Use Class C3);
 - 1,889 sqm GEA of retail (Use Class A1 and A3);
 - 16,604 sqm GEA of office floorspace (Use Class B1); and
 - 772 sqm GEA of Health and Community Centre (Use Class D1)
- 10.4 Overall there is a site wide increase of 16,690 sqm in gross external floor area (excluding plant, cycle parking and refuse areas) since the 2012 OPP achieved in March 2012 for an alternative mixed-use scheme (LPA Ref: 11/00276/OUT). There is an increase in land use for office and residential use.
- 10.5 The 2018 Proposed Scheme will reduce the total parking from the 2012 OPP with a maximum of 301 car parking spaces site-wide, to 94 car parking spaces site-wide. 4 will be allocated to the office use, 72 to residential use, with the remaining 20 spaces allocated to retail, health/community centre use and servicing.
- 10.6 620 cycle parking spaces will be provided, above and beyond the minimum requirements set out in RBC policy.
- 10.7 Delivery and servicing will remain as per existing arrangements from the 2012 OPP, with operations undertaken from the nearest safe kerbside location within the proposal internal road network.
- 10.8 The vehicular access will adopt the same approach as the 2012 OPP, permitting a left-in arrangement at both the western access to the A329 Caversham Road, and the eastern access to the A329 Vastern Road, and a left-out arrangement only at the eastern access to avoid 'rat running' through the site. Cyclists will be able to enter and exit from both access points. A two-way flow of traffic movement will be permitted along the majority of the internal road network within the site's boundary to increase the convenience for vehicle users.

- 10.9 A multi-modal trip generation assessment has been undertaken using the most recent census and TRICS data to provide a more accurate forecast. This has concluded that:
- There will be a much lower impact upon the surrounding highway network than the 2012 OPP. As the impacts of 2012 OPP were considered acceptable, it follows that the impacts of the current proposals should also be acceptable
 - In view of the high level of public transport accessibility, there will be insignificant impacts upon public transport modes.

Conclusions

- 10.10 With the mitigations proposed, it is considered that the transport impacts of the development can be accommodated on the surrounding highway and public transport networks. Therefore, the development is considered to accord with the relevant local and national policies.

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