



OLD CHARLTON ROAD, HITCHIN

TRANSPORT STATEMENT

March 2025

McCarthy Stone

RETIREMENT LIVING DEVELOPMENT
OLD CHARLTON ROAD
HITCHIN

TRANSPORT STATEMENT

CONTROLLED DOCUMENT

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**RETIREMENT LIVING DEVELOPMENT
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HITCHIN**

TRANSPORT STATEMENT

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1. INTRODUCTION

- 1.1 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 35 apartments to replace the existing 4 bungalows at Old Charlton Road, Hitchin. The site location is illustrated in **Figure 1** with the site layout attached in **Appendix A**.

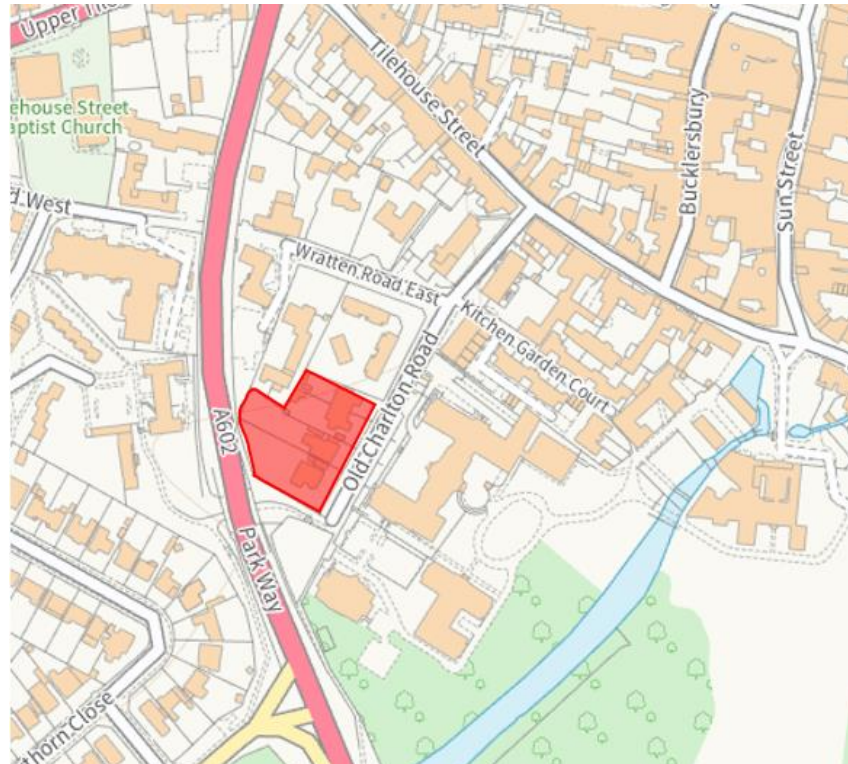


Figure 1: Site Location

- 1.2 Paul Basham Associates have also prepared a Full Travel Plan (TP) in support of the application.
- 1.3 Included in the Transport Statement will be:
- Site Location:
 - A description of the existing site conditions, local road network and surrounding area, as well as an overview of the accessibility of the local area with reference to the existing pedestrian infrastructure, public transport network and nearby amenities.
 - Proposed Development:
 - An outline of the development proposals with a detailed review of the highways elements including the access arrangements, parking provision, and fire and refuse strategies supported by drawings.

- Highway Impact:
 - An analysis of the impact that the development proposals would have on the local road network in relation to trip generation through consulting the TRICS database.
- Summary and Conclusion:
 - A synopsis of the Transport Statement (TS) regarding the above elements with an overall conclusion.

1.4 This Transport Statement (TS) has been written in line with the local guidance and National Planning Policy Framework (NPPF) (December 2024), specifically the following NPPF policies:

- Para 109: Transport issues should be considered from the earliest stages of plan-making and development proposals, using a vision-led approach to identify transport solutions that deliver well-designed, sustainable and popular places. This should involve:
 - a) Making transport considerations an important part of early engagement with local communities;
 - b) Ensuring patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places;
 - c) Understanding and addressing the potential impacts of development on transport networks;
 - d) Realising opportunities from existing or proposed transport infrastructure, and changing transport technology and usage – for example in relation to the scale, location or density of development that can be accommodated;
 - e) Identifying and pursuing opportunities to promote walking, cycling and public transport use; and
 - f) Identifying, assessing and taking into account the environmental impacts of traffic and transport infrastructure – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains.
- Para 110: The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.
- Para 116: Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios.

1.5 With regard to local planning policy, the following documents have been considered:

- Hertfordshire County Council's 'Highways Place and Movement Planning and Design Guide' (March 2024);
- Hertfordshire County Council's 'Local Transport Plan (LTP) 2018 -2031 (May 2018);
- North Hertfordshire District Council's '*Local Plan 2011-2031*' (November 2022);
- North Hertfordshire District Council's '*Vehicle parking at new developments*' SPD (September 2011); and
- North Hertfordshire District Council's '*Sustainability*' SPD.

2. EXISTING CONDITIONS AND SITE ACCESSIBILITY

- 2.1 The existing site comprises 4 residential bungalows fronting Old Charlton Road. Each existing property is currently accessed via dedicated vehicle crossover points onto Old Charlton Road.
- 2.2 The site is bounded by residential dwellings to the north, Old Charlton Road and offices to the east, a public footpath and offices to the south, and Park Way (A602) as well as residential dwellings to the west. The existing condition of the site frontage is illustrated in **Photograph 1**.



Photograph 1: Existing conditions of site frontage adjacent Old Charlton Road

Local Road Network

- 2.3 Old Charlton Road is a single carriageway road which measures approximately 7m-7.5m wide in the vicinity of the site with the effective width of the road reducing to 5m-5.5m wide because of on-street parking in operation. Old Charlton Road is a cul-de-sac road which terminates to the south of the site and is subject to a 20mph speed limit. The road extends for approximately 125m and becomes Wratten Road East, subsequently joining with Tilehouse Street at its northern extent via a simple T-junction. Approximately 300m east of the Wratten Road East/Tilehouse Street junction, the B656 can be accessed. This provides a connection to the wider Strategic Road Network (SRN) including A602 via 4-arm roundabout and A505. The A602 also provides a link with the A1(M) approximately 4.3km east of the aforementioned 4-arm roundabout.
- 2.4 Formal on-street parking is available on the eastern side of Old Charlton Road, extending for approximately 70m. The parking bays are restricted to Zone C permit holders only between Monday to Saturday 8am-6pm or a maximum stay of 2 hours with no return within 4 hours. For the remainder of

Old Charlton Road and Wratten Road East, a single yellow line is present which prohibits vehicles from parking between Monday – Saturday 8am-6pm. The existing conditions of Old Charlton Road adjacent the site frontage is illustrated in **Photograph 2** with the existing condition of Wratten Road East illustrated in **Photograph 3**.



Photograph 2: Existing on-street parking on Old Charlton Road adjacent the site frontage



Photograph 3: Existing conditions of Wratten Road East

- 2.5 Tilehouse Street is a single carriageway road of an east to west alignment and measures approximately 5.5m wide. Tilehouse Street terminates approximately 140m northwest of the junction with Wratten Road East. To the west, the road becomes Bridge Street and connects with the Park Street and Queen Street, both forming part of the B656.

Pedestrian and Cycle Infrastructure

- 2.6 The existing pedestrian infrastructure in the local area presents an excellent opportunity to promote sustainable travel to future users of the site. Located on southern side of Old Charlton Road is a pedestrian connection via an underpass connecting the site to the western residential area exiting at Wratten Close. Old Charlton Road benefits from a footway along the eastern side of the carriageway measuring approximately 2m in width. Wratten Road East has a footway on both the eastern and western sides of the carriageway measuring 2m in width for approximately 55m. This connects with the existing pedestrian infrastructure on Tilehouse Street.

- 2.7 The aforementioned footways on Wratten Road East continue along Tilehouse Street to the east and west, providing a continuous pedestrian connection to Sun Street, Bucklersbury and Queen Street where numerous amenities in Hitchin can be accessed.
- 2.8 The route to the town centre is supported by pedestrian crossing facilities at regular intervals including dropped kerbs with tactile paving at the Wratten Road East junction with Wratten Road East. Approximately 280m east of the Wratten Road East junction with Tilehouse Street, a pedestrian refuge island with dropped kerbs and tactile paving is in operation on Bridge Street arm of the 3-arm roundabout connecting to Queen Street to the north and Park Street to the south (**Photograph 4**)
- 2.9 An additional crossing point is available on Queen Street approximately 30m north of the 3-arm roundabout, in the form of a signalised pedestrian crossing with dropped kerbs and tactile paving (illustrated in **Photograph 5**). This provides a safe and convenient connection to the closest southbound bus stop (discussed further below).



Photograph 4: Pedestrian crossing with refuge island on Bridge Street



Photograph 5: Signalised crossing on Queen Street

- 2.10 In addition to the above, the Sun Street and Bucklersbury junctions with Tilehouse Street contain a pedestrian crossing with tactile paving and raised table as shown in **Photograph 6**.

- 2.11 There are no national cycle routes accessible within the vicinity of the site although Recreational Cycle Route 16 can be accessed to the south on Charlton Road. The route runs south through the countryside towards Preston. Moreover, it should be noted the layout of the local roads, low speed limits and lightly trafficked nature of the nearby roads as witnessed on a site visit, make the local area conducive to cycling. It should be noted that opportunities to promote cycling particularly to future residents are limited given the typical demographic (discussed further in subsequent sections). Sheffield stands are present adjacent Sun Street as shown in **Photograph 7**.



Photograph 6: Pedestrian crossing on Sun Street



Photograph 7: Sheffield stands located along Sun Street/Tilehouse Street

Public Transport

- 2.12 There are excellent links to public transport close to the site, with the nearest bus stops (known as 'Asda' bus stops), located on Queen Street approximately 500m (7-minute walk) and 550m from the site for the northbound and southbound directions respectively. Both bus stops benefit from a single post with a flag and printed timetable, whilst the northbound bus stop also benefits from road demarcations.
- 2.13 A summary of the local bus services operating at the closest bus stops are outlined in **Table 1**.

Service	Bus Operator	Bus Route	Frequency		
			Mon-Fri	Sat	Sun
37	Central Connect	Buntingford – Stevenage	Every 2 hours		No Service
88 (northbound only)	Red Eagle	Luton – Hitchin	6 times a day	4 times a day	No Service
101	Arriva	Luton – Stevenage	Every 30 minutes		Every 60 minutes
304 (northbound only)	Centreb us	Hitchin – St Albans	6 times a day	5 times day	No Service
314/315 (northbound only)	Centreb us	Hitchin – Welwyn Garden City	Every hour		No Service
635	Uno	Watford – Hatfield	10 times a day	No Service	

Table 1: Summary of Local Bus Services

2.14 In addition to the bus stops the nearest railway station ‘Hitchin’ is located approximately 1.9km northeast of the site. The station is accessible via a 26 minute walk, 7 minute cycle or via the bus 37 or 635 (10-12 minute journey). Direct services from the station include Cambridge (approximate 40 minute journey), Peterborough (approximate 50 minute journey), Brighton (approximate 2 hour journey), London Kings Cross (approximate 50 minute journey) and Horsham (approximate 2 hour journey).

Accessibility to Local Amenities

2.15 CIHT document ‘Providing for journeys on foot’ (2000, Table 3.2) identifies the ‘desirable’, ‘acceptable’ and ‘preferred maximum’ walking distances to destinations. **Table 2** outlines the different classifications and the associated distances.

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

Table 2: CIHT guidance for ‘Providing for journeys on foot’ (2000)

2.16 Furthermore, the CIHT document ‘Planning for Walking’ (April 2015) identifies that whilst the number of pedestrian journeys is 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.

- 2.17 The location of the site is in good proximity to the local amenities and offers an excellent opportunity to develop a sustainable site. A summary of the amenities that would be of interest to the demographic of the proposed development are presented in **Table 3**.

Amenity	Approximate Distance	Approximate Walking Journey Time	Approximate Cycling Journey Time
Public House (The Coopers Arms)	160	3	1
Post Office (Hitchin Post Office)	320	5	1
Hitchin High Street	320	7	2
Supermarket (Asda)	480	8	2
Pharmacy (Boots Pharmacy)	480	7	2
Bank and ATM (Barclays)	480	6	2
Bus Stop (northbound)	500	7	2
Bus Stop (southbound)	550	7	2
Doctors (Portmill Surgery)	800	11	3
Train Station (Hitchin Train Station)	1.9km	26	6

Table 3: Proximity to Local Amenities

- 2.18 As outlined in **Table 3**, with reference to **Table 2**, there are several key amenities in the local area which are within an ‘acceptable’ walking distance of the site that would appeal to the demographic of the proposed development. The amenities identified within **Table 3** are only a select few with many more accessible within similar distances. Furthermore, majority of the journey times are detailed within **Table 3** are significantly shorter in duration in comparison to the average pedestrian journey time of 17-minutes stated in CIHT’s ‘Planning for Walking’ (April 2015).

- 2.19 Moreover, the local buses provide frequent and quick services to destinations such as Harpenden, Luton and Welwyn Garden City where many more amenities are located, increasing the level of accessibility from the site. Therefore, there is an excellent opportunity to create a sustainable development in this location in accordance with NHDC’s ‘Sustainability’ SPD .

Summary of Site Accessibility

- 2.20 The development is in close proximity to a number of amenities within Hitchin including supermarket, post office, bank, pharmacy and doctors all within a suitable walking distance. The public transport options close to the site are excellent with frequent connections to Harpenden, Luton, Welwyn Garden City and Stevenage. In addition, Hitchin railway station is accessible via walking, cycling or bus where site users can travel to destinations such as London Kings Cross, Cambridge and Brighton. Furthermore, the pedestrian and cycle infrastructure within Hitchin is considered to be good with Sheffield stands identified in the town centre. The site is therefore considered to present an excellent opportunity to create a sustainable development in accordance with NHDC’s ‘Sustainability’ SPD.

Personal Injury Accident (PIA) Data

- 2.21 Personal Injury Accident (PIA) data has been obtained from Department for Transport (DfT's) MAVRIC database for the most recent 5-year period (2019 – 2023). All incidents recorded within the vicinity of the site are indicated within **Figure 2**.

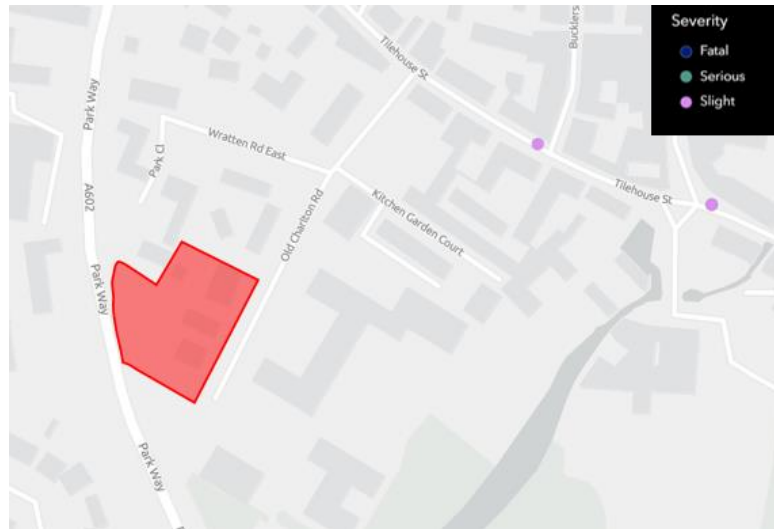


Figure 2: PIA Data (Source: MAVRIC)

- 2.22 As illustrated in **Figure 2**, there are a total of 2 incidents within close proximity to the site within the most recently recorded 5-year period (2019-2023). All these incidents were classified as slight. No fatal or serious incidents have occurred within close proximity to the site.
- 2.23 Given the low frequency and sporadic nature of the incidents, it is evident that there is no significant accident history within the vicinity of the site that would present a safety concern for future residents or be exacerbated by the proposed development.

3. PROPOSED DEVELOPMENT

- 3.1 The proposed development comprises a retirement living development of 35 apartments to replace the existing 4 bungalows with access off Old Charlton Road. The proposed site layout is attached within **Appendix A**.
- 3.2 'Retirement Living' developments are designed to accommodate elderly persons who require limited support to allow them to live a relatively independent life. It consists of individual apartments for the residents with communal facilities such as homeowners' lounge, landscaped gardens and guest suites where friends or relatives can stay when visiting a resident. The scheme is minimally staffed with only a house manager on duty during office hours, and an alarm call system is in place for residents to call for help in an emergency outside of office hours.
- 3.3 McCarthy Stone developments are typically age-restricted to 55 years and above, however the average age of entry to McCarthy Stone Retirement Living developments has been found to be 78 years.
- 3.4 The decision to move into a McCarthy Stone development is driven by age and needs, with residents usually choosing to move into a Retirement Living apartment as their current home no longer meets their required needs due to the size of the property or location, with key amenities such as supermarkets and pharmacies no longer accessible.

Access Arrangements

- 3.5 The dedicated vehicular crossovers which are currently associated to the existing 4 x bungalows are proposed to be stopped up. The proposed development will be accessed via a newly formed vehicle crossover onto Old Charlton Road, measuring 5.5m wide, leading into a 6m wide internal access road.
- 3.6 Private vehicle tracking has been completed and as shown in **Appendix C**, two cars are capable of passing concurrently at the site access in accordance with Manual for Streets (MfS) guidance. In addition, the access geometries are capable of supporting a fire tender.
- 3.7 Pedestrian and cycles can access the site from the aforementioned access via a new dedicated footway measuring 2m wide extending for approximately 30m. This new footway will be located on the western side of Old Charlton Road immediately north of the proposed access (as shown in **Appendix B**). Additionally, this footway will connect with the existing footway on the eastern side of the carriageway via a dropped kerb crossing with tactile paving, providing a continuous route and step-free access to Hitchin town centre which is considered to be the main desire line for pedestrians and scooters.

- 3.8 Whilst it is noted that pedestrians/scooters can travel south of the site via the underpass to access the residential area to the west and town centre via Upper Tilehouse Street. This route is not considered to be the most direct and is therefore not anticipated to be regularly used by future residents of the site. In the unlikely event that future users utilise this route, it is acknowledged that pedestrians/scooters will be required to travel within the carriageway of Old Charlton Road to access the underpass. However, considering this short distance and low speed, lightly trafficked nature of Old Charlton Road in addition to the minimal number of pedestrian/cycle trips which are anticipated use this route in reality, this arrangement is considered to represent a very low chance of conflict and is considered to be appropriate on this basis.

Visibility Assessment

- 3.9 Visibility splays of 2.4m x 25m have been demonstrated to be achievable at the proposed access in line with MfS guidance for a road subject to 20mph speed limit. These can be seen in **Appendix B**.
- 3.10 In addition to the above, **Appendix B** also demonstrates pedestrian visibility splays to 25m at the proposed pedestrian crossing to the north of the site in accordance with the 20mph speed limit on Old Charlton Road. Whilst it is noted that the pedestrian visibility splay adjacent the eastern side of the carriageway conflicts with the on-street parking spaces in the secondary direction, this is considered to be justified by paragraph 7.8.5 of MfS guidance which states *“Parking in visibility splays in built-up areas is quite common, yet it does not appear to create significant problems in practice. Ideally, defined parking bays should be provided outside the visibility splay. However, in some circumstances, where speeds are low, some encroachment may be acceptable.”* Old Charlton Road is considered to be a low speed, lightly trafficked road, particularly given it terminates just south of the site, it should also be noted the visibility splay envelope which contains on-street parking bays is in the secondary direction.
- 3.11 When considering the above in addition to the absence of an accident history over the most recent 5-year period, as well as the minimal impact of the proposals and low speed, lightly trafficked nature of Old Charlton Road, safe and suitable access is considered to be achievable.

Car Parking Provision

- 3.12 In order to inform suitable parking standards, North Hertfordshire District Council’s ‘Vehicle Parking at New Development’ SPD (September 2011) has been referred to. For ‘Retirement Developments’ a provision of 1 space per dwelling for residents and 0.25 spaces for visitors where no garages are present is required. For the proposed 35 Retirement Living units, this equates to a requirement of 44 parking spaces (35 spaces for residents and 9 spaces for visitors).

- 3.13 In paragraph 4.6 of the aforementioned parking SPD it is stated *‘Consideration has been given to retirement dwellings which are becoming an increasingly popular style of development. For this type of development the standard is a minimum of 1 space per dwelling, with room for negotiated reduction dependant on robust evidence put forward by the developer and the location of the development in reference to its position within the accessibility zones. This allows the standard to be applied more flexibly, varying from site to site, depending on its location and available parking and transport facilities nearby.’*
- 3.14 The site is located in zone 2 based on the accessibility map set out in the aforementioned parking SPD and this allows for a 25-50% reduction from the parking standards. This would equate to an acceptable reduction of 22 to 33 spaces. The proposed parking provision of 23 spaces falls within this threshold and is therefore considered an acceptable reduction on this basis although further evidence has been provided below to support this.
- 3.15 Given the specific nature of McCarthy Stone schemes and considering the above, independent research undertaken by McCarthy Stone into the average parking demand across existing developments has been consulted to establish a suitable reduction in the proposed car parking provision. The McCarthy Stone independent research, attached within **Appendix D**, identifies an average total parking demand (residents and visitors) of 0.517 space per unit. This equates to a requirement of 18 spaces to support the proposed 35 retirement living units. In total, 23 spaces have been provided (including 2 accessible spaces), equating to a ratio of 0.66 spaces per unit which is in excess of the independent research.
- 3.16 All spaces including the accessible and visitor spaces will have electric charging capability.
- 3.17 When considering the specific nature of McCarthy Stone schemes which is supported by an evidence base from a number of developments across the country, in addition to the acceptable parking reduction identified within HCC’s parking SPD and, the excellent sustainability credentials of the site (as outlined in Section 2), the proposed parking provision is considered to be suitable to support the anticipated parking demand without leading to overspill onto the local road network.
- 3.18 Car parking tracking has been undertaken of a selection of spaces, demonstrating the parking layout and spaces to be suitable to support the proposals and enable a private car to enter and exit the site in a forward gear. Vehicle tracking is attached as **Appendix C**.

Mobility Scooter and Cycle Parking

- 3.19 The independent research (**Appendix D**) undertaken by McCarthy Stone sets out the mobility scooter demand at existing developments across the country. The research states an average ownership of

0.103 scooter spaces per apartment. This equates to 4 scooter spaces for the 35 units. The proposed scooter store will accommodate storage for 6 scooters and therefore there is sufficient space to accommodate the anticipated demand.

- 3.20 McCarthy Stone research has been consulted to establish the likely demand for cycle parking. The research, attached within **Appendix B**, outlines an average bicycle ownership rate of 0.018 bicycles per apartment at existing McCarthy Stone developments. This would equate to 1 cycle for the proposed 35-unit retirement living development.
- 3.21 In addition, LTN 1/20, table 11-1 has been consulted and states that a minimum of 0.05 cycle spaces is recommended per residential units for “elderly houses” which is the most appropriate standard to reflect the proposed development. This equates to 2 spaces required for the 35 retirement living units.
- 3.22 Paragraph 3.19 has demonstrated there is sufficient space in the scooter store to accommodate 6 scooters although the research indicates a demand for 4 scooters. Therefore, it is considered that two cycles can be accommodated within the scooter store for residents, and the number of scooters and bicycles will be managed by the house manager. In addition, there are 6 Sheffield Stands located outside the main entrance for use by residents and visitors.
- 3.23 On this basis, the proposed cycle parking provision is deemed acceptable to meet the anticipated demand set out within McCarthy Stone independent research as well as LTN 1/20 guidance although this is further supported by a TRICS assessment set out within Section 4.

Fire and Refuse Strategy

- 3.24 A fire tender is able to enter the site, turn and leave in a forward gear whilst getting within 45m of all parts of the building in line with Building Regulations (Document B). The associated tracking drawing is shown in **Appendix E**.
- 3.25 Refuse collection is proposed to occur on-street from Old Charlton Road as per the existing arrangement for the 4 bungalows. The refuse vehicle is able to get within 10m of the refuse store based on Manual for Streets (MfS) guidelines. This arrangement is considered to be acceptable as it reflects the existing situation for both the existing bungalows on the site, and the neighbouring residential dwellings as well.

4. HIGHWAY IMPACT

- 4.1 The subsequent section of this Transport Statement (TS) assesses the likely vehicular and cycle trip generation associated to the proposed development using the TRICS database.

Existing Development Vehicular Trip Generation

- 4.2 In order to estimate the number of two-way vehicular trips that the existing 4 bungalows would generate, a TRICS assessment has been undertaken using 'Houses Privately Owned' as the closest approximation, with the following parameters applied:

- Use Class 'Residential Houses' and Sub Category 'Houses Privately Owned';
- Parameter of 0-15 units;
- Weekday surveys only;
- Sites in England and Wales (Excluding Greater London); and
- Sites located in 'Edge of Town Centre' and 'Edge of Town' locations.

- 4.3 The TRICS outputs are demonstrated in **Table 4** with full outputs attached in **Appendix F**. It is noted that the existing site contains 4 bungalows however a sample size of 0-15 units was selected to obtain a sufficient sample size.

	AM Peak (0800-0900)			PM Peak (1700-1800)			Daily (12 hours)
	Arrivals	Departures	Total	Arrivals	Departures	Total	
Trip Rate	0.364	0.500	0.864	0.409	0.545	0.954	8.271
Trip Generation (4 houses)	1	2	3	2	2	4	33

Table 4: Existing Trip Generation (TRICS database)

- 4.4 **Table 4** demonstrates that the existing development is expected to currently generate 3 vehicular trips in the AM peak, 4 vehicular trips in the PM peak, and 33 trips across a 12-hour period.

Proposed Development Vehicular Trip Generation

- 4.5 In order to estimate the number of vehicular trips that the proposed development would generate, a trip generation assessment has been undertaken using the TRICS database using the following parameters:

- Use Class 'Residential' and Sub Category 'Retirement Flats';
- Parameter of 17-50 units;
- Weekday surveys only;
- Sites in England and Wales (Excluding Greater London); and
- Sites located in 'Edge of Town Centre' and 'Edge of Town'.

4.6 The TRICS outputs are demonstrated in **Table 5** with the full outputs attached in **Appendix F**.

	AM Peak (0800-0900)			PM Peak (1700-1800)			Daily (12 hours)
	Arrivals	Departures	Total	Arrivals	Departures	Total	
Trip Rate	0.058	0.081	0.139	0.061	0.038	0.099	1.596
Trip Generation (Proposed development- 35 units)	2	3	5	2	1	3	56

Table 5: Proposed Development Trip Generation

4.7 As can be seen from **Table 5** above the proposed development could generate 5 vehicular trips in the AM peak, 3 vehicular trips in the PM peak and 56 vehicular trips over a 12-hour period.

4.8 Given the specific nature of the proposals, McCarthy Stone independent research has also been consulted to estimate the trip generation for the proposed development as shown in **Table 6** with the full outputs attached in **Appendix D**.

	12 hour period
Trip Rate	2.19
Trip Generation (35 units)	77

Table 6: McCarthy Stone Data Trip Generation

4.9 According to the independent research, the proposed development is anticipated to generate 77 trips over the 12-hour period.

Net Vehicular Impact

4.10 A comparison between the existing and potential trip generation has been undertaken to identify the net change in trip generation and is summarised in **Table 7**.

	AM Peak (0800-0900)	PM Peak (1700-1800)	Daily (12 hours)
Existing Development Trip Generation (4 residential units)	3	4	33
Proposed Development TRICS Trip Generation (35 Retirement Living Units)	5	3	56
Net Difference	+2	-1	+23
Existing Development Trip Generation (4 residential units)	3	4	33
Proposed Development Trip Generation (McCarthy Stone data)	-	-	77
Net Difference	-	-	+44

Table 7: Net Trip Generation

- 4.11 When referencing the McCarthy Stone independent research as a worst case, the proposed development would result in a worst case of 44 additional vehicular trips across the 12-hour period in comparison to the existing development. This would result in an average of 4 additional vehicle trips an hour and therefore the proposals are not expected to have a significant impact on the existing safety or operation of the local road network. It is worth noting that given the nature of the proposed development, the trips would be evenly spread across the 12-hour period, and this is supported by the minimal number of trips in the AM and PM peak as identified in **Table 5**.
- 4.12 The National Planning Policy Framework (NPPF) (December 2024) states in paragraph 116 that *'Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios.'*
- 4.13 Therefore, based on the above assessment the proposed development should not be prevented or refused on highways grounds.

Proposed Cycle Trip Generation

- 4.14 In order to provide a robust assessment, the TRICS database has also been consulted to determine the likely number of cycles anticipated for the proposed retirement living development. The same parameters as above have been selected with the results demonstrated **Table 8** and full outputs attached as **Appendix F**.

	AM Peak (0800-0900)			PM Peak (1700-1800)			Daily (12 hours)
	Arrivals	Departures	Total	Arrivals	Departures	Total	
Trip Rate	0.059	0.078	0.137	0.067	0.037	0.104	8.271
Trip Generation (4 houses)	0	0	1	0	0	0	33

Table 8: Proposed Development Cycle Trip Generation (TRICS database)

- 4.15 As demonstrated in **Table 8**, a total 1 of cycle trip is expected in the AM peak and 0 cycle trips in the PM peak with 33 expected across a 12-hour period. It is noted that these 33 cycle trips would be evenly spread throughout the day due to the nature of retirement living units and equate to an average of 3 cycles per hour. This is considered to be an overestimation when considering the average cycle ownership identified in McCarthy Stone independent research as set out in Section 3.
- 4.16 When considering the above, in addition to the average cycle demand and suggested minimum cycle provision set out in LTN 1/20 guidance, it is evident that cycle demand at the proposed development is anticipated to be low and that the proposed cycle parking provision set out in Section 3 is sufficient to support this.

5. SUMMARY AND CONCLUSIONS

- 5.1 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 35 apartments to replace the existing 4 bungalows at Old Charlton Road, Hitchin.
- 5.2 The development is situated in Hitchin and in close proximity to Hitchin town centre with several key amenities within walking distance that would appeal to the demographic of the proposed development. The area benefits from good pedestrian and cycle links with regular bus services to destinations such as Stevenage, Welwyn Garden City and Luton. Included in this is bus services to Hitchin Railway Station.
- 5.3 Personal Injury Accident (PIA) data has been obtained from MAVRIC for the most recent 5-year period (2019-2023). No accident history has been identified which would be exacerbated by the proposals.
- 5.4 The proposed development will be accessed via Old Charlton Road with a newly formed vehicle crossover measuring 5.5m wide at the access, widening to 6m wide on the internal access road. Two private cars are capable of passing at the access simultaneously and suitable visibility has been demonstrated to be achievable in accordance with the 20mph speed limit.
- 5.5 It is proposed that 23 car parking spaces (0.66 spaces per unit) will be provided which is in excess of the anticipated demand identified by McCarthy Stone independent research of 18 spaces (0.517 spaces per unit). The proposed parking provision is therefore anticipated to be suitable to accommodate the proposed development without leading to overspill onto the local road network, particularly given the excellent sustainability credentials of the site. A car park tracking exercise has been undertaken demonstrating all spaces to track acceptably.
- 5.6 In line with the anticipated bicycle and scooter ownership rate based on McCarthy Stone research, a TRICS assessment and LTN 1/20 guidance a secure and flexible bicycle and mobility scooter store will be provided to meet the expected demand.
- 5.7 Suitable fire and refuse will be in place with a fire tender able to enter the site, turn and leave in a forward gear whilst getting within 45m of all parts of the building. Refuse collection is intended to occur on-street from Old Charlton Road as per the existing arrangement with refuse operatives capable of getting within 10m of the bin store in accordance with Manual for Streets (MfS) guidance.

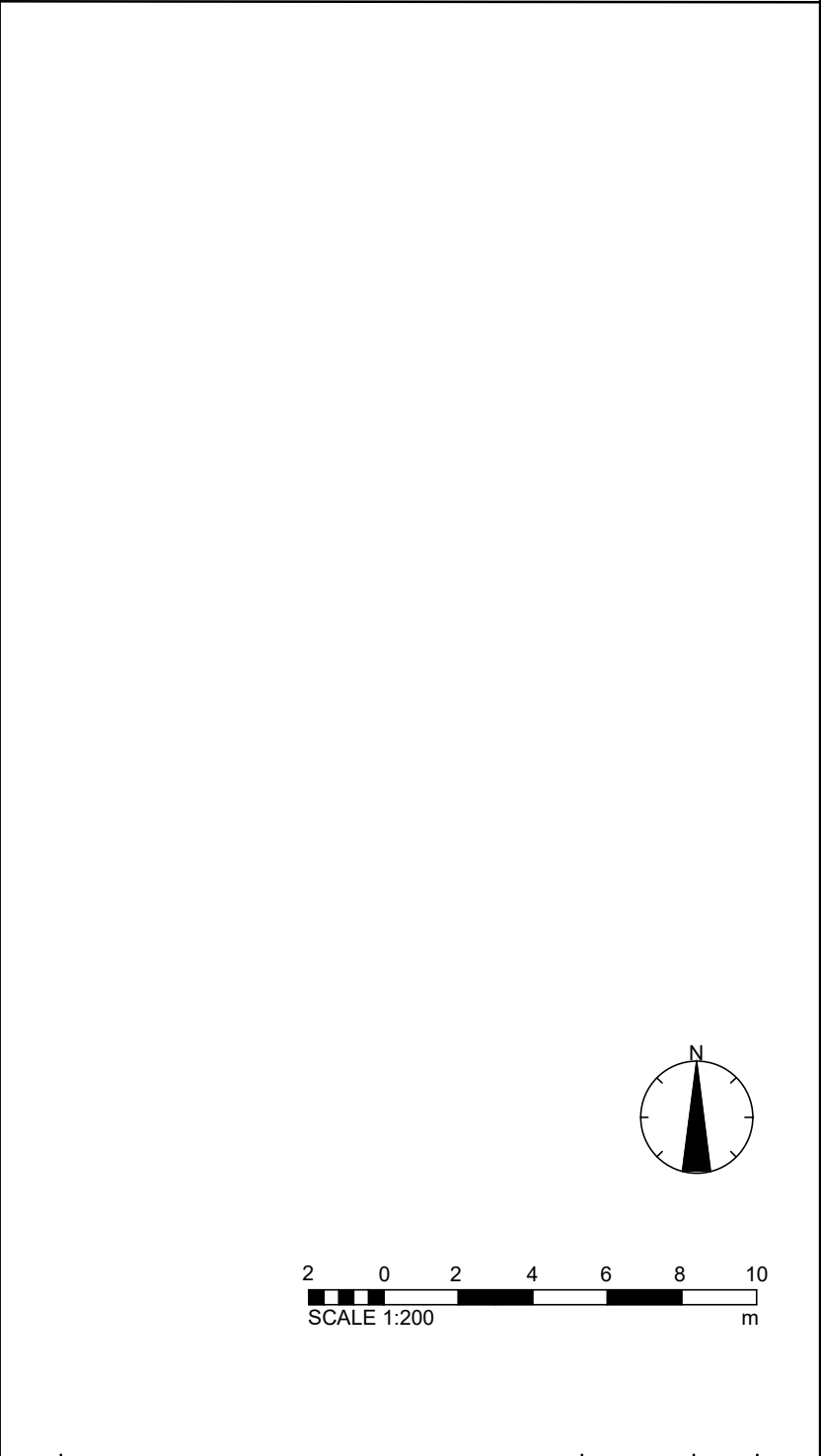
- 5.8 Based on the TRICS database the proposed 35-unit Retirement Living development it is expected to generate an additional 44 trips across the 12 hour period when reviewing the McCarthy Stone independent research as a worst case. In total, this would result in an average of 4 additional trips an hour and therefore the proposals are not expected to have a significant impact on the existing safety or operation of the local road network.
- 5.9 The National Planning Policy Framework (NPPF) (December 2024) states in paragraph 116 that *'Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios.'* Paul Basham Associates would therefore encourage the local highway authority at Hertfordshire County Council and the planning authority at North Hertfordshire District Council to look favourably upon this development in relation to highways and transportation.



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DRAWING NOTES:



P5	Landscape updates	12/03/2025	AM	MSK
P4	Ground floorplan and landscape updates	11/03/2025	AM	MSK
P3	Site plan coloured	13/02/2025	AM	MSK
P2	Ground floor plan and landscape updates	11/02/2025	AM	MSK
P1	First Issue	24/01/2025	AM	MSK
REV	DESCRIPTION	DATE	BY	CHKD

ORIGINATOR:

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CLIENT:

McCARTHY STONE

Life, well lived

IN ASSOCIATION WITH:

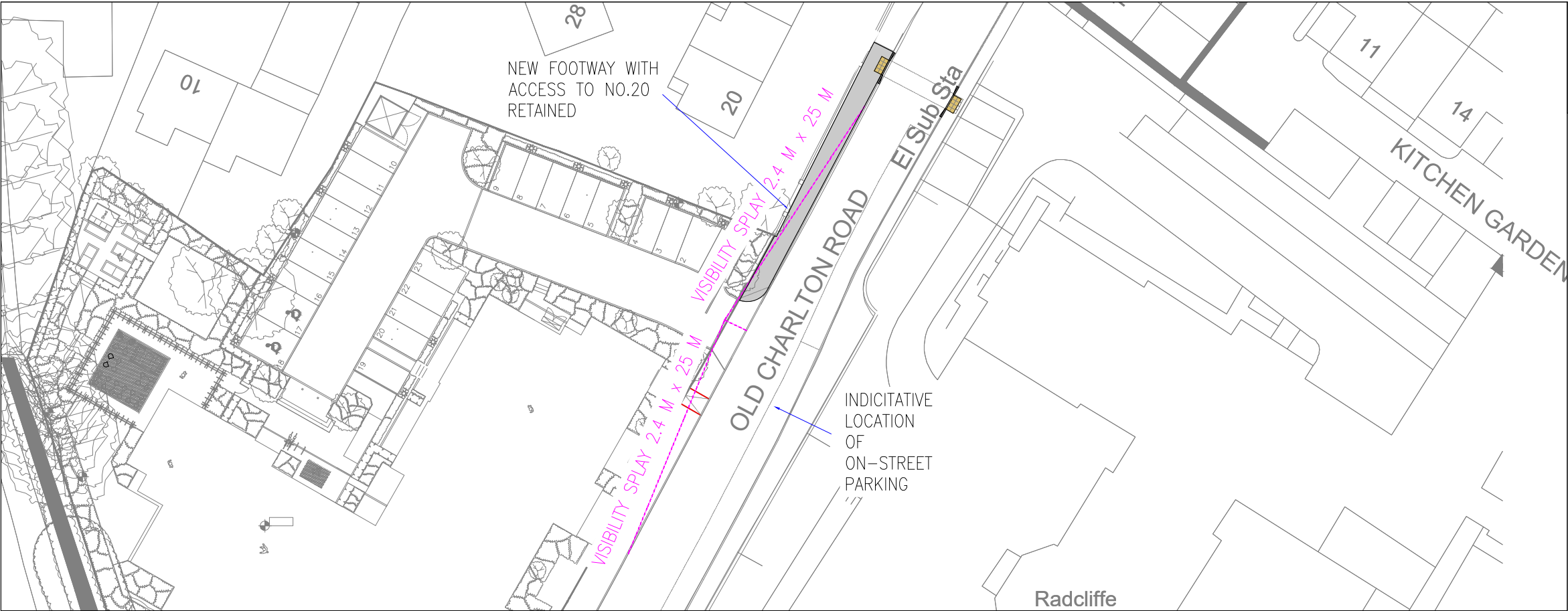
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Old Charlton Road,
Hitchin

TITLE:
Proposed Site Plan

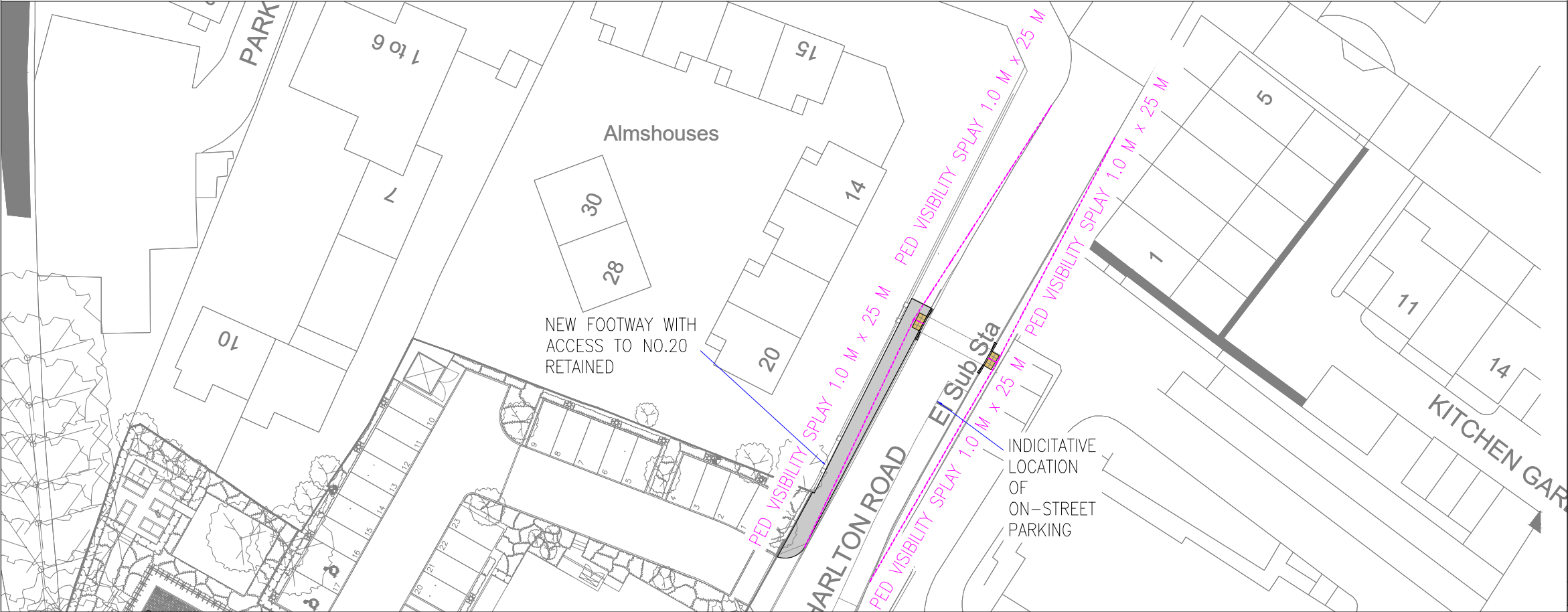
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REGION:	PROJECT NUMBER:	STAGE NUMBER:	DISCIPLINE:	DRAWING NUMBER:	REV:
LSE	2983	02	AC	001	P5



VISIBILITY SPLAY



PEDESTRIAN VISIBILITY SPLAY

Project Name	OLD CHARLTON ROAD, HITCHIN
Project Phase	PRELIMINARY

Title	VISIBILITY SPLAYS ASSESSMENT
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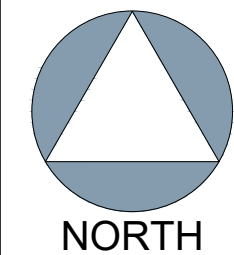
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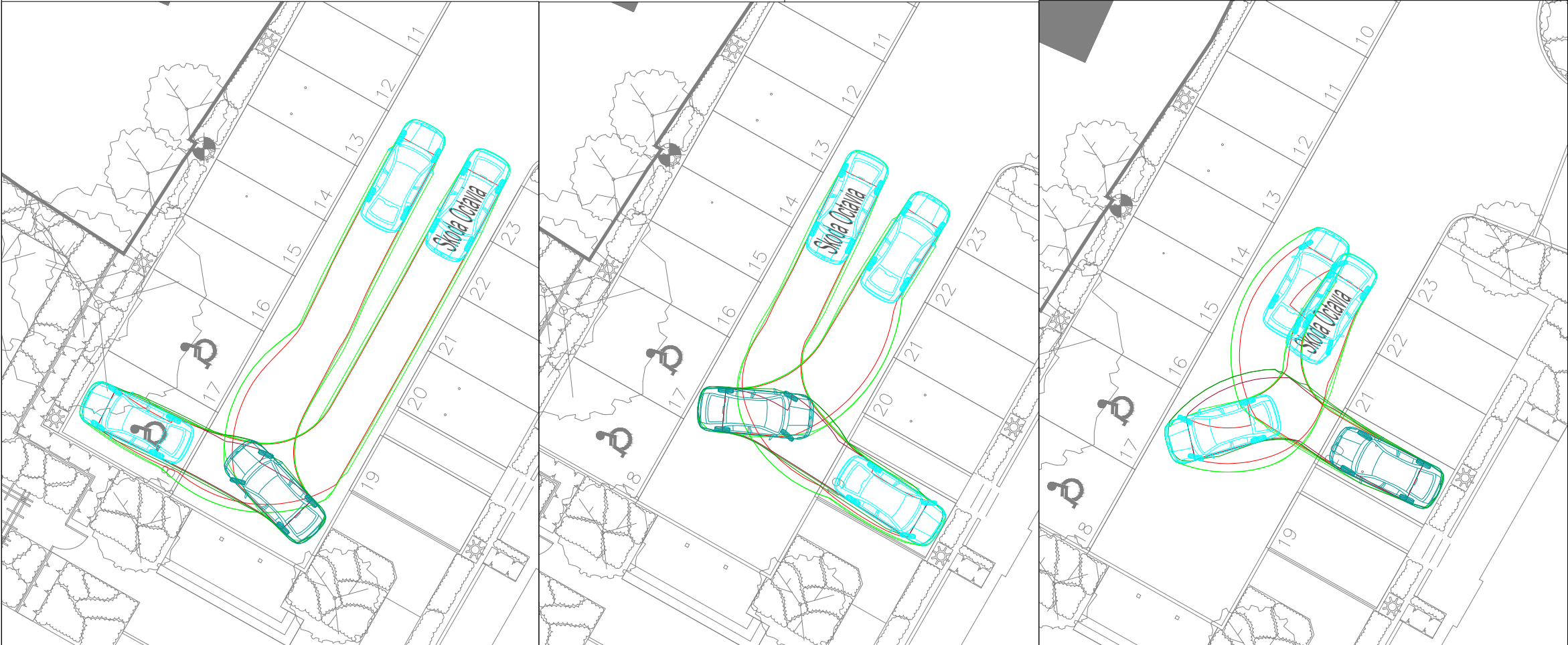
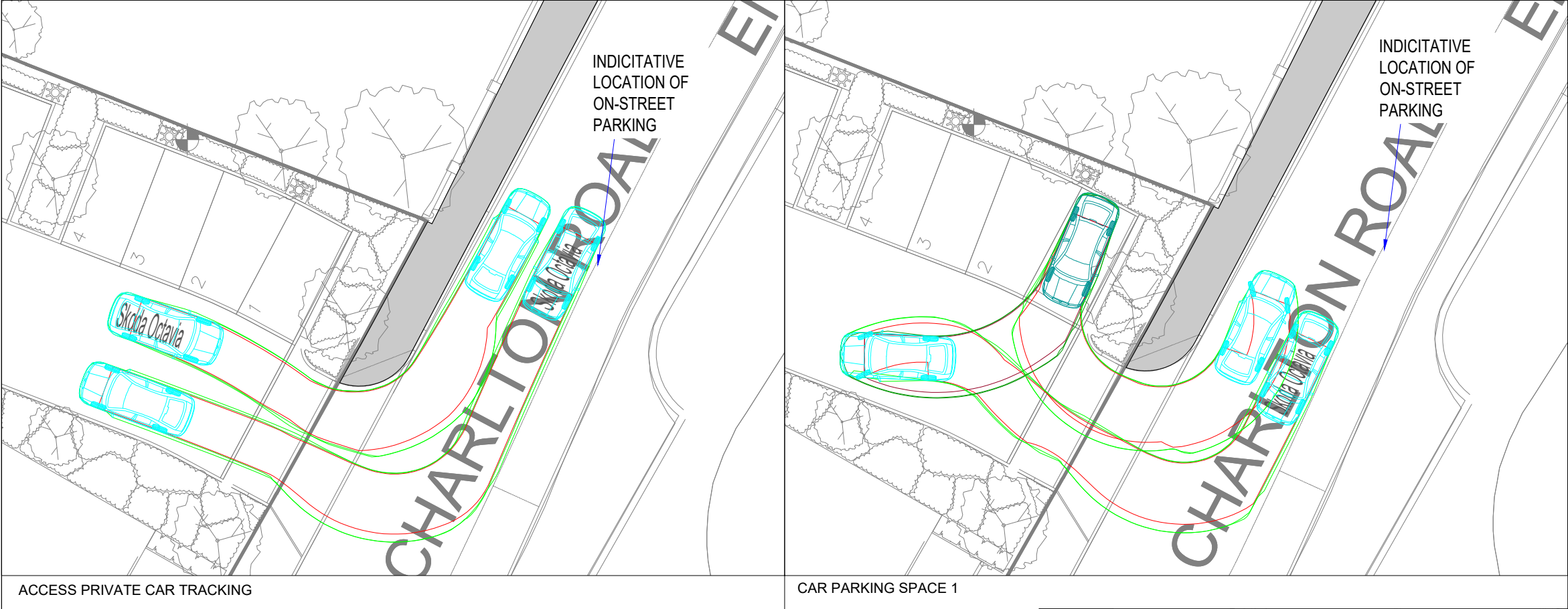


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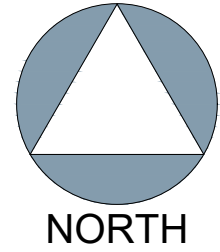


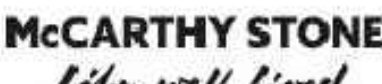
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VEHICLE PROFILE

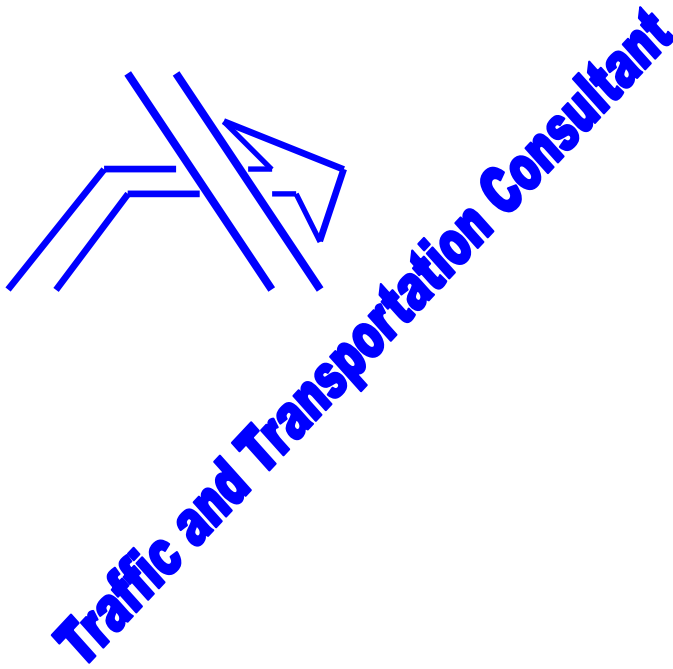
Skoda Octavia	
Overall Length	4.572m
Overall Width	1.769m
Overall Body Height	1.488m
Min Body Ground Clearance	0.249m
Max Track Width	1.713m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.100m



CAR PARKING SPACE 2		CAR PARKING SPACE 3		CAR PARKING SPACE 4		
Project Name OLD CHARLTON ROAD, HITCHIN		Title PRIVATE VEHICLE TRACKING		 paulbasham associates Paul Basham Associates Ltd The Lambourn, Wyndyke Furlong, Abingdon, Oxfordshire, OX14 1UJ 01235 352150 info@paulbashamassociates.com www.paulbashamassociates.com		Client 
Project Phase PRELIMINARY						

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Dr Allan J Burns



MCCARTHY STONE RETIREMENT LIFESTYLES LTD

RETIREMENT LIVING DEVELOPMENTS

REPORT ON TRANSPORT CHARACTERISTICS

FEBRUARY 2024

A. Introduction

A.1 This report is divided into 5 sections, as indicated below. This will allow the report to be used as a whole or in parts, as appropriate.

1. Residents' car, cycle and buggy ownership levels,
 2. Cars owned by residents,
 3. Car parking demand,
 4. Traffic generation
- and
5. Travel plan guidance.

SECTION 1.

RETIREMENT LIVING DEVELOPMENTS

CAR OWNERSHIP OF RESIDENTS

1.1 INTRODUCTION

1.1.1 The data contained in this report has been obtained by sending questionnaires to the house managers of a number of relatively recent McCarthy and Stone Retirement Living developments.

1.1.2 The questionnaires were sent to the following developments:-

Table 1.1.1 Surveyed Developments

Development	Location	Date of first occupation
Henshaw Court	Castle Bromwich, Birmingham	August 2013
Anstie Court	Devizes, Wiltshire	December 2013
Haven Court	Hythe, Hampshire	December 2013
Cornmantle Court	Ringwood, Hampshire	Jan 2015
Norton Court	Leighton Buzzard, Bedfordshire	July 2015
Waverley Court	Carlisle, Cumbria	August 2015
Hamon Court	Hunstanton, Norfolk	February 2017
The Laureates	Cottingham, Yorkshire	February 2017
Riverside Court	Abergavenny, Monmouthshire	May 2017
Swinden Court	Darlington, County Durham	April 2019
Tumbling Weir Court	Ottery St Mary, Devon	August 2019
Beck House,	Isleworth, London	September 2019
Greenhaven	Poole, Dorset	March 2021

1.1.3 In the following tables of data, the developments will be listed in the above order, i.e. from the most established to the most recent development. In this way it may be possible to detect any trends related to the age of the development. However, the confidence that can be given to any such perceived trends may be limited, due to the limited sample size, but may support trends detected in previous studies or be supported by logic.

1.1.4 A copy of the survey questionnaire is included as Appendix 1.A to this section of the report.

1.2. OCCUPANCY LEVELS

- 1.2.1 The questionnaire data gives the occupancy levels of the apartments. It has been shown, from past surveys that the occupancy level is higher in the larger apartments, sold as providing two bedrooms. As the proportion of these larger apartments varies from development to development, it is prudent to look at these types of apartments independently.

Table 1.2.1 Apartment Occupancy

Development	Occupied One Bed Apps	Total Residents (One bed)	Residents per One Bed App	Occupied Two Bed Apps	Total Residents (Two bed)	Residents per two Bed App	Tot Residents Per App
Henshaw Court	23	29	1.261	13	15	1.154	1.222
Anstie Court	10	13	1.300	20	21	1.05	1.133
Haven Court	14	20	1.429	16	17	1.063	1.233
Cornmantle Court	18	23	1.278	13	20	1.538	1.387
Norton Court	15	16	1.067	12	18	1.50	1.259
Waverley Court	24	24	1.00	18	25	1.389	1.167
Hamon Court	14	17	1.214	13	14	1.077	1.148
The Laureates	20	23	1.150	12	18	1.50	1.281
Riverside Court	19	26	1.368	17	24	1.412	1.389
Swinden Court	11	11	1.00	11	18	1.636	1.318
Tumbling Weir Court	13	15	1.154	11	15	1.364	1.25
Beck House,	8	10	1.25	6	7	1.167	1.214
Greenhaven	9	14	1.556	19	26	1.368	1.429
Totals	198	241	1.217	181	238	1.315	1.264

- 1.2.2 Although the most recent development has the highest occupancy rate, there does not appear to be any significant trend in the occupancy rate between the oldest and most recent developments.

1. 3. SEX OF RESIDENTS

1.3.1 The survey also established the sex of residents.

Table 1.3.1 Sex of Residents

Development	Occupied Aps 1 bed	One Bed Aps Females	One Bed Aps Males	Occupied Aps 2 bed	Two Bed Aps Females	Two Bed Aps Males
Henshaw Court	23	22	7	13	11	4
Anstie Court	10	10	3	20	16	5
Haven Court	14	15	5	16	10	7
Cornmantle Court	18	16	7	13	12	8
Norton Court	15	10	6	12	10	8
Waverley Court	24	17	7	18	17	8
Hamon Court	14	13	4	13	9	5
The Laureates	20	16	7	12	10	8
Riverside Court	19	16	10	17	15	9
Swinden Court	11	6	5	11	10	8
Tumbling Weir Court	13	12	3	11	10	5
Beck House,	8	5	5	6	7	0
Greenhaven	9	7	7	19	16	10
Totals	198	165	76	181	153	85

1.3.2 In total there were 318 female residents and 161 male residents. Therefore 66.4% of the residents were female and 33.6% male.

1.3.3 The residents in the occupied one bedroom apartments were 68.5% female and 31.5% male, a little higher proportion of females than in the larger two bedroom apartments, where the split was 64.3% females and 35.7% male.

1.4. VEHICLE OWNERSHIP

- 1.4.1 Based on the evidence from previous surveys, the vehicle ownership of residents of one bedroom apartments is generally lower than that of the residents of two bedroom units. The data given in Table 1.4.1 below confirms that this remains valid.

Table 1.4.1 Vehicle Ownership – one and two bedroom apartments.

Development	Occupied Aps 1 bed	Vehs - one bed aps	Vehs per 1 bed ap	Occupied Aps 2 bed	Vehs – two bed aps	Vehs per 2 bed ap	Total Vehs	Vehs per total ap
Henshaw Court	23	12	0.522	13	7	0.538	19	0.528
Anstie Court	10	4	0.400	20	6	0.300	10	0.333
Haven Court	14	4	0.286	16	5	0.313	9	0.300
Cornmantle Court	18	6	0.333	13	7	0.538	13	0.419
Norton Court	15	7	0.467	12	8	0.667	15	0.556
Waverley Court	24	7	0.292	18	10	0.556	17	0.405
Hamon Court	14	3	0.214	13	7	0.538	10	0.370
The Laureates	20	4	0.200	12	8	0.667	12	0.375
Riverside Court	19	2	0.105	17	9	0.529	11	0.306
Swinden Court	11	4	0.364	11	8	0.727	12	0.545
Tumbling Weir Court	13	7	0.538	11	7	0.636	14	0.583
Beck House,	8	3	0.375	6	5	0.833	8	0.571
Greenhaven	9	5	0.556	19	15	0.795	20	0.714
Totals	198	68	0.343	181	102	0.564	170	0.449

- 1.4.2 As can be seen, the average vehicle ownership of the residents of one bedroom apartments is 0.343 vehicles per apartment and that of the residents of the larger apartments is 0.564 vehicles per apartment. Therefore, the ownership for the larger apartments is 1.64 times that for the smaller apartments.
- 1.4.3 Although the overall vehicle ownership level is at its highest for the most recent development, there does not appear to be a significant vehicle ownership trend. It may well be that the particular characteristics of Greenhaven, a small scheme in a relatively high value area, would explain the high level of vehicle ownership.
- 1.4.4 Experience suggests that the presence of a male resident increases the likelihood of a vehicle being owned by the residents of an apartment. In the following table (1.4.2) the ownership of a vehicle is shown in relation to the occupants of the apartment. It shows that the highest level of vehicle ownership is where there is more than one residents of an apartment, at 0.745 vehicles per apartment. Given the higher occupancy levels of the larger apartments, this supports the finding that vehicle ownership is higher in the larger apartment.

- 1.4.5 In the vast majority of apartments, the two residents include at least one male resident. This, and also the level of vehicle ownership in male only residents, supports the finding that the presence of a male resident increases the likelihood of vehicle ownership.

Table 1.4.2 The Sex of Residents owning a Vehicle

Development	Single female occupants	Vehs	Single male occupants	Vehs	Two occupants	Vehs
Henshaw Court	25	10	3	0	9	8
Anstie Court	27	7	4	0	4	3
Haven Court	18	2	5	1	7	6
Cornmantle Court	16	3	3	3	12	8
Norton Court	13	6	7	3	7	6
Waverley Court	26	5	7	5	8	7
Hamon Court	18	4	5	4	4	2
The Laureates	17	3	6	3	9	6
Riverside Court	17	3	5	1	14	7
Swinden Court	9	3	6	4	7	5
Tumbling Weir Court	16	7	2	1	6	6
Beck House,	8	4	3	3	3	1
Greenhaven	12	8	4	1	12	11
Totals	222	65	60	29	102	76
Averages		0.293		0.483		0.745

- 1.4.6 The vehicle ownership of single male residents is 0.483 vehicles per apartment, which is some 1.64 times the level of ownership amongst single female residents, where the ownership rate is 0.293 vehicles per apartment.
- 1.4.7 The data in Table 1.4.3, below, indicates that the parking provision for residents generally exceeds the level of vehicle ownership. There is only one development (Henshaw Court) out of the thirteen where the resident vehicle ownership exceeds the provision. The combined data would suggest an over-provision of some 42%. However there are a number of vacant apartments in the developments and future residents could include a number of vehicle owners. The surveyed showed 379 occupied apartments and 69 vacant apartments. If the level of vehicle parking remains the same amongst future residents, it would suggest an overall demand for 201 parking spaces, which is still less than the 242 provided, suggesting an “over-provision” of some 20%.

Table 1.4.3 Vehicle ownership and Parking Provision

Development	Total Vehs	Total Parking	Total Resident Parking	Visitor Parking	Staff Parking
Henshaw Court	19	17	17	0	0
Anstie Court	10	16	16	0	0
Haven Court	9	17	17	0	0
Cornmantle Court	13	19	14	5	0
Norton Court	15	17	17	0	0
Waverley Court	17	30	22	7	0
Hamon Court	10	18	18	0	0
The Laureates	12	25	22	3	0
Riverside Court	11	19	19	0	0
Swinden Court	12	28	24	3	1
Tumbling Weir Court	14	16	16	0	0
Beck House,	8	15	15	0	0
Greenhaven	20	30	24	4	2
Totals	170	267	242	22	3

1.5. CYCLE OWNERSHIP

- 1.5.1 The cycle ownership amongst residents is extremely low, as would be expected, given the age profile of residents and the fact that residents generally move into this form of accommodation when they need an element of support and, for example, where the upkeep of the former houses and gardens becomes too difficult for them. This is demonstrated in the following table (1.5.1):-

Table 1.5.1 Cycle Ownership

Development	Number of Occupied Apartments	Number of cycles owned
Henshaw Court	36	1
Anstie Court	30	2
Haven Court	30	1
Cornmantle Court	31	0
Norton Court	27	0
Waverley Court	42	2
Hamon Court	27	1
The Laureates	32	0
Riverside Court	36	0
Swinden Court	22	0
Tumbling Weir Court	24	0
Beck House,	14	0
Greenhaven	28	
Totals	379	7
Average Cycle per occupied apartment	0.018	

- 1.5.2 As can be seen, the level of cycle ownership is very low, at approximately 1 cycle per 54 apartments.
- 1.5.3 In general, this would suggest that approximately half of the developments would have no cycle owners and the peak ownership is two cycles per development. Consideration should be given to catering for this peak demand for undercover cycle parking. It may well be that the most cost effective provision is within the mobility scooter store.

1.6. MOBILITY SCOOTER OWNERSHIP AND STORAGE

1.6.1 The number of mobility scooters (buggies) owned by residents of all the apartments is shown in Table 1.6.1, below. This also shows the storage arrangements.

Table 1.6.1, Mobility Scooter Ownership

Development	Number of Occupied Apartments	Number of mobility scooters owned	Storage location:- S = store provided A= apartment
Henshaw Court	36	1	1S
Anstie Court	30	5	5S
Haven Court	30	5	5S
Cornmantle Court	31	1	1S
Norton Court	27	7	7S
Waverley Court	42	4	4S
Hamon Court	27	2	2S
The Laureates	32	2	2S
Riverside Court	36	5	5S
Swinden Court	22	5	3S
Tumbling Weir Court	24	1	1S
Beck House,	14	1	1S
Greenhaven	28	0	-
Totals	379	39	37S – 2 Other
Average Mobility Scooters per occupied apartment	0.103		

1.6.2 The survey shows that, on average, some 10% of apartments own a mobility scooter, although the peak ownership is some 26%. In all but one development, all scooters were kept in the store provided.

APPENDIX 1. A

Development

House Manager

Total number of parking spaces Number of spaces reserved for :- 1. visitors

2. staff

Apartment number	One or Two Bedrooms	Number of Female occupants	Number of Male occupants	Number of motor vehicles owned	Number of cycles owned	Number of mobility scooters owned/ where stored
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13, if included						
14						
15						
16						
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34						
35						
36						
37						
38, if included						

SECTION 2.

RETIREMENT LIVING DEVELOPMENTS

VEHICLES OWNED BY RESIDENTS

2.1 INTRODUCTION

- 2.1.1 The make, model and year of manufacture of vehicles owned by the residents of 7 retirement living developments were recorded as part of the overall survey. The developments surveyed are listed in Table 2.1.1, below.

Table 2.1.1

Development	Location	Date of opening
Olivier Place	Wilton, nr Salisbury	Feb 2017
Queen's Gate	Wokingham, Berkshire	Feb 2017
The Laureates	Cottingham, Yorkshire	Feb 2017
Poets Place	Loughton, Essex	Aug 2017
Lido Grange	Prestatyn, N Wales	Nov 2017
The Boathouse	Southampton	Jan 2019
Juniper House	Milton Keynes, Buckinghamshire	May 2021

- 2.1.2 Appendix 2 A, provides a complete list of the survey results. The surveys included 107 residents' vehicles.
- 2.1.3 Where possible, the lengths and widths of all of these vehicles has been ascertained, using the internet, are noted.

2.2 VEHICLE DIMENSIONS

2.2.1 In previous surveys, the most popular vehicle amongst residents was the Nissan Micra. In the current survey, the most popular vehicle was the Honda Jazz. This was owned by 12.1% of residents. The next most popular was the Toyota Yaris, owned by 5.6% of residents, closely followed by the Ford Fiesta at 4.6%. These relatively small vehicles account for over 22% of vehicles owned.

2.2.2 Table 2.2.1 below shows the distribution of vehicle widths.

Table 2.2.1 Vehicle widths

Width in metres	Number of Vehicles	Percentage of vehicles
Less than 1.60	3	2.80
< 1.62	8	7.48
<1.64	9	8.41
<1.66	16	14.95
<1.68	18	16.82
<1.70	43	40.19
<1.72	44	41.12
<1.74	52	48.60
<1.76	58	54.21
<1.78	70	65.42
<1.80	74	69.16
<1.82	83	77.57
<1.84	90	84.11
<1.86	96	89.72
<1.88	97	90.65
<1.90	100	93.46
<1.92	100	93.46
<1.94	103	96.26
<1.96	103	96.26
<1.98	105	98.13
<2.00	106	99.07
<2.20	106	99.07
<2.40	107	100

2.2.3 It can be seen that almost 70% of these vehicles are less than 1.8 metres wide, which is typically 0.6 metres narrower than a standard car parking space.

2.2.4 There were a small number of very large vehicles in the sample. The largest being one Range Rover. In total, only 5 vehicles (4.6%) were longer than the standard car parking space (4.8 metres). These were the Range Rover, a Lexus, a Mercedes and 2 Mazda 6 vehicles.

2.2.5 Table 2.2.2 below shows the distribution of vehicle widths.

Table 2.2.2 Vehicle lengths

Length in metres	Number of Vehicles	Percentage of vehicles
Less than 3.4	1	0.93
<3.6	13	12.15
<3.8	14	13.08
<4.0	41	38.32
<4.2	67	62.62
<4.4	91	85.05
<4.6	96	89.72
<4.8	102	95.33
<5.0	106	99.07
<5.2	106	99.07
<5.4	107	100

- 2.2.6 It can be seen that over 95% of these vehicles are less than 4.8 metres in length, which is typically the standard length of a car parking space. Some 85% are shorter than 4.4 metres.
- 2.2.7 The mean width of the surveyed vehicles was 1.75 metres and the mean length was 4.11 metres.
- 2.2.8 The vast majority of vehicles owned by residents are of modest size and will be readily accommodated in most conventional car park layouts.
- 2.2.9 Electric Vehicles:- The survey staff were instructed to identify any electric vehicles owned by residents. Only two hybrid vehicles were identified along with one electric vehicle. This is an insignificant number, Of the 91 vehicles observed by the survey staff, only 2.2% were hybrid vehicles and 1.1 were fully electric vehicles. However, the proportions are likely to be higher in the future, as such vehicles become more common and the time of the restriction on the sale of petrol/diesel

APPENDIX 2. A

Vehicles Owned by Residents RL Developments

Manufacturer	Model	Year	Width (metres)	Length (metres)	Notes
BMW	118D	2016	1.765	4.324	
	330i	2022	1.827	4.709	
Citreon	C1	2017	1.615	3.466	
	C3	2013	1.766	4.101	
	Picasso	2010	1.829	4.585	
	Picasso	2016	1.826	4.438	
Dacia	Sondero	2017	1.733	4.056	
Fiat	Panda	2010	1.643	3.653	
Ford	Fiesta	2014	1.722	3.969	
	Fiesta	2015	1.722	3.969	
	Fiesta	2015	1.722	3.969	
	Fiesta	2016	1.722	3.969	
	Fiesta	2018	1.756	4.068	
	Focus	2005	1.823	4.360	
	Focus	2005	1.823	4.360	
	Focus	2017	1.823	4.360	
	Puma	2020	1.805	4.186	
Honda	Jazz	2005	1.694	3.995	
	Jazz	2007	1.675	3.830	
	Jazz	2007	1.675	3.830	
	Jazz	2009	1.695	3.900	
	Jazz	2010	1.695	3.900	
	Jazz	2015	1.694	3.995	
	Jazz	2015	1.694	3.995	
	Jazz	2017	1.694	3.995	
	Jazz	2020	1.694	4.028	
	Jazz	2020	1.694	4.028	
	Jazz	2020	1.694	4.028	
	Jazz	2022	1.694	4.044	
	Jazz	2022	1.694	4.044	
	Civic	2014	1.770	4.300	
Hyundai	i20	2022	1.775	4.040	
	iX20	2015	1.765	4.120	
	Kona	2019	1.800	4.165	
	Santa Fe	2020	1.890	4.770	
Jaguar	F Pace	2017	1.936	4.731	
	F P300	2019	1.923	4.470	

Manufacturer	Model	Year	Width (metres)	Length (metres)	Notes
Kia	Picanto	2008	1.595	3.595	
	Picanto	2008	1.595	3.595	
	Picanto	2020	1.595	3.595	
	Venga	2012	1.865	4.075	
	Venga	2015	1.765	4.075	
Lexus	RX400H	2007	1.845	4.760	
	RX500H	2023	1.920	4.890	
Mazda	2	2012	1.695	3.885	
	2	2021	1.695	4.070	
	2	2016	1.695	4.060	
	CX3	2019	1.765	4.270	
	3	2016	1.795	4.465	
	6	2016	1.840	4.805	
	6	2021	1.840	4.870	
Mercedes	A180	2005	1.975	3.838	
	A180	2009	1.975	3.838	
	B180	2012	1.786	4.359	
	GL350D	2016	1.982	5.240	
	GLC300D	2019	1.890	4.642	
	EQC400	2021	1.884	4.762	
Mini	Countryman	2020	1.822	4.299	
	Cooper	2022	1.727	4.036	
Nissan	Micra	2020	1.743	3.999	
	Note	2008	1.691	4.083	
	Note	2015	1.695	4.100	
	Note	2015	1.695	4.100	
	Juke	2013	1.795	4.135	
	Juke	2021	1.800	4.210	
	Quashqai	2015	1.806	4.377	
	Quashqai	2016	1.806	4.377	
Peugeot	107	2011	1.855	3.430	
	107	2004	1.855	3.430	
	108	2015	1.615	3.475	
	206	2004	1.632	3.822	
	207	2013	1.750	4.044	
	208	2016	1.739	3.973	
	308	2019	1.804	4.253	
	308	2021	1.804	4.253	

Manufacturer	Model	Year	Width (metres)	Length (metres)	Notes
Range Rover	HSE SDV6	2015	2.220	4.850	
Renault	Modus	2008	1.695	3.874	
	Megane	2015	1.848	4.312	
	Megane	2018	1.814	4.359	
Skoda	Citigo	2015	1.645	3.563	
	Citigo	2018	1.645	3.397	
	Rapid	2018	1.706	4.483	
	Fabia	2004	1.646	4.222	
	Fabia	2014	1.642	4.000	
	Yeti	2017	1.763	4.223	
Suzuki	Swift	2022	1.735	3.845	
	Vitara	2022	1.775	4.175	
Toyota	Auris	2017	1.760	4.330	
	Aygo	2011	1.615	3.415	
	Aygo	2021	1.615	3.430	
	Aygo X	2022	1.615	3.455	
	Yaris	2002	1.694	3.950	
	Yaris	2010	1.695	3.950	
	Yaris	2013	1.695	3.950	
	Yaris	2015	1.695	3.950	
	Yaris	2018	1.695	3.950	
	Yaris	2023	1.765	4.172	
	Corolla	2003	1.695	4.385	
Vauxhall	Corsa	2017	1.746	4.036	
	Corsa	2019	1.746	4.036	
	Astra	2013	1.753	4.249	
	Meriva	2013	1.812	4.288	
	Mokka	2015	1.777	4.278	
VW	UPi	2013	1.645	3.540	
	Polo	2004	1.650	3.897	
	Polo	2017	1.682	3.972	
	Golf	2014	1.790	4.255	

SECTION 3.

RETIREMENT LIVING DEVELOPMENTS

OVERALL PARKING SPACE DEMAND

3.1 INTRODUCTION

- 3.1.1 Detailed traffic surveys were undertaken at 6 retirement living developments in England and Wales. Six is the number of sets of data that the TRICS database providers adopted as the minimum number of sites needed for inclusion on their data card.
- 3.1.2 The sites were selected to meet the following criteria:-
1. Relatively recent developments
 2. Feasible to survey - suitable parking for surveys staff to see all necessary activity
 3. An ungated development (or gated with gates normally left open) to ensure available access for residents, visitors, servicing and staff.
- 3.1.3 The same survey staff were used for each of the surveys, to ensure consistency.
- 3.1.4 The staff entered the site car park shortly before 7 a.m. and noted part of the registration numbers of all vehicles present. The full registration plate information was not noted, for confidentiality reasons. Unless there was information to the contrary, these have been assumed to be vehicles owned by residents.
- 3.1.5 From 7 a.m. to 7 p.m., the time and partial registration number details were noted for all vehicle movements into and out of the car park. Where appropriate, this was extended to any vehicle observed to park outside the development, where an occupier of the vehicle was seen to enter or leave the development, for example where a resident was picked up from the roadside dropped off there.
- 3.1.6 This data allows the number of vehicles within the car park (or parking offsite) to be calculated throughout the day.
- 3.1.7 The developments surveyed are listed in Table 3.1.1 below.

Table 3.1.1. Surveys developments

Development	Location	Opening date	Survey date
Haven Court	Hythe, nr Southampton	Dec 2013	Tuesday 4 July 2023
Olivier Place	Wilton, nr Salisbury	Feb 2017	Thursday 3 August 2023
Queen's Gate	Wokingham, Berkshire	Feb 2017	Thursday 10 August 2023
The Laureates	Cottingham, Yorkshire	Feb 2017	Thursday 18 January 2024
Lido Grange	Prestatyn, N Wales	Nov 2017	Thursday 1 February 2024
Juniper House	Milton Keynes, Buckinghamshire	May 2021	Thursday 12 October 2023

- 3.1.8 The survey at Haven Court was extended to 10 p.m., as a guide to how parking demand and traffic generation might vary during the evening period.

3.2 CAR PARKING DEMAND

3.2.1. Table 3.2.1 below shows the peak parking demand during each hour of the survey.

Table 3.2.1 Peak Parking Demand

Time Period	Peak Parking Demand						
	Haven Court	Olivier Place	Queens Gate	The Laureates	Lido Grange	Juniper House	Totals
Parking spaces	24	29	28	25	27	38	171
0700-0800	12	21	14	11	17	19	94
0800-0900	12	20	14	13	17	22	98
0900-1000	14	20	15	14	20	20	103
1000-1100	15	22	14	13	20	23	107
1100-1200	14	21	13	14	15	22	99
1200-1300	17	22	13	12	16	25	105
1300-1400	16	21	12	13	17	25	104
1400-1500	14	17	13	12	16	23	95
1500-1600	14	19	12	14	15	21	95
1600-1700	15	19	13	13	19	21	100
1700-1800	12	22	13	10	18	25	100
1800-1900	13	23	12	11	17	21	97
1900-2000	14						
2000-2100	14						
2100-2200	14						
Peak demand per parking space	0.708	0.793	0.536	0.560	0.741	0.658	0.626
Occupied apartments	30	34	27	32	38	46	207
Peak demand per occupied apartment	0.567	0.676	0.556	0.438	0.526	0.543	0.517

3.2.2 The table shows that, in every case, the peak parking demand was significantly below the provision of parking spaces. The greatest uptake of the available spaces was at Olivier Place, where some 79% of the spaces were utilised during one hour of the day. On average over the 6 developments, the peak take up was 62.6%.

3.2.3 The data also shows that, on average, the peak demand for parking was some 0.517 spaces per occupied apartment. The peak demand was at the Olivier Place development, where the demand was 0.676 spaces per apartment.

SECTION 4.

RETIREMENT LIVING DEVELOPMENTS

VEHICLE AND OTHER MOVEMENTS

4.1 INTRODUCTION

- 4.1.1 The following introduction is, in part, a repetition of that of Section 3 of this report. This will allow this section of the report to be used independently, as appropriate.
- 4.1.2 Detailed traffic surveys were undertaken at 6 retirement living developments in England and Wales. Six is the number of sets of data that the TRICS database providers adopted as the minimum number of sites needed for inclusion on their data card.
- 4.1.3 The sites were selected to meet the following criteria:-
1. Relatively recent developments
 2. Feasible to survey - suitable parking for surveys staff to see all necessary activity
 3. An ungated development (or gated with gates normally left open) to ensure available access for residents, visitors, servicing and staff.
- 4.1.4 The same survey staff were used for each of the surveys, to ensure consistency.
- 4.1.5 The staff entered the site car park shortly before 7 a.m. and noted part of the registration numbers of all vehicles present. The full registration plate information was not noted, for confidentiality reasons. Unless there was information to the contrary, these have been assumed to be vehicles owned by residents.
- 4.1.6 From 7 a.m. to 7 p.m., the time and partial registration number details were noted for all vehicle movements into and out of the car park. Where appropriate, this was extended to any vehicle observed to park outside the development, where an occupier of the vehicle was seen to enter or leave the development, for example where a resident was picked up from the roadside dropped off there.
- 4.1.7 This data allows the hourly traffic generation of the developments to be calculated.
- 4.1.8 The survey staff also noted the number of other movements into and out of the development, such as these by pedestrians and mobility scooters.
- 4.1.9 The developments surveyed are listed in Table 3.1.1 below.

Table 4.1.1. Surveys developments

Development	Location	Opening date	Survey date
Haven Court	Hythe, nr Southampton	Dec 2013	Tuesday 4 July 2023
Olivier Place	Wilton, nr Salisbury	Feb 2017	Thursday 3 August 2023
Queen's Gate	Wokingham, Berkshire	Feb 2017	Thursday 10 August 2023
The Laureates	Cottingham, Yorkshire	Feb 2017	Thursday 18 January 2024
Lido Grange	Prestatyn, N Wales	Nov 2017	Thursday 1 February 2024
Juniper House	Milton Keynes, Buckinghamshire	May 2021	Thursday 12 October 2023

- 4.1.10 The survey at Haven Court was extended to 10 p.m., as a guide to how parking demand and traffic generation might vary during the evening period.

4.2 TRAFFIC GENERATION

4.2.1 Table 4.2.1 shows the hourly traffic generation for each of the 6 developments.

Table 4.2.1 Traffic Generation

Time Period	Haven Crt		Olivier Place		Queen's Gate		The Laureates		Lido Grange		Juniper House		Totals	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
0700-0800	2	2	2	3	1	1	0	0	0	1	0	0	5	7
0800-0900	2	2	4	4	1	1	2	0	2	0	3	1	14	8
0900-1000	6	6	6	7	2	1	1	2	2	1	2	4	19	21
1000-1100	6	7	7	5	4	3	4	3	4	9	6	3	31	30
1100-1200	6	5	4	7	2	3	3	6	2	1	7	7	24	29
1200-1300	7	7	9	5	4	4	3	3	3	3	5	5	31	27
1300-1400	5	3	2	7	3	2	4	2	2	1	6	6	22	21
1400-1500	2	2	4	4	2	2	1	1	4	6	5	7	18	22
1500-1600	2	3	5	6	3	4	4	4	2	1	3	3	19	21
1600-1700	4	4	7	3	4	3	3	4	6	2	3	2	27	18
1700-1800	1	1	4	2	0	1	0	1	0	1	4	4	9	10
1800-1900	4	3	4	3	2	2	2	1	0	1	0	0	12	10
Totals	47	45	58	56	28	27	27	27	27	27	44	42	231	224

4.2.2 The surveys were undertaken when there were a total of 207 occupied apartments. The total two-way traffic movements were 455. Therefore the overall average traffic generation rate is 2.20 vehicle movements per occupied apartment per 12 hour day (0700-1900).

4.2.3 Table 4.2.2 shows the 12 hour traffic generate rates for each of the 6 development,

Table 4.2.2 Traffic Generation Rates of Surveyed Developments

. Development	Total Vehicle Movements per 12 hour day	Occupied apartments	Generation per Occupied Apartment
Haven Court (2013)	92	30	3.07
Olivier Place (2017)	114	34	3.35
Queen's Gate (2017)	55	27	2.04
The Laureates (2017)	54	32	1.69
Lido Grange (2017)	54	38	1.42
Juniper House (2021)	86	46	1.87

4.2.4 There was a comparable survey undertaken at Haven Court, by the same survey staff, back in 2015. At that time the overall generation was 68 vehicle movements per 12 hour day. The current generation was found to be 92, i.e. a 35% increase. This might suggest that the traffic generation increases as the development matures. From Table 4.2.2, above, it can be seen that the development opened in 2013 has a current generation of 3.07 vehicle movements per apartment. The average for the 2017 developments is 2.11 and the generation of the 2021 development is 1.87. Whilst this is clearly a very limited sample, there does appear to be a trend.

- 4.2.5 This increase is logical and can be explained as follows. As residents get older, they are likely to give up car ownership, or use their cars less frequently. This would tend to suggest that the overall traffic generation might be reduced. However, the residents will still have a need to travel, for shopping, medical appointments, family visits etc. When using their own vehicle, these would involve one vehicle leaving the development and one vehicle returning. If these trips are undertaken using taxis, or lifts from friends or relatives, there would be one movement to the development to pick up the resident, one movement away to the shops or appointment, one movement back to the development to drop off the resident, followed by one movement away. Hence two movements are replaced by four.
- 4.2.6 In addition, as residents get older, their need for visits by carers and medical professionals are likely to increase.
- 4.2.7 Whilst the generation is likely to increase as the development becomes more established, it is likely that the generation will reach a peak when all the residents' needs are being met and also when some of the residents are being replaced by younger, fitter, ones.
- 4.2.8 The following table, Table 4.2.3, shows the hourly split of the traffic generated.

Table 4.2.3 Hourly Split of Generated Traffic

Time	Traffic Generation		Percentage of 12 Hour Generation	
	In	Out	In	Out
0700-0800	5	7	2.16	3.13
0800-0900	14	8	6.06	3.57
0900-1000	19	21	8.23	9.38
1000-1100	31	30	13.42	13.39
1100-1200	24	29	10.39	12.95
1200-1300	31	27	13.42	12.05
1300-1400	22	21	9.52	9.38
1400-1500	18	22	7.79	9.82
1500-1600	19	21	8.23	9.38
1600-1700	27	18	11.69	8.04
1700-1800	9	10	3.90	4.46
1800-1900	12	10	5.19	4.46
Totals	231	224	100	100.01

- 4.2.9 The survey at Haven Court was extended by 3 hours to finish at 10 p.m. This showed only 2 vehicles entering the development and 3 leaving between 7 p.m. and 8 p.m., with no movements in the following 2 hours. This suggests that traffic movements are insignificant later in the day. This is in line with previous survey data.

4.2.10 Vehicle Types

Haven Court:- None of the vehicle movements were by large commercial vehicles. There were two visits by a gas engineer in a Ford Transit van, 2 visits by supermarket delivery vehicles and 3 other visits in small vans.

Olivier Place:- There were no vehicle movements by large commercial vehicles. There were 18 movements by light goods vehicles and 0 by a motor cycle.

Queen's Gate:- There were no vehicle movements were a large commercial vehicles. There were 2 movements by light goods vehicles and 4 by a bus.

The Laureates:- There were 2 vehicle movements by large commercial vehicles. This was the refuse collection vehicle that entered the development at 11.11, departing 3 minutes later.

There were 6 movements by light goods vehicles, 3 in and 3 out.

Lido Grange:- There were no vehicle movements by large commercial vehicles. There were 2 movements by light goods vehicles.

Juniper Court:- There were no vehicle movements were a large commercial vehicles. There were 6 movements by light goods vehicles.

4.2.11 Table 4.2.4 shows the percentage of vehicles movements by vehicles other than the private car.

Table 4.2.4 Other Vehicle Movements

Total Traffic Generation	455	Percentage
Motor Cycles	0	0
Light Goods Vehicles	44	9.67
Heavy Goods Vehicles	2	0.44
Buses	4	8.79

4.3 RESIDENTS TRAFFIC GENERATION

- 4.3.1 Using the noted registration numbers of the car present at 7 a.m. , which are assumed to belong to residents, it is possible to determine how many of the vehicle movements were undertaken by residents' vehicles.

Table 4.3.1 Traffic Generation by Residents

Development	Total Vehicle Movements per 12 hour day	Residents' Movements	Percentage of Movements made by Residents
Haven Court (2013)	92	4	4.3
Olivier Place (2017)	114	34	29.8
Queen's Gate (2017)	55	12	21.8
The Laureates (2017)	54	10	18.5
Lido Grange (2017)	54	19	35.2
Juniper House (2021)	86	18	20.9

- 4.3.2 The very low level of movements by residents at Haven Court, the oldest of the surveyed developments, tends to support the hypothesis that visitors undertake a significantly greater proportion of movements as a development ages. This is described in paragraph 4.2.5 above.

4.4 PEDESTRIAN MOVEMENTS

4.4.1 Table 4.3.1 shows the 12 hour pedestrian movements for the 6 developments.

Table 4.2.1 Pedestrian Movements

Development	Occupied Apartments	Pedestrian Movements	Pedestrian Movements per Occupied Apartment
Haven Court	30	17	0.567
Olivier Place	34	45	1.324
Queen's Gate	27	27	1.000
The Laureates	32	40	1,250
Lido Grange	38	68	1.789
Juniper House	46	32	0.696

4.5 OTHER MOVEMENTS

- 4.5.1 The survey showed no movements by cycle, mobility scooter etc. at any of the developments.
- 4.5.2 Clearly this does not indicate that such movements never take place. But that they are very infrequent.

SECTION 5.

RETIREMENT LIVING DEVELOPMENTS

TRAVEL PLANS

5.1 INTRODUCTION

5.1.1 The government website describes travel plans as follows:-

Travel Plans are long-term management strategies for integrating proposals for sustainable travel into the planning process. They are based on evidence of the anticipated transport impacts of development and set measures to promote and encourage sustainable travel (such as promoting walking and cycling). They should not, however, be used as an excuse for unfairly penalising drivers and cutting provision for cars in a way that is unsustainable and could have negative impacts on the surrounding streets.

Travel Plans should where possible, be considered in parallel to development proposals and readily integrated into the design and occupation of the new site rather than retrofitted after occupation.

Where there may be more effective or sustainable outcomes, and in order to mitigate the impact of the proposed development, consideration may be given to travel planning over a wider area.

5.1.2 Local Authorities often impose a planning condition, when approving a development proposal, requiring the submission of a Travel Plan for approval prior to the commencement of the development. It is frequently a requirement that the submitted plan should include targets for the reduction in vehicle movements generated by the development and means by which these targets will be achieved and measured.

5.1.3 This brief report explains how there are significant problems in applying such an approach to retirement housing for the older people. This type of housing is defined in the PPG “Housing for Older and Disabled People” as

Retirement living or sheltered housing: *This usually consists of purpose-built flats or bungalows with limited communal facilities such as a lounge, laundry room and guest room. It does not generally provide care services, but provides some support to enable residents to live independently. This can include 24 hour on-site assistance (alarm) and a warden or house manager.*

5.2. Traffic Generation Trends

- 5.2.1 In the early years of a development of retirement housing for the older people, the traffic generation is significantly lower than that of standard housing developments. The car ownership levels are relatively low and residents with vehicles are unlikely to use them frequently. There are generally no journeys to and from work, trips to the local schools to drop off children etc.
- 5.2.2 Whereas standard open market housing might be expected to generate some 6 or more vehicle movements per dwelling per day, recent survey work indicates an average trip rate of some 2.2 for this form of retirement housing. As a result, the scope to reduce vehicle movements is relatively limited
- 5.2.3 However, unlike most forms of development, the needs of residents of retirement housing for older people will change significantly over time. As residents get older, many are likely to give up driving. One might expect that this would result in a reduced traffic generation. Indeed for some travel purposes, this may be the case. However, there are many purposes for which trips will continue to be essential. This is likely to result in a different pattern of movements. Tab
- 5.2.4 For some trips, bus services could provide a suitable alternative to the car and so this would tend to reduce the traffic generation of the development. In some instances, residents might have goods delivered, rather than using the cars to collect them (e.g. supermarket deliveries). This would have a neutral effect on vehicle movements. In other instances, such as trips to medical services, residents may use taxi services or be transported by relatives or friends. Here there would be an increase in traffic generation i.e. one movement to collect the resident and one away to the destination. There would be two additional vehicle movements associated with returning the resident to their home.
- 5.2.5 Whilst a travel plan can encourage the use of bus services, by requiring residents to be provided with information about the available services, it is difficult to see how it can help to reduce vehicles movements in any other way.
- 5.2.6 As residents get older, their needs will change. The use of the health services is likely to be increased, even allowing for the fact that residents in this form of housing tend to stay healthier for longer, increasing the need to either travel to service providers or receive more visits from medical practitioners. This will tend to result in an increased traffic generation, as the development becomes more established.
- 5.2.7 The ability of the residents to undertake daily chores will also decline over the years. It is normally the case that older people will call on “carers” to assist them. Movements to and from the development, by “carers”, will be a wholly new and increasing requirement. Whilst efforts can be made to ensure that “carers” provide services to more than one resident during each visit, there is still likely to be an increase in the number of movements to and from the development.
- 5.2.8 From the above, it is clear that the traffic generation of this form of housing is highly unlikely to reduce over time and is very likely to increase, irrespective of any realistic policies adopted in a Travel Plan.

5.3. Practical Examples

5.3.1 The recent survey work illustrates the trend for there to be an increased traffic generation, as the development becomes more established.

5.3.2 *Haven Court – Hythe, Southampton*

Comparable surveys have been undertaken at the Haven Court retirement living development in both April 2015, soon after it was first occupied, and July 2023. The surveys were undertaken by the same survey staff. Over the 8 years, the peak parking demand fell from some 24 spaces to 17. This would suggest a fall in car ownership amongst residents.

5.3.3 The survey in 2015 showed the overall generation was 68 vehicle movements per 12 hour day. The current generation was found to be 92, i.e. a 35% increase. This would suggest that the traffic generation increases as the development matures

5.2.4 From Table 5.2.1 below, it can be seen that the development opened in 2013 has a current generation of 3.07 vehicle movements per apartment. The average for the 2017 developments is 2.11 and the generation of the 2021 development is 1.74. Whilst this is clearly a very limited sample, there does appear to be a trend.

Table 4.2.2 Traffic Generation Rates of Surveyed Developments

. Development	Total Vehicle Movements per 12 hour day	Occupied apartments	Generation per Occupied Apartment
Haven Court (2013)	92	30	3.07
Olivier Place (2017)	114	34	3.35
Queen's Gate (2017)	55	27	2.04
The Laureates (2017)	54	32	1.69
Lido Grange (2017)	54	38	1.42
Juniper House (2021)	86	46	1.74

5.2.5 Surveys have also been undertaken at Linters Court, Redhill, Surrey in both 2007 and 2015. Although this is a different form of retirement housing, providing increased facilities for the residents, it is a comparable for of housing for older people.

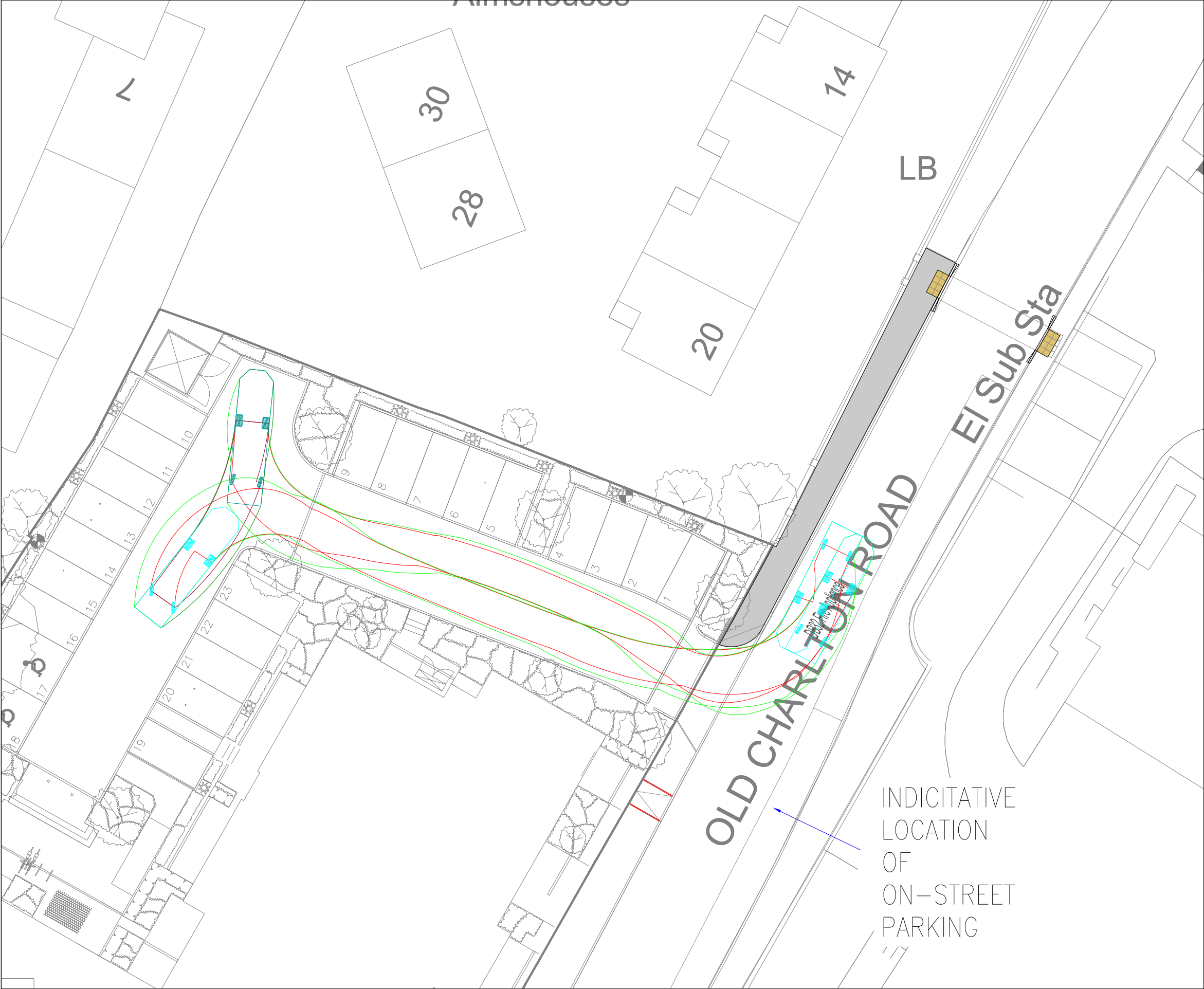
5.2.6 As with the Haven Court survey results, the Redhill surveys were some 8 years apart and showed that the peak parking demand fell from 22 spaces in 2007 to 17 in 2015. Again, this would suggest a fall in car ownership amongst residents. However, the 12 hour traffic generation increased from 99 to 139 vehicle movements.

5.4. Conclusions

- 5.4.1 Any requirement to reduce the traffic generation of sheltered housing for the elderly, as required in a Travel Plan, is unlikely to be realistic. **It would be unreasonable to deprive the residents of essential medical and caring services. Furthermore, any measures that would tend to reduce traffic generation, but would result in the increased isolation of residents should be resisted as being likely to have an adverse impact on the mental health of residents.**
- 5.4.2 Where the requirement for a Travel Plan is being imposed, it may be prudent to use this report to inform local authority officers of the problems of trying to reduce overall traffic generation in an acceptable manner for this form of housing.

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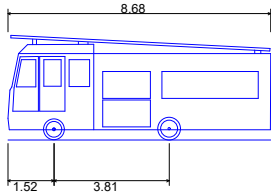


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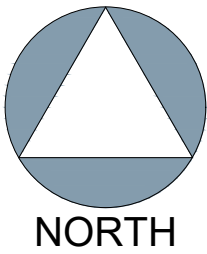
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VEHICLE PROFILE



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	



P01	FIRST ISSUE	12.03.25	HML	LEJ
Rev	Description	Date	By	App'd
	Date Created	12.03.25	Drawn By	HML
	Approved By	LEJ	Suitability Code	-
	PBA Project Number	504.0052	Scale	1:250 (AT A3)
	PBA Drawing No:	504.0052-0003	Revision	P01

Project Name	OLD CHARLTON ROAD, HITCHIN
Project Phase	PRELIMINARY

Title	FIRE TENDER SWEPT PATH ANALYSIS
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McCarthy Stone
Life, well lived

Appendix F

Calculation Reference: AUDIT-247601-250221-0220

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	HF HERTFORDSHIRE	1 days
	IW ISLE OF WIGHT	1 days
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	NS NORTH SOMERSET	1 days
05	EAST MIDLANDS	
	DY DERBY	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	EC CHESHIRE EAST	1 days
09	NORTH	
	CU CUMBERLAND	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 48 (units:)
 Range Selected by User: 17 to 50 (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: 01/01/16 to 24/06/24

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

Selected survey days:

Monday	3 days
Tuesday	1 days
Wednesday	2 days
Thursday	3 days
Friday	1 days

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

Selected survey types:

Manual count	10 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	8
Edge of Town	2

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

Selected Location Sub Categories:

Residential Zone	9
Built-Up Zone	1

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	8 days - Selected
Servicing vehicles Excluded	4 days - Selected

Secondary Filtering selection:**Use Class:**

C3	10 days
----	---------

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

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	2 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	2 days
25,001 to 50,000	3 days
50,001 to 100,000	1 days

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

Population within 5 miles:

5,001 to 25,000	2 days
25,001 to 50,000	1 days
75,001 to 100,000	3 days
100,001 to 125,000	1 days
125,001 to 250,000	1 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	4 days
1.1 to 1.5	5 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	2 days
No	8 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	10 days
-----------------	---------

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

LIST OF SITES relevant to selection parameters

1	CU-03-N-01 FRIARGATE PENRITH	RETIREMENT FLATS	CUMBERLAND
	Edge of Town Centre Residential Zone Total No of Dwellings:	48	
	Survey date: MONDAY	24/06/24	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	HF-03-N-01 POUND AVENUE STEVENAGE	RETIREMENT FLATS	HERTFORDSHIRE
	Edge of Town Centre Residential Zone Total No of Dwellings:	35	
	Survey date: THURSDAY	02/11/23	Survey Type: MANUAL
5	IW-03-N-01 CHURCH ROAD BEMBRIDGE	RETIREMENT FLATS	ISLE OF WIGHT
	Edge of Town Residential Zone Total No of Dwellings:	40	
	Survey date: THURSDAY	27/06/19	Survey Type: MANUAL
6	NS-03-N-01 CHRIST CHURCH CLOSE NEAR BRISTOL NAILSEA	RETIREMENT FLATS	NORTH SOMERSET
	Edge of Town Centre Residential Zone Total No of Dwellings:	28	
	Survey date: WEDNESDAY	03/05/23	Survey Type: MANUAL
7	NY-03-N-01 EASTGATE PICKERING	RETIREMENT FLATS	NORTH YORKSHIRE
	Edge of Town Residential Zone Total No of Dwellings:	30	
	Survey date: MONDAY	26/09/16	Survey Type: MANUAL
8	WK-03-N-01 REGENT STREET ROYAL LEAMINGTON SPA	RETIREMENT FLATS	WARWICKSHIRE
	Edge of Town Centre Built-Up Zone Total No of Dwellings:	34	
	Survey date: MONDAY	21/11/22	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	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
10	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	10	35	0.020	10	35	0.023	10	35	0.043
08:00 - 09:00	10	35	0.058	10	35	0.081	10	35	0.139
09:00 - 10:00	10	35	0.110	10	35	0.092	10	35	0.202
10:00 - 11:00	10	35	0.092	10	35	0.113	10	35	0.205
11:00 - 12:00	10	35	0.081	10	35	0.078	10	35	0.159
12:00 - 13:00	10	35	0.090	10	35	0.087	10	35	0.177
13:00 - 14:00	10	35	0.072	10	35	0.061	10	35	0.133
14:00 - 15:00	10	35	0.069	10	35	0.095	10	35	0.164
15:00 - 16:00	10	35	0.058	10	35	0.066	10	35	0.124
16:00 - 17:00	10	35	0.058	10	35	0.038	10	35	0.096
17:00 - 18:00	10	35	0.061	10	35	0.038	10	35	0.099
18:00 - 19:00	10	35	0.029	10	35	0.026	10	35	0.055
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.798			0.798			1.596

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

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

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Parameter summary

Trip rate parameter range selected: 25 - 48 (units:)
 Survey date range: 01/01/16 - 24/06/24
 Number of weekdays (Monday-Friday): 10
 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.

Calculation Reference: AUDIT-247601-250314-0354

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	HF	HERTFORDSHIRE
	KC	KENT
		1 days
		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: 8 to 14 (units:)
 Range Selected by User: 0 to 15 (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: 01/01/16 to 18/09/24

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

Selected survey days:

Monday 1 days
 Wednesday 1 days

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

Selected survey types:

Manual count 2 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 2

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

Selected Location Sub Categories:

Residential Zone 2

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included 2 days - Selected
 Servicing vehicles Excluded 1 days - Selected

Secondary Filtering selection:

Use Class:

C3 2 days

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

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

10,001 to 15,000	1 days
20,001 to 25,000	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
125,001 to 250,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	1 days

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

Travel Plan:

Yes	2 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	2 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
-----------------------	-----	--

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

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	11	0.136	2	11	0.500	2	11	0.636
08:00 - 09:00	2	11	0.364	2	11	0.500	2	11	0.864
09:00 - 10:00	2	11	0.045	2	11	0.136	2	11	0.181
10:00 - 11:00	2	11	0.182	2	11	0.318	2	11	0.500
11:00 - 12:00	2	11	0.227	2	11	0.227	2	11	0.454
12:00 - 13:00	2	11	0.409	2	11	0.273	2	11	0.682
13:00 - 14:00	2	11	0.409	2	11	0.273	2	11	0.682
14:00 - 15:00	2	11	0.227	2	11	0.500	2	11	0.727
15:00 - 16:00	2	11	0.455	2	11	0.364	2	11	0.819
16:00 - 17:00	2	11	0.545	2	11	0.318	2	11	0.863
17:00 - 18:00	2	11	0.409	2	11	0.545	2	11	0.954
18:00 - 19:00	2	11	0.545	2	11	0.364	2	11	0.909
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.953			4.318			8.271

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

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

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Parameter summary

Trip rate parameter range selected:	8 - 14 (units:)
Survey date range:	01/01/16 - 18/09/24
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
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.

Calculation Reference: AUDIT-247601-250320-0348

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01	GREATER LONDON	
	WF WALTHAM FOREST	1 days
02	SOUTH EAST	
	HF HERTFORDSHIRE	1 days
	IW ISLE OF WIGHT	1 days
	WS WEST SUSSEX	1 days
05	EAST MIDLANDS	
	DY DERBY	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
09	NORTH	
	CU CUMBERLAND	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: 34 to 48 (units:)
Range Selected by User: 17 to 76 (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: 01/01/16 to 24/06/24

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

Selected survey days:

Monday 2 days
Tuesday 1 days
Wednesday 1 days
Thursday 3 days

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

Selected survey types:

Manual count 7 days
Directional ATC Count 0 days

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

Selected Locations:

Edge of Town Centre 5
Edge of Town 2

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

Selected Location Sub Categories:

Residential Zone 6
Built-Up Zone 1

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included 10 days - Selected
Servicing vehicles Excluded X days - Selected

Secondary Filtering selection:

Use Class:

C3 7 days

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

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	1 days
10,001 to 15,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	3 days
50,001 to 100,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	1 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	2 days
1.1 to 1.5	4 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	6 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	6 days
0 None	1 days

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

LIST OF SITES relevant to selection parameters

1	CU-03-N-01 FRIARGATE PENRITH	RETIREMENT FLATS	CUMBERLAND
	Edge of Town Centre Residential Zone Total No of Dwellings:	48	
	Survey date: MONDAY	24/06/24	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	HF-03-N-01 POUND AVENUE STEVENAGE	RETIREMENT FLATS	HERTFORDSHIRE
	Edge of Town Centre Residential Zone Total No of Dwellings:	35	
	Survey date: THURSDAY	02/11/23	Survey Type: MANUAL
4	IW-03-N-01 CHURCH ROAD BEMBRIDGE	RETIREMENT FLATS	ISLE OF WIGHT
	Edge of Town Residential Zone Total No of Dwellings:	40	
	Survey date: THURSDAY	27/06/19	Survey Type: MANUAL
5	WF-03-N-01 SEWARDSTONE ROAD WALTHAMSTOW	RETIREMENT FLATS	WALTHAM FOREST
	Edge of Town Residential Zone Total No of Dwellings:	40	
	Survey date: TUESDAY	05/11/19	Survey Type: MANUAL
6	WK-03-N-01 REGENT STREET ROYAL LEAMINGTON SPA	RETIREMENT FLATS	WARWICKSHIRE
	Edge of Town Centre Built-Up Zone Total No of Dwellings:	34	
	Survey date: MONDAY	21/11/22	Survey Type: MANUAL
7	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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BG-03-N-01	COVID

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL TOTAL VEHICLES
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period
 Total People to Total Vehicles ratio (all time periods and directions): 2.33

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	7	39	0.030	7	39	0.033	7	39	0.063
08:00 - 09:00	7	39	0.059	7	39	0.078	7	39	0.137
09:00 - 10:00	7	39	0.104	7	39	0.096	7	39	0.200
10:00 - 11:00	7	39	0.104	7	39	0.122	7	39	0.226
11:00 - 12:00	7	39	0.081	7	39	0.067	7	39	0.148
12:00 - 13:00	7	39	0.100	7	39	0.093	7	39	0.193
13:00 - 14:00	7	39	0.081	7	39	0.067	7	39	0.148
14:00 - 15:00	7	39	0.078	7	39	0.119	7	39	0.197
15:00 - 16:00	7	39	0.070	7	39	0.070	7	39	0.140
16:00 - 17:00	7	39	0.070	7	39	0.056	7	39	0.126
17:00 - 18:00	7	39	0.067	7	39	0.037	7	39	0.104
18:00 - 19:00	7	39	0.030	7	39	0.033	7	39	0.063
19:00 - 20:00	1	40	0.000	1	40	0.000	1	40	0.000
20:00 - 21:00	1	40	0.000	1	40	0.000	1	40	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.874			0.871			1.745

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

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

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Parameter summary

Trip rate parameter range selected:
 Survey date date range:
 Number of weekdays (Monday-Friday):
 Number of Saturdays:
 Number of Sundays:
 Surveys automatically removed from selection:
 Surveys manually removed from selection:

34 - 48 (units:)
 01/01/16 - 24/06/24
 7
 0
 0
 2
 1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL CYCLISTS
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	7	39	0.000	7	39	0.004	7	39	0.004
08:00 - 09:00	7	39	0.007	7	39	0.000	7	39	0.007
09:00 - 10:00	7	39	0.000	7	39	0.000	7	39	0.000
10:00 - 11:00	7	39	0.007	7	39	0.004	7	39	0.011
11:00 - 12:00	7	39	0.000	7	39	0.000	7	39	0.000
12:00 - 13:00	7	39	0.004	7	39	0.000	7	39	0.004
13:00 - 14:00	7	39	0.004	7	39	0.004	7	39	0.008
14:00 - 15:00	7	39	0.000	7	39	0.004	7	39	0.004
15:00 - 16:00	7	39	0.000	7	39	0.004	7	39	0.004
16:00 - 17:00	7	39	0.000	7	39	0.004	7	39	0.004
17:00 - 18:00	7	39	0.004	7	39	0.004	7	39	0.008
18:00 - 19:00	7	39	0.000	7	39	0.000	7	39	0.000
19:00 - 20:00	1	40	0.000	1	40	0.000	1	40	0.000
20:00 - 21:00	1	40	0.000	1	40	0.000	1	40	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.026			0.028			0.054

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.*