



Access Self Storage
Portman Road, Reading

Transport Statement

For

Access Self Storage

Document Control Sheet

Transport Statement

Access Self Storage, Portman Road, Reading

This document has been issued and amended as follows:

Date	Issue	Prepared by	Approved by
15/07/2016	1 st Draft	Kathryn Lewis	Peter Sturgeon

Motion
8 Duncannon Street
London
WC2N 4JF
T 020 7031 8141
F 020 7031 8101
E info@motion.co.uk
W www.motion.co.uk

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1.0 Introduction

- 1.1 This Transport Statement has been prepared by Motion on behalf of Access Self Storage in relation to the proposed extension of office and storage space at the Access Self Storage site on Portman Road, Reading.
- 1.2 The application site is located on the north side of Portman Road, approximately 3 kilometres west of Reading town centre. The building currently comprises 654 square metres (Gross External Area-GEA) of B1 office floor space and 5,972 square metres GEA of B8 storage floor space at ground and first floor plus associated parking/loading facilities.
- 1.3 This Transport Statement will consider the suitability of the proposals with regard to accessibility, trip attraction parking and servicing.
- 1.4 The remainder of the report comprises the following sections:
 - ▶ Section 2 – Policy Context;
 - ▶ Section 3 – Baseline Conditions;
 - ▶ Section 4 – Development Proposals;
 - ▶ Section 5 – Effect of Development; and,
 - ▶ Section 6 – Summary and Conclusions.

2.0 Policy Context

Introduction

- 2.1 This section details the relevant national and local planning policies against which the development proposals would be considered. The most relevant policy documents relating to this study are detailed below:

- ▶ National Planning Policy Framework (March 2012)
- ▶ Reading Borough Local Development Framework Core Strategy (January 2015)
- ▶ Reading Borough Local Development Framework Revised Parking Standards and Design Supplementary Planning Document (October 2011)

National Planning Policy

National Planning Policy Framework (March 2012)

- 2.2 The National Planning Policy Framework (NPPF) was published in March 2012 and sets out the Government's planning policies for England and how these are expected to be applied.

- 2.3 In relation to transport, NPPF states that:

"The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas".

- 2.4 When considering the transport effects of a development on the transport network, the NPPF states that:

"All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

- ▶ *The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;*
- ▶ *Safe and suitable access to the site can be achieved for all people; and*
- ▶ *Improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."*

- 2.5 In order to promote opportunities for sustainable travel, the NPPF advises that:

"Developments should be located and designed where practical to

- ▶ *Accommodate the efficient delivery of goods and supplies;*
- ▶ *Give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;*
- ▶ *Create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;"*

- 2.6 The NPPF highlights that a key tool for facilitating the promotion of sustainable travel choices will be a Travel Plan and that:

"All developments which generate significant amounts of movement should be required to provide a Travel Plan."

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,*
- ▶ *An overall need to reduce the use of high-emission vehicles."*

Local Planning Policy

Reading Borough Local Development Framework Core Strategy (January 2015)

2.8 The Core Strategy was adopted in its current form in January 2015. The strategy sets out the key elements of the planning framework in Reading.

2.9 *With regard to sustainable transport, it is stated that these will be promoted by:*

- ▶ *'Ensuring that development is accessible;*
- ▶ *Reducing the need to travel especially by car;*
- ▶ *Promoting travel plans and connections from a development via sustainable transport modes; and,*
- ▶ *Ensuring that development contributes towards infrastructure provision that helps to promote safe, sustainable transport choices, and enables the transport system to deal with the additional trips arising from that development.'*

2.10 The Core Strategy states that the Council's aims for transport are to:

- ▶ *'Improve accessibility to central Reading and to neighbourhood centres for all modes of transport, ensuring access to essential facilities for all members of the community and continuing sustainable economic growth;*
- ▶ *Reduce the impact of congestion on key radial routes, through the provision of justified additional capacity for each mode, thereby enhancing travel choice;*
- ▶ *Make relevant information widely available in a range of formats, to enable travellers to make informed choices about their journeys and use that information to manage the network efficiently;*
- ▶ *Ensure that travel in Reading is made as safe as possible, particularly for vulnerable road users, through timely maintenance and traffic management;*
- ▶ *Protect the natural and built environment through effective long-term planning to reduce the need to travel;*
- ▶ *Support the delivery of the regional spatial strategy, managing and investing in inter-regional corridors to deliver urban regeneration and sub-regional objectives; and,*
- ▶ *Promote management of and investment in the local transport system, delivering continuous and sustainable improvements through efficient use of resources, effective use of existing networks, and long term planning for future travel needs.'*

2.11 In relation to planning permission, it is stated that:

'Planning permission will not be granted unless the proposed development contributes appropriately to the provision of a balanced transport network as outlined in the Reading Transport Strategy, including the implementation of the core transport infrastructure projects and area action plans. Such projects and plans will include the provision of measures that make alternatives to the use of private cars (such as walking, cycling and the use of public transport) more attractive, and contribute to improved accessibility and transport safety.'

2.12 In regard to the impact of development it is stated that:

'All developments need to fully consider their transport impacts and include measures to mitigate those impacts. It is important that all modes of transport are considered, particularly sustainable modes that will usually require improvement (or establishment). It is important that all developments ensure that sustainable choices can be made.'

Revised Parking Standards and Design Supplementary Planning Document (October 2011)

2.13 This supplementary planning document was adopted in October 2011 and outlines the parking strategy within Reading where maximum standards apply to zones across the town.

2.14 The application site is located within Zone 3, the Secondary Core Area, described as:

'Areas within this zone feature in a variety of land uses and densities and include some local centres for day-to-day needs. Typically these areas are within 400m of a Reading Buses high frequency 'Premier Route', which provides high quality bus routes. These buses link not only to the Central Core Area, but also Zone 2 areas and beyond to major supermarket and local centre facilities. Walking and cycling can play an important role in these areas.'

2.15 With regard to car parking standards it is stated that:

'The car parking standards set, except for those relating to residential (C3), are to be imposed as maximums, unless a developer can prove that their development requires parking at a higher level for exceptional circumstances.'

2.16 The parking standards for Zone 3 are displayed below:

Use	Car Parking	Cycle Parking	Motorcycle Parking	Disabled Parking
B1 (office)	1 space per 50m ²	1 space per 200m ²	2% of total provision	5% of total provision
B8 (storage and distribution)	1 space per 150m ²	1 space per 450m ²		

Table 2.1 – Reading Borough Council Maximum Parking Standards

3.0 Baseline Conditions

Site Location and Surrounding Area

- 3.1 The application site is located to the north of Portman Road approximately 3 kilometres west of Reading town centre. There is a mix of land uses in the vicinity of the site with industrial units to the north of Portman Road and housing to the south.
- 3.2 The application site is bound to the south by Portman Road, to the north by Loverock Road, to the west by Wigmore Road and to the east by further industrial units. A site location plan is attached at **Appendix A**.

Existing Site Use

- 3.3 The site is occupied by Access Self Storage and comprises 5,972 square metres of B8 use and 654 square metres of serviced B1 office space. In total the site provides parking for approximately 122 cars. Much of this existing parking is used for secure vehicle storage. The existing site layout is attached at **Appendix B**.
- 3.4 Vehicular access for loading and car parking is taken from Loverock Road at the north eastern corner of the site. Access to a forecourt parking area is provided from western frontage of the site on Wigmore Lane. Pedestrian access for both the offices and self storage reception is taken from Wigmore Lane.

Highway Network

- 3.5 Loverock Road provides access to the main parking and loading area. Loverock Road is a two way single carriageway road subject to a 30mph speed limit. There are no parking or loading restrictions on Loverock Road in the vicinity of the site. A footway is provided on the southern side of the road.
- 3.6 To the west of the application site, Loverock Road provides access to Wigmore Lane a single carriageway, two way road that is subject to a 30mph speed limit. There are no loading or waiting restriction in operation. Footways are provided on both sides of Wigmore Lane.
- 3.7 To the south, Wigmore Lane meets Portman Road by way of a priority junction. Portman Road is a single carriageway, two way road that is subject to a 30mph speed limit in the vicinity of the site. It primarily serves the industrial units in the area and is not subject to any parking or waiting restrictions.
- 3.8 To the west, Portman Road provides access to the A329 Oxford Road. To the east, Portman Road joins Beresford Road, which in turn provides access to the A329 Oxford Road. The A329 provides access to the wider strategic road network including links to the A329(M) and the M4.

Accessibility by Foot

- 3.9 Walking is an important mode of travel at a local level and offers the potential to replace short car trips, particularly those under 2 kilometres. Walking can also form part of longer journeys by public transport and car.
- 3.10 Footways are provided on both side of Portman Road and Wigmore Lane and the southern side of Loverock Road. These footways connect the site with the wider pedestrian network including routes into Reading town centre.

Accessibility by Cycle

- 3.11 Cycling is considered to have the potential to substitute short car trips, particularly those under 5 kilometres, and to form part of a longer journey by public transport.
- 3.12 There are several cycle routes in the vicinity of the site, as highlighted by Travel Reading Live as well as a National Cycle Network Route. Local cycle routes are summarised in Table 3.1.

Route	Location in Relation to Application Site	Route
Route 5	Oxford Road – 500 metres south	Tilehurst Station – The West Village & Oxford Road – Reading Town Centre
Route 50	Oxford Road – 500 metres south	Tilehurst Village – Meadway – Prospect Park & Oxford Road – Reading Town Centre
Route 60	Bath Road – 2500 metres east	Southcote & Bath Road – Reading Station
Route 4 (NCN)	Bridge Street – 3000 metres east	London – Reading – Bath – Swansea – Tenby – Fishguard

Table 3.1 – Local Cycle Network

- 3.13 It is considered that the application site is conveniently located for people undertaking journeys by foot and bicycle.

Accessibility by Bus

- 3.14 The nearest bus stops to the application site are located approximately 650 metres to the south west at Norcot Junction. Both stops provide shelters, seating, timetable information and real time bus information.
- 3.15 A summary of the services operating in the vicinity of the application site is shown below in Table 3.2.

Service No.	Bus Route	Weekday Frequency (every x minutes)
16	Reading Town Centre – Norcot Junction – Kentwood – Purley on Thames	15 minutes
17	Whiteknights – Palmer Park – Reading Town Centre – Norcot Junction – Tilehurst	10 minutes
18	Kentwood – Norcot Junction – Reading West – Prospect Park – Reading Town Centre	3 services per day
143	Reading Town Centre – Norcot Junction – Pangbourne – Upper Basildon – Whitchurch Hill	5 services per day
BB3 (school service)	Woodcote – Goring – Streatley – Pangbourne – Norcot Junction – Reading West	1 per day
TG6 (school service)	Kentwood – Norcot Junction – Southcote – Fords Farm – Theale	1 per day

Table 3.2 – Local Bus Services

- 3.16 The bus services are frequent and provide access to a range of local destinations.

Accessibility by Train

- 3.17 The nearest rail station to the site is Reading West, which is located approximately 1.6 kilometres to the east. Reading West is managed by the Great Western Railway and is served by trains that operate to and from Reading, Basingstoke and Newbury stations.
- 3.18 All of the bus services listed in Table 3.2 stop within 100 metres of the station providing convenient access between the station and the application site.

4.0 Development Proposals

- 4.1 The proposals comprise the extension of the existing building at ground and first floor with a second floor above the extended area. The proposals result in the site providing a total of 1,350 square metres GEA of B1 office space and 8,632 square metres GEA of B8 storage. The proposed site layout plan is attached at **Appendix C**.
- 4.2 The proposals result in the reduction in on site parking from approximately 122 spaces to 71 spaces. A total of 27 spaces will be allocated for office parking, whilst the remainder will be for the self storage use. The existing vehicle storage operation on site will cease.
- 4.3 The proposals also include the provision of 14 cycle parking spaces and two motorcycle bays. The parking provision fully accords with local parking standards.

Access

- 4.4 The proposals result in the reduction of the parking forecourt adjacent to Wigmore Lane. This forecourt will be used for self storage customer parking. Pedestrian access for offices and the self storage reception will continue to be taken from this area. The Loverock Road entrance will provide access to loading facilities for the self storage building, parking for both office and self storage and will accommodate any office deliveries.

5.0 Effect of Development

- 5.1 This section considers the likely transport effect of the additional 696 square metres of office accommodation and the 2,660 square metres of storage space.

Trip Attraction

- 5.2 The TRICS database has been interrogated in order to quantify the likely level of vehicle trips associated with the additional floor space.

Office Use

- 5.3 The proposals provide an additional 696 square metres of office space. For the purposes of this assessment the following parameters have been used to establish comparable TRICS sites from which to calculate additional trips:

- ▶ Land Use – Office
- ▶ Regions – South East
- ▶ Gross Floor Area – 186-1000 square metres
- ▶ Selected Locations – Edge of Town Centre, Suburban Area.

- 5.4 Copies of the TRICS output reports are provided in **Appendix D**, while a summary of total vehicle trip rates and trips during the peak hours are provided in Table 5.1.

Period	Trip Rate		Total Vehicle Trips (696 sqm)	
	In	Out	In	Out
AM peak (0800-0900)	1.634	0.000	11	0
PM Peak (1700-1800)	0.000	1.256	0	9

Table 5.1 Office Vehicle Trip Rates

- 5.5 Table 5.1 indicates that the additional office floor space is likely to attract in the order of 11 vehicle trips in the morning peak hour and 9 in the evening.

Storage Use

- 5.6 The trip attraction of the proposed 2,660 square metres of storage floor space has been estimated using TRICS data. The following parameters have been used.

- ▶ Land Use – Warehousing (Self Storage)
- ▶ Regions – South East
- ▶ Gross Floor Area – 3000 - 5925 square metres
- ▶ Selected Locations – Edge of Town

- 5.7 Copies of the TRICS output reports are provided in **Appendix E** while a summary of total vehicle trip rates and trips during the peak hours are provided in Table 5.2.

Period	Trip Rate		Total Vehicle Trips (2,660 sqm)	
	In	Out	In	Out
AM peak (0800-0900)	0.096	0.069	3	2
PM Peak (1700-1800)	0.061	0.069	2	2

Table 5.2 Self Storage Vehicle Trip Rates

- 5.8 Table 5.2 indicates that the current storage facilities are likely to generate in the order of 4 to 5 vehicle trips during the weekday peak hour periods.

Total Development Trips

- 5.9 The total vehicle trips for the additional floor space on site is detailed below in Table 5.3.

Period	Peak	
	In	Out
AM peak (0800-0900)	14	2
PM Peak (1700-1800)	2	11

Table 5.3 Vehicle Trip Comparison – Storage

- 5.10 This assessment indicates that the development will result in the addition of 16 vehicle trips during the weekday morning peak hour period and 13 during the evening peak. This level of trips, an average of one vehicle every four minutes, is negligible and likely to be within fluctuations that occur on the local road network on a daily basis in any event. It should also be noted that this assessment takes no account of the reduction of existing site trips associated with the cessation of the vehicle storage operation.

Parking and Servicing

- 5.11 The development proposals result in a reduction in on site car parking, with the resulting provision being fully in accordance with local parking standards. So as to minimise the demand for parking on site and encourage the use of sustainable travel modes, Access Self Storage proposes introducing a workplace travel plan for the office accommodation on site. The Travel Plan has been prepared as a standalone document that forms a part of the planning application package.
- 5.12 The proposal result in the reconfiguration of the existing parking and loading areas, which result in more space being available for commercial vehicles to manoeuvre. Swept path analysis has been undertaken to demonstrate that a maximum length articulated vehicle can manoeuvre to and from the loading area in a satisfactory manner. This assessment is attached at **Appendix F**.

6.0 Summary and Conclusions

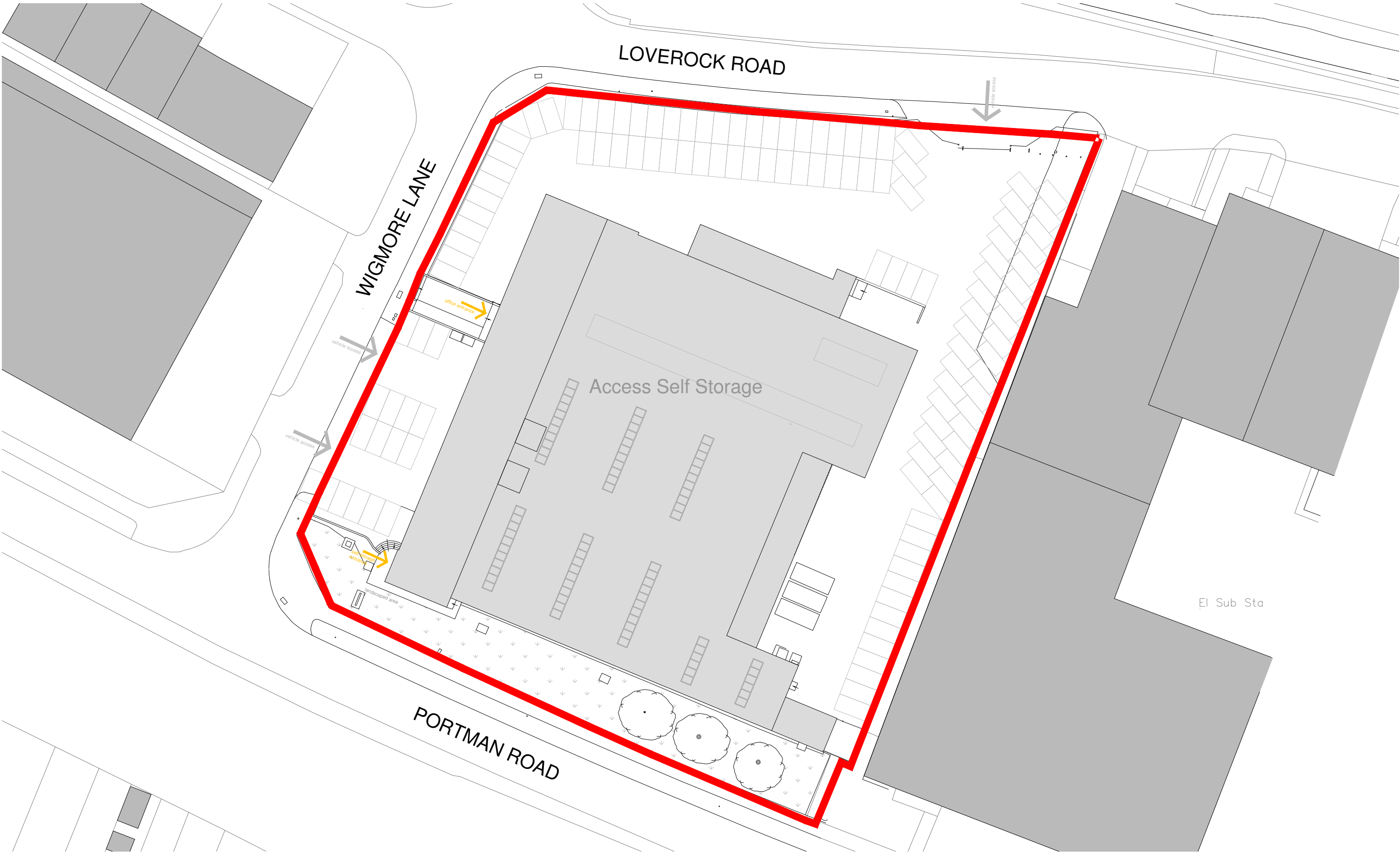
- 6.1 This Transport Statement has been prepared by Motion on behalf of Access Self Storage in relation to the proposed extension of both office and storage space at the self storage site at Portman Road, Reading.
- 6.2 This Transport Statement considers the suitability of the proposals with regard to accessibility, trip attraction, parking and servicing. In summary it is considered that:
- ▶ The site is located in an accessible location in close proximity to public transport services;
 - ▶ Access to the site will take place in the same way as at present;
 - ▶ Parking will be provided on site and will be within the maximum standards as set out by Reading Borough Council;
 - ▶ Servicing activity will continue to take place on site; and
 - ▶ The likely change in peak hour vehicle trips will not have a detrimental effect on the operation of the local road network.
- 6.3 It is therefore concluded that the proposals are acceptable in traffic and transport terms.

Appendix A

Site Location Plan

Appendix B

Existing Site Layout



Rev	Date	Version Description	Dwn	Chk

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION In addition to the hazards/risks normally associated with the types of work detailed on this drawing, refer to Designers Risk Assessment, note the following: It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement Use Dimensions - DO NOT SCALE Contractors Must Verify All Dimensions On Site Before Starting Work This Drawing Is Copyright	Notes:	Client Logo	dmwr Architects DMWR Architects Limited 16-18 Hutton Garden London EC1N 8AT t 0207 870 3779 e mail@dmwr.co.uk www.dmwr.co.uk	Client Access Self Storage Project Name Access Self Storage Reading 62 Portman Road, Reading RG30 1EA Drawing Title Existing Site Plan	Drawing Status PLANNING North  Drawing Details DMWR Job No. 3237 Drawn By HS Drawn Date 05/2016 Checked By JA Scale @ A1 1:250 Drawing Number DMWR/A1/3237-PL02 Revision /
	Car parking layout based on aerial view				

Appendix C

Proposed Site Layout

Appendix D

TRICS Output - Office

Calculation Reference: AUDIT-734001-160715-0735

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
ES	EAST SUSSEX	1 days
HF	HERTFORDSHIRE	1 days

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

Filtering Stage 2 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:	186 to 610 (units: sqm)
Range Selected by User:	186 to 1000 (units: sqm)

Public Transport Provision:

Selection by:	Include all surveys
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Date Range:	01/01/08 to 17/11/15
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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:

Tuesday	1 days
Wednesday	1 days

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

Selected survey types:

Manual count	2 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)	1

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	1
Built-Up Zone	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.

Filtering Stage 3 selection:

Use Class:

B1

2 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:

25,001 to 50,000

2 days

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

Population within 5 miles:

75,001 to 100,000

1 days

125,001 to 250,000

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

2 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

1 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.

LIST OF SITES relevant to selection parameters

1	ES-02-A-11	HOUSING COMPANY	EAST SUSSEX
	THE SIDINGS		
	ORE VALLEY		
	HASTINGS		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	186 sqm	
	Survey date: TUESDAY	17/11/15	Survey Type: MANUAL
2	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

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 VEHICLES

Calculation factor: 100 sqm

Estimated TRIP rate value per 696 SQM shown in shaded columns

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS				DEPARTURES				TOTALS			
	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated 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	2	398	0.126	0.874	2	398	0.000	0.000	2	398	0.126	0.874
07:30 - 08:00	2	398	0.000	0.000	2	398	0.000	0.000	2	398	0.000	0.000
08:00 - 08:30	2	398	0.503	3.497	2	398	0.000	0.000	2	398	0.503	3.497
08:30 - 09:00	2	398	1.131	7.869	2	398	0.000	0.000	2	398	1.131	7.869
09:00 - 09:30	2	398	0.251	1.749	2	398	0.000	0.000	2	398	0.251	1.749
09:30 - 10:00	2	398	0.251	1.749	2	398	0.000	0.000	2	398	0.251	1.749
10:00 - 10:30	2	398	0.126	0.874	2	398	0.000	0.000	2	398	0.126	0.874
10:30 - 11:00	2	398	0.000	0.000	2	398	0.251	1.749	2	398	0.251	1.749
11:00 - 11:30	2	398	0.126	0.874	2	398	0.126	0.874	2	398	0.252	1.748
11:30 - 12:00	2	398	0.000	0.000	2	398	0.000	0.000	2	398	0.000	0.000
12:00 - 12:30	2	398	0.126	0.874	2	398	0.000	0.000	2	398	0.126	0.874
12:30 - 13:00	2	398	0.000	0.000	2	398	0.000	0.000	2	398	0.000	0.000
13:00 - 13:30	2	398	0.126	0.874	2	398	0.000	0.000	2	398	0.126	0.874
13:30 - 14:00	2	398	0.126	0.874	2	398	0.251	1.749	2	398	0.377	2.623
14:00 - 14:30	2	398	0.000	0.000	2	398	0.126	0.874	2	398	0.126	0.874
14:30 - 15:00	2	398	0.503	3.497	2	398	0.251	1.749	2	398	0.754	5.246
15:00 - 15:30	2	398	0.000	0.000	2	398	0.503	3.497	2	398	0.503	3.497
15:30 - 16:00	2	398	0.251	1.749	2	398	0.251	1.749	2	398	0.502	3.498
16:00 - 16:30	2	398	0.251	1.749	2	398	0.879	6.121	2	398	1.130	7.870
16:30 - 17:00	2	398	0.251	1.749	2	398	0.377	2.623	2	398	0.628	4.372
17:00 - 17:30	2	398	0.000	0.000	2	398	0.377	2.623	2	398	0.377	2.623
17:30 - 18:00	2	398	0.000	0.000	2	398	0.879	6.121	2	398	0.879	6.121
18:00 - 18:30	2	398	0.251	1.749	2	398	0.251	1.749	2	398	0.502	3.498
18:30 - 19:00	2	398	0.000	0.000	2	398	0.000	0.000	2	398	0.000	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:			4.399	30.601			4.522	31.478			8.921	62.079

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.

Parameter summary

Trip rate parameter range selected:	186 - 610 (units: sqm)
Survey date date range:	01/01/08 - 17/11/15
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix E

TRICS Output – Self Storage

Calculation Reference: AUDIT-734001-160715-0701

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : E - WAREHOUSING (SELF STORAGE)
VEHICLES

Selected regions and areas:

02 SOUTH EAST
KC KENT 2 days

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

Filtering Stage 2 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: 5575 to 5925 (units: sqm)
Range Selected by User: 3000 to 5925 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 01/12/09

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:

Tuesday 2 days

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

Selected survey types:

Manual count 2 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 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:

Industrial Zone 2

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.

Filtering Stage 3 selection:

Use Class:

B8 2 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®.

Filtering Stage 3 selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days

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

Population within 5 miles:

125,001 to 250,000	2 days
--------------------	--------

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

Car ownership within 5 miles:

1.1 to 1.5	2 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	2 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.

LIST OF SITES relevant to selection parameters

1	KC-02-E-01	EASI STORE	KENT
	LONGFIELD ROAD		
	TUNBRIDGE WELLS		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	5925 sqm	
	Survey date: TUESDAY	01/12/09	Survey Type: MANUAL
2	KC-02-E-03	BIG YELLOW STORAGE	KENT
	LONGFIELD ROAD		
	TUNBRIDGE WELLS		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	5575 sqm	
	Survey date: TUESDAY	01/12/09	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/E - WAREHOUSING (SELF STORAGE)

VEHICLES

Calculation factor: 100 sqm

Estimated TRIP rate value per 2660 SQM shown in shaded columns

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS				DEPARTURES				TOTALS			
	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated 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	2	5750	0.017	0.463	2	5750	0.009	0.231	2	5750	0.026	0.694
07:30 - 08:00	2	5750	0.035	0.925	2	5750	0.017	0.463	2	5750	0.052	1.388
08:00 - 08:30	2	5750	0.035	0.925	2	5750	0.026	0.694	2	5750	0.061	1.619
08:30 - 09:00	2	5750	0.061	1.619	2	5750	0.043	1.157	2	5750	0.104	2.776
09:00 - 09:30	2	5750	0.070	1.850	2	5750	0.052	1.388	2	5750	0.122	3.238
09:30 - 10:00	2	5750	0.043	1.157	2	5750	0.026	0.694	2	5750	0.069	1.851
10:00 - 10:30	2	5750	0.043	1.157	2	5750	0.026	0.694	2	5750	0.069	1.851
10:30 - 11:00	2	5750	0.035	0.925	2	5750	0.052	1.388	2	5750	0.087	2.313
11:00 - 11:30	2	5750	0.026	0.694	2	5750	0.043	1.157	2	5750	0.069	1.851
11:30 - 12:00	2	5750	0.026	0.694	2	5750	0.017	0.463	2	5750	0.043	1.157
12:00 - 12:30	2	5750	0.052	1.388	2	5750	0.043	1.157	2	5750	0.095	2.545
12:30 - 13:00	2	5750	0.052	1.388	2	5750	0.035	0.925	2	5750	0.087	2.313
13:00 - 13:30	2	5750	0.026	0.694	2	5750	0.061	1.619	2	5750	0.087	2.313
13:30 - 14:00	2	5750	0.026	0.694	2	5750	0.026	0.694	2	5750	0.052	1.388
14:00 - 14:30	2	5750	0.052	1.388	2	5750	0.052	1.388	2	5750	0.104	2.776
14:30 - 15:00	2	5750	0.043	1.157	2	5750	0.043	1.157	2	5750	0.086	2.314
15:00 - 15:30	2	5750	0.104	2.776	2	5750	0.052	1.388	2	5750	0.156	4.164
15:30 - 16:00	2	5750	0.043	1.157	2	5750	0.043	1.157	2	5750	0.086	2.314
16:00 - 16:30	2	5750	0.026	0.694	2	5750	0.035	0.925	2	5750	0.061	1.619
16:30 - 17:00	2	5750	0.035	0.925	2	5750	0.087	2.313	2	5750	0.122	3.238
17:00 - 17:30	2	5750	0.052	1.388	2	5750	0.052	1.388	2	5750	0.104	2.776
17:30 - 18:00	2	5750	0.009	0.231	2	5750	0.017	0.463	2	5750	0.026	0.694
18:00 - 18:30	2	5750	0.017	0.463	2	5750	0.035	0.925	2	5750	0.052	1.388
18:30 - 19:00	2	5750	0.017	0.463	2	5750	0.061	1.619	2	5750	0.078	2.082
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:			0.945	25.215			0.953	25.447			1.898	50.662

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.

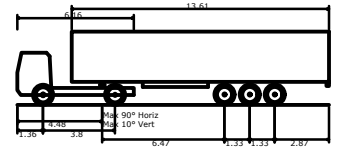
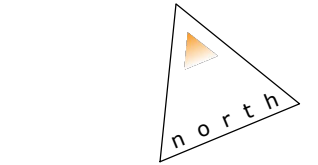
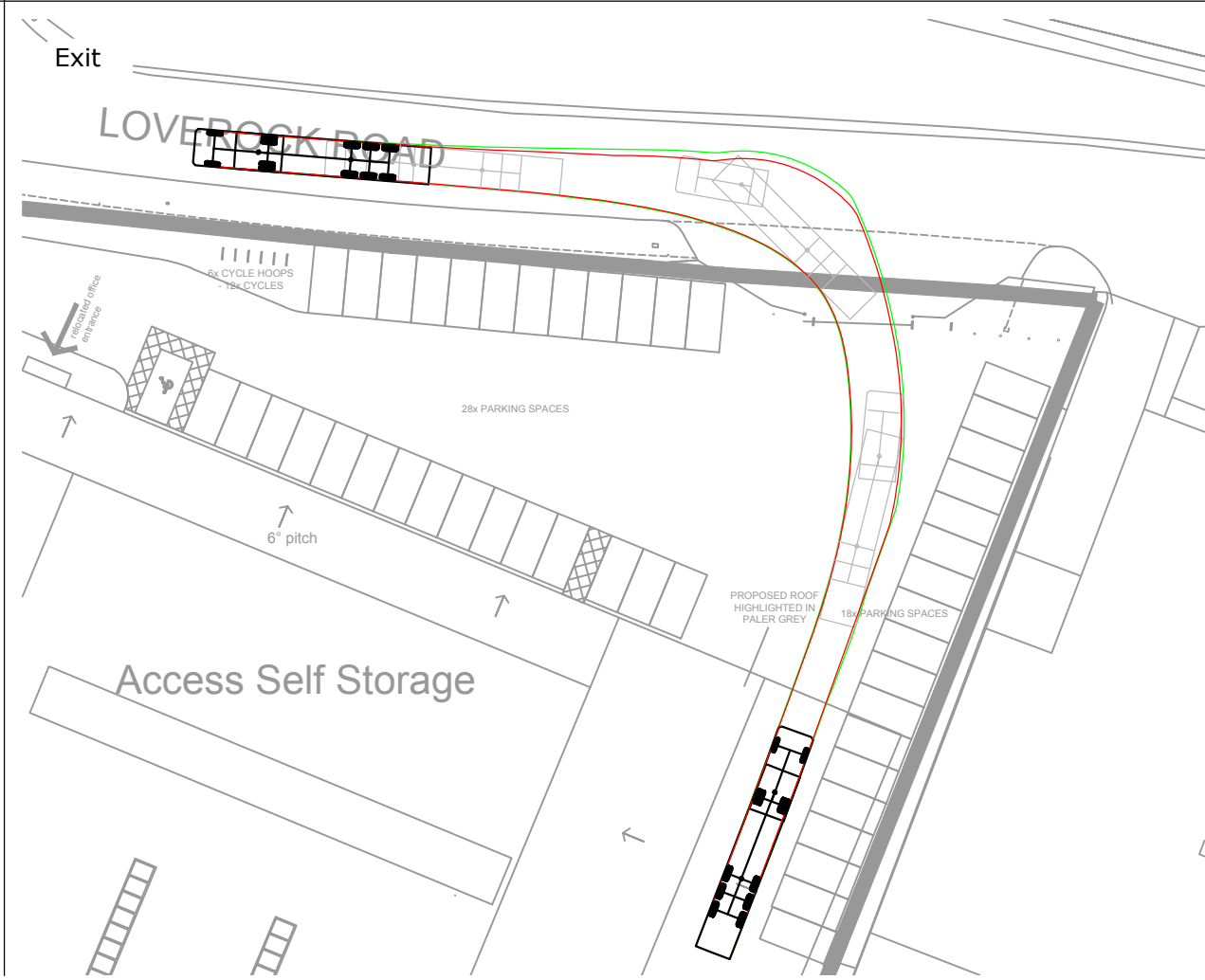
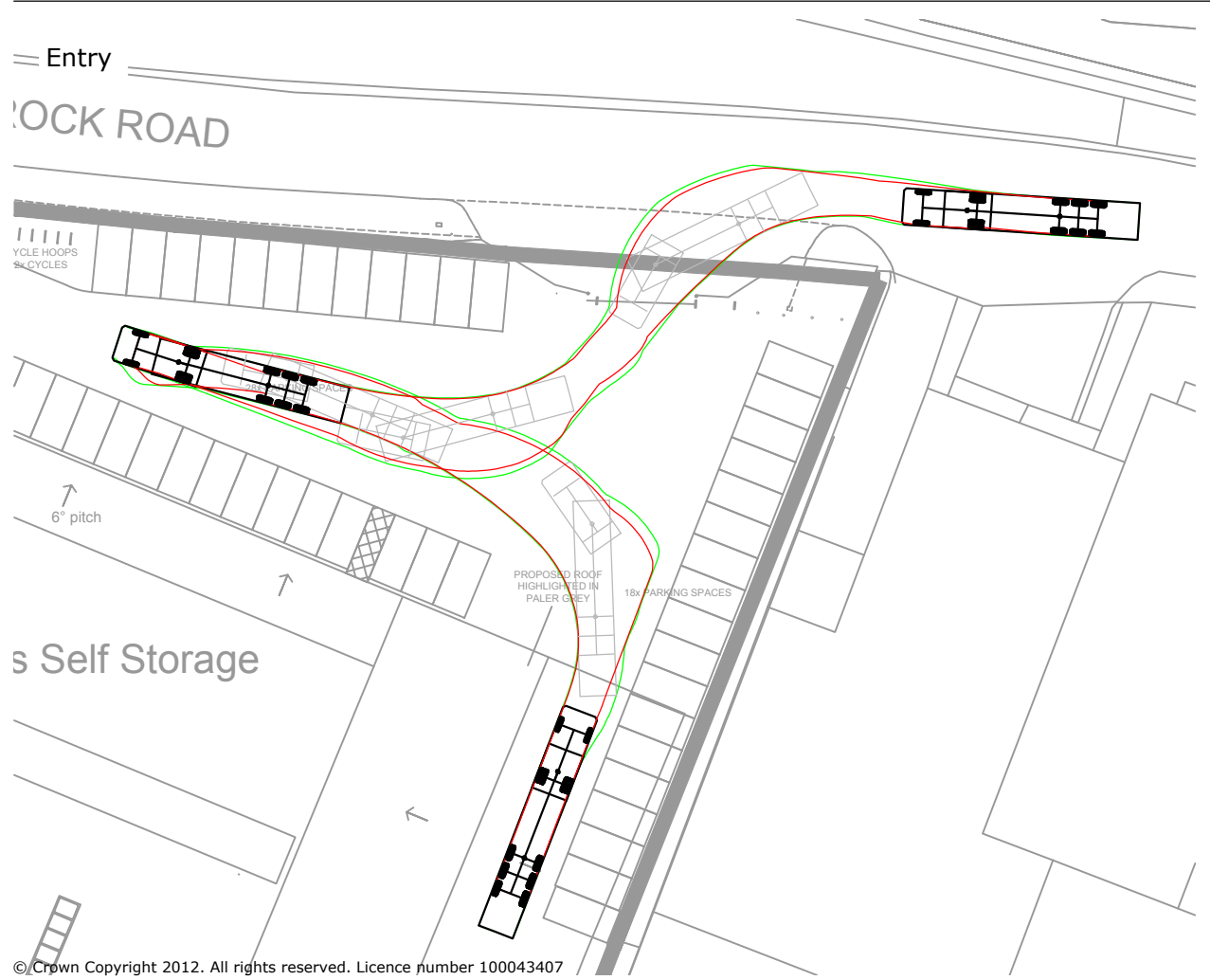
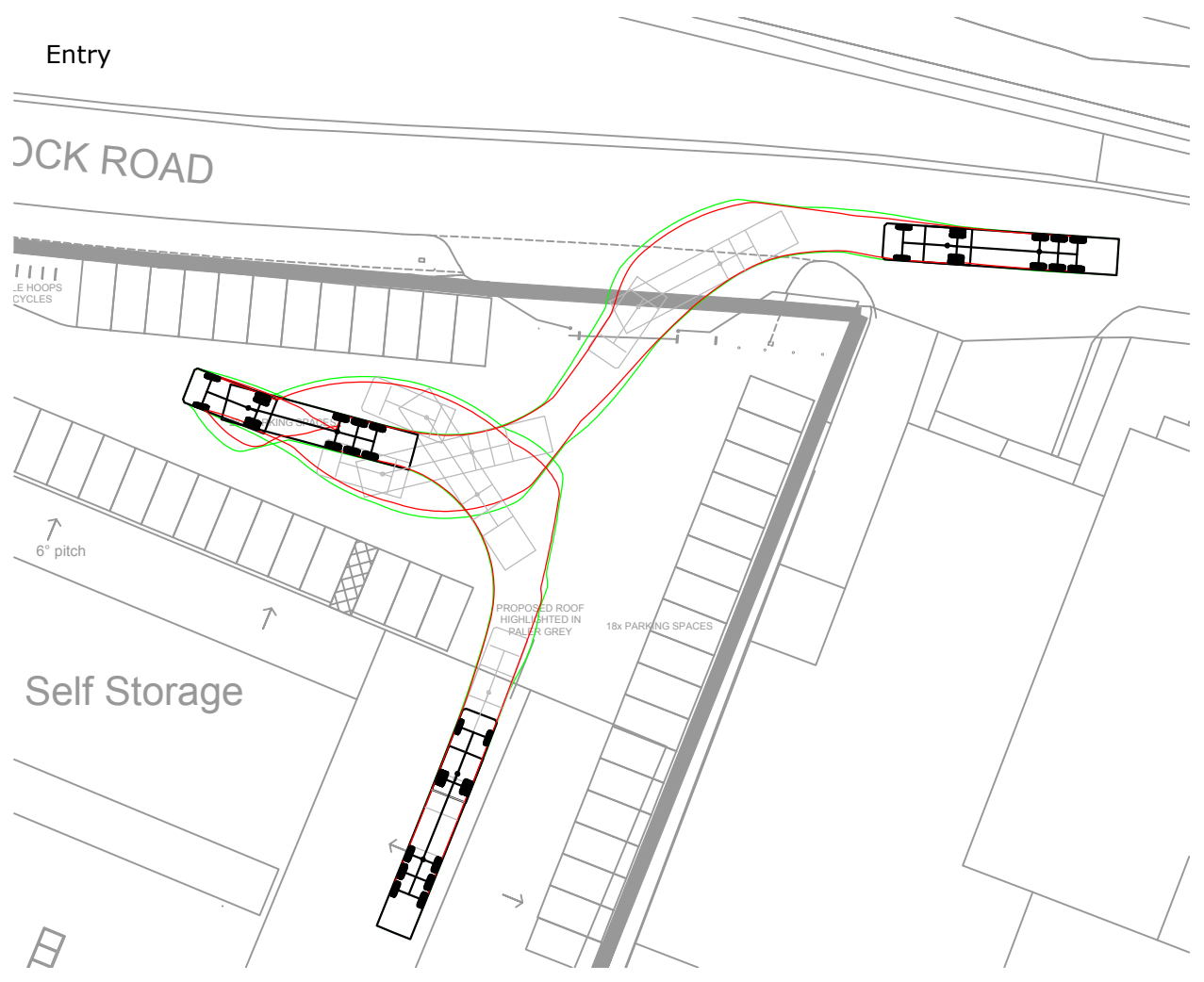
Parameter summary

Trip rate parameter range selected:	5575 - 5925 (units: sqm)
Survey date date range:	01/01/08 - 01/12/09
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix F

Swept Path Analysis



FTA Design Articulated Vehicle (1998)	
Overall Length	16.48m
Overall Width	2.55m
Overall Body Height	3.87m
Min Body Ground Clearance	0.515m
Max Track Width	2.47m
Lock-to-lock time	3.00s
Curb to Curb Turning Radius	6.550m



84 North Street
Guildford
Surrey
GU1 4AU

Golden Cross House
8 Duncannon Street
London
WC2N 4JF

T: 01483 531 300 T: 020 7031 8141

www.motion.co.uk

Project:
Access Self Storage, Reading

Title:
Swept Path Analysis
16.5m Artic Vehicle

Scale: 1:500 (@ A3)

Drawing:
160530-TK01

Revision:
-