

Cotter Street
Ardwick
Transport Statement
221129/SK22285/TS01(-01)

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Project	Document	Rev	Description	Authorised by	Signed	Date
SK22285	TS01	00	Draft	L Speers	LGS	17/11/2022
SK22285	TS01	01	Update re RSA1	L Speers	LGS	29/11/2022

1 Introduction

1.1 SK has been instructed by Church Inn (Ardwick) Limited to prepare a Transport Statement (TS) to accompany a planning application for a residential development on a site off Cotter Street in Ardwick, Manchester. The planning application seeks consent for the construction of 16 town houses.

1.2 Planning Practice Guidance (PPG) states that:

“Travel Plans, Transport Assessments and Statements are all ways of assessing and mitigating the negative transport impacts of development in order to promote sustainable development. They are required for all developments which generate significant amounts of movements.”¹

1.3 The proposal is of a scale that the level of movements generated will not be significant and therefore, and in line with PPG, a formal assessment would not normally be required for the planning application. However, a TS has been prepared for the planning application to set out the baseline transport network context, proposed multi-modal access arrangements for the development, and quantify the level of trip impact.

1.4 The scope of the assessment acknowledges the small-scale of the development and low-level of impact. Commensurate with this, the study area has been limited to the roads fronting the site.

1.5 The scope of the TS has been discussed and agreed with the Local Highway Authority, Manchester City Council (MCC).

2 Existing Transport Network Audit

Site Location

2.1 Figure 2.1 shows that the site is located in the centre of the Ardwick Green area, identified as Ardwick Green North in MCC’s “Ardwick Green Neighbourhood Development Framework”².

2.2 The site is bounded to the north by Nivin Street, to the east by Cotter Street, to the south by Ardwick Green N and to the west by the St Thomas Centre.

Site Characteristics

2.3 The northern part of the site is occupied by a building that was previously a public house, but most recent consented use was as a private dwelling (three beds).

2.4 The southern part of the site was historically occupied by a public house (the Church Inn). The building is now demolished. Planning permission was granted in 2012 for the construction of 20 apartments (with 20 parking spaces). The consent has now lapsed. The most recent use of the southern part of the site appears to have been outdoor storage.

2.5 A vehicle access is provided to the south of the site onto Ardwick Green N. The access is a kerbed priority junction arrangement with dropped kerbs and tactile paving.

2.6 A vehicle access is provided to the north of the site onto Nivin Street. The access is a dropped-kerb crossover arrangement.

¹ Ministry of Housing, Communities & Local Government (2016), Planning Practice Guidance

² MCC (2021), Ardwick Green Neighbourhood Development Framework

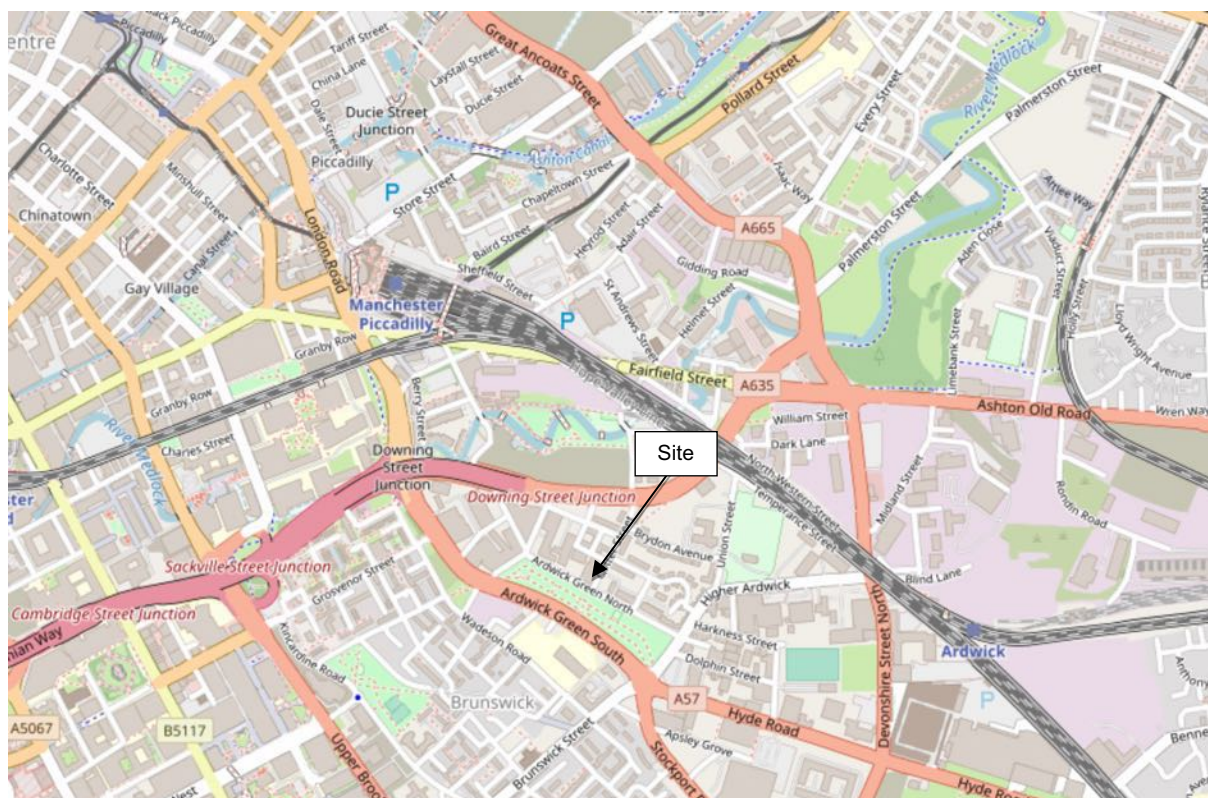


Figure 2.1: Site Location
[source: [ISO4](#)]

Highway Network Audit

- 2.7 Cotter Street is a 5.5m wide road with footways of between 1.8m-2.2m on either side of the carriageway. Street lighting is present, and the road is subject to a 20mph speed limit.
- 2.8 Cotter Street routes past the site's eastern frontage. To the south it meets Ardwick Green N at a priority junction. Tactile paving and dropped kerbs are provided.
- 2.9 Ardwick Green N routes east-west along the site's southern frontage. The road is 10m wide with 2.5m footways on both sides of the carriageway. Street lighting is present, and the road is subject to a 20mph speed limit.
- 2.10 On the northern boundary, Nivin Street is a narrow street with a width of 4m-4.5m. The road provides a service function. A 2m footway is provided on the northern side of the road. Adjacent to the site a narrow section of footway is present (1m or less), widening to 2m once past the narrowing.

Traffic Regulation Orders

- 2.11 Other than at the junction protection zone on approach to Ardwick Green N, there are no parking controls on Cotter Street on the site frontage other than a junction protection zone at the junction with Ardwick Green North.
- 2.12 Ardwick Green N has marked parking bays along both sides of the carriageway. Just to the west of the existing site access, the parking bays are marked as loading bays and disabled bays. The remainder of the marked bays are uncontrolled.



Figure 2.1: Site Location
[source: ISO4]

Road Safety Data

- 2.13 The TfGM (GMTU) database has been used to establish collision patterns over the most recent five-year period available for links / junctions in the study area. The database is regularly updated by TfGM. The database states that the current period covered is five-years to 31 March 2022.
- 2.14 Figure 2.2 shows that there has been a single collision in the study area during the five-year period assessed. The collision occurred in 2017 at the junction of Cotter Street / Ardwick Green N and was classified as slight. The collision did not involve a pedestrian or cyclist.
- 2.15 The data shows that there are no prevailing road safety issues that will compromise future access to the site.

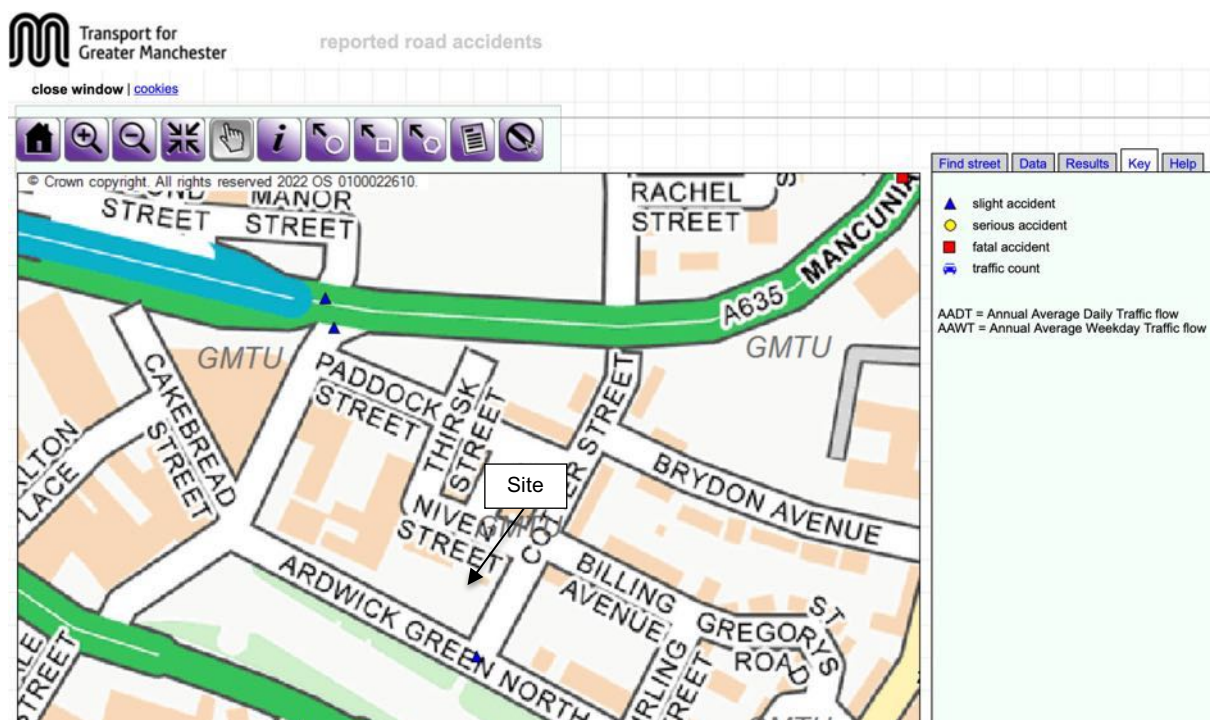


Figure 2.2: Road Safety
[source: [GMTU](#)]

3 Proposed Development

- 3.1 The proposal seeks planning permission to clear the existing uses on the site and construct 16 town houses. The development layout is attached as Appendix A.
- 3.2 Pedestrian access to the dwellings is provided either direct from the bounding footway or via the segregated pedestrian access points provided on the Cotter Street, Ardwick Road N and Nivin Street frontages. The setting of the site presents an opportunity to widen to bounding footway on Nivin Street from its existing width (1m) to 2m. Redundant access points on the site boundary will be reinstated.
- 3.3 Vehicle access to the site will be provided via a new crossover arrangement on Cotter Street. Appendix B shows the access arrangement and the visibility available at the junction. The boundary treatment will ensure pedestrian / vehicle intervisibility.
- 3.4 The vehicle access, bounding footway resurfacing, and reinstatement of redundant access points will be undertaken as part of the Section 278 works. MCC has requested a Road Safety Audit (RSA1) be undertaken of the proposed access works set out above as part of the planning application. The RSA1 is currently being organised and will be submitted to MCC as soon as it is ready with the Designer's Response.
- 3.5 The new access point will provide vehicle access to the site car park. The car park provides 16 parking spaces, including two spaces that can be adapted for use by a disabled resident. Electric vehicle charging provision is proposed to all spaces (fast charge: 7kw). Swept paths have been undertaken of the car park and are attached as Appendix C.
- 3.6 Cycle parking will be accommodated in each dwelling, with space provided for two bikes to be stored.
- 3.7 The refuse store is located in the car park. The applicant has advised that refuse collection will be undertaken by private contract. As is permitted in GD04, the refuse vehicle will reverse into the car park on collection day and a swept path is included in Appendix C showing this.

4 Accessibility Audit & Assessment

Pedestrian & Cycle Audit

- 4.1 The footways on Cotter Street are typically 2m wide and on Ardwick Green N are 2.5m. The footway on the Niven Street frontage is 1m wide.
- 4.2 At the junction of Cotter Street / Ardwick Green N dropped kerb and tactile paving is provided. Dropped kerbs are provided at the Cotter Street junction with Niven Street.
- 4.3 The nearest bus stop are located on Ardwick Road S. Tactile paving and dropped kerbs are provided on Ardwick Road S and pedestrian refuges in the central reserve to allow access to the westbound bus stops. An alternative route would be to travel east on Ardwick Road N and access the bus stops on Hyde Road. Tactile paving and dropped kerbs are provided at side roads on this route and controlled crossings are provided on all arms at the Ardwick Road S / Higher Ardwick (Apollo) roundabout.
- 4.4 As shown by TfGM's Cycle Map (Figure 4.1), the streets bounding the site are subject to a 20mph speed limit creating a suitable environment for pedestrian and cycle trips. These routes are identified as advisory cycle routes on the Greater Manchester Cycle Network and a Bee Network routes.

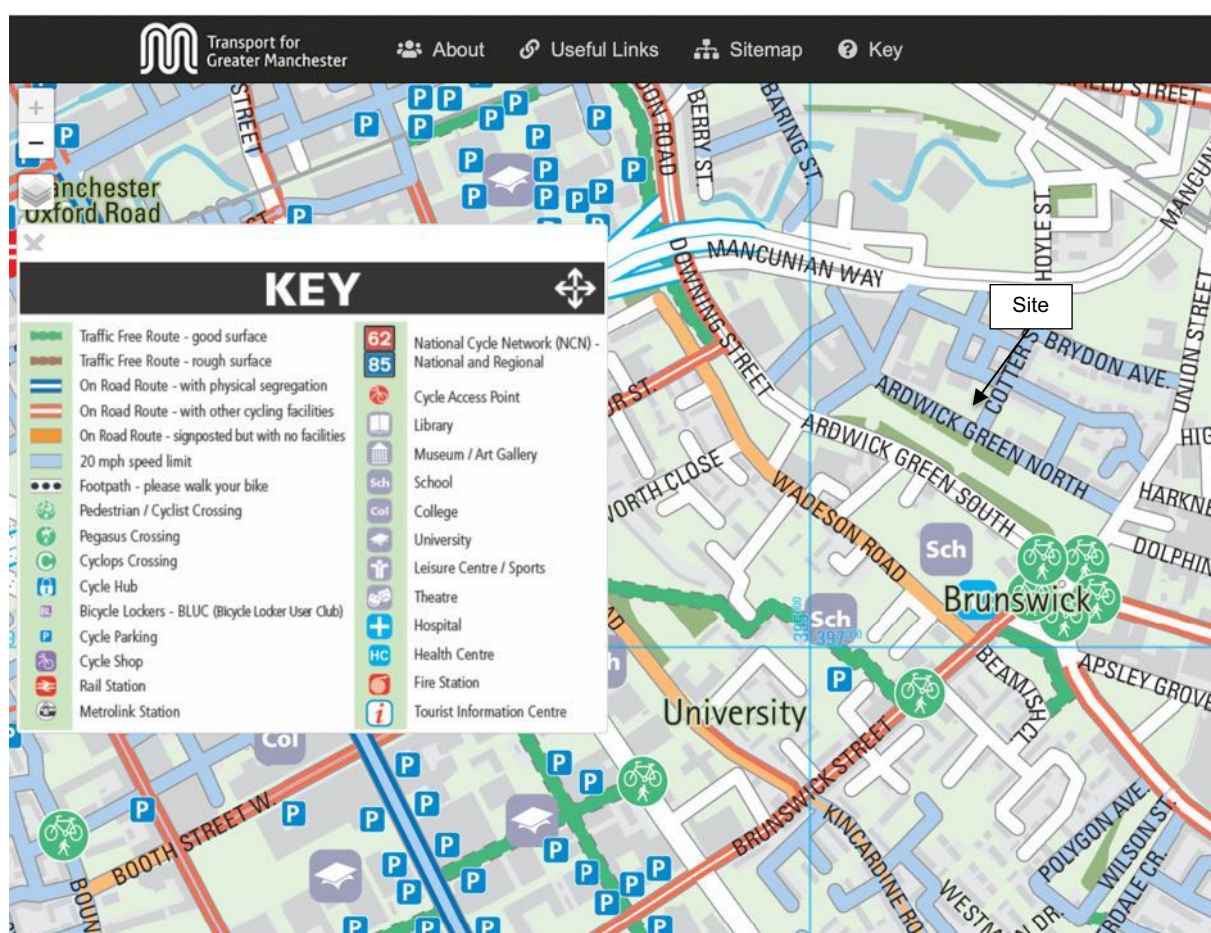


Figure 4.1: Cycle Network
[source: [TfGM](#)]

Pedestrian & Cyclist Assessment: Road Safety

- 4.5 The road safety assessment in Section 2 shows that there has been a single collision during the latest five-years of data reviewed. The collision occurred in 2017 and was classified as slight. It did not involve a pedestrian or cyclist.

Pedestrians & Cyclist Assessment: Proposals

- 4.6 An audit has been undertaken of existing walking routes, including widths and presence of crossing facilities. The assessment shows that the footways surrounding the site are generally an appropriate width (other than Nivin Street) and that controlled and uncontrolled crossing provision is already in place.
- 4.7 The audit also confirms that the streets surrounding the site create a suitable environment for cycle trips and the site is well located in terms of access to frequent public transport routes.
- 4.8 The assessment confirms that the site is accessible by a range of modes using existing infrastructure and no further intervention is required, other than the provision of appropriate pedestrian access to the site, the reinstatement of redundant access points on the bounding footway and the provision of a high level of cycle parking.
- 4.9 The setting of the site also presents an opportunity to widen the Nivin Street frontage footway from 1m to 2m.

Public Transport Accessibility

- 4.10 Figure 4.2 shows that the nearest bus stops to the site are located a short walk away on Ardwick Road S (circa three-minute walk). The pedestrian audit set out previously shows that the routes to the bus stops provide appropriate provision in terms of footways and crossing points.
- 4.11 The bus stops benefit from shelters, seating, timetable information and boarding facilities, and are illuminated by street lighting.



Figure 4.2: Bus Network
[source: TfGM]

- 4.12 Table 4.1 provides a summary of the bus routes serving these stops.

No.	Route	Weekday (buses per hour / each way)			Weekend (buses per hour / each way)	
		Peak	Day	Evening	Day	Day
192	Hazel Grove – Stockport – Manchester	17	18	13	18	12
201	Hattersley – Hyde – Manchester	6	6	2	6	2
202	Gee Cross – Hyde – Manchester	2	2	1	2	1
203	Manchester – Reddish – Stockport	7	6	3	6	4
205	Dane Bank – Gorton – Manchester	2	2	2	2	2

Table 4.1: Existing Bus Services
[source: [TfGM](#)]

- 4.13 Table 4.1 shows that the site is very well served by local bus services across the day and in the evening. This is confirmed by the GMAL for the site, which is a level of 38.24 / score of 8, the highest level in Greater Manchester.

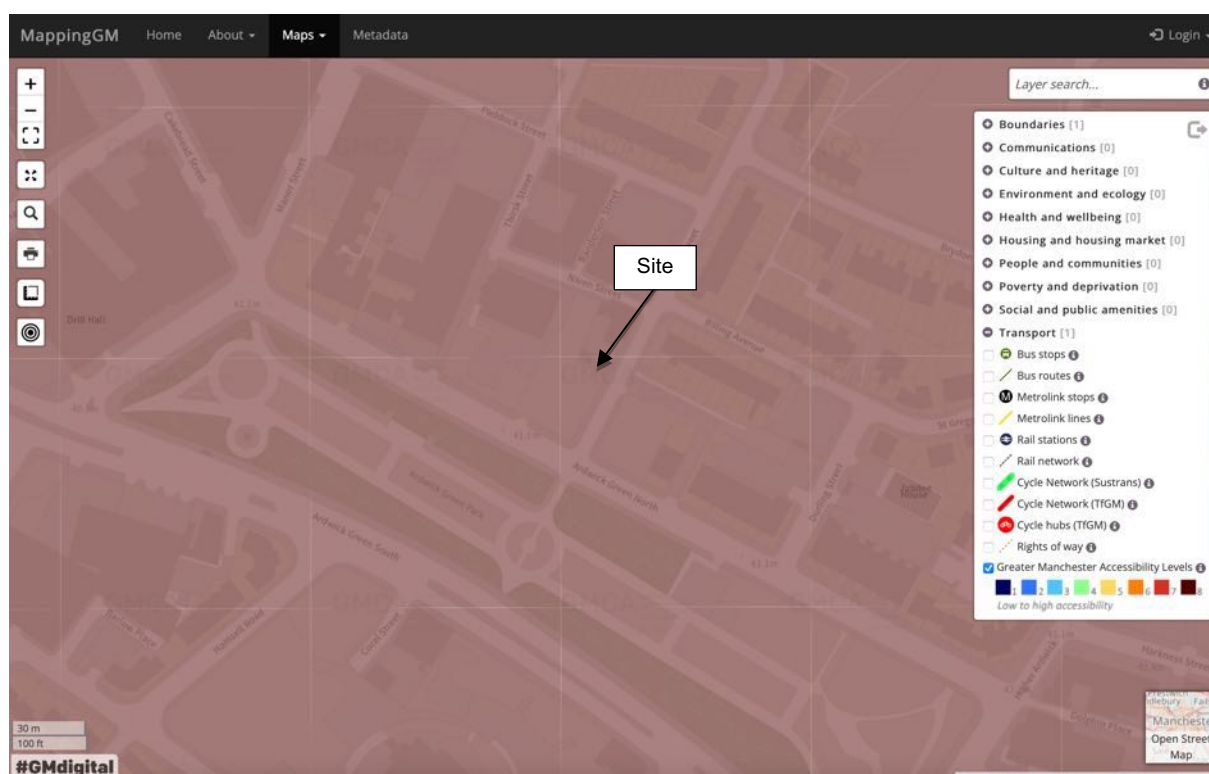


Figure 4.3: Greater Manchester Accessibility Level
[source: [Mapping GM](#)]

- 4.14 The assessment shows that the site is highly accessible by public transport.

5 Traffic Impact Assessment

Development Trip Generation

- 5.1 TRICS has been used to allow an understanding of the future trip generating potential of the site. The following parameters have been set:

- Land Use: 03 / Residential / A / Houses Privately Owned

- Regions: All Except Greater London, Northern Ireland & Republic of Ireland
- Location: Suburban Area
- Date Range: Default
- Dwelling Numbers: 6 to 30

5.2 The TRICS interrogation results in a sample size of five with an average of 23 dwellings and 300% parking provision. This provides a robust means of assessing the impact of the development.

5.3 The TRICS output is attached as Appendix D, with a summary provided in Table 5.1.

	Person Trip Rates (per dwelling)			Total Trips – Houses		
	In	Out	Total	In	Out	Total
AM Peak Hour	0.368	0.991	1.359	6	16	22
PM Peak Hour	0.444	0.359	0.803	7	6	13

Table 5.1: Person Trip Rates & Total Development Trips

Development Mode Share

5.4 Census mode share data (Manchester 018) has been used to derive the mode share for use in the assessment. The Census output is attached as Appendix E.

Modes	Share
Public Transport	35%
Car Driver	31%
Car Passenger	3%
Cycle	4%
Pedestrian	26%
Other	1%

Table 5.2: Census Data
[source: [Nomis](#)]

Vehicle Trip Generation

5.5 The car driver mode share has been applied to the total trips to derive the vehicle trips generated by the development.

	Vehicle Trips - Houses		
	In	Out	Total
AM Peak Hour	2	5	7
PM Peak Hour	2	2	4

Table 5.3: Development Vehicle Trips

Traffic Impact

5.6 Table 5.3 shows that the proposal will not generate a significant level of traffic and that the generation will be beneath DfT significance thresholds. The level of traffic generated by the proposal will not have an impact on highway operation or road safety levels.

5.7 The proposal includes an appropriate vehicle access junction that provides suitable visibility levels.

6 Conclusions

- 6.1 SK has been appointed to prepare a TS to accompany a planning application for a residential development on a site off Cotters Street in Ardwick. The proposal will construct 16 dwellings.
- 6.2 The TS has been prepared in line with local, regional, and national assessment guidance using standard appraisal methods.
- 6.3 An accessibility audit and assessment has been undertaken and this shows that the pedestrian and cycle infrastructure serving the site is appropriate. Measures are included in the proposal including the provision of appropriate pedestrian access to the site, the reinstatement of redundant access points on the bounding footway and bounding footway resurfacing, and the provision of a high level of cycle parking. The setting of the site also presents the opportunity to widen the Nivin Street frontage footway from 1m to 2m.
- 6.4 The site is also shown to be very well located in terms of public transport accessibility. Pedestrian routes to the bus stops are via appropriate width footways and crossing points are available. The bus waiting infrastructure includes shelters, seating, timetable information and boarding facilities, and are illuminated by street lighting.
- 6.5 A road safety assessment has been undertaken that shows that there are no collision hotspots in the study area. There has been a single collision in the study area during the five-year period assessed. The collision was classified as slight and did not involve a pedestrian or cyclist.
- 6.6 A new vehicle cross-over access will serve the development and it is shown that appropriate visibility splays can be provided. The vehicle access proposal will be delivered by Section 278. MCC has requested that a RSA1 be undertaken of the vehicle access works for the planning submission. This is currently being organised and will be submitted with the Designer's Response as soon as it is finished.
- 6.7 The proposal provides 100% car parking provision, with two spaces that can be adapted for disabled use. EV charging points will be provided for all spaces at the site.
- 6.8 The development trip forecast is based on TRICS and local area Census data. The assessment shows that the proposal is not associated with a significant change in traffic flows and that there will be no impact on highway operation.

Appendix A

ARDWICK GREEN NORTH

NIVIN STREET



Proposed Site Layout
1 : 100

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Revision		Date	Drawn	Checked
A	Drawing updated to revised scheme	19/10/22	RM	JH
B	Blocks relocated and green landscaping added	20/10/22	RM	JH
C	Site boundary updated to match Title Deeds	25/10/22	RM	JH
D	Bin store and landscaping layout updated to client comments	25/10/22	RM	JH
E	Bin store size reduced. Boundary treatments updated. Car park width amended to accommodate EV charge points	02/11/22	RM	JH
F	Boundary treatments updated / Pedestrian entrance gate removed / Bin store updated to timber store, as per client comments	09/11/22	RM	JH
G	Site layout amended as entrances to Cotter Street removed	22/11/22	RM	JH
H	Car park layout amended to suit vehicle tracking. Plot 12 side entrance removed to DFS comments	28/11/22	RM	JH

CODA
Architecture

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Client

STEP PLACES

Project

ARDWICK

Drawn

Checked

Date

Scale @ A1

RM

JH

19/10/22

1 : 100

Title

PROPOSED SITE LAYOUT

Suitability Code

Purpose for issue

S1

COORDINATION

Drawing No

2565

-

CDA

-

00

-

SL

-

DR

-

A

-

0500

H

Project

Originator

Volume

Level

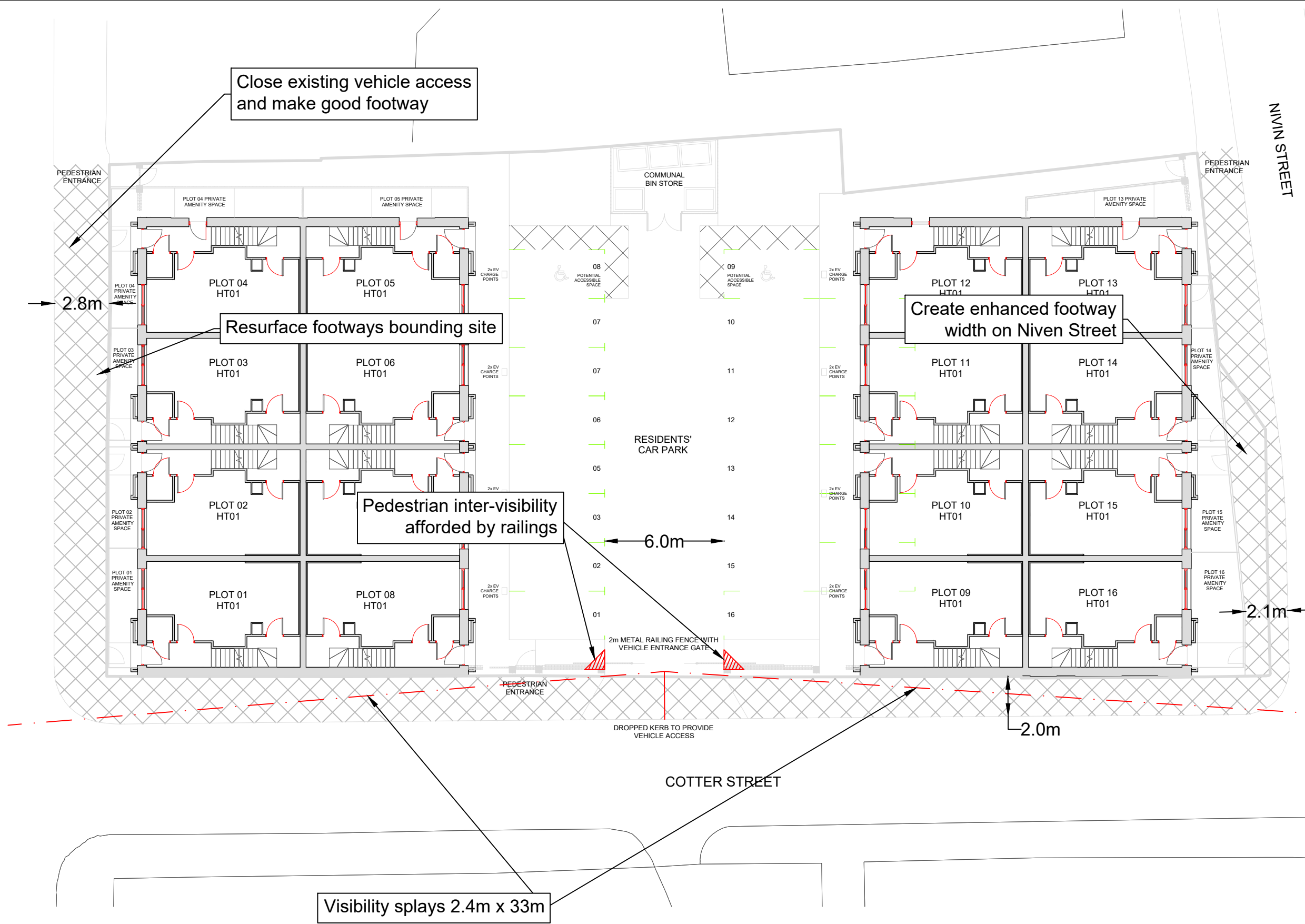
Type

Role

Number

Revision

Appendix B



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED AND ONLY WRITTEN DIMENSIONS SHALL BE USED

NOTES

Layout subject to detailed design and confirmation of statutory undertakers' equipment.

Revision Details	By	Date	Suffix
Layout updated, viewable area amended, annotation added	JAT LGS Check	29.11.22	A

Drawing Number
SK22285-001

Cotter Street, Ardwick

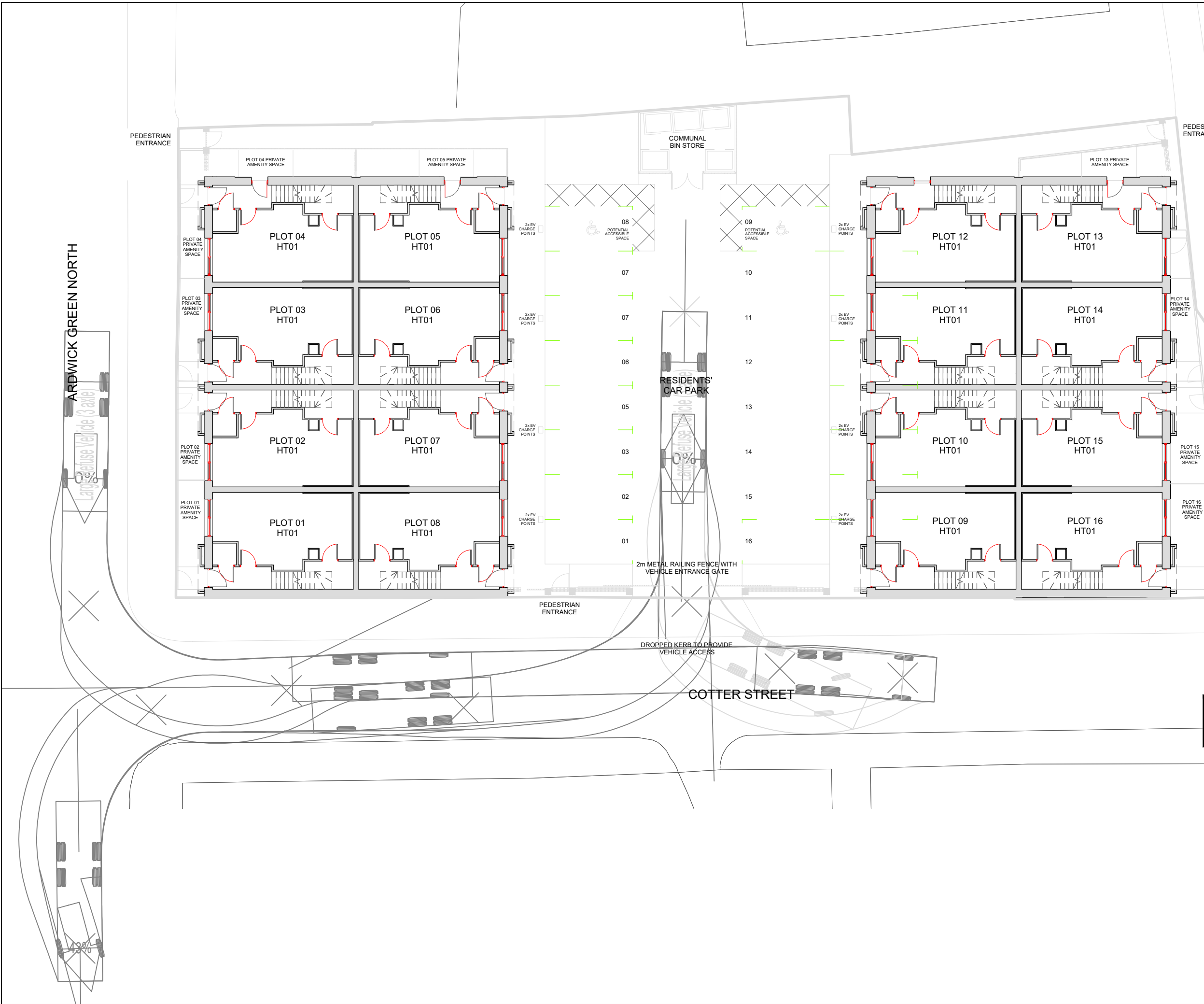
Drawing Title
Proposed Access Arrangement Cotter Street

Scale at A3
1:500

Drawn	Approved
JAT	LGS

Check	Date
LGS	03.11.22

Appendix C



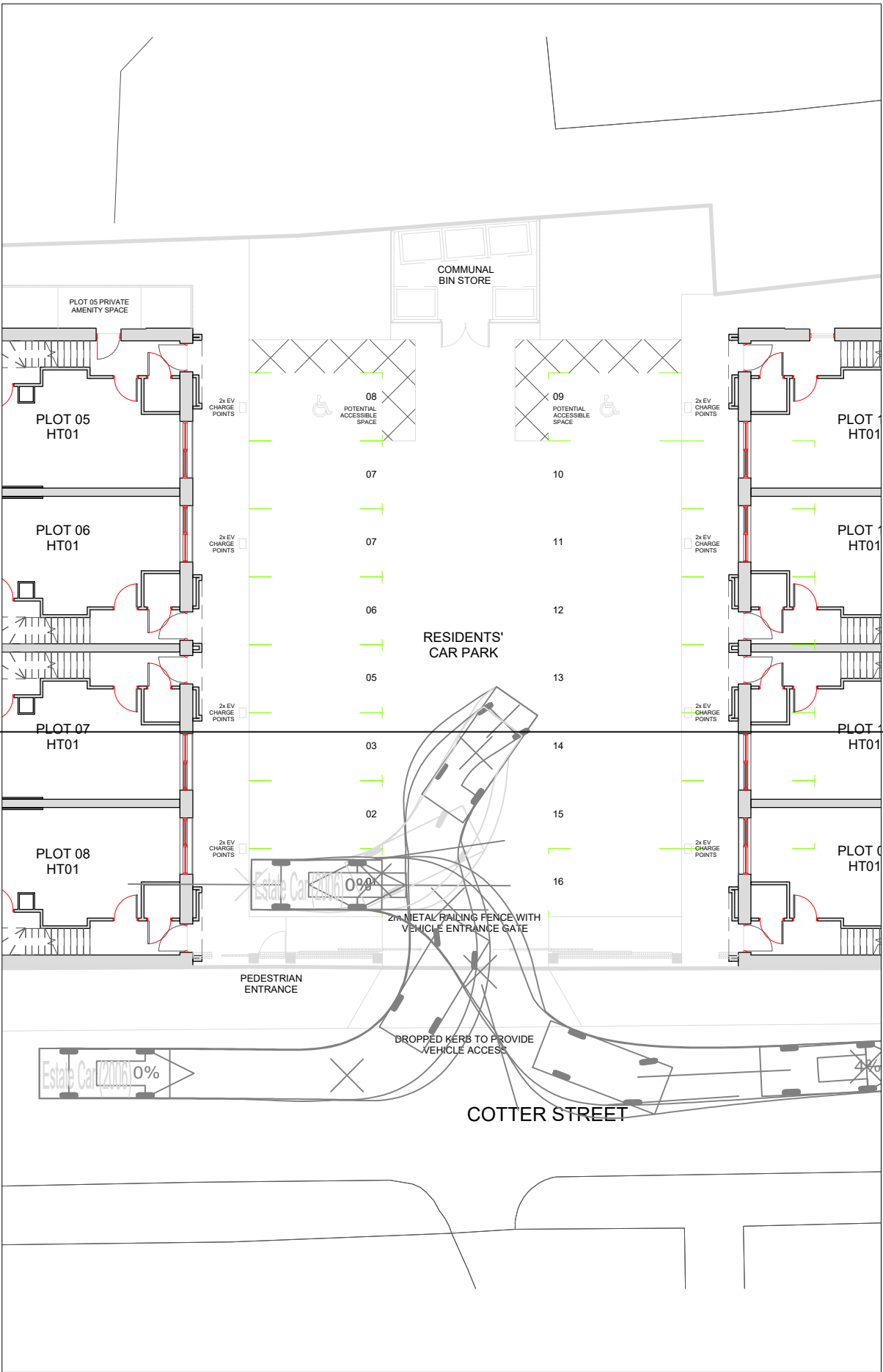
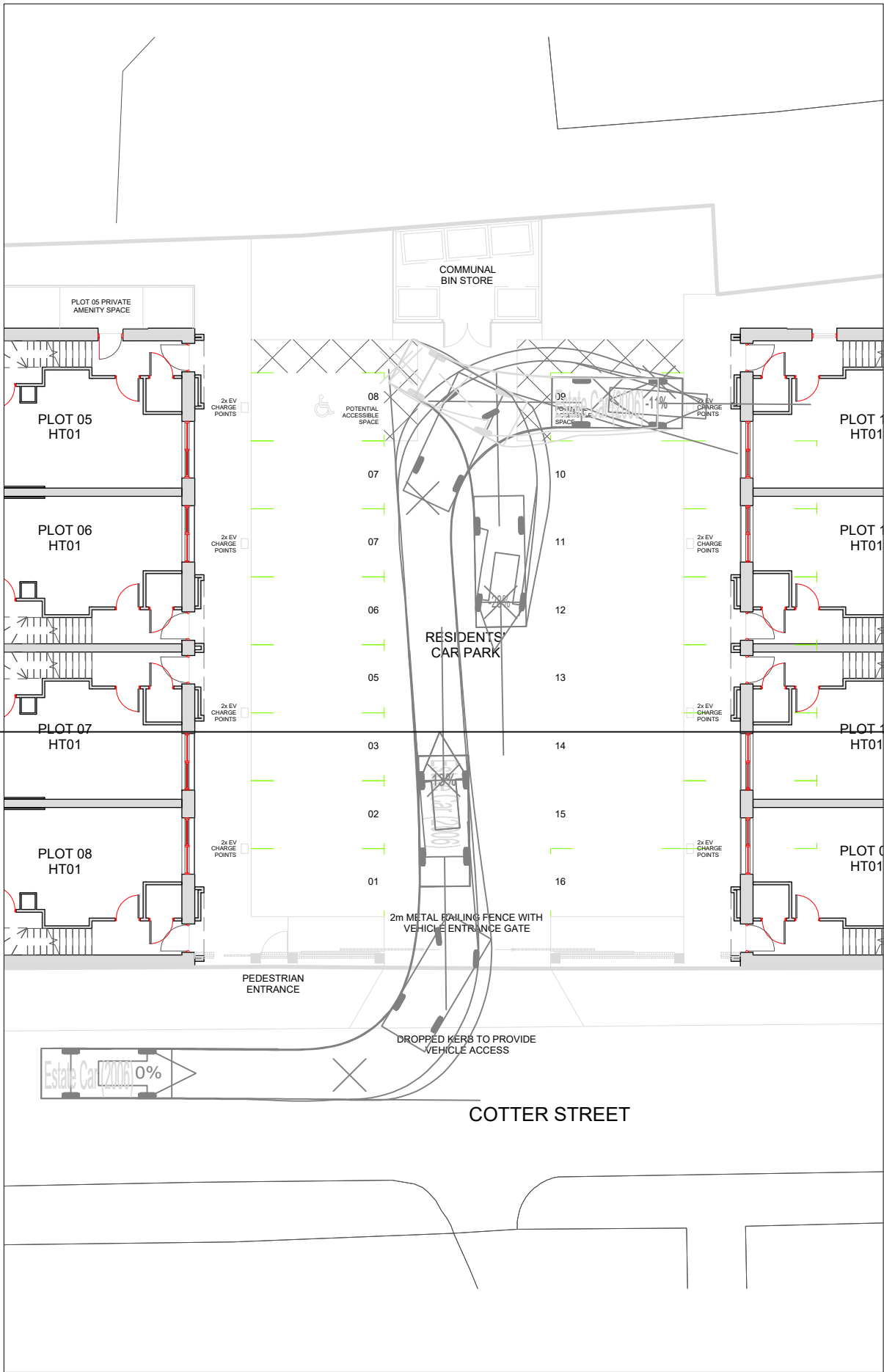
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NOTES

Vehicle Profile

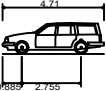
Large Refuse Vehicle (3 axle)	
Overall Length	9.860m
Overall Width	2.450m
Overall Body Height	3.814m
Min Body Ground Clearance	0.366m
Track Width	2.450m
Lock to Lock Time	4.00 sec
Kerb to Kerb Turning Radius	9.500m

Revision Details Site layout updated	By JAT LGS Check	Date 29.11.22	Suffix A
Drawing Number SK22285-002			
Cotter Street, Ardwick			
Drawing Title Swept Path Analysis Large Refuse Collection Vehicle Accessing Parking Area			
Scale at A3 1:200			
Drawn JAT	Approved LGS		
Check LGS	Date 03.11.22		
SK Transport Planning Ltd Albion Wharf Manchester M1 5LN www.sktransport.co.uk 0161 234 6509			



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NOTES
Vehicle Profile



Estate Car (2006)	
Overall Length	4.710m
Overall Width	1.804m
Overall Body Height	1.442m
Min Body Ground Clearance	0.207m
Max Track Width	1.756m
Lock to Lock Time	4.00 sec
Kerb to Kerb Turning Radius	5.950m

Revision Details Site layout updated		By JAT	LGS Check	Date 29.11.22	Suffix A
Drawing Number SK22285-003					
Cotter Street, Ardwick					
Drawing Title Swept Path Analysis Large Estate Car Sample Parking Manoeuvres					
Scale at A3 1:200					
Drawn JAT		Approved LGS			
Check LGS		Date 03.11.22			
		SK Transport Planning Ltd Albion Wharf Manchester M1 5LN www.sktransport.co.uk 0161 234 6509			

Appendix D

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	SD SWINDON	1 days
04	EAST ANGLIA	
	PB PETERBOROUGH	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	AC CHESHIRE WEST & CHESTER	1 days
10	WALES	
	PS POWYS	1 days

Primary Filtering selection:

Parameter: No of Dwellings
Actual Range: 10 to 28 (units:)
Range Selected by User: 6 to 30 (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: 01/01/14 to 06/06/22

Selected survey days:

Monday	2 days
Wednesday	1 days
Thursday	2 days

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	5
------------------------------------	---

Selected Location Sub Categories:

Residential Zone	5
------------------	---

Secondary Filtering selection:

Use Class:

C3	5 days
----	--------

Population within 500m Range:

All Surveys Included

Population within 1 mile:

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

Secondary Filtering selection (Cont.):

Population within 5 miles:

5,001 to 25,000	1 days
50,001 to 75,000	2 days
125,001 to 250,000	2 days

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	4 days

Travel Plan:

Yes	1 days
No	4 days

PTAL Rating:

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

LIST OF SITES relevant to selection parameters

1	AC-03-A-04	TOWN HOUSES	CHESHIRE WEST & CHESTER
	LONDON ROAD		
	NORTHWICH		
	LEFTWICH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	24	
	Survey date: THURSDAY	06/06/19	Survey Type: MANUAL
2	NY-03-A-13	TERRACED HOUSES	NORTH YORKSHIRE
	CATTERICK ROAD		
	CATTERICK GARRISON		
	OLD HOSPITAL COMPOUND		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	10	
	Survey date: WEDNESDAY	10/05/17	Survey Type: MANUAL
3	PB-03-A-04	DETACHED HOUSES	PETERBOROUGH
	EASTFIELD ROAD		
	PETERBOROUGH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	28	
	Survey date: MONDAY	17/10/16	Survey Type: MANUAL
4	PS-03-A-02	DETACHED/SEMI-DETACHED	POWYS
	GUNROG ROAD		
	WELSHPOOL		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	28	
	Survey date: MONDAY	11/05/15	Survey Type: MANUAL
5	SD-03-A-01	SEMI DETACHED	SWINDON
	HEADLANDS GROVE		
	SWINDON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	27	
	Survey date: THURSDAY	22/09/16	Survey Type: MANUAL

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.66

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	5	23	0.111	5	23	0.299	5	23	0.410
08:00 - 09:00	5	23	0.256	5	23	0.487	5	23	0.743
09:00 - 10:00	5	23	0.179	5	23	0.179	5	23	0.358
10:00 - 11:00	5	23	0.179	5	23	0.179	5	23	0.358
11:00 - 12:00	5	23	0.179	5	23	0.162	5	23	0.341
12:00 - 13:00	5	23	0.214	5	23	0.205	5	23	0.419
13:00 - 14:00	5	23	0.197	5	23	0.205	5	23	0.402
14:00 - 15:00	5	23	0.265	5	23	0.308	5	23	0.573
15:00 - 16:00	5	23	0.436	5	23	0.376	5	23	0.812
16:00 - 17:00	5	23	0.402	5	23	0.291	5	23	0.693
17:00 - 18:00	5	23	0.248	5	23	0.197	5	23	0.445
18:00 - 19:00	5	23	0.205	5	23	0.128	5	23	0.333
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.871			3.016			5.887

Parameter summary

Trip rate parameter range selected: 10 - 28 (units:)
Survey date date range: 01/01/14 - 06/06/22
Number of weekdays (Monday-Friday): 5
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	23	0.000	5	23	0.000	5	23	0.000
08:00 - 09:00	5	23	0.017	5	23	0.017	5	23	0.034
09:00 - 10:00	5	23	0.017	5	23	0.017	5	23	0.034
10:00 - 11:00	5	23	0.009	5	23	0.009	5	23	0.018
11:00 - 12:00	5	23	0.000	5	23	0.000	5	23	0.000
12:00 - 13:00	5	23	0.000	5	23	0.000	5	23	0.000
13:00 - 14:00	5	23	0.009	5	23	0.009	5	23	0.018
14:00 - 15:00	5	23	0.000	5	23	0.000	5	23	0.000
15:00 - 16:00	5	23	0.000	5	23	0.000	5	23	0.000
16:00 - 17:00	5	23	0.000	5	23	0.000	5	23	0.000
17:00 - 18:00	5	23	0.000	5	23	0.000	5	23	0.000
18:00 - 19:00	5	23	0.000	5	23	0.000	5	23	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.052			0.052			0.104

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.66

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	5	23	0.222	5	23	0.487	5	23	0.709
08:00 - 09:00	5	23	0.368	5	23	0.991	5	23	1.359
09:00 - 10:00	5	23	0.265	5	23	0.274	5	23	0.539
10:00 - 11:00	5	23	0.316	5	23	0.350	5	23	0.666
11:00 - 12:00	5	23	0.239	5	23	0.256	5	23	0.495
12:00 - 13:00	5	23	0.325	5	23	0.342	5	23	0.667
13:00 - 14:00	5	23	0.274	5	23	0.359	5	23	0.633
14:00 - 15:00	5	23	0.462	5	23	0.385	5	23	0.847
15:00 - 16:00	5	23	0.803	5	23	0.624	5	23	1.427
16:00 - 17:00	5	23	0.650	5	23	0.402	5	23	1.052
17:00 - 18:00	5	23	0.444	5	23	0.359	5	23	0.803
18:00 - 19:00	5	23	0.402	5	23	0.171	5	23	0.573
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.770			5.000			9.770

Appendix E

QS701EW - Method of travel to work

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population	All usual residents aged 16 to 74
units	Persons
area type	2011 super output areas - middle layer
area name	E02001062 : Manchester 018
rural urban	Total

Method of Travel to Work	2011
All categories: Method of travel to work	2,882
Underground, metro, light rail, tram	34
Train	71
Bus, minibus or coach	878
Taxi	29
Motorcycle, scooter or moped	8
Driving a car or van	878
Passenger in a car or van	94
Bicycle	111
On foot	749
Other method of travel to work	30