ttp consulting

transport planning specialists

Fastned

BALHALDIE

Transport Statement

March 2024

TTP Consulting Ltd

[redacted]

www.ttp-consulting.co.uk

Registered in England: 09931399

Contents

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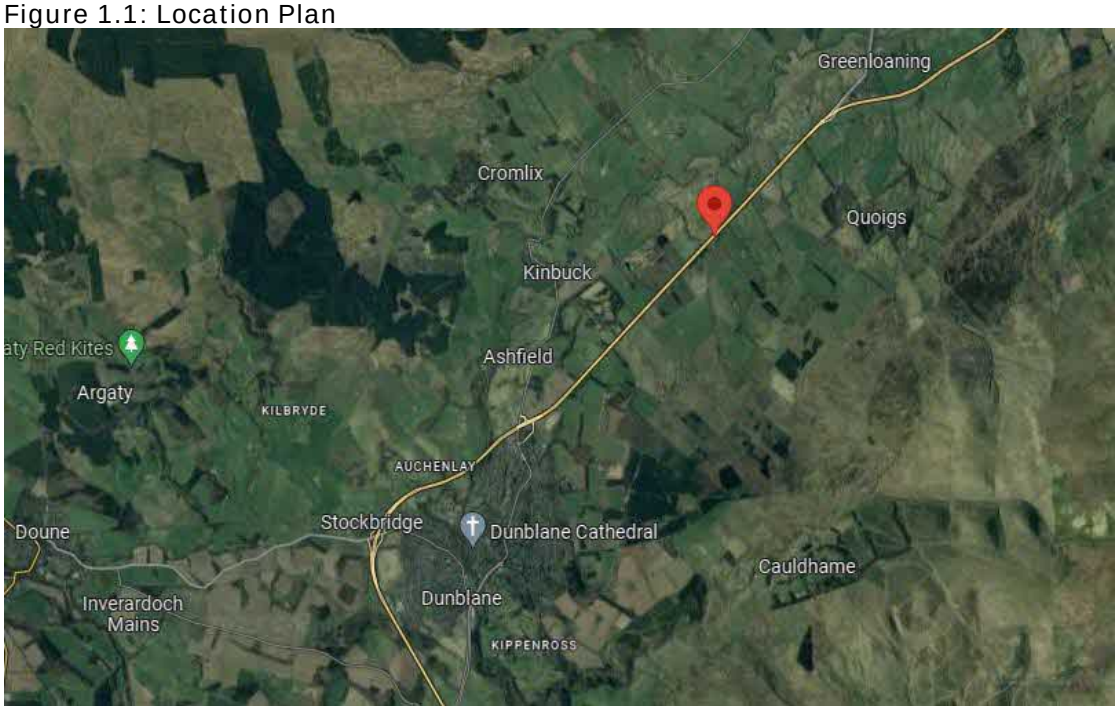
Appendices

1 INTRODUCTION

1.1 TTP Consulting is retained by Fastned to provide highways advice in relation to their proposals to create an Electric Vehicle (EV) Charging station adjacent to the A9 north of Dunblane.

Figure 1.1: Location Plan



1.2 The Site which is currently vacant comprises of a circa 100sqm building that was formerly occupied by Subway along with parking for 38 cars and two coaches; access is provided directly from the A9 via a left-in / left-out arrangement.

1.3 This report has been prepared to support an application to create an EV Charging station with an initial capacity for 10 cars and the ability to expand, with the building used as a waiting area with café / coffee shop along with toilets as illustrated on the plans in Appendix A.

2 EXISTING SITUATION

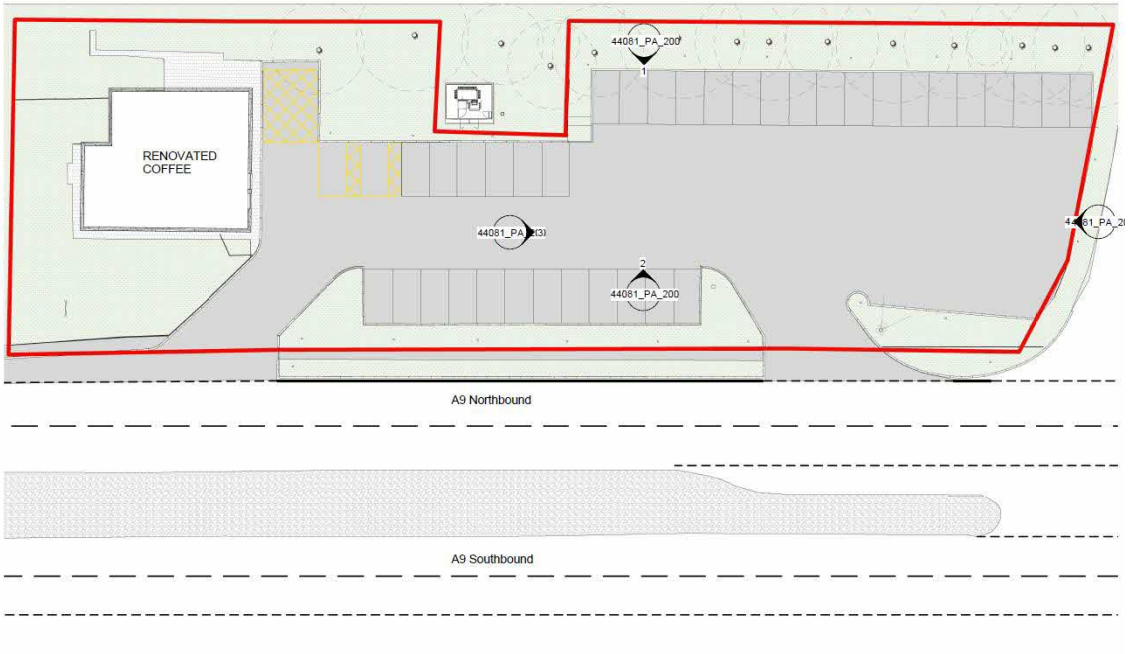
The Site

2.1 The Site which is broadly rectangular in shape is located on the northern side of the A9 to the north of Dunblane. It comprises of a circa 1,800sqft (167sqm) single storey building located at the southern end of the Site with external seating areas to the south and north of the building.

2.2 Parking is provided for up to 38 cars to the north of the building; the provision includes 2 spaces reserved for Blue Badge holders. In addition, there is parking for two coaches at the northern end of the Site. Access to the Site is provided via a left-in / left-out arrangement on the A9 with an entrance taper.

2.3 The premises was most recently occupied by Subway (between 2017 and 2022), and before that by a Steakhouse and originally a Little Chef (up to about 2013) with a sister restaurant on the opposite side of the A9

Figure 2.1: Existing Layout



The Surrounding Area

2.4 The local area is rural in nature with the Site and that opposite effectively being rest areas for drivers using the A9. The Site is bound by the A9 to the south-east and by open fields / farmland in the other directions; access to the farm house which located immediately north of the Site is taken via a dirt track that runs along the north-eastern boundary of the Site.

2.5 There is a bus stop immediately to the south of the access taper which is served by northbound buses on Routes 15A, 20, 252, 253 and 277; southbound buses call at the stop adjacent to the rest area on the opposite side of the carriageway. Buses on Roue 15A operate on the most frequent basis running between Stirling in the south and Crieff and Perth to the north.

2.6 The rest area opposite comprises of a Petrol Filling Station (PFS) operated by Shell with the now vacant former Little Chef building to the north and a Starbuck to the south-east.

The PFS which fronts the A9 has a single EV charging point in addition to fossil fuels, with the charging facilities currently able to deliver power at up to 50.0 kW/hr maximum. The station also includes a Shop and a Toilet, with food and drinks offerings including a Costa Express. Access is taken via a left-in / left-out arrangement from the A9.

The former Little Chef building is located to the north of the PFS fronting the A9 and has an area of dedicated car parking to the rear of the building; access to the car park is shared with the PFS.

The Starbucks which is located to the south-east of the PFS is a relatively new addition to the rest area comprises of a circa 2,500sqft (232sqm) with drive-thru facilities and a dedicated car park to the rear that can accommodate up to 36 cars including one space reserved for Blue Badge holders; in addition, there is a large order bay. Access to the car park (and drive thru lane) from the A9 is also shared with the PFS.

2.7 The closest other existing PFS are a Shell PFS circa 12.5km to the north at the A823 junction, and 13km to the south at Junction 10 at Stirling.

The Highway Network and Traffic Conditions

2.8 The A9 which runs to the south-east of the Site is managed by Transport Scotland and provides a connection between the A9 / M9 roundabout at Stirling in the south and Perth and beyond to the north. It is a dual carriageway with two lanes in both directions and subjected to a 70mph / national speed limit. There are right turn refuge lanes immediately north of the Site to accommodate north and southbound right turning traffic entering the private accesses either side.

2.9 Data from the Department for Transport website suggests that the average annual daily flows are in the region of 29,600 movements (two-way) based on a 2022 count, with circa 10.8% classified as HGV. The flows are marginally lower than those recorded in 2019 prior to the COVID-19 pandemic where a two-way flow of marginally less than 30,000 movements with 10.1% HGV were recorded.

2.10 Table 2.1 provides a summary of the hourly flows as recorded in the 2019 count.

Table 2.1: Summary of DfT Manual Count (19th September 2019)

	Northbound		Southbound	
	HGV	All Vehicles	HGV	All Vehicles
0700 – 0800	134	892	90	765
0800 – 0900	130	1045	97	995
0900 – 1000	184	1143	110	950
1000 – 1100	136	972	124	915
1100 – 1200	103	916	150	978
1200 – 1300	117	892	151	930
1300 – 1400	93	800	168	1174
1400 – 1500	115	902	182	1299
1500 – 1600	81	975	171	1469
1600 – 1700	104	1201	138	1599
1700 – 1800	76	1242	109	1363
1800 – 1900	80	836	113	1058
0700 – 1900	1353	11816	1603	13495

Accident Data

2.11 Accident data has been extracted from the Crash map website for the local area for the 5 year period through to the end of December 2022 which suggests that there have been 3 accidents that have occurred in the immediate vicinity, with one occurring at the turning facility immediately north of the Site, and the southbound carriageway adjacent to the PFS.

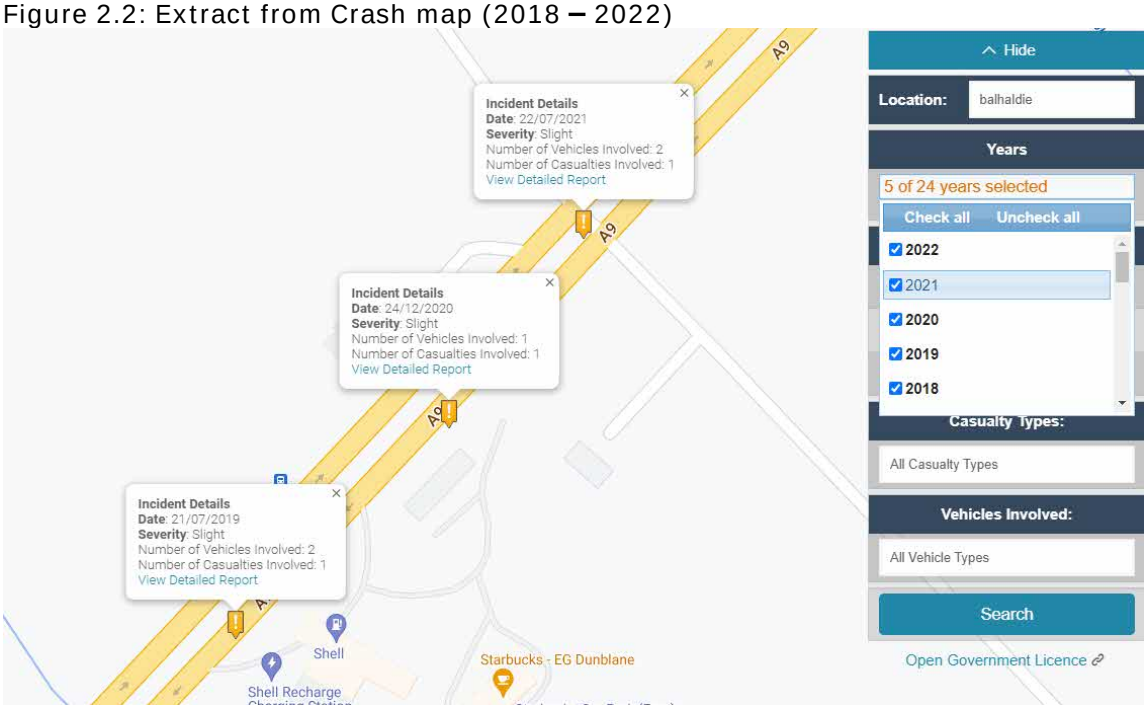
The accident that took place at the turning facility immediately to the north which occurred on the 22nd July 2021 involved two vehicles resulting in one slight injury.

One accident occurred on the 24th December 2020 immediately north of the PFS; the accident involved a single vehicle resulting in one slight injury.

One accident occurred on the 21st July 2019 in the vicinity of the exit from the PFS which involved two vehicles resulting in one slight injury.

2.12 The number of personnel injury accidents is deemed to be relatively low when compared to the volume of vehicles , with on average less than one accident per year.

Figure 2.2: Extract from Crash map (2018 – 2022)



Existing Nearby Charging Facilities

2.13 There are a number of existing charging stations in the wider area with a summary as follows:

The closest is located at the Shell PFS immediately opposite the Site where there is a single 50Kwa supply.

Adjacent to the A9 south of the Site

The Charge Place Scotland located at Junction 10 of the A9 which is circa 15km south of the Site has a total of 64 charging points including 10 reserved for Blue Badge holders.

The Osprey Charging Station at Junction 10 to the south has 3 charging stations.

Adjacent to the A9 North of the Site

The Charge Place Scotland at Junction 12 of the A9 which is circa 35km to the north of the Site has 12 charging stations. In addition, there is a Tesla Supercharger Station.

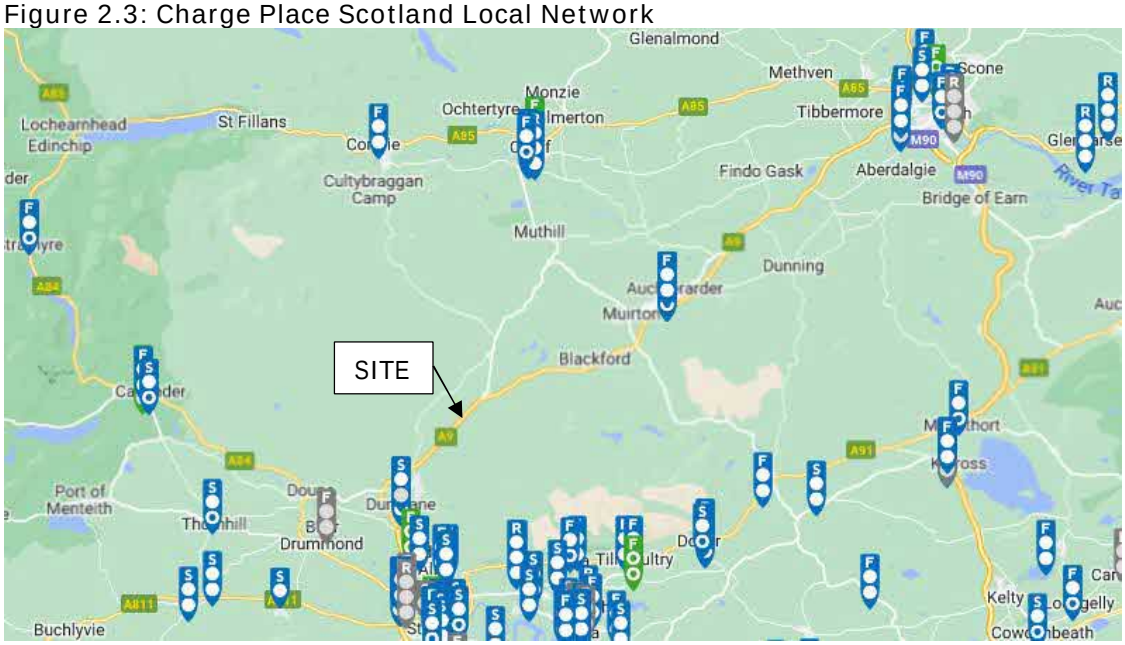
There is a single charging station at the Gleneagles railway station which is circa 15km to the north of the Site.

General off the A9 in the wider area

There are a number of other charging stations within Dunblane, Perth and Stirling.

2.14 As such, whereas there are a number of facilities adjacent to the A9 at Stirling and Perth, there are limited facilities between the two destinations.

Figure 2.3: Charge Place Scotland Local Network



3 THE PROPOSED DEVELOPMENT

3.1 It is proposed to reconfigure the car park with a loss of 8 spaces thereby reducing the overall number to 30 spaces of which 10 spaces will be provided with EV Charging facilities, 2 spaces reserved for Blue Badge holders and the 18 standard spaces. In addition, the 2 coach spaces will be removed with further details as follows:

The 10 spaces with charging facilities including one fully accessible space which could be used by Blue Badge holders.

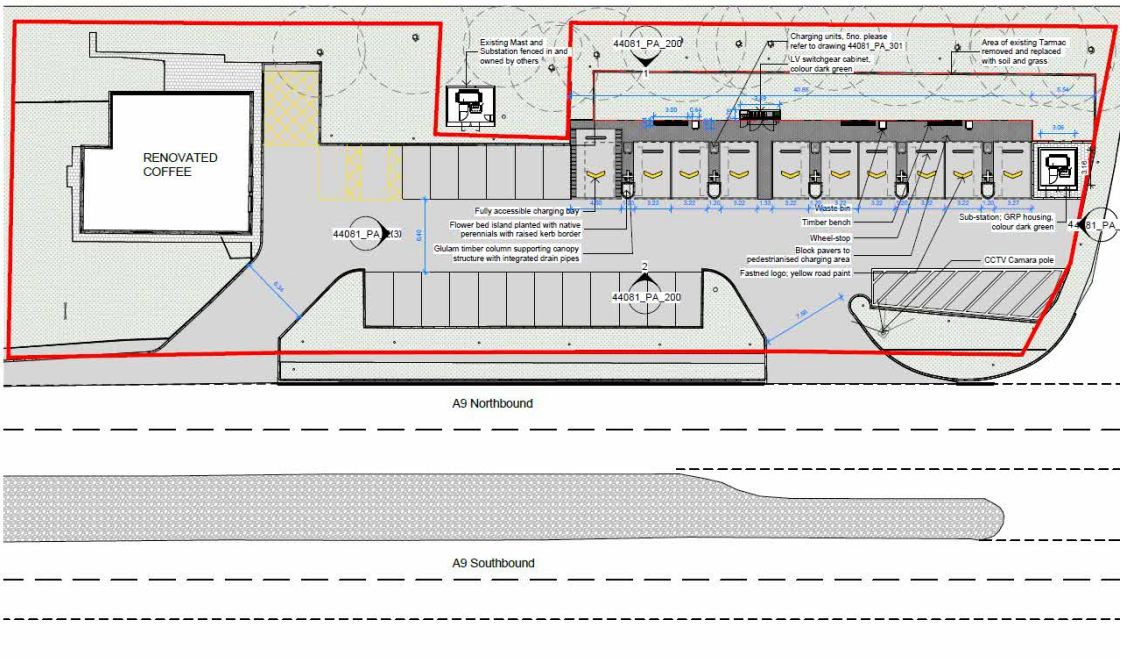
The former restaurant will be brought back into use as a waiting area whilst drivers chare their car, with the building including associated food and drink offers along with toilets.

Three of the spaces backing onto the telecom mast will be removed to make way for the transformer and associated plant.

No changes are proposed to the access arrangements.

3.2 An extract of the proposed layout is provided at Figure 3.1 with a copy of the application plans included at Appendix A.

Figure 3.1: Proposed Layout



4 EFFECTS OF PROPOSED DEVELOPMENT

Trip Generation

4.1 The proposals would result in the former restaurant being reopened and providing a facility for drivers of all light vehicles, i.e. including electric and fossil fuel cars. As noted earlier, the Site has been occupied by a number of tenants over the years, most recently by Subway, and for a longer time albeit a few years ago now, by Little Chef as a roadside café.

4.2 Given the former use, re-opening the building to provide a roadside facility would not generate any more trips than would have been deemed acceptable, with the only change now sought being providing charging facilities for drivers of Electric Cars. Data from the Department for Transport website suggests that circa 4.5% of all vehicles currently on the road are electric vehicles, including commercial and private cars; the number is expected to increase in time with changes in policy and habits, with corresponding reductions with fossil fuel cars over time.

4.3 Table 4.1 provides an estimate of the potential number of electric cars passing the Site northbound on the A9 across the day based on the 2019 observed flows, starting at a base of 5% through to 40%; although the number could increase further with time, it is anticipated that changes in technology and also that many people will continue to drive fossil fuel cars well into the future and as such any further increases could taper off until well in the future. Finally, it is anticipated that only a relatively small proportion of drivers would use the facilities on the grounds that relatively local drivers would tend to "fill up" at home where the cost would be significantly cheaper, subject to having an off-street charger, with the proposed facility on the A9 is more likely to be used by drivers undertaking longer distance journeys.

Table 4.1: Potential Number of Electric Cars Passing Site (Northbound)

Period	Percentage of Overall Cars							
	5%	10%	15%	20%	25%	30%	35%	40%
0700 – 0800	38	76	114	152	190	227	265	303
0800 – 0900	46	92	137	183	229	275	320	366
0900 – 1000	48	96	144	192	240	288	336	384
1000 – 1100	42	84	125	167	209	251	293	334
1100 – 1200	41	81	122	163	203	244	285	325
1200 – 1300	39	78	116	155	194	233	271	310
1300 – 1400	35	71	106	141	177	212	247	283
1400 – 1500	39	79	118	157	197	236	275	315
1500 – 1600	45	89	134	179	224	268	313	358
1600 – 1700	55	110	165	219	274	329	384	439
1700 – 1800	58	117	175	233	292	350	408	466
1800 – 1900	38	76	113	151	189	227	265	302
0700 - 1900	523	1046	1569	2093	2616	3139	3662	4185

4.4 Although relatively old, there is a survey within the TRICS database from 1st July 2007 of the MOTO rest area at Junction 9 of the A9 at Stirling, which although larger than the former café at Balhaldie, provides an indication of the potential number of vehicular trips that would have called a the former café. The MOTO site has a petrol filling station, a Travelodge Hotel and a Tourist Information Office in addition to a Burger King and Costa at the time of the survey; trips to and from the PFS, hotel and tourist office were not included in the survey counts. The TRICS survey suggested that on average each space turned over once an hour, suggesting a potential trip generation at the Site of up to 38 arrivals and 38 departures per hour on average across the day when in use as a roadside café; as with the proposed EV facility, the vast majority would have been pass-by on the a9.

Capacity of EV Station

4.5 The proposed station would have 10 charging stations at the outset each capable of rapid charging, with modern cars typically able to charge from 20% to 80% in less than 30 minutes. Notwithstanding that most drivers are unlikely to wait until their battery is less than 20% capacity before topping up, not necessarily all charge to 80%, with technology likely to improve with time with cars taking less time to charge. Technology in cars currently can advise drivers of available capacity at nearby charging stations which assists drivers to plan their journey.

4.6 Based on the anticipated dwell time for charging, the EV station would have capacity to charge up to 20 – 25 cars an hour at the outset; there would be scope for future expansion through the conversion of more standard spaces. The above suggests a capacity for up to 240 – 300 cars across a 12hr period.

4.7 The flows in Table 4.1 suggest that the number of EV cars passing the Site each day could be in the region of 500 at present through to over 4,000 per day in the future. However, as noted above, the proposed EV Charging station is more likely to be used by longer distance drivers than commuters for example, and as such, the percentage of drivers who would require a charge would be significantly lower. Furthermore, it is expected that the number of EV Charging stations would increase over time offering drivers a greater choice.

4.8 Overall, the proposed EV Charging station is considered to have sufficient capacity to accommodate the anticipated level of demand, being able to accommodate circa 6% - 7.5% of the potential number of passing electric cars based on 240 – 300 charging slots and 4,000 cars. Furthermore, given the location of the proposed station, it is anticipated that the vast majority of not all cars using the facilities would be pass-by trips with no dedicated trips.

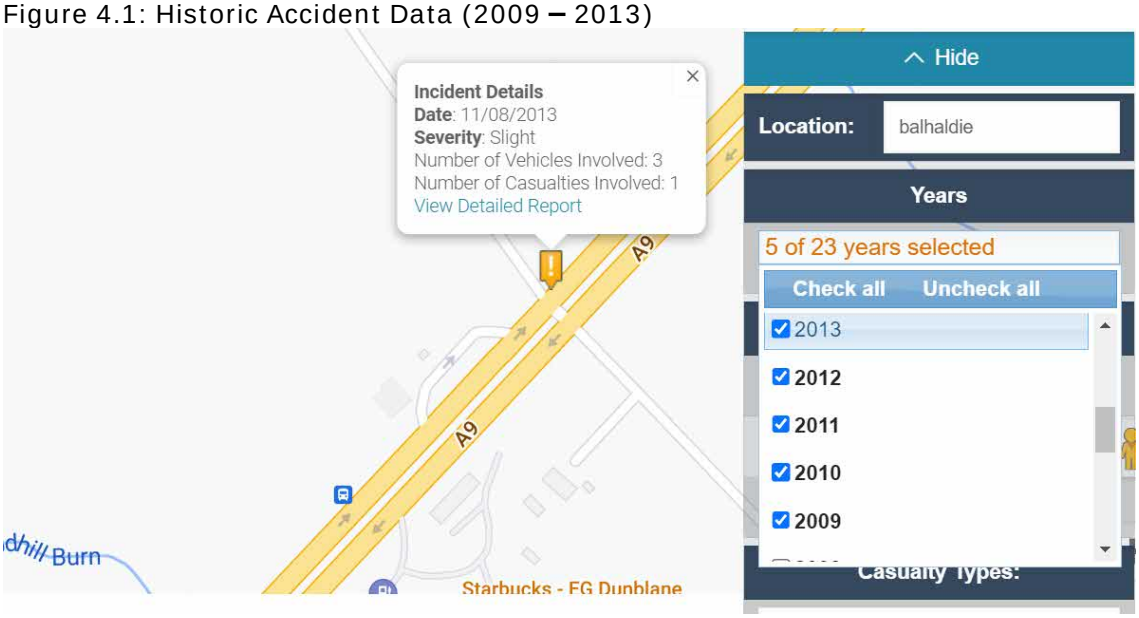
Access Arrangements

4.9 The proposals do not include any changes to the access arrangements with a left-in / left-out arrangement, with the taper entrance from the A9 and vehicles entering directly onto the carriageway.

4.10 Although there is the right turn refuge immediately to the north of the Site which could result in drivers crossing two lanes to enter if they want to head back south, it is considered unlikely that the option would be exercised by drivers of EV cars on the grounds that the station is primarily aimed at northbound drivers with other existing (and presumably future) stations catering for southbound traffic, including albeit only one station at the PFS opposite.

4.11 It should also be noted that although the Subway is currently closed, the cut through has been available for drivers for a long time, with data from the Crash map website for the period 2009 through 2013 when the Little Chef was operational revealed only one personnel injury accident during the 5 year period which occurred on the 11th August 2013 and involved three cars resulting in one slight injury.

Figure 4.1: Historic Accident Data (2009 – 2013)



4.12 It can be concluded that the creation of a EV Charging station including the re-opening of the former café / restaurant would not result in an increases in trips and as such risk of accidents when compared to its existing / former use. Furthermore, visibility to and from the access and egress along with the turning facility is excellent in both directions.

5 SUMMARY AND CONCLUSION

Summary

5.1 TTP Consulting is retained to provide highways advice in relation to the proposals for the former Subway located on the northbound carriageway on the A9 at Balhaldie.

5.2 The Site comprises of a single storey café which has a gross floor area of circa 167sqm with parking for up to 38 cars accessed directly from the A9 via a left-in / left-out arrangement. In addition, there is parking for two coaches. The building was previously occupied by a restaurant for a couple of years prior to the Subway, and for a longer period beforehand by Little Chef.

5.3 There was a further Little Chef on the opposite side of the carriageway catering for southbound traffic, with the rest area also including a PFS operated by Shell plus a more recent addition in Starbucks. Although the PFS primarily caters for fossil fuel vehicles, it does have a single charging point for Electric cars.

5.4 This report has been prepared to support an application to create an EV Charging Station to be operated by Fastned, with initial capacity for 10 cars and the ability to increase provide more in the future through the conversion of standard spaces; the former café will be brought back into use to provide a waiting facility for drivers, with the facilities also available to drivers of fossil fuel cars.

5.5 The accident history demonstrates that there is no accident problem in the immediate vicinity with excellent visibility to / from the accesses and junctions.

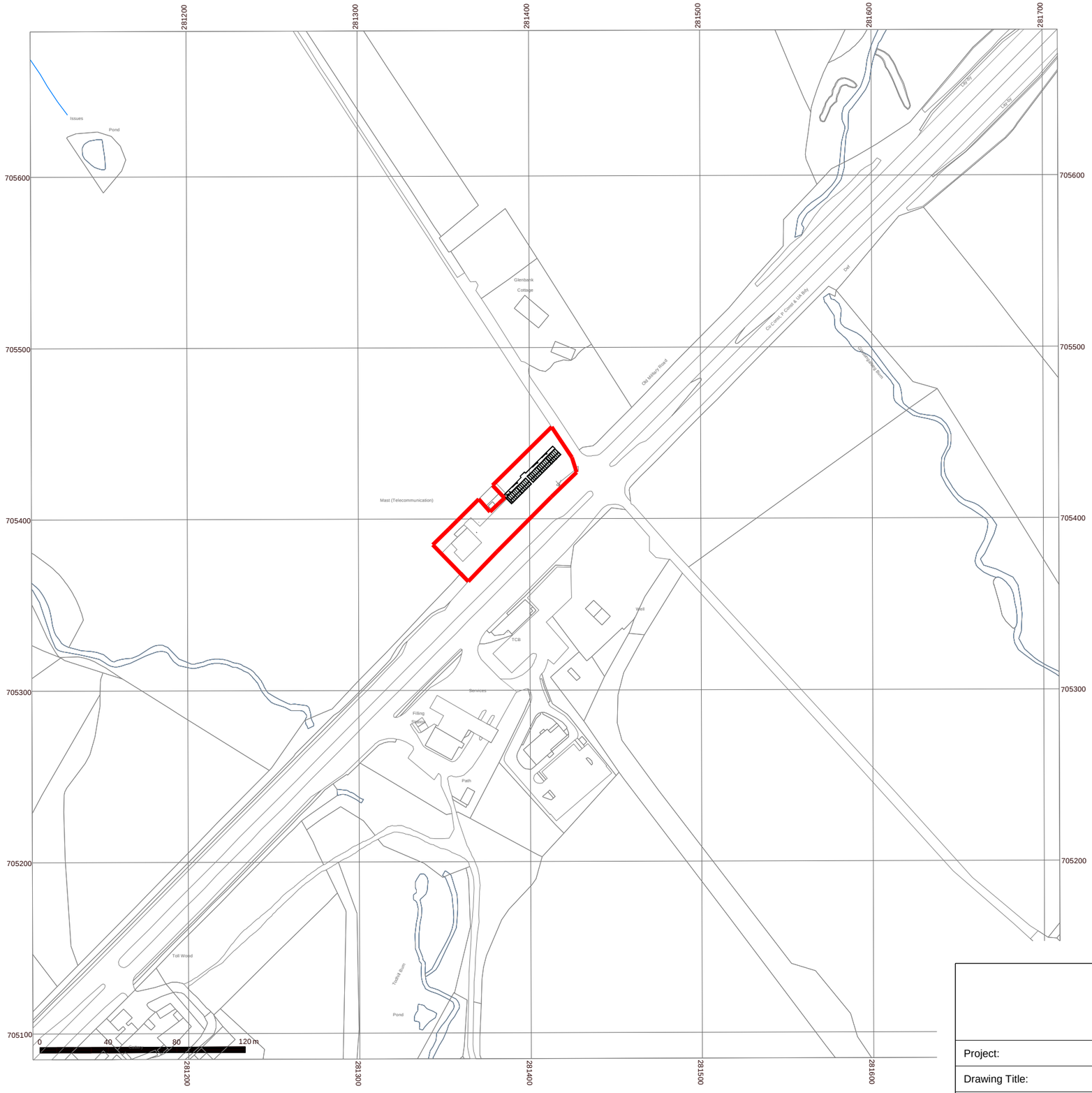
5.6 The proposed EV Station is estimated to have capacity for 240 – 300 charges across a typical 12hr day based on 25 - 30min dwell times, with the ability to provide additional stations in the future. The proposed capacity is deemed sufficient to accommodate the anticipated demand across the day, with the facilities primarily aimed at longer distance drivers.

Conclusion

5.7 The proposed EV Station would not result in an unacceptable impact on the local highway network, with the facility contributing towards an improved network for charging electric cars.

Appendix A

(Application Plans)



Key:

- Ownership boundary
- Application Boundary

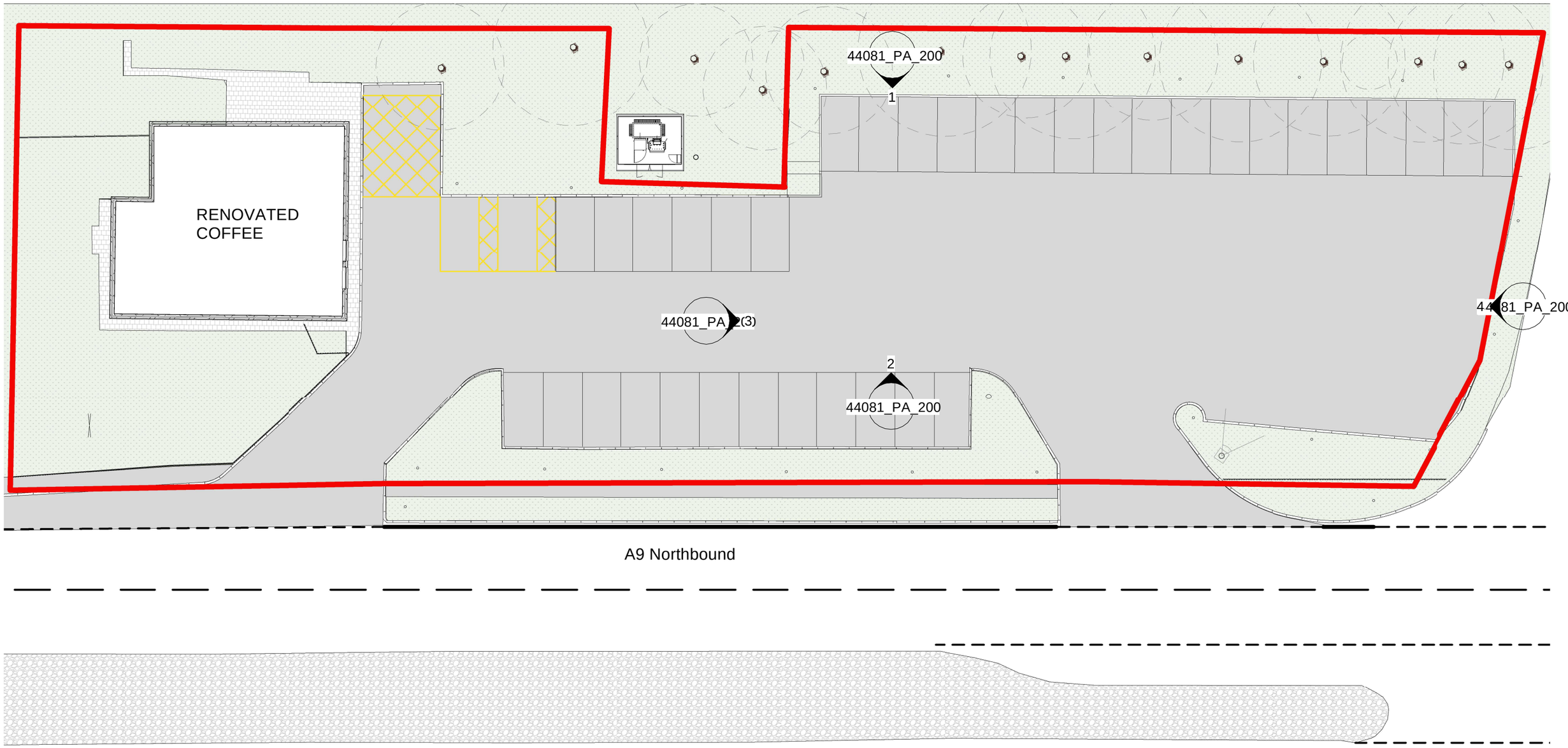
Fastned

Project:	44.081 Balhaldie		
Drawing Title:	Location Plan		
Status:	Planning Application		
Scale: 1:2500	Format: A3	Drawing No: 44081_PA_100	
Author: CL	Date: Mar 24	Revision: -	

Fastned UK Ltd.

1st Floor, 3 Bath Place
London
EC2A 3DR

E: contact@fastned.co.uk
T: 0203 936 1703



N

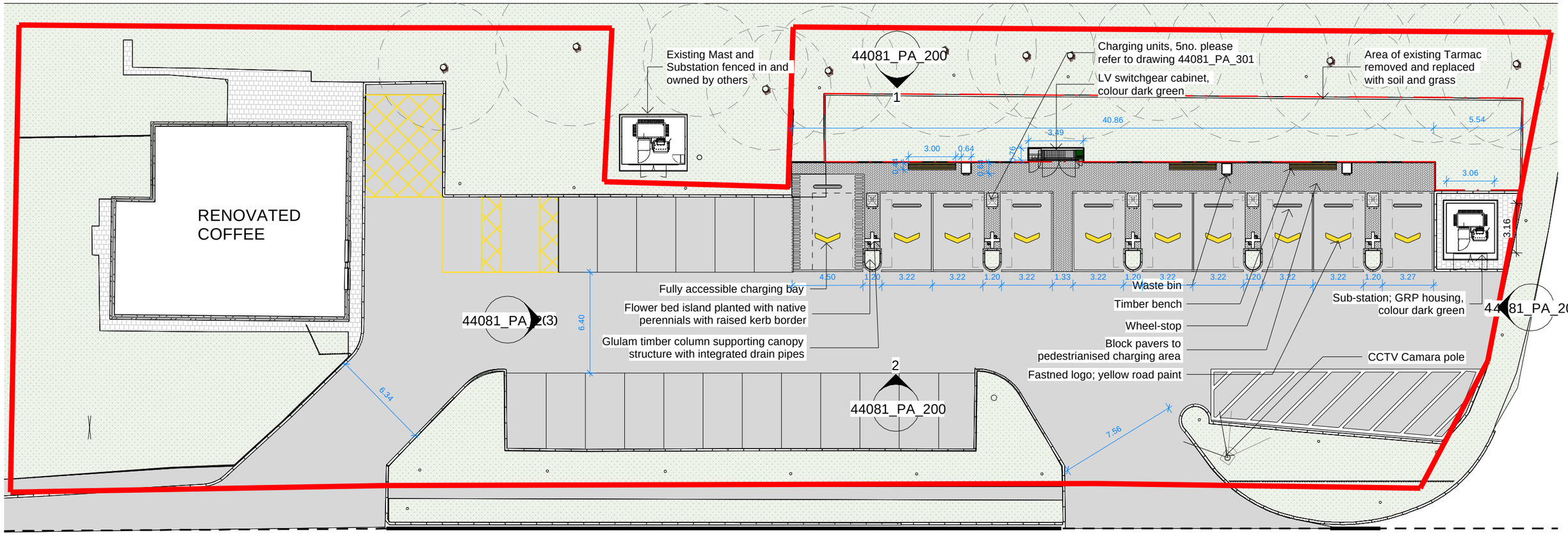
Fastned

Project:	44.081 Balhaldie		
Drawing Title:	Existing Site Plan		
Status:	Planning Application		
Scale: 1:250	Format: A3	Drawing No: 44081_PA_101	
Author: CL	Date: Mar 24	Revision: -	

Fastned UK Ltd.

1st Floor, 3 Bath Place
London
EC2A 3DR

E: contact@fastned.co.uk
T: 0203 936 1703



0 10 50
1:250

N

Project:	44.081 Balhaldie		
Drawing Title:	Proposed Ground Level Plan		
Status:	Planning Application		
Scale: 1:250	Format: A3	Drawing No: 44081_PA_103	
Author: Author	Date: Mar 24	Revision: -	

Fastned

Fastned UK Ltd.

1st Floor, 3 Bath Place
London
EC2A 3DR

E: contact@fastned.co.uk
T: 0203 936 1703

Appendix B

(DfT Traffic Data)

Year	Method	Direction	Bicycles	MC	Cars / Taxis	Bus / Coach	LGV	All HGV	All MV		
2000	Manual count	N	0	0	7911	55	956	1607	10529		
2000	Manual count	S	0	17	7355	21	775	1658	9826	20355	
2001	Estimate	N	0	0	8156	57	1010	1576	10799		
2001	Estimate	S	0	19	7583	22	818	1640	10082	20881	
2002	Estimate	N	0	0	8393	59	1018	1587	11057		
2002	Estimate	S	0	19	7803	23	825	1659	10329	21386	
2003	Estimate	N	0	0	8578	58	1127	1620	11383		
2003	Estimate	S	0	21	7975	23	913	1701	10633	22016	
2004	Manual count	N	0	22	9738	80	1456	1799	13095		
2004	Manual count	S	0	30	9777	84	1498	1989	13378	26473	
2005	Estimate	N	0	21	9669	77	1523	1763	13053		
2005	Estimate	S	0	29	9709	80	1567	1952	13337	26390	
2006	Estimate	N	0	23	9834	74	1596	1767	13294		
2006	Estimate	S	0	31	9874	77	1642	1960	13584	26878	
2007	Manual count	N	0	80	13776	126	1412	1546	16940		
2007	Manual count	S	1	70	13412	144	1762	1715	17103	34043	
2008	Estimate	N	0	78	13679	128	1415	1528	16828		
2008	Estimate	S	1	68	13318	147	1765	1705	17003	33831	
2009	Estimate	N	0	82	13501	134	1462	1407	16586		
2009	Estimate	S	1	71	13145	154	1823	1586	16779	33365	
2010	ATC	N	0	49	10696	102	1424	1509	13780		
2010	ATC	S	0	48	10492	100	1397	1482	13519	27299	
2011	ATC	N	0	47	10212	97	1360	1441	13157		
2011	ATC	S	0	42	9194	88	1224	1298	11846	25003	
2012	ATC	S	0	45	9896	95	1318	1397	12751		
2012	ATC	N	0	45	9820	93	1308	1386	12652	25403	
2013	ATC	E	0	40	8643	82	1151	1220	11135		
2013	ATC	W	0	39	8499	81	1131	1200	10950	22085	
2014	ATC	E	0	45	9822	93	1308	1386	12655		
2014	ATC	W	0	43	9353	90	1245	1320	12051	24706	
2015	ATC	E	0	53	11417	108	1520	1611	14709		
2015	ATC	W	0	53	11512	110	1533	1625	14833	29542	
2016	Estimate	E	0	55	11758	111	1642	1654	15220		
2016	Estimate	W	0	55	11857	112	1655	1669	15348	30568	
2017	Estimate	E	0	55	11753	113	1749	1707	15378		
2017	Estimate	W	0	55	11852	115	1763	1722	15507	30885	
2018	ATC	E	0	59	12053	113	1885	1779	15890		
2018	ATC	W	0	58	11847	112	1852	1749	15618	31508	
2019	Manual count	E	0	45	10268	78	2226	1392	14008		
2019	Manual count	W	0	58	11538	78	2651	1644	15970	29978	10.1%
2020	Estimate	E	0	26	6899	48	1769	1184	9926		
2020	Estimate	W	0	34	7753	48	2107	1396	11338	21264	
2021	Estimate	E	0	31	7919	58	2126	1338	11473		
2021	Estimate	W	0	40	8899	58	2533	1581	13112	24585	11.9%
2022	ATC	E	0	41	10521	72	2683	1574	14890		
2022	ATC	W	0	46	10231	62	2765	1610	14714	29604	10.8%

Appendix C

(TRICS Output)

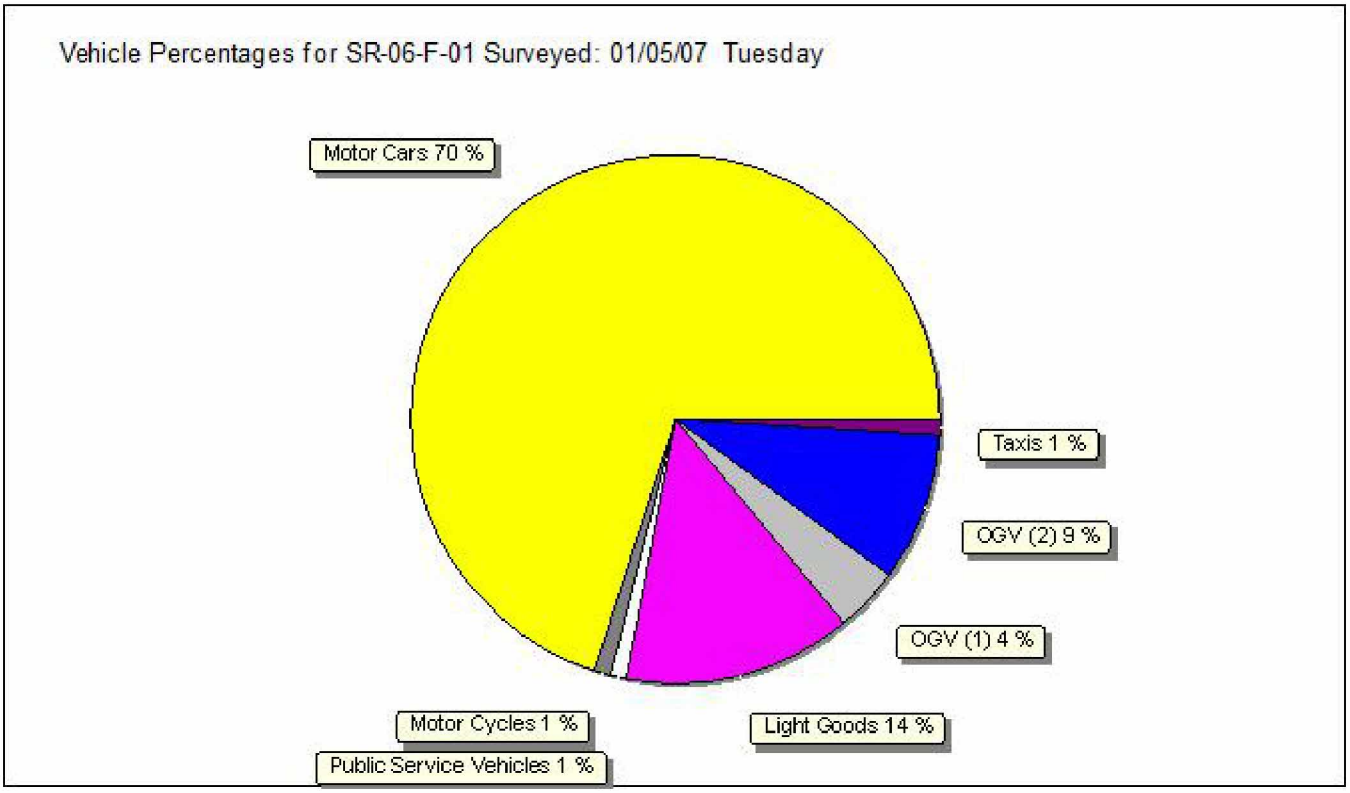
Site reference: SR-06-F-01 Survey date: 01/05/07 Day of week: Tuesday

Survey type: Manual Count
AM weather: Hot and Clear
PM weather: Hot and Clear
Initial car park occupancy: 45 Final car park occupancy: 59
BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE
Parking Capacity 56% (149 On-Site Spaces)
Data proportions in %

Motor cars	70	Motor cycles	1	Public service	1
Light goods	14	OGV (1)	4	OGV (2)	9
				Taxis	1

Servicing Vehicles count recorded No

Time	Arr 1774	Dep 1760	Totals 3534	Parking Accum
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	90	99	189	36
08:00-09:00	123	109	232	50
09:00-10:00	151	133	284	68
10:00-11:00	158	169	327	57
11:00-12:00	169	171	340	55
12:00-13:00	163	135	298	83
13:00-14:00	147	173	320	57
14:00-15:00	125	128	253	54
15:00-16:00	142	125	267	71
16:00-17:00	149	139	288	81
17:00-18:00	108	106	214	83
18:00-19:00	125	126	251	82
19:00-20:00	79	90	169	71
20:00-21:00	45	57	102	59
21:00-22:00				
22:00-23:00				
23:00-24:00				


Vehicle Percentages for SR-06-F-01 Surveyed: 01/05/07 Tuesday
Motor Cars 70 %
Taxis 1 %
OGV (2) 9 %
OGV (1) 4 %
Light Goods 14 %
Motor Cycles 1 %
Public Service Vehicles 1 %

TTP Consulting 111-113 Great Portland Street London Licence No: 752101

Calculation Reference: AUDIT-752101-230707-0706

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : F - MOTORWAY SERVICE AREAS (res./PFS/mot
TOTAL VEHICLES

Selected regions and areas:
11 SCOTLAND
SR STIRLING 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: Parking spaces
Actual Range: 149 to 149 (units:)
Range Selected by User: 149 to 318 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/05 to 01/05/07

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

Selected survey days:
Tuesday 1 days

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

Selected survey types:
Manual count 1 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:
Free Standing (PPS6 Out of Town) 1

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

Selected Location Sub Categories:
Out of Town 1

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

Inclusion of Servicing Vehicles Counts:
Servicing vehicles Included X days - Selected
Servicing vehicles Excluded 1 days - Selected

Secondary Filtering selection:

Use Class:
n/a 1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:
1,000 or Less 1 days

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

Population within 5 miles:
75,001 to 100,000 1 days

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

Car ownership within 5 miles:
1.1 to 1.5 1 days

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

Travel Plan:
No 1 days

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

PTAL Rating:
No PTAL Present 1 days

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

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LIST OF SITES relevant to selection parameters

1 SR-06-F-01 MOTO STIRLING
JUNC.9 M9/M80
STIRLING
PIRNHILL
Free Standing (PPS6 Out of Town)
Out of Town
Total Parking spaces: 149
Survey date: TUESDAY 01/05/07 Survey Type: MANUAL

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/F - MOTORWAY SERVICE AREAS (res./PFS/mot
TOTAL VEHICLES
Calculation factor: 1 PARKING SPACES
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PARKING	Trip Rate	No. Days	Ave. PARKING	Trip Rate	No. Days	Ave. PARKING	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	1	149	0.604	1	149	0.664	1	149	1.268
08:00 - 09:00	1	149	0.826	1	149	0.732	1	149	1.558
09:00 - 10:00	1	149	1.013	1	149	0.893	1	149	1.906
10:00 - 11:00	1	149	1.060	1	149	1.134	1	149	2.194
11:00 - 12:00	1	149	1.134	1	149	1.148	1	149	2.282
12:00 - 13:00	1	149	1.094	1	149	0.906	1	149	2.000
13:00 - 14:00	1	149	0.987	1	149	1.161	1	149	2.148
14:00 - 15:00	1	149	0.839	1	149	0.859	1	149	1.698
15:00 - 16:00	1	149	0.953	1	149	0.839	1	149	1.792
16:00 - 17:00	1	149	1.000	1	149	0.933	1	149	1.933
17:00 - 18:00	1	149	0.725	1	149	0.711	1	149	1.436
18:00 - 19:00	1	149	0.839	1	149	0.846	1	149	1.685
19:00 - 20:00	1	149	0.530	1	149	0.604	1	149	1.134
20:00 - 21:00	1	149	0.302	1	149	0.383	1	149	0.685
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			11.906			11.813			23.719

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

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

Parameter summary

Trip rate parameter range selected:	149 - 149 (units:)
Survey date date range:	01/01/05 - 01/05/07
Number of weekdays (Monday-Friday):	1
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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.