



HUYTON LANE, HUYTON

Transport Statement

February 2023

McCarthy Stone Ltd

RETIREMENT SCHEME
HUYTON LANE
HUYTON

TRANSPORT STATEMENT

CONTROLLED DOCUMENT

<i>Document No:</i>	501.0008/TS/4	
<i>Status:</i>	Original	
	<i>Name</i>	<i>Date</i>
<i>Prepared by:</i>	Jessica Harding	January 2023
<i>Checked by:</i>	Izzie Diment	January 2023
<i>Approved by:</i>	Harry Cross	January 2023

Revision Record

<i>Rev.</i>	<i>Date</i>	<i>By</i>	<i>Summary of Changes</i>	<i>Aprvd</i>
2	Feb 2023	JH	Updated Site Layout	HC
3-4	Feb 2023	JH	Client Comments	HC

Disclaimer

This document has been prepared in accordance with the scope of Paul Basham Associates Ltd's appointment with its client and is subject to the terms of that appointment. It is addressed to and for the sole use and reliance of Paul Basham Associates clients. Paul Basham Associates accepts no liability for any use of this document other than by its client and only for the purposes, stated in the document, for which it was prepared and provided. No person other than the client may copy (in whole or in part), use or rely on the contents of this document, without the prior written permission of a Director of Paul Basham Associates. Any advice, opinions, or recommendations within this document should be read and relied upon only in the context of the document as a whole. The contents of this document are not to be construed as providing legal, business or tax advice or opinion.

© Paul Basham Associates Limited 2022

McCARTHY STONE

McCarthy Stone
4th Floor
100 Holdenhurst Road
Bournemouth
Dorset
BH8 8AQ



Paul Basham Associates Ltd
Suite 4 Hitching Court
Abingdon Business Park
Blacklands Way
Abingdon
OX14 1RG

**RETIREMENT SCHEME
HUYTON LANE
HUYTON**

TRANSPORT STATEMENT

Contents

1.	EXECUTIVE SUMMARY.....	2
2.	INTRODUCTION.....	3
3.	EXISTING CONDITIONS AND SITE ACCESS	4
4.	PROPOSED DEVELOPMENT.....	15
5.	TRIP GENERATION	18
6.	SUMMARY AND CONCLUSIONS.....	20

Figures

- Figure 1 – Approximate Site Location
Figure 2 – Public Right of Way Route (Source: Knowsley Borough Council)
Figure 3 – National Cycle Route 56 (Source: OS Maps)
Figure 4 – Key Bus Route Map
Figure 5 – Personal Injury Accident (PIA) Data 2017-2021 (Source: CrashMap)

Tables

- Table 1 – Summary of Local Bus Services
Table 2 – Rail Services
Table 3 – CIHT Guidance for ‘Providing for journeys on foot’ (2000)
Table 4 – Proximity to Local Amenities
Table 5 – PIA Data Summary
Table 6 – Accommodation Schedule
Table 7 – Proposed Trip Generation
Table 8 – McCarthy Stone Independent Trip Generation Research

Appendices

- Appendix A – Proposed Site Layout
Appendix B – Accessibility Map
Appendix C – Vehicle Tracking Drawing
Appendix D – Visibility Splay
Appendix E – McCarthy Stone Independent Data
Appendix F – Refuse & Fire Tender Vehicle Tracking
Appendix G – Proposed Trip Generation Outputs (TRICS V.7.9.4)



1. EXECUTIVE SUMMARY

- Paul Basham Associates have been instructed to act on behalf of McCarthy Stone to support a planning application for a Retirement Living development comprising of 53 Retirement apartments at Huyton Lane, Huyton;
- The site is located in an extremely accessible location, in very close proximity to Huyton town centre and associated amenities/public transport connections.
- The access to the site demonstrates achievable visibility splays and the internal geometries allow appropriately sized vehicles to enter, turn on site, and exit in forward gear;
- 22 car parking spaces are provided at a ratio of 0.42 spaces per apartment. Bearing in mind the affordable nature of the site, and independent research carried out by McCarthy Stone, this is deemed appropriate for the end user and would not result in any overspill on the local road network;
- Refuse and fire tender vehicles are able to access the bin store/dry risers within appropriate distances specified within Manual for Streets and Building Regulations guidance;
- McCarthy Stone Research suggests that the proposed development will generate 3 two-way trips in the AM peak, 4 two-way trips in the PM peak and a 12-hour total of 82 trips will be expected across the day.
- In conclusion the site is not anticipated to result in any detrimental impact to the safety or operation of the local road network, and we would therefore encourage the local highway authority (Knowsley Borough Council) to look favourably upon this development in relation to highways.



2. INTRODUCTION

- 2.1 This Transport Statement (TS) has been prepared by Paul Basham Associates on behalf of McCarthy Stone to support a planning application for a Retirement Living development comprising of 53 Retirement apartments at Huyton Lane, Huyton. The site location is demonstrated in **Figure 1**, with the proposed site layout attached within **Appendix A**.



Figure 1: Approximate Site Location

- 2.2 Paul Basham Associates have prepared a Full Travel Plan (TP) in conjunction with this application, which should be read alongside this report.
- 2.3 The planning history on the site includes the previous *'demolition of buildings and restoration of site with topsoil and grass seed together with erection of hoarding to site boundary'* (application reference: 18/00539) which was granted permission in December 2018. Furthermore, within near proximity to the site, the development for *'erection of 62 dwellings together with construction of new vehicular and pedestrian access, landscaping, public open space, drainage and associated works'* at Land at Whiston Lane, Huyton was granted permission in April 2019 (application reference: 18/00478/FUL).
- 2.4 The remainder of this Transport Statement (TS) will assess the following:
- Existing Conditions and Site Accessibility;
 - Proposed Development (comprising Access Arrangements, visibility, parking provision, Fire and Refuse Servicing);
 - Trip Generation; and
 - Summary and Conclusions.

3. EXISTING CONDITIONS AND SITE ACCESS

- 3.1 The site is situated approximately 150m northeast of Huyton town centre and is currently vacant but was previously occupied by Huyton Ambulance Centre and Fire Station, which was granted permission (application reference: 18/00539) to be demolished in 2018. The site is bound to the north by Huyton Lane, to the north east by residential dwellings, to the south east by a vehicle car park associated to an Asda and to the south west by Lathom Road. The existing site conditions are shown in **Photographs 1-2.**



Photograph 1: Existing Site Conditions



Photograph 2: Existing Site Conditions

Local Road Network

- 3.2 Huyton Lane (B5199) is a single carriageway road, measuring approximately 10m in width and is subject to a 30mph speed limit within the vicinity of the site. Double yellow lines align the kerb along the site frontage with the exception at access points. The site frontage along Huyton Lane is situated adjacent to a signalised junction (approximately 30m east) whereby the carriageway headed westbound becomes two lanes (one for straight-on, and another for straight-on and left turns).
- 3.3 The site has 2 existing access points, one to the north west for the fire station and one to the north east for the ambulance centre. There is hatching adjacent to the ambulance station access on Huyton Lane preventing waiting adjacent to the site access. The existing conditions along the site frontage on Huyton Lane are demonstrated within **Photographs 3-4.**



Photograph 3: Site frontage conditions viewing westbound



Photograph 4: Site frontage conditions viewing westbound

- 3.4 Huyton Lane facilitates access to residential dwellings, meeting Archway Road (B5199) and Lathom Road approximately 30m west of the proposed site access at the signalised crossroad junction – the B5199 headed westbound provides access to the M62 (approximately 2.6km southwest of the site). To the east Huyton Lane connects to Liverpool Road roundabout (A57/A58) approximately 2.9km east that connects Huyton to the Strategic Road Network via the M57. The Strategic Road Network provides access to Liverpool to the west and Manchester to the east.

Pedestrian Infrastructure

- 3.5 There is excellent pedestrian connectivity in the local area, presenting the opportunity to promote walking from the development site, particularly as the site is situated approximately 150m northeast of Huyton town centre. Huyton Lane provides footways that flank both sides of the carriageway measuring approximately 2.5m in width as well as featuring dropped kerbs and tactile paving. Pedestrian infrastructure is demonstrated within **Photographs 5-8**.



Photograph 5: Tactile Paving and footway conditions at the site frontage viewing eastbound along Huyton Lane



Photograph 6: Pedestrian footway conditions headed eastbound along Huyton Lane



Photograph 7: Zebra Crossing point at Asda, Huyton



Photograph 8: Pedestrian refuge Islands along Huyton Lane adjacent the Asda vehicle access roundabout

- 3.6 As previously mentioned, the site is located 30m east of a signalised junction, this junction provides controlled toucan crossings with tactile paving and dropped kerbs across Huyton Lane and Lathom Road. These crossings help facilitate the safe movement of pedestrians. These crossings are shown within **Photographs 9-10**.



Photograph 9: Pedestrian Signalised Crossing at Huyton Lane viewing westbound



Photograph 10: Pedestrian Signalised Crossing headed southbound from Huyton Lane

- 3.7 Approximately 55m to the west of the proposed site access (headed south), wide pedestrian footways flank either side of Lathom Road, connecting Huyton Lane through to Huyton town centre, bus facilities, the rail station and amenities. Within Huyton town centre, an abundance of pedestrian infrastructure is provided; including designated pedestrian areas, raised tables and pedestrian refuge islands. The existing pedestrian infrastructure within Huyton town centre has been shown within **Photograph 11-14**.



Photograph 11: Pedestrian Conditions within Huyton town centre



Photograph 12: Pedestrian Signalised Crossing within Huyton town centre



Photograph 13: Pedestrian Conditions within Huyton town centre



Photograph 14: Pedestrian Footway Conditions within the local road network headed westbound

- 3.8 Public Right of Way HU/6/2 is situated approximately 60m north east of the site. The route follows Corpse Way southward towards the ASDA supermarket and then towards Victoria Road and Seel Road, approximately 390m south of the site. **Figure 2** demonstrates the Public Right of Way within near proximity to the site and **Photographs 15-16** demonstrates the conditions of the footway.

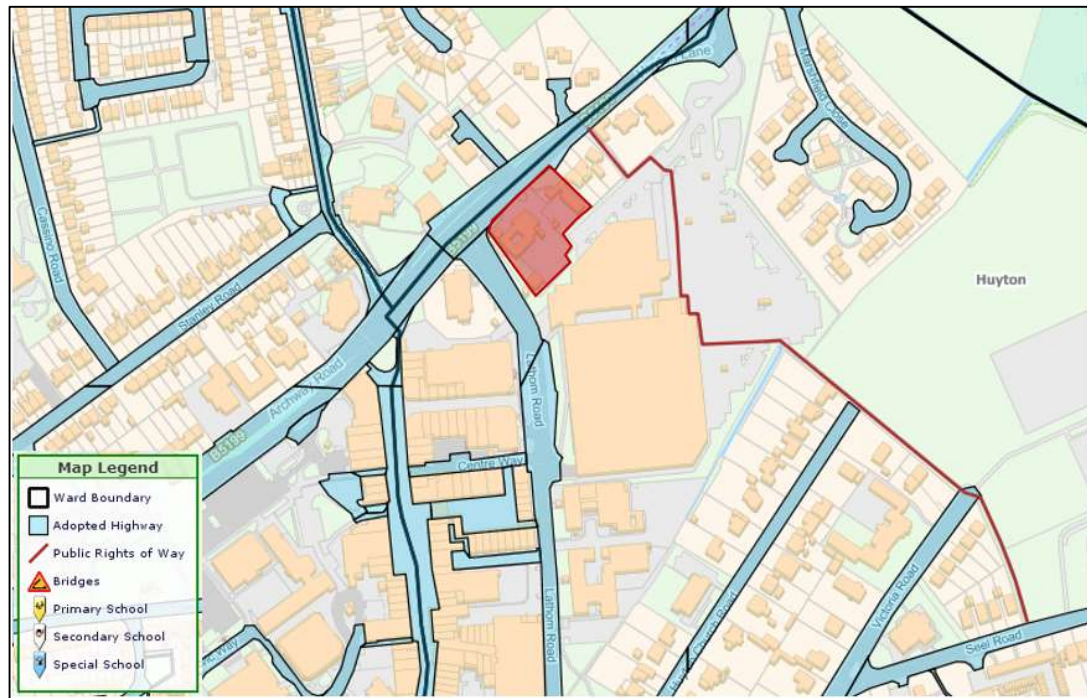


Figure 2: Public Right of Way Route (Source: Knowsley Borough Council)



Photograph 15: PRoW HU/6/2 from Huyton Lane viewing westbound along Huyton Lane



Photograph 16: PRoW HU/6/2 from Huyton Lane viewing southbound towards Asda

Cycle Network

- 3.9 The nature of the proposed development means that residents are unlikely to cycle to/from the site, however there are still opportunities to promote this method of sustainable travel in the local area. Staff and visitors would be able to utilise Sheffield Stands and the existing pedestrian/cycle designated area within Huyton town centre. The closest National Cycle Route (NCR) is a short section of NCR 56 which is situated 1.3km southeast of site. The route is situated in the Stadt Moers Country Park and can be accessed via a 6-minute cycle from the site access. National Cycle Route (NCR) 56 is demonstrated within **Figure 3**. Overall, cycling in the local area is a viable option for both residents who are able to do so to reach local amenities, and staff/visitors travelling from nearby areas.

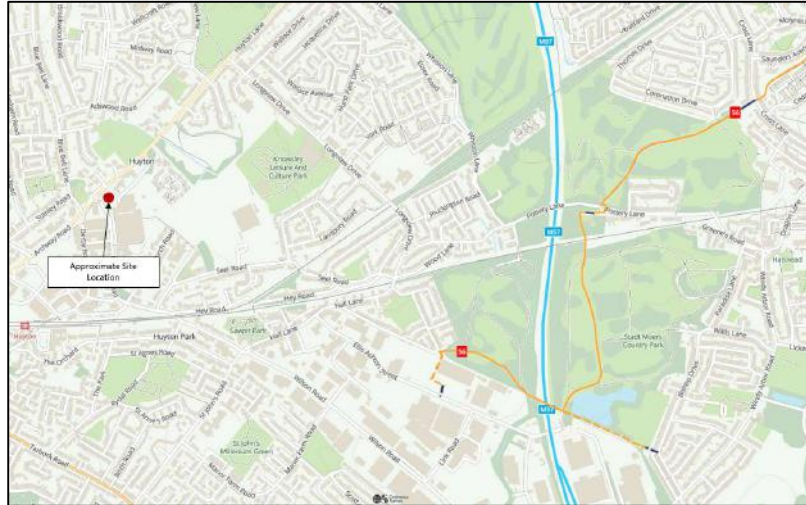


Figure 3: National Cycle Route 56 (Source: OS Maps)

Public Transport

Bus Travel

- 3.10 The closest bus stops to the proposed site are the 'Archway Road (Stop K)' bus stops situated approximately 140m south of the site and the 'Huyton Bus Station' situated approximately 400m south of the site. Both stops are served by an abundance of services and have been summarised within **Table 1** and demonstrated within **Figure 4**.

Service	Closest Bus Stop	Operator	Route	Approximate Frequency		
				Mon-Fri	Sat	Sun
3/3A	Huyton Bus Station (Stand 3)	Arriva Merseyside	Wilson Road – Halewood Shopping Centre	First Bus 06:51am; Last Bus 17:51pm Every Hour	First Bus 07:51am; Last Bus 17:51pm Every Hour	No Service
7	Huyton Bus Station (Stand 2)	Arriva Merseyside	Warrington – Liverpool	First Bus 05:41am; Last Bus 22:59pm Every 30 minutes	First Bus 05:41am; Last Bus 22:58pm Every 30 minutes	First Bus 09:02am; Last Bus 22:59pm Every 30 minutes
9	Huyton Bus Station (Stand 5)	Arriva Merseyside	Liverpool – Huyton Circular	First Bus 05:32am; Last Bus 19:31pm Every 30 minutes	First Bus 06:46am; Last Bus 18:36pm Every 30 minutes	No Service
10B	Archway Road K	Arriva Merseyside	Huyton – Liverpool	First Bus 06:20am; Last Bus 23:08pm Every 10 minutes then every 30 minutes after 9pm	First Bus 07:15am; Last Bus 23:08pm Every 15-20 minutes then every 30 minutes after 9pm	First Bus 09:13am; Last Bus 22:38pm Every 20 minutes
15	Huyton Bus Station (Stand 1)	Arriva Merseyside	Huyton - Liverpool	First Bus 05:16am; Last Bus 23:41pm Every 10 minutes then	First Bus 05:29am; Last Bus 23:41pm Every 10 minutes then	First Bus 06:36am; Last Bus 23:11pm Every 30 minutes

				every 30 minutes after 7pm	every 30 minutes after 7pm	
61	Huyton Bus Station (Stand 2)	Arriva Northwest	Queen Square – Halton Hospital	First Bus 05:31am; Last Bus 19:31 Every Hour	First Bus 05:31am; Last Bus 19:31 Every Hour	First Bus 08:52am; Last Bus 18:52 Every Hour
89	Archway Road J	Arriva Merseyside	St.Helens – Liverpool John Lennon Airport	First Bus 06:10am; Last Bus 22:52pm Every 30 minutes	First Bus 06:11am; Last Bus 22:52pm Every 30 minutes	First Bus 09:23am; Last Bus 22:52pm Every 30 minutes
217	Huyton Bus Station (Stand 1)	Stagecoach Merseyside and South Lancashire	Kirkby Civic Centre – Huyton Bus Station	First Bus 05:15am; Last Bus 20:36pm Every 20-30 minutes	First Bus 05:15am; Last Bus 20:41pm Every 30 minutes	(Bus Stand 5) First Bus 07:06am; Last Bus 23:06pm Every 2 Hours
246	Huyton Bus Station (Stand 1)	Cumfybus	Huyton Local Route	First Bus 09:30am; Last Bus 17:30pm Every Hour	First Bus 09:30am; Last Bus 17:30pm Every Hour	No Service
258	Archway Road K	Huyton Travel	Leach Croft – Waterpark Drive Circular	First Bus 08:14am; Last Bus 17:34pm Every 30 minutes	First Bus 09:24am; Last Bus 17:34pm Every 30 minutes	No Service
C46	Archway Road J	Warrington's Own Buses	Stockbridge Village - Widnes	First Bus 08:16am; last bus 17:05pm; – One bus a day	No Service	No Service

Table 1: Summary of Local Bus Services

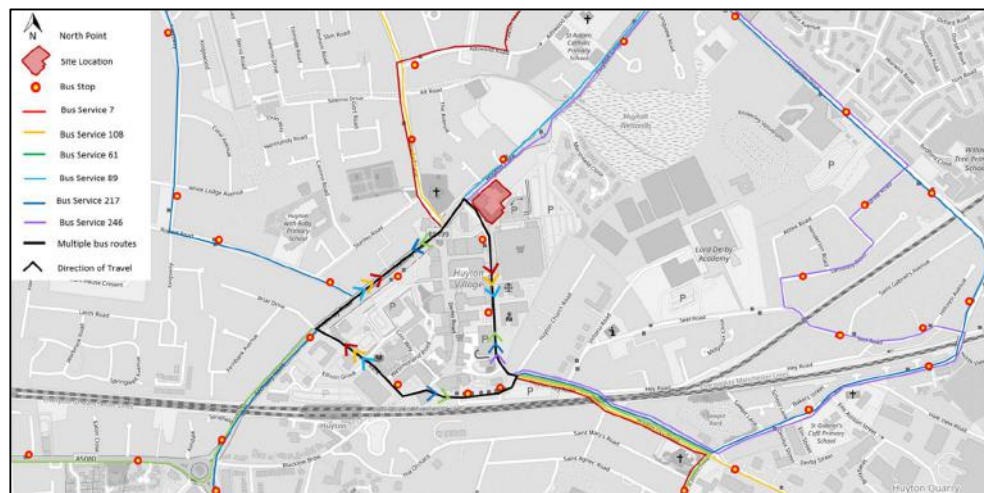


Figure 4: Key Bus Routes within Huyton

Rail Travel

- 3.11 The closest rail station to the site is Huyton Railway Station situated approximately 570m southwest of the site along Blacklow Brow carriageway. The station can be accessed via a 2-minute cycle, 9-minute walk, or an 8-minute bus journey via the 7 or 10B bus. Huyton Railway Station is served by the Northern

Line; it provides 10 parking spaces, 12 cycle spaces, seated area and step free access. The station provides services to Liverpool Lime Street, Wigan North-western, Manchester Airport, Manchester Victoria and Blackpool North.

3.12 The rail services timetable has been summarised in **Table 2**.

Destination	Approximate Frequency	Approximate Journey Length
Liverpool Lime Street	Every 10 Minutes	20-minutes
Wigan North-Western	Every 30 Minutes	40-minutes
Manchester Airport	Every Hour	1 hour 10-minutes
Blackpool North	Every Hour	1 hour 50-minutes

Table 2: Rail Services

Facilities

3.13 The CIHT document, 'Providing for Journeys on foot' (2000), identifies the 'desirable', 'acceptable' and 'preferred maximum' walking distances to locations within town centres and elsewhere. The distances are outlined within **Table 3** below.

	Town Centre (m)	Elsewhere (m)
Desirable	200	400
Acceptable	400	800
Preferred Maximum	800	1200

Table 3: CIHT Guidance for 'Providing for journeys on foot' (2000)

3.14 In addition, the CIHT's 'Planning for Walking' (April 2015) identifies that whilst a number of pedestrian journeys are decreasing, 'the average length of pedestrian journeys increased slightly from 0.7 miles to 0.85 miles' between 1985 to 2007 (page 6). This equates to an average length of pedestrian journeys of 1,368m. The average duration also increased from 15 minutes to 17 minutes.

3.15 The site is positioned within walking/cycling distance of several local amenities and services within Huyton. A summary of the site's proximity to these facilities and the associated walking and cycling times is provided in **Table 4** and an accessibility map is attached in **Appendix B**.

Amenity	Approximate Distance	Approximate Walking Journey Time	Approximate Cycling Journey Time
Place of Worship (St Michael's Parish Church)	90m	<1 Minute	<1 Minute
Bus Stop (Archway Road)	100m	1 Minute	<1 Minute
Supermarket (Asda)	100m	1 Minute	1 Minute
Pharmacy (ASDA Pharmacy)	100m	1 Minute	1 Minute
Restaurant (The Barkers Brewery)	110m	2 Minutes	1 Minute
Retail (Holland and Barrett/Wilko/Butchers)	150m	2 Minutes	1 Minute
Bank (Lloyds Bank)	180m	3 Minutes	2 Minutes
Restaurant (Huyton Fish and Chip Shop)	230m	3 Minutes	2 Minutes
Police Station (Huyton Police Station)	280m	4 Minutes	2 Minutes
Cafe (The Coffee House Huyton)	360m	4 Minutes	2 Minutes
Pharmacy (Superdrug)	390m	4 Minutes	2 Minutes
Restaurants (La Vita)	430m	5 Minutes	2 Minutes
Post Office (Huyton Post Office)	500m	5 Minutes	2 Minutes
Health (Roby Medical Centre)	500m	5 Minutes	2 Minutes
Huyton Library	520m	7 Minutes	3 Minutes

Table 4: Proximity to Local Amenities

3.16 As displayed within **Table 4** and referring to **Table 3**, there are several amenities and services within the 'desirable' and 'acceptable' walking distances due to the close proximity of Huyton town centre to the proposed site. This demonstrates that the proposed site would provide an excellent opportunity to create a sustainable development. Additionally, in line with the guidance provided in 'Planning for Walking' (April 2015) walking to local amenities is realistic for future site occupants given all of the facilities listed in **Table 4** are within the average walking time.

3.17 These are just a handful of the nearby amenities that would be accessible for future residents of the site. Additionally, the public transport network (rail and bus) to locations such as Liverpool, Blackpool North and Manchester provide access to further amenities. Therefore, the site is considered to be highly accessible.

Personal Injury Accident (PIA) Data

3.18 Personal Injury Accident (PIA) data has been assessed for the most recent five-year period between 2017-2021 in order to analyse the existing safety conditions of the local road network. **Figure 5** below showcases the incidents that have occurred within 150m of the proposed site access within the specified five-year period and **Table 5** summarises the results.

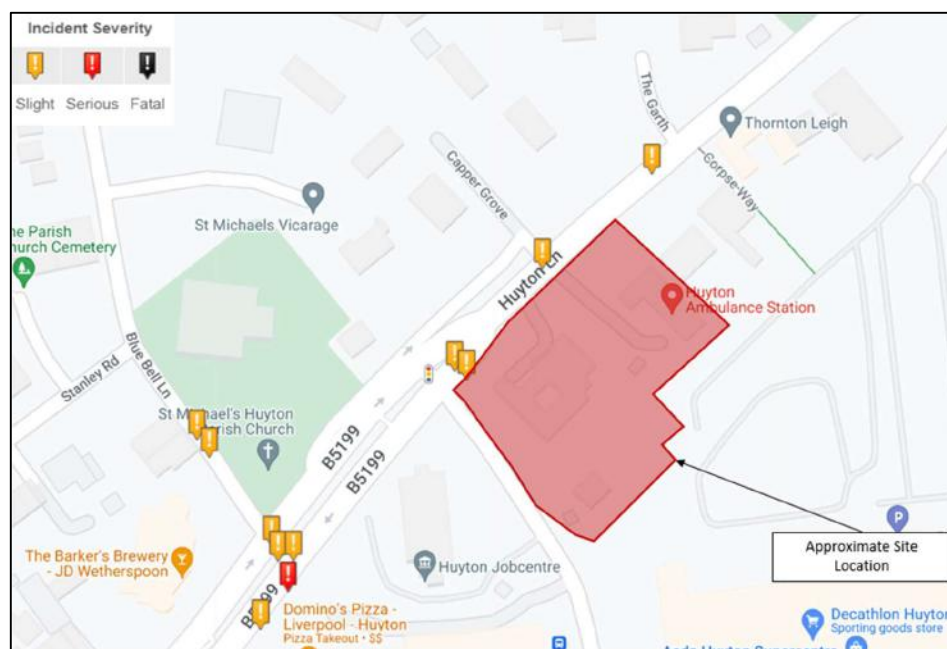


Figure 5: Personal Injury Accident (PIA) Data 2017-2021 (Source: CrashMap)

Incident Location	Direction from Proposed Site Access	Approximate Distance from Proposed Site Access	Severity
Huyton Lane	West	15m	Slight
Huyton Lane	East	30m	Slight
B1599 – Westbound Lane (Signalised Junction)	West	50m	Slight
B1599 – Westbound Lane (Signalised Junction)	West	50m	Slight
B1599 – Westbound Lane	West	120m	Slight
B1599 – Westbound Lane	West	120m	Slight
B1599 – Eastbound Lane	West	120m	Slight
B1599 – Westbound Lane	West	125m	Serious
B1599 – Westbound Lane	West	150m	Slight
Blue Bell Lane	Northwest	100m	Slight
Blue Bell Lane	Northwest	105m	Slight

Table 5: PIA Data Summary

3.19 **Figure 4** and **Table 5** demonstrates that within a 150m study area, a total of 11 accidents have occurred within proximity to the site, 10 of which are 'slight' in nature and one 'serious'. Whilst any accident is regrettable, the frequency and severity of those incidents do not indicate any existing highway safety concerns that would worsen as a result of the proposed development particularly given the context and volumes of traffic. Therefore, the site is not expected to result in the worsening of the safety or operation to the local road network.

Summary of Accessibility

- 3.20 The proposed site is considered to be extremely sustainable, located within significantly close proximity to Huyton town centre, with excellent public transportation options providing connections to wider areas including Liverpool, Manchester and Blackpool.



4. PROPOSED DEVELOPMENT

- 4.1 The proposed development comprises a 53-unit Retirement Living development situated on Huyton Lane, Huyton. The proposed site layout is attached as **Appendix A** and an accommodation schedule has been summarised in **Table 6**.

Floor Level	Number of Bedrooms		
	1 Bedroom	2 Bedroom	Total
Ground Floor	7	4	11
First Floor	10	4	14
Second Floor	10	4	14
Third Floor	10	4	14
Total	37	16	53

Table 6: Accommodation Schedule

Access Arrangements

- 4.2 The proposed site has one access point along Huyton Lane in the form of a vehicle crossover arrangement measuring approximately 5.5m in width approximately 15m to the north west of the Ambulance Centre access. The proposed development seeks to stop up the existing Fire Station access and the Ambulance Centre access, providing a continuous footway of 2m in width to be in keeping with the current footway along the site frontage. Vehicle swept path analysis has been undertaken and demonstrates that two vehicles are able to access the site simultaneously, this has been demonstrated within **Appendix C**.
- 4.3 Pedestrian access can be taken from Huyton Lane using the proposed stepped access and alternative pedestrian access along the site frontage. Alternatively, a third pedestrian access point is situated along Lathom Road to the southwest of the development which provides direct routes towards Huyton Town Centre.

Visibility

- 4.4 Huyton Lane is subject to a 30mph speed limit along the site frontage; therefore, achievable visibility has been measured at 2.4m x 43m in accordance with Manual for Streets (MfS) guidance. Visibility Splay assessments have been demonstrated within **Appendix D** and demonstrated within **Photographs 17-18**.



Photograph 17: Primary Direction Visibility Splay



Photograph 18: Secondary Direction Visibility Splay

Parking Provision

- 4.5 The proposed development provides a total of 22 parking spaces, measuring 2.5m x 5.0m with a 6m aisle width. Vehicle swept path analysis has been undertaken; spaces are achievable for manoeuvring without conflict and have been demonstrated within **Appendix C**.
- 4.6 In order to determine the parking provision of the proposed site, Local Authority parking standards have been assessed, however Knowsley Borough Council do not provide specific standards for Retirement living developments, with the closest alternative being Care Home/Nursing Home. Therefore, to further inform the parking provision for the development, the McCarthy Stone Independent Research has been utilised to assess the level of parking with average user demand; this data has been presented within **Appendix E**. McCarthy Stone Independent Data presents that on average the parking demand equates 0.55 spaces per unit (equivalent to 29 spaces for the 53 units).
- 4.7 The proposed development seeks to provide 22 spaces (including 2 disabled bays), which equates to a provision of 0.42 spaces per unit, which is sufficient in light of the affordable nature of the proposed units in comparison to the schemes that produced the benchmark McCarthy Stone data. Additionally, the site is located in a highly accessible area as previously mentioned, with excellent public transport links in the form of buses and trains and the use of such sustainable modes of transport will be encouraged throughout the accompanying Travel Plan. A similar McCarthy Stone scheme for 51 units with a comparable parking provision of 20 spaces (0.39 spaces per apartment) was recently approved by Oldham Council in Failsworth (FUL/349677/22).
- 4.8 Furthermore, a car club space, allowing residents access to a car without owning one, could be implemented to increase the parking provision should the demand suggest that this is needed. McCarthy Stone's Independent research did not include any sites that had car club spaces and so the provision of the car club space in this instance will reduce resident demand. CoMoUK's car club annual report for the UK 2021 states that each car club vehicle replaces the equivalent of 6 private car parking

spaces. In combination with the Travel Plan to encourage sustainable transport, it is therefore considered that the proposed provision of 22 parking spaces is appropriate for the development. The inclusion of the car club space here would theoretically see the provision rise from 22 spaces to 27 spaces. This approach of increasing the effective parking provision through the implementation of a car club space has recently been approved by Rushcliffe Borough Council for a similar McCarthy Stone Scheme in West Bridgford (ref: 21/0063/FUL).

- 4.9 In addition to the above, the McCarthy Stone Independent research (shown on Chart FF5b within the McCarthy Stone Independent Research also attached as **Appendix E**) demonstrates that 33.9% of residents give up their car in the year of entry to the development with 14.3% of residents giving up their car in the year following entry as residents decide they no longer need a car.
- 4.10 Electric Vehicle Charging points are also to be provided for the 22 parking spaces. Each EV charging point will be placed in the middle of two spaces, with two ports available for each pair of spaces. This results in all spaces having access to EVC infrastructure.

Cycle and Buggy Provision

- 4.11 Mobility scooter storage has been made available for the storage of 7 buggies. Independent research undertaken by McCarthy Stone (attached within **Appendix E**) also outlines the average level of mobility scooter ownership, which equates to the provision of 0.079 buggy spaces per apartment. In relation to the proposed 53-unit retirement living development, this would equate to requirement of 4 mobility scooter spaces. Therefore, the buggy store provided is sufficient for accommodating the expected demand.
- 4.12 Furthermore, McCarthy Stone have also undertaken independent research into their cycle ownership across their sites. The data presented that the cycle ownership per apartment is 0.0289, therefore equating to 2 spaces for the 53-unit development. The buggy store provided will be suitable to provide flexible storage to suit the required demand for both uses.

Fire and Refuse Servicing

- 4.13 Refuse collection is able to occur via on-site collection whereby the refuse vehicle is able to safely access the site, manoeuvre and egress the site without conflict. The refuse vehicle is able to get within the 10m bin carrying distance requirements set out within Manual for Streets for Eurobins. A Fire Tender is able to access on-site, manoeuvre and egress suitably, and is able to reach within the 18m distance required of the stairwell to the south of the site via the secondary pedestrian access on Lathom Road as per Building Regulations (Part B). The refuse vehicle and Fire Tender manoeuvres have been demonstrated to be achievable within **Appendix F**.

5. TRIP GENERATION

5.1 The subsequent section of this Transport Statement (TS) assesses the likely vehicular trip rate generation associated with the proposed development through consulting the TRICS database.

5.2 In order to provide a robust assessment, it has been assumed that the current site does not produce any trips due to the unoccupied nature of the Fire Station (with exception to the Ambulance Centre). The following trip generation assessment will constitute a 'worst-case' scenario, whereby all proposed trips are additional.

Proposed Development Trip Generation

5.3 In order to estimate the number of trips that the proposed development would generate, a TRICS (V.7.9.4) assessment has been undertaken using 'Retirement Flats' as the closest approximation. Overall, the following parameters were used:

- Land Use 'Residential', sub-category 'Retirement Flats';
- Sites in England and Wales (excluding Greater London);
- Parameter of 17-88 Dwellings;
- Weekday surveys only; and
- 'Edge of Town Centre' locations.

5.4 The results of the TRICS assessment are outlined in **Table 7**, with the full outputs attached within **Appendix G**.

TRICS (v 7.9.4)	AM Peak (0800-0900)			PM Peak (1700-1800)			12-hour Total Daily Trips
	Arrivals	Departures	Total	Arrivals	Departures	Totals	
Trip Rate per 1 dwelling	0.064	0.085	0.149	0.059	0.037	0.096	1.910
Trip Generation (53 units)	3	5	8	3	2	5	101

Table 7: Proposed Trip Generation

5.5 As summarised within **Table 7** above, as a worst-case scenario the proposed development is anticipated to generate 8 trips in the AM peak, 5 trips during the PM peak and a daily total of 101 trips across a 12-hour period, equating to approximately 8 trips every hour across a 12-hour period.

- 5.6 In addition to the TRICS assessment, the McCarthy Stone Independent research into trip generation at existing developments has also been consulted (**Appendix E**), with the outputs summarised in **Table 8** below.

	AM Peak	PM Peak	Total (12HR)
Trip Rate per dwelling	0.06	0.08	1.55
Vehicle trips (53 apartments)	3	4	82

Table 8: McCarthy Stone Independent Trip Generation Research

- 5.7 As outlined above, the McCarthy Stone Research suggests that 3 two-way trips will occur in the AM peak, 4 two-way trips in the PM peak and a 12-hour total of 82 trips will be expected across the day.
- 5.8 Regardless of the trip rates used, as a worst-case scenario, the presented small increase in trips on the local road network during the peak AM and PM periods is anticipated to be negligible on the local road network, especially with the excellent links to public transport and local amenities. Therefore, as the proposed development is not anticipated to have a significant impact on the safety or operation of the local road network, the anticipated proposed development trips should be looked upon favourably.

6. SUMMARY AND CONCLUSIONS

- 6.1 This Transport Statement (TS) has been prepared by Paul Basham Associates on behalf of McCarthy Stone to support a planning application for a Retirement Living development comprising of 53 Retirement apartments at Huyton Lane, Huyton.
- 6.2 The site is located in a highly accessible area with several amenities (including Huyton town centre) within walking distance of the site. This is supported by good pedestrian infrastructure including continuous footways and provision of various crossing points situated along Huyton Lan. Additionally, there is an excellent opportunity to promote sustainable travel from the site with the nearby bus stops providing frequent services to nearby towns and facilities.
- 6.3 The proposed site has one access point along Huyton Lane in the form of a vehicle crossover arrangement measuring approximately 5.5m in width. The proposed development seeks to stop-up the existing access arrangements for the Fire Station and Ambulance Centre, providing a continuous footway of 2m in width to be in keeping with the current footway along the site frontage. Huyton Lane is subject to a 30mph speed limit along the site frontage; therefore, achievable visibility has been measured at 2.4m x 43m in accordance with Manual for Streets (MfS) guidance.
- 6.4 As Knowsley Borough's Parking Standards do not contain specific site-related parking standards that apply to the proposed development, McCarthy Stone's independent parking research has been consulted which identifies a total parking demand of 0.55 spaces per apartment (0.45 spaces for residents and 0.1 spaces for visitors). This equates to a provision of 29-spaces on-site; the proposed provision of 22 spaces is considered adequate in light of the affordable nature of the scheme in comparison to the schemes that produced the benchmark data, as well as the sustainable nature of the site. McCarthy Stone research demonstrates that 33.9% of residents give up their car in the year of entry to the development, with 14.3% of residents giving up their car in the year following entry, as residents decide they no longer need their own individual car. All vehicle parking spaces are of suitable geometries and will have access to EVC infrastructure.
- 6.5 A car club space, allowing residents access to a car without owning one, could be implemented to increase the parking provision, should the demand suggest that this is needed. The inclusion of the car club space here would theoretically see the provision rise from 22 to 27 spaces.
- 6.6 A Fire Tender is able to access on-site, manoeuvre and egress suitably, and is able to reach within the 18m distance required of the stairwell to the south of the site via the secondary pedestrian access on Lathom Road as per Building Regulations (Part B). Refuse vehicles are able to service the development via on-site collection, manoeuvring within accordance of Eurobins and Manual for Streets (MfS) carry distances of 10m.



- 6.7 The TRICS assessment highlighted that the proposed retirement living development, as a worst case, is anticipated to generate 8 trips in the AM peak and 5 trips in the PM peak and a daily total of 101 trips which equates to approximately 8 trips every hour across a 12-hour period. McCarthy Stone's trip generation research was also consulted, which suggests that 3 trips will occur in the AM peak, 4 in the PM peak and a 12-hour total of 82 trips will be expected across a 12-hour period equating to approximately 7 trips every hour across a 12-hour period.
- 6.8 In either case, as a worst-case scenario, the presented small increase in trips on the local road network during peak AM and PM periods is anticipated to be negligible on the local road network, particularly with the majority of trips occurring outside of the peak periods, and with excellent links to public transport and local amenities.
- 6.9 In conclusion, taking the above assessment, we would therefore encourage the local highway authority (Knowsley Borough Council) to look favourably upon this development in relation to highways.



Appendix A





UNIT TYPES	GF	FF	SF	3F	Total
EV1-1	3	5	5	5	18
EV2-1	3	3	3	3	12
EV3-1	1	1	1	1	4
EV4-2	1	1	1	1	4
EV5-2	2	2	2	2	8
EV6-1	0	1	1	1	3
EV7-2	1	1	1	1	4
Total Per Floor	11	14	14	14	53

Total Amount	53 Unit Types
Footprint GEA Ground Floor	927.0m ²
Footprint GIA Ground Floor	860.0m ²
Total GEA (all floors)	3708.0m ²
Total GIA (all floors)	3440.0m ²
Acres	0.947
Hectare	0.3834

PARKING LAYOUT PHASE 1

Accessible Spaces	2
Standard Spaces	20
Total parking spaces	22
Residents Garden	1132m ²



Scale 1:500

Notes:

- All drawings are subject to Planning and Building Control consent.
- The details shown are for design intent purposes only and are subject to further design development with suppliers and sub-contractors
- Proposals subject to consultation and approval from Local Authority Building Control or an Approved Inspector
- All setting out dimensions should be checked on-site prior to construction and any discrepancies and/or omissions should be reported to the Architect immediately

Rev	Date	Details	Drawn	Chkd
C	25.01.23	Amendment to staircase location and units arrangement	AL	MA
B	23.01.23	Amendments to car park layout	AL	MA
A	20.01.23	Building re-designed to accommodate 5m water easement	MA	MA

Drawn By:	Project No:
AL	22053
Date:	Scale:
Dec22	1:500 @A3
Checked By:	Dwg No:
MA	1002
Date:	Rev: C

Issued for:

PLANNING (DRAFT)

Project/Client:

22053

Huyton Lane, Huyton

McCarthy & Stone

Drawing:

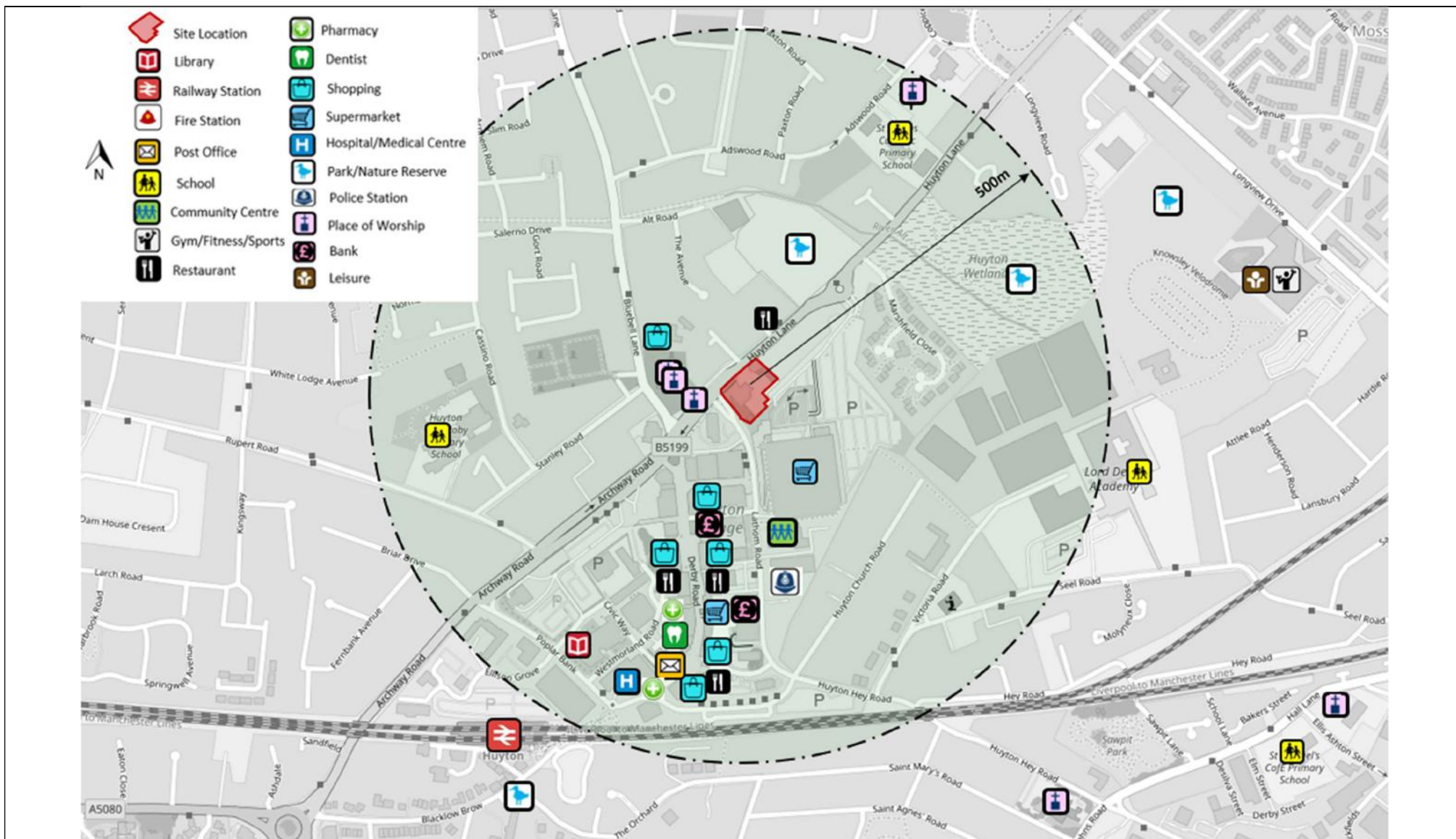
Proposed Site Plan

27 Glasshouse Studios, Fryern Court Road, Fordingbridge, Hampshire, SP6 1QX
T: (01425) 655806
www.brightspacearchitects.com

© Brightspace Architects Ltd. Contractors must work only to figured dimensions which are to be checked on site.
Registered Office: 27 Glasshouse Studios, Fryern Court Road, Fordingbridge, Hants, SP6 1QX. Registered Number: 07399058

Appendix B

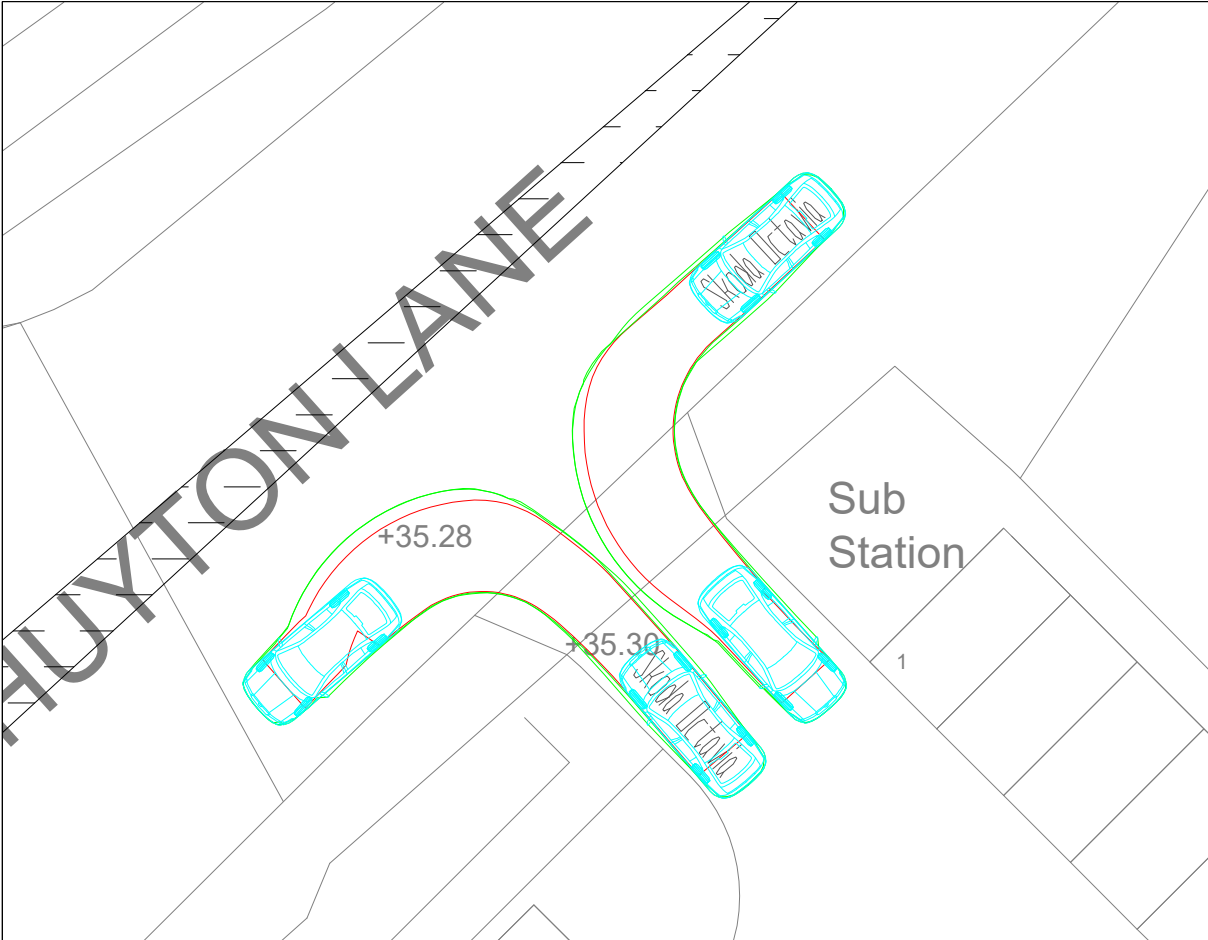




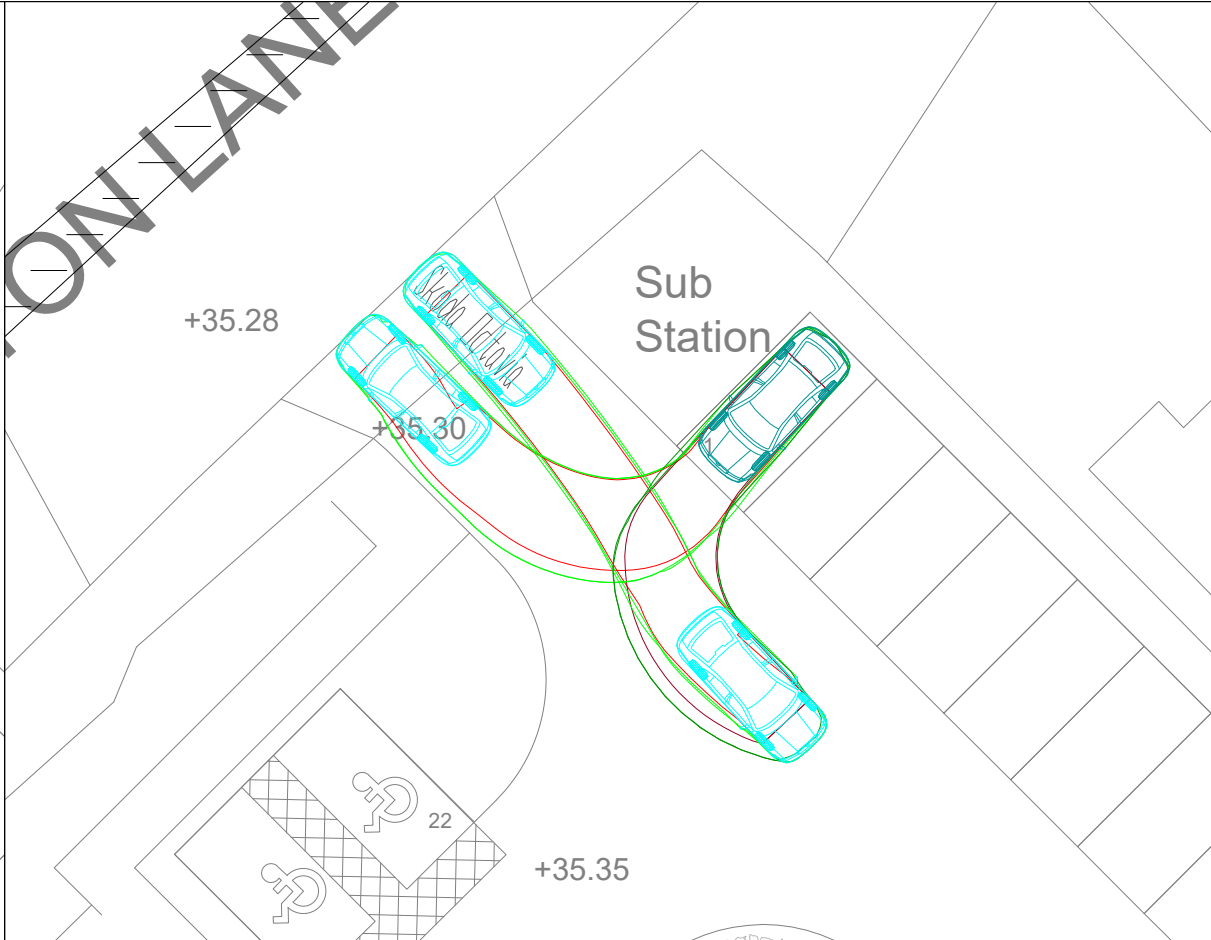
Project Number: 501.0008	Title: Accessibility Map		Checked By: HC	Checked Date: 02.02.23	Scale: N/A
Project Name: Huyton Lane, Huyton			Drawn By: JH	Drawn Date: 10.01.23	Drawing No: N/A

Appendix C

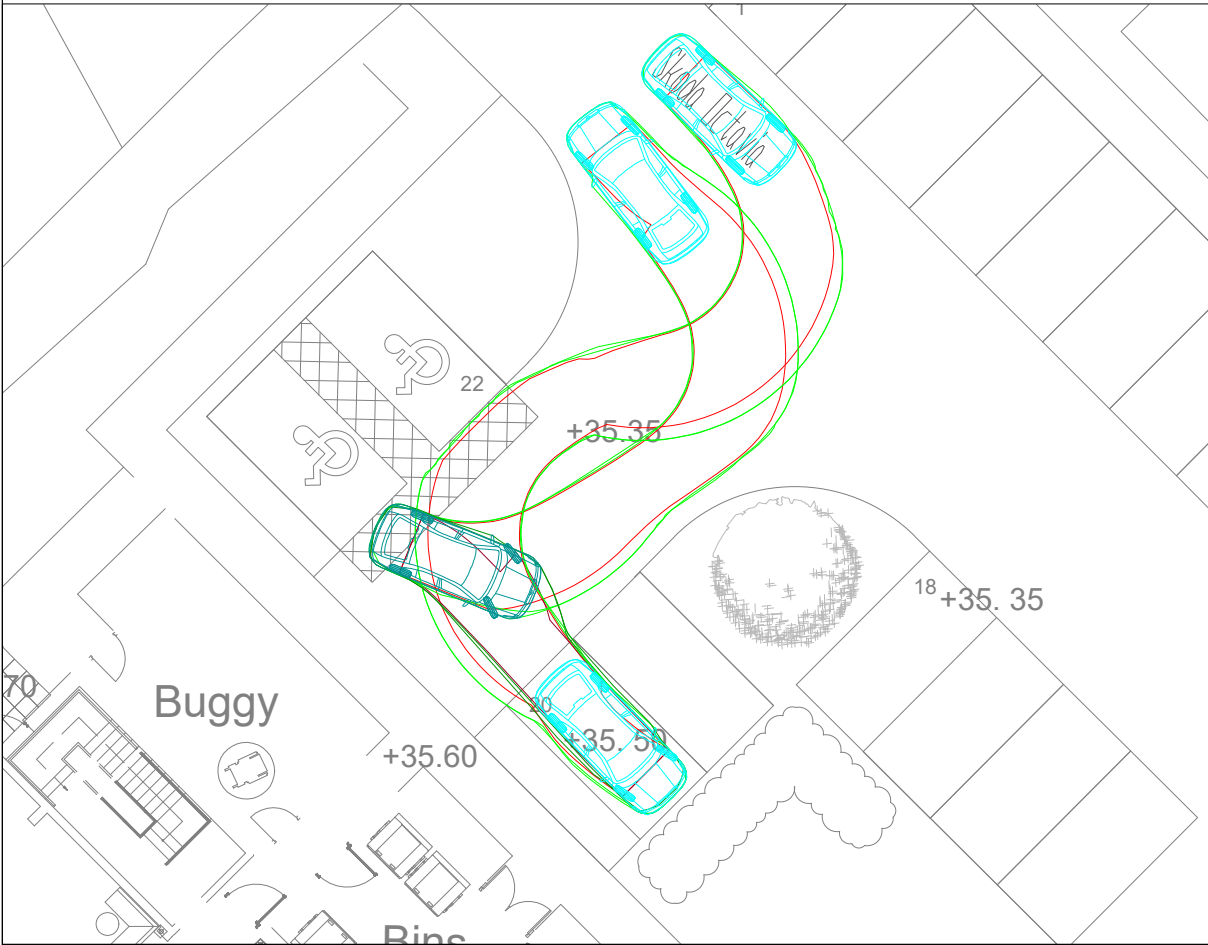




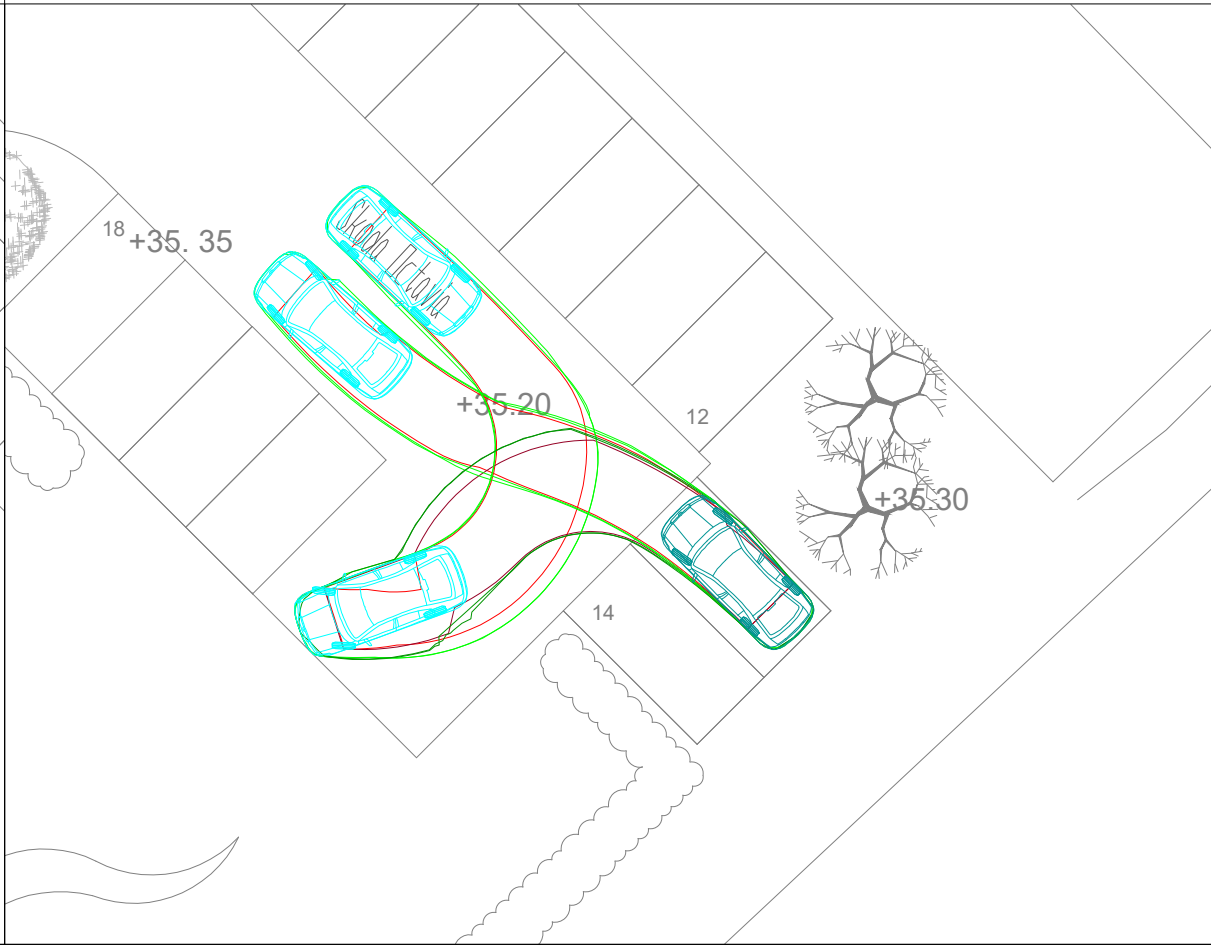
VEHICLE ACCESS TRACKING



VEHICLE PARKING 1



VEHICLE PARKING 2



VEHICLE PARKING 3

GENERAL NOTES

- THIS DRAWING IS INTENDED TO BE VIEWED IN COMBINATION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SERVICES AND SPECIALIST DRAWINGS AND SPECIFICATION.
- ANY VARIATIONS OR DISCREPANCIES BETWEEN THESE DRAWINGS IN TERMS OF DIMENSIONS OR DETAILS SHOULD BE DRAWN TO THE ATTENTION OF THE ARCHITECT AND/OR THE ENGINEER FOR CLARIFICATION.
- PAUL BASHAM ASSOCIATES ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF BACKGROUND INFORMATION PRODUCED BY THIRD PARTIES – THIS MUST BE TREATED AS INDICATIVE ONLY.
- ALL DIMENSIONS AND LEVELS ARE IN METRES. DO NOT SCALE THIS DRAWING, PRINT, PLOT OR DISK.
- THIS DRAWING SHOULD ONLY BE USED FOR CONSTRUCTION IF THE PROJECT PHASE IN THE TITLE FRAME BELOW IS SHOWN AS "CONSTRUCTION". PAUL BASHAM ASSOCIATES TAKE NO RESPONSIBILITY FOR CONSTRUCTION WORKS UNDERTAKEN TO DRAWINGS WHICH ARE NOT MARKED UNDER THIS PHASE.

VEHICLE PROFILE

Skoda Octavia	4.572m
Overall Length	1.769m
Overall Width	1.488m
Overall Body Height	0.249m
Min Body Ground Clearance	1.713m
Max Track Width	4.00s
Lock to lock time	5.100m
Kerb to Kerb Turning Radius	

NORTH

B	UPDATED SITE LAYOUT	30.01.23	JH	HC
A	UPDATED SITE LAYOUT	10.01.23	JH	HC
Rev	Description	Date	By	Chkd

Project Name
HUYTON LANE,
HUYTON

Project Phase
PRELIMINARY

Title
PRIVATE VEHICLE TRACKING

paulbasham

associates

Paul Basham Associates Ltd
Suite 4, Hitching Court, Blacklands Way, Abingdon Business Park,
Abingdon, OX14 1RG
01235 425460
info@paulbashamassociates.com www.paulbashamassociates.com

Client
McCARTHY STONE
Life, well lived

Checked By
HC

Checked Date
11.08.22

Drawn By
JH

Drawn Date
11.08.22

Scale
1:200

(AT A3 SIZE)

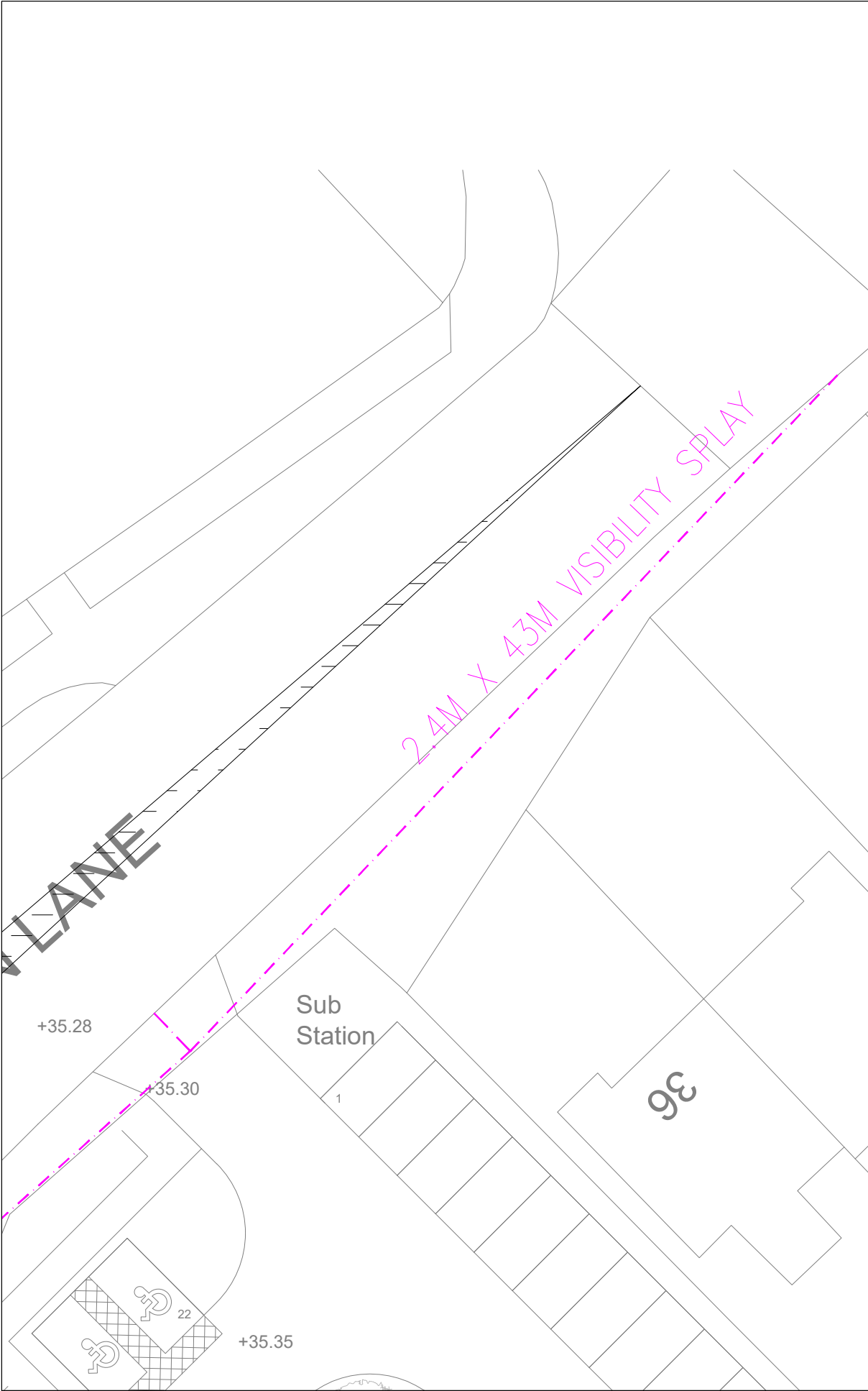
Client Drawing No.
-

PBA Drawing No.
501.0008.003

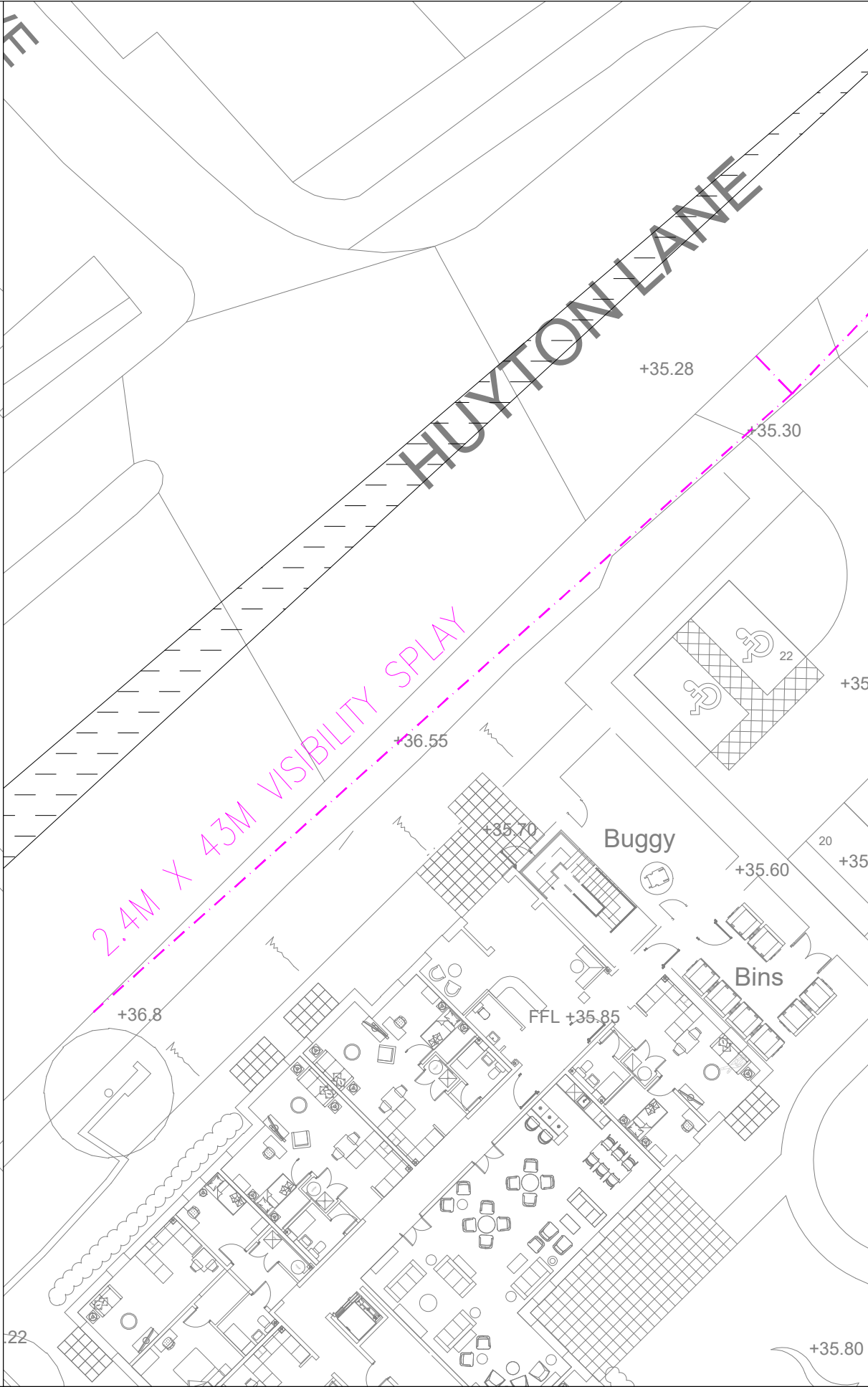
Revision
B

Appendix D





PRIMARY DIRECTION VISIBILITY SPLAY



SECONDARY DIRECTION VISIBILITY SPLAY

GENERAL NOTES

- THIS DRAWING IS INTENDED TO BE VIEWED IN COMBINATION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SERVICES AND SPECIALIST DRAWINGS AND SPECIFICATION.
- ANY VARIATIONS OR DISCREPANCIES BETWEEN THESE DRAWINGS IN TERMS OF DIMENSIONS OR DETAILS SHOULD BE DRAWN TO THE ATTENTION OF THE ARCHITECT AND/OR THE ENGINEER FOR CLARIFICATION.
- PAUL BASHAM ASSOCIATES ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF BACKGROUND INFORMATION PRODUCED BY THIRD PARTIES – THIS MUST BE TREATED AS INDICATIVE ONLY.
- ALL DIMENSIONS AND LEVELS ARE IN METRES. DO NOT SCALE THIS DRAWING, PRINT, PLOT OR DISK.
- THIS DRAWING SHOULD ONLY BE USED FOR CONSTRUCTION IF THE PROJECT PHASE IN THE TITLE FRAME BELOW IS SHOWN AS "CONSTRUCTION". PAUL BASHAM ASSOCIATES TAKE NO RESPONSIBILITY FOR CONSTRUCTION WORKS UNDERTAKEN TO DRAWINGS WHICH ARE NOT MARKED UNDER THIS PHASE.



NORTH

B	UPDATED SITE LAYOUT	20.01.23	JH	HC
A	UPDATED SITE LAYOUT	10.01.23	JH	HC
Rev	Description	Date	By	Chkd

Project Name	HUYTON LANE, HUYTON	
Project Phase	PRELIMINARY	

Title	VISIBILITY SPLAYS	
-------	-------------------	--



Client

McCARTHY STONE

Life, well lived

Checked By	Checked Date	Scale
HC	11.08.22	1:250
Drawn By	Drawn Date	Client Drawing No.
JH	11.08.22	-

PBA Drawing No.	Revision
501.0008.001	B

(AT A3 SIZE)

Appendix E



Fact File 5. – Car Ownership of Residents and Car Parking Provision

The results given below are based on the responses from 238 apartments where the residents gave their car ownership. The data is spread across 9 developments throughout the UK. These developments are listed in the Introduction to this report.

Current Cars Per Apartment (i.e. at time of survey)

The number of cars owned by the residents of one and two bedroom apartments are given in Table FF5a below:-

Table FF5a Cars per Apartment

	One Bedroom Apartments	Two Bedroom Apartments	Combined
Cars per Apartment	0.490	0.783	0.592

Please read the remainder of this fact file before using this data!

Car Ownership by Age Group

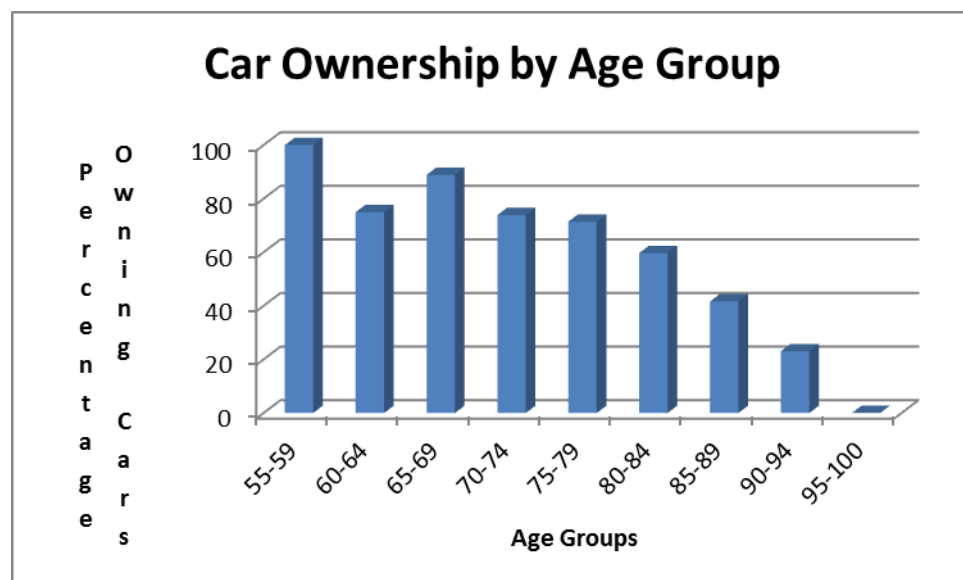
The results given below are based on the responses from 195 apartments, where the residents gave both their age and their car ownership. The data is spread across 9 developments throughout the UK. These developments are listed in the Introduction to this report.

Chart FF5 below shows the percentage of residents who own cars in each of the age groups from 55 to 100, shown in 5 year bands. Where the car is owned by a couple, the age of the younger of the two has been used.

It can be seen that in the age group 55 to 59 all residents owned a car i.e. 100%, declining to 0% owning a car for those over 95 years of age.

As indicated in Fact File 4, the peak age of entering Category II type developments is between 75 and 79 years of age. For this age group, just less than 71% of residents would be expected to be car owners.

Chart FF5a – Car Ownership related to Age of Residents



The car ownership levels shown in Chart FF5a are as follows:-

100% of residents in the 55-59 age group own a car
75% of residents in the 60 - 64 age group own a car
88.89% of residents in the 65 - 69 age group own a car
73.91% of residents in the 70 - 74 age group own a car
71.42% of residents in the 75 - 79 age group own a car
59.70% of residents in the 80 - 84 age group own a car
41.67% of residents in the 85 – 89 age group own a car
23.08% of residents in the 90 - 94 age group own a car
0% of residents in the 95 - 100 age group own a car.

Note :- It should be noted that there were only a small number of persons in the age groups at each end of the scale i.e. 1 in the 55-59 age group, 3 in the 60-64 age group, 3 in the 90-94 age group and 0 in the oldest age group.

Driving Licences

One of the reasons that car ownership declines with the age of residents is that some have given up their licences, either voluntarily or as a result of action by the DVLA. From the age of 70, all licence owners have to declare, every three years, that they are able to drive safely

It has often been suggested that, in the past, there was a significant difference between the sexes in terms of who might drive, with men being more likely to do so than women, although it is also sometimes suggested that the differences are reducing significantly. The current situation in recent Retirement Living developments has been ascertained by the questionnaire survey and is shown in Table FF5b, below.

Table FF5b – Holding of Driving Licences

	Male Residents	Female Residents
Once held a driving licence	88.8%	74.4%
Currently hold driving licence	69.6%	46.8%
Never held a driving licence	11.2%	25.6%

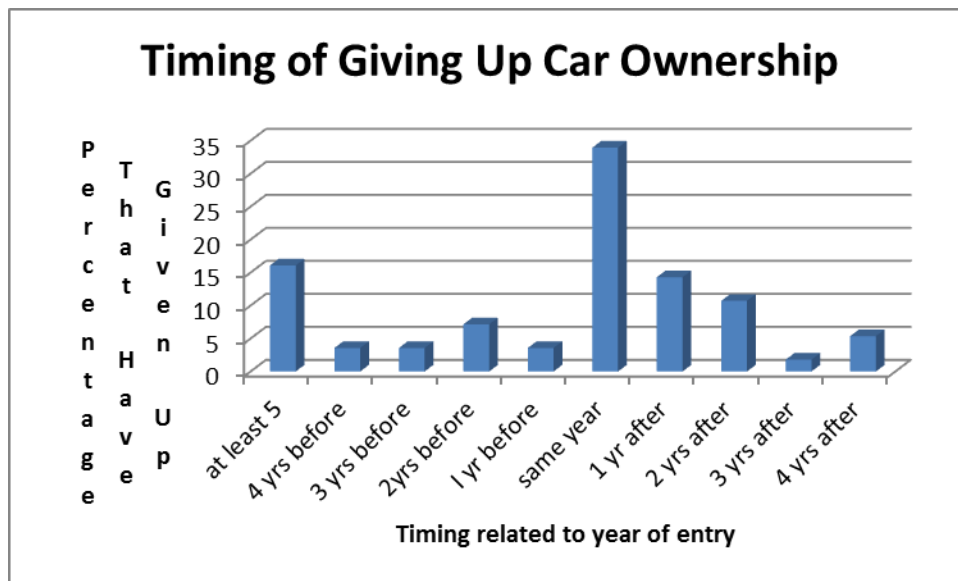
This shows that nearly 90% of the men responding to the survey questionnaire once held a driving licence, whereas only some 74% of the women responding did so. It also shows that some 22% of the men have given up their licences, whereas 37% of the women have done so. Given that there are significantly more women than men resident in these developments, the likelihood of a resident giving up driving is significant.

Giving Up Car Ownership

Studies in the past have shown that there is a clear link between entering sheltered housing and giving up car ownership. This survey confirms this to be the case. Chart FF5b, below, shows the timing of residents giving up their cars, in relation to the timing of entry to their apartments.

As the developments surveyed were recent ones, there is no data for the period 4 or more years after entry. However, from previous evidence, it is likely that there will be a steady number of residents deciding that car ownership is no longer appropriate.

Chart FF5b Timing of giving up Car Ownership
– expressed as percentage of total that have given up ownership.



This shows that some 16% of residents had given up their cars 5 or more years before entry to this form of housing.

In the period closer to entrance the percentage giving up 4 years before entry was 3.6%, 3 years before entry was some 3.6%, 2 years before entry was 7.1%, and 1 year before entry was 3.6%.

In the year of entry, this rises to 33.9%.

A significant number of residents (14.3%) decided to give up car ownership in the year after entry and a further 10.7% in the second year after entry.

It should be noted that the survey concentrated on recent developments, where car parking provision is normally higher than developments undertaken in previous years and where residents have to purchase parking permits, if they wish to park within the development. Therefore, the number of residents who had lived in the development for 2, 3 or more years is very limited. Indeed there were none who had lived in the development for 4 or more years. It would be expected that some residents would give up their cars over the remaining of the time living in the developments.

Reasons for Giving Up Car Ownership

The questionnaire survey sought the reasons residents had for giving up car ownership. The following table outlines the reasons given:-

Table FF5c – Reasons for Giving Up Car Ownership

Reason	Number	Percentage
Age, including safety concerns, tired of driving, lack of confidence, DVLA requirement	19	35.8%
Health reasons, including poor eyesight and slow reactions	14	26.4%
No need, including use of good public transport	10	18.8%
Death of spouse	3	5.7%
Finacial reason	3	5.7%
(No reason given)	4	7.5%
Total	53	99.9%

Car Ownership on Entry to Category II Type Development

At the time of the survey the car ownership level is indicated in Table FF5a, above.

However, the survey shows that some of residents have given up car ownership since entering the development. Therefore these should be added to give a true picture of the level of car ownership upon entry. It is accepted that the number of car owners will gradually decline over the years following the opening of the development.

The following Table, FF5d, shows the actual car ownership of residents when entering this form of housing.

Table FF5d Car Ownership Levels for One and Two Bedroom Apartments

Apartment size	Current Ownership – at time of survey	Cars given up between entry and survey date	Total cars	Responses	Car Ownership rate – cars per apartment
One Bed	76	13	89	155	0.574
Two Bed	65	4	69	83	0.831
Totals	141	17	158	238	0.664

This table shows that residents of the larger apartments are significantly more likely to own a car. Indeed their car ownership rate at the time of entry to the development is some 1.45 times that of the smaller apartments.

Warnings

1) There is a very significant variation in the car ownership rates for 1 and 2 bed apartments in the 9 surveyed developments. For 1 bed units the car ownership rates vary from 0.286 to 0.667. For the larger apartments the range is 0.5 to 1.25. For one development, the car ownership rate for one bedroom apartments exceeded that for two bedroom units. This makes it difficult to derive a car ownership model for residents that would accurately predict the car ownership in any specific future development.

2) It is possible that car owners may be more active than other residents and so more likely to respond to the questionnaires, thereby given a higher car ownership rate for each category of apartment. It is also possible that there is a difference in the likelihood of male and female residents to complete the questionnaires. If men are more likely to do so and if men are more likely to be car owners, then this could also exaggerate the car ownership levels indicated by the survey.

For comparison purposes, the car ownership rates derived in the final column of Table FF5b above have been applied to the developments included in the survey to ascertain how the provision might have changed, if these rates had been applied. The results are shown in Table FF5e below.

Table FF5e – Comparison of Actual Provision and Provision Using Derived Ownership Rates

Development	1 bed Apart- ments	2 bed Apart- ments	Suggested Provision for 1 bed Units (0.574)	Suggested Provision for 2 bed units (0.831)	Suggested Total provision	Actual Provision for Residents	Difference (Suggested minus Actual)
Haven Court, Hythe	18	18	10.33	14.96	25.29	17	8.29
Salmon Court, Wellesbourne	13	8	7.11	6.65	13.76	17	-3.24
Jowlett Court, Bradford	41	16	23.53	13.30	36.83	29	7.83
Victory Court, Waterlooville	26	12	14.92	14.44	29.36	22	7.36
Hanna Court, Wilmslow	30	10	17.22	8.31	25.53	22	3.53
Lauder Court, Hamilton	43	21	24.68	17.45	42.13	36	6.13
Isabel Court, Exeter	34	16	19.52	13.30	32.82	19	13.82
Liberty Court, Chesham	35	11	20.09	9.14	29.23	12	17.23
Middleton Court, Porthcawl	35	25	20.09	20.78	40.87	33	7.87
Totals	275	137	157.49	118.33	275.82	207	68.82

This shows that in all but one of the developments, the provision would have been significantly higher if the suggested resident parking requirement, as derived in Table FF5d, were to be applied. Overall, the suggested provision would indicate a provision of some 33% more spaces than have been provided. Clearly, unless there is a very significant number of car owners parking outside the developments, this does indicate that the survey data obtained from the questionnaires may be biased. This is likely to result, at least in part, from a higher proportion of car owners responding than non car owners.

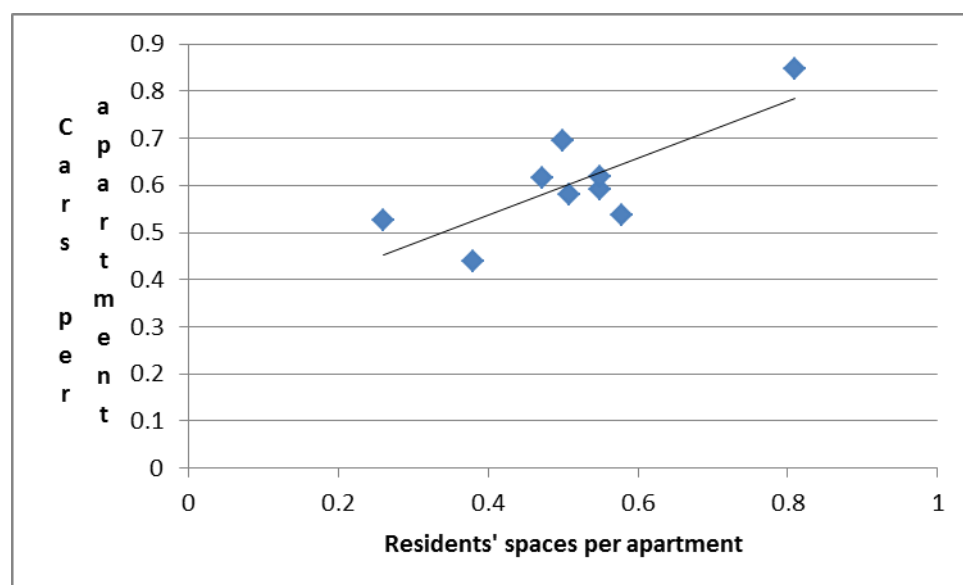
Parking Location

The questionnaire survey indicates that all but a very few residents park their cars within the development. The survey data indicates that 135 of the residents parked within the developments compared to just 4 who parked elsewhere. One of these parked in a public car park and the other three parked on the street. This shows that over 97% of residents parked within the developments.

The Influence of Parking Provision on Car Ownership

In order to assess the impact of the car parking provision on the car ownership level, an analysis has been undertaken. The following chart (FF5c) shows a plot of the cars per apartment against the car parking provision for residents.

Chart FF5c The Relationship between Car Ownership (per apartment) and the level of provision made.



Regression analysis of this data suggests that some 61.5% of the variation in the car ownership levels is explained by the number of parking spaces provided.

Variations in Car Ownership Rates

In “Warning 1”, above, it is noted that there is a very significant variation in the car ownership rates of the developments surveyed. Whilst this could be caused by a simple variation in human behaviour, it is important to investigate if there are any other causal factors that could usefully be taken into account when determining the car parking provision that needs to be made.

The guidance in the National Planning Policy Framework indicates that, in preparing car parking standards, there are five factors that need to be considered. These are:-

the accessibility of the development

the type, mix and use of development

the availability of and opportunities for public transport

local car ownership levels, and

an overall need to reduce the use of high-emission vehicles”

1. Accessibility of Development

It is difficult to quantify accessibility. A study of a similar form of accommodation showed that it is not possible to find a significant relationship between car ownership and simple and easily determined measures of assessment.

2. The type, mix and Use of the development

This factor has already been considered by surveying the particular development type and taking into account the mix of different apartment types.

3. The availability of and opportunities for public transport

As with general accessibility, it is difficult to derive a measure of this accessibility that would allow the car ownership, and subsequent requirement for parking spaces, to be determined.

4. Local Car Ownership

It would normally be assumed that car ownership levels in Retirement Living developments would be higher in areas where car ownership amongst the elderly in the area is higher than the average.

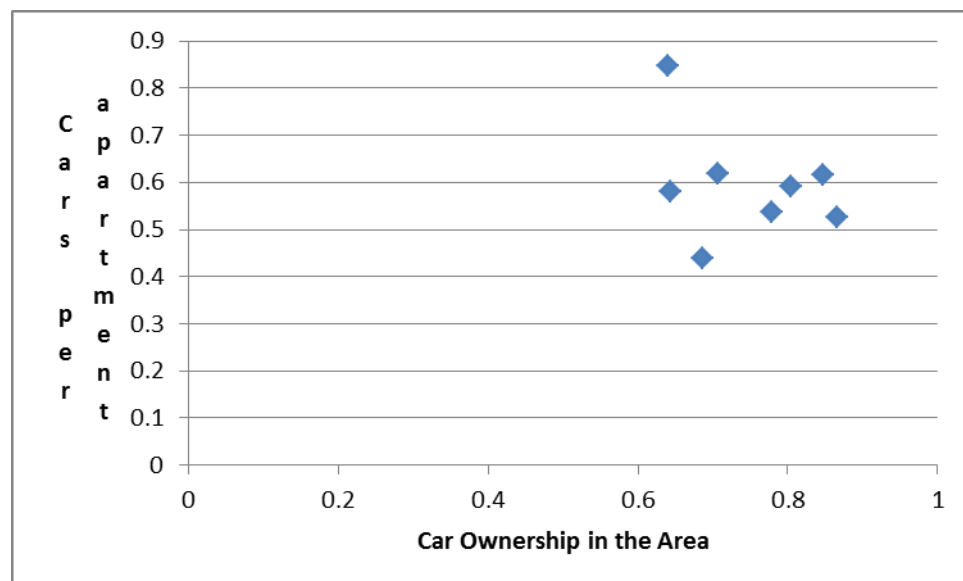
Given that the average entry age for Retirement Living developments is between 75 and 80 years of age, this analysis will use the car ownership levels from the National Census data for this age group. The data that is readily available only includes data for local authority areas in England and Wales and so this analysis will only consider the developments in these countries.

Table FF5i shows the data to be used in this analysis.

Table FF5i – Car Ownership in Retirement Living developments and Surrounding Areas

Development	Location	Overall Car Ownership Rate	ONS data- in age group 75-79 owning a vehicle
Haven Court,	Hythe, New Forest	0.615	0.848
Salmon Court	Wellesbourne	0.846	0.640
Jowett Court	Bradford	0.581	0.644
Victory Court	Waterlooville	0.538	0.778
Hanna Court	Wilmslow	0.591	0.804
Isabel Court	Exeter	0.438	0.686
Liberty Court	Chesham	0.526	0.866
Middleton Court	Porthcawl	0.619	0.707

Chart FF5f – Car Ownership in Developments Compared to Car ownership Amongst the Elderley of the Surrounding Area



When plotted, as shown in Chart FF5f, below, there does not appear to be any realistic causal relationship between car ownership levels in development and in the surrounding area.

A regression analysis of this data indicates a very low level of confidence that there is any such relationship.

Traffic Count Data

The traffic surveys undertaken allowed the accumulation of vehicles parked at the developments to be assessed. Details of the parking at individual developments can be seen in the Appendices to this report.

The following table indicates the peak parking demand for each of the surveyed developments, along with the peak number of vehicles parked per apartment and the number of parking spaces provided. Given that the surveys included any vehicles parked outside the site (within view of the survey staff), where one or more of the occupiers entered or left the development, it is possible that the peak parking could exceed the number of spaces provided.

Table FF5j Peak Parking Demand

Development	Apartments	Date of Survey	Peak Demand	Peak demand – Spaces per Apartment	Provision of spaces
Haven Court, Hythe	36	Tuesday, 28 April 2015	24	0.667	17
Haven Court, Hythe	36	Saturday,	19	0.528	17
Haven Court, Hythe	36	Sunday, 17 May 2015	22	0.611	17
Hanna Court, Wilmslow	40	Monday, 1 August 2016	14	0.350	18
Eadhelm Court, Edenbridge	34	Wednesday, 29 April 2015	23	0.676	19
Pagham Court, Bognor	36	Wednesday, 8 July 2015	20	0.556	14
Lauder Court, Hamilton	64	Friday, 29 July 2016	21	0.328	45
Middleton Court, Porthcawl	60	Tuesday, 26 July 2016	26	0.433	32
Totals (excluding Saturday and Sunday data)	270		128	0.474	145

This data shows that in some instances the peak demand was accommodated within the development and in others the parking exceeded to provision. In this case the “overflow” parking is either accommodated within the site, but not in the designated spaces, or on the highway nearby, where this is permitted and available.

CONCLUSION

From the assessment above and in another study of car ownership/parking at Retirement Living developments, it has not been possible to find any significant relationship between car ownership and the factors included in the analysis, which are based on the guidance in the Planning Policy Framework.

However, the questionnaire survey data for the 9 developments surveyed shows that in 6 of these developments none of the car owners parked their vehicle off the site. (Given that not all residents responded to the survey, there could possibly be other instances where off-site parking occurred, but the number would appear to be very low).

Recommendation

In the developments surveyed by questionnaire, the overall car ownership rate at the time of entry to the developments was found to be 0.664 cars per apartment. However, the possible bias in the survey data, with a higher proportion of car owners responding than non-car owners, this car ownership level has to be adjusted to reflect this. The assessment above suggests that the realistic level is some 33% below this. This would indicate an average car parking provision of 0.45 spaces per apartment for residents.

The average proportion of 2 bedroom apartments was approximately 33%. Given the apparent higher car ownership in two bedroom apartments, consideration should be given to increasing the car parking provision where the proportion of two bedroom units is significantly above the 33% level. A slightly reduced provision could be made where there is a significantly lower percentage of two bedroom units.

One of the objectives of introducing car parking permits for residents was to control the number of cars owned at a level that could be accommodated within the development. It appears that this is generally successful.

Blue Badges

The questionnaire survey indicates that 68 residents in the 242 apartments were in possession of a "blue badge" allowing these residents to use disabled parking spaces and to park on yellow lines in certain instances. Not all of these residents owned cars, but are able to use their badges when being driven by others.

Fact File 6. – Visitor Parking

Irrespective of any other consideration, it is clear that residents believe that there is a need to provide car parking for visitors. The questionnaire survey indicates that some 90% (207 out of 231) of residents considered visitor parking to be necessary. A minority qualified their answers that this should not be at the expense of the residents' provision. This fear may have been in the mind of those giving the 24 negative responses.

This would suggest that making some provision for the parking of visitors in developments would be likely to be a welcome selling point for the majority of residents, whether they be car owners or not.

A second reason for considering the provision of visitor parking spaces is the need to ensure that residents do not become isolated. Where there are significant problems in finding off-site parking spaces, some visitors may be deterred from undertaking visits. This may be more of an issue in instances where the residents have not moved into developments close to their relatives and friends, such as in costal developments where the seaside location is a major consideration in the move.

Furthermore, it will be seen for the survey data in Fact File 7, below, that significantly greater numbers of trips to and from the developments are undertaken by visitors than by residents. These results are summarised in Table FF6a, below.

Table FF6a Visitor Movements in Relation to Resident Movements

Development	Day of Week	Resident Generation Rate – (Movements/ Apartment)	Visitor+ Staff Generation Rate – (Movements/ Apartment)	Ratio – Visitor/Staff movements to Residents' Movements
Haven Court, Hythe	Tuesday	0.58	1.31	2.26
	Saturday	0.5	1.53	3.06
	Sunday	0.56	1.25	2.23
Hanna Court, Wilmslow	Monday	0.5	1.075	2.15
Eadhelm Court, Edenbridge	Wednesday	0.529	1.147	2.16
Paghan Court, Bognor	Wednesday	0.92	2.0	2.17
Lauder Court, Hamilton	Friday	0.28	0.58	2.07
Middleton Court, Porthcawl	Tuesday	0.68	0.47	0.69

Note – The only development where the visitor movements recorded were less than those of visitors is at Middleton Court, Porthcawl. There is no clear reason why this is the case. One possibility is that, as this development is located on the sea front, the residents could have moved here to be beside the sea and so moved away from many of their friends and relatives, who would, therefore, not be able to visit on a frequent basis.

A further possibility is that some visitors had to park away from the development, due to difficulties of parking at the development in this seaside location. If this is the case, a high level of pedestrian movement would be expected. This will be assessed in Fact File no.9.

Whilst the number of visitor movements is significantly greater than those of residents, it should be noted that one visitor space can normally be used by several visitors during the day, whereas residents can occupy their spaces for the whole of the day. The survey data for all of the above developments shows that a number of residents do not undertake any trips by car on the survey day.

The number of visitor cars parked during the survey days can be obtained from the traffic count data. This assessment is on the basis that, unless there is any indication to the contrary, the vehicles parked in the car park at 7 a.m. are residents' cars.

The following table, Table FF6b, shows the peak demand for visitor parking at each of the surveyed developments (by means of traffic counts).

Table FF6b Visitor Parking Demand

Development	Day of Week	Peak Visitor Parking Number	Peak Visitor Parking Rate – Vehicles per apartment	Percentage of 12 hour day for this demand
Haven Court, Hythe (36 aps)	Tuesday	6	0.167	1.11% (8 mins)
	Saturday	6	0.167	1.25% (9 mins)
	Sunday	5	0.139	2.5% (18 mins)
Hanna Court, Wilmslow (40 aps)	Monday	4	0.100	0.83% (6 mins)
Eadhelm Court, Edenbridge (34 aps)	Wednesday	5	0.147	1.11% (8 mins)
Pagham Court, Bognor (36 aps)	Wednesday	10	0.333	0.56% (4 mins)
Lauder Court, Hamilton (64 aps)	Friday	5	0.078	1.11% (8 mins)
Middleton Court, Porthcawl (60 aps)	Tuesday	3	0.050	0.138% (1 min)
Totals (270 aps)		33	0.122	

The total of the peak parking numbers is the above table (taking only the maximum number at Haven Court, where the surveys were undertaken on a number of days) is 33 from 270 apartments. This would indicate an average rate of 0.122 parked visitor vehicles per apartment or 1 space for every 8.18 apartments.

Detailed observation of the survey data shows that in a number of instances the peak demand coincides with visits by taxis or delivery vehicles. In many instances these vehicles would not need or use a visitor parking space, but for taxis would simply stop outside the entrance to pick up or drop off a resident and for delivery vehicles, such as parcel post etc., would stop by the entrance to drop off the parcel.

In considering the appropriate provision, it is necessary to take into account the following guidance in the National Planning Policy Framework, if one interprets the vehicles referred to as including normal petrol or diesel powered cars:-

“an overall need to reduce the use of high-emission vehicles”

On this basis, it could be argued that the provision should not guarantee a visitor a parking space at peak times so as to encourage those who have the viable option, to use public transport. It can also be argued that no on-site provision should be made for staff. However, if provision has to be made for staff, only one space would be required.

Experience indicates that there are many cases where the company would not wish to provide any visitor parking. This allows all the parking spaces to be allocated to residents. However, there are instances where the lack of suitable off-site parking would indicate a need for some on-site provision and also some planning/highway authorities wish to impose a planning condition that would result in the allocation of some spaces for visitors, possibly including staff.

Recommendation

The provision of visitor parking should be considered on a case by case basis. On-site provision should normally be made for visitor parking at the rate of 0.1 spaces per apartment UNLESS it can be demonstrated that there is sufficient off-site provision on nearby roads or in nearby public car parks. A minimum of 1 disabled visitor parking space should be provided within the development.

Fact File 7. – Weekday Traffic Generation

The 12 hour traffic generation data for the 6 surveyed developments is given in Table FF7a, below. This is the data obtained from the weekday surveys only.

Table FF7a Traffic Generation (Vehicle Movements per 12 hour day – 0700-1900)

Development	Date of Survey	No of Apartments	Vehicle Movements (12 Hr)	Generation per apartment
Haven Court, Hythe	Tuesday 28 April 2015	36	68	1.89
Hanna Court, Wilmslow	Monday 1 August 2016	40	63	1.58
Eadhelm Court, Edenbridge	Wednesday 29 April 2015	34	56	1.65
Pagham Court, Bognor	Wednesday 8 July 2015	36	107	2.92
Lauder Court, Hamilton	Friday 29 July 2016	64	55	0.86
Middleton Court, Porthcawl	Tuesday 26 July 2016	60	69	1.15
Totals		270	418	1.55

There were no recorded visits by heavy goods vehicles. However, the occasional visit, such as that by the refuse collection vehicle must be expected.

The hourly vehicle movements are derived in the following table FF7b.

For the purposes of this table the developments are labelled as follows:

A – Haven Court, Hythe

B – Hanna Court, Wilmslow

C - Eadhelm Court, Edenbridge

D – Pagham Court, Bognor

E – Lauder Court, Hamilton

F – Middleton Court, Porthcawl

Table FF7b – Hourly movements

Time Period	A		B		C		D		E		F		Totals	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
0700 -0800	0	0	1	1	2	1	0	0	0	1	1	2	4	5
0800-0900	0	1	3	1	1	1	1	3	2	1	1	1	8	8
0900-1000	3	2	3	5	2	4	8	9	2	1	3	6	21	27
1000-1100	4	5	4	4	4	4	10	5	3	4	3	2	28	24
1100-1200	6	4	1	1	6	4	10	9	2	3	5	5	30	26
1200-1300	7	4	4	5	5	6	8	8	5	5	6	8	35	36
1300-1400	5	6	4	4	0	1	3	3	3	2	1	2	16	18
1400-1500	1	2	4	3	1	1	1	2	2	1	2	1	11	10
1500-1600	1	2	3	5	1	2	4	4	2	3	4	7	15	23
1600-1700	3	5	0	0	4	2	3	2	5	4	5	1	20	14
1700-1800	2	2	2	2	1	0	4	4	0	2	2	0	11	10
1800-1900	2	1	1	2	2	1	1	3	1	1	0	1	7	9
Totals	34	34	30	33	29	27	53	52	27	28	33	36	206	210

Based on the final two columns of Table FF7b, the following data can be obtained, as shown in Table FF7c, below. This shows the percentage of the arrivals taking place in each hour along with the percentage of departures.

Table FF7c - Percentage hourly splits

Time period	Arrivals	Departures	% Arrivals	% Departures
0700-0800	4	5	1.94	2.38
0800-0900	8	8	3.88	3.81
0900-1000	21	27	10.19	12.86
1000-1100	28	24	13.59	11.43
1100-1200	30	26	14.56	12.38
1200-1300	35	36	16.99	17.14
1300-1400	16	18	7.77	8.57
1400-1500	11	10	5.34	4.76
1500-1600	15	23	7.28	10.95
1600-1700	20	14	9.71	6.67
1700-1800	11	10	5.34	4.76
1800-1900	7	9	3.40	4.28
Totals	206	210	99.99	99.99

Traffic Generation – 1900 - 0700

The current surveys did not include observing the traffic generation between 7 p.m. and 7 a.m. The best available information is based on a survey at a single development at Swanland, near Hull, undertaken some years ago. This suggested that the 24 hour generation could be obtained by multiplying the 12 hour generation, between 7 a.m. and 7 p.m. by 1.098, i.e. increasing the daytime generation by about 10%. The survey also indicated that there were no vehicle movements between the hours of 10 p.m. and 7 a.m.

Residents and Visitor Traffic Generation

On the basic assumption that all vehicles parked within the site at 7 a.m. are likely to be owned by residents, unless there is a clear indication to the contrary, it is possible to differentiate between vehicle movements made by residents' cars and those of others, which can be described as visitors. This description is used to include staff, servicing vehicles, deliveries, taxis, ambulances, etc. and visits by relatives and friends.

Table FF7d below shows the split between resident and visitor traffic movements. It can be seen that residents undertake significantly fewer vehicle movements than visitors.

Table FF7d Visitor Movements in Relation to Resident Movements

Development	Day of Week	Resident Generation Rate – (Movements/ Apartment)	Visitor + Staff Generation Rate – (Movements/ Apartment)	Ratio – Visitor/Staff movements to Residents' Movements
Haven Court, Hythe	Tuesday	0.58	1.31	2.26
	Saturday	0.5	1.53	3.06
	Sunday	0.56	1.25	2.23
Hanna Court, Wilmslow	Monday	0.5	1.075	2.15
Eadhelm Court, Edenbridge	Wednesday	0.529	1.147	2.16
Paghan Court, Bognor	Wednesday	0.92	2.0	2.17
Lauder Court, Hamilton	Friday	0.28	0.58	2.07
Middleton Court, Porthcawl	Tuesday	0.68	0.47	0.69

It can be seen that for the majority of the developments, visitors undertake some 2 to 3 times as many vehicle movements as residents. The major exception to this is Middleton Court, Porthcawl. The reason for this difference is unclear. However, there are two possible, or likely, options.

Option 1. Some residents wish to live in a seaside resort, close to the sea. This may mean that they are moving away from their established links with friends and family, rather than moving closer to them, which is a common reason for moving to a specific development. This may result in residents receiving fewer visits from relatives and long-term friends.

Option 2. Although there is on-street parking outside Middleton Court, it is possible that the availability of spaces for use by visitors is very limited, due to the pressure on parking usage on roads just a short distance away from the sea front. If this is the case, a higher level of pedestrian movements would be expected generated by visitors who have had to park some distance away from the development.

The survey does shows a higher than average generation of pedestrian movements, which would tend to support this second possible explanation. If this is the reason, the real vehicle generation would be likely to be somewhat higher than the observed level, due to some of the vehicles generated parking away from the site and therefore away from the view of the survey staff. However, it is also possible that a higher than average pedestrian generation could be due to more residents undertaking recreational walks, due to the attractiveness of the waterside.

Motor Cycle Movements

The surveys do not record a single trip by motorcycle to or from the developments.

It is also of note that no resident indicated that they owned any motorcycle.

Fact File 8. – Weekend Traffic Generation

In order to ascertain if the weekend traffic generation is significantly higher than that during weekdays, the development in Hythe near Southampton (Haven Court) was surveyed over the 12 hour period starting at 7 a.m. on both a Saturday and a Sunday.

The following table, FF8a, gives the comparable trip generation rates for the three survey days.

Table FF8a Comparable trip rates – weekday and weekend (Haven Court, Hythe)

Day	Resident Generation Rate	Visitor Generation Rate	Overall Generation Rate
Tuesday 28 April 2015	0.58	1.31	1.89
Saturday 2 May 2015	0.5	1.52	2.02
Sunday 17 May 2015	0.56	1.25	1.81

The full data is reproduced in Appendix II to this report.

This suggests that a Saturday may well have a similar, albeit slightly increased generation, when compared to the weekday generation but that the Sunday is a little quieter.

However, the variations are not significant, with both weekend days having a total generation with 10% of the Tuesday generation. This difference may well be within the daily differences and could be influenced by such factors as the weather.

Fact File 9. – Pedestrian and Other Non-Vehicle Movements.

Pedestrian Movements

The following table gives the number of pedestrian movements at each of the developments surveyed, along with the trip rates per apartment.

Table FF9a Pedestrian Movements per 12 hour day - weekdays

Development	Date of Survey	Pedestrian Movements	Pedestrian Movement Rate (Movements per apartment)
Haven Court, Hythe (36)	Tues 28 April 15	33	0.92
	Sat 2 May 15	40	1.11
	Sun 17 May 15	28	0.78
Hanna Court, Wilmslow (40)	Mon 1 Aug 2016	36	0.90
Eadhelm Court, Edenbridge(34)	Wed 29 April 15	67	1.97
Paghan Court, Bognor (36)	Wed 8 July 15	33	0.92
Lauder Court, Hamilton (64)	Fri 29 July 15	27	0.42
Middleton Court, Porthcawl (60)	Tues 26 July 16	116	1.93
Total (342)		380	1.11

This indicates an average of 1.11 pedestrian movements per apartment per day. As a pedestrian trip involves 2 movements, i.e. one in each direction, this would suggest approximately 1 pedestrian trip for every 1.8 apartments per day.

Cycle Movements

Given the nature of the developments, it would be expected that the use of cycles by residents would be very low. This expectation is supported by the results of the questionnaire survey. This showed that there were only 7 cycles owned by the residents of 242 apartments. This is an ownership rate of 0.0289 cycles per apartment, i.e. approximately 1 cycle per 35 apartments.

The following table gives the number of cycle movements at each of the developments surveyed, along with the trip rates per apartment.

Table FF9b Cycle Movements per 12 hour day - weekdays

Development	Date of Survey	Cycle Movements	Cycle Movement Rate (Movements per apartment)
Haven Court, Hythe (36)	Tues 28 April 15	4	0.11
	Sat 2 May 15	0	0.00
	Sun 17 May 15	2	0.06
Hanna Court, Wilmslow (40)	Mon 1 Aug 2016	0	0.00
Eadhelm Court, Edenbridge(34)	Wed 29 April 15	0	0.00
Paghan Court, Bognor (36)	Wed 8 July 15	2	0.06
Lauder Court, Hamilton (64)	Fri 29 July 15	0	0.00
Middleton Court, Porthcawl (60)	Tues 26 July 16	0	0.00
Total (342)		8	0.023

This shows that even when visitor cycle movements are included, the number of cycle movements to and from the developments is extremely low. This equates to 1 cycle movement per 43.5 apartments. Given that a trip involves 2 movements, one in and one out of the development, this suggests only 1 visit per day for every 87 apartments.

Wheelchair Movements

The questionnaire survey shows that 2 wheelchairs are owned by the residents of 242 apartments, at an average rate of 0.008 wheelchairs per apartment, or 1 wheelchair per 121 apartments.

The traffic counts did not record any external movements by wheelchair.

Buggy Movements

The questionnaire survey shows that 19 buggies are owned by the residents of 242 apartments, at an average rate of 0.079 wheelchairs per apartment, or 1 wheelchair per 12.7 apartments.

The following table gives the number of buggy movements at each of the developments surveyed, along with the trip rates per apartment.

Table FF9c Buggy Movements per 12 hour day - weekdays

Development	Date of Survey	Buggy Movements	Buggy Movement Rate (Movements per apartment)
Haven Court, Hythe (36)	Tues 28 April 15	2	0.056
	Sat 2 May 15	2	0.056
	Sun 17 May 15	0	0
Hanna Court, Wilmslow (40)	Mon 1 Aug 2016	0	0
Eadhelm Court, Edenbridge(34)	Wed 29 April 15	0	0
Paghan Court, Bognor (36)	Wed 8 July 15	0	0
Lauder Court, Hamilton (64)	Fri 29 July 15	0	0
Middleton Court, Porthcawl (60)	Tues 26 July 16	0	0
Total (342)		4	0.0117

This shows an average of 1 buggy movement per 85.5 apartments. As each trip involves 2 movements, it would indicate an average of 1 trip per 171 apartments per day.

Fact File 10 – Cycle and Buggy Parking

Cycle Parking

As indicated in Fact File 9, given the nature of the developments, it would be expected that the use of cycles by residents would be very low. This expectation is supported by the results of the questionnaire survey. This showed that there were only 7 cycles owned by the residents of 242 apartments. This is an ownership rate of 0.0289 cycles per apartment, i.e. approximately 1 cycle per 35 apartments.

Consequently the provision of cycle parking for residents, which is classed as long-stay cycle parking, need only be very limited. However, it would be appropriate to make additional provision for staff, which would encourage them to adopt this form of travel.

It can be seen from the record of visits by cyclists that the maximum number of visits recorded at any of the 6 developments was two, resulting in four cycle movements. Even if these two visits were to coincide, this would suggest a peak demand for “short-stay” cycle parking of two spaces. However, a higher provision would be appropriate to encourage use of this mode of transport.

Recommendation

It is recommended that provision be made for a minimum of two, and ideally four, long-stay, secure and undercover cycle parking spaces. This provision could be incorporated in the buggy store. A further four short-stay cycle parking spaces should be provided in a convenient location within the car parking area. The above provision would be appropriate for developments of approximately 50 apartments. For developments providing significantly more apartments, the provision should be increased accordingly.

Buggy Parking

The questionnaire survey indicated that 19 of the residents of 242 apartments owned a buggy. This is an ownership of 0.079 buggies per apartment, or 1 buggy per 12.65, say 12 apartments.

However, it should be noted that all of the developments included in the questionnaire survey were recent developments. It is possible that the ownership of buggies will increase as residents get older and potentially more frail, and are more likely to give up their cars. Therefore the provision of buggy parking should allow for this.

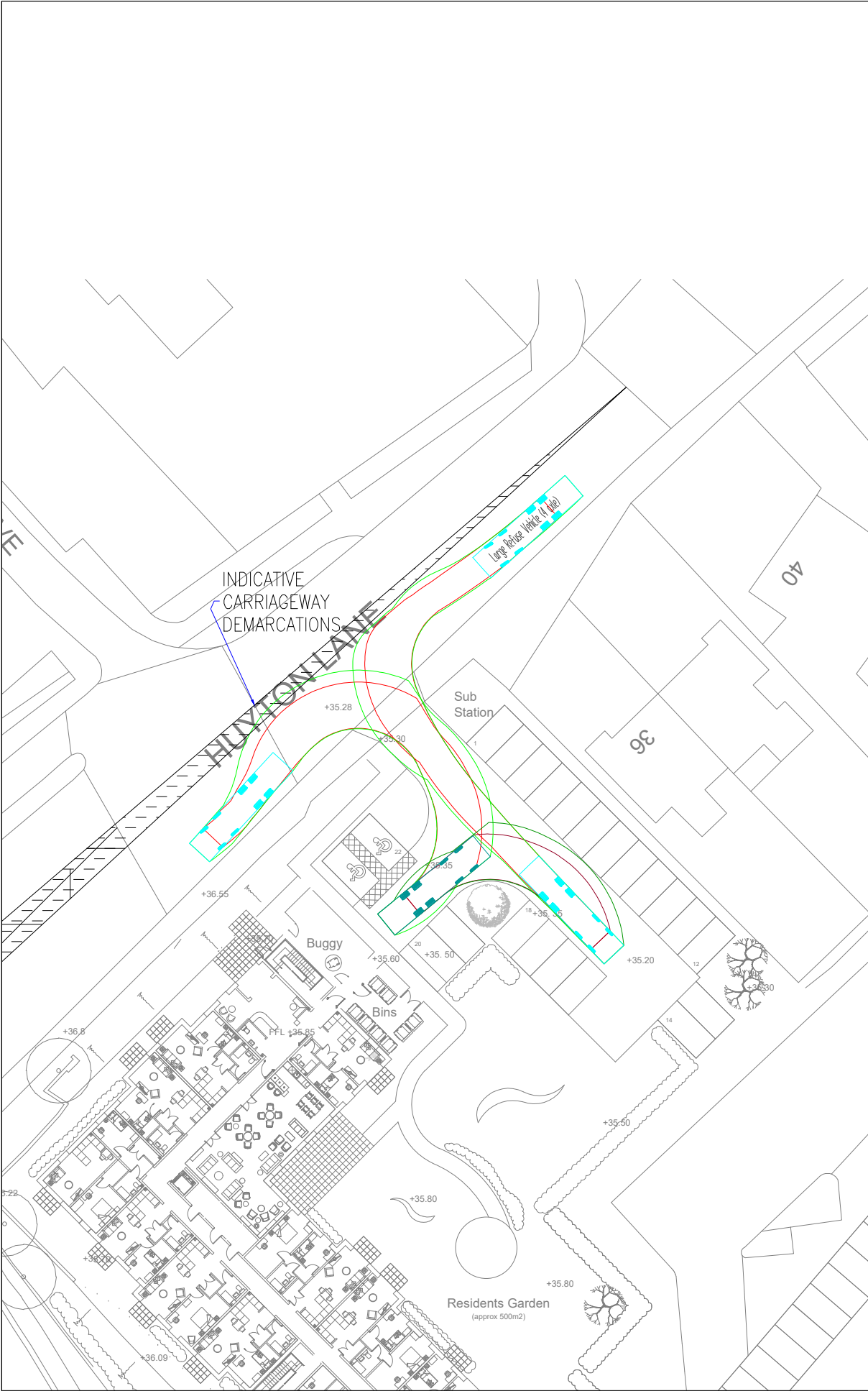
The previous study of Retirement Living developments showed a buggy ownership rate of approximately 1 buggy per 97 apartments. It also showed that there was a suppressed demand for buggy parking. Consequently it was then recommended that a minimum of 1 buggy store space per 10 apartments should be provided. There is no sound basis for changes this recommendation.

Recommendation

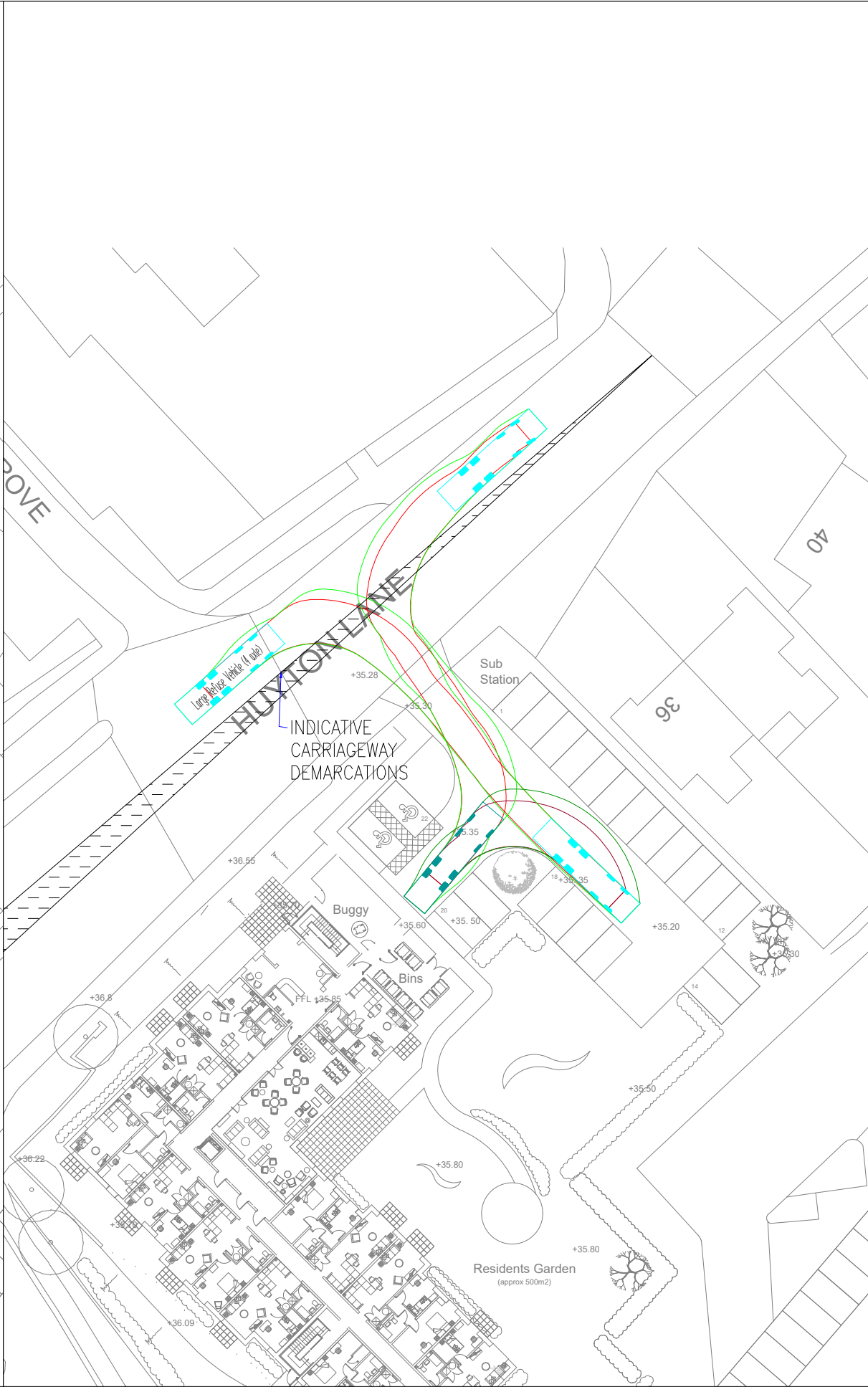
It is recommended that provision be made for a minimum of 1 buggy storage space per 10 apartments.

Appendix F





LEFT IN, LEFT OUT REFUSE VEHICLE MANOEUVRE

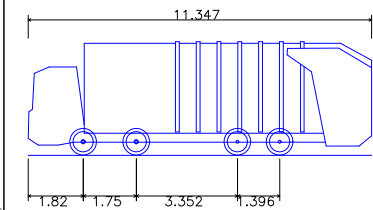


RIGHT IN, RIGHT OUT REFUSE VEHICLE MANOEUVRE

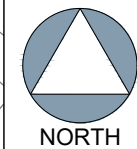
GENERAL NOTES

- THIS DRAWING IS INTENDED TO BE VIEWED IN COMBINATION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SERVICES AND SPECIALIST DRAWINGS AND SPECIFICATION.
- ANY VARIATIONS OR DISCREPANCIES BETWEEN THESE DRAWINGS IN TERMS OF DIMENSIONS OR DETAILS SHOULD BE DRAWN TO THE ATTENTION OF THE ARCHITECT AND/OR THE ENGINEER FOR CLARIFICATION.
- PAUL BASHAM ASSOCIATES ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF BACKGROUND INFORMATION PRODUCED BY THIRD PARTIES – THIS MUST BE TREATED AS INDICATIVE ONLY.
- ALL DIMENSIONS AND LEVELS ARE IN METRES. DO NOT SCALE THIS DRAWING, PRINT, PLOT OR DISK.
- THIS DRAWING SHOULD ONLY BE USED FOR CONSTRUCTION IF THE PROJECT PHASE IN THE TITLE FRAME BELOW IS SHOWN AS "CONSTRUCTION". PAUL BASHAM ASSOCIATES TAKE NO RESPONSIBILITY FOR CONSTRUCTION WORKS UNDERTAKEN TO DRAWINGS WHICH ARE NOT MARKED UNDER THIS PHASE.

VEHICLE PROFILE

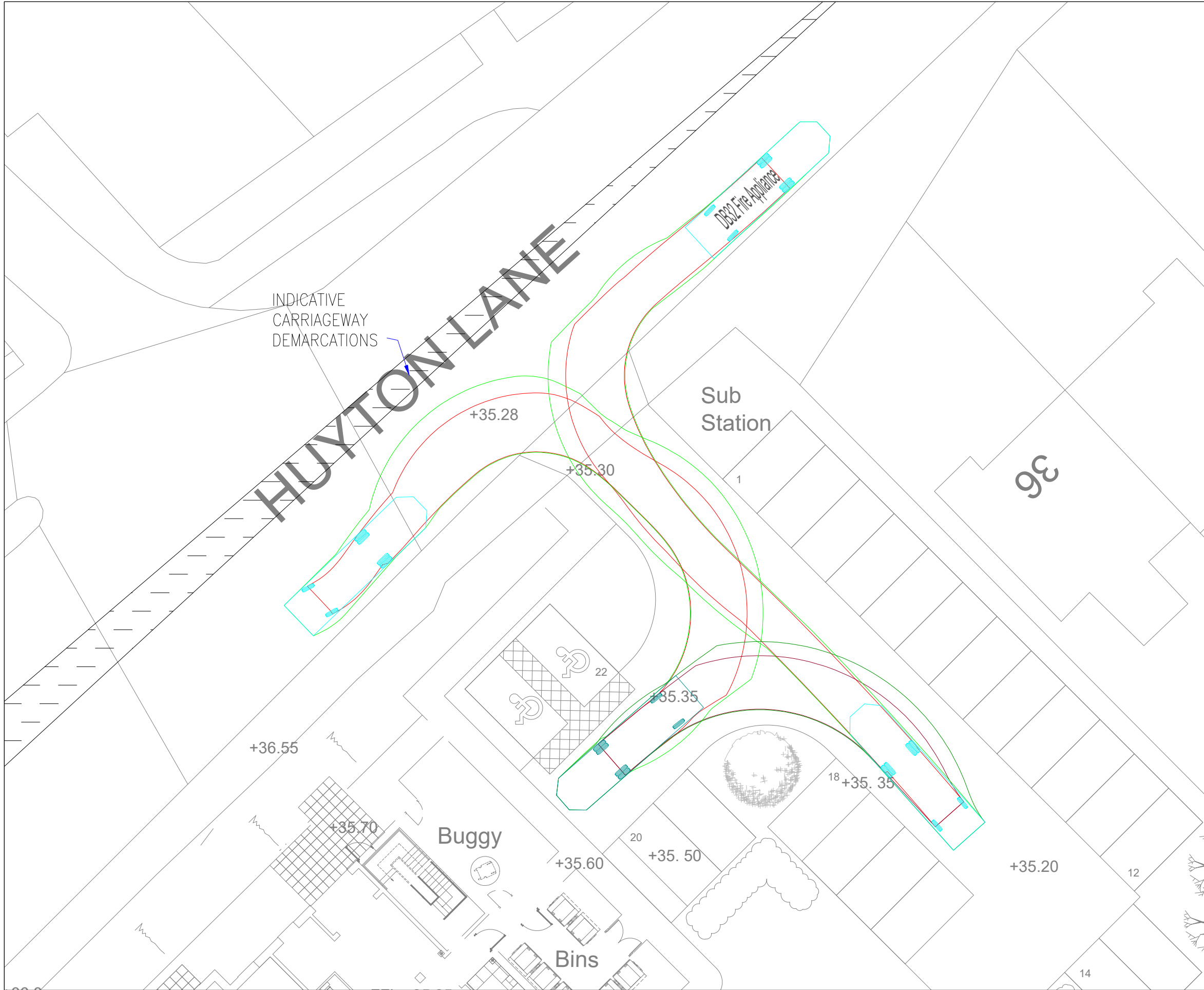


Large Refuse Vehicle (4 axle)	
Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.751m
Min. Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m



B	UPDATED SITE LAYOUT	30.01.23	JH	HC
A	UPDATED SITE LAYOUT	10.01.23	JH	HC
Rev	Description	Date	By	Chkd

Project Name HUYTON LANE, HUYTON	Title REFUSE VEHICLE TRACKING	 Paul Basham Associates Ltd Suite 4, Hitching Court, Blacklands Way, Abingdon Business Park, Abingdon, OX14 1RG 01235 425460 info@paulbashamassociates.com www.paulbashamassociates.com	Client McCARTHY STONE <i>Life, well lived</i>	Checked By HC	Checked Date 11.08.22	Scale 1:500 (AT A3 SIZE)		
Project Phase PRELIMINARY				Drawn By JH	Drawn Date 11.08.22	Client Drawing No. -	PBA Drawing No. 501.0008.002	Revision B



The drawings, information and data recorded in this document ("the information") is the property of Paul Basham Associates. This document and the information are solely for the use of the authorised recipient and this document may not be used, copied or reproduced in whole or part for any purposes other than which it was supplied by Paul Basham Associates. Paul Basham Associates makes no representation, undertakes no duty and accepts no responsibilities to any third party who may use or rely upon this document or the information.

GENERAL NOTES

- THIS DRAWING IS INTENDED TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SERVICES AND SPECIALIST DRAWINGS, DETAILS AND SPECIFICATIONS.
- ANY VARIATIONS OR DISCREPANCIES BETWEEN THESE DRAWINGS IN TERMS OF DIMENSIONS OR DETAILS SHOULD BE DRAWN TO THE ATTENTION OF THE ARCHITECT AND/OR THE ENGINEER FOR CLARIFICATION.
- ALL FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSIONS. DO NOT SCALE THIS DRAWING.
- PAUL BASHAM ASSOCIATES ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF BACKGROUND INFORMATION PRODUCED BY THIRD PARTIES – THIS MUST BE TREATED AS INDICATIVE ONLY.
- THIS DRAWING SHOULD ONLY BE USED FOR CONSTRUCTION IF THE PROJECT PHASE IN THE TITLE FRAME BELOW IS SHOWN AS "CONSTRUCTION". PAUL BASHAM ASSOCIATES TAKE NO RESPONSIBILITY FOR CONSTRUCTION WORKS UNDERTAKEN TO DRAWINGS WHICH ARE NOT MARKED UNDER THIS PHASE.

VEHICLE PROFILE

DB32 Fire Appliance	8.680m
Overall Length	2.180m
Overall Width	3.452m
Overall Body Height	0.337m
Min Body Ground Clearance	2.121m
Max Track Width	6.00s
Lock to lock time	7.910m
Kerb to Kerb Turning Radius	

NORTH

P01	FIRST ISSUE	02.02.23	JH	TP
Rev	Description	Date	By	App'd
Date Created	Drawn By	Approved By	Suitability Code	
02.02.23	JH	TP	-	
PBA Project Number		Scale	(AT A3)	
501.0008		1:200		
PBA Drawing No:			Revision	
501.0008-0004			P01	

Project Name HUYTON LANE, HUYTON	Title FIRE TENDER TRACKING	paulbasham associates Paul Basham Associates Ltd Suite 4, Hitching Court, Blacklands Way, Abingdon Business Park, Abingdon, OX14 1RG 01235 425460 info@paulbashamassociates.com www.paulbashamassociates.com	Client McCARTHY STONE <i>Life, well lived</i>
Project Phase PRELIMINARY			

Appendix G



Calculation Reference: AUDIT-247601-230116-0151

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : N - RETIREMENT FLATS
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	WS WEST SUSSEX	1 days
05	EAST MIDLANDS	
	DY DERBY	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
08	NORTH WEST	
	EC CHESHIRE EAST	1 days
10	WALES	
	BG BRIDGEND	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: No of Dwellings
 Actual Range: 25 to 57 (units:)
 Range Selected by User: 17 to 88 (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 10/05/22

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

Selected survey days:

Tuesday	2 days
Wednesday	1 days
Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town Centre	5
---------------------	---

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

Selected Location Sub Categories:

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

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 5 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

Population within 1 mile:

1,001 to 5,000	1 days
15,001 to 20,000	1 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:

25,001 to 50,000	1 days
75,001 to 100,000	2 days
250,001 to 500,000	2 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	1 days
1.1 to 1.5	3 days

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

Travel Plan:

Yes	1 days
No	4 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	5 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
-----------------------	-----	--

LIST OF SITES relevant to selection parameters

1	BG-03-N-01 PICTON AVENUE PORTHCAWL	RETIREMENT FLATS	BRIDGEND
	Edge of Town Centre Residential Zone Total No of Dwellings:	57	
	Survey date: TUESDAY	18/05/21	Survey Type: MANUAL
2	DY-03-N-02 LEAPER STREET DERBY	RETIREMENT FLATS	DERBY
	Edge of Town Centre Residential Zone Total No of Dwellings:	35	
	Survey date: WEDNESDAY	20/10/21	Survey Type: MANUAL
3	EC-03-N-01 HOBSON STREET MACCLESFIELD	RETIREMENT FLATS	CHESHIRE EAST
	Edge of Town Centre Residential Zone Total No of Dwellings:	33	
	Survey date: FRIDAY	16/09/16	Survey Type: MANUAL
4	WM-03-N-01 SHORT STREET STOURBRIDGE	RETIREMENT BUNGALOWS	WEST MIDLANDS
	Edge of Town Centre Residential Zone Total No of Dwellings:	25	
	Survey date: TUESDAY	21/11/17	Survey Type: MANUAL
5	WS-03-N-03 FITZALAN ROAD LITTLEHAMPTON	RETIREMENT FLATS	WEST SUSSEX
	Edge of Town Centre Residential Zone Total No of Dwellings:	38	
	Survey date: THURSDAY	23/09/21	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 03 - RESIDENTIAL/N - RETIREMENT FLATS

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	5	38	0.032	5	38	0.032	5	38	0.064
08:00 - 09:00	5	38	0.064	5	38	0.085	5	38	0.149
09:00 - 10:00	5	38	0.101	5	38	0.112	5	38	0.213
10:00 - 11:00	5	38	0.117	5	38	0.122	5	38	0.239
11:00 - 12:00	5	38	0.117	5	38	0.112	5	38	0.229
12:00 - 13:00	5	38	0.106	5	38	0.090	5	38	0.196
13:00 - 14:00	5	38	0.080	5	38	0.122	5	38	0.202
14:00 - 15:00	5	38	0.053	5	38	0.085	5	38	0.138
15:00 - 16:00	5	38	0.080	5	38	0.043	5	38	0.123
16:00 - 17:00	5	38	0.069	5	38	0.074	5	38	0.143
17:00 - 18:00	5	38	0.059	5	38	0.037	5	38	0.096
18:00 - 19:00	5	38	0.059	5	38	0.059	5	38	0.118
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.937			0.973			1.910

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.

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	25 - 57 (units:)
Survey date range:	01/01/14 - 10/05/22
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
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.