



Proposed Mixed Use Development
32 Bower Terrace, Epping

Highways Pre-Application Note

For

PA Finley Ltd

Document Control Sheet

Proposed Mixed Use Development

32 Bower Terrace, Epping

PA Finley Ltd

This document has been issued and amended as follows:

Date	Issue	Prepared by	Approved by
01/04/2021	1 st Draft	EU	AW
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1.0 Introduction

- 1.1 This Pre-app Note has been prepared on behalf of PA Finley Ltd in connection with a pre-application submission in respect of a proposed redevelopment of an existing warehouse to provide a mixed-use scheme comprising 579 m2 of commercial space and 42 flats located at 32 Bower Terrace, Epping (herein referred to as 'the site').
- 1.2 The site is located approximately 1 kilometre south of the centre of Epping, to the north of Bower Terrace. Bower Terrace is a short cul-de-sac which provides access to the site and Bower Hill Industrial Estate. The site is situated within the administrative authorities of Epping Forest District Council (Local Planning Authority) and Essex County Council (County Highway Authority).
- 1.3 The site currently accommodates a 2328 sqm warehouse building located along the western boundary with associated parking and hardstanding for delivery vehicles to the front of the building. There are currently circa 15 staff members occupying the two units within the building. It is estimated that there are at least 10 car parking spaces on site.
- 1.4 The proposals seek planning permission for the redevelopment of the site to accommodate 579 sqm of commercial space and 42 residential dwellings. The residential use will comprise 19 x 1 bed flats, 19 x 2 bed flats and 4 x 3 bed flats, 10% of which will be wheelchair accessible. The proposals include seven car parking spaces of which three are accessible spaces. Appropriate levels of cycle parking will also be provided on-site in accordance with local standards.
- 1.5 This Pre-app Note provides details in respect to vehicle/pedestrian access, servicing, parking and potential trip generation associated with the above proposals. In highways terms, the site and proposal would be compliant with national and local policies.

2.0 Site Context

Site Location

- 2.1 The site lies to the north of Bower Terrace within Epping. Bower Terrace is a short cul-de-sac which provides access to the site and the Bower Hill Industrial Estate. To the east Bower Terrace connects with Bower Hill which runs on a north/south axis providing access northbound towards the centre of Epping. The site location is shown in Figure 2.1 below.

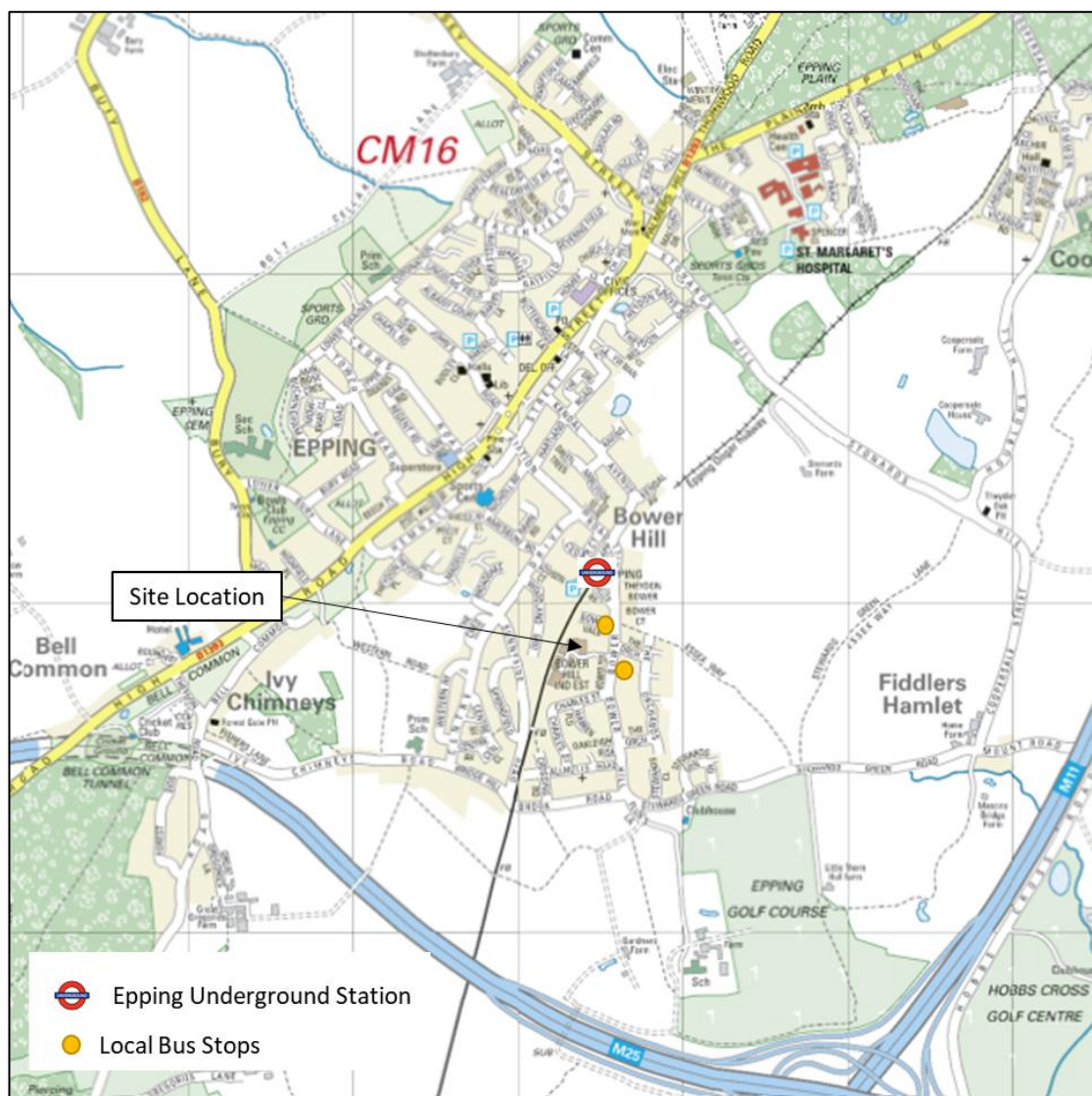


Figure 2.1: Site Location Plan

- 2.2 The site is located within a suitable walking distance (1 kilometres) from Epping town centre, and thus has access to numerous shops, restaurants and leisure facilities. Two primary schools (Ivy Chimneys Primary School and Epping Primary School), two secondary schools (The Tower and Epping St Johns) and one nursery (Epping Montessori Nursery) are located within a 1.5 kilometre walk from the site. A variety of local amenities can also be accessed within a 20 minute walk within the centre of Epping, including a convenience store/supermarket, a post office, a dentists, pharmacy and banks. St Margaret's Hospital can also be accessed within 2.2 kilometres of the site.

Accessibility of the Site by Non-Car Modes

- 2.3 The site is easily accessible on foot via footways on all local roads. A footway is provided on the northern side of Bower Terrace which connects to lit footways on both sides of Bower Hill providing direct access towards the centre of Epping and local bus stops. All local crossing points are provisioned with dropped kerbs.
- 2.4 Although no on-road cycle facilities are provided within the vicinity of the site, it is considered that the local highway network is suitable for cycling due to the relatively low speed limit and flat topography.
- 2.5 As illustrated on Figure 2.1, the nearest bus stops are located along Bower Hill approximately 120 metres north and south of access with Bower Terrace. These stops serve route 381 which provides access to Epping, Roydon and Harlow and run every 2 hours in each direction.
- 2.6 Epping underground station is located approximately 350 metres north of the site, which equates to a 5 minute walk or a 2 minute cycle. Epping forms the north east end of the Central Line which provides access to London Liverpool Street in 38 minutes.

Summary

- 2.7 The above review demonstrates that the site is spatially well located to encourage people travelling to and from the site to make journeys by walking, cycling and public transport.
- 2.8 The proposed development therefore presents an opportunity to provide new residence at a location that is already accessible by a variety of modes of transport and would therefore have the potential to reduce reliance upon the private car.

3.0 Proposed Development

- 3.1 The proposals seek planning permission for the redevelopment of the site to accommodate 579 sqm of commercial space and 42 residential dwellings. The residential use will comprise 19 x 1 bed flats, 19 x 2 bed flats and 4 x 3 bed flats, 10% of which will be wheelchair accessible. The Architect's site layout plan is attached for reference at [Appendix A](#).

Access Arrangements

- 3.2 Vehicular and pedestrian access to the site will remain via the existing access from Bower Terrace. The proposed site layout illustrates an undercroft at the site entrance which measures 4.6 metres in width. The internal layout provides an access road to the parking spaces which varies between 5.3 metres and 7 metres in width. As such, allowing two cars to pass at all times.
- 3.3 Visibility splays are provided in accordance with Manual for Streets (MfS) at the junction between Bower Terrace and Bower Hill. As Bower Hill is subject to a 30 mph speed limit, visibility splays of 2.4 metres by 43 metres are shown at [Appendix B](#).

Car Parking

Proposed Car Parking

- 3.4 The proposals include a total of 7 unallocated car parking spaces for both residential and commercial uses, 2 of which will be accessible spaces. The proposed allocation is 1 disabled space for each of the uses, 3 operational spaces for the commercial and 2 visitor / unallocated spaces for the residential use. All spaces are provided with electric vehicle charging points.
- 3.5 Epping Forest currently refer to ECC's 'Parking Standards - Design and Good Practice' (September 2009) document in relation to parking standards whilst their new Local Plan is emerging. Table 3.1 provides a summary of the relevant standards.

Use	Vehicle	Cycle Minimum	PTW Minimum	Disable Minimum
1 Bedroom	Minimum: 1 space per dwelling	1 secure covered space per dwelling or None if garage or secure internal area provided	N/A	None if parking is within dwelling curtilage otherwise as visitor/unallocated
2 Bedroom	Minimum: 2 spaces per dwelling			
Visitor/ Unallocated	Minimum: 0.25 spaces per dwelling (unallocated rounded up to the nearest whole number)	1 space per 8 dwellings	1 space plus 1 per 20 car parking spaces	3 bays or 6% of total capacity, whichever is greater
B2	Maximum: 1 space per 50 sqm	1 space per 250 sqm plus 1 space per 500sqm for visitors	1 space plus 1 per 20 car spaces (for 1st 100 car spaces), then 1 space per 30 car spaces (over 100 car spaces)	200 vehicle bays or less = 2 bays or 5% of total capacity, whichever is greater, Over 200 vehicle bays = 6 bays plus 2% of total capacity

Table 3.1: Essex Parking Standards

- 3.6 ECC's parking standards state the following in regards to reduced parking provision:

"For main urban areas a reduction to the vehicle parking standard may be considered, particularly for residential development. Main urban areas are defined as those having frequent and extensive public transport and cycling and walking links, accessing education, healthcare, food shopping and employment."

- 3.7 The draft New Epping Forest Local Plan Policy T1(F iv) also refers to car free residential development in locations such as this.
- 3.8 Considering the site is located a short walk from Epping town centre and within close proximity to Epping underground station and a local bus services, the proposed development is ideally located to encourage people to travel to the site by more sustainable modes of transport besides the private car.
- 3.9 It should be reiterated that the site is located within an accessible location not only in respect of trips by bus and train, but also to local facilities within Epping. Pedestrian access in the surrounding area is very good and provides safe links between the site and key local amenities as well numerous shops, restaurants and leisure facilities. Various schools, convenience stores, health facilities and areas of public open space are all located within a short walk distance from the site, as such future residents would have little need to own a car.
- 3.10 In summary, considering the site is situated within an accessible location near the centre of Epping, and access on-foot, by cycle and via public transport is good, seven car parking spaces for the scheme is considered appropriate in this location.
- 3.11 Nonetheless, the following paragraphs outline the existing on-street parking occupancy and potential for any overspill parking associated with the proposed development to be accommodated on-street.

On-street Parking

- 3.12 The existing on-street car parking occupancy levels, or 'stress', surrounding the development site has been assessed through the undertaking of manual parking surveys in accordance with the 'Lambeth Council Parking Survey Guidance Note' (Lambeth Council, 2009).
- 3.13 Lambeth Council's parking survey methodology is generally accepted for assessing parking stress, and involves one overnight parking beat survey between the hours of 00:30 and 05:30 hours on two separate weeknights. Networks are considered 'stressed' when the parking occupancy exceeds 85%.
- 3.14 In accordance with the guidance, spot checks were taken on Tuesday 23rd and Wednesday 24th February 2021 between 00:30 hours and 05:00 hours. Parking survey guidance advises that a survey area should cover streets within a 200-metre walking distance of the point of interest. Where 200-metre boundary occurs part-way along a street, the survey area should be shortened or extended to the nearest junction.
- 3.15 The number of existing parking spaces in the survey area were identified as part of the analysis. For the purposes of calculating parking stress as defined by the guidance document, it is assumed that each vehicle takes up an average kerb space of 5 metres. Therefore, where parking bays are not physically marked out, lengths of kerb space were measured and split into increments of 5 metres. Physical bays have been divided into 5 metre intervals and rounded down to the nearest whole number to calculate the capacity of each space. Any spaces or lengths of kerb shorter than 5 metres, along with crossovers, have been eliminated from the available kerb space, in accordance with guidance.
- 3.16 All survey results are included for reference at **Appendix C**. The site is located within a controlled parking zone which is restricted to resident permit holders between 10:00 and 16:00 hours. There are also 24 spaces along single yellow lines which are restricted between 10:00 and 11:00 hours.
- 3.17 Bower Terrace and Bower Hill are both subject to parking restrictions in the form of double yellow lines or single yellow lines within the vicinity of the site.

- 3.18 In terms of car parking occupancy overnight, the results are set out in full within Table 3.2 for the Tuesday 23rd February survey and Table 3.3 for the Wednesday 24th February survey.

Tuesday 23 rd February			
Road Name	Permit Holder Spaces	Spaces Used	Occupancy
Bower Vale	23	18	78%

Table 3.2: Parking Survey Results – Tuesday 23rd February

- 3.19 Table 3.2 indicates that there were 5 spaces available in the local area during the first overnight survey. This equates to an overall occupancy of 78%. Additionally, Bower Terrace, Bower Hill and The Orchards had 23 spaces available along single yellow lines.

Wednesday 24 th February			
Road Name	Permit Holder Spaces	Spaces Used	Occupancy
Bower Vale	23	19	83%

Table 3.3: Parking Survey Results – Wednesday 24th February

- 3.20 Table 3.3 indicates that there were 4 spaces available in the local area during the second overnight survey. This equates to an overall occupancy of 83%. Additionally, Bower Terrace, Bower Hill and The Orchards had 23 spaces available along single yellow lines.
- 3.21 In summary, the overnight on-street parking surveys identify that the existing overnight on-street parking occupancy is in the range of 78-83% capacity. This is below the 85% threshold where networks are considered stressed. The presence of on-street parking restrictions and the existing parking stress levels within the local area is likely to deter future car ownership.
- 3.22 It is expected that it is unlikely there will be any significant change to the parking stress of the surrounding area given that it is unlikely that future residents of the scheme will own cars.

Cycle Parking Provision

- 3.23 The proposals include a large secure cycle store to the rear of the building which will accommodate parking for 40 cycles in the form of double stacked spaces. The commercial use is also provided with a secure cycle store which will accommodate three cycle parking spaces. In addition, three Sheffield cycle parking stands (six cycle parking spaces) will be provided for visitor cycle parking. This accords with ECC's standards set out in Table 3.1.

Servicing/Refuse Collection

- 3.24 Three bin stores are provided on-site, one will require the refuse vehicle to reverse into the site and the remaining two can be accessed from Bower Terrace. Swept path analysis attached at **Appendix D** demonstrates a refuse vehicle reversing into the site from Bower Terrace and exiting in forward gear. Swept path analysis has also been undertaken for a refuse vehicle passing the site and turning within the industrial estate to the west as per the existing arrangement, attached at **Appendix D**.
- 3.25 Servicing associated with the commercial use will be undertaken on-site, vehicles will reverse into the site from Bower Terrace and exit in forward gear. **Appendix E** demonstrates a box van undertaking this manoeuvre.

4.0 Trip Generation

- 4.1 This section sets out the impact of the development proposals on the highway network. The assessment focuses on the weekday morning and evening hours of 08:00-09:00 and 17:00-18:00, which constitutes the key trip generation periods for residential development. Consideration is also given to daily trips.

Existing Commercial Use

- 4.2 To calculate the trip attraction of the existing commercial warehouse, an assessment utilising the TRICS database has been undertaken. The TRICS category '02 Employment: F – Warehousing (Commercial)' has been used, with the following criteria:

- ▶ Sites located in England, excluding Greater London; and
- ▶ Sites located in areas classed as Edge of Town and Suburban Area.

- 4.3 A summary of the peak hour vehicular trip rates and trips for 2328 sqm of warehouse space are provided in Table 4.1 below and the full TRICS output included at **Appendix F**.

Mode of Travel	Weekday AM Peak		Weekday PM Peak		Weekday Daily Movements	
	Arr	Dep	Arr	Dep	Arr	Dep
Vehicular Trip Rates	0.177	0.086	0.069	0.182	1.688	1.718
Vehicular Trips	4	2	2	4	39	40

Table 4.1: Existing Warehouse Use – Trip Rates and Resultant Trips

- 4.4 Table 4.1 indicates that the existing use could generate six vehicular movement in the weekday morning peak and six vehicular movements in the weekday evening peak. Over an average weekday, the existing use could generate 79 two-way vehicular movements.

Proposed Use

Proposed Commercial Use

- 4.5 The trip rates established for the existing use have been used to determine the trips for the proposed 579 sqm commercial space. A summary of the peak hour vehicular trip rates and trips for 579 sqm of commercial space are provided in Table 4.2 below.

Mode of Travel	Weekday AM Peak		Weekday PM Peak		Weekday Daily Movements	
	Arr	Dep	Arr	Dep	Arr	Dep
Vehicular Trip Rates	0.177	0.086	0.069	0.182	1.688	1.718
Vehicular Trips	1	0	0	1	10	10

Table 4.2: Proposed Commercial Use – Trip Rates and Resultant Trips

- 4.6 Table 4.2 indicates that the proposed commercial use could generate one vehicular movement in the weekday morning and evening peak hours. Over an average weekday, the proposed commercial use could generate 20 two-way vehicular movements.

Proposed Flats

- 4.7 Since there are only 7 on-site spaces provided for both the commercial and residential uses, it is unlikely that any of the residents on the site will own and park a car on the site apart from disabled persons. There is unlikely to be any significant peak hour car movements associated with the residential use.

- 4.8 Throughout the day there will be occasional vehicles associated with the residential uses associated with visitors or disabled motorists. It is estimated that these movements could amount to say, 10 over a typical day.

Net Impact

Table 4.4 below summarises the net impact of the proposal in terms of vehicular trips.

Mode of Travel	Weekday AM Peak		Weekday PM Peak		Weekday Daily Movements	
	Arr	Dep	Arr	Dep	Arr	Dep
Existing Use Total Vehicular Trips	4	2	2	4	39	40
Proposed Total Vehicular Trips	1	0	0	1	15	15
Net Impact	-3	-2	-2	-3	-24	-25

Table 4.3: Net Impact of Proposed Development in terms of Vehicular Trips

- 4.9 Table 4.3 indicates that the change of use is likely to result in a significant decrease in the number of vehicular trips to the site on both a peak hour and daily basis.

5.0 Summary and Conclusion

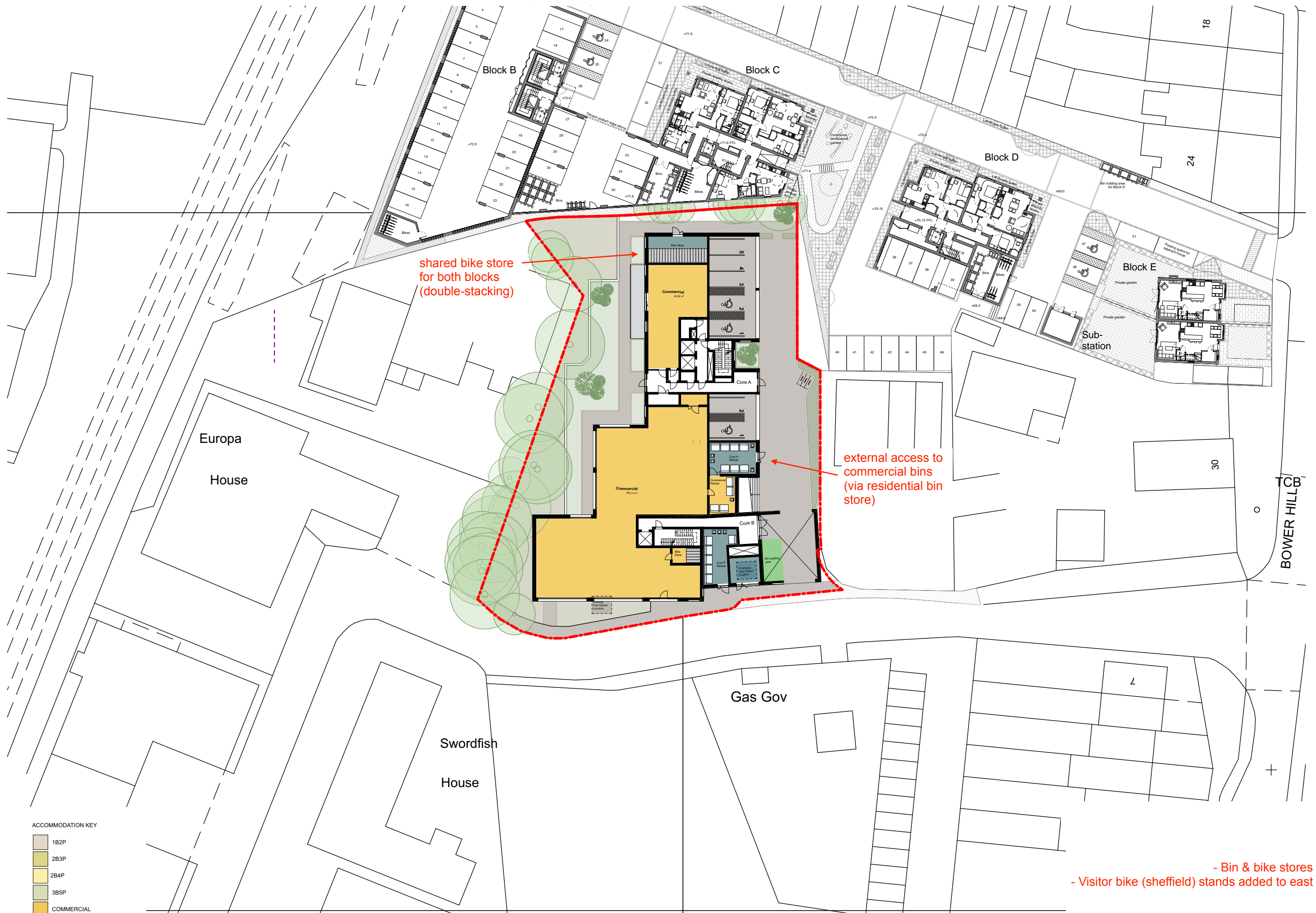
- 5.1 This Pre-app Note has been prepared on behalf of PA Finley Ltd in connection with a pre-application submission to ECC in respect of a proposed redevelopment of an existing warehouse into a mixed-use scheme comprising 579 m2 of commercial space and 42 flats located at 32 Bower Terrace. Epping.
- 5.2 The proposals seek planning permission for the redevelopment of the site to accommodate 455 sqm of commercial space and 42 residential dwellings. The residential use will comprise 19 x 1 bed flats, 19 x 2 bed flats and 4 x 3 bed flats, 10% of which will be wheelchair accessible.
- 5.3 In summary, this Pre-app Note has demonstrates:
- ▶ The site is accessible by a range of sustainable modes of travel;
 - ▶ The site benefits from good access on foot and by cycle to Epping centre. Indeed, there are many local amenities within close walk and cycle distance of the site meaning that residents would have less need to own a car;
 - ▶ Vehicular and pedestrian access to the site would be achieved from Bower Terrace;
 - ▶ Appropriate levels of car parking will be provided for the residential and commercial use on-site;
 - ▶ Disabled accessible parking is provided in accordance with local standards;
 - ▶ Charging facilities for electric vehicles is provided for all car parking spaces;
 - ▶ Cycle parking will be provided on site in accordance with local standards;
 - ▶ Deliver and servicing activity including refuse collection can be undertaken on site; and,
 - ▶ The proposals are likely to result in a significant decrease in the number of vehicular trips to the site on both a peak hour and daily basis.

Conclusion

- 5.4 In view of the above, the proposed development is considered to be acceptable in transport terms and meets with local and national policy criteria. The assessment work undertaken has shown that there would not be any demonstratable harm arising from the proposed scheme and it will not cause any severe impacts. Therefore, there are no traffic and transport related reasons why the development should not be granted planning consent.

Appendix A

Architect's Site Layout Plan



22.03.21
 - Bin & bike stores amended
 - Visitor bike (sheffield) stands added to east boundary

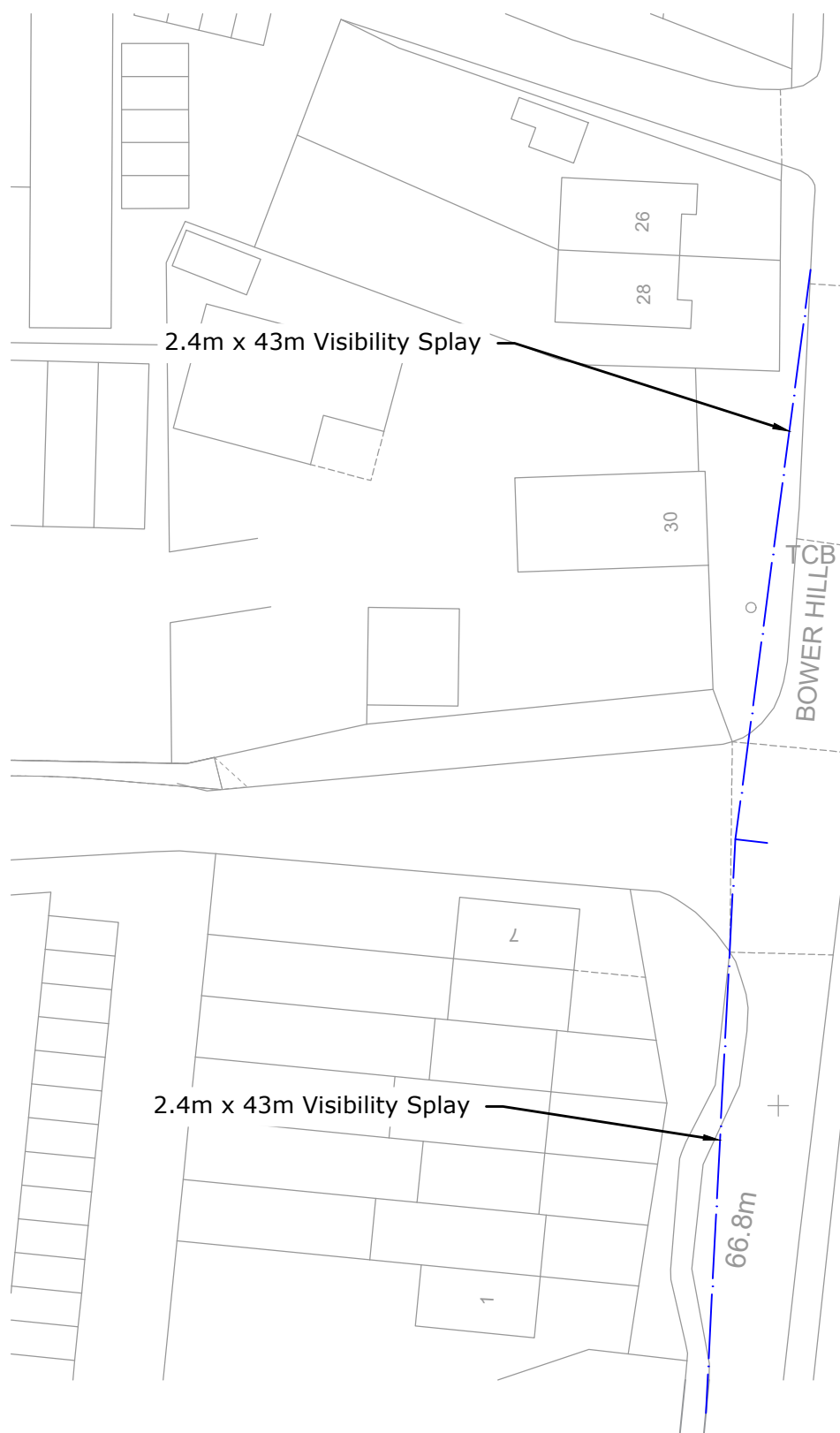
BOWER HILL

Ground Floor Plan

3458_1 | 1:500, 1:250@A3 | 19/03/2021

Appendix B

Visibility Splays



84 North Street
Guildford
Surrey
GU1 4AU

T: 01483 531 300

Cargo Works
1-2 Hatfields
London
SE1 9PG

T: 020 8065 5208

www.motion.co.uk

Project:
Bower Terrace, Epping

Title:
Visibility Splay

Scale: 1:500 (@ A4)

Drawing:
2101070-01

Revision:

-

Appendix C

On-street Parking Survey Results

32 BOWER TERRACE, EPPING, CM16 7BN.

PARKING STRESS SURVEY

RESULTS

SURVEY LOCATION PLAN

PARKING RESTRICTION PLANS

PARKED VEHICLE LOCATION PLANS

FEBRUARY 2021

LAMBETH METHODOLOGY



BENCHMARK DATA COLLECTION

32 BOWER TERRACE, EPPING, CM16 7BN - PARKING STRESS SURVEY - TUESDAY 23/02/2021 05:15

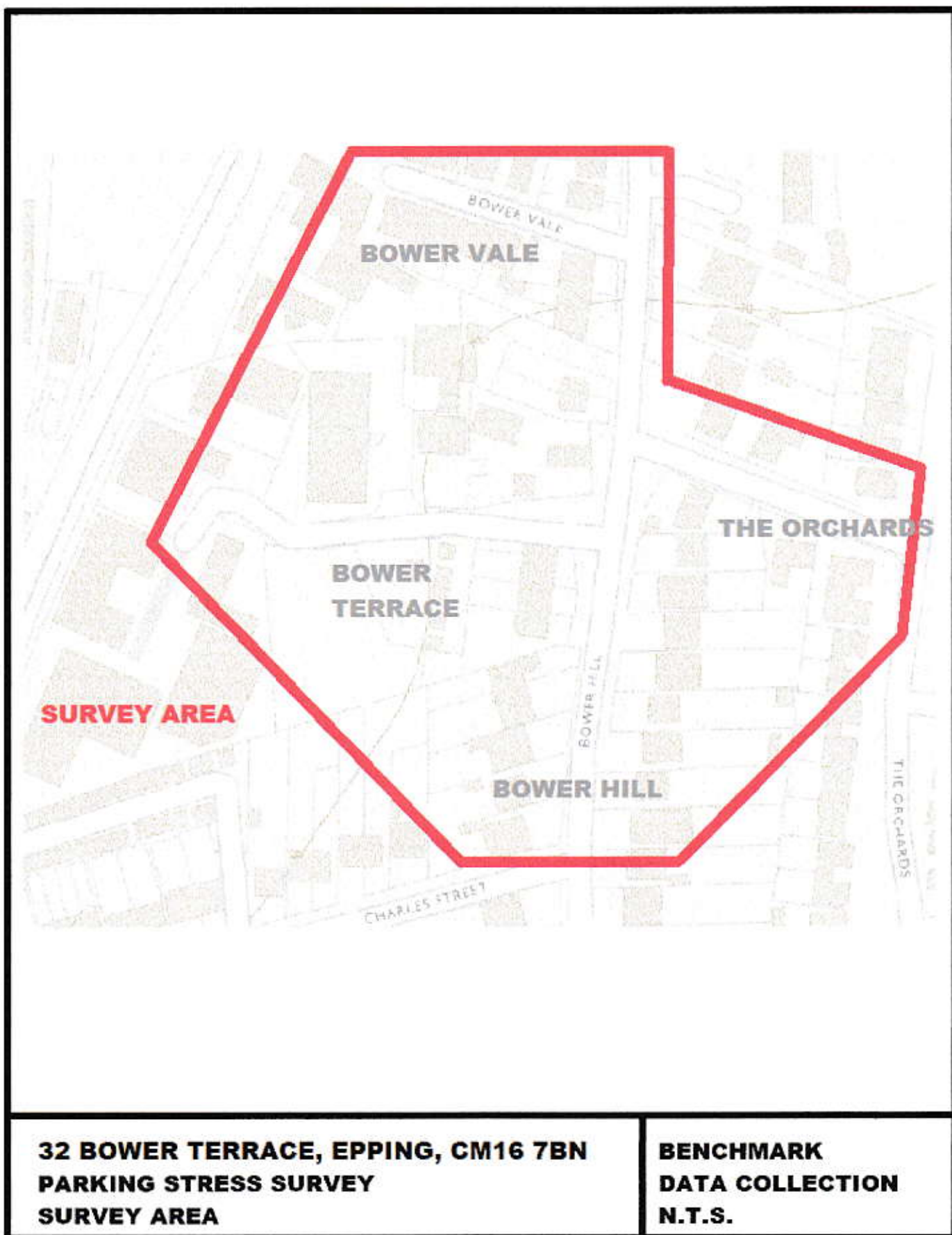
AREA NOT IN A CONTROLLED PARKING ZONE								
ROAD NAME	TOTAL LENGTH (m) OF KERB SPACE	TOTAL LENGTH (m) OF UNRESTRICTED PARKING	NUMBER OF UNRESTRICTED (5m) PARKING SPACES	NUMBER OF VEHICLES PARKED	UNRESTRICTED PARKING STRESS %	NUMBER OF SYL 5m PARKING SPACES	NUMBER OF VEHICLES PARKED ON SYL	SINGLE YELLOW LINE PARKING STRESS %
BOWER TERRACE	237	0	0	0	-	0	0	-
BOWER HILL	386.4	0	0	0	-	11	1	9
THE ORCHARDS	215	0	0	0	-	13	0	0
TOTAL	838.4	0	0	0	-	24	1	4

ROAD NAME	CONTROLLED PARKING ZONE - RESIDENT PERMIT HOLDER 'H'			
	TOTAL LENGTH (m) OF PARKING SPACES	NUMBER OF (5m) RPH PARKING SPACES	NUMBER OF VEHICLES PARKED IN RPH PARKING SPACES	RPH PARKING STRESS %
BOWER VALE	122	23	18	78
TOTAL	122	23	18	78

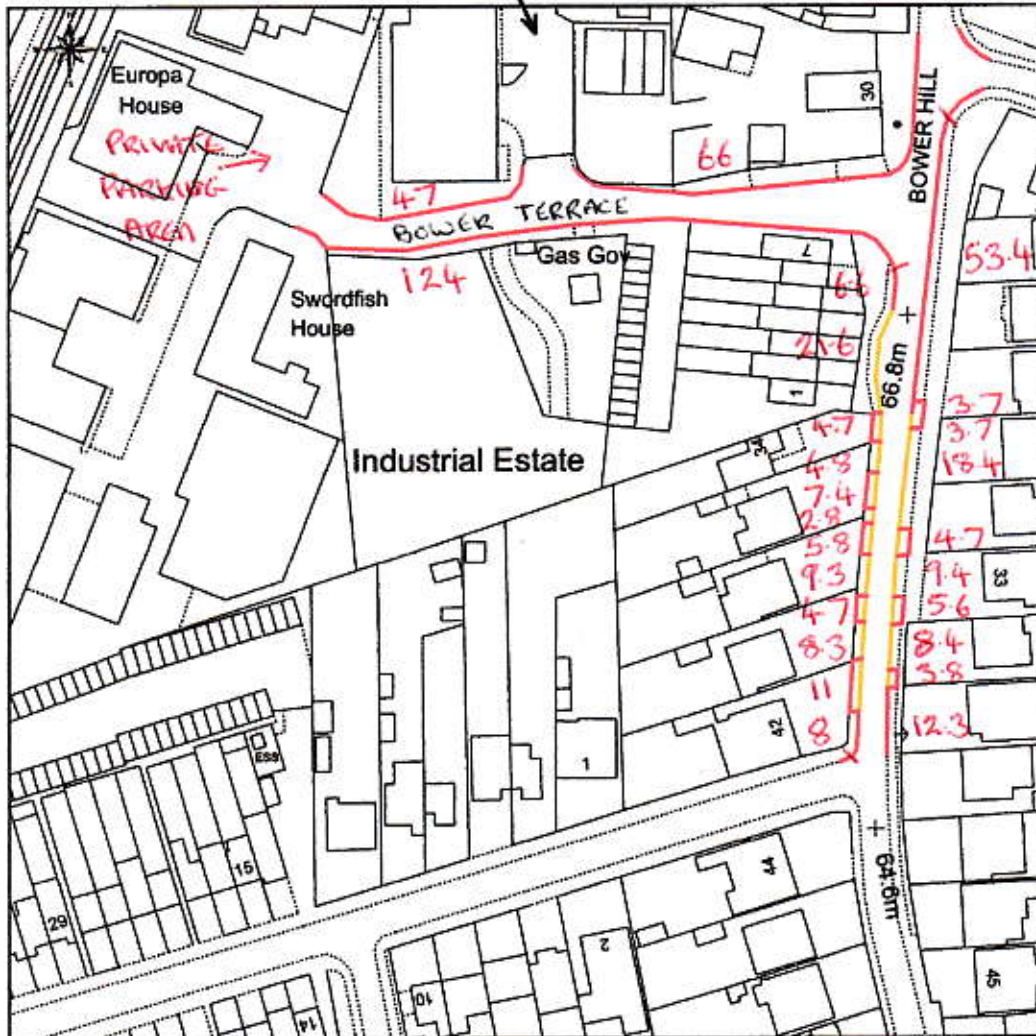
32 BOWER TERRACE, EPPING, CM16 7BN - PARKING STRESS SURVEY - WEDNESDAY 24/02/2021 04:20

AREA NOT IN A CONTROLLED PARKING ZONE								
ROAD NAME	TOTAL LENGTH (m) OF KERB SPACE	TOTAL LENGTH (m) OF UNRESTRICTED PARKING	NUMBER OF UNRESTRICTED (5m) PARKING SPACES	NUMBER OF VEHICLES PARKED	UNRESTRICTED PARKING STRESS %	NUMBER OF SYL 5m PARKING SPACES	NUMBER OF VEHICLES PARKED ON SYL	SINGLE YELLOW LINE PARKING STRESS %
BOWER TERRACE	237	0	0	0	-	0	0	-
BOWER HILL	386.4	0	0	0	-	11	1	9
THE ORCHARDS	215	0	0	0	-	13	0	0
TOTAL	838.4	0	0	0	-	24	1	4

ROAD NAME	CONTROLLED PARKING ZONE - RESIDENT PERMIT HOLDER 'H'			
	TOTAL LENGTH (m) OF PARKING SPACES	NUMBER OF (5m) RPH PARKING SPACES	NUMBER OF VEHICLES PARKED IN RPH PARKING SPACES	RPH PARKING STRESS %
BOWER VALE	122	23	19	83
TOTAL	122	23	19	83



**CAR PARK
32 BOWER TERRACE**



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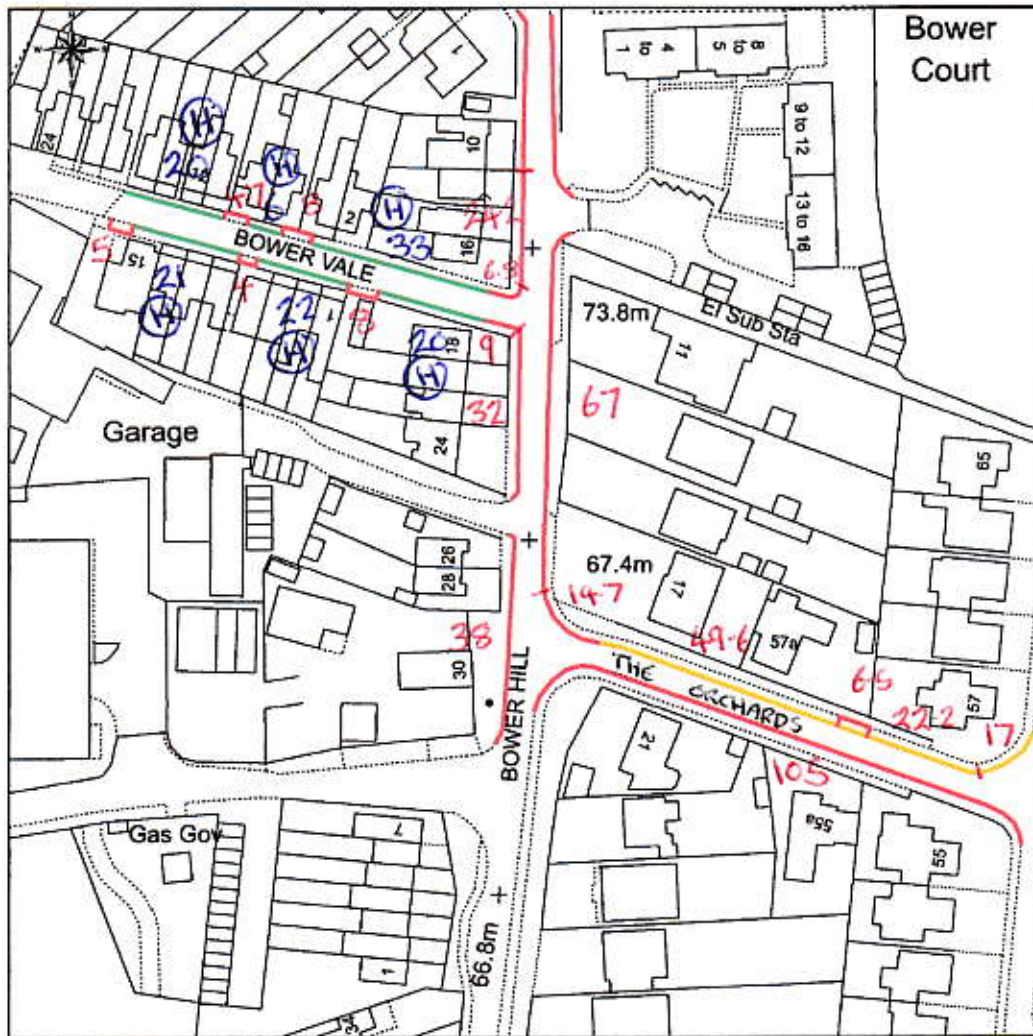
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- ACCEPTABLE PARKING
- SINGLE YELLOW LINE (SYL)
- DOUBLE YELLOW LINE (DYL)
- UNACCEPTABLE PARKING
- └─┘ DROPPED KERB

DBH DISABLED BADGE HOLDER
ALL MEASUREMENTS IN METRES

PARKING RESTRICTIONS

SYL = MONDAY - FRIDAY
10AM - 11AM



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- ACCEPTABLE PARKING
- SINGLE YELLOW LINE (SYL)
- DOUBLE YELLOW LINE (DYL)
- UNACCEPTABLE PARKING
- ⌈ DROPPED KERB

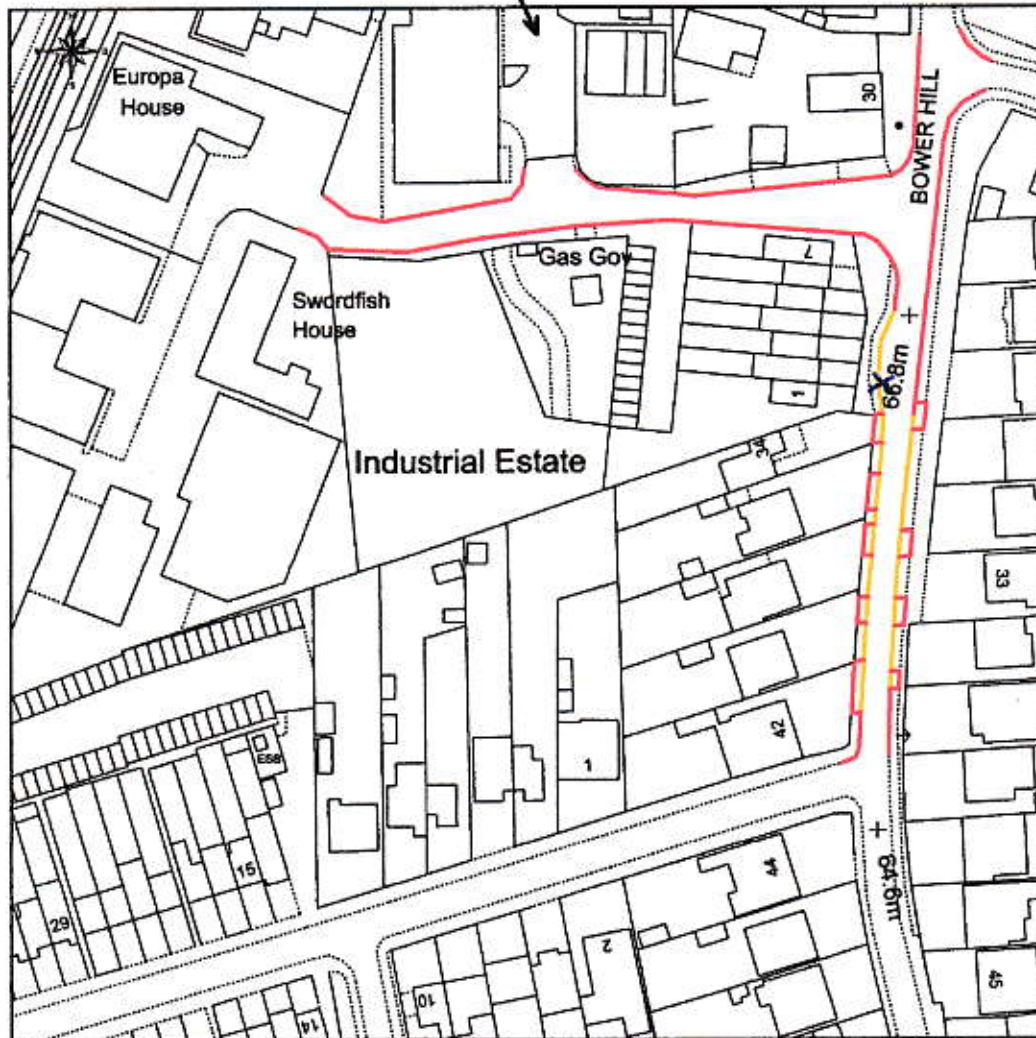
DBH DISABLED BADGE HOLDER
ALL MEASUREMENTS IN METRES

PARKING RESTRICTIONS

SYL = MONDAY - FRIDAY
10 AM - 11 AM

(H) = PERMIT HOLDER 'H'
PARKING ONLY
MONDAY - FRIDAY
10 AM - 4 PM

**CAR PARK
32 BOWER TERRACE**



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0m 20m 40m 60m 80m 100m

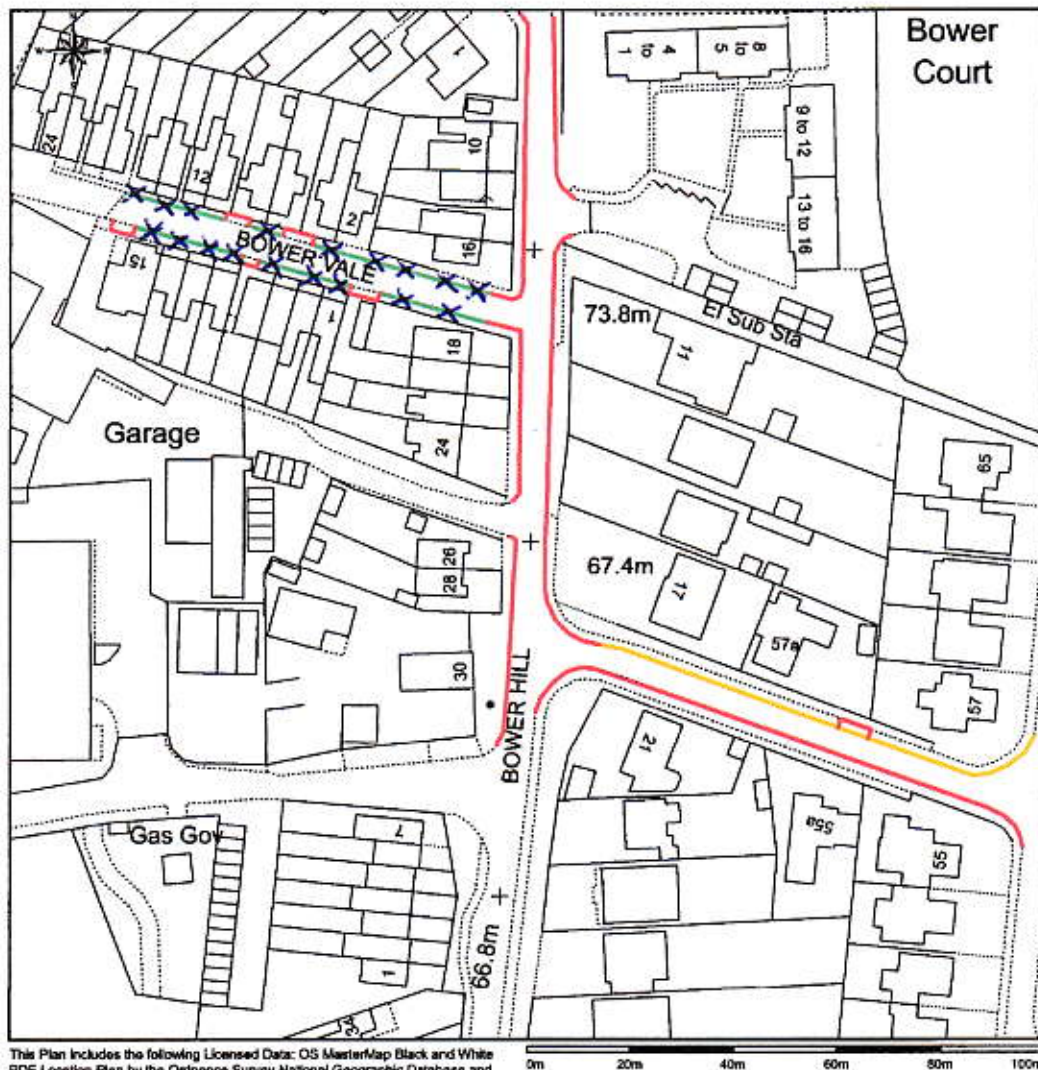
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- ACCEPTABLE PARKING
- SINGLE YELLOW LINE (SYL)
- DOUBLE YELLOW LINE (DYL)
- UNACCEPTABLE PARKING
- ┌ DROPPED KERB

DBH DISABLED BADGE HOLDER
ALL MEASUREMENTS IN METRES

PARKED VEHICLE LOCATION

TUESDAY 23/02/2021 - 05:15



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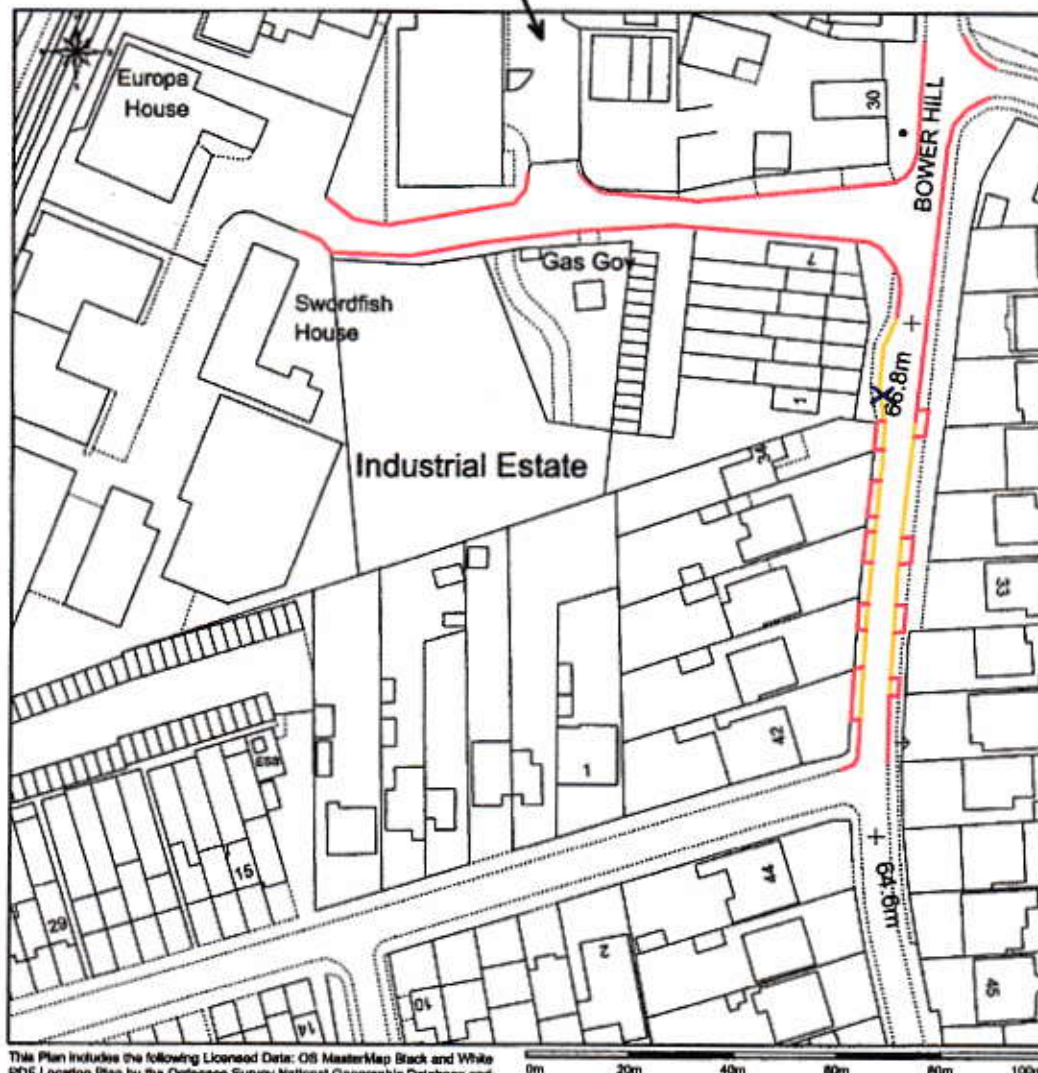
- ACCEPTABLE PARKING
- SINGLE YELLOW LINE (SYL)
- DOUBLE YELLOW LINE (DYL)
- UNACCEPTABLE PARKING
- └─┘ DROPPED KERB

DBH DISABLED BADGE HOLDER
ALL MEASUREMENTS IN METRES

PARKED VEHICLE LOCATION

TUESDAY 23/02/2021 - 05:15

**CAR PARK
32 BOWER TERRACE**



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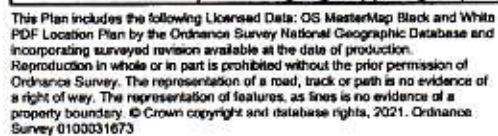
Scale: 1:1250, paper size: A4






- ACCEPTABLE PARKING
- SINGLE YELLOW LINE (SYL)
- DOUBLE YELLOW LINE (DYL)
- UNACCEPTABLE PARKING
- └─┘ DROPPED KERB

DBH DISABLED BADGE HOLDER
ALL MEASUREMENTS IN METRES

PARKED VEHICLE LOCATION

WEDNESDAY 24/02/2021 - 04:20



-  ACCEPTABLE PARKING
-  SINGLE YELLOW LINE (SYL)
-  DOUBLE YELLOW LINE (DYL)
-  UNACCEPTABLE PARKING
-  DROPPED KERB

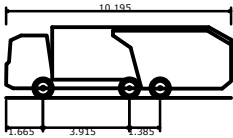
PARKED VEHICLE LOCATION

WEDNESDAY 24/02/2021 - 04:20

Appendix D

Swept Path Analysis – Refuse Vehicle

C:\Users\joeearp\Motion\StaffSite - TP Projects\ieppi 2101070\Drawings\2101070-TK01 To TK03.dwg



Phoenix 2-20W (with Elite 2 6x4 chassis)
Overall Length 10.195m
Overall Width 2.530m
Overall Body Height 3.205m
Min Body Ground Clearance 0.410m
Track Width 2.500m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 9.000m



84 North Street
Guildford
Surrey
GU1 4AU
T: 01483 531 300

Cargo Works
1-2 Hatfields
London
SE1 9PG
T: 020 8065 5208

www.motion.co.uk

Project:
Bower Terrace, Epping

Title:
Swept Path Analysis
Refuse Vehicle - Turn on Site

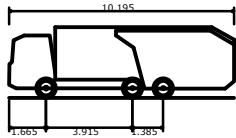
Scale: 1:250 (@ A3)

Notes:

Drawing:
2101070-TK01

Revision:
-

C:\Users\joeearp\Motion\StaffSite - TP Projects\ieppi 2101070\Drawings\2101070-TK01 To TK03.dwg



Phoenix 2-20W (with Elite 2 6x4 chassis)
Overall Length 10.195m
Overall Width 2.530m
Overall Body Height 3.205m
Min Body Ground Clearance 0.410m
Track Width 2.500m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 9.000m



84 North Street
Guildford
Surrey
GU1 4AU
T: 01483 531 300

Cargo Works
1-2 Hatfields
London
SE1 9PG
T: 020 8065 5208

www.motion.co.uk

Project:
Bower Terrace, Epping

Title:
Swept Path Analysis
Refuse Vehicle - Turn on Bower Terrace

Scale: 1:250 (@ A3)

Notes:

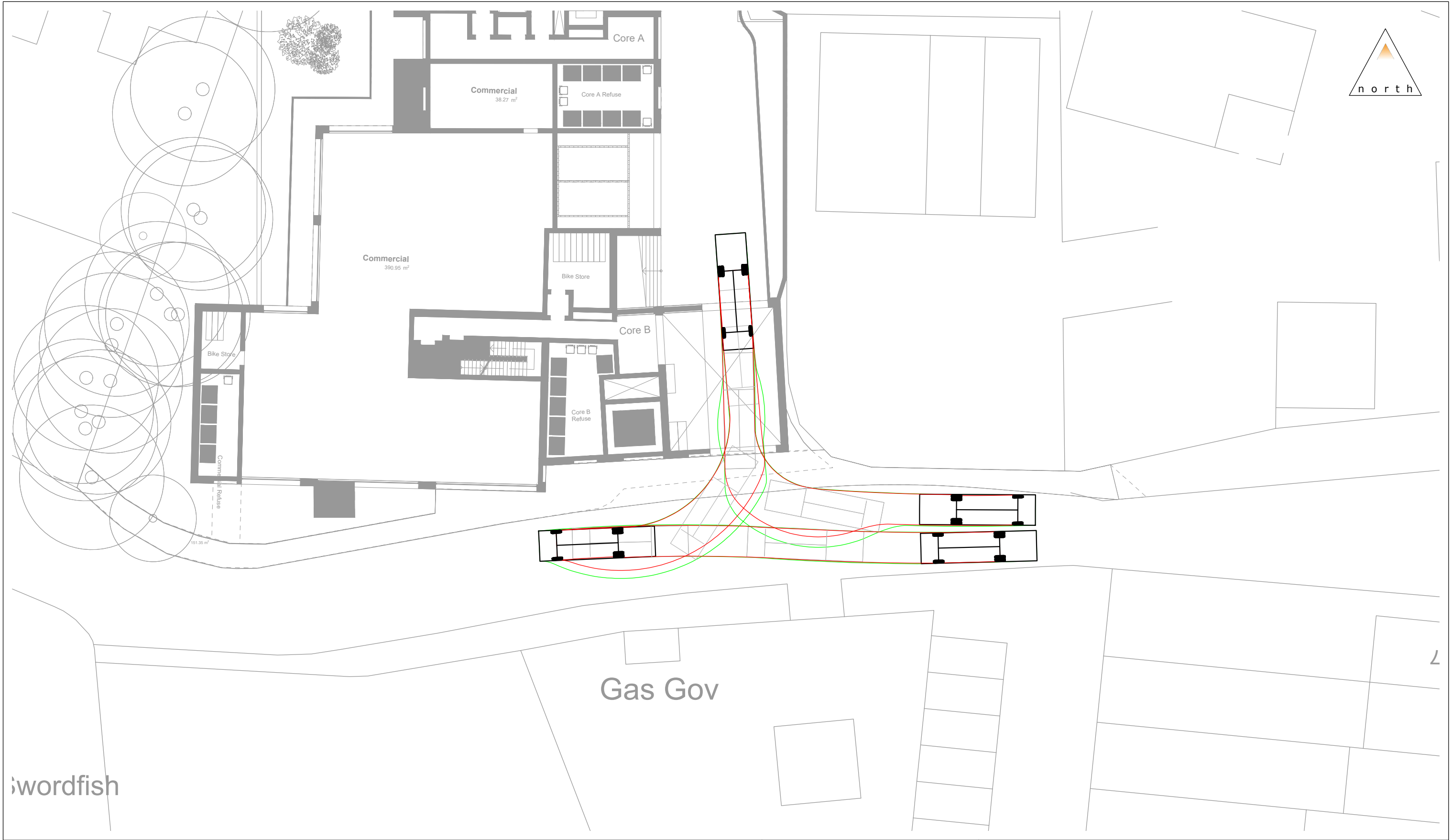
Drawing:
2101070-TK02

Revision:
-

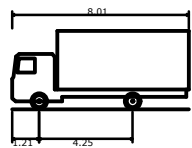
Appendix E

Swept Path Analysis – Box Van

C:\Users\ellieupton\Motion\StaffSite - TP Projects\ieppi 2101070\Drawings\2101070-TK01 To TK04.dwg



wordfish



7.5t Box Van
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to lock time
Kerb to Kerb Turning Radius

8.010m
2.100m
3.556m
0.351m
2.064m
4.00s
7.400m



84 North Street
Guildford
Surrey
GU1 4AU

Cargo Works
1-2 Hatfields
London
SE1 9PG

T: 01483 531 300

T: 020 8065 5208

www.motion.co.uk

Project:
Bower Terrace, Epping

Title:
Swept Path Analysis
7.5t Box Van

Scale: 1:250 (@ A3)

Notes:

Drawing:

2101070-TK04

Revision:

-

Appendix F

TRICS Output – Commercial Use

Calculation Reference: AUDIT-734001-210401-0453

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT

Category : F - WAREHOUSING (COMMERCIAL)

TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	EX ESSEX	1 days
	HC HAMPSHIRE	1 days
	KC KENT	1 days
03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	SF SUFFOLK	2 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area

Actual Range: 190 to 37530 (units: sqm)

Range Selected by User: 190 to 80066 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 15/10/20

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

Selected survey days:

Monday	1 days
Wednesday	1 days
Thursday	4 days
Friday	5 days

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

Selected survey types:

Manual count	11 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 undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	9

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	9
Commercial 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.

Motion High Street Guildford

Licence No: 734001

Secondary Filtering selection:

Use Class:

n/a	2 days
B8	9 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®.

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	3 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
20,001 to 25,000	2 days
25,001 to 50,000	1 days

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

Population within 5 miles:

5,001 to 25,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	5 days
250,001 to 500,000	2 days
500,001 or More	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	4 days
1.1 to 1.5	7 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	11 days
----	---------

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

PTAL Rating:

No PTAL Present	11 days
-----------------	---------

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
-----------------------	-----	--

Motion High Street Guildford

Licence No: 734001

LIST OF SITES relevant to selection parameters

1	BD-02-F-02 CAMBRIDGE ROAD BEDFORD	DRINKS WHOLESALER	BEDFORDSHIRE
	Edge of Town Industrial Zone Total Gross floor area: 3500 sqm <i>Survey date: THURSDAY 15/10/20</i>		<i>Survey Type: MANUAL</i>
2	DV-02-F-01 ALDERS WAY PAIGNTON	OPTICS WAREHOUSE	DEVON
	Edge of Town Industrial Zone Total Gross floor area: 190 sqm <i>Survey date: FRIDAY 29/03/19</i>		<i>Survey Type: MANUAL</i>
3	EX-02-F-01 BRUNEL WAY COLCHESTER SEVERALLS INDUSTRIAL PK	SPORTS SUPPLEMENTS	ESSEX
	Edge of Town Industrial Zone Total Gross floor area: 6560 sqm <i>Survey date: FRIDAY 18/05/18</i>		<i>Survey Type: MANUAL</i>
4	HC-02-F-02 RUTHERFORD ROAD BASINGSTOKE	LOGISTICS	HAMPSHIRE
	Suburban Area (PPS6 Out of Centre) Commercial Zone Total Gross floor area: 13200 sqm <i>Survey date: THURSDAY 16/06/16</i>		<i>Survey Type: MANUAL</i>
5	KC-02-F-02 MILLS ROAD AYLESFORD QUARRY WOOD	COMMERCIAL WAREHOUSING	KENT
	Edge of Town Industrial Zone Total Gross floor area: 11200 sqm <i>Survey date: FRIDAY 22/09/17</i>		<i>Survey Type: MANUAL</i>
6	SF-02-F-02 WALTON ROAD FELIXSTOWE	WAREHOUSING	SUFFOLK
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 22270 sqm <i>Survey date: THURSDAY 11/07/13</i>		<i>Survey Type: MANUAL</i>
7	SF-02-F-03 CENTRAL AVENUE IPSWICH WARREN HEATH	ROAD HAULAGE	SUFFOLK
	Edge of Town Industrial Zone Total Gross floor area: 4700 sqm <i>Survey date: FRIDAY 18/09/15</i>		<i>Survey Type: MANUAL</i>
8	TW-02-F-01 MANDARIN WAY WASHINGTON PATTISON IND. ESTATE	ASDA DISTRIBUTION CENTRE	TYNE & WEAR
	Edge of Town Industrial Zone Total Gross floor area: 31000 sqm <i>Survey date: FRIDAY 13/11/15</i>		<i>Survey Type: MANUAL</i>
9	WM-02-F-02 SOVEREIGN ROAD BIRMINGHAM KINGS NORTON	LOGISTICS FIRM	WEST MIDLANDS
	Edge of Town Commercial Zone Total Gross floor area: 3625 sqm <i>Survey date: MONDAY 09/11/15</i>		<i>Survey Type: MANUAL</i>

Motion High Street Guildford

Licence No: 734001

LIST OF SITES relevant to selection parameters (Cont.)

10	WO-02-F-03 COTSWOLD WAY WORCESTER	THERMOTECHNOLOGY	WORCESTERSHIRE
	Edge of Town Industrial Zone Total Gross floor area:	37530 sqm	
	Survey date: WEDNESDAY	14/10/20	Survey Type: MANUAL
11	WY-02-F-02 STAITHGATE LANE BRADFORD NEWHALL	DISTRIBUTION COMPANY	WEST YORKSHIRE
	Edge of Town Industrial Zone Total Gross floor area:	10446 sqm	
	Survey date: THURSDAY	14/03/19	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.

Motion High Street Guildford

Licence No: 734001

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	4	9102	0.135	4	9102	0.077	4	9102	0.212
06:00 - 07:00	5	14787	0.193	5	14787	0.062	5	14787	0.255
07:00 - 08:00	11	13111	0.184	11	13111	0.071	11	13111	0.255
08:00 - 09:00	11	13111	0.177	11	13111	0.086	11	13111	0.263
09:00 - 10:00	11	13111	0.146	11	13111	0.065	11	13111	0.211
10:00 - 11:00	11	13111	0.103	11	13111	0.084	11	13111	0.187
11:00 - 12:00	11	13111	0.098	11	13111	0.098	11	13111	0.196
12:00 - 13:00	11	13111	0.095	11	13111	0.095	11	13111	0.190
13:00 - 14:00	11	13111	0.116	11	13111	0.110	11	13111	0.226
14:00 - 15:00	11	13111	0.096	11	13111	0.114	11	13111	0.210
15:00 - 16:00	11	13111	0.089	11	13111	0.108	11	13111	0.197
16:00 - 17:00	11	13111	0.067	11	13111	0.148	11	13111	0.215
17:00 - 18:00	11	13111	0.069	11	13111	0.182	11	13111	0.251
18:00 - 19:00	11	13111	0.036	11	13111	0.128	11	13111	0.164
19:00 - 20:00	5	14787	0.034	5	14787	0.164	5	14787	0.198
20:00 - 21:00	5	14787	0.019	5	14787	0.108	5	14787	0.127
21:00 - 22:00	1	22270	0.031	1	22270	0.018	1	22270	0.049
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		1.688			1.718				3.406

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.

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Parameter summary

Trip rate parameter range selected:	190 - 37530 (units: sqm)
Survey date date range:	01/01/13 - 15/10/20
Number of weekdays (Monday-Friday):	11
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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 G

TRICS Output – Residential Use

Calculation Reference: AUDIT-734001-210401-0451

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : C - FLATS PRIVATELY OWNED
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
03	SOUTH WEST	
	DC DORSET	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	NT NOTTINGHAMSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	RI EAST RIDING OF YORKSHIRE	1 days
08	NORTH WEST	
	MS MERSEYSIDE	2 days
09	NORTH	
	CB CUMBRIA	2 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 9 to 184 (units:)
 Range Selected by User: 6 to 215 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 16/10/20

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

Selected survey days:

Monday	3 days
Tuesday	5 days
Wednesday	5 days
Friday	1 days

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

Selected survey types:

Manual count	14 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:

Suburban Area (PPS6 Out of Centre)	12
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:

Development Zone	2
Residential Zone	8
No Sub Category	4

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

Secondary Filtering selection:

Use Class:

C3 14 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 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	2 days
10,001 to 15,000	4 days
20,001 to 25,000	5 days
25,001 to 50,000	2 days
50,001 to 100,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	3 days
125,001 to 250,000	3 days
250,001 to 500,000	4 days
500,001 or More	2 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	6 days
1.1 to 1.5	8 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 14 days

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

PTAL Rating:

No PTAL Present 14 days

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
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Motion High Street Guildford

Licence No: 734001

LIST OF SITES relevant to selection parameters

1	CA-03-C-03 CROMWELL ROAD CAMBRIDGE	BLOCKS OF FLATS		CAMBRIDGESHIRE
	Suburban Area (PPS6 Out of Centre) No Sub Category Total No of Dwellings:		82	
	Survey date: MONDAY		18/09/17	Survey Type: MANUAL
2	CB-03-C-02 BRIDGE LANE PENRITH	BLOCK OF FLATS		CUMBRIA
	Edge of Town No Sub Category Total No of Dwellings:		35	
	Survey date: WEDNESDAY		11/06/14	Survey Type: MANUAL
3	CB-03-C-03 LOUND STREET KENDAL	FLATS & BUNGALOWS		CUMBRIA
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		33	
	Survey date: MONDAY		09/06/14	Survey Type: MANUAL
4	DC-03-C-02 PALM COURT WEYMOUTH SPA ROAD	FLATS IN BLOCKS		DORSET
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		14	
	Survey date: FRIDAY		28/03/14	Survey Type: MANUAL
5	DS-03-C-03 CAESAR STREET DERBY	BLOCKS OF FLATS		DERBYSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		30	
	Survey date: WEDNESDAY		25/09/19	Survey Type: MANUAL
6	ES-03-C-01 OLD SHOREHAM RD BRIGHTON HOVE	BLOCK OF FLATS		EAST SUSSEX
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		71	
	Survey date: TUESDAY		26/09/17	Survey Type: MANUAL
7	MS-03-C-02 SOUTH FERRY QUAY LIVERPOOL BRUNSWICK DOCK	BLOCKS OF FLATS		MERSEYSIDE
	Suburban Area (PPS6 Out of Centre) Development Zone Total No of Dwellings:		184	
	Survey date: TUESDAY		13/11/18	Survey Type: MANUAL
8	MS-03-C-03 MARINERS WHARF LIVERPOOL QUEENS DOCK	BLOCK OF FLATS		MERSEYSIDE
	Suburban Area (PPS6 Out of Centre) Development Zone Total No of Dwellings:		9	
	Survey date: TUESDAY		13/11/18	Survey Type: MANUAL

Motion High Street Guildford

Licence No: 734001

LIST OF SITES relevant to selection parameters (Cont.)

9	NF-03-C-02	MIXED FLATS & HOUSES	NORFOLK
	HALL ROAD		
	NORWICH		
	LAKENHAM		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	82	
	Survey date: MONDAY	18/11/19	Survey Type: MANUAL
10	NT-03-C-01	HOUSES (SPLIT INTO FLATS)	NOTTINGHAMSHIRE
	LAWRENCE WAY		
	NOTTINGHAM		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total No of Dwellings:	56	
	Survey date: TUESDAY	08/11/16	Survey Type: MANUAL
11	NT-03-C-02	HOUSES (SPLIT INTO FLATS)	NOTTINGHAMSHIRE
	CASTLE MARINA ROAD		
	NOTTINGHAM		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total No of Dwellings:	135	
	Survey date: WEDNESDAY	09/11/16	Survey Type: MANUAL
12	RI-03-C-01	FLATS	EAST RIDING OF YORKSHIRE
	465 PRIORY ROAD		
	HULL		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	20	
	Survey date: TUESDAY	13/05/14	Survey Type: MANUAL
13	SF-03-C-03	BLOCKS OF FLATS	SUFFOLK
	TOLLGATE LANE		
	BURY ST EDMUNDS		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	30	
	Survey date: WEDNESDAY	03/12/14	Survey Type: MANUAL
14	SF-03-C-04	BLOCKS OF FLATS	SUFFOLK
	SAINT MARY'S ROAD		
	IPSWICH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	56	
	Survey date: WEDNESDAY	16/09/20	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.

Motion High Street Guildford

Licence No: 734001

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	14	60	0.055	14	60	0.148	14	60	0.203
08:00 - 09:00	14	60	0.062	14	60	0.188	14	60	0.250
09:00 - 10:00	14	60	0.082	14	60	0.115	14	60	0.197
10:00 - 11:00	14	60	0.063	14	60	0.080	14	60	0.143
11:00 - 12:00	14	60	0.066	14	60	0.073	14	60	0.139
12:00 - 13:00	14	60	0.074	14	60	0.082	14	60	0.156
13:00 - 14:00	14	60	0.061	14	60	0.082	14	60	0.143
14:00 - 15:00	14	60	0.076	14	60	0.080	14	60	0.156
15:00 - 16:00	14	60	0.112	14	60	0.068	14	60	0.180
16:00 - 17:00	14	60	0.112	14	60	0.081	14	60	0.193
17:00 - 18:00	14	60	0.171	14	60	0.086	14	60	0.257
18:00 - 19:00	14	60	0.142	14	60	0.093	14	60	0.235
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.076			1.176			2.252

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.

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Parameter summary

Trip rate parameter range selected: 9 - 184 (units:)
 Survey date range: 01/01/13 - 16/10/20
 Number of weekdays (Monday-Friday): 14
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 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.