



now part of



Station Hill, Reading

Block E & F Reserved Matters - Transport & Waste Matters

On behalf of **SH Reading Master LLP**

Project Ref: 44470/001 | Rev: 2.0 | Date: February 2019

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2.0	14/02/2019	Final Issue	DJW	CB	SW

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Contents

1	Introduction	1
1.1	Introduction	1
1.2	Background	1
1.3	Proposed Development	1
2	Accessibility Strategy	4
2.1	Overview	4
2.2	Walking and Cycling Accessibility	4
2.3	Bus Accessibility	4
2.4	Rail Accessibility	5
2.5	Highway Access	6
3	Development Proposals	7
3.1	Overview	7
3.2	Parking Provision and Management	7
3.3	Visitor Bays	7
3.4	Electric Vehicle Charging Point (EVCP) Car Parking	8
3.5	Accessible Parking	8
3.6	Cycle Parking	8
4	Delivery, Servicing & Waste Strategy	9
4.1	Overview	9
4.2	Delivery and Servicing Strategy	9
4.3	Residential Waste Storage and Collection Strategy	9
4.4	Residential Bulky Waste	10
4.5	Commercial Waste Storage and Collection Strategy	11
5	Trip Generation	12
5.1	Overview	12
5.2	Trip Generation Comparison using Telecom House trip rates	12
5.3	Conclusion	14
6	Proposed Highway Alterations	15
7	Conclusion	16

Figures

Figure 1.1: Site Location Plan	2
Figure 2-1: Extract from Reading Bus Network Map showing location of bus stops	5

Tables

Table 1-1: Plot E Consented Floorspace	2
Table 1-2: Plot F Consented Floorspace.....	2
Table 1-3: Bedroom numbers vs residential units proposed.....	3
Table 1-4: Proposed Bedroom and Unit difference compared to Consented 2016 Scheme (475 units).....	3
Table 2-1: Anticipated bus passenger increase from proposed development	5
Table 3-1: Car parking provision	7
Table 3-2: Car parking ratios from other residential sites within Reading area	7
Table 4.1: Anticipated waste generated by Block E residential element	10
Table 4.2: Anticipated waste generated by Block F residential element.....	10
Table 4.3 Commercial Waste Generation	11
Table 5-1: Consented development residential people trip generation.....	12
Table 5-2: Proposed scheme residential development people trip generation	12
Table 5-3: Net difference (Consented vs Proposed) – people trip generation.....	12
Table 5-4: Total Proposed Mode Share (taken from 2015 Telecom House application).....	13
Table 5-5: Proposed Mode Split for additional 63 units	13

Appendices

Appendix A	Masterplan Layout
Appendix B	Proposed Highway Alterations
Appendix C	Delivery and Servicing Technical Note
Appendix D	Environmental Scoping Request – Transport Extract

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1 Introduction

1.1 Introduction

- 1.1.1 This Transport & Waste Matters note has been prepared to set out the transport and waste details of a Reserved Matter application for Plot E & F of Station Hill & Telecom House (TH), Reading.

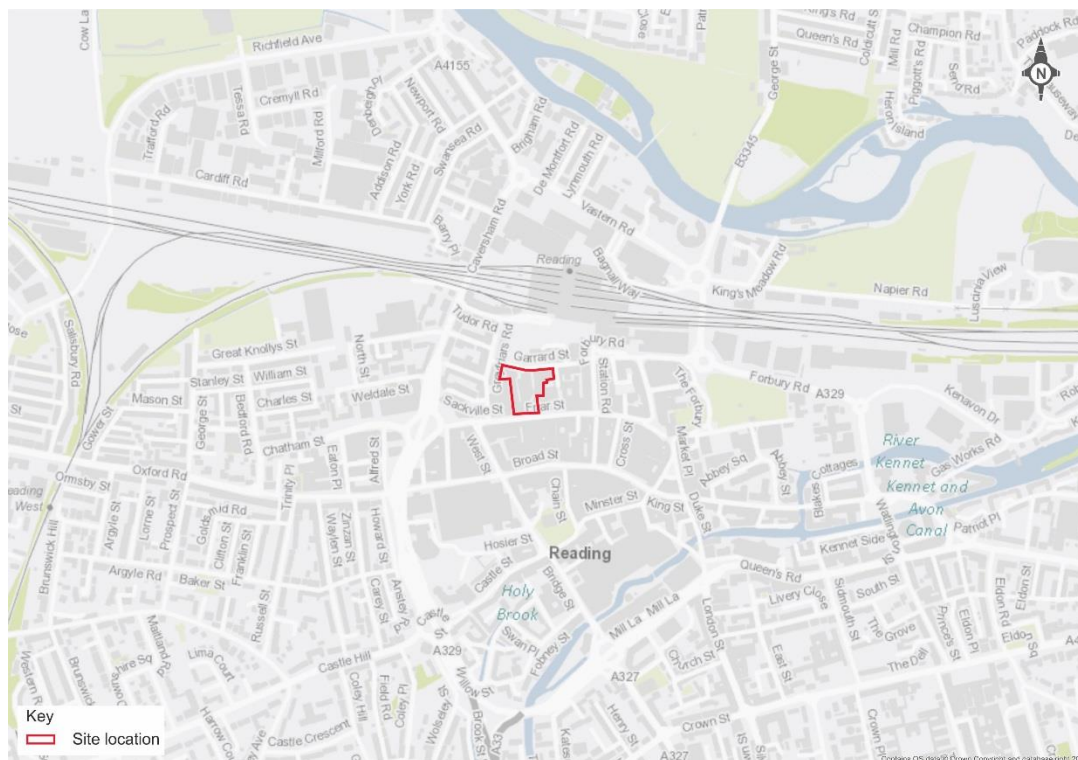
1.2 Background

- 1.2.1 There have been a number of previous approved applications relating to the Station Hill site.
- 1.2.2 In March 2013 an Outline Planning Application (Planning Ref: 130436) for the redevelopment of approximately 2.14 hectares (ha) of previously developed land at Station Hill was submitted. The development was known as the Station Hill 3 Scheme (SH3). The Planning Application was subsequently granted planning consent in January 2015.
- 1.2.3 In August 2015, two further planning applications to extend and amend Plot E of the 2015 Consented Scheme to incorporate an adjacent site referred to as the Telecom House Site. The applications comprised:
- i. An application pursuant to section 73 of the Town and Country Planning Act 1990 to amend the 2015 Consented Scheme (Planning Ref: 151426). The Planning Application was subsequently granted planning consent in July 2016, and;
 - ii. An outline planning application for a new Plot E incorporating the areas of both the 2015 Consented Scheme Plot E and the Telecom House Site (Planning Ref: 151427). The Planning Application was subsequently granted planning consent in July 2016.
- 1.2.4 This Reserved Matters Application seeks to make changes to the 2016 Consented Scheme in respect of Plots E and F in response to a series of key design changes.

1.3 Proposed Development

- 1.3.1 The development proposals are for a Reserved Matters application comprising of:
- Reserved Matters application for the development for 538 units, 1,541 sqm of retail floorspace and 390 sqm of community floorspace.
- 1.3.2 The site is located within the heart of Reading Town Centre, as shown in **Figure 1.1**.

Figure 1.1: Site Location Plan



1.3.3 The proposed masterplan can be found in **Appendix A**.

1.3.4 The site benefits from a consented planning permission (Ref: 151426) outlined in **Table 1-1 & Table 1-2**.

Table 1-1: Plot E Consented Floorspace

Plot E	Outline Consent
Retail / Leisure	Min 1,000m ² Max 7,000m ²
Residential	Max 33,550m ²

Table 1-2: Plot F Consented Floorspace

Plot F	Outline Consent
Retail / Leisure	Min 800m ² Max 800m ²
Residential	Max 19,500m ²

1.3.5 The Plot E & F scheme proposal is to provide 538 residential homes, an additional 63 dwellings to the indicative masterplan assessed within the overall SH3 with Plot E/ Telecom House consented scheme (consisting of 475 units). Alongside an increase in units, the application also seeks to alter the unit type make up to a mix of studio, 1 & 2 bed dwellings with minimal 3 bed dwellings compared to the previous scheme which was a mix of 1,2 & 3 bed dwellings.

1.3.6 **Table 1-3** shows the bedroom numbers from the consented application and proposed development.

Table 1-3: Bedroom numbers vs residential units proposed

	Studio	1-bed	2-bed	3-bed	Total
Bedrooms	1	1	2	3	
2015 Units	0	203	258	14	475
2015 Bedrooms	0	203	516	42	761
2018 units	58	245	224	11	538
2018 Bedrooms	58	245	448	33	784

1.3.7 **Table 1-4** shows the difference in residential units and beds based on 538 units.

Table 1-4: Proposed Bedroom and Unit difference compared to Consented 2016 Scheme (475 units).

	Studio	1-bed	2-bed	3-bed	Total
Bedrooms	1	1	2	3	
Difference Units	+58	+42	-34	-3	+63
Difference Bedrooms	+58	+42	-68	-9	+23

1.3.8 The proposed development would add 63 units but only an increase of 23 bedrooms, which still in accordance with the July 2016 consented floor areas.

1.3.9 The scheme is proposing 1,541 sqm of retail floorspace and 390 sqm of community space within Blocks E & F. This is a reduction of floorspace compared to the previously submitted application. Therefore, the Transport Assessment forming part of the July 2016 consent is considered a robust scenario in terms of retail and leisure impacts.

2 Accessibility Strategy

2.1 Overview

- 2.1.1 This section provides an understanding of the proposed access and movement to and from Plots E & F and sets out how the scheme accords to the approved development principles.

2.2 Walking and Cycling Accessibility

- 2.2.1 Level access will be provided from Friar Street to the residential and retail uses via a central spine provided through the site to Garrard Street. Public access from Garrard Street to the central spine 'Friars Walk' will be provided via staircase and public lift.
- 2.2.2 Residential access to the residential lift / staircase cores can be achieved from both Garrard Street and Friar Street.
- 2.2.3 Level access will be provided throughout the development suitable for access by mobility impaired users. A publicly accessible lift will be provided to enable access between Friars Walk and Garrard Street.
- 2.2.4 It is proposed to alter the footway and crossing point in front of the development at the Friar Street entrance to improve access and better align the crossing with the pedestrian desire line. The proposed alterations are shown on **PBA drawing 44470/5501/003** found in **Appendix B**.
- 2.2.5 All of Reading's town centre amenities and shops are within a 15-minute walk of the site.
- 2.2.6 Central Reading currently has a good level of cycle connectivity to the south of the site through a combination of 'Quiet Roads', cycle paths and cycle lanes within the carriageway. Beyond the immediate centre of Reading, some additional dedicated cycle paths are present on the main routes into Reading, including via Oxford Road and Portman Road to the west; A33 to the south; and routes through Caversham and across both Christchurch Meadows pedestrian and cycle bridge and Caversham Bridge to the north. Leisure routes are also present along the River Kennet and River Thames.

2.3 Bus Accessibility

- 2.3.1 The development is located within the town centre and is ideally located with regards to available bus services. The development will provide access to the local bus stops from Garrard Street, Friars Walk and Friar Street, in accordance with the principles of the approved scheme. **Figure 2-1** shows the location of nearby bus stops within the town centre.

Figure 2-1: Extract from Reading Bus Network Map showing location of bus stops



2.3.2 **Table 2-1** shows the potential increase in bus passengers for the additional 63 units using the approved (July 2016 consent) Telecom House Trip rates.

Table 2-1: Anticipated bus passenger increase from proposed development

Mode Split	AM (08:00 – 09:00)			PM (17:00 – 18:00)			Daily
	Arrive	Depart	Two-way	Arrive	Depart	Two-way	
Bus	1	4	5	3	1	4	38

2.3.3 An updated impact assessment on the existing bus network will not be required given the small increase in predicted bus passengers associated with the proposal.

2.4 Rail Accessibility

2.4.1 The development site is located close to Reading Station, which is identified as a regional transport hub and is operated by GWR. Access to the station will be provided from Garrard Street, Friar Street and Friars Walk, in accordance with the principles of the approved scheme.

2.5 Highway Access

- 2.5.1 Vehicle Access will be obtained from Garrard Street in accordance with the principles of the approved scheme. The proposed entrance/ exit to the car park is next to the location shown in the approved Telecom house parameter plan.
- 2.5.2 There are two existing points of access to Garrard Street from the wider area. The first is from the Tudor Road / Inner Distribution Road (IDR) junction to the north-west. The second is via Greyfriars Road, which is a one-way northbound street and provides access for vehicles from the IDR south and west. Greyfriars Road can be accessed from the grade separated Chatham Street roundabout.
- 2.5.3 All vehicles must exit the site via the Tudor Road junction with the IDR (Caversham Road). Drivers wishing to travel north must perform a U-turn at the Chatham Street roundabout. The Stanshawe Road junction connecting Greyfriars Road with the IDR is restricted to bus, taxi and cycle movements only.

3 Development Proposals

3.1 Overview

- 3.1.1 This section outlines the development proposals contained with the Reserved Matters application related to vehicle and cycle parking.
- 3.1.2 The development proposals are for a Reserved Matters application comprising of:
- Reserved Matters application for the development for 538 units, 1,541 sqm of retail floorspace and 390 sqm of community floorspace.

3.2 Parking Provision and Management

- 3.2.1 The development is seeking to be flexible with respect to the market conditions and the nature and location of the development. The parking provision and parking ratios for the 2015 application and proposed development are set out in **Table 3-1**.
- 3.2.2 The new proposal provides up to 168 spaces within the Plot E & F scheme compared to the previously consented max 200 'on-plot' spaces. An additional potential allowance for 44 spaces in the Garrard Street multi-storey car park (MSCP) was also made at that time.

Table 3-1: Car parking provision

	Outline Consent	Proposal (538 units)
Parking Provision	200 + (44) in MSCP	168
Parking Ratio	0.42 (0.5)	0.31

- 3.2.3 As shown in **Table 3-1**, the proposed development will have a lower vehicle parking ratio on site compared to the consented scheme. **Table 3-2** shows parking ratios for residential sites within the Reading area. This shows that the proposed parking ratio falls within the range of parking ratios for similar sites found within Reading Town Centre.

Table 3-2: Car parking ratios from other residential sites within Reading area

Site	Unit Number	Parking number	Parking Ratio
Chatham Place	184	92	0.50
Kings Point	103	27	0.26
Jacksons Corner	34	0	0.00
Gas Works	34	0	0.00
52-55 Friar Street and 12 Greyfriars Road	137	22	0.16
Royal Mail	701	350	0.50
29-35 Station Road	33	0	0.00
30 Garrard Street	106	12	0.11
Kenavon Drive	765	324	0.42

3.3 Visitor Bays

- 3.3.1 The development is looking to provide no visitor parking bays. Reading Bough Council (RBC) policy does not require visitor parking spaces to be provided in zone 1 for residential uses. RBC policy also states that 'Public parking will be provided in line with RBC's current parking

strategy' for retail uses. There is existing on-street parking located along Garrard Street and public car parks located within Reading Town Centre.

3.4 Electric Vehicle Charging Point (EVCP) Car Parking

- 3.4.1 The electric vehicle charging parking for the proposed development will be provided on the basis of an initial 10% active and 10% passive provision. The development is proposing 16 active EVCP spaces and infrastructure to provide 16 passive EVCP spaces.

3.5 Accessible Parking

- 3.5.1 The accessible parking for the proposed development will be provided on the basis of a minimum of 5% provision of the overall parking provision, as previously approved and as set out in RBC's parking policy guidance. The development is currently therefore proposing 8 accessible bays which is 5% of the overall development car parking numbers.

3.6 Cycle Parking

- 3.6.1 The proposed development will provide cycle parking spaces in accordance with the current 2011 RBC Parking Standards.
- 3.6.2 The development is proposed to provide 340 cycle parking spaces.
- 3.6.3 Residential cycle parking meets RBC standards and is located within the car park podium, accessible from the vehicle entrance on Garrard Street. This will be made up of a mixture of Sheffield stands and two tier cycle racks. A further cycle parking area is located within the ground floor of Block E, accessible directly from Friar Street and Friars Walk and made up of cycle lockers. This cycle parking area will be shared between residential users and retail staff for the development.
- 3.6.4 There is provision for an area within Block E where residents can undertake bike maintenance and wash their bike.
- 3.6.5 Retail staff cycle parking will be located within a cycle parking area within the ground floor of Block E, accessible directly from Friar Street and Friars Walk and made up of cycle lockers.
- 3.6.6 Retail visitor cycle parking will be located on street at access points to Friars Walk as previously agreed within the cycle masterplan that formed part of the 2015 SH3 scheme.

4 Delivery, Servicing & Waste Strategy

4.1 Overview

- 4.1.1 This sections summaries the proposed Delivery, Servicing and Waste strategy for Plots E & F.
- 4.1.2 A more detailed technical note reviewing the potential impact of the proposed servicing and delivery strategy for Blocks E & F on Garrard Street and Friars Street can be found in **Appendix C**.

4.2 Delivery and Servicing Strategy

- 4.2.1 It is proposed that all servicing and delivery for the residential element of the development is to be accessed from Garrard Street. A service yard is proposed to accommodate for medium scale deliveries with the ability for a panel van to turn internally. Larger vehicles will either need to reverse into the service yard or load from Garrard Street within a proposed on-street loading bay. The loading bay is proposed on Garrard Street adjacent to Block F to facilitate servicing and delivery for the community space and Block E & F residents. **PBA drawing 44470/5501/004** outlines the principles of the proposed highway marking alterations to facilitate this (**Appendix B**).
- 4.2.2 It is proposed that servicing and delivery for the retail element will be undertaken from a combination of Friar Street and Garrard Street via the proposed on-street loading bays. RBC is also planning to implement a 'Red Route' scheme on Friar Street which shows a shared loading bay/taxi rank directly outside the proposed development and two loading bays on the opposite side of the street. Some modifications are proposed to this layout as outlined in **PBA drawing 44470/5501/003** to improve pedestrian (**Appendix B**).
- 4.2.3 A service lift from Garrard Street would facilitate access to the retail units and Friars Walk as shown on the masterplan drawing (**Appendix A**) and **PBA drawing 44470/5501/004** (**Appendix B**).

4.3 Residential Waste Storage and Collection Strategy

- 4.3.1 Residents within Blocks E & F will utilise waste chutes located within each residential core to dispose of waste which will feed into refuse storage areas. The development is providing two waste chutes per residential core.
- 4.3.2 Refuse storage areas will be located within the ground and mezzanine floors of the car park with access onto Garrard Street for collection. There are two primary and two secondary waste storage rooms proposed, outlined below:

Block E

- Primary Waste storage room – lower ground floor of car park at base of northern residential core;
- Secondary Waste storage room – located at lower ground floor of car park at base of central residential core; and
- Secondary Waste storage room – mezzanine floor of car park at base of southern residential core.

Block F

- Primary Waste storage room – mezzanine floor of car park at base of residential core.

- 4.3.3 The primary waste storage rooms will be used to hold refuse before they are moved to the refuse vehicle collection areas on Garrard Street or Merchants Place for collection. The

secondary waste storage room bins will be monitored by an onsite facilities team who will be responsible for rotating bins to and from the primary storage room when they become full. The anticipated waste generated by the residential element of the development is shown in **Table 4-1 & 4-2**.

Table 4.1: Anticipated waste generated by Block E residential element

Frequency	Units	Residual waste 1,100 L bins	Recycling 1,100 L bins	Total 1,100 L bins
Plot E				
Fortnightly	370	74.0	74.0	148.0
Weekly	370	37.0	37.0	74.0
Twice Weekly	370	18.5	18.5	37.0
Three times a week	370	12.3	12.3	24.6

Table 4.2: Anticipated waste generated by Block F residential element

Frequency	Units	Residual waste 1,100 L bins	Recycling 1,100 L bins	Total 1,100 L bins
Plot F				
Fortnightly	168	33.6	33.6	67.2
Weekly	168	16.8	16.8	33.6
Twice Weekly	168	8.4	8.4	16.8
Three times a week	168	5.6	5.6	11.2

- 4.3.4 The waste storage area provided for Block E is 303m², which has the capacity to hold up to 45 bins.
- 4.3.5 The waste storage area provided for Block F is 55m², which has the capacity to hold up to 11 bins.
- 4.3.6 Therefore, a three times a week collection would probably be required to accommodate the anticipated waste generation for the site. This collection frequency would mean that the primary and secondary waste storage rooms would provide sufficient waste storage to accommodate the anticipated residential waste generation.
- 4.3.7 The onsite facilities team will be responsible for moving bins from the primary storage area to the servicing yard off Garrard Street or Merchants Place for collection. Refuse collection lorries will utilise the internal service yard provided from Garrard Street to collect waste from Block E. Refuse collection lorries will collect on street (Garrard Street or Merchants Place) from Block F.

4.4 Residential Bulky Waste

- 4.4.1 The bulky waste storage area is provided within the lower ground floor of the car park adjacent to the car park access. The bulky waste storage area is approximately 55m².

4.5 Commercial Waste Storage and Collection Strategy

- 4.5.1 Each retail unit will have an area to store waste generated throughout the day. A combined commercial waste storage area is located at the Friar Street end of the development, which will hold commercial waste for collection from Friar Street. It is approximately 50m², which has capacity to hold up to 15 bins. This commercial waste will be collected from Friar Street by refuse lorry.
- 4.5.2 The anticipated commercial waste generation is shown in **Table 4-3** based on a 'maximum use' scenario (100% Retail – Food Shop) which provides an initial estimate of the maximum storage requirements dependant on collection frequency.

Table 4:3 Commercial Waste Generation

Retail	Area	Provision required per week	1,100L Euro Bins – Weekly	1,100L Euro Bins – Twice Weekly	1,100L Euro Bins – Three times a week
Plot E	1,228m ²	17,192	15.7	7.9	5.2
Plot F	462m ²	6,468	5.9	3	2
Total	1,690m²	23,660	21.6	10.9	7.2

- 4.5.3 The commercial management team on site would be responsible for moving each individual units one day waste generation to the combined commercial waste storage area.

5 Trip Generation

5.1 Overview

5.1.1 This section sets out the trip generation for the proposed development.

5.2 Trip Generation Comparison using Telecom House trip rates

5.2.1 A people trip rate comparison was undertaken between the consented scheme previously assessed and proposed development using the Telecom house trip rates (July 2016 consent).

5.2.2 **Table 5-1** shows the 2016 consented development residential people trip generation, (475 units).

Table 5-1: Consented development residential people trip generation

	AM (08:00 – 09:00)			PM (17:00 – 18:00)			Daily
	Arrive	Depart	Two-way	Arrive	Depart	Two-way	
Residential (475 units)	49	264	313	183	106	289	2645

5.2.3 **Table 5-2** shows the proposed development residential people trip generation for the proposed number of units (538 units).

Table 5-2: Proposed scheme residential development people trip generation

	AM (08:00 – 09:00)			PM (17:00 – 18:00)			Daily
	Arrive	Depart	Two-way	Arrive	Depart	Two-way	
Residential (538 units)	55	299	354	208	120	328	2996

5.2.4 **Table 5-3** shows a comparison between the consented people trip generation and proposed scheme people trip generation.

Table 5-3: Net difference (Consented vs Proposed) – people trip generation

	AM (08:00 - 09:00)			PM (17:00 - 18:00)			Daily
	Arrive	Depart	Two-way	Arrive	Depart	Two-way	
538 units	+6	+35	+41	+25	+14	+39	+351

5.2.5 The mode shares are based on the agreed mode share taken from the 2016 Telecom House application outlined in **Table 5-4**.

Table 5-4: Total Proposed Mode Share (taken from 2016 Telecom House application)

	Residential
From Home	4.13%
Underground	0.45%
Train	20.04%
Bus	11.07%
Taxi	0.42%
Motorcycle	0.35%
Car Driver	28.42%
Car Passenger	2.61%
Bicycle	3.34%
Foot	28.47%
Other	0.69%
Total	100%

5.2.6 **Table 5-5** summaries the trips by mode for the additional people trips generated by the Plot E & F scheme.

Table 5-5: Proposed Mode Split for additional 63 units

	AM (08:00 – 09:00)			PM (17:00 – 18:00)			
Mode Split	Arrive	Depart	Two-way	Arrive	Depart	Two-way	Daily
From Home	0	1	2	1	1	2	15
Underground	0	0	1	0	1	0	2
Train	1	7	8	5	3	8	70
Bus	1	4	4	3	1	4	39
Taxi	0	0	0	0	1	0	1
Motorcycle	0	0	0	0	0	0	2
Car Driver	2	10	12	7	4	11	100
Car Passenger	0	1	1	0	0	1	9
Bicycle	0	1	2	1	0	1	12
Foot	2	10	12	7	4	11	100
Other	0	0	0	0	0	0	3
Total	5	34	41	25	14	38	352

5.2.7 **Table 5-5** shows that the additional 63 residential dwellings will generate 12 and 11 two way 'Car trips' in the AM and PM peak hour respectively and a minor increase in trips associated with public transports. This does not reflect the overall planned reduction in onsite parking, so is a robust upper estimate.

5.2.8 The Environmental Impact Assessment Scoping opinion was sought based on a maximum of 550 units now proposed. Subsequent development of the masterplan has led to 538 units being sought, an increase of 63 dwellings to the indicative masterplan assessed within the overall SH3 with Plot E/ Telecom House consented scheme (consisting of 475 units).

5.2.9 The increase in number of vehicle trips associated with 75 additional units assessed within the 2013 Environmental Statement (550 units) is above the additional 63 units now sought.

Therefore, the 2013 transport modelling presented still represents a 'worst-case scenario', with the impacts previously assessed considered to accurately represent the likely significant effect of the proposed development. The transport paragraph extract and RBC Environmental Scoping response can be found in **Appendix D**.

5.3 Conclusion

- 5.3.1 Overall **Table 5-5** shows that the additional 63 residential dwellings will generate up to 12 and 11 two way 'Car trips' in the AM and PM peak hour respectively. Therefore, whilst there could be a small increase in 'Car Driver' trips, this is not anticipated to have any material impact on the function of the local highway network and this marginal increase in car trips is still below the car trips modelled in the original 2013 transport assessment.

6 Proposed Highway Alterations

6.1.1 The following Highway Alteration works are proposed to support the development:

- New Access onto Garrard Street for car parking, as previously consented;
- Alteration to the existing taxi rank to a proposed loading bay and two additional on street parking bays on Garrard Street adjacent to Block F;
- New footway and streetscape on Garrard Street / Merchants Place;
- Reduction in size of the existing on-street parking bay on Garrard Street adjacent to Block E; and
- Proposed relocation of the existing pedestrian build out and loading bay on Friar Street to improve pedestrian access and align with Red Route implementation.

6.1.2 A copy of the proposed Highway Alterations works can be found in **Appendix C**.

7 Conclusion

- 7.1.1 This Transport & Waste Matters document considers the development proposals in context of the approved principles for the consented Block E & F schemes
- 7.1.2 The proposed detailed application for the Plot E & F scheme, provide an additional 63 residential dwellings to the indicative masterplan assessed within the overall SH3 with Plot E/ Telecom House consented scheme (consisting of 475 units).
- 7.1.3 This document demonstrates that the Reserved Matters Application (RMA) is in accordance with the July 2016 consented scheme.
- 7.1.4 Cycle parking, accessible parking and electric vehicle charging provision has been proposed to meet the RBCs minimum parking standards.
- 7.1.5 This application is proposing a suitable delivery, servicing and waste strategy which will not have a detrimental impact to the existing highway.
- 7.1.6 The additional 63 residential dwellings could generate 12 and 11 additional two way 'Car trips' in the AM and PM peak hour respectively and a minor increase in trips associated with public transport when compared to the 475 units assessed within the 2015 Transport Assessment.
- 7.1.7 The development proposed still generates a reduced level of vehicle trips to that which was originally assessed and approved within the 2013 Environmental Impact Assessment using RBC strategic transport model (550 units). Therefore, the 2013 transport modelling is still a robust assessment of the likely significant effects of the proposed development on the Highway Network.

Appendix A Masterplan Layout

GRAYFRIARS ROAD

Plot E

GARRARD STREET

Plot F (see concurrent but separate application)

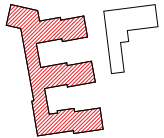
MERCHANTS PLACE

FRIAR STREET

DRAFT

REV No.	DATE	DESCRIPTION	OWN	CHK
P8	2018-12-18	Issued for Design Freeze		
P7	2018-12-17	Issued for Coordination		
P6	2018-12-12	Issued for Client Meeting		
P5	2018-11-18	Issued for Design Freeze		
P4	2018-11-07	Issued for Coordination		
P3	2018-11-02	Issued for Coordination		
P2	2018-10-23	Issued for Client Meeting		
P1	2018-10-19	Issued for Coordination		

KEY PLAN



PROJECT

Station Hill, Reading

CLIENT

SH Reading Master LLP

CALLISONRTKL
A DESIGN CONSULTANCY OF ARCADIS

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SHEET IDENTIFICATION

TITLE
Plot E - Ground Floor Level (45.7 AOD)

STATUS

Planning

PROJECT NUMBER: 050-170073

DATE DRAWN: 09/27/18

SCALE: 1:1

DRAWN BY: AM

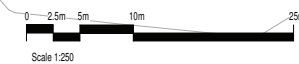
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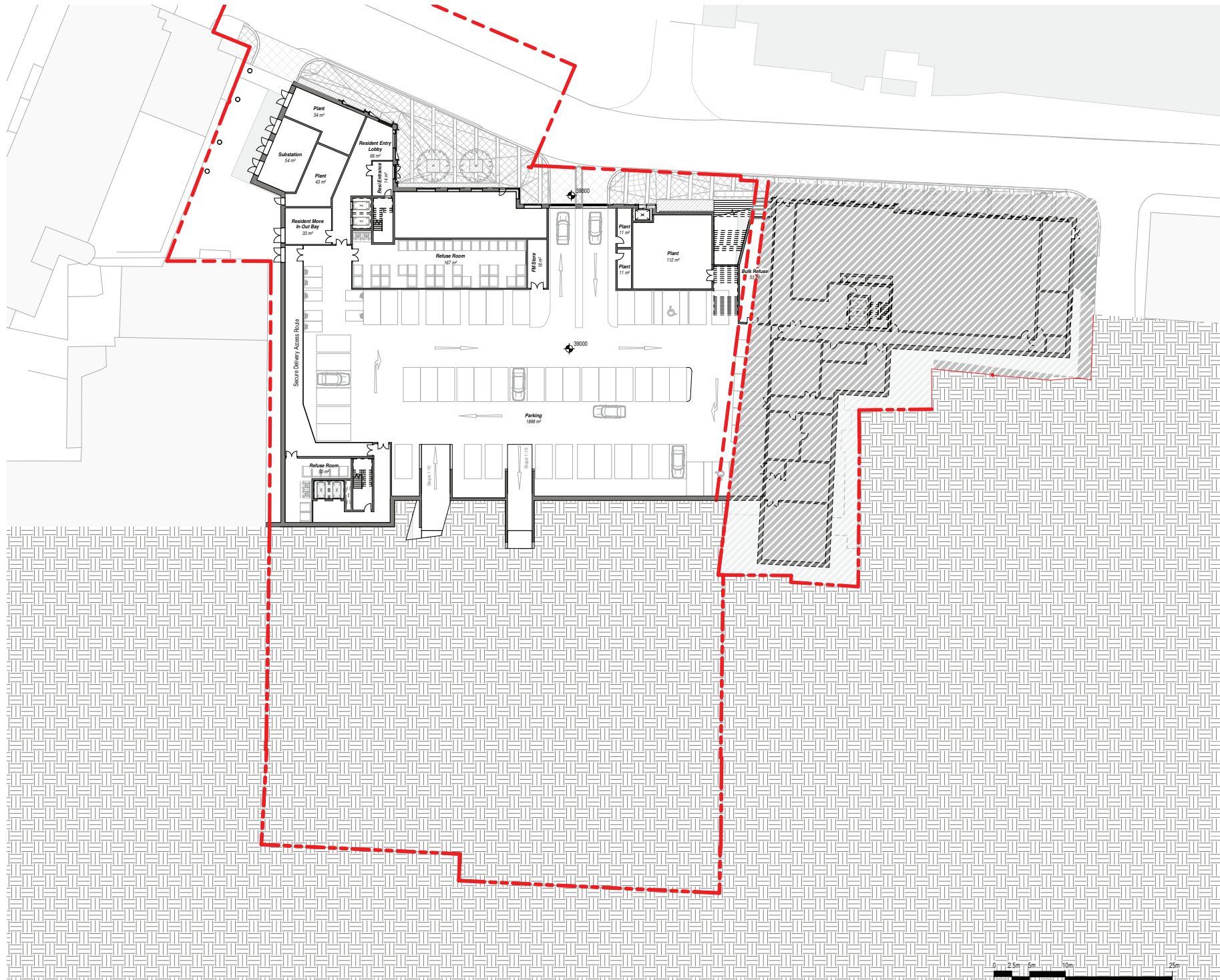
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SHR - CRL - SB - GF - PL

A - 130-003- P8

07/02/2019 20:24:52





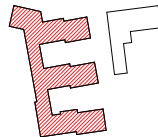
1 Block E - Lower Ground Floor Level

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REV No.	DATE	DESCRIPTION	DWN/CHK
P8	2018-12-18	Issued for Design Freeze	
P7	2018-12-15	Issued for Client Meeting	
P6	2018-11-18	Issued for Design Freeze	
P5	2018-11-07	Issued for Coordination	
P4	2018-11-02	Issued for Coordination	
P3	2018-10-31	Issued for Client Meeting	
P2	2018-10-18	Issued for Coordination	
P1	2018-10-01	Issued for Coordination	

KEY PLAN



PROJECT

Station Hill, Reading

CLIENT

SH Reading Master
LLP

CALLISONRTKL
A DESIGN CONSULTANCY OF ARCADIS

CallisonRTKL - UK Ltd.
25 Farringdon Street, 10th Floor
London EC4A 3DF
T: +44(0)20 7396 0404
SHEET IDENTIFICATION
TITLE

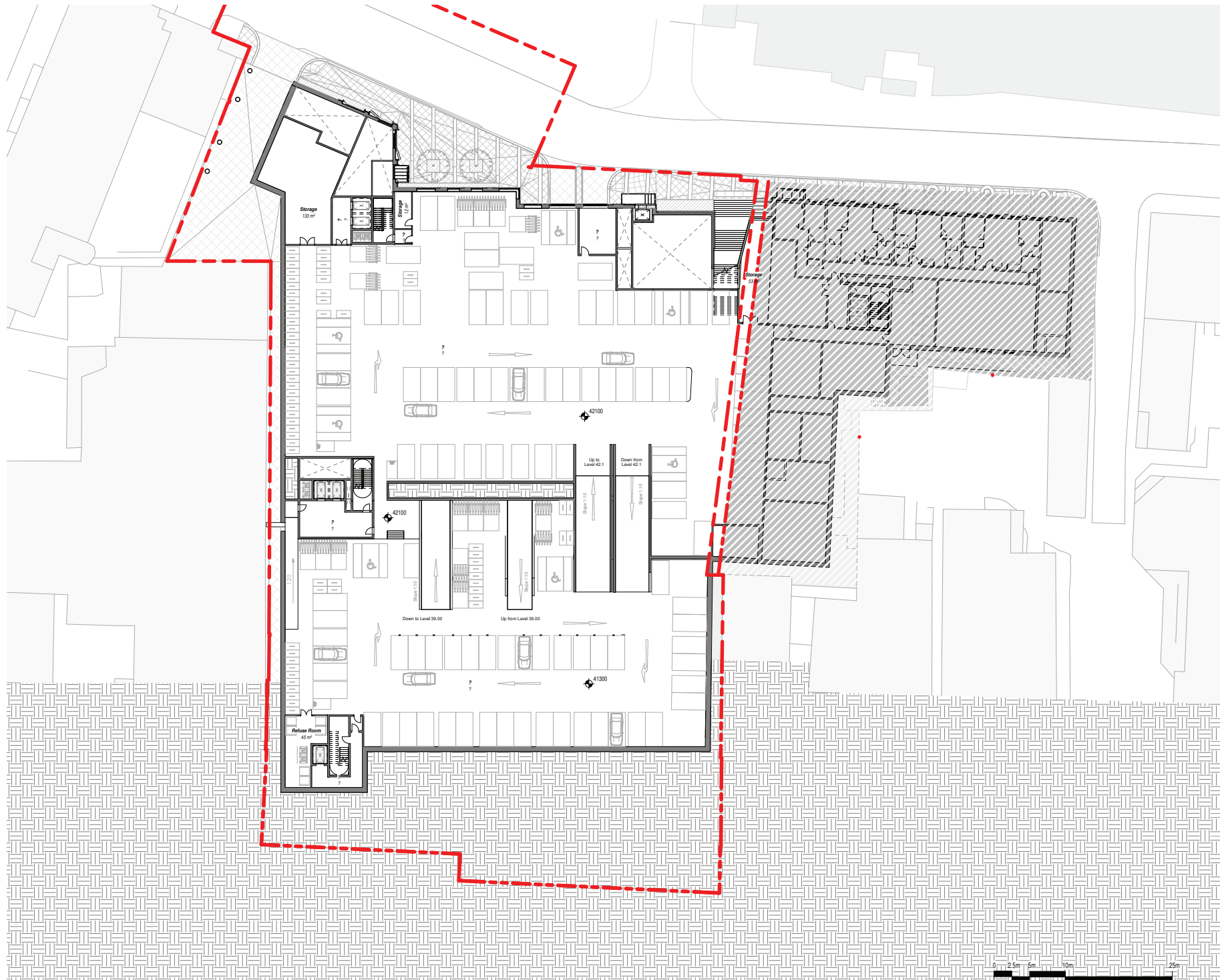
**Block E - Lower Ground
Floor Level (39 AOD)**

STATUS

Planning

PROJECT NUMBER	DATE DRAWN	ZONE	LEVEL	TYPE
050-170073	09/27/18	SB	LG	PL
DRAWN BY	CHECKED BY	AUTHOR	CHECKER	
PROJECT	ORGANISATION	ZONE	LEVEL	TYPE
SHR	CALLISONRTKL	SB	LG	PL
A - 130-001- P8				

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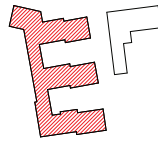
1 Block E - Mezzanine Floor Level
1 : 250

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REV No.	DATE	DESCRIPTION	DWN	CHK
P9	2018-12-18	Issued for Design Freeze		
P8	2018-12-17	Issued for Coordination		
P7	2018-12-15	Issued for Client Meeting		
P6	2018-11-18	Issued for Design Freeze		
P5	2018-11-07	Issued for Coordination		
P4	2018-11-02	Issued for Coordination		
P3	2018-10-31	Issued for Client Meeting		
P2	2018-10-18	Issued for Coordination		
P1	2018-10-01	Issued for Coordination		

KEY PLAN



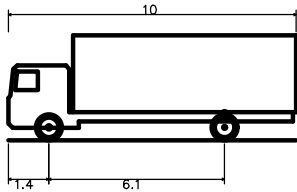
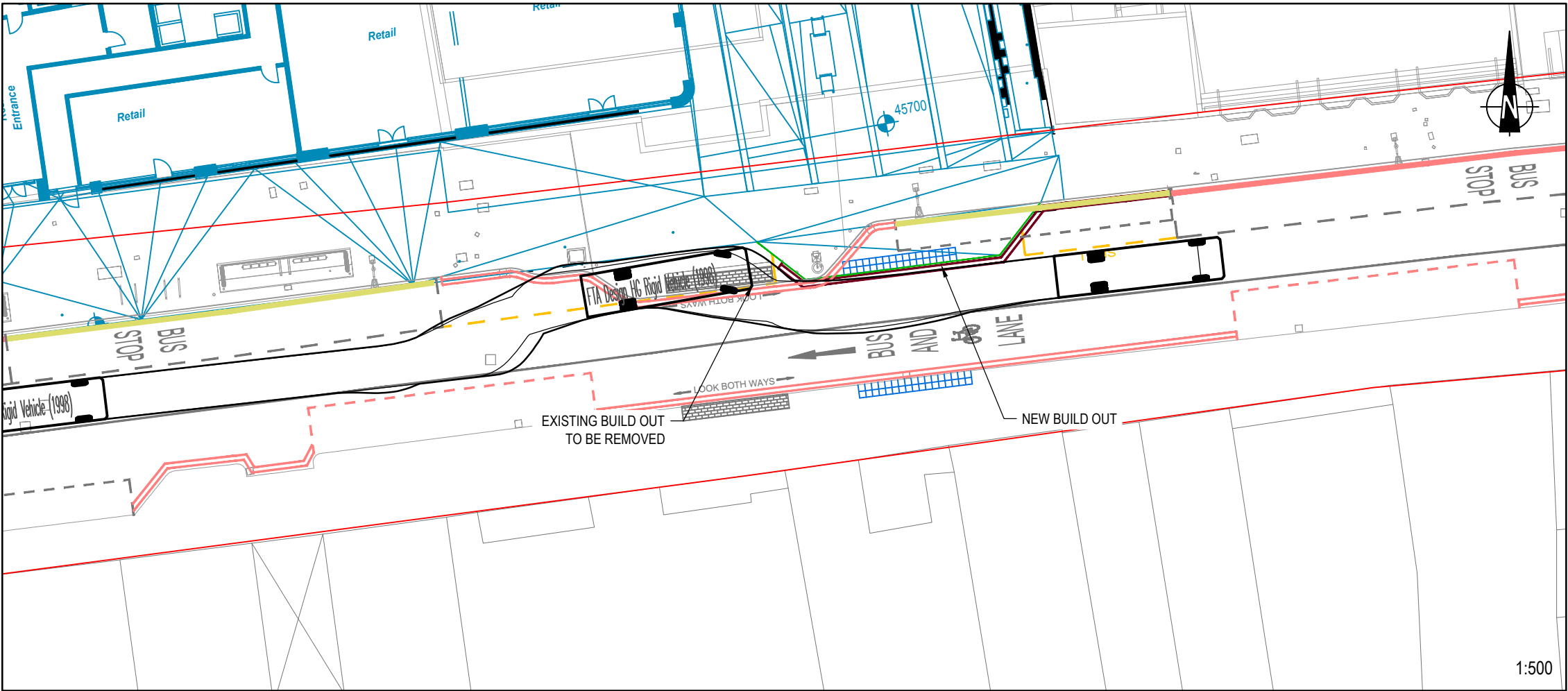
PROJECT
Station Hill, Reading

CLIENT
SH Reading Master
LLP

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SHEET IDENTIFICATION
TITLE
Block E - Mezzanine Floor
Level (41.3 - 42.1 AOD)

STATUS
Planning
PROJECT NUMBER
050-170073
DATE DRAWN
09/27/18
SCALE: DRAWING
1 : 250
DRAWN BY
Author
CHECKED BY
Checker
PROJECT ORIGINATOR
ZONE
LEVEL
TYPE
SHR - CRL - SB - MZ - PL
SHEET NUMBER
A - 130-002- P9
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Appendix B Proposed Highway Alterations



FTA Design HG Rigid Vehicle (1998)

Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.645m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	11.000m

KEY:

HIGHWAY BOUNDARY

EXISTING PROPOSALS:

RED ROUTE ROAD MARKINGS

ROAD MARKINGS

EXISTING BUILD OUT TO BE REMOVED

STATION HILL PROPOSALS:

BUILDING LINE

RED ROUTE ROAD MARKINGS

ROAD MARKINGS

PROPOSED BUILD OUT EXTENTS

D	UPDATED MASTERPLAN	11.02.19	RC	DJW	
C	REVISED LAYOUT	02.01.19	JHC	DJW	
B	REVISED BUILD OUT	13.11.18	JHC	CB	
A	REVISED BUILD OUT	16.10.18	JHC	CB	CB
Mark	Revision	Date	Drawn	Chkd	Appd

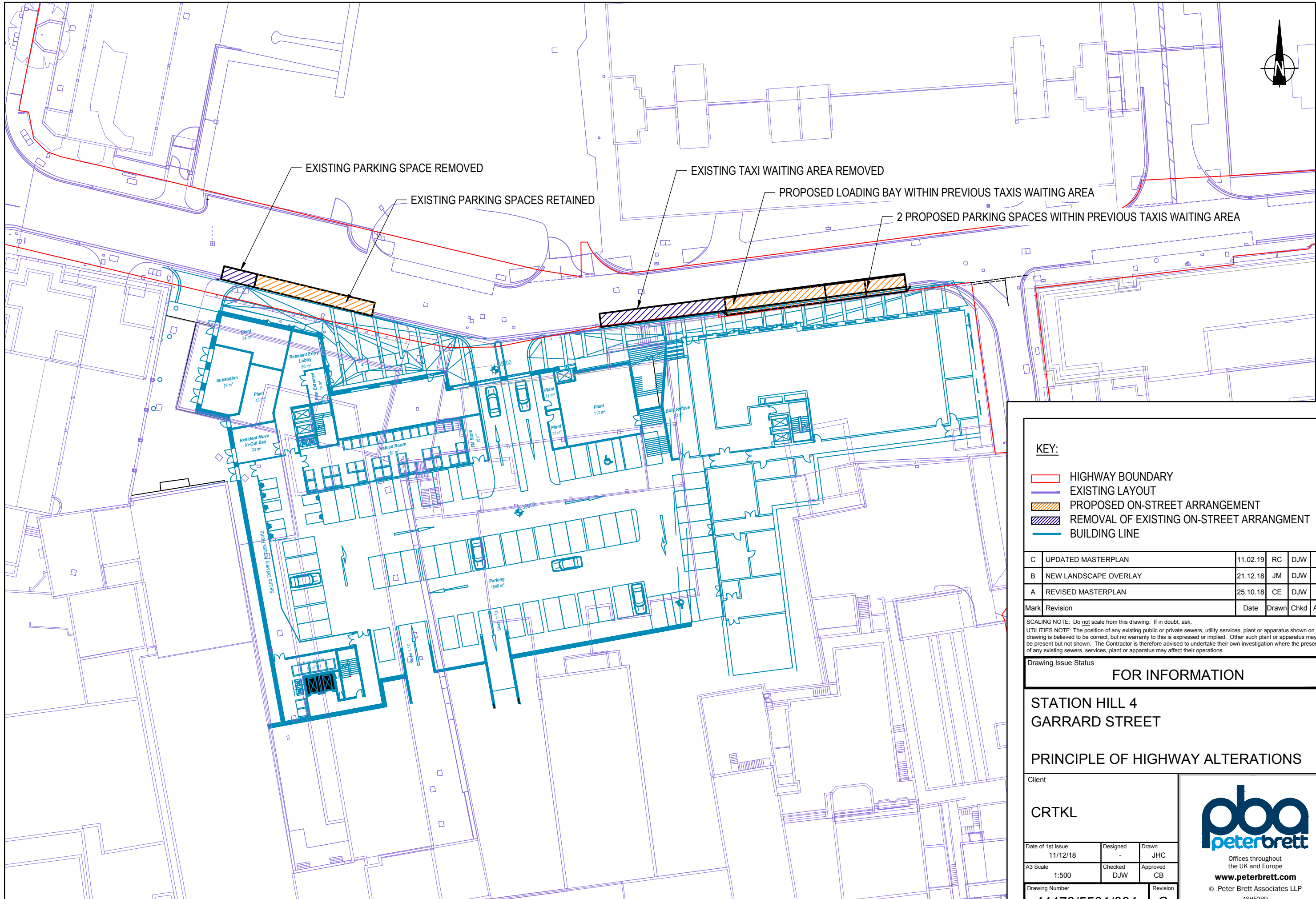
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FOR INFORMATION

STATION HILL 4 FRIAR STREET PROPOSED BUILD OUT & SWEEP PATH ANALYSIS

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CRTKL			
Date of 1st Issue	Designed	Drawn	
25/09/18	-	AC	
A3 Scale	Checked	Approved	
AS SHOWN	JHC	CB	
Drawing Number	Revision		
44470/5501/003	D		



KEY:

- HIGHWAY BOUNDARY
- EXISTING LAYOUT
- PROPOSED ON-STREET ARRANGEMENT
- REMOVAL OF EXISTING ON-STREET ARRANGMENT
- BUILDING LINE

C	UPDATED MASTERPLAN	11.02.19	RC	DJW	
B	NEW LANDSCAPE OVERLAY	21.12.18	JM	DJW	
A	REVISED MASTERPLAN	25.10.18	CE	DJW	CB
Mark	Revision	Date	Drawn	Chkd	Appd

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**STATION HILL 4
GARRARD STREET**

PRINCIPLE OF HIGHWAY ALTERATIONS

Client			
CRTKL			
Date of 1st Issue	Designed	Drawn	
11/12/18	-	JHC	
A3 Scale	Checked	Approved	
1:500	DJW	CB	
Drawing Number	Revision		
44470/5501/004	C		

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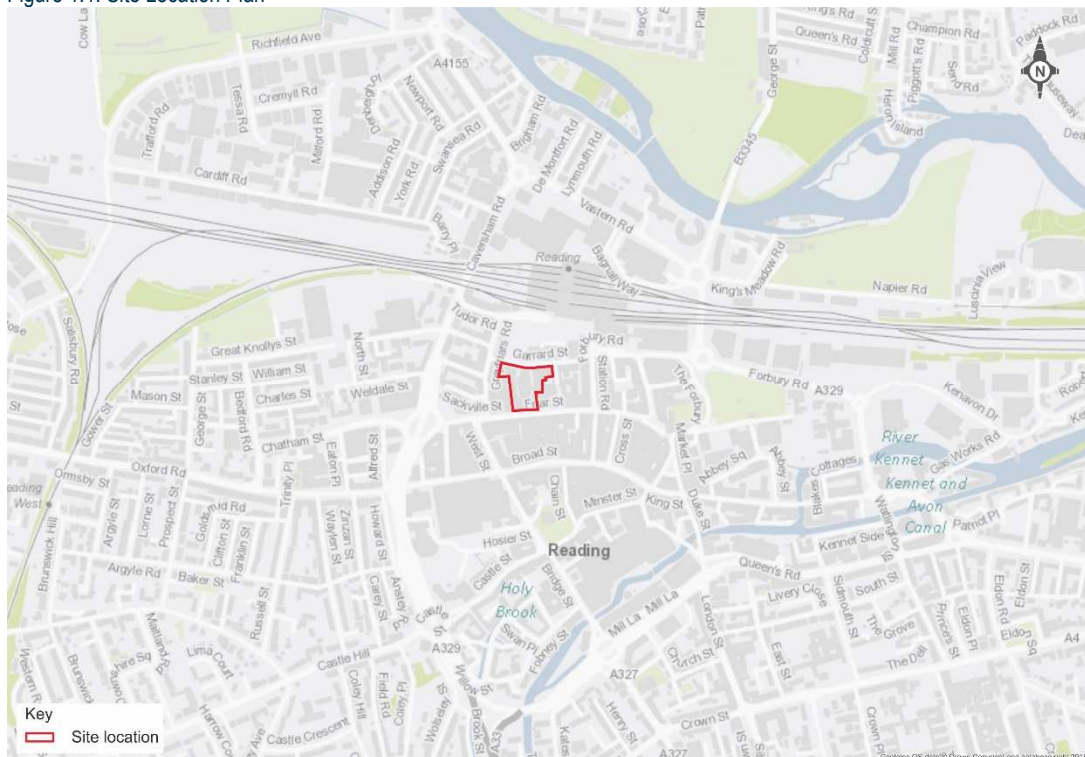
Appendix C Delivery and Servicing Technical Note

TECHNICAL NOTE

Job Name: Station Hill
Job No: 44470
Note No: TN003 – Revision B
Date: 21/11/2018
Prepared By: J. Churchill / D. Whittaker
Subject: **Block E & F Delivery and Servicing**

- 1.1.1 This technical note provides a review of the existing delivery/servicing occurrences on Friars Street & Garrard Street. This note seeks to assess whether the delivery and servicing demand for Blocks E & F of the Station Hill development could be served from Friar Street without materially impacting the future operation of Reading Borough Council's (RBC) future 'Red Route Scheme'.
- 1.1.2 The proposed development is for up to 538 residential units, approx. 1,770 sqm of retail space and approx. 855 sqm of community space in the heart of Reading town centre as shown in Figure 1.1.

Figure 1.1: Site Location Plan



Current Friar Street and Garrard Street use

- 1.1.3 PBA have undertaken analysis of Friar Street and Garrard Streets delivery and servicing activities through a review of video surveillance footage. The surveys took place on a neutral weekday (Tuesday 16th October).

Friar Street

- 1.1.4 Friar Street lies to the south of the proposed development and facilitates the servicing of existing businesses located along Friar Street. The existing businesses serviced from Friar Street include three units within the site boundary facing Friar Street and have an approximate combined Gross

TECHNICAL NOTE

Floor Area of approximately 1,000sqm: BonMarche, Savers and A2 Supply. There are a further two currently un-occupied units next to A2 supply's which would be serviced from Friar Street.

- 1.1.5 Friar Street has existing access restrictions between 7:00 – 11:00 and 16:00 – 19:00 for all vehicles except buses, wheelchair accessible taxis & permit holders. There are no dedicated loading bays along Friar Street, however kerb side loading is allowed outside the no loading hours of 07:30 – 09:30 and 16:00 – 18:00. The majority of Friar Street has bus stops along the northern edge. There is an existing 18m taxi rank that can accommodate up to 3 taxis on the northern edge of the highway to the east of the proposed development, which can be utilised by delivery vehicles outside of the restriction times. There is also an existing 25m disabled bay that can accommodate up to 4 cars on the southern edge of the highway to the west of the proposed development, which has a 4-hour maximum parking restriction. From the end of this disabled bay to the pedestrian crossing and traffic lights of Friar Street/Greyfriars Road junction, no loading can be undertaken on the southern edge at any time. Loading can be undertaken along the southern kerbside outside the restricted hours and along the northern kerbside within the existing taxi rank and outside the bus cages.
- 1.1.6 It was observed that over a 24hr period 102 vehicles utilised Friar Street as either taxis or servicing and delivery activities. Of the 102 vehicles recorded, 42 were taxis.
- 1.1.7 Table 1.1 shows a breakdown of the 60 delivery vehicle types over the 24hr period.

Table 1.1: Friar Street Vehicle Types

Vehicle Type	Quantity	Percentage
Motorcycle (couriers)	5	8%
Cars and vans up to 3.5 tonnes (LGVs)	38	63%
Large sized refuse vehicle	5	8%
HGVs over 3.5t up to 18t	12	20%
Total	60	100%

- 1.1.8 Table 1.2 shows a summary of the Friar Street Utilisation over the 24hr period. The table presents a breakdown arrival and departure trips of vehicles, the average wait time of each vehicle type and a summary of total vehicles using Friar Street.

TECHNICAL NOTE

Table 1.2: Friar Street Utilisation

	MCY		Cars / Vans		Refuse		HGVs		Taxi		Total	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
01:00	0	0	0	0	1	1	0	0	2	2	3	3
02:00	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	1	1	1	1	0	0	0	0	2	2
05:00	0	0	2	2	0	0	3	0	0	0	5	2
06:00	0	0	1	1	0	0	1	4	0	0	2	5
07:00	0	0	1	0	0	0	0	0	0	0	1	0
08:00	0	0	2	3	2	2	0	0	0	0	4	5
09:00	0	0	3	3	1	1	0	0	1	1	5	5
10:00	0	0	1	1	0	0	1	1	0	0	2	2
11:00	0	0	3	3	0	0	3	3	2	2	8	8
12:00	1	1	4	3	0	0	0	0	1	0	6	4
13:00	0	0	2	2	0	0	1	1	3	1	6	4
14:00	0	0	5	6	0	0	1	1	3	5	9	12
15:00	0	0	5	4	0	0	1	1	2	3	8	8
16:00	0	0	3	4	0	0	0	0	3	2	6	6
17:00	0	0	0	0	0	0	0	0	1	2	1	2
18:00	1	1	0	0	0	0	1	1	3	3	5	5
19:00	1	1	2	1	0	0	0	0	0	0	3	2
20:00	0	0	1	1	0	0	0	0	2	1	3	2
21:00	0	0	1	1	0	0	0	0	1	2	2	3
22:00	0	0	0	1	0	0	0	0	6	5	6	6
23:00	1	1	1	1	0	0	0	0	4	4	6	6
00:00	1	1	0	0	0	0	0	0	8	9	9	10
Total	5		38		5		12		42		102	
Average Wait (hour:min:sec)	00:08:01		00:09:27		00:10:01		00:13:23		00:06:33		00:10:35	
Total Usage (hour:min:sec)	00:43:30		05:58:59		00:50:03		02:40:32		04:35:25		17:59:41	

- 1.1.9 The existing restrictions on Friar Street limits the overall potential usage to 18 hours based on servicing been restricted between 07:30 – 09:30 and 16:00 -18:00.
- 1.1.10 Table 1.2 shows that Friar Street's existing total delivery and taxis usage across the 24-hour period was 17 hours 59 minutes. Across the surveyed period, the average delivery / loading time was 10 minutes and 35 seconds per vehicle. The survey data shows that the maximum number of vehicles arriving on Friar Street within an hour was 9 vehicles, however it was observed from the video footage that these 9 vehicles did not cause disruption to the buses and other vehicles using Friar Street. It was also observed that over a 24hr period, 14 vehicles used the disabled parking bay area for delivery and servicing.
- 1.1.11 Friar Street also recorded 42 instances of taxis waiting along Friar Street during the survey period, with an average wait time of 6 minutes 33 seconds per vehicle. The total usage of Friar Streets taxi rank across the 24-hour period was 4 hours and 35 minutes on a neutral weekday. The majority of taxis used Friar Street in the afternoon and evening. The longest a taxi was waiting across the day was for 42 minutes and 17 seconds. It was observed that this wait time was associated with the taxi parking up and the driver exiting the vehicle.

Garrard Street

TECHNICAL NOTE

- 1.1.12 Garrard Street currently has no dedicated delivery and servicing provision. A high percentage of the street is dedicated to taxi waiting areas which feed into a taxi rank at Reading Station. There are also two on-street car parking areas. However, Garrard Street is largely un-restricted and has the opportunity at various locations where loading could be undertaken. Currently loading occurs along Merchants Place to the east of the Site, which can accommodate loading between 00:00 – 11:00 and 16:00 – 00:00.
- 1.1.13 26 vehicles loaded over the 24hr period on Garrard Street, 19 were undertaken kerbside with 7 undertaken within the taxi areas / parking bays. The taxi waiting area is generally utilised throughout the day with taxi's queuing for a fare at Reading Station. It is our understanding from discussion with RBC that currently the taxis waiting area along Garrard Street is temporary and can be removed as the Station Hill scheme emerges.
- 1.1.14 Table 1.3 shows a breakdown of the 26 delivery vehicle types observed using Garrard Street over the 24hr period.

Table 1.3: Garrard Street Vehicle Types

Vehicle Type	Quantity	Percentage
Motorcycle (couriers)	0	0%
Cars and vans up to 3.5 tonnes (LGVs)	20	77%
Large sized refuse vehicle	1	4%
HGVs over 3.5t up to 18t	5	19%

- 1.1.15 Table 1.4 shows a summary of the usage across Garrard Street over the surveyed period.

Table 1.4: Garrard Street Utilisation

Cars / Vans	Refuse	HGVs	Total
-------------	--------	------	-------

TECHNICAL NOTE

	In	Out	In	Out	In	Out	In	Out
01:00	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0
05:00	0	0	1	1	0	0	1	1
06:00	1	1	0	0	0	0	1	1
07:00	0	0	0	0	1	0	1	0
08:00	4	3	0	0	0	1	4	4
09:00	3	3	0	0	3	2	6	5
10:00	1	1	0	0	0	0	1	1
11:00	4	4	0	0	1	0	5	4
12:00	2	2	0	0	0	2	2	4
13:00	2	1	0	0	0	0	2	1
14:00	1	3	0	0	0	0	1	3
15:00	2	2	0	0	0	0	2	2
16:00	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0
19:00	0	0	0	0	0	0	0	0
20:00	0	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0
00:00	0	0	0	0	0	0	0	0
Total	20		1		5		26	
Average Wait (hour:min:sec)	00:51:12		00:01:39		00:44:44		00:16:22	
Total Usage (hour:min:sec)	17:04:04		00:01:39		03:43:42		08:23:21	

- 1.1.16 Garrard Street currently has no restricted times for loading and therefore there is the potential for 24hr delivery and servicing to be undertaken.
- 1.1.17 Table 1.4 shows that Garrard Street's existing total delivery usage across the 24-hour period was 8 hours and 23 minutes. Across the surveyed period, the average delivery / loading time was 16 minutes and 22 seconds per vehicle.

Existing Usage Summary

- 1.1.18 Overall following a review of the survey data, the overall delivery usage observed is outlined below:
- Friar Street – 17hrs 59mins,
 - Garrard Street – 8hrs 23mins.
- 1.1.19 Multiple vehicles can undertake loading and servicing activities concurrently over an 18-hour period on Friar Street and over a 24-hour period on Garrard Street. When considering the overall servicing vehicle usage duration observed, the data suggests that there is available capacity on Friar Street and Garrard Street to accommodate additional on-street loading operations.

Delivery and Servicing Demand for Proposed Development

- 1.1.20 The likely demand for delivery and servicing vehicle trips generated by the proposed retail and residential units, as well as the vehicle type expected to make these deliveries has been estimated

TECHNICAL NOTE

from a review of Trip Rate Information Compute System (TRICS) and the Friar Street traffic survey results recorded on Tuesday 16th October.

1.1.21 TRICS servicing and delivery trip data for 3 different retail classes was extracted and reviewed. The retail classes assessed:

- Restaurant,
- Pub/Restaurant,
- Mixed Shopping Malls.

1.1.22 Alongside a review of TRICS data, a first principles assessment was undertaken using the Friar Street survey data to estimate the anticipated number of servicing and delivery trips that would be generated by the retail element of the site.

1.1.23 A comparison of data estimated utilising the TRICS data against that of the Friars Street based estimation showed between 7 – 20 vehicles would be generated over a 24hr period by the retail element of the development (based on a retail floorspace of 1,770sqm and 855sqm of community space). A worst-case assessment of 2625sqm retail floorspace has been used to generate the retail trips below.

1.1.24 A review of TRICS data was also undertaken to determine the anticipated number of servicing and delivery vehicles that would be generated by the residential element of the site.

1.1.25 The estimated overall delivery and servicing demand associated with the residential and retail development is summarised in Table 1.5. It is noted that the AM and PM peaks would be within the restricted period on Friar Street and so these trips would be redistributed across the day.

Table 1.5: Total Delivery and Servicing Demand

Land Use	AM Peak			PM Peak			Daily		
	LGV	HGV	Total	LGV	HGV	Total	LGV	HGV	Total
Residential	2	0	2	0	0	0	10	2	12
Retail	1	0	1	0	1	1	10	3	13
Total	3	0	3	0	1	1	20	5	25

1.1.26 The delivery and servicing demand exercise indicated a total of 25 daily delivery and servicing trips associated with the residential units and retail/ community floor space would be undertaken.

Vehicle Types

1.1.27 It is assumed that the site will receive deliveries and be serviced by a range of different vehicle types including:

- Motorcycles (couriers);
- Cars and vans up to 3.5 tonnes (LGVs);
- Large sized refuse vehicle;
- HGVs over 3.5 tonnes including box vans and 7.5t – 18t rigid lorries;

Dwell Times

1.1.28 Dwell times will vary depending on vehicle type and the type of goods being delivered or collected or the type of service being carried out.

1.1.29 Based on past experience of similar developments PBA have previously worked on across the South East and London, the following average dwell times have been considered robust for the different vehicle types identified above.

TECHNICAL NOTE

Table 1.6: Vehicle Types and Dwell Times

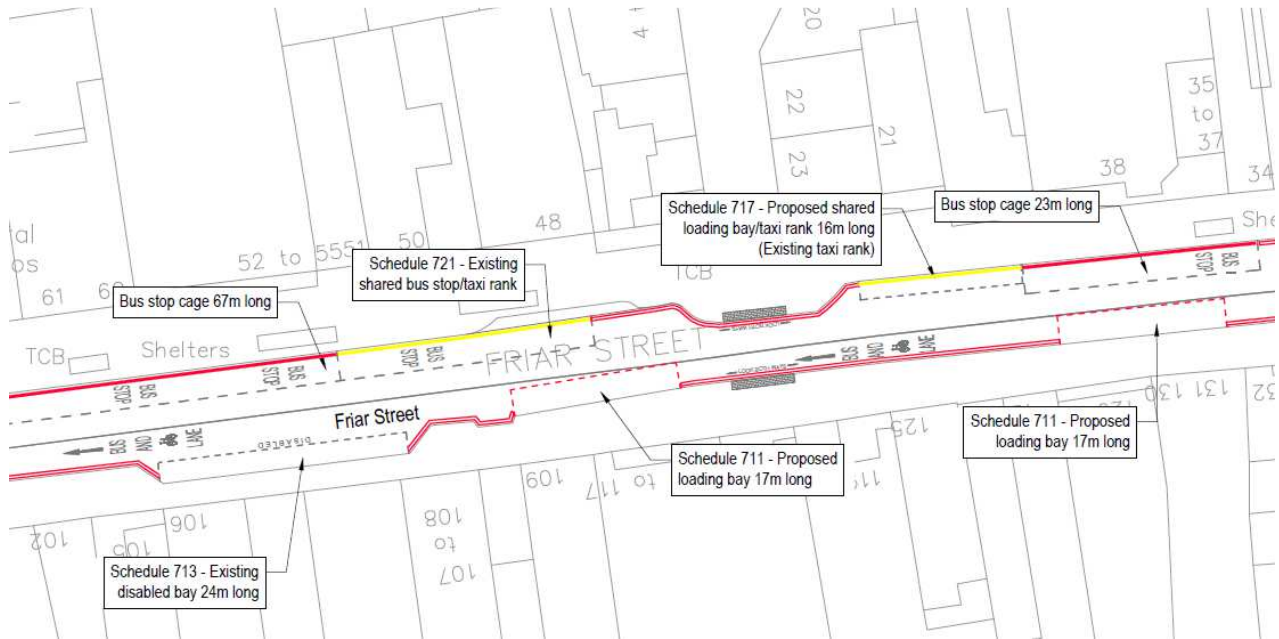
Vehicle Type	Dwell Time	Average Dwell Time
Motorcycle (couriers)	0 – 10 minutes	6 minutes
Cars and vans up to 3.5 tonnes (LGVs)	0 – 15 minutes	8 minutes
Large sized refuse vehicle	5 – 30 minutes	20 minutes
HGVs over 3.5t up to 18t	5 – 30+ minutes	25 minutes

Red Route Proposals

- 1.1.30 RBC have proposed plans for introducing a red route along Friars Street to protect key bus routes and keep them free and clear from unnecessary delays to improve efficiency of bus services. The Red Route scheme is a 'no' stopping restriction which aims to keep key public transport moving, preventing delays for bus passengers and improve safety for pedestrians and cyclists. The double red lines will mean no vehicles can stop at any time, including to load or unload. There are some exceptions, such as hackney carriages, private hire vehicles and blue badge holders, who are allowed to stop to let passengers in and out. Single red lines will mean that drivers will be able to stop or park in accordance with signed restrictions.
- 1.1.31 This has resulted in the revision of restrictions along Friars Street with regards to servicing and delivery by the provision of dedicated loading bays and loss of kerb side loading in order to formalise the existing servicing activities. Within this rearrangement of the Friar Street layout, three loading bays have been included, one of which is the existing taxi rank which will be a shared taxi/loading facility, with two new designated loading bays on the southern kerb. The existing access and loading restrictions will be maintained therefore giving an available loading time of 18 hours within the designated loading bays.
- 1.1.32 Figure 1.2 is an extract from the proposed RBC Red Route plans, outlining the proposed scheme along Friar Street.

Figure 1.2: Extract of RBC proposed Red Route scheme along Friar Street

TECHNICAL NOTE



- 1.1.33 PBA have assessed a worst-case scenario with all retail units being served from Friar Street only. However, the proposed development is seeking to propose servicing and delivery activities for the retail units to be undertaken from both Friar Street and Garrard Street.
- 1.1.34 Using the information gathered on servicing along Friar Street, we have allocated the recorded servicing occurrences to a future dedicated loading bay based on proximity, to understand the likely use of loading bays proposed by RBC. This has been summarised below in Tables 1.7, 1.8 & 1.9 which outlines the anticipated allocation of the existing delivery and servicing recorded during the survey period, to each of the three loadings bays (one on the northern edge and two on the southern edge).
- 1.1.35 The tables show the estimated total usage and average wait time for delivery and service vehicles and taxis anticipated to be using Friar Street. The tables also show capacity which is an assumption on the number of vehicles that can be accommodated within the proposed laybys at any one time. The actual usage is the total usage time per vehicle divided by the capacity of the loading bay, which reflects a more realistic usage of Friar Street by servicing and delivery vehicles and taxis.

Table 1.7: Friar Street South Western Loading Bay

TECHNICAL NOTE

	MCY		Cars / Vans		HGV		Total	
	In	Out	In	Out	In	Out	In	Out
01:00	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0
05:00	0	0	1	1	1	0	2	1
06:00	0	0	0	0	0	1	0	1
07:00	0	0	0	0	0	0	0	0
08:00	0	0	1	1	0	0	1	1
09:00	0	0	1	1	0	0	1	1
10:00	0	0	1	1	1	1	2	2
11:00	0	0	1	1	2	2	3	3
12:00	1	0	0	0	0	0	1	1
13:00	0	0	1	0	0	0	1	0
14:00	0	0	0	1	0	0	0	1
15:00	0	0	1	0	0	0	1	0
16:00	0	0	0	1	0	0	0	1
17:00	0	0	0	0	0	0	0	0
18:00	1	1	0	0	1	1	2	2
19:00	1	1	0	0	0	0	1	1
20:00	0	0	1	0	0	0	1	0
21:00	0	0	1	1	0	0	1	1
22:00	0	0	0	1	0	0	0	1
23:00	0	0	0	0	0	0	0	0
00:00	0	0	0	0	0	0	0	0
Total	3		9		5		17	
Average Wait (hour:min:sec)	00:07:19		00:20:27		00:23:11		00:18:22	
Total Usage (hour:min:sec)	00:21:58		03:04:02		01:55:55		05:12:22	
Capacity (Number of vehicles)	15		2		1		2	
Actual Usage (hour:min:sec)	00:01:28		01:32:01		01:55:55		02:36:11	

1.1.36 As shown in Table 1.7 above, based on existing surveyed utilisation, the proposed western loading bay on the southern edge would have an actual usage of 2 hours and 36 minutes during an 18-hour period.

Table 1.8: Friar Street South Eastern Loading Bay

TECHNICAL NOTE

	Cars / Vans		Refuse		HGV		Taxi		Total	
	In	Out	In	Out	In	Out	In	Out	In	Out
01:00	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0
04:00	0	0	1	1	0	0	0	0	1	1
05:00	0	0	0	0	2	0	0	0	2	0
06:00	0	0	0	0	0	2	0	0	0	2
07:00	0	0	0	0	0	0	0	0	0	0
08:00	1	1	0	0	0	0	0	0	1	1
09:00	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0
11:00	1	1	0	0	1	1	0	0	2	2
12:00	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0
14:00	3	3	0	0	0	0	0	0	3	3
15:00	0	0	0	0	0	0	0	0	0	0
16:00	2	2	0	0	0	0	0	0	2	2
17:00	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	1	1	1	1
19:00	0	0	0	0	0	0	0	0	0	0
20:00	0	0	0	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	1	1	0	0	0	0	0	0	1	1
00:00	0	0	0	0	0	0	0	0	0	0
Total	8		1		3		1		13	
Average Wait (hour:min:sec)	00:11:10		00:01:46		00:36:09		00:05:34		00:15:29	
Total Usage (hour:min:sec)	01:29:22		00:01:46		01:48:27		00:05:34		03:21:11	
Capacity (Number of vehicles)	2		1		1		2		2	
Actual Usage (hour:min:sec)	00:44:41		00:01:46		01:48:27		00:02:47		01:40:35	

1.1.37 As shown in Table 1.8 above, based on existing surveyed utilisation, the proposed eastern loading bay on the southern edge would have an actual usage of 1 hours and 40 minutes in an 18-hour period.

Table 1.9: Friar Street Northern Loading Bay

TECHNICAL NOTE

	MCY		Cars / Vans		Refuse		HGV		Taxi		Total	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
01:00	0	0	0	0	1	1	0	0	2	2	3	3
02:00	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	1	1	0	0	0	0	0	0	1	1
05:00	0	0	1	1	0	0	0	0	0	0	1	1
06:00	0	0	1	1	0	0	1	1	0	0	2	2
07:00	0	0	1	0	0	0	0	0	0	0	1	0
08:00	0	0	2	3	0	0	0	0	0	0	2	3
09:00	0	0	2	2	1	1	0	0	1	1	4	4
10:00	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	1	1	0	0	0	0	2	2	3	3
12:00	0	0	4	3	0	0	0	0	1	0	5	3
13:00	0	0	1	2	0	0	1	1	3	1	5	4
14:00	0	0	2	2	0	0	1	1	3	5	6	8
15:00	0	0	4	4	0	0	1	1	2	3	7	8
16:00	0	0	1	1	0	0	0	0	3	2	4	3
17:00	0	0	0	0	0	0	0	0	1	2	1	2
18:00	0	0	0	0	0	0	0	0	2	2	2	2
19:00	0	0	2	1	0	0	0	0	0	0	2	1
20:00	0	0	0	1	0	0	0	0	2	1	2	2
21:00	0	0	0	0	0	0	0	0	1	2	1	2
22:00	0	0	0	0	0	0	0	0	6	5	6	5
23:00	1	1	0	0	0	0	0	0	4	4	5	5
00:00	1	1	0	0	0	0	0	0	8	9	9	10
Total	2		23		2		4		41		72	
Average Wait (hour:min:sec)	00:08:42		00:07:30		00:11:44		00:10:41		00:06:35		00:07:15	
Total Usage (hour:min:sec)	00:17:24		02:52:39		00:23:27		00:42:43		04:29:51		08:41:55	
Capacity (Number of vehicles)	15		2		1		1		2		2	
Actual Usage (hour:min:sec)	00:01:10		01:26:19		00:23:27		00:42:43		02:14:55		04:20:57	

1.1.38 As shown in Table 1.9 above, based on existing surveyed utilisation, the proposed loading bay on the northern edge of the carriageway, would have an actual usage of 4 hours and 21 minutes over an 18-hour period. This loading bay has a higher total usage due to it also acting as taxi rank within certain restricted hours.

TECHNICAL NOTE

Red Route Loading Bay - Conclusion

- 1.1.39 Table 1.10 summaries the anticipated actual usage of the three proposed loading bays using a robust assumption of all servicing happening between 11:00 – 16:00, when in reality servicing is available over 18 hours of the day as demonstrated by the survey results.

Table 1.10: Summary of actual usage of proposed loading bays on Friar Street

Loading Bay	Actual Usage	Potential Spare Capacity (based on loading been undertaken between 11am – 4pm)
South-western Loading Bay	2hrs 36 mins	2hrs 24mins
South-eastern Loading Bay	1hr 40mins	3hrs 20mins
Northern Loading Bay	4hrs 20 mins	40mins
Total	8hrs 36mins	6hrs 24mins

- 1.1.40 In conclusion, the traffic survey undertaken along Friar Street and anticipated trip generation for existing servicing and delivery vehicles highlights that the proposed Red Route loading bays along Friar Street utilises up to 8hrs 36 minutes of potentially 15 hours of loading time, based on loading happening between 11:00 – 16:00 within three loading bays. The three loading bays will have up to 6hrs and 24mins of spare capacity to potentially accommodate additional delivery and servicing movements.

Proposed Development Loading Bay Usage

- 1.1.41 Within RBC's Parking Standards and Design document it states that the number of loading bays for a site application in zone 1 will be based on the merits of the application.
- 1.1.42 The development is proposing a servicing yard and 1 loading bay located on Garrard Street to accommodate the residential aspects of the development.
- 1.1.43 As demonstrated in Table 1.5 above, there will be an estimated demand of 25 trips throughout the day. Of these 25, 12 are residential delivery or servicing instances which are proposed to be undertaken from Garrard Street.
- 1.1.44 The 13 trips indicated for retail delivery or servicing instances are proposed to be served from a combination of Friar Street and Garrard Street. While for assessment purposes, all trips have been assessed as being accommodated on Friar Street.
- 1.1.45 As outlined previously, five existing retail units (three occupied and two vacant) within the proposed development site boundary are serviced directly from Friar Street. The proposed retail units closest to Friar Street would look to utilise the same servicing and delivery strategy. Therefore, the proposed development could be serviced from Friar Street without having a fundamental change to the existing servicing and delivery usage along Friar Street.
- 1.1.46 An estimation of the potential overall delivery waiting time for the proposed development based on 13 retail trips a day is shown in Table 1.11.

TECHNICAL NOTE

Table 1.11: Estimated Delivery vehicle type and wait times

Vehicle Type	Vehicle Number	Average Wait Time Taken from Table1.6 (mins)	Total Estimated Wait Time (mins)
Motorcycle (couriers)	1	6	6
Cars and vans up to 3.5 tonnes (LGVs)	10	8	80
Large sized refuse vehicle	1	20	20
HGVs over 3.5t up to 18t	1	25	25
Total	13	-	131 mins (2hrs 11mins)

- 1.1.47 Table 1.11 shows that the proposed development is anticipated to require up to 131mins for loading and unloading on Friar Street in order to service the retail elements of the development, based on a robust generation. This loading/ unloading times are to be split across the three proposed laybys bays.

Conclusion

- 1.1.48 In conclusion, the anticipated loading time required for the delivery and servicing trips generated by the development is up to 2hrs 11mins which can be accommodated within the potential 6hrs 24mins spare capacity available across the three proposed laybys along Friar Street. This is based on a robust assumption of all loading only being undertaken between 11:00 – 16:00. (Noting the existing Outline(s) Condition 44 contain a restriction for commercial servicing to between 08:00 – 22:00).
- 1.1.49 Given that capacity has been shown to exist within the three laybys the anticipated time associated with the proposed development can be accommodated (accounting for the robust predictions being made). Furthermore, the delivery and servicing for the development could be managed through a management strategy to minimise the number of delivery and service vehicles utilising the loading bays on Friar Street at the same time.
- 1.1.50 Five retail units within Station Hill site boundary are serviced off Friar Street and therefore the majority of the proposed retail floorspace is within the existing servicing and delivery accommodation. The additional retail floorspace would generate a manageable amount of additional servicing and delivery trips which would not have a determinantal impact on future Friar Street operation.
- 1.1.51 The residential servicing and delivery is anticipated to be undertaken through a combination of on and off-street servicing, therefore minimising the potential impact on Garrard Street. It has therefore been identified that Plots E & F would have an internal service yard and a dedicated internal loading bay, along with the opportunity for the retail element to utilise the 3 loading bays on Friar Street plus on-street from Garrard Street. Given the temporary nature of the taxi rank located on Garrard Street, there is the potential to develop a dedicated loading bay on Garrard Street to facilitate formal on-street delivery for the development.

DOCUMENT ISSUE RECORD

Technical Note No	Rev	Date	Prepared	Checked	Reviewed (Discipline Lead)	Approved (Project Director)
44470/5501/TN003	-	14.11.18	J. Churchill	D. Whittaker	C. Brice	
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Peter Brett Associates LLP disclaims any responsibility to the Client and others in respect of any matters outside the scope of this report. This report has been prepared with reasonable skill, care and diligence within the terms of the Contract with the Client and generally in accordance with the RICS Rules of Conduct.

Appendix D Environmental Scoping Request – Transport Extract

present.

Transportation

The Transport Chapter of the 2015 ES showed that the Station Hill Scheme incorporating the Telecom House Site (the 2016 Consented Scheme) resulted in a reduction of trips compared with the 2015 Consented Scheme when considering the potential trip generation of the extant uses of Telecom House. The net reduction in vehicle trips is shown in Table 9-12 of the Transport chapter of the 2015 ES, which concluded that the traffic modelling presented in the 2013 ES (and reproduced in the 2015 ES) demonstrated a 'worst-case' scenario.

The anticipated increase in vehicle trips generated by the increase in the maximum number of units (additional 75 units) brought about by the proposed amendments, is less than the net reduction in vehicle trips shown in the 2015 Transport ES chapter. Peter Brett Associates, the Transport Consultants for both the 2015 and 2016 Consented Schemes and authors of the 2013 and 2015 ES Chapters, therefore consider that the transport modelling presented in the 2013 ES (and reproduced in the 2015 ES) still represents a 'worst-case' scenario, with the impacts previously assessed considered to accurately represent the likely significant effect of the proposed development.