



Proposed Residential Development
Cadogan House, Reading

Transport Statement

For
Hillnic

Document Control Sheet

Proposed Residential Development

Cadogan House, Reading

Hillnic

This document has been issued and amended as follows:

Date	Issue	Prepared by	Approved by
30/08/2018	1 st Draft	Calum McGoff	James Bancroft
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1.0 Introduction

- 1.1 This Transport Statement has been prepared on behalf of Hillnic to support the conversion, under permitted development rights, of an existing B1 office building to 39 residential dwellings at Cadogan House, Reading.
- 1.2 The site is located to the east of Rose Kiln Lane just north of its junction with the A33. The A33 leads north to Reading town centre and south to Junction 11 of the M4 and Basingstoke. The site is well located with respect to sustainable transport opportunities with bus stops located approximately 400 metres to the north of the site whilst Reading and Reading West stations are located approximately 1.5 kilometres to the north and north-west respectively.
- 1.3 This application relates to the entirety of Cadogan House, which currently consists of approximately 1,000 square metres of office space. The proposals seek to convert the existing office space into 39 residential dwellings.
- 1.4 This Transport Statement, which should be read in conjunction with the Planning Statement prepared by Pegasus, demonstrates that:
 - ▶ The site is accessible by the more sustainable modes of travel including foot, cycle and public transport and is well located to enable future residents to walk to a range of local facilities and amenities;
 - ▶ The proposed conversion of the office space to residential use will lead to a material reduction in trips associated with the site;
 - ▶ The proposals will not result in increased demand for parking or servicing, and will comply with the adopted parking standards; and,
 - ▶ The proposals will not lead to any harm to the existing operation and free flow of traffic on the adjoining highway network.
- 1.5 Following this introduction, this Transport Statement is split into five sections as follows:
 - ▶ Section 2 outlines the national and local transport planning policies considered pertinent to the application;
 - ▶ Section 3 sets out the existing use of the site and provides a description of the surrounding area and highway network;
 - ▶ Section 4 provides an overview of the proposed development and details of the proposed access, parking and servicing arrangements;
 - ▶ Section 5 assesses the trip generating potential of the proposals and provides an overview of the impacts that these are likely to be compared with the existing use of the site; and,
 - ▶ Section 6 summarises the key findings and conclusions of this report.

2.0 Transport Planning Policy Context

Overview

- 2.1 There are a number of documents that contain policies relevant to transport. The key policy documents which set the context for the development proposals are as follows:

- ▶ National Planning Policy Framework – July 2018;
- ▶ Planning Practice Guidance;
- ▶ Reading Borough Local Development Framework, Core Strategy – January 2008; and,
- ▶ Reading Borough Local Development Framework, Sites and Detailed Policies Document – October 2012

National Planning Policy Framework

- 2.2 The National Planning Policy Framework (NPPF) was published in July 2018 and sets out a presumption in favour of sustainable development that recognises the importance of transport policies in facilitating sustainable development, and that planning decisions should have regard to local circumstances. In this regard, paragraph 102 states that:

"Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- *The potential impacts of development on transport networks can be addressed;*
- *Opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- *Opportunities to promote walking, cycling and public transport use are identified and pursued;*
- *The environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- *Patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places."*

- 2.3 Similarly, paragraph 103 states that:

"The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making. "

- 2.4 Paragraph 110 therefore requires developments to be located and designed to:

"... give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport..."

- 2.5 Ultimately, the NPPF requires local planning authorities to ensure that:

- *"Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*

- *Safe and suitable access to the site can be achieved for all users; and*
- *Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.*

2.6 Indeed paragraph 109 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."

2.7 In relation to parking policy, the NPPF states that:

"If setting local parking standards for residential and non-residential development, local planning authorities should take into account:

- *The accessibility of the development;*
- *The type, mix and use of development;*
- *The availability of and opportunities for public transport;*
- *Local car ownership levels; and,*
- *The need to ensure an adequate provision of spaces for charging plug-in and other ultra low emission vehicles."*

2.8 However, this is qualified by the following:

"Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport (in accordance with chapter 11 of this Framework). In town centres, local authorities should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists."

Planning Practice Guidance

2.9 The Planning Practice Guidance (PPG), which is available of the Department for Communities and Local Government (DCLG) website, supports the overarching aims of the NPPF. Highways and transportation matters are dealt with at Section ID42 of the NPPG under the heading of *"Travel plans, transport assessments and statements in decision taking"*.

2.10 With respect to Transport Assessments and Transport Statements paragraph 15 of ID42 notes a planning application should typically consider the following:

- *information about the proposed development, site layout, (particularly proposed transport access and layout across all modes of transport);*
- *information about neighbouring uses, amenity and character, existing functional classification of the nearby road network;*
- *data about existing public transport provision, including provision/ frequency of services and proposed public transport changes;*
- *a qualitative and quantitative description of the travel characteristics of the proposed development, including movements across all modes of transport that would result from the development and in the vicinity of the site;*

- *an assessment of trips from all directly relevant committed development in the area (i.e. development that there is a reasonable degree of certainty will proceed within the next three years);*
- *data about current traffic flows on links and at junctions (including by different modes of transport and the volume and type of vehicles) within the study area and identification of critical links and junctions on the highways network;*
- *an analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent three-year period, or five-year period if the proposed site has been identified as within a high accident area;*
- *an assessment of the likely associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas);*
- *measures to improve the accessibility of the location (such as provision/ enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms;*
- *a description of parking facilities in the area and the parking strategy of the development;*
- *ways of encouraging environmental sustainability by reducing the need to travel; and*
- *measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads.*

Reading Borough Local Development Framework

- 2.11 Planning applications within Reading Borough are assessed against the planning policies contained within the Core Strategy adopted in 2008 and The Sites and Detailed Policies Document adopted in 2012. A summary of the policies which are relevant to the proposals are as follows:
- ▶ Core Strategy Policy CS22 - Transport Assessments: Developments should ensure an adequate level of accessibility.
 - ▶ Core Strategy Policy CS24 - Car/Cycle Parking: Car parking standards and cycle parking requirements will be applied in relation to the accessibility of locations to sustainable transport facilities.
 - ▶ Sites and Detailed Policies Document Policy DM12: Access and servicing arrangements to developments should be safe and comply with the Highway Authorities standards.
- 2.12 Having regard to Core Strategy Policy CS24 it should be noted that the adopted parking standards are set out in the Reading Borough Council Supplementary Planning Document entitled "Revised Parking Standards and Design" (SPD) adopted October 2011. The guidance operates on a zonal system depending on the proximity of sites to local centres and public transport provision.
- 2.13 The application site is within Zone 2, the Primary Core Area which surrounds the town centre makes up Zone 1. Zone 2 extends to walking distances up to 2 kilometres from the town centre and includes areas well served by public transport. The boundary between Zone 1 and Zone 2 is the Inner Distribution Road and is noteworthy that the boundary between Zone 1 and Zone 2 is only circa 200 metres north of the application site.
- 2.14 The maximum parking standards for 1/2 bed dwellings within Zone 2 is 1 space per unit, while the maximum parking standards for 1/2 bed dwellings within Zone 1 is 0.5 spaces per dwellings. The SPD also requires cycle Parking to be provided at a minimum ratio of 0.5 spaces per dwelling.

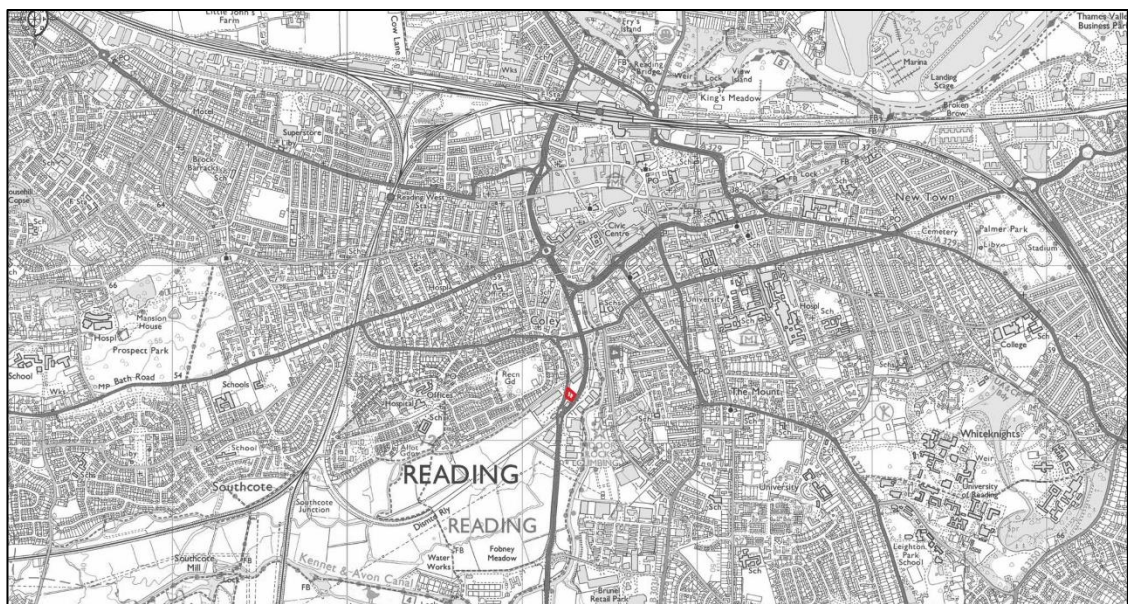
3.0 Baseline Conditions

Overview

- 3.1 So that the context of the site can be established, a review of the local highway network in the vicinity of the site has been undertaken. The following text summarises this review and makes reference to the location of the site and baseline traffic conditions. It also sets out an overview of the accessibility of the site by a variety of modes of transport.

Site Details

- 3.2 The application site is located on the east side of Rose Kiln Lane approximately 1.2 kilometres south of the centre of Reading. The A33, which follows a north-south alignment on the site's eastern boundary, provides access to Reading town centre along with the M4 and the wider highway network. A plan showing the site in relation to the local highway network is shown below.



Site location Plan

- 3.3 Cadogan House is currently occupied by 1,026 square metres of office space (B1 Land Use). In this regard, it benefits from an existing access on Rose Kiln Lane serving both vehicles and pedestrians and a 35 space car park.

Planning History

- 3.4 It is noteworthy that, aside from the existing B1 use, an application to convert the building to 19 residential dwellings under permitted development rights was approved in March 2018 (Ref: 172277). RBC, in their capacity as the local highway authority, made no objection on highways and transportation grounds.

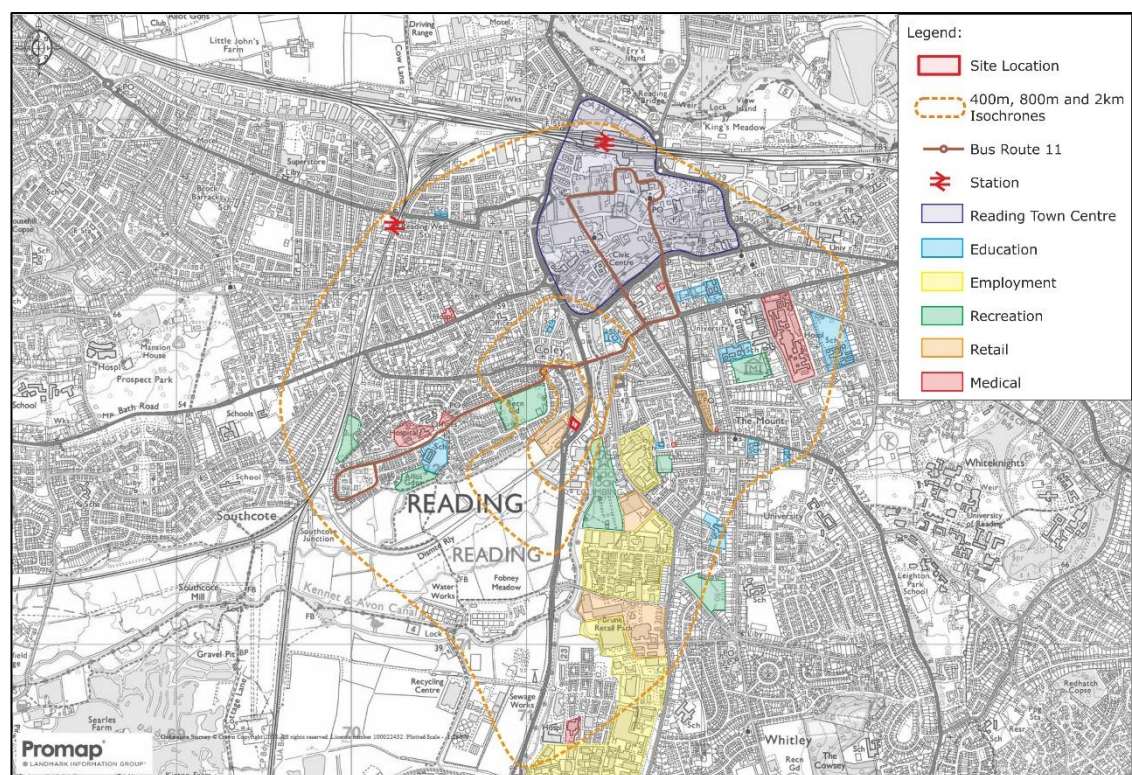
Sustainable Transport Networks

- 3.5 It is generally accepted that walking and cycling provide important alternatives to the private car and should also be encouraged to form part of longer journeys by public transport. Indeed, it is noteworthy that the Institute of Highways and Transportation (IHT) has prepared several guidance documents that provide advice with respect to the provision of sustainable travel in conjunction with new developments. Within these documents it is suggested that:

- ▶ Most people will walk to a destination that is less than one mile (*Planning for Walking, 2015*);
 - ▶ The bicycle is a potential mode of transport for all journeys under five miles (*Planning for Cycling 2015*); and,
 - ▶ Walking distances to bus stops should not exceed 400 metres, with people being prepared to walk twice as far to rail stations (*Planning for Walking 2015*).
- 3.6 Notwithstanding the above, it should be noted that Manual for Streets (MfS) identifies 'walkable neighbourhoods' as being "characterised by having a range of facilities within 10 minutes (up to about 800m) walking distance of residential areas which residents may access comfortably on foot". However, it is important to recognise that MfS does not consider 800 metres to be a maximum walking distance. Indeed, MfS and TD91/05 of the Design Manual for Roads and Bridges (DMRB) contend that walking can be used to access a variety of destinations within a range of two kilometres and two miles respectively.
- 3.7 Having regard to the above, it is considered that the site is accessible by the more sustainable modes of travel including foot, cycle and public transport. Details of each of these sustainable modes of transport are set out below.

Accessibility by Foot

- 3.8 Rose Kiln Lane, which benefits regular street lighting, has wide footways on either side of its carriageway that link the site to local bus stops. They also provide connections to a range of facilities and amenities. Indeed, it is worthy of note that pedestrian crossing facilities such as tactile paving and signalised crossings are provided on Rose Kiln Lane itself as well as the A33 and A4. As such, pedestrian routes to local facilities and amenities benefit from safe and convenient crossing facilities. A plan showing the site in relation to local amenities is shown below, with a summary of typical walk/cycle times provided at Table 3.1.



Local Amenity Plan

Destination	Distance (metres)	Typical Journey Times (minutes)	
		Foot	Cycle
Public Transport Interchanges			
St Saviours Road Bus Stops	400	5	1
Reading Railway Station	1,900	24	6
Reading West Railway Station	1,900	24	6
Community Facilities			
Coley Park Community Centre	1,300	16	4
St Giles Church	1,000	13	3
Allotments	1,400	18	4
Health Facilities			
The Berkshire Independent Hospital	1,200	15	4
Coley Park Surgery	1,100	14	3
Education Facilities			
Katesgrove Primary School	800	10	3
Coley Primary School and Nursery	600	8	2
The Palmer Academy	1,900	24	6
The Wren School	2,000	25	6
Blessed Hugh Faringdon Catholic School	2,700	N/A	8
Local Retail Outlets			
Home Bargains	100	1	1
The Food Warehouse	100	1	1
Spar	500	6	2
Bally Convenience Store	600	8	2
Open Spaces			
Coley Recreation Ground	450	6	1
Waterloo Meadows	1,100	14	3
Katesgrove Playground	650	8	2
Key Employment Areas			
Neighbouring Commercial Estate	-	0	0
Nimrod Industrial Estate	1,200	15	4
Reading Town Centre	1,500	19	5
Green Park	2,500	N/A	8

Table 3.1 – Typical Journey times to Key Local Services

Accessibility by Cycle

- 3.9 The area surrounding the site is considered suitable for cyclists. A shared foot/cycle way adjoins Rose Kiln Lane's southbound carriageway providing a link to a network of local cycle routes as well as National Cycle Route 4, a long distance route from London to Fishguard via Reading, Bath, Bristol, Newport and Swansea. It is possible to access both Reading and Reading West Stations along with the town centre and major employment sites such as Green Park and Reading International Business Park using this network. The local cycle routes are attached at [Appendix A](#).

Accessibility by Public Transport

- 3.10 The closest bus stops to the site are located approximately 400 metres north of the site on St Saviours Road. These stops benefit from shelters, seating and timetable information and can be accessed via lit footways.
- 3.11 These bus stops are serviced by Route 11 which provides a link between Coley Park and Reading town centre including Reading Station every 20 minutes throughout the day.

Accessibility by Rail

- 3.12 Reading and Reading West stations are both located approximately 1.5 kilometres from the site. Both can be accessed by foot or cycle, whilst Reading Station is also served by Bus Route 11. Reading Station provides access to a wide range of services including regular connections to destinations such as London Paddington, London Waterloo, Bristol, Cardiff and the South West.

Road Safety

- 3.13 ID42-015 of the NPPG recommends that:
- "an analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent three-year period, or five-year period in the proposed site has been identified as within a high accident area."*
- 3.14 Whilst there is no suggestion that the local highway network is subject to an abnormally high accident rate, Personal Injury Accident (PIA) data recorded within the immediate vicinity of the site, defined as the stretch of Rose Kiln Lane approximately 100 metres either side of the site access, has been downloaded from the *Crashmap* website for the last available five year period covering 2013 to 2017. Based upon this information, which includes location, severity and the manoeuvre being performed at the time (see **Appendix B**), it is apparent that just one accident was recorded within the study period, it was classified as 'slight' in severity. Given the low frequency of accidents, it is considered that the local highway network is not subject to any defects that result in an abnormally high accident rate.

Summary of Baseline Conditions

- 3.15 The above review demonstrates that the site is readily accessible by a variety of modes of transport that have the potential to reduce reliance on the private car. In addition to this it has been established that the site is well located to a range of key local amenities. It is therefore considered that its location accords with the guiding principles of the National Planning Policy Framework. It is also apparent that the local highway network is not subject to any highway safety concerns that lead to an abnormally high accident rate.

4.0 Development Proposals

Overview

- 4.1 The proposals seek to convert an existing office building to provide 39 flats. The remainder of this section sets out the proposed access, parking and servicing arrangements.

Access Strategy

- 4.2 The existing access on Rose Kiln Lane will be retained. As this access was designed to serve a commercial building, it is considered that it provides a safe means of access to the site. This is particularly evident that no accidents have been recorded at the access itself in the last five years. Moreover, the analyses presented at Section 5 clearly demonstrate that the traffic generating potential of 39 dwellings is considerably lower than that associated with the current use. The current access will therefore continue to provide a safe and suitable means of access to the site.

Car Parking Arrangements

- 4.3 As outlined in Section 3, the site currently provides 35 car parking spaces, it is intended that these be retained. This represents a site wide provision of 0.9 spaces per dwelling.
- 4.4 RBC's 'Revised Parking Standards and Design SPD' indicates a maximum provision of one space per dwelling for one bed flats located in Zone 2. This results in a requirement for a total of 39 spaces. RBC's parking standards state that *"should a developer require fewer spaces than are set out here then there would need to be a demonstration, to the Highway Authority's satisfaction, that there would be no detriment to highway safety as a result"*.
- 4.5 An interrogation of 2011 Census Data (provided at **Appendix C**) indicates that average car ownership rates amongst one bed flats in the order 0.6 cars per dwelling, lower than both the one space per dwelling standard and the proposed provision of 0.9 spaces per dwelling. Indeed, the calculations provided at **Appendix D**, which take into anticipated increases in car ownership within Reading up to 2026 (i.e. the end of the current plan period), indicate that the proposed development is likely to generate a peak residential parking demand for 33 spaces.
- 4.6 As the proposed development incorporates 35 parking spaces, it is considered that the proposals provide an appropriate level of off-street that will ensure that the potential overspill of parking onto surrounding streets is minimised. This is particularly evident given that information regarding similar sites, contained within the industry standard TRICS database, suggests typical parking demands will be in the order 20 vehicles (see **Appendix E**).
- 4.7 To this end it is considered that the level of parking provided at the proposed development is such that it is highly unlikely there will be any overspill of parking onto surrounding roads. In the event that the peak demands outlined at **Appendices D** and **E** are exceeded, there is potential for visitors to the proposed development to make use of unrestricted on street parking in Admirals Court and Laud Close located approximately 150 metres to the north of the site access. This is consistent with guidance contained within Manual for Streets (MfS), which notes at paragraph 8.3.15 that *"it is not always necessary to provide parking on site"*.
- 4.8 When considering the above it is also noteworthy that the current use is likely to generate a peak parking demand equivalent to circa 37 vehicles (see **Appendix F**). Given that the current site provides space for 35 vehicles to park on site, it is considered inevitable that a proportion of this demand will be displaced onto the surrounding highway network. In this regard, it is clear that the proposed development will have an overall benefit to the local area in terms of minimising demand for on-street parking.

Cycle Parking Arrangements

- 4.9 The proposed development generates a need for at least 20 cycle parking spaces. These will either be re-provided using the existing on-site cycle parking provision or through the construction of a new secure cycle store.

Servicing Arrangements

- 4.10 Cadogan House is currently served by a bin store located in the car park. It is intended that refuse generated at the site will be stored and collected from this location using vehicles of a similar size to that which already visit the site on a regular basis (see **Appendix G**).
- 4.11 All other deliveries would take place on site. As these are likely to be undertaken using similar vehicles to that which currently serve the existing office, it is considered that home deliveries can be satisfactorily accommodated within the boundary of the site.

5.0 Trip Generation Assessment and Development Impact

Overview

- 5.1 This section outlines the trip generating of the proposed residential development in comparison to the existing offices. The assessment presented in this section compares traffic generation the traffic generation of the existing and proposed uses during the morning (AM) and evening (PM) peak hours and across the course of a typical day, which for the purposes of this assessment is taken to be between 07:00 and 19:00.

TRICS Assessment

- 5.2 The TRICS database (version 7.5.2) has been interrogated to find comparable sites in order to obtain trip rate information for the existing and proposed land uses at the site. The subsequent TRICS output files are attached at [Appendix H](#).

Existing Trip Generation

- 5.3 The site currently comprises 1,026 square metres of office accommodation. Weekday surveys for the 'employment/office' land use category for sites between 500 and 2000 square metres in 'Edge of Town Centre' locations. Trip rates per 100 square metres of gross floor area and person trip attraction linked with the existing site are set out in Table 5.1.

Time Period	Trip Rates (per 100 sqm)			Person Trips (1,026 sqm)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
AM Peak (0800-0900)	4.179	0.256	4.435	43	3	46
PM Peak (1700-1800)	0.604	3.168	3.772	6	33	39
Daily (0700-1900)	15.659	15.783	31.442	161	162	323

Table 5.1 – Trip Attracting Potential of 1,026 square metres of Office Space

- 5.4 To establish the modal breakdown of trips associated with the existing use, the person trips outlined in Table 5.1 have been factored using 2011 Census data from the *Nomis* website for the local area. Copies of the data extracted are provided at [Appendix I](#), while Table 5.2 provides a summary of the results.

Mode		AM Peak		PM Peak		Daily	
		Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Public Transport	12.9%	5	0	1	4	21	21
- Rail	3.0%	1	0	0	1	5	5
- Bus	9.9%	4	0	1	3	16	16
Taxi	0.1%	0	0	0	0	0	0
Motorcycle	0.2%	0	0	0	0	0	0
Car/van driver	62.8%	27	2	4	20	101	102
Car/van passenger	4.9%	2	0	0	2	8	8
Pedal Cycle	3.2%	1	0	0	1	5	5
On foot	15.7%	7	0	1	5	25	25
Other	0.1%	0	0	0	0	0	0
TOTAL	100%	43	3	6	33	161	162

Table 5.2 – Person Trip Attraction by Mode

- 5.5 Table 5.2 indicates that the existing use has the potential to generate approximately 50 and 40 person trips during the morning and evening peak periods, with circa 30 of these being attributed to vehicle movements. The daily equivalents are 323 total trips and 203 vehicle trips.

Proposed Trip Generation

- 5.6 It is proposed to redevelop the site to provide 39 residential dwellings. Trip rates for the 'residential/flats privately owned' land use category have been extracted from the TRICS database. Trip rates per flat and the subsequent person trip attraction associated with the proposals are set out below in Table 5.3.

Time Period	Trip Rates (per unit)			Person Trips		
	Arrivals	Departures	Total	Arrivals	Departures	Total
AM Peak (0800-0900)	0.133	0.493	0.626	5	19	24
PM Peak (1700-1800)	0.45	0.211	0.661	18	8	26
Daily (0700-1900)	2.545	2.784	5.329	99	109	208

Table 5.3 – Trip Attracting Potential of 39 Residential Units

- 5.7 As with the existing use the person trips set out above have been factored using 2011 Census data (see [Appendix I](#)), Table 5.4 provides a summary of the results.

Mode		AM Peak		PM Peak		Daily	
		Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Public Transport	14.9%	1	3	3	1	15	16
- Rail	6.8%	0	1	1	1	7	7
- Bus	8.1%	0	2	1	1	8	9
Taxi	0.0%	0	0	0	0	0	0
Motorcycle	0.5%	0	0	0	0	1	1
Car/van driver	56.3%	3	11	10	5	56	61
Car/van passenger	5.7%	0	1	1	0	6	6
Pedal Cycle	5.6%	0	1	1	0	6	6
On foot	16.3%	1	3	3	1	16	18
Other	0.7%	0	0	0	0	1	1
TOTAL	100%	5	19	18	8	99	109

Table 5.4 – Person Trip Attraction by Mode

- 5.8 Table 5.4 indicates that the proposed development has the potential to generate in the order of 25 vehicle movements in the AM and PM peak hours respectively, with circa 15 of these attributed to vehicle trips. The daily equivalents are 208 total trips and 117 vehicle trips.

Development Impact

- 5.9 In order to assess the impact of the proposed development the trip profiles shown in Tables 5.1 and 5.3 have been reviewed. A copy of the calculations undertaken is provided at Appendix J, with a summary of the results presented at Table 5.5.

Mode	AM Peak		PM Peak		Daily	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Public Transport	-5	2	2	-3	-6	-5
- Rail	-1	1	1	0	2	2
- Bus	-4	1	1	-3	-8	-7
Taxi	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0
Car/van driver	-24	9	6	-16	-46	-42
Car/van passenger	-2	1	1	-1	-2	-2
Pedal Cycle	-1	1	1	-1	0	1
On foot	-6	3	2	-4	-10	-8
Other	0	0	0	0	0	1
TOTAL	-38	16	11	-25	-64	-56

Table 5.5 – Development Impact

- 5.10 The above clearly demonstrates that the proposed development will result in an overall net reduction in all trips during both the peak travel periods and across the course of a typical day. In this regard, it is clear that the proposed development will have an overall beneficial impact from a transport capacity perspective and thus does not constitute the serve impact that is referred to in the NPPF as the only legitimate reason to resist a development on transport grounds.

Assessment Summary

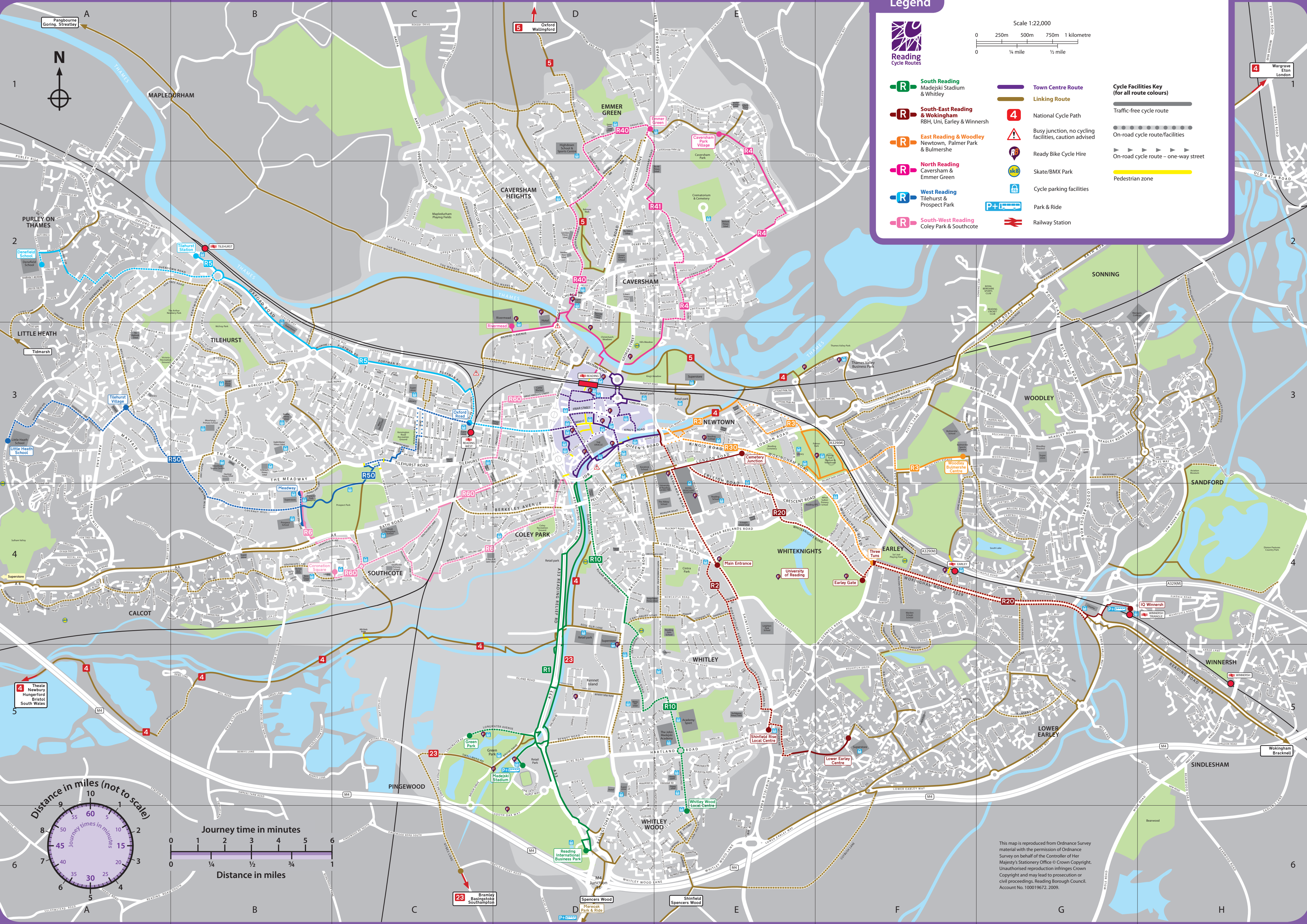
- 5.11 Having regard to the trip rates obtained from the TRICS database it is clear that the proposed change of use of the existing office to 39 residential dwellings will lead to an overall reduction in trips associated with the site. On this basis it is considered that the proposals will not prejudice road safety or the free-flow of traffic or operation of the neighbouring highway network. When the reduction in vehicular trips is considered in conjunction with the reduced demand for parking outlined on Section 4, it is clear that there are no highways and transportation reasons why this prior approval application should be resisted.

6.0 Summary and Conclusions

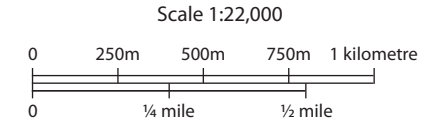
- 6.1 This Transport Statement has been prepared on behalf of Hillnic to support the conversion, under prior approval, of existing office space to 39 residential dwellings at Cadogan House, Reading.
- 6.2 This Transport Statement demonstrates that:
- ▶ The site is accessible by the more sustainable modes of travel including foot, cycle and public transport and is well located to enable future residents to walk to a range of local facilities and amenities;
 - ▶ The proposed conversion of office space to residential use will lead to a material reduction in the traffic associated with the site;
 - ▶ The proposals will not result in increased demand for parking or servicing; and,
 - ▶ The proposals will not lead to any harm to the existing operation and free-flow of traffic on the adjoining highway network.
- 6.3 On the basis of the above, it is considered that the proposals can be accommodated without detriment to the operation of the local highway network. As such, it is considered that there is no reason why the proposals should be resisted on traffic or transportation grounds.

Appendix A

Local Cycle Routes



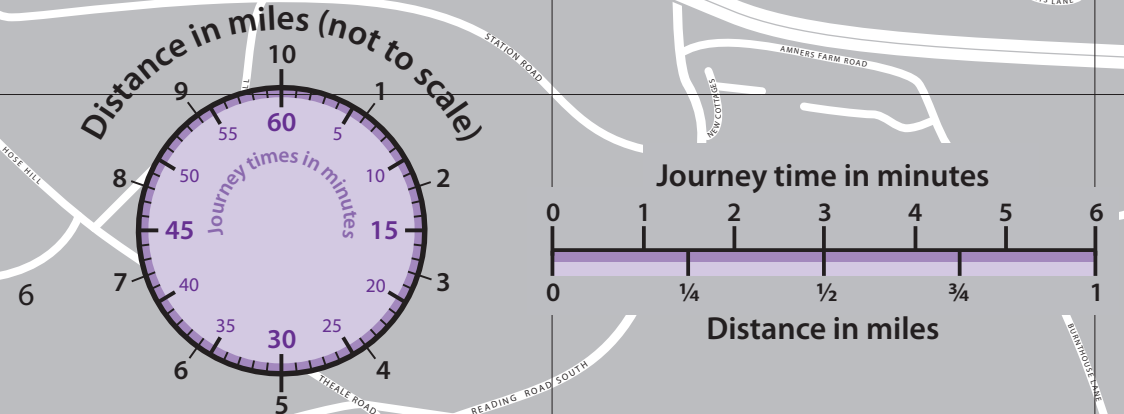
Legend



- R** South Reading
Madejski Stadium & Whitley
- R** South-East Reading & Wokingham
RBH, Uni, Earley & Winnersh
- R** East Reading & Woodley
Newtown, Palmer Park & Bulmershe
- R** North Reading
Caversham & Emmer Green
- R** West Reading
Tilehurst & Prospect Park
- R** South-West Reading
Coley Park & Southcote

- Town Centre Route**
- Linking Route**
- 4** National Cycle Path
- Busy junction, no cycling facilities, caution advised
- Ready Bike Cycle Hire
- Skate/BMX Park
- Cycle parking facilities
- Park & Ride
- Railway Station

- Cycle Facilities Key (for all route colours)**
- Traffic-free cycle route
 - On-road cycle route/facilities
 - On-road cycle route – one-way street
 - Pedestrian zone



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Appendix B

Crashmap Output Reports



crashmap.co.uk

Crash Date: Thursday, June 11, 2015 **Time of Crash:** 12:41:00 PM **Crash Reference:** 201543W087065

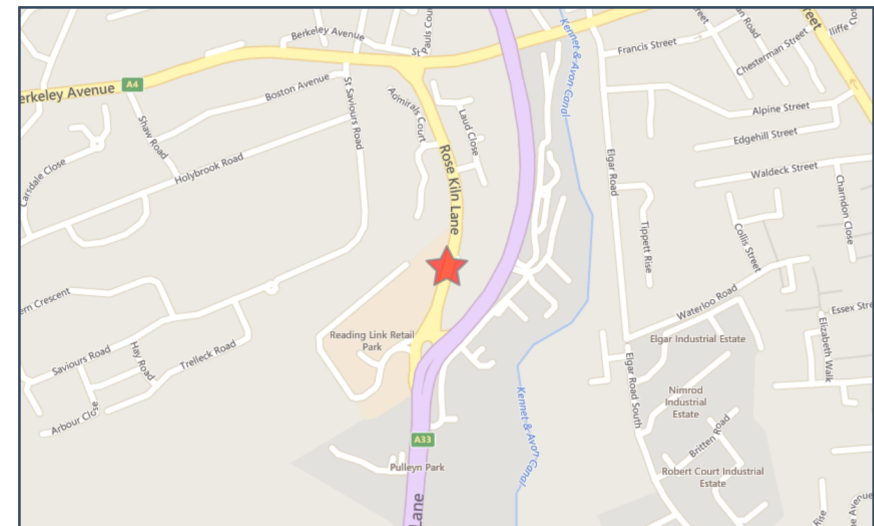
Highest Injury Severity: Slight
Highway Authority: Reading
Local Authority: Reading
Weather Description: Fine without high winds
Road Surface Description: Dry
Speed Limit: 40
Light Conditions: Daylight: regardless of presence of streetlights
Carriageway Hazards: None
Junction Detail: T or staggered junction
Junction Pedestrian Crossing: No physical crossing facility within 50 metres
Road Type: Single carriageway
Junction Control: Give way or uncontrolled

Road Number: U0

Number of Casualties: 1

Number of Vehicles: 2

OS Grid Reference: 471251 172287



For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions



Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	12	Male	Over 75	Vehicle is slowing down or stopping	Front	Other	None	None
2	Car (excluding private hire)	10	Male	Over 75	Vehicle is slowing down or stopping	Back	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Male	Over 75	Unknown or other	Unknown or other

For more information about the data please visit: www.crashmap.co.uk/home/aboutthedata and www.crashmap.co.uk/home/definitions

Appendix C

2011 Census Data – Car Ownership Data

Cadogan House, Reading: 2011 Census Data - Car Ownership Rates

Ward	Dwelling Type	Tenure	Dwelling Size	Total: Car or van availability	No cars or vans in household	1 car or van in household	2 cars or vans in household	3 or more cars or vans in household
E36000879 Minster	Flat, maisonette or apartment	Total: Tenure	1 - 3 rooms	1,022	494	438	84	6
E36000879 Minster	Flat, maisonette or apartment	Owned: Owned outright or with a mortgage or loan	1 - 3 rooms	221	66	119	36	0
E36000879 Minster	Flat, maisonette or apartment	Shared ownership; rented and living rent free	1 - 3 rooms	801	428	319	48	6

Appendix D

Parking Demand Calculations - 2011 Census Data

Cadogan House, Reading

Proposed Scheme Overview

Units	Number
Units	39
TOTAL	39

2011 Census Data Review and Scheme Demands

2011 Census Data

Ward	Rooms	Car/Van Ownership Rates			
		0 cars/vans	1 cars/vans	2 cars/vans	3 cars/vans
Minster	1 to 3	48%	43%	8%	1%

Notes:

Data taken from "CT0103 - Accommodation type by tenure by number of rooms by car or van availability"

Data relates to "Flats, maisonettes or apartment" for both private and shared ownership, rented, and living rent free tenures

Scheme Demands (car/van ownership rates)

	Number of Units	Car/Van Ownership Rates			
		0 cars/vans	1 cars/vans	2 cars/vans	3 cars/vans
Minster	39	19	17	3	0

Scheme Demands (total car/vans)

Scheme demands in 2026

TEMPRO Growth Rates	Growth Rates			
	0 cars/vans	1 cars/vans	2 cars/vans	3 cars/vans
Reading 013 (MSOA)	0.998	1.2164	1.3576	1.5957

Proposed Development	Number	Car/Vans Owned by Future Residents			
		0 cars/vans	1 cars/vans	2 cars/vans	3 cars/vans
Reading 013 (MSOA)	39	19	21	4	0

Visitor spaces 4

Summary

Residents	29
Visitors	4
Total	33
Parking Ratio	0.8

Appendix E

Parking Demand calculations - TRICS

Cadogan House, Reading: Car Parking Demand Calculations (Proposed Residential Use)

TRICS Data - Surveys

Time Range	Survey Data					Average
	CA-03-C-02	CB-03-C-02	CB-03-C-03	RI-03-C-01	SF-03-C-03	
07:00-08:00	28	14	12	6	15	15
08:00-09:00	14	12	11	3	11	10
09:00-10:00	11	13	9	4	9	9
10:00-11:00	13	13	11	4	6	10
11:00-12:00	12	14	11	3	4	10
12:00-13:00	14	16	11	2	6	11
13:00-14:00	13	13	10	2	6	10
14:00-15:00	7	12	7	2	6	7
15:00-16:00	13	12	8	3	5	9
16:00-17:00	18	17	8	3	5	12
17:00-18:00	29	22	10	6	10	17
18:00-19:00	36	22	12	6	13	19

TRICS Data - Demand Rates

	CA-03-C-02	CB-03-C-02	CB-03-C-03	RI-03-C-01	SF-03-C-03	Average
Units	44	35	33	20	30	32

Time Range	Demand Rates (per unit)					Average
	CA-03-C-02	CB-03-C-02	CB-03-C-03	RI-03-C-01	SF-03-C-03	
07:00-08:00	0.636	0.400	0.364	0.300	0.500	0.425
08:00-09:00	0.318	0.343	0.333	0.150	0.367	0.286
09:00-10:00	0.250	0.371	0.273	0.200	0.300	0.274
10:00-11:00	0.295	0.371	0.333	0.200	0.200	0.300
11:00-12:00	0.273	0.400	0.333	0.150	0.133	0.289
12:00-13:00	0.318	0.457	0.333	0.100	0.200	0.302
13:00-14:00	0.295	0.371	0.303	0.100	0.200	0.267
14:00-15:00	0.159	0.343	0.212	0.100	0.200	0.204
15:00-16:00	0.295	0.343	0.242	0.150	0.167	0.258
16:00-17:00	0.409	0.486	0.242	0.150	0.167	0.322
17:00-18:00	0.659	0.629	0.303	0.300	0.333	0.473
18:00-19:00	0.818	0.629	0.364	0.300	0.433	0.528

Proposed Development - Parking Demands

Units 39

Time Range	Demand
07:00-08:00	17
08:00-09:00	11
09:00-10:00	11
10:00-11:00	12
11:00-12:00	11
12:00-13:00	12
13:00-14:00	10
14:00-15:00	8
15:00-16:00	10
16:00-17:00	13
17:00-18:00	18
18:00-19:00	21

Appendix F

Parking Demand Calculations – Existing Use

Cadogan House, Reading: Car Parking Demand Calculations (Existing Use)

TRICS Data - Surveys

Time Range	Survey Data					Average
	BD-02-A-03	CB-02-A-02	HF-02-A-03	KC-02-A-09	NF-02-A-02	
07:00-07:30	0	3	4	5	2	3
07:30-08:00	0	10	4	19	10	8
08:00-08:30	3	27	6	35	23	18
08:30-09:00	8	29	11	65	39	28
09:00-09:30	15	30	11	81	47	34
09:30-10:00	24	30	11	88	47	38
10:00-10:30	23	30	11	92	47	39
10:30-11:00	23	30	11	92	45	39
11:00-11:30	22	30	11	93	44	39
11:30-12:00	19	29	11	91	41	38
12:00-12:30	19	20	11	90	36	35
12:30-13:00	19	22	11	91	33	36
13:00-13:30	20	21	11	93	32	36
13:30-14:00	19	26	11	95	38	38
14:00-14:30	22	26	11	96	37	39
14:30-15:00	20	26	12	96	37	39
15:00-15:30	22	25	10	95	35	38
15:30-16:00	20	25	9	93	33	37
16:00-16:30	18	25	6	75	32	31
16:30-17:00	11	25	6	38	29	20
17:00-17:30	8	3	5	16	22	8
17:30-18:00	9	2	2	3	13	4
18:00-18:30	7	1	2	3	7	3
18:30-19:00	7	1	2	3	1	3

TRICS Data - Demand Rates

	CA-03-C-02	CB-03-C-02	CB-03-C-03	RI-03-C-01	SF-03-C-03	Average
Floor Area	1469	925	610	1500	894	1080

Time Range	Demand Rates (per unit)					Average
	CA-03-C-02	CB-03-C-02	CB-03-C-03	RI-03-C-01	SF-03-C-03	
07:00-08:00	0.000	0.032	0.066	0.033	0.022	0.031
08:00-09:00	0.000	0.108	0.066	0.127	0.112	0.082
09:00-10:00	0.020	0.292	0.098	0.233	0.257	0.180
10:00-11:00	0.054	0.314	0.180	0.433	0.436	0.284
11:00-12:00	0.102	0.324	0.180	0.540	0.526	0.334
12:00-13:00	0.163	0.324	0.180	0.587	0.526	0.356
13:00-14:00	0.157	0.324	0.180	0.613	0.526	0.360
14:00-15:00	0.157	0.324	0.180	0.613	0.503	0.356
15:00-16:00	0.150	0.324	0.180	0.620	0.492	0.353
16:00-17:00	0.129	0.314	0.180	0.607	0.459	0.338
17:00-18:00	0.129	0.216	0.180	0.600	0.403	0.306
18:00-19:00	0.129	0.238	0.180	0.607	0.369	0.305

Proposed Development - Parking Demands

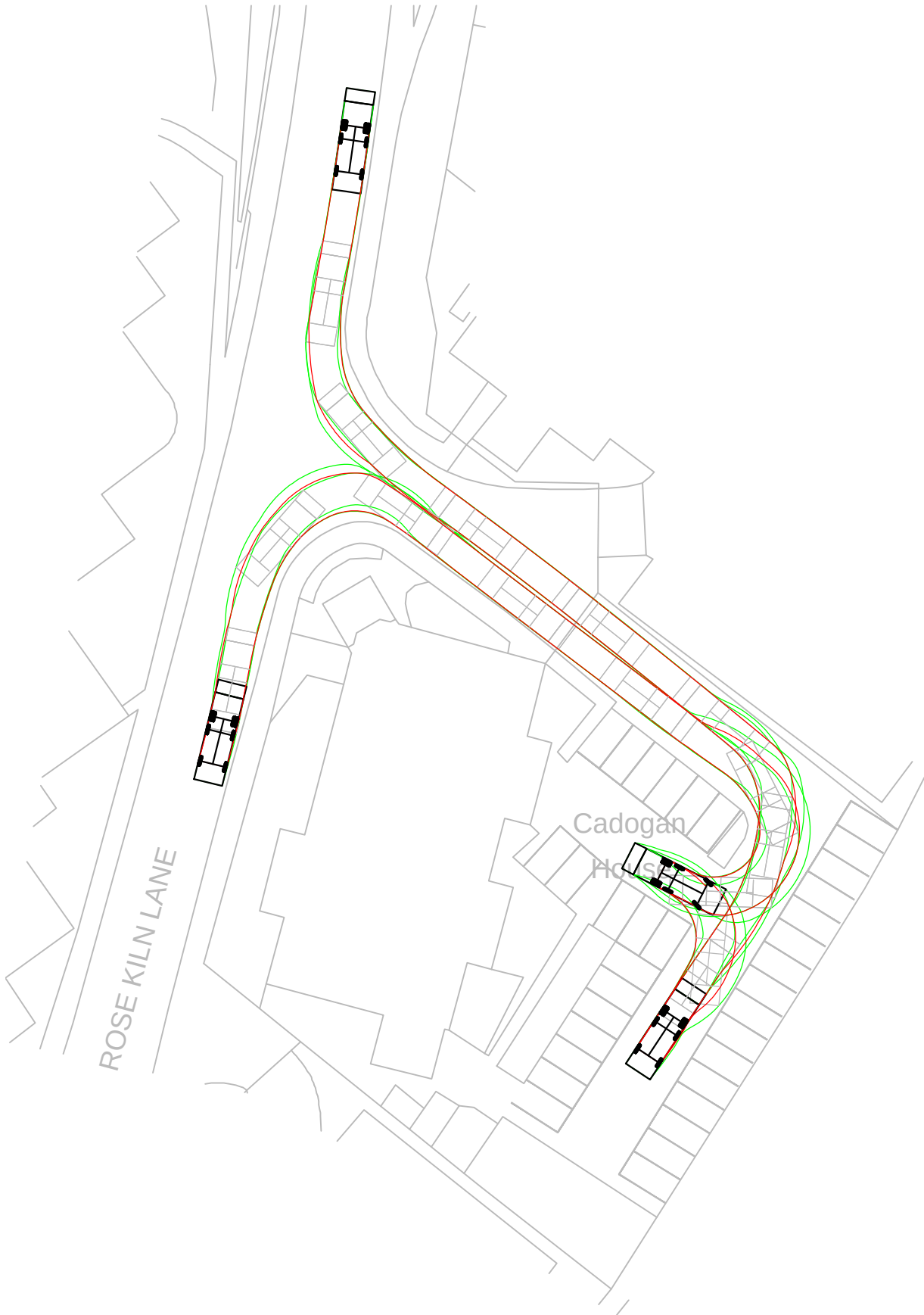
Floor Area 1026

Time Range	Demand
07:00-08:00	3
08:00-09:00	8
09:00-10:00	18
10:00-11:00	29
11:00-12:00	34
12:00-13:00	37
13:00-14:00	37
14:00-15:00	36
15:00-16:00	36
16:00-17:00	35
17:00-18:00	31
18:00-19:00	31

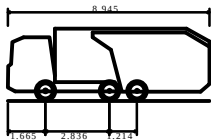
Appendix G

Swept Path Analysis

R:\Projects\hira\007013\Drawings\1807013-TK01.dwg



Rev:	Description:	Date:	Rev By:	Chk'd:
------	--------------	-------	---------	--------



Phoenix 2-15W (with Elite 2 6x2ML chassis)	8.945m
Overall Length	8.945m
Overall Width	2.530m
Overall Body Height	3.205m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.500m



9 Greyfriars, Reading, Berkshire, RG1 1NU

T: 0118 206 2930

Guildford - London - Reading

www.motion.co.uk

Project:
Cadogan House, Reading

Title:
Swept Path Analysis
Refuse Vehicle

Client:
Hillnic

Drawing Status: -

Scale: 1:500 (@ A3) Date:29/08/2018

Drawn: CM Checked: JB Approved: JB

Drawing:	Revision:
1807013-TK01	-

Appendix H

TRICS Output Reports

Calculation Reference: AUDIT-734001-180829-0853

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : A - OFFICE
 MULTI-MODAL OGVS

Selected regions and areas:

02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	HF HERTFORDSHIRE	1 days
	KC KENT	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
09	NORTH	
	CB CUMBRIA	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
 Actual Range: 610 to 1500 (units: sqm)
 Range Selected by User: 500 to 2000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 11/09/17

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	2 days
Wednesday	2 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town Centre	5
---------------------	---

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	1
Commercial Zone	1
Built-Up Zone	2
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

B1	5 days
----	--------

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	3 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

25,001 to 50,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	1 days
No	4 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	5 days
-----------------	--------

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	BD-02-A-03	OFFICES		BEDFORDSHIRE
	BROMHAM ROAD			
	BEDFORD			
	Edge of Town Centre			
	No Sub Category			
	Total Gross floor area:	1469	sqm	
	Survey date: MONDAY	14/10/13		Survey Type: MANUAL
2	CB-02-A-02	OFFICE		CUMBRIA
	PORT ROAD			
	CARLISLE			
	Edge of Town Centre			
	Industrial Zone			
	Total Gross floor area:	925	sqm	
	Survey date: FRIDAY	24/06/16		Survey Type: MANUAL
3	HF-02-A-03	OFFICE		HERTFORDSHIRE
	60 VICTORIA STREET			
	ST ALBANS			
	Edge of Town Centre			
	Built-Up Zone			
	Total Gross floor area:	610	sqm	
	Survey date: WEDNESDAY	16/10/13		Survey Type: MANUAL
4	KC-02-A-09	COUNCIL OFFICES		KENT
	SANDLING ROAD			
	MAIDSTONE			
	Edge of Town Centre			
	Built-Up Zone			
	Total Gross floor area:	1500	sqm	
	Survey date: WEDNESDAY	19/10/11		Survey Type: MANUAL
5	NF-02-A-02	FINANCIAL PLANNERS		NORFOLK
	NORTH QUAY			
	GREAT YARMOUTH			
	Edge of Town Centre			
	Commercial Zone			
	Total Gross floor area:	894	sqm	
	Survey date: MONDAY	11/09/17		Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
 MULTI-MODAL OGVS
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	5	1080	0.000	5	1080	0.000	5	1080	0.000
07:30 - 08:00	5	1080	0.000	5	1080	0.000	5	1080	0.000
08:00 - 08:30	5	1080	0.000	5	1080	0.000	5	1080	0.000
08:30 - 09:00	5	1080	0.000	5	1080	0.000	5	1080	0.000
09:00 - 09:30	5	1080	0.000	5	1080	0.000	5	1080	0.000
09:30 - 10:00	5	1080	0.000	5	1080	0.000	5	1080	0.000
10:00 - 10:30	5	1080	0.000	5	1080	0.000	5	1080	0.000
10:30 - 11:00	5	1080	0.000	5	1080	0.000	5	1080	0.000
11:00 - 11:30	5	1080	0.000	5	1080	0.000	5	1080	0.000
11:30 - 12:00	5	1080	0.000	5	1080	0.000	5	1080	0.000
12:00 - 12:30	5	1080	0.000	5	1080	0.000	5	1080	0.000
12:30 - 13:00	5	1080	0.000	5	1080	0.000	5	1080	0.000
13:00 - 13:30	5	1080	0.000	5	1080	0.000	5	1080	0.000
13:30 - 14:00	5	1080	0.000	5	1080	0.000	5	1080	0.000
14:00 - 14:30	5	1080	0.000	5	1080	0.000	5	1080	0.000
14:30 - 15:00	5	1080	0.000	5	1080	0.000	5	1080	0.000
15:00 - 15:30	5	1080	0.000	5	1080	0.000	5	1080	0.000
15:30 - 16:00	5	1080	0.019	5	1080	0.019	5	1080	0.038
16:00 - 16:30	5	1080	0.000	5	1080	0.000	5	1080	0.000
16:30 - 17:00	5	1080	0.000	5	1080	0.000	5	1080	0.000
17:00 - 17:30	5	1080	0.037	5	1080	0.037	5	1080	0.074
17:30 - 18:00	5	1080	0.000	5	1080	0.000	5	1080	0.000
18:00 - 18:30	5	1080	0.000	5	1080	0.000	5	1080	0.000
18:30 - 19:00	5	1080	0.000	5	1080	0.000	5	1080	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.056			0.056			0.112

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
 MULTI-MODAL TOTAL PEOPLE
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	5	1080	0.130	5	1080	0.000	5	1080	0.130
07:30 - 08:00	5	1080	0.889	5	1080	0.093	5	1080	0.982
08:00 - 08:30	5	1080	1.686	5	1080	0.074	5	1080	1.760
08:30 - 09:00	5	1080	2.260	5	1080	0.148	5	1080	2.408
09:00 - 09:30	5	1080	1.667	5	1080	0.371	5	1080	2.038
09:30 - 10:00	5	1080	1.130	5	1080	0.463	5	1080	1.593
10:00 - 10:30	5	1080	0.722	5	1080	0.519	5	1080	1.241
10:30 - 11:00	5	1080	0.463	5	1080	0.445	5	1080	0.908
11:00 - 11:30	5	1080	0.315	5	1080	0.463	5	1080	0.778
11:30 - 12:00	5	1080	0.167	5	1080	0.593	5	1080	0.760
12:00 - 12:30	5	1080	0.463	5	1080	1.908	5	1080	2.371
12:30 - 13:00	5	1080	1.260	5	1080	1.371	5	1080	2.631
13:00 - 13:30	5	1080	1.204	5	1080	1.204	5	1080	2.408
13:30 - 14:00	5	1080	1.575	5	1080	0.704	5	1080	2.279
14:00 - 14:30	5	1080	0.574	5	1080	0.259	5	1080	0.833
14:30 - 15:00	5	1080	0.204	5	1080	0.259	5	1080	0.463
15:00 - 15:30	5	1080	0.278	5	1080	0.333	5	1080	0.611
15:30 - 16:00	5	1080	0.185	5	1080	0.408	5	1080	0.593
16:00 - 16:30	5	1080	0.185	5	1080	1.112	5	1080	1.297
16:30 - 17:00	5	1080	0.074	5	1080	1.593	5	1080	1.667
17:00 - 17:30	5	1080	0.556	5	1080	2.205	5	1080	2.761
17:30 - 18:00	5	1080	0.185	5	1080	1.241	5	1080	1.426
18:00 - 18:30	5	1080	0.130	5	1080	0.371	5	1080	0.501
18:30 - 19:00	5	1080	0.019	5	1080	0.204	5	1080	0.223
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			16.321			16.341			32.662

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Calculation Reference: AUDIT-734001-180829-0825

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
MULTI-MODAL OGVS

Selected regions and areas:

04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	NT NOTTINGHAMSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	RI EAST RIDING OF YORKSHIRE	1 days
09	NORTH	
	CB CUMBRIA	2 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 20 to 56 (units:)
Range Selected by User: 20 to 60 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 08/11/16

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	3 days
Wednesday	2 days
Thursday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	4
Edge of Town	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	3
Built-Up Zone	1
No Sub Category	3

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3	7 days
----	--------

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000	1 days
10,001 to 15,000	4 days
20,001 to 25,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	3 days
125,001 to 250,000	1 days
250,001 to 500,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	6 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	7 days
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This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	7 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CA-03-C-02	BLOCK OF FLATS	CAMBRIDGESHIRE
	WESTFIELD ROAD		
	PETERBOROUGH		
	NETHERTON		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of dwellings:	44	
	Survey date: TUESDAY	18/10/11	Survey Type: MANUAL
2	CB-03-C-02	BLOCK OF FLATS	CUMBRIA
	BRIDGE LANE		
	PENRITH		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	35	
	Survey date: WEDNESDAY	11/06/14	Survey Type: MANUAL
3	CB-03-C-03	FLATS & BUNGALOWS	CUMBRIA
	LOUND STREET		
	KENDAL		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	33	
	Survey date: MONDAY	09/06/14	Survey Type: MANUAL
4	NF-03-C-01	BLOCKS OF FLATS	NORFOLK
	PAGE STAIR LANE		
	KING'S LYNN		
	Edge of Town Centre		
	Built-Up Zone		
	Total Number of dwellings:	51	
	Survey date: THURSDAY	11/12/14	Survey Type: MANUAL
5	NT-03-C-01	HOUSES (SPLIT INTO FLATS)	NOTTINGHAMSHIRE
	LAWRENCE WAY		
	NOTTINGHAM		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of dwellings:	56	
	Survey date: TUESDAY	08/11/16	Survey Type: MANUAL
6	RI-03-C-01	FLATS	EAST RIDING OF YORKSHIRE
	465 PRIORY ROAD		
	HULL		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	20	
	Survey date: TUESDAY	13/05/14	Survey Type: MANUAL
7	SF-03-C-03	BLOCKS OF FLATS	SUFFOLK
	TOLLGATE LANE		
	BURY ST EDMUNDS		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	30	
	Survey date: WEDNESDAY	03/12/14	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	38	0.004	7	38	0.007	7	38	0.011
08:00 - 09:00	7	38	0.004	7	38	0.004	7	38	0.008
09:00 - 10:00	7	38	0.000	7	38	0.000	7	38	0.000
10:00 - 11:00	7	38	0.000	7	38	0.000	7	38	0.000
11:00 - 12:00	7	38	0.000	7	38	0.000	7	38	0.000
12:00 - 13:00	7	38	0.007	7	38	0.007	7	38	0.014
13:00 - 14:00	7	38	0.004	7	38	0.004	7	38	0.008
14:00 - 15:00	7	38	0.004	7	38	0.004	7	38	0.008
15:00 - 16:00	7	38	0.000	7	38	0.000	7	38	0.000
16:00 - 17:00	7	38	0.000	7	38	0.000	7	38	0.000
17:00 - 18:00	7	38	0.000	7	38	0.000	7	38	0.000
18:00 - 19:00	7	38	0.000	7	38	0.000	7	38	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.023			0.026			0.049

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	38	0.160	7	38	0.320	7	38	0.480
08:00 - 09:00	7	38	0.093	7	38	0.446	7	38	0.539
09:00 - 10:00	7	38	0.257	7	38	0.357	7	38	0.614
10:00 - 11:00	7	38	0.182	7	38	0.238	7	38	0.420
11:00 - 12:00	7	38	0.238	7	38	0.212	7	38	0.450
12:00 - 13:00	7	38	0.182	7	38	0.160	7	38	0.342
13:00 - 14:00	7	38	0.167	7	38	0.208	7	38	0.375
14:00 - 15:00	7	38	0.190	7	38	0.271	7	38	0.461
15:00 - 16:00	7	38	0.249	7	38	0.167	7	38	0.416
16:00 - 17:00	7	38	0.260	7	38	0.145	7	38	0.405
17:00 - 18:00	7	38	0.450	7	38	0.201	7	38	0.651
18:00 - 19:00	7	38	0.338	7	38	0.197	7	38	0.535
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		2.766			2.922			5.688	

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Appendix I

Trip Generation

Cadogan House - Trip Generation

Extant Use

Development Quantum 1026 sqm

TRICS Person Trips

Time Period	Trip Rates (per 100 sqm)			Person Trips		
	Arrivals	Departures	Total	Arrivals	Departures	Total
AM Peak (0800-0900)	4.179	0.256	4.435	43	3	46
PM Peak (1700-1800)	0.604	3.168	3.772	6	33	39
Daily (0700-1900)	15.659	15.783	31.442	161	162	323

Mode Split

Mode		AM Peak			PM Peak			Daily		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
Public Transport	12.9%	5	0	5	1	4	5	21	21	42
- Rail	3.0%	1	0	1	0	1	1	5	5	10
- Bus	9.9%	4.26	0.26	5	1	3	4	16	16	32
Taxi	0.1%	0	0	0	0	0	0	0	0	0
Motorcycle	0.2%	0	0	0	0	0	0	0	0	1
Car/van driver	62.8%	27	2	29	4	20	24	101	102	203
Car/van passenger	4.9%	2	0	2	0	2	2	8	8	16
Pedal Cycle	3.2%	1	0	1	0	1	1	5	5	10
On foot	15.7%	7	0	7	1	5	6	25	25	51
Other	0.1%	0	0	0	0	0	0	0	0	0
TOTAL	100 %	43	3	46	6	33	39	161	162	323

Cadogan House - Trip Generation

Proposed Use

Development Quantum 39

TRICS Person Trips

Time Period	Trip Rates (per unit)			Person Trips		
	Arrivals	Departures	Total	Arrivals	Departures	Total
AM Peak (0800-0900)	0.133	0.493	0.626	5	19	24
PM Peak (1700-1800)	0.45	0.211	0.661	18	8	26
Daily (0700-1900)	2.545	2.784	5.329	99	109	208

Mode Split

Mode		AM Peak			PM Peak			Daily		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
Public Transport	14.9%	1	3	4	3	1	4	15	16	31
- Rail	6.8%	0	1	2	1	1	2	7	7	14
- Bus	8.1%	0	2	2	1	1	2	8	9	17
Taxi	0.0%	0	0	0	0	0	0	0	0	0
Motorcycle	0.5%	0	0	0	0	0	0	1	1	1
Car/van driver	56.3%	3	11	14	10	5	15	56	61	117
Car/van passenger	5.7%	0	1	1	1	0	1	6	6	12
Pedal Cycle	5.6%	0	1	1	1	0	1	6	6	12
On foot	16.3%	1	3	4	3	1	4	16	18	34
Other	0.7%	0	0	0	0	0	0	1	1	1
TOTAL	100 %	5	19	24	18	8	26	99	109	208

Appendix J

Development Impact Calculations

Cadogan House - Development Impact

Extant Consent

Mode	AM Peak			PM Peak			Daily		
	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
Public Transport	6	0	6	1	4	5	21	21	42
- Rail	1	0	1	0	1	1	5	5	10
- Bus	4	0	5	1	3	4	16	16	32
Taxi	0	0	0	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0	0	0	1
Car/van driver	27	2	29	4	20	24	101	102	203
Car/van passenger	2	0	2	0	2	2	8	8	16
Pedal Cycle	1	0	1	0	1	1	5	5	10
On foot	7	0	7	1	5	6	25	25	51
Other	0	0	0	0	0	0	0	0	0
TOTAL	43	3	46	6	33	39	161	162	323

Proposed Development

Mode	AM Peak			PM Peak			Daily		
	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
Public Transport	1	3	4	3	1	4	14	16	30
- Rail	0	1	2	1	1	2	7	7	14
- Bus	0	2	2	1	1	2	8	9	16
Taxi	0	0	0	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0	1	1	1
Car/van driver	3	11	13	10	5	14	54	60	114
Car/van passenger	0	1	1	1	0	1	6	6	12
Pedal Cycle	0	1	1	1	0	1	5	6	11
On foot	1	3	4	3	1	4	16	17	33
Other	0	0	0	0	0	0	1	1	1
TOTAL	5	19	24	17	8	25	97	106	203

Net Impact

Mode	AM Peak			PM Peak			Daily		
	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
Public Transport	-5	2	-2	2	-3	-1	-6	-5	-11
- Rail	-1	1	0	1	0	1	2	2	4
- Bus	-4	1	-3	1	-3	-2	-8	-7	-16
Taxi	0	0	0	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0	0	0	0
Car/van driver	-24	9	-15	6	-16	-10	-46	-42	-89
Car/van passenger	-2	1	-1	1	-1	0	-2	-2	-4
Pedal Cycle	-1	1	0	1	-1	0	0	1	1
On foot	-6	3	-3	2	-4	-2	-10	-8	-18
Other	0	0	0	0	0	0	0	1	1
TOTAL	-38	16	-22	11	-25	-14	-64	-56	-120