

planning
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Transport Statement for McCarthy & Stone Retirement Lifestyles Ltd
GRFC Bowls Club, Church Walk, Gravesend, Kent

March 2023
PL/RS/16623 Version 2



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1 Introduction

- 1.1.1 DHA has been commissioned by McCarthy & Stone Retirement Lifestyles Ltd to provide transport planning advice in relation to land at the GRFC Bowls Club, off Church Walk, in Gravesend, Kent.
- 1.1.2 This Transport Statement (TS) has been produced in accordance with the Planning Practice Guidance (March 2014).
- 1.1.3 Following this introduction, the TS is structured as follows:-
- Section 2 summarises the existing transport conditions local to the site;
 - Section 3 sets out the development proposals;
 - Section 4 provides an assessment of compliance with transport planning policy;
 - Section 5 looks at the forecast vehicular trip generation of the proposals; and
 - Section 6 provides a summary and conclusion.

2 Existing Transport Conditions

2.1 The Existing Site

- 2.1.1 The current site consists of a bowling green, club house and associated outbuildings located at the northern end of Rectory Field Playing Fields (postcode DA12 2QU). The site was previously in use by GRFC Bowls Club but is currently vacant.
- 2.1.2 The site is located to the south of the A226 Milton Road, approximately 1.0km from the centre of Gravesend and is bounded by Ellerslie to the west and Church Walk to the east. The site location is shown in its local context in Figure 2-1 below.

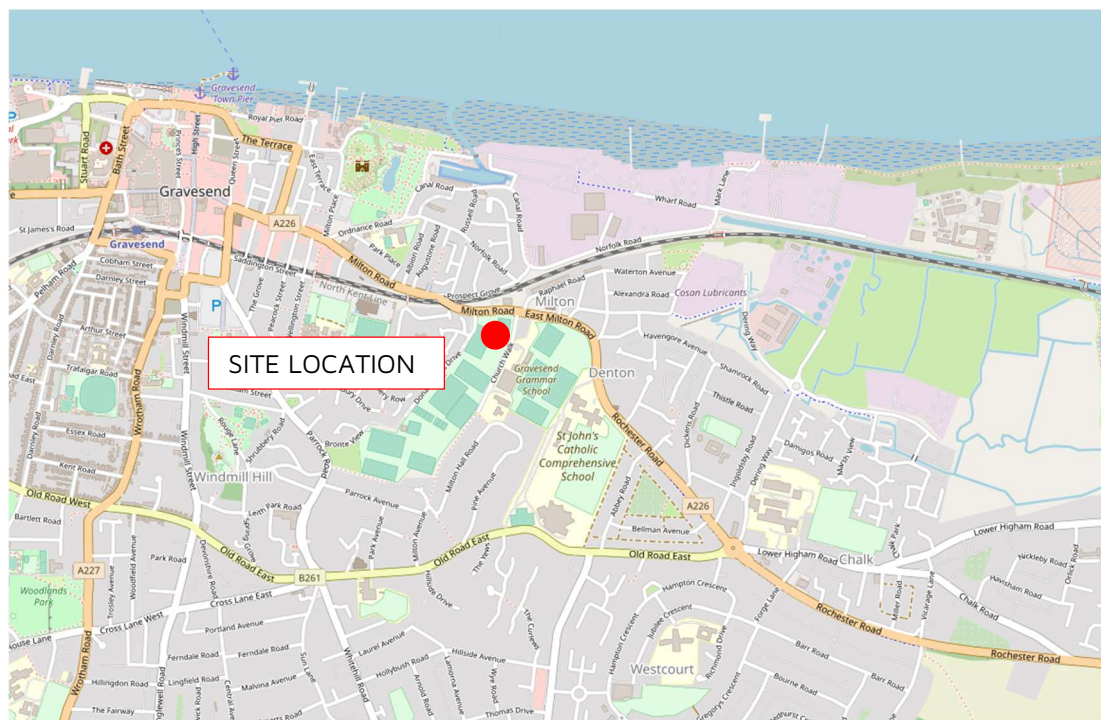


Figure 2-1: Site Location (courtesy of OpenStreetMap.org)

2.2 Local Highway Network

- 2.2.1 Milton Road (A226) runs east-west along the site frontage and is subject to a 30mph speed limit at this point. Travelling eastwards, Milton Road becomes East Milton Road from the junction with Raphael Road. It forms part of the Secondary Route Network and provides a direct connection between Gravesend and Strood, where it meets the A2 before crossing over the River Medway. There are a number of local roads that connect to the A2/M2 and avoid Gravesend town centre. Ellerslie is an access road for a small residential estate and the sports club facilities within Rectory Field. Church Walk is the main access for Gravesend Grammar School. The site therefore enjoys ready access to the primary and strategic route networks and thus to a range of local and regional destinations.

2.3 Walking and Cycling Infrastructure

- 2.3.1 Milton Road has footways along both sides with regular street lighting and dropped kerbs at side roads. There is a pelican crossing of Milton Road on the site frontage that connects the bus stops on either side of the road. Milton Road crosses over the North Kent railway line, less than 200m from the site, giving a step-free and relatively gentle pedestrian route into the town centre.
- 2.3.2 Several Public Rights of Way (PRoW) are located close to the site, as shown in Figure 2-2 below. Church Walk connects through to Old Road East and the Windmill Hill area. There are other pedestrian connections such as the stepped footbridge over the railway line near Waterton Park towards the Thames

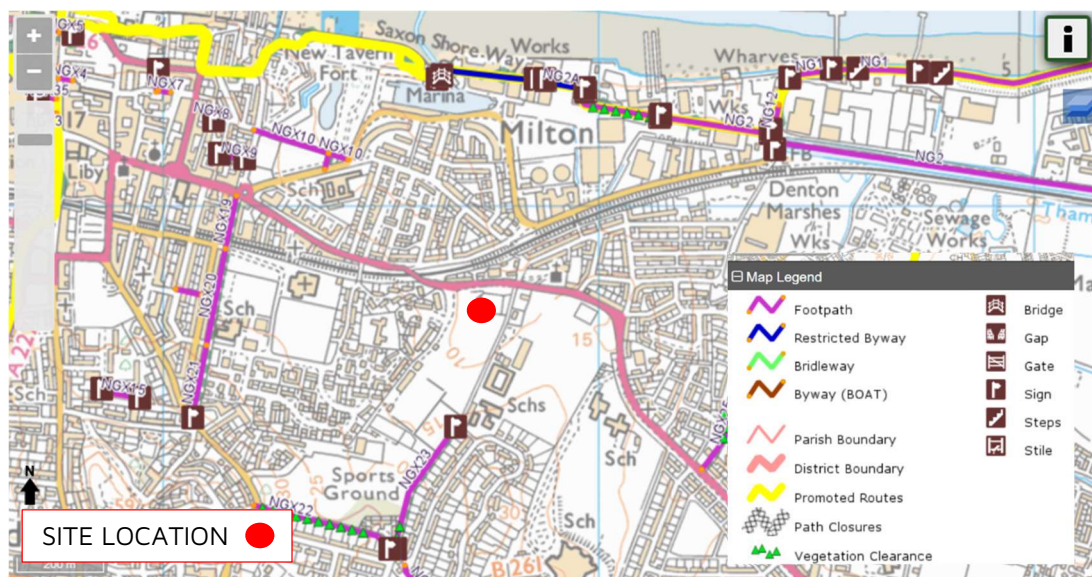


Figure 2-2: Local PRoW Network (courtesy of Kent County Council)

- 2.3.3 National Cycle Route (NCN) 1 is a long-distance cycle route connecting Dover with Scotland. It runs east-west from the Medway Towns alongside the Thames and Medway Canal and then follows Canal Basin onto the promenade, 500m to the north of the site. The route then continues through the Gravesend riverfront area towards Northfleet and Greenhithe. There is also NCN Route 177 that follows the A2 corridor, starting in Rochester and running via Shorne Country Park and the Cyclopark in Springhead where it joins NCN1.



Figure 2-3: Local Cycle Network (courtesy of OpenCycleMap.org)

2.4 Public Transport Infrastructure

- 2.4.1 The closest bus stops to the site are located on Milton Road, approximately 10m from the proposed pedestrian access. A summary of the passenger bus services that call at these stops is provided in Table 2--1 below (school services have been omitted). All passenger bus routes provide a frequent weekday bus service to / from Gravesend town centre and the railway station.

Service No.	Route	Weekday Frequency First/Last Service at Church Road Stop
190 (Arriva)	Gravesend Railway Station – Chalk – Higham – Strood – Rochester – Chatham Waterfront	every 20 mins 05:53/19:20
480/490 Sapphire (Arriva)	Dartford Home Gardens – Bluewater – Swanscombe – Northfleet – Gravesend – Valley Drive/Riverview Park	every 10 mins 04:16/00:36
481 (Arriva)	Riverview Park – Gravesend – Northfleet – Ebbsfleet International – Swanscombe – Bluewater	every 35 mins 06:10/22:20
489 (Arriva)	Denton Lion Garage – Gravesend Barrack Row – Northfleet – New Ash Green – Longfield	1 service per day 15:34

Table 2--1: Local Bus Routes and Frequencies

- 2.4.2 The nearest railway station is Gravesend on the North Kent Line, located approximately 1.2 km from the site. Walking to the station via Milton Road takes 18 minutes, along a fairly direct route. The cycle journey along this route takes 7-8 minutes. There are 280 sheltered cycle parking spaces in the 'Cycle Hub' at the station, which also offers a DIY repair centre and electric bike charging points. There is step-free access to both platforms and step-free interchange between platforms via lifts.

2.4.3 The following Southeastern services operate from the station:-

To London terminals: weekday AM peak

- 3 trains per hour (tph) to London Charing Cross via Sidcup;
- 3 tph to London St Pancras International (part high-speed).

To North/East Kent destinations: weekday AM peak

- 1 tph to Faversham via Medway Towns;
- 1 tph to Ramsgate via Faversham.

2.4.4 The following Thameslink services operate from the station:-

- 2 tph to Luton via London Blackfriars, Dartford & Greenwich.

2.5 Accessibility

2.5.1 The nearest convenience store is a Co-op Food store on Milton Road, approximately 180m from the site, which is open from 07:00 to 22:00 every day (September 2022). Milton Road has local shops along its length, and it takes less than 10 minutes to walk to the edge of the town centre from the site. Gravesend Library is the nearest library, being a 17-minute walk from the site. The nearest Post Office is the Gravesend Delivery Office on Milton Road, an 11-minute walk.

2.5.2 It is noted that there will be no nursing staff on-site; therefore access to health care facilities is an important consideration. There is no direct bus service to Darenth Valley Hospital from the stops on Milton Road, but the hospital can be reached with only one change either at Bluewater or the town centre; the journey time is approximately 45-50 minutes. Gravesend Community Hospital in Bath Street provides services from Kent Community Health NHS Foundation Trust among others and is a 20-minute walk/11-minute bus ride away.

2.5.3 The site lies within the current practice boundaries of five GPs, with Rochester Road Surgery being a 6-minute walk from the site. Two other surgeries/medical centres can be walked in less than 20 minutes. There are four dentists within a 20-minute walk of the site.

2.5.4 As such, it is considered likely that a significant proportion of everyday journeys made from the site will be relatively short distance in nature, in accordance with the National Planning Policy Framework objectives.

2.6 Highway Safety

2.6.1 Personal Injury Collision (PIC) data has been obtained from Kent County Council (KCC) for the area surrounding the proposal site for the most recent three-year study period up to 31st March 2022 (both incident plots and reports are included at **Appendix A**).

2.6.2 A total of seven incidents were recorded on Milton Road/East Milton Road, five of which incidents resulted in 'slight' and two in 'serious' injuries.

2.6.3 Only one of the incidents occurred in the vicinity of the site on Milton Road near the junction with Ellerslie. This incident resulted in three 'serious' injuries and

involved a vehicle travelling west which veered on to the opposite side of the road and collided with a second vehicle, which then collided with a parked vehicle. The incident took place just before midnight on New Year's Eve 2021.

- 2.6.4 The second incident that resulted in one 'serious' injury took place approximately 300m to the east of the site, when a vehicle pulled out from Empress Road on to East Milton Road and collided with a pedal cyclist travelling south-east. Two of the 'slight' injury incidents also took place at the junction of Empress Road, with vehicles pulling out and colliding with traffic on East Milton Road.
- 2.6.5 The three remaining 'slight' injury incidents took place between Raphael Road and Elliott Street. One incident involved a vehicle hitting the back of a motor cyclist, another involved a moped rider falling off after failing to navigate a gentle bend and the third involved a vehicle veering on to the opposite side of the road, hitting a second vehicle which then collided with a parked car.
- 2.6.6 The recorded incidents appear to have resulted from road user error, particularly the incident that happened in the immediate site vicinity. It is therefore considered unlikely that the proposed development would materially exacerbate the highway safety record in this location.

3 Development Proposals

3.1 Overview

- 3.1.1 The proposal is for a four-storey, 62-unit retirement living complex with a mix of 33 no. 1-bedroom units and 29 no. 2-bedroom units plus communal living areas and an on-site bistro serving subsidised hot food. The residents will be over 70's 'frail elderly' with limited care requirements and living independently. The proposed site location and layout plans are included at **Appendix B**.

3.2 Access

- 3.2.1 Vehicular access to the site will be from Ellerslie by way of a simple priority junction, 27m to the south of the junction with Milton Road. An initial carriageway width of 6.0m will be provided on entry to the site, running through a parking court with bays on both sides before entering a second parking court. Three disabled parking bays are included in the second parking court, opposite the main building entrance and a further two spaces are capable to being converted to meet possible future demand.
- 3.2.2 The access has 6m kerb radii, with 1.8m wide footways and a pedestrian dropped crossing with tactile paving. The short distance from the access to the junction with Milton Road means that only 2.4 x 25m visibility splays can be achieved. Therefore, a speed survey was undertaken which has recorded 85th percentile speed of 19.5mph northbound and 20.2mph southbound and this confirms that the splays proposed are suitable at this location. A 4.8m wide dropped kerb emergency access with a gate is proposed to the south of the access to serve the sports fields. The Stage 1 access design is included at **Appendix C**, the automatic traffic count survey data is included at **Appendix D** and the road safety audit and designer's response are included at **Appendix E**.
- 3.2.3 Pedestrian access to the site is directly from Milton Road, 10m from the aforementioned bus stop, from where a path runs to the north, east and south of the building to reach the main entrance, with a side path on to Church Walk. Access on foot, from the vehicle entrance and parking space to the main entrance, is via the access road.

3.3 Parking

- 3.3.1 A total of 32 parking spaces will be provided, of which three will be designed for disabled users and two further spaces that can be converted for disabled use. Four of the 32 spaces will be allocated for staff parking. An ambulance bay is also provided near the main entrance. Electric Vehicle (EV) charging facilities will be provided in accordance with Part S of the Building Regulations. Two cycle parking spaces are located in the mobility scooter store, which has capacity for six scooters, along with charging points.

3.4 Site Servicing

- 3.4.1 To ensure that the proposed site layout is accessible to service vehicles, swept path analysis has been undertaken. A refuse vehicle, pantechinon, estate car and

fire tender have been assessed. The associated drawings are included at **Appendix F**.

- 3.4.2 The drawings demonstrate that the site layout can comfortably accommodate these larger vehicle movements, ensuring that accessibility to all properties is maintained and that they can access and egress the site in a forward gear.

3.5 Construction Traffic

- 3.5.1 Site offices and welfare facilities will be located on the construction site. Wheel washing equipment will be provided as necessary for construction phases. Access to the construction site will be secured and operated in accordance with current health and safety legislation. Delivery and construction HGV traffic will be accommodated on the construction site, with no requirement for waiting on the public highway. Daily movements of goods vehicles, in particular, will be timed to avoid peak traffic times.
- 3.5.2 Third-party suppliers and contractors visiting the site will be made aware of the construction access and routeing arrangements at the start of the project. Site management will ensure compliance with construction access arrangements.

4 Transport Planning Policy

4.1 National Planning Policy Framework (NPPF)

4.1.0 The NPPF sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally prepared plans for housing and other developments can be produced. The NPPF is a material consideration in planning decisions.

4.1.1 At the heart of the NPPF is a presumption in favour of sustainable development. This is reflected in Section 9 of the document where it is noted that significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering genuine choice of transport modes. The NPPF advises that in assessing sites, it should be ensured that:-

- a) *"Appropriate opportunities to promote sustainable transport can be – or have been – taken up, given the type of development and its location;*
- b) *Safe and suitable access to the site can be achieved for all users;*
- c) *The design of streets, parking areas, other transport elements and the content of associated standards reflect current national guidance, including the National Design Guide and the National Model Design Code*
- d) *Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

4.1.2 Paragraph 111 states that: *"development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or if the residual cumulative impacts on the road network would be severe."*

4.1.3 Paragraph 112 then goes on to note that applications for development should:-

- a) *"Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- b) *Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- c) *Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- d) *Allow for the efficient delivery of goods, and access by service and emergency vehicles; and*

- e) *Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*

- 4.1.4 Paragraph 113 further states that: *"all developments that will generate significant amounts of movement should be required to provide a Travel Plan, and the application should be supported by a Transport Statement or Transport Assessment so that the likely impacts of the proposal can be assessed."*

4.2 Planning Practice Guidance (PPG)

- 4.2.0 The PPG was established in 2014 as a supporting resource in conjunction with the NPPF, which is also a material consideration in determining planning applications. With respect to transport, the PPG includes a section titled *'Travel Plans, Transport Assessments and Statements in Decision-Taking'*. This provides general guidance on the process of producing these documents.

- 4.2.1 With regard to the purpose of a Transport Assessment or Statement it is noted that:-

"The Transport Assessment or Transport Statement may propose mitigation measures where these are necessary to avoid unacceptable or "severe" impacts. Travel Plans can play an effective role in taking forward those mitigation measures which relate to on-going occupation and operation of the development."

4.3 Local Transport Plan 4 (LTP4): Delivering Growth without Gridlock 2016-2031

- 4.3.1 LTP4 was prepared by KCC and runs from 2016 to 2031. The Plan includes details on how the County Council will meet its transport ambition for Kent, which is:-

"To deliver safe and effective transport, ensuring that all Kent's communities and businesses benefit, the environment is enhanced and economic growth is supported".

- 4.3.2 This ambition will be realised through five targeted, overarching policies which will aim to deliver specific outcomes for the county:-

"Outcome 1: Economic growth and minimised congestion

Policy: *Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.*

Outcome 2: Affordable and accessible door-to-door journeys

Policy: *Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.*

Outcome 3: Safer travel

Policy: *Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.*

Outcome 4: Enhanced environment

Policy: Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.

Outcome 5: Better health and wellbeing

Policy: Provide and promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality."

- 4.3.3 Within LTP4, KCC outlines Strategic, Countywide and Local strategies for achieving the above outcomes, whilst continuing to promote and deliver 'Growth without Gridlock'.

4.4 Gravesham Local Plan Core Strategy

- 4.4.1 The Core Strategy was adopted by Gravesham Borough Council (GBC) in September 2014 and is the Council's principal document within its Local Plan, setting out the main planning policy objectives for the Borough up to 2028.

- 4.4.2 With regard to transport, Strategic Objective 7 is to:-

"Enhance the Borough's public transport network to serve existing and new neighbourhoods and communities in Gravesend, Northfleet and Ebbsfleet."

- 4.4.3 Policy CS11 states the following:-

"New developments should mitigate their impact on the highway and public transport networks as required. As appropriate, transport assessments and travel plans should be provided and implemented to ensure the delivery of travel choice and sustainable opportunities for travel..."

Sufficient parking in new development will be provided in accordance with adopted standards which will reflect the availability of alternative means of transport and accessibility to services and facilities..."

The Council will seek improvements to walking and cycling facilities and networks in the Borough including provision in new development as appropriate..."

4.5 Gravesham Local Plan First Review (saved policy)

- 4.5.1 Although the adopted Core Strategy replaces a number of the policies contained within the Local Plan (First Review), those which were 'saved' by the Secretary of State will remain applicable in the determination of planning applications.

- 4.5.2 Policies T1 to T3 are in accordance with general policy outlined by the Local Highway Authority with respect to the use of the highway network. These are set out as follows:-

"Policy T1: The Local Planning and Highway Authorities will consider the impact on the transport system and on the environment of traffic generated by new development and will wish to ensure that all proposed developments

are adequately served by the highway network identified on the Proposals Map.

Policy T2: The Local Planning and Highway Authorities will seek to channel all traffic travelling through Gravesend on to the primary road network and to channel traffic between and within residential, industrial and principal business districts of the Borough onto the district distributors.

Policy T3: The Local Planning and Highway Authorities will not normally permit any proposed development that generates significant volumes of commercial vehicle traffic, if it is not well related to the primary and district distributor network."

4.5.3 In addition, **Policy T5** relates to the formation or intensified use of an access to the main highway network as identified on the Proposals Map, stating that this would not usually be permitted unless it can be demonstrated that there would be no safety implications and that the access is designed to a suitable standard which is acceptable to the Local Planning and Highway Authorities.

4.5.4 **Policy P3** states that the Borough Council will expect development to make provision for vehicle parking, in accordance with the Kent County Council Vehicle Parking Standards, unless justified as an exception. It also states that all vehicle parking provision should normally be made on the development site.

4.6 Parking Policy

4.6.1 GBC's adopted parking policy is taken from the Kent and Medway Structure Plan: Supplementary Planning Guidance 4 (SPG4, 2006). This outlines the maximum parking standards required for Land Use Class C2 Residential Institutions, which are as follows:-

Maximum Vehicle Parking Standards

	Goods Vehicles	Car Parking	
		Employees	Residents/visitors
Nursing/Residential Care Homes	Minimum of 1 space for an Ambulance (see Note 1)	1 space per resident staff + 1 space per 2 other staff	1 space per 6 beds or residents
Hospitals & Hospices	See Notes 1 & 2	1 space per 2 staff	2 spaces per 3 beds
Residential Schools, Colleges or Training Centres	See Note 1 & 3	1 space per resident staff + 1 space per 2 other staff	1 space per 15 students
Notes:	1. Adequate facilities should be provided to enable delivery vehicles to park and manoeuvre clear of the public highway. 2. Sufficient ambulance bays and/or parking should be provided to meet the operational needs of the development. Exact details should be agreed with the Local Planning Authority. 3. At special schools there is a need to include appropriate additional spaces for ambulances, taxis and coaches		

Table 4-1: Excerpt from SPG4 Maximum Vehicle Parking Standards for Residential Institutions

4.6.2 Cycle parking requirements are also set out in SPG4. The minimum requirement for Extra Care Accommodation is one space per ten beds, as confirmed in Table 4-2 below.

Minimum Cycle Parking Standards

Hospitals & other residential institutions offering a level of care	1 space per 10 beds
Residential schools, colleges & training centres	1 space per 5 students

Table 4-2: Excerpt from SPG4 Minimum Cycle Parking Standards for Extra Care Accommodation

- 4.6.3 Approved Document S of The Building Regulations 2010 outlines the infrastructure required for the charging of Electric Vehicles (EVs). This approved document is part of the 2021 edition of the Regulations and took effect in June 2022.
- 4.6.4 Requirement S1 outlines the guidance for the erection of new residential buildings:-
- "(1) A new residential building with associated parking must have access to electric vehicle charge points as provided for in paragraph (2).*
- (2) The number of associated parking spaces which have access to electric vehicle charge points must be -*
- (a) the total number of associated parking spaces, where there are fewer associated parking spaces than there are dwellings contained in the residential building; or*
- (b) the number of associated parking spaces that is equal to the total number of dwellings contained in the residential building, where there are the same number of associated parking spaces as, or more associated parking spaces than, there are dwellings."*
- 4.6.5 A storage area for mobility scooters and bicycles will be provided within the ground floor of the building by the main entrance, with direct step-free access to the outside and internally. There is space for six scooters and two bicycles and charging points will be provided.
- 4.7 Policy Compliance**
- 4.7.1 The proposed development is seen to comply with all levels of transport planning policy. The NPPF accepts that levels of access by sustainable travel modes will reflect the setting of the site and given that the proposal site is within walking distance of a number of everyday services and facilities, it is considered that it has good accessibility.
- 4.7.2 With respect to local policy, the proposed development traffic impacts are not considered to be 'severe', as demonstrated in Section 5 of this report. The site is considered to be suitable to accommodate the proposed development in terms of highway design and safety implications. A review of the local highway safety record has found that the development proposals are unlikely to materially exacerbate any pre-existing highway safety concerns.

- 4.7.3 As detailed above, for the 62 units, a total of 32 parking spaces will be provided, which will include three spaces for disabled people, a further two spaces that can be converted to disabled bays in response to possible future demand and four allocated spaces for staff. An ambulance bay is also provided near the main entrance.
- 4.7.4 According to the SPG4 parking standards for Nursing / Residential Care Homes, the parking provision should be 15 spaces for residents (1 space per 6 beds or residents and four spaces for staff). The applicant considers that the proposed development is Class C2 Extra Care Accommodation, which is aimed at providing independent living for the frail elderly, with day-to-day care in the form of assistance and domiciliary care tailored to the owners' individual needs. Since the residents would be living more independently than if they were living in a care home, they would be more mobile, more likely to want to own and use a private car and therefore require a parking space.
- 4.7.5 This is supported by research¹ conducted for McCarthy Stone (the end user of the proposal) by Dr Allan J Burns Traffic and Transportation Consultant, which recommends a provision of 0.52 spaces per apartment (based on an average 30% of 2-bedroom apartments). It also states that other factors to be taken into account are the accessibility of the site and the level of car ownership of residents imposed by McCarthy Stone's parking permit scheme, both of which are pertinent in this case.
- 4.7.6 A review of car ownership for those aged 65+ has also been made for the Middle-Layer Super Output Area (MSOA) in which the site is located (Gravesham 011). Table 4-2 shows that 29% of those aged 65+ that are resident in the local area have no car or van in their household, compared to 7-9% for all other age ranges. Only 22% of those aged 65+ have 2 or more cars or vans in their household, compared to the average of 50% for the local area.

Age	All categories: Car or van availability	No cars or vans in household	1 car or van in household	2 or more cars or vans in household
All categories: Age	9,822	11%	39%	50%
Age 0 to 15	1,906	8%	41%	51%
Age 16 to 24	1,110	8%	28%	63%
Age 25 to 34	1,184	9%	39%	52%
Age 35 to 49	2,203	8%	38%	54%
Age 50 to 64	1,876	7%	36%	57%
Age 65 and over	1,543	29%	49%	22%

Table 5-3: Car Ownership by Age in MSAO Gravesham 011
(Source: Census 2001 - Table LC4109EW)

- 4.7.7 Since car ownership declines with age and the average age of residents in this type of development is over 70 years old, it is envisaged that those who do not own a car will be higher than 29%. Residents are classed as the 'frail elderly', which

¹ Dr Allan J Burns (2016), *Assisted Living Developments: Report on Transport Impact and Parking Provision*

have the support of a warden or other staff. It will also be the case that a limit of one car parking space per apartment would be applied for those residents who do own a vehicle, which will be enforced by the aforementioned permit system. Taking the findings of the research and the local conditions into account, it is felt that a total of 28 resident parking spaces for 62 units – which includes the three disabled bays – is seen to be appropriate for the proposal.

- 4.7.8 Similarly for cycle parking, since future residents will have an average age of over 70 years old, they will be less likely to cycle than those in unrestricted housing and therefore there is provision for two bicycles in the mobility scooter store. EV charging facilities are to be developed in accordance with Part S of the Building Regulations.
- 4.7.9 For staff parking, there will be a mix of full and part-time staff which broadly equates to between 14 and 17 full-time equivalent posts. Generally, there would be 5-7 members of staff on-site during the busiest part of the day and 1-2 staff to cover the night shift. McCarthy Stone aim to employ staff from the local area, who would be encouraged to use sustainable forms of transport to get to the site; therefore four allocated staff parking spaces are proposed.
- 4.7.10 In view of the highly accessible edge-of-town-centre location of the site, the parking provision as set out, is considered entirely appropriate and in accordance with national and local planning policy.

5 Trip Generation

5.1 Overview

- 5.1.1 This section outlines the methodology employed to calculate the likely vehicle trip generation of the proposed development. It also considers the principal transport impacts that could arise from the proposals.

5.2 Proposed Development Vehicle Trip Generation

- 5.2.1 The vehicle trip generation of the proposed development has been calculated with reference to the national TRICS trip rate database using the '02 - Residential Institutions' land use and the 'F - Care Home (Elderly Residential)' category. Only TRICS survey sites outside of London, in England, Scotland and Wales, have been considered, with a range of dwelling numbers in 'Edge of Town Centre' and 'Suburban Area' locations to provide a suitably large and representative dataset. Weekday periods were assessed to provide a robust consideration of the peak trip generation periods. A summary of the resulting TRICS trip rates is provided below in Table 5-1. Please note that any apparent inaccuracies in the totals are due to rounding to whole numbers in MS Excel.

- 5.2.2 The full TRICS report for this assessment is included at **Appendix F**.

Period	Arrivals	Departures	Total
AM Peak (0800-0900)	0.076	0.048	0.124
PM Peak (1700-1800)	0.062	0.112	0.174
Daily (0700-1900)	0.898	0.853	1.751

Table 5-1: TRICS Trip Rates – Care Home – Elderly Residential

- 5.2.3 These trips have been factored against the total number of units proposed for the site, as shown in Table 5-2 below.

Period	Arrivals	Departures	Total
AM Peak (0800-0900)	7	4	11
PM Peak (1700-1800)	4	8	12
Daily (0700-1900)	82	77	159

Table 5-2: Total Trip Generation – Care Home – Elderly Residential (91 residents)

- 5.2.4 It is noted that a total of 158 vehicle trips could be expected to and from the proposed development during the 12-hour weekday period. Of these, eleven trips are expected to take place in the AM peak hour and 12 trips in the PM peak hour. Overall, this would equate to 13 movements per hour across the 12-hour day, or approximately one movement every five minutes on average, which is not considered to represent a significant or 'severe' highway impact in accordance with Paragraph 111 of the NPPF.

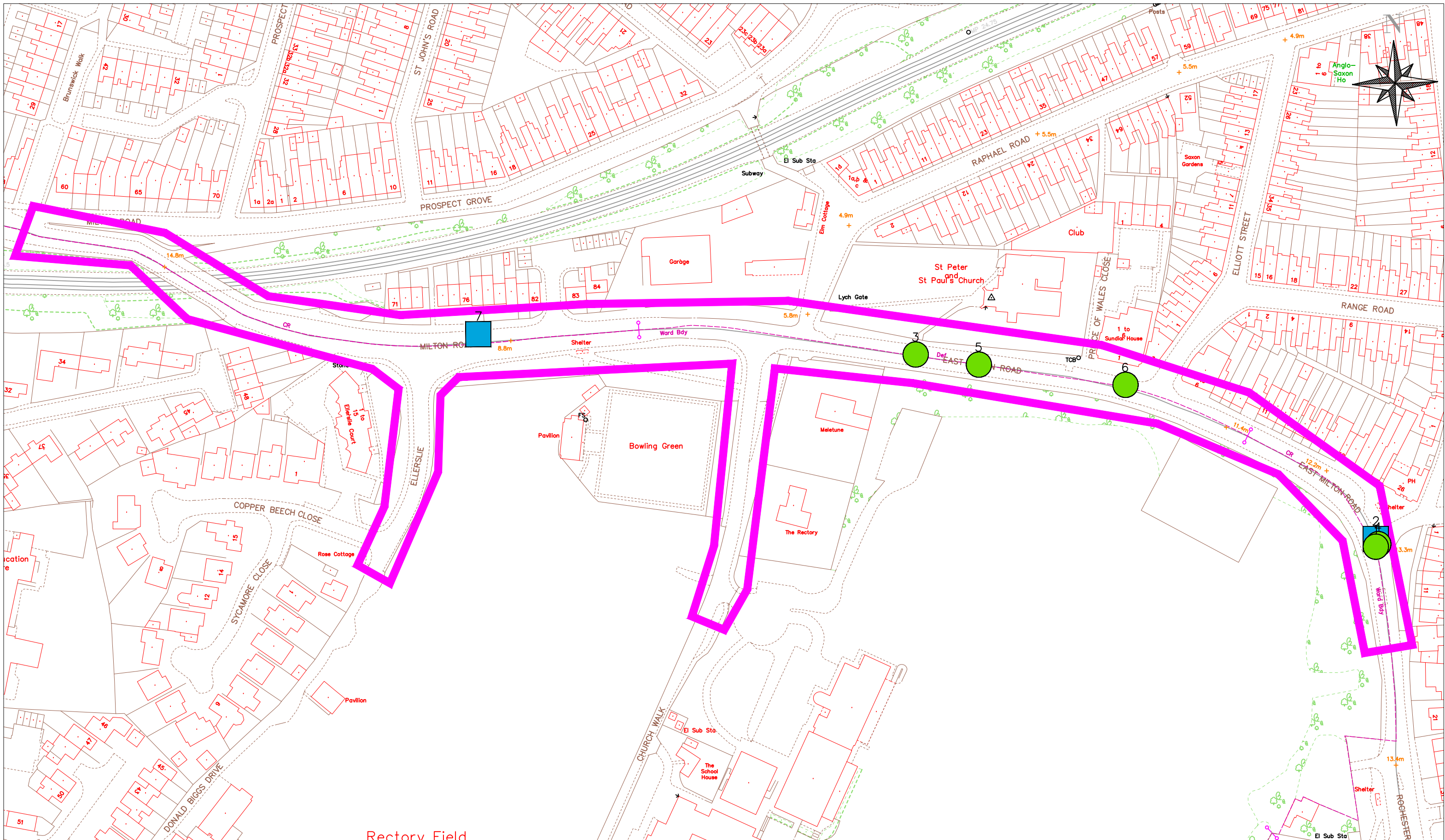
6 Summary and Conclusion

- 6.1.1 This Transport Statement has been prepared on behalf of McCarthy & Stone Retirement Lifestyles Ltd in support of the proposed retirement living complex at the site of the GRFC Bowls Club in Gravesend, Kent.
- 6.1.2 The proposed development comprises the construction of 62 no. 1 and 2- bedroom residential units, with a new access from Ellerslie.
- 6.1.3 Following a review of national and local transport planning policy, no conflicts are envisaged. The site is adjacent to local bus stops with regular services to Gravesend town centre and other local and regional destinations. A convenience store is situated less than 200m from the site and there is a range of health and community services in the local area. Future residents will therefore be able to undertake everyday journeys by non-car means.
- 6.1.4 The review of Personal Injury Collision data contained in this report confirms that the proposed development should have no material adverse impacts in this regard.
- 6.1.5 The proposed level of on-site vehicle and cycle parking accords with the needs of the site taking into account the highly accessible urban location of the site and the vehicle ownership and usage characteristics of residents with an average age of 70+ years old.
- 6.1.6 It has been demonstrated that the proposed development has the capacity to generate approximately 158 vehicle trips across the 12-hour weekday period (0700-1900), equating to approximately 13 movements per hour on average. It is not considered that this represents a 'severe' impact with reference to Paragraph 111 of the National Planning Policy Framework.
- 6.1.7 Given the above, it is concluded that the proposed development should not have any adverse transport impacts and therefore there should be no sound transport-based objections to the planning application.

APPENDIX

A





Location: Milton Road, Gravesend

3 years personal injury crash data up to 31/03/2022

KCC Ref number: EXT/155/22

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Crash Severity

Slight

Serious

Fatal

Kent
County
Council

kent.gov.uk

Date: 02-August-2022

Time: 12:43:20

Title: **Milton Road, Gravesend**

Requested output: **D - Print Crash Report**

Date: 02-August-2022

Accident Date BETWEEN '01-Apr-2019' AND '31-Mar-2022'

There were 7 reported crashes resulting in injury

D-PRINT CRASH REPORT

2-Aug-2022
12:43:20

Milton Road, Gravesend
Accident Date BETWEEN '01-Apr-2019' AND '31-Mar-2022'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
1	Road No A226 Grid 566037E Section 173 Ref 173733N	SLIGHT	28/10/2019	2	18:45	DRK STL	Dry	Fine		R.TURN	
	A226, EAST MILTON RD J/W EMPRESS RD, GRAVESEND.								Gravesham		
	V2 WAS TRAVELLING ALONG EAST MILTON RD TOWARDS ROCHESTER RD. V1 WAS SAT AT THE JUNCTION OF DENTON ST/EMPRESS RD AND HAS PULLED OUT AND TURNED RIGHT ONTO EAST MILTON RD, V1 HAS COLLIDED WITH V2 HEAD ON.						Veh1, car, E -> NW Veh2, car, NW -> SE			Casualties 2 Vehicles 2	
2	Road No A226 Grid 566037E Section 173 Ref 173736N	SERIOUS	02/03/2020	2	18:41	DRK STL	Dry	Fine		R.TURN	P/C
	A226, EAST MILTON RD J/W EMPRESS RD, GRAVESEND								Gravesham		
	R2 was coming along East Milton Rd towards the mndbt. V1 has come to the junction from Empress Rd and pulled straight out and collided with R2. V1 stopped and the occupants exited the vehicle to check on R2 before leaving the scene.						Veh1, car, NE -> NW Veh2, pedal cycle, NW -> SE			Casualties 1 Vehicles 2	
3	Road No A226 Grid 565855E Section 171 Ref 173809N	SLIGHT	31/08/2020	2	13:50	L	Dry	Fine			M/C
	A226, EAST MILTON RD, GRAVESEND (MAPPED TO COORDS).								Gravesham		
	R2 was heading for the car park, V1 ahead then sped up and hit R2 on rear, forcing them to try hold the weight of the bike but fell off.						Veh1, car, SE -> NW Veh2, m/cycle 125 - 500cc, SE -> NW			Casualties 1 Vehicles 2	

Key Involved

PED Pedestrian
HGV Heavy Goods Vehicle
GV Goods Vehicle
M/C Motor Cycle
P/C Pedal Cycle
PSV Bus/Coach

Street Lighting

L Daylight
STL Street Lights
USL Street Lights Unlit
NSL No Street Lights
STU Street Lights Unknown

FACTORS

+VE Positive Breath Test
R.TURN Right Turn Manoeuvre
O/TAKE Overtaking Manoeuvre
S.VEH Single Vehicle

Special Conditions

ATS OUT Traffic Lights Not Working
ATS DEF Traffic Lights Defective
SIGNS Road Signs Defective or Obscured
RD WRKS Road Works
Surface Road Surface Defective

D-PRINT CRASH REPORT

2-Aug-2022

12:43:20

Milton Road, Gravesend

Accident Date BETWEEN '01-Apr-2019' AND '31-Mar-2022'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
4	Road No A226 Section 173 Grid 566038E Ref 173734N	SLIGHT	14/01/2021	5	19:19	DRK STU	Wet/Damp	Rain			
	A226, EAST MILTON RD J/W EMPRESS RD, GRAVESEND.									Gravesham	
	V2 was driving along East Milton Rd and V1 pulled out from Empress Rd junction on the left hand side and collided with V2 and hit their offside front right side.						Veh1, car, NE -> SW Veh2, car, NW -> SE			Casualties Vehicles	2 2
5	Road No A226 Section 171 Grid 565880E Ref 173805N	SLIGHT	17/09/2021	6	22:30	DRK STL	Dry	Fine		S.VEH +VE	M/C
	A226 EAST MILTON ROAD, GRAVESEND (MAPPED TO GRID REF)									Gravesham	
	This is a single vehicle RTC in which the rider of a moped failed to navigate a gentle left hand bend, drifting wide before falling off.						Veh1, m/cycle 50 - 125cc, SE -> W			Casualties Vehicles	1 1
6	Road No A226 Section 172 Grid 565938E Ref 173797N	SLIGHT	16/10/2021	7	08:55	L	Dry	Fine			
	A226 EAST MILTON RD J/W ELLIOTT ST, GRAVESEND									Gravesham	
	V1 was travelling west on Milton Rd and drove onto the wrong side of the road on an offside bend and collided with the offside of V2. V1 then collided with V3 which was parked in a parking bay.						Veh1, car, SE -> W Veh2, car, W -> SE Veh3, car, P -> P			Casualties Vehicles	1 3
7	Road No A226 Section Grid 565682E Ref 173817N	SERIOUS	31/12/2021	6	23:54	DRK STL	Dry	Fine		+VE	
	A226 EAST MILTON RD, GRAVESEND (MAPPED TO COORDS)									Gravesham	
	V1 was travelling west on East Milton Rd when it veered onto the opposite side of the road and collided with V2. V2 then collided with V3, which was parked at the side of the road.						Veh1, car, E -> W Veh2, car, W -> E Veh3, car, P -> P			Casualties Vehicles	3 3

Key

Involved
 PED Pedestrian
 HGV Heavy Goods Vehicle
 GV Goods Vehicle
 M/C Motor Cycle
 P/C Pedal Cycle
 PSV Bus/Coach

Street Lighting

L Daylight
 STL Street Lights
 USL Street Lights Unlit
 NSL No Street Lights
 STU Street Lights Unknown

FACTORS

+VE Positive Breath Test
 R.TURN Right Turn Manoeuvre
 O/TAKE Overtaking Manoeuvre
 S.VEH Single Vehicle

Special Conditions

ATS OUT Traffic Lights Not Working
 ATS DEF Traffic Lights Defective
 SIGNS Road Signs Defective or Obscured
 RD WRKS Road Works
 Surface Road Surface Defective

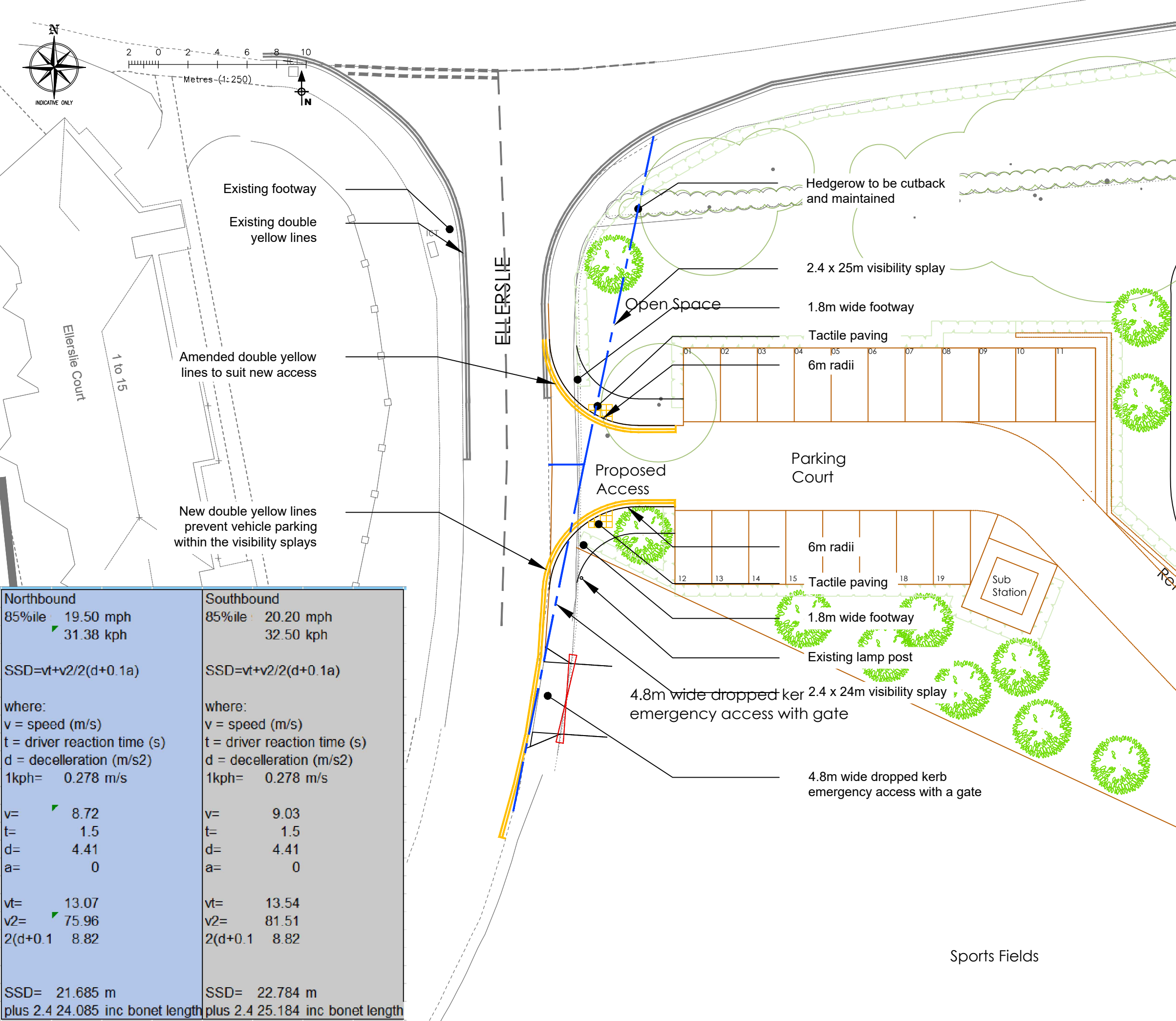
APPENDIX B



APPENDIX

C





DO NOT SCALE

- Notes:
- This drawing has been prepared in accordance with the scope of DHA's appointment with its client and is subject to the terms and conditions of that appointment. DHA accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
 - If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.
 - Where applicable Ordnance Survey (c) Crown Copyright 2022 All rights reserved. Licence Number 100031961.
 - Drawing based on OS data, topographical survey and a site layout plan provided by On Architecture on 8th November 2022
 - Visibility splays have been based on the speeds recorded by a week long ATC Survey completed by K&M Traffic Surveys Ltd on 10th February 2023. The speed survey recorded 85th percentile speeds of 19.5mph and 20.2mph for northbound and southbound traffic respectively. These recorded speeds have been used within calculations set out within Manual for Streets using a driver reaction time of 1.5s and a deceleration rate of 4.41m/s².

P3	06.03.23	JM	ATC Survey		CS	CS
P2	21.11.22	JM	RSA Comments		CS	CS
P1	19.10.22	MM	First Issue		JM	CS
REV	DATE	BY	DESCRIPTION	CHK	APD	

client	
MCCARTHY & STONE RETIREMENT LIFESTYLES LTD	

project	
GRFC BOWLS CLUB	

title	
PROPOSED VISIBILITY SPLAYS	

project	16623	drwg	H-01	rev	P3
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Drawn	MM	Checked	JM	Approved	CS	scale @ A3	1:250	date	06.03.23
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status	FOR INFORMATION	P
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Eclipse House, Eclipse Park, Sittingbourne Road
Maidstone, Kent. ME14 3EN
t: 01622 776226 f: 01622 776227
e: info@dhaplanning.co.uk w: www.dhaplanning.co.uk

CAD Reference:	A3
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APPENDIX

D





Class		Axes	Groups	Description	Parameters	Dominant Vehicle	Aggregate
1	SV	2	1 OR 2	Short - Car, light Van	$d(1) \geq 1.7m$, $d(1) \leq 3.2m$ & axles=2		Light
2	SVT	3, 4 OR 5	3	Short Towing - Trailer, Caravan, Boat, etc.	groups=3, $d(1) \geq 2.1m$, $d(1) \leq 3.2m$, $d(2) \geq 2.1m$ & axles=3,4,5		
3	TB2	2	2	Two axle truck or Bus	$d(1) \geq 3.2m$ & axles=2		Medium
4	TB3	3	2	Three axle truck or Bus	axles=3 & groups=2		
5	T4	>3	2	Four axle truck	axles>3 & groups=2		
6	ART3	3	3	Three axle articulated vehicle or Rigid vehicle and trailer	$d(1) \geq 3.2m$, axles=3 & groups=3		Heavy
7	ART4	4	>2	Four axle articulated vehicle or Rigid vehicle and trailer	$d(2) \leq 2.1m$ or $d(1) \leq 2.1m$ or $d(1) \geq 3.2m$ axles = 4 & groups>2		
8	ART5	5	>2	Five axle articulated vehicle or Rigid vehicle and trailer	$d(2) \leq 2.1m$ or $d(1) \leq 2.1m$ or $d(1) \geq 3.2m$ axles = 5 & groups>2		
9	ART6	>=6	>2	Six (or more) axle articulated vehicle or Rigid vehicle and trailer	axles=6 & groups>2 or axles>6 & groups=3		
10	BD	>6	4	B-Double or Heavy truck and trailer	groups=4 & axles>6		
11	DRT	>6	5	Double road train or Heavy truck and two trailers	groups=5,6 & axles>6		
12	TRT	>6	>6	Triple road train or Heavy truck and three (or more) trailers	groups>6 & axles>6		
14	M/C	2	1 OR 2	Motorcycle	$d(1) \geq 1.18m$, $d(1) \leq 1.7m$ & axles=2		Light
15	CYCLE	2	1 OR 2	Cycle	$d(1) \leq 1.18$ & axles=2		

K&MTRAFFIC SURVEYS

SITE: ELLERSLIE GRAVESEND

LOCATION: ATTACHED TO FENCE

GRID REFERENCE: 51.438758, 0.382178

DIRECTION: NORTHBOUND SPEED LIMIT: 30

10 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0300	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	15.9	-
0400	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	18.2	-
0500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6.4	-
0600	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	10.6	-
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1500	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	14.1	-
1600	22	18	0	1	1	0	0	0	0	0	0	0	0	1	1	15.2	18
1700	28	23	0	0	1	0	0	0	0	0	0	0	0	1	3	16	19.1
1800	26	23	0	1	2	0	0	0	0	0	0	0	0	0	0	16.2	19.2
1900	20	19	0	0	1	0	0	0	0	0	0	0	0	0	0	16	20.3
2000	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	12.8	-
2100	8	7	0	0	1	0	0	0	0	0	0	0	0	0	0	16.2	-
2200	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	18.7	-
2300	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	18.7	-
07-19	83	71	0	2	4	0	0	0	0	0	0	0	0	2	4	15.7	18.1
06-22	116	101	0	3	6	0	0	0	0	0	0	0	0	2	4	15.6	18.3
06-00	124	109	0	3	6	0	0	0	0	0	0	0	0	2	4	15.8	18.7
00-00	128	111	0	4	6	0	0	0	0	0	0	0	0	2	5	15.8	18.7

11 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	14.5	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0400	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	17.7	-
0500	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	13.6	-
0600	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	12.3	-
0700	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	15.9	-
0800	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	16.3	-
0900	14	13	0	0	1	0	0	0	0	0	0	0	0	0	0	14.2	17.6
1000	28	25	0	0	2	0	0	0	0	0	0	0	0	0	1	15.7	19
1100	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	16.2	19
1200	37	36	0	0	1	0	0	0	0	0	0	0	0	0	0	16.9	19.9
1300	41	37	0	3	0	0	0	0	0	0	0	0	0	0	1	17.5	20.8
1400	26	25	0	1	0	0	0	0	0	0	0	0	0	0	0	16.9	20
1500	35	34	0	0	1	0	0	0	0	0	0	0	0	0	0	16	19.4
1600	47	45	0	1	0	0	0	0	0	0	0	0	0	0	1	17.8	22
1700	61	59	0	1	0	0	0	0	0	0	0	0	0	0	1	16.9	20.4
1800	45	43	0	1	1	0	0	0	0	0	0	0	0	0	0	17	20
1900	28	27	0	0	1	0	0	0	0	0	0	0	0	0	0	17	20.3
2000	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	18.2	22.5
2100	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	15	-
2200	15	14	0	0	1	0	0	0	0	0	0	0	0	0	0	15.9	18.3
2300	45	39	0	0	6	0	0	0	0	0	0	0	0	0	0	16.6	18.8
07-19	377	360	0	7	6	0	0	0	0	0	0	0	0	0	4	16.7	20
06-22	434	416	0	7	7	0	0	0	0	0	0	0	0	0	4	16.7	20
06-00	494	469	0	7	14	0	0	0	0	0	0	0	0	0	4	16.7	19.9
00-00	500	475	0	7	14	0	0	0	0	0	0	0	0	0	4	16.6	19.9

12 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	33	29	0	0	4	0	0	0	0	0	0	0	0	0	0	16.1	18.3
0100	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7.2	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0500	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	14.7	-
0600	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	17.2	-
0700	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	17.3	-
0800	6	4	0	1	1	0	0	0	0	0	0	0	0	0	0	16	-
0900	42	41	0	0	1	0	0	0	0	0	0	0	0	0	0	13.9	17.5
1000	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	15.7	19.6
1100	48	43	0	0	4	0	0	0	0	0	0	0	0	0	1	16	19.2
1200	82	82	0	0	0	0	0	0	0	0	0	0	0	0	0	16.6	18.9
1300	27	26	0	1	0	0	0	0	0	0	0	0	0	0	0	16.7	22.5
1400	23	23	0	0	0	0	0	0	0	0	0	0	0	0	0	17.2	20.9
1500	17	15	0	2	0	0	0	0	0	0	0	0	0	0	0	16.3	20.3
1600	26	24	0	1	1	0	0	0	0	0	0	0	0	0	0	16	18.9
1700	25	23	0	0	2	0	0	0	0	0	0	0	0	0	0	17.7	23.3
1800	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	16.7	21
1900	12	11	0	0	1	0	0	0	0	0	0	0	0	0	0	16.7	20.1
2000	3	2	0	0	0	0	0	0	0	0	0	0	0	0	1	11.6	-
2100	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	17	-
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
07-19	339	324	0	5	9	0	0	0	0	0	0	0	0	0	1	16.2	19.8
06-22	368	351	0	5	10	0	0	0	0	0	0	0	0	0	2	16.2	19.9
06-00	368	351	0	5	10	0	0	0	0	0	0	0	0	0	2	16.2	19.9
00-00	403	382	0	5	14	0	0	0	0	0	0	0	0	0	2	16.2	19.5

13 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
1200	21	19	0	0	2	0	0	0	0	0	0	0	0	0	0	0	16
1300	14	11	0	1	2	0	0	0	0	0	0	0	0	0	0	0	16.8
1400	24	23	0	1	0	0	0	0	0	0	0	0	0	0	0	0	16.6
1500	34	31	0	2	0	0	0	0	0	0	0	0	0	0	0	1	16.4
1600	24	23	0	1	0	0	0	0	0	0	0	0	0	0	0	0	16.3
1700	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
1800	20	19	0	0	0	0	0	0	0	0	0	0	0	0	1	0	16.2
1900	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15.3
2000	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19.4
2100	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18.1
2200	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
2300	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13.5
07-19	148	137	0	5	4	0	0	0	0	0	0	0	0	1	1	16.3	19.3
06-22	190	179	0	5	4	0	0	0	0	0	0	0	0	1	1	16.5	19.7
06-00	193	181	0	5	4	0	0	0	0	0	0	0	0	1	2	16.5	19.7
00-00	193	181	0	5	4	0	0	0	0	0	0	0	0	1	2	16.5	19.7

14 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0100	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	17.1	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0300	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	16.5	-
0400	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	14.7	-
0500	6	4	0	0	0	1	0	0	0	0	0	0	0	0	1	12.9	-
0600	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	12.8	-
0700	14	12	0	1	0	0	0	0	0	0	0	0	0	0	1	15.3	18.7
0800	13	11	0	1	1	0	0	0	0	0	0	0	0	0	0	15.8	19.5
0900	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	15.8	-
1000	10	8	0	2	0	0	0	0	0	0	0	0	0	0	0	15.4	-
1100	9	8	0	0	0	0	0	0	0	0	0	0	0	0	1	15.2	-
1200	13	11	0	2	0	0	0	0	0	0	0	0	0	0	0	15.7	18.3
1300	16	15	0	1	0	0	0	0	0	0	0	0	0	0	0	15.7	19.6
1400	28	27	0	1	0	0	0	0	0	0	0	0	0	0	0	15.9	18.8
1500	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	13.5	-
1600	13	12	0	0	1	0	0	0	0	0	0	0	0	0	0	18.4	26.9
1700	17	14	0	1	1	0	0	0	0	0	0	0	0	1	0	15.7	20.5
1800	39	36	0	0	3	0	0	0	0	0	0	0	0	0	0	16.4	18.2
1900	33	30	0	0	3	0	0	0	0	0	0	0	0	0	0	17	21.7
2000	19	16	0	1	2	0	0	0	0	0	0	0	0	0	0	16.4	19.2
2100	31	29	0	0	2	0	0	0	0	0	0	0	0	0	0	18.1	20.3
2200	17	16	0	0	1	0	0	0	0	0	0	0	0	0	0	18	20.7
2300	5	4	0	0	1	0	0	0	0	0	0	0	0	0	0	15.9	-
07-19	192	174	0	9	6	0	0	0	0	0	0	0	0	1	2	15.9	18.7
06-22	283	257	0	10	13	0	0	0	0	0	0	0	0	1	2	16.2	19.4
06-00	305	277	0	10	15	0	0	0	0	0	0	0	0	1	2	16.3	19.6
00-00	315	284	0	11	15	1	0	0	0	0	0	0	0	1	3	16.2	19.5

15 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0400	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	21 -
0500	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	16.3 -
0600	9	8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	13.6 -
0700	14	12	0	0	1	0	0	0	0	0	0	0	0	0	0	1	14.9 16.9
0800	24	21	0	1	2	0	0	0	0	0	0	0	0	0	0	0	15.6 19.3
0900	14	12	0	1	1	0	0	0	0	0	0	0	0	0	0	0	16.1 19.2
1000	12	11	0	0	1	0	0	0	0	0	0	0	0	0	0	0	16.8 19.2
1100	12	11	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15.9 20.2
1200	12	10	0	2	0	0	0	0	0	0	0	0	0	0	0	0	14.4 16.7
1300	17	16	0	1	0	0	0	0	0	0	0	0	0	0	0	0	14.8 17.4
1400	12	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	14.3 16.5
1500	16	11	0	0	4	0	0	0	0	0	0	0	0	0	0	1	15.7 19.7
1600	21	17	0	2	1	0	0	1	0	0	0	0	0	0	0	0	16.1 19
1700	32	29	0	1	2	0	0	0	0	0	0	0	0	0	0	0	15.6 18.2
1800	27	26	0	0	1	0	0	0	0	0	0	0	0	0	0	0	17.1 21.5
1900	56	50	0	0	5	0	0	0	0	0	0	0	0	0	0	1	15.3 17.5
2000	15	13	0	1	0	0	0	0	0	0	0	0	0	1	0	0	15.8 20.6
2100	38	33	0	1	4	0	0	0	0	0	0	0	0	0	0	0	17.1 19.6
2200	12	10	0	0	2	0	0	0	0	0	0	0	0	0	0	0	17.5 21.2
2300	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23.2 -
07-19	213	187	0	9	13	0	0	1	0	0	0	0	0	0	3	15.7	18.9
06-22	331	291	0	11	23	0	0	1	0	0	0	0	0	1	4	15.8	18.9
06-00	344	302	0	11	25	0	0	1	0	0	0	0	0	1	4	15.8	19
00-00	348	304	0	12	25	0	0	1	0	0	0	0	0	1	5	15.9	19

16 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19.4 -
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0400	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	18.5 -
0500	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14.1 -
0600	13	11	0	0	2	0	0	0	0	0	0	0	0	0	0	0	13.3 17.2
0700	12	8	0	0	3	0	0	0	0	0	0	0	0	0	0	1	14.2 17
0800	13	8	0	4	1	0	0	0	0	0	0	0	0	0	0	0	14.7 18.7
0900	12	9	0	2	0	0	0	0	0	0	0	0	0	0	0	1	14.7 17.3
1000	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14.8 -
1100	7	6	0	0	1	0	0	0	0	0	0	0	0	0	0	0	13.4 -
1200	11	10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	15.5 17.6
1300	18	17	0	0	1	0	0	0	0	0	0	0	0	0	0	0	15.6 17.2
1400	15	12	0	1	1	0	0	0	0	0	0	0	0	0	0	1	13.1 16.1
1500	10	8	0	0	2	0	0	0	0	0	0	0	0	0	0	0	14.7 -
1600	14	10	0	1	2	0	0	0	0	0	0	0	0	0	1	0	15.2 18.6
1700	20	18	0	0	0	0	0	0	0	0	0	0	0	0	0	2	16.4 18.2
1800	30	29	0	0	0	0	0	0	0	0	0	0	0	0	1	0	15.6 18.3
1900	52	50	0	1	0	0	0	0	0	0	0	0	0	0	0	1	17.1 20.8
2000	17	15	0	0	0	0	0	0	0	0	0	0	0	0	1	1	18.7 24.5
2100	22	21	0	0	1	0	0	0	0	0	0	0	0	0	0	0	19 22.8
2200	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15.3 -
2300	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.7 -
07-19	169	142	0	9	11	0	0	0	0	0	0	0	0	0	2	5	15 17.7
06-22	273	239	0	10	14	0	0	0	0	0	0	0	0	0	3	7	15.9 19.1
06-00	276	242	0	10	14	0	0	0	0	0	0	0	0	0	3	7	15.9 19.1
00-00	284	248	0	11	14	0	0	0	0	0	0	0	0	0	3	8	15.9 19.1

DIRECTION: NORTHBOUND SPEED LIMIT: 30

10 February 2023

[illegible]

11 February 2023

[illegible]

12 February 2023

[illegible]

13 February 2023

[illegible]

14 February 2023

[illegible]

15 February 2023

[illegible]

16 February 2023

[illegible]

Grand Total

[illegible]

K&MTRAFFIC SURVEYS

SITE: ELLERSLIE GRAVESEND

LOCATION: ATTACHED TO FENCE

GRID REFERENCE: 51.438758, 0.382178

DIRECTION: NORTHBOUND

SPEED LIMIT: 30

	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Averages	
	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	1-5.	1-7.
Hour									
0000-0100	0	2	33	0	0	0	2	0.4	5.3
0100-0200	0	0	1	0	1	0	0	0.2	0.3
0200-0300	0	0	0	0	0	0	0	0	0
0300-0400	1	0	0	0	1	0	0	0.4	0.3
0400-0500	2	2	0	0	2	1	2	1.4	1.3
0500-0600	1	2	1	0	6	3	4	2.8	2.4
0600-0700	3	5	5	0	8	9	13	6.6	6.1
0700-0800	0	8	1	0	14	14	12	8	7
0800-0900	0	5	6	0	13	24	13	10	8.7
0900-1000	0	14	42	0	10	14	12	7.2	13.1
1000-1100	0	28	21	0	10	12	7	5.8	11.1
1100-1200	0	30	48	0	9	12	7	5.6	15.1
1200-1300	0	37	82	21	13	12	11	11.4	25.1
1300-1400	0	41	27	14	16	17	18	13	19
1400-1500	0	26	23	24	28	12	15	15.8	18.3
1500-1600	7	35	17	34	10	16	10	15.4	18.4
1600-1700	22	47	26	24	13	21	14	18.8	23.9
1700-1800	28	61	25	11	17	32	20	21.6	27.7
1800-1900	26	45	21	20	39	27	30	28.4	29.7
1900-2000	20	28	12	18	33	56	52	35.8	31.3
2000-2100	2	14	3	7	19	15	17	12	11
2100-2200	8	10	9	17	31	38	22	23.2	19.3
2200-2300	6	15	0	1	17	12	1	7.4	7.4
2300-2400	2	45	0	2	5	1	2	2.4	8.1
Totals									
0700-1900	83	377	339	148	192	213	169	161	217.3
0600-2200	116	434	368	190	283	331	273	238.6	285
0600-0000	124	494	368	193	305	344	276	248.4	300.6
0000-0000	128	500	403	193	315	348	284	253.6	310.1
AM Peak	600	1100	1100	1100	700	800	800		
	3	30	48	0	14	24	13		
PM Peak	1700	1700	1200	1500	1800	1900	1900		
	28	61	82	34	39	56	52		

K&MTRAFFIC SURVEYS

SITE: ELLERSLIE GRAVESEND

LOCATION: ATTACHED TO FENCE

GRID REFERENCE: 51.438758, 0.382178

DIRECTION: SOUTHBOUND SPEED LIMIT: 30

10 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0100	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	23	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0400	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	20.2	-
0500	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	15.3	-
0600	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	15.2	-
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1500	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	15.2	18.1
1600	25	19	0	2	3	0	0	0	0	0	0	0	0	1	0	16.4	19.9
1700	37	32	0	0	1	0	0	0	0	0	0	0	0	3	1	16.8	19.5
1800	21	19	0	0	2	0	0	0	0	0	0	0	0	0	0	16.1	17.9
1900	14	12	0	0	2	0	0	0	0	0	0	0	0	0	0	15.3	16.9
2000	8	6	0	1	0	0	0	0	0	0	0	0	0	1	0	17.1	-
2100	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	19.8	-
2200	5	4	0	0	1	0	0	0	0	0	0	0	0	0	0	17.2	-
2300	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	16.8	-
07-19	98	85	0	2	6	0	0	0	0	0	0	0	0	4	1	16.3	19
06-22	131	114	0	3	8	0	0	0	0	0	0	0	0	5	1	16.4	19.3
06-00	137	119	0	3	9	0	0	0	0	0	0	0	0	5	1	16.4	19
00-00	142	123	0	4	9	0	0	0	0	0	0	0	0	5	1	16.5	19.3

11 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	16.4	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0400	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	24.1	-
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0600	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	16.3	-
0700	6	5	0	1	0	0	0	0	0	0	0	0	0	0	0	16	-
0800	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	15.6	-
0900	43	38	0	0	4	1	0	0	0	0	0	0	0	0	0	16.8	19.1
1000	49	46	0	2	0	0	0	0	0	0	0	0	0	1	0	18.8	22.6
1100	40	37	0	1	1	0	0	0	0	0	0	0	0	1	0	18.6	22.5
1200	42	41	0	0	1	0	0	0	0	0	0	0	0	0	0	17.6	20.8
1300	53	46	0	6	0	0	0	0	0	0	0	0	0	1	0	17.2	20.8
1400	53	51	0	2	0	0	0	0	0	0	0	0	0	0	0	17	19.4
1500	42	39	0	1	1	0	0	0	0	0	0	0	0	0	1	17	20.6
1600	25	24	0	0	0	0	0	0	0	0	0	0	0	1	0	18.7	23.1
1700	32	27	0	4	1	0	0	0	0	0	0	0	0	0	0	19.2	23.6
1800	25	24	0	1	0	0	0	0	0	0	0	0	0	0	0	18.9	23.8
1900	48	47	0	1	0	0	0	0	0	0	0	0	0	0	0	17.4	19.8
2000	22	21	0	0	1	0	0	0	0	0	0	0	0	0	0	17.2	19.6
2100	10	7	0	1	2	0	0	0	0	0	0	0	0	0	0	16.9	-
2200	6	4	0	0	2	0	0	0	0	0	0	0	0	0	0	16.1	-
2300	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	16	18.5
07-19	416	384	0	18	8	1	0	0	0	0	0	0	0	4	1	17.8	21.3
06-22	499	462	0	20	11	1	0	0	0	0	0	0	0	4	1	17.7	20.9
06-00	523	484	0	20	13	1	0	0	0	0	0	0	0	4	1	17.6	20.9
00-00	526	486	0	21	13	1	0	0	0	0	0	0	0	4	1	17.6	20.9

12 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	26	26	0	0	0	0	0	0	0	0	0	0	0	0	0	14.7	15.8
0100	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	14.2	-
0200	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	16	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0600	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	15.1	-
0700	4	2	0	1	1	0	0	0	0	0	0	0	0	0	0	16	-
0800	37	35	0	2	0	0	0	0	0	0	0	0	0	0	0	17.3	20.2
0900	126	121	0	4	1	0	0	0	0	0	0	0	0	0	0	16.2	19.9
1000	31	25	0	5	0	0	0	0	0	0	0	0	0	1	0	16.6	20.2
1100	29	26	0	3	0	0	0	0	0	0	0	0	0	0	0	16.5	19.1
1200	23	22	0	1	0	0	0	0	0	0	0	0	0	0	0	16.7	19.5
1300	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	16.3	18.5
1400	20	17	0	2	0	0	0	0	0	0	0	0	0	0	1	19.1	23.2
1500	16	13	0	3	0	0	0	0	0	0	0	0	0	0	0	18.3	22.6
1600	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	15.5	18.2
1700	15	12	0	2	1	0	0	0	0	0	0	0	0	0	0	18.2	21.5
1800	16	15	0	0	1	0	0	0	0	0	0	0	0	0	0	17.1	21.9
1900	29	26	0	1	2	0	0	0	0	0	0	0	0	0	0	17.5	20.6
2000	4	3	0	0	1	0	0	0	0	0	0	0	0	0	0	18.1	-
2100	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	18.3	19.2
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
07-19	345	316	0	23	4	0	0	0	0	0	0	0	0	1	1	16.8	20.1
06-22	392	359	0	24	7	0	0	0	0	0	0	0	0	1	1	16.9	20
06-00	392	359	0	24	7	0	0	0	0	0	0	0	0	1	1	16.9	20
00-00	420	387	0	24	7	0	0	0	0	0	0	0	0	1	1	16.7	20

13 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
1200	11	10	0	1	0	0	0	0	0	0	0	0	0	0	0	17.8	20.4
1300	19	14	0	3	1	0	0	0	0	0	0	0	0	0	1	16.8	21.4
1400	51	45	0	3	1	0	0	0	0	0	0	0	0	1	1	18	23.1
1500	13	10	0	2	0	0	0	0	0	0	0	0	0	1	0	18	22.7
1600	19	17	0	2	0	0	0	0	0	0	0	0	0	0	0	16.1	19.5
1700	18	17	0	1	0	0	0	0	0	0	0	0	0	0	0	20.5	28
1800	20	17	0	1	0	0	0	0	0	0	0	0	0	1	1	17.9	22.5
1900	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	17.6	20.9
2000	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	16.6 -	
2100	4	3	0	1	0	0	0	0	0	0	0	0	0	0	0	15 -	
2200	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	15.5 -	
2300	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	13.2 -	
07-19	151	130	0	13	2	0	0	0	0	0	0	0	0	3	3	17.9	22
06-22	184	162	0	14	2	0	0	0	0	0	0	0	0	3	3	17.7	21.9
06-00	190	167	0	15	2	0	0	0	0	0	0	0	0	3	3	17.6	21.8
00-00	190	167	0	15	2	0	0	0	0	0	0	0	0	3	3	17.6	21.8

14 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0100	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19.2 -
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-
0300	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14.7 -
0400	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	20.1 -
0500	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	15.1 -
0600	10	9	0	0	1	0	0	0	0	0	0	0	0	0	0	0	15.8 -
0700	13	12	0	1	0	0	0	0	0	0	0	0	0	0	0	0	18.1
0800	9	8	0	1	0	0	0	0	0	0	0	0	0	0	0	0	19 -
0900	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18.1
1000	11	8	0	2	1	0	0	0	0	0	0	0	0	0	0	0	17.6
1100	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17.9
1200	23	19	0	3	0	0	0	0	0	0	0	0	0	0	0	1	17.1
1300	8	6	0	0	0	0	0	0	0	0	0	0	0	0	1	1	18.1 -
1400	15	11	0	3	0	0	0	0	0	0	0	0	0	0	0	1	16.9
1500	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.1 -
1600	21	16	0	2	2	0	0	0	0	0	0	0	0	0	0	1	15.8
1700	20	18	0	1	0	0	0	0	0	0	0	0	0	0	1	0	17.7
1800	66	64	0	1	1	0	0	0	0	0	0	0	0	0	0	0	17.8
1900	33	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19.3
2000	20	18	0	0	2	0	0	0	0	0	0	0	0	0	0	0	16
2100	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14.2 -
2200	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15.4 -
2300	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.8 -
07-19	218	194	0	14	4	0	0	0	0	0	0	0	0	2	4	17.5	20.6
06-22	291	264	0	14	7	0	0	0	0	0	0	0	0	2	4	17.4	20.5
06-00	306	279	0	14	7	0	0	0	0	0	0	0	0	2	4	17.3	20.4
00-00	317	288	1	15	7	0	0	0	0	0	0	0	0	2	4	17.3	20.4

15 February 2023

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	21.2 -
0100	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18.3 -
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0400	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	23 -
0500	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15.8 -
0600	20	18	0	2	0	0	0	0	0	0	0	0	0	0	0	0	18.9 22.5
0700	7	6	0	0	1	0	0	0	0	0	0	0	0	0	0	0	19.5 -
0800	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.9 19.7
0900	11	9	0	2	0	0	0	0	0	0	0	0	0	0	0	0	16 19.8
1000	12	9	0	1	2	0	0	0	0	0	0	0	0	0	0	0	17.1 20.5
1100	5	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	17.6 -
1200	16	11	0	2	0	0	0	0	0	0	0	0	0	2	1	1	17.2 21
1300	15	13	0	2	0	0	0	0	0	0	0	0	0	0	0	0	15.6 17.9
1400	14	12	0	1	1	0	0	0	0	0	0	0	0	0	0	0	17.7 20.3
1500	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.4 19.5
1600	21	17	0	0	2	0	1	0	0	0	0	0	0	0	0	1	16.7 20.6
1700	57	54	0	1	2	0	0	0	0	0	0	0	0	0	0	0	15.6 18.6
1800	50	45	0	0	5	0	0	0	0	0	0	0	0	0	0	0	17.6 20.3
1900	62	58	0	0	4	0	0	0	0	0	0	0	0	0	0	0	15.2 17.8
2000	10	7	0	2	0	0	0	0	0	0	0	0	0	1	0	0	16.5 -
2100	11	10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	16.2 18.3
2200	4	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	18.5 -
2300	4	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	16.2 -
07-19	232	204	0	10	13	0	1	0	0	0	0	0	0	2	2	2	16.7 19.8
06-22	335	297	0	15	17	0	1	0	0	0	0	0	0	3	2	2	16.6 19.7
06-00	343	302	0	16	19	0	1	0	0	0	0	0	0	3	2	2	16.6 19.7
00-00	351	307	0	18	20	0	1	0	0	0	0	0	0	3	2	2	16.6 19.8

16 February 2023

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	22.3	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0400	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	26.2	-
0500	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	18.2	-
0600	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	17.1	-
0700	5	3	0	1	1	0	0	0	0	0	0	0	0	0	0	17.8	-
0800	14	7	0	4	3	0	0	0	0	0	0	0	0	0	0	16.5	20.1
0900	9	6	0	3	0	0	0	0	0	0	0	0	0	0	0	16.4	-
1000	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	16.5	-
1100	9	8	0	1	0	0	0	0	0	0	0	0	0	0	0	16.6	-
1200	13	12	0	1	0	0	0	0	0	0	0	0	0	0	0	17.5	22.2
1300	21	17	0	1	1	0	0	0	0	0	0	0	0	0	2	15.3	17.2
1400	16	13	0	2	0	0	0	0	0	0	0	0	0	1	0	15.5	18.8
1500	9	7	0	1	1	0	0	0	0	0	0	0	0	0	0	18.8	-
1600	21	17	0	3	1	0	0	0	0	0	0	0	0	0	0	16.9	20.6
1700	44	40	0	1	3	0	0	0	0	0	0	0	0	0	0	17.7	21.2
1800	40	37	0	0	2	0	0	0	0	0	0	0	0	1	0	16	20.1
1900	44	42	0	0	0	0	0	0	0	0	0	0	0	2	0	18.6	22.8
2000	7	6	0	1	0	0	0	0	0	0	0	0	0	0	0	17.2	-
2100	4	3	0	1	0	0	0	0	0	0	0	0	0	0	0	17.2	-
2200	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10.4	-
2300	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	16.3	-
07-19	204	169	0	18	13	0	0	0	0	0	0	0	0	2	2	16.7	19.8
06-22	269	230	0	20	13	0	0	0	0	0	0	0	0	4	2	17	20.1
06-00	274	235	0	20	13	0	0	0	0	0	0	0	0	4	2	17	20.1
00-00	280	239	0	21	14	0	0	0	0	0	0	0	0	4	2	17.1	20.3

K&M TRAFFIC SURVEYS

SITE: ELLERSLIE GRAVESEND

LOCATION: ATTACHED TO FENCE

GRID REFERENCE: 51.438758, 0.382178

DIRECTION: SOUTHBOUND SPEED LIMIT: 30

10 February 2023

[illegible]

11 February 2023

[illegible]

12 February 2023

[illegible]

13 February 2023

[illegible]

14 February 2023

[illegible]

15 February 2023

[illegible]

16 February 2023

[illegible]

Grand Total

[illegible]

0700-1900	98	416	345	151	218	232	204		180.6	237.7
0600-2200	131	499	392	184	291	335	269		242	300.1
0600-0000	137	523	392	190	306	343	274		250	309.3
0000-0000	142	526	420	190	317	351	280		256	318
AM Peak	600	1000	900	1100	700	600	800			
	4	49	126	0	13	20	14			
PM Peak	1700	1400	1900	1400	1800	1900	1900			
	37	53	29	51	66	62	44			

APPENDIX E



Road Safety Audit Stage 1

Access to Ellerslie from Gravesend Bowls Club



Client: DHA Transport

Road Safety Answers reference no: RSA630

Control Sheet

	Name	Date	Signature
Author	Paul Martin	03/11/2022	
Checker	David Dodd	03/11/2022	
Authoriser	Paul Martin	03/11/2022	

Report Version

RSA Report Ref.	Version	Date of Issue
RSA630	Final	03/11/2022

1. Introduction

1.1 This report describes a Stage 1 Road Safety Audit carried out on the preliminary design for Section 278 works providing an upgraded access to Ellerslie from the Gravesend Bowls Club site, for DHA Transport, at the request of the Overseeing Organisation, Kent County Council. The audit was carried out in the office of Road Safety Answers Ltd during November 2022.

1.2 The audit team members were as follows:

Team Leader

Paul Martin - BSc (Hons), CEng, FCIHT, FSoRSA, IEng, MICE
HE Approved RSA Certificate of Competency (2013)
Director, Road Safety Answers Ltd

Team Member

David Dodd – BSc(Hons), DipNEBOSH, FIHE, IEng. MCIHT, MSoRSA
Independent Highway and Road Safety Consultant

1.3 The audit comprised an examination of the documents listed in **Appendix A**, and included the drawings supplied by Matthew Marsh of DHA Transport. The site was visited by the Audit Team, together, on 3rd November 2022 between 08.35 and 09.05 hours. The weather was rain and the road surface was wet. Traffic flows were moderate to heavy on Milton Road and light to moderate on Ellerslie. Pedestrian and cyclist flows were light on both roads.

1.4 The terms of reference of the audit are as described in the UK's national standard for road safety audit, GG 119 (revision 2). The team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.

1.5 All the problems described in this report are considered by the audit team to require action to improve the safety of the scheme and minimise accident occurrence. A plan showing the locations of the problems is shown in **Appendix B**.

1.6 The purpose of the scheme is to provide an access onto Ellerslie to serve a 62-bedroom retirement complex.

1.7 The scheme consists of the following elements:

- A simple priority junction serving a 5.5m access road which almost immediately widens out into a parking court with 19 parking spaces, the access road then continuing into the site at a width of 4.8m
- 6m radii on each shoulder of the junction;
- A 1.8m wide footway on each shoulder of the junction connecting into the footway on Ellerslie on each side, and terminating on each side at the parking court;
- Visibility splays onto Ellerslie of 43m south x 2.4m x 17m north, the northern splay measured to the kerbline of the bellmouth of Ellerslie at its junction with the A226 Milton Road;
- A 4.8m wide emergency access road, with dropped kerbs onto Ellerslie, 16m south of the primary access road to the development;
- Extension to the existing double yellow lines on the east side of Ellerslie southwards to a point 8m south of the emergency access road;
- An uncontrolled pedestrian crossing across the mouth of the primary access, with dropped kerbs and tactile paving.

1.8 No details of street lighting, surface water drainage or advanced signing have been provided. These issues are not, therefore, considered further in this report unless the existing facilities, or lack of them, is likely to engender a safety problem.

1.9 The auditors are not aware that any previous road safety audits have been carried out on these, or similar, proposals,

2. Items resulting from this Stage 1 Audit

2.1 PROBLEM

Location: A – Ellerslie between the proposed access and Milton Road (Dwg. 16623/H-01 Rev. P1).

Summary: Risk of side impact collisions due to the lack of visibility towards traffic turning left into Ellerslie at relatively high speeds.

The eastern shoulder of the junction of Ellerslie with Milton Road has a compound curve varying in radius between 15m and 30m, with a deceleration lane on Milton Road leading into this compound curve (photo 1). This encourages higher than desirable left turn speeds into Ellerslie; the auditors observed speeds in excess of 20mph entering Ellerslie from the east. The 17m visibility splay from the access towards this traffic is, therefore, likely to be inadequate for the predicted speeds, leading to a high risk of side impact collisions.



Photo 1: Looking east across Ellerslie, along Milton Road

RECOMMENDATION

The speed of left traffic turning from Milton Road should be reduced and the visibility northwards from the proposed access road should be increased. This could be achieved by removing the deceleration lane on Milton Road, reducing the kerblin radius into Ellerslie from Milton Road and swapping the emergency access road location and the primary access road to the parking court.

Design Team Response:

Client Officer Response:

3. Audit Team Statement

We certify that this road safety audit has been carried out in accordance with GG 119 (revision 2), with the exception that Designer and Highway Authority response sections have been added to each problem, and a signing off chapter added for the convenience of both parties.

Audit Team Leader

Paul Martin - BSc (Hons), CEng, FCIHT, FSoRSA, IEng, MICE
HE Approved RSA Certificate of Competency
Director, Road Safety Answers Ltd

Signed 
Date 03/11/2022

Audit Team Member

David Dodd – BSc(Hons), DipNEBOSH, FIHE, IEng. MCIHT, MSoRSA
Independent Highway and Road Safety Consultant

Signed 
Date 03/11/2022

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4. Design Team and Overseeing Organisation Statements

Design Team Leader

I certify that I have reviewed the items raised in this Stage 1 Safety Audit report. I have given due consideration to each issue raised and have stated my proposed course of action for each in this report. I seek the Overseeing Organisation's endorsement of my proposals.

Name:

Organisation:

Signed:

Date:

Overseeing Organisation (Highway Authority) Project Manager

I certify that I have reviewed the comments and actions proposed by the Design Team Leader and, in this report, I have stated my agreement, or alternative proposal, or acceptance of the risk associated with the problem.

Name:

Organisation:

Signed:

Date:

Appendix A

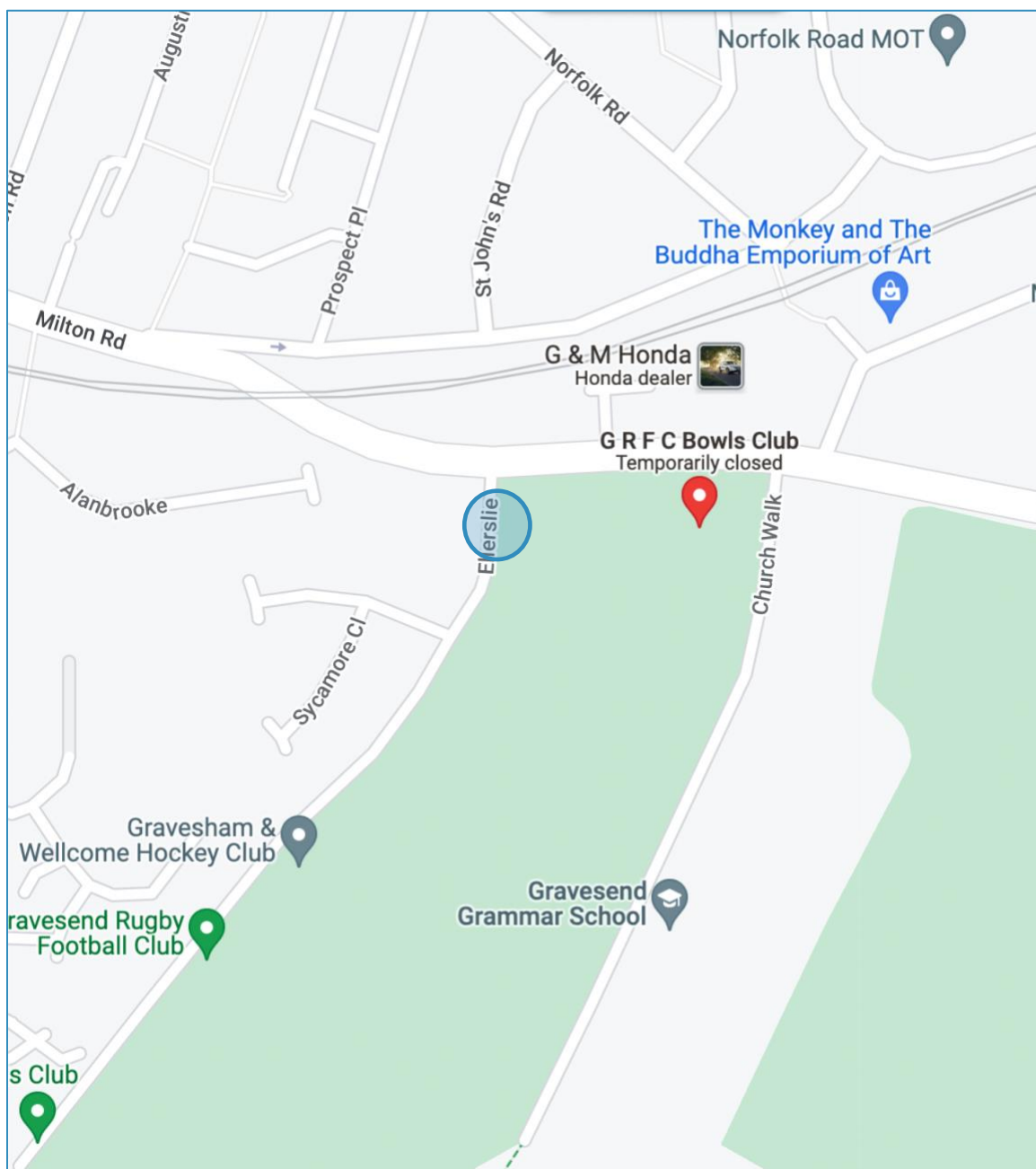
Drawings and Documents Examined:

16623 - H-01.pdf

16623 - T-01.pdf

Appendix B

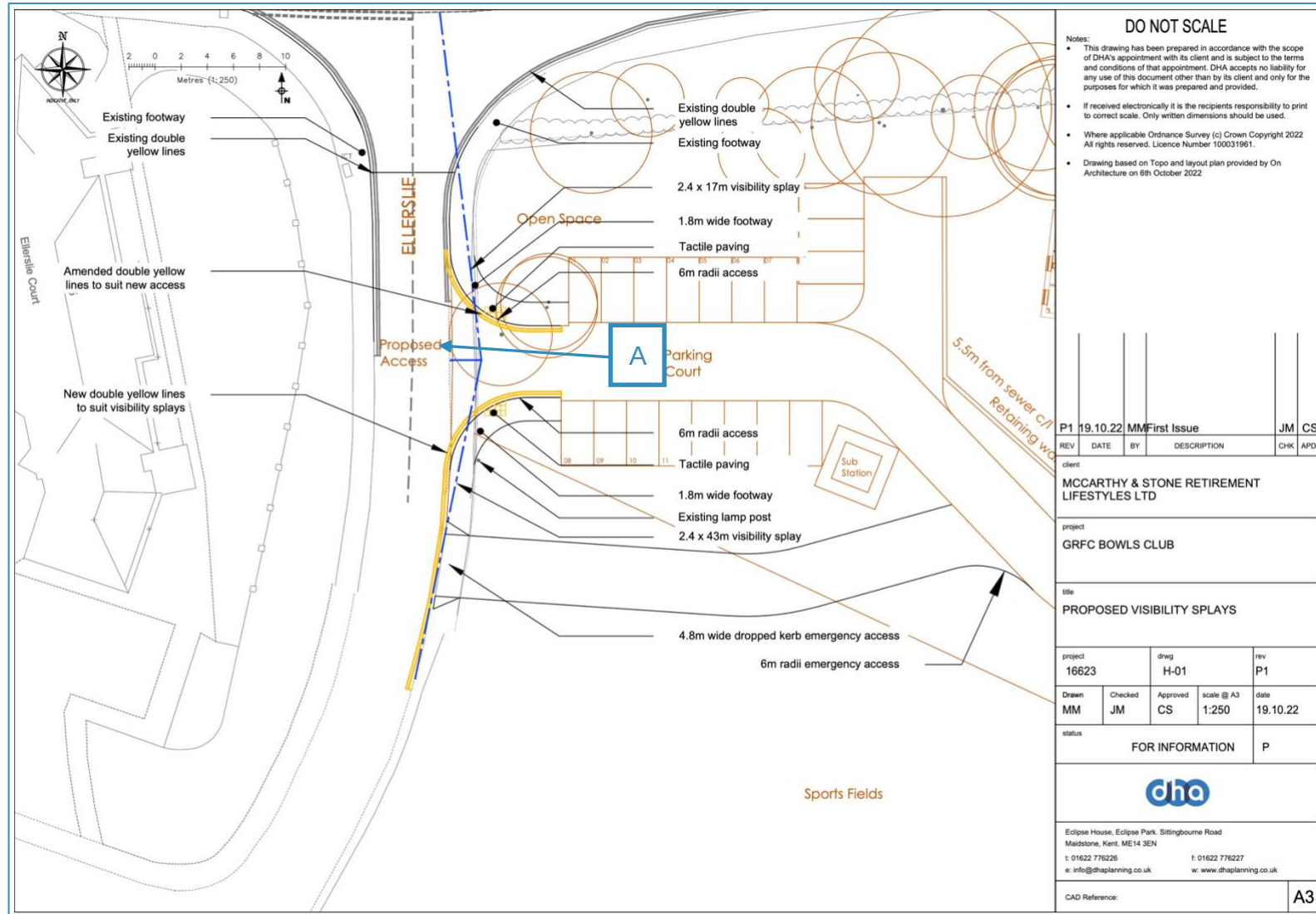
The following plan shows the location of the scheme



Scheme: Access to Ellerslie, Gravesend

Client: DHA (Highway Authority: Kent County Council)

Problems Location Plan



Project Details – Gravesend Bowls Club

Date – 21/11/22

Consultant/Design Engineer – DHA

Contact – Matthew Marsh 01622 776226



Road Safety Audit Stage 1

This response is to the issues raised in the Stage 1 RSA report, prepared by Road Safety Answers dated 3rd November 2022. Ref RSA630

Authorisation sheet

Prepared by:	
Name:	Matthew Marsh
Position	Planning, Highways and Design Technician
Signed:	
Organisation	DHA
Date:	06/03/2023
Approved by:	
Name:	Chris Smoker
Position	Associate Director
Signed:	
Organisation:	DHA
Date:	06/03/2023

Introduction

The proposal is for a four-storey, 62-bedroom retirement living complex. The Stage 1 Road Safety Audit was prepared by Road Safety Answers Ltd on 3rd November 2022 to assess the proposed access. This Designer's Response was produced by Matthew Marsh of DHA, approved by Chris Smoker of DHA and reviewed by the overseeing organisation of Kent County Council.

Item Number	RSA Issue	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
2.1	Location: A – Ellerslie between the proposed access and Milton Road (Dwg. 16623/H-01 Rev. P1). Summary: Risk of side impact collisions due to the lack of visibility towards traffic turning left into Ellerslie at relatively high speeds. The eastern shoulder of the junction of Ellerslie with Milton Road has a compound curve varying in radius between 15m and 30m, with a deceleration lane on Milton Road leading into this compound curve (photo 1). This encourages higher than desirable left turn speeds into Ellerslie; the auditors observed speeds in excess of 20mph entering Ellerslie from the east. The 17m visibility splay from the access towards this traffic is, therefore, likely to be inadequate for the predicted speeds, leading to a high risk of side impact collisions.	The speed of left traffic turning from Milton Road should be reduced and the visibility northwards from the proposed access road should be increased. This could be achieved by removing the deceleration lane on Milton Road, reducing the kerbline radius into Ellerslie from Milton Road and swapping the emergency access road location and the primary access road to the parking court.	Noted A speed survey has been completed at the location of the site access which has recorded 85th percentile speeds of 19.5mph and 20.2mph for northbound and southbound traffic respectively. Based on these speeds, the visibility splays have been updated in order on drawing ref 16623-H-01 Rev P3 to demonstrate that 2.4 x 25m splays can be achieved from the site access meeting the requirements for 20mph. Additionally, it is noted that KCC Highways were not keen on providing a tighter radius on Ellerslie due to the impact on the acceleration lane for buses.		

Design Organisation and Overseeing Organisation Statements

On behalf of the design organisation I certify that:

- 1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.**

Name:	
Signed:	
Position:	
Organisation:	
Date:	

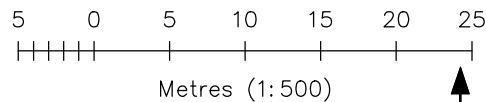
On behalf of the overseeing Organisation I certify that:

- 1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and**
2) The agreed RSA actions will be progressed.

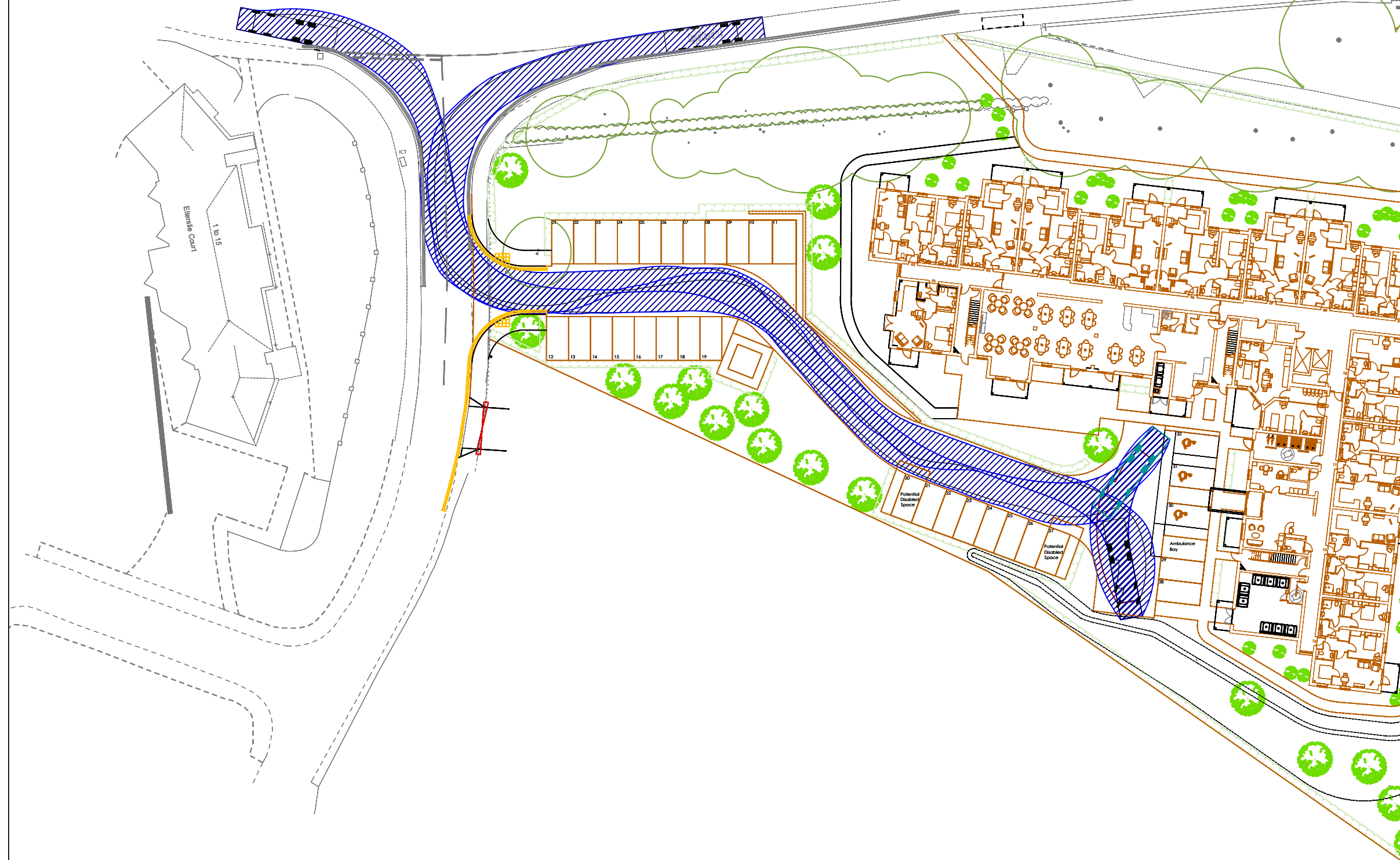
Name:	
Signed:	
Position:	
Organisation:	
Date:	

APPENDIX F



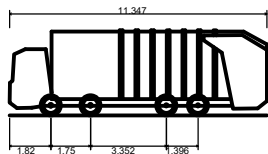


Metres (1:500)



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11.4m Refuse
Overall Length 11.347m
Overall Width 2.500m
Overall Body Height 3.751m
Min Body Ground Clearance 0.304m
Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 11.330m

P2	08.03.23	JM	Updated Design	CS	CS
P1	22.11.22	JM	First Issue	CS	CS
REV	DATE	BY	DESCRIPTION	CHK	APD

client
MCCARTHY & STONE RETIREMENT LIFESTYLES LTD

project
GRFC BOWLS CLUB

title
VEHICLE SWEEP PATH ANALYSIS
11.4M REFUSE

project	16623	drwg	T-03	rev	P2
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Drawn	Checked	Approved	scale @ A3	date
JM	CS	CS	1:500	08.03.23

status	FOR INFORMATION	P
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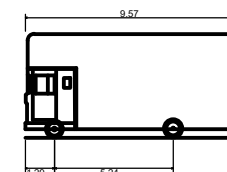
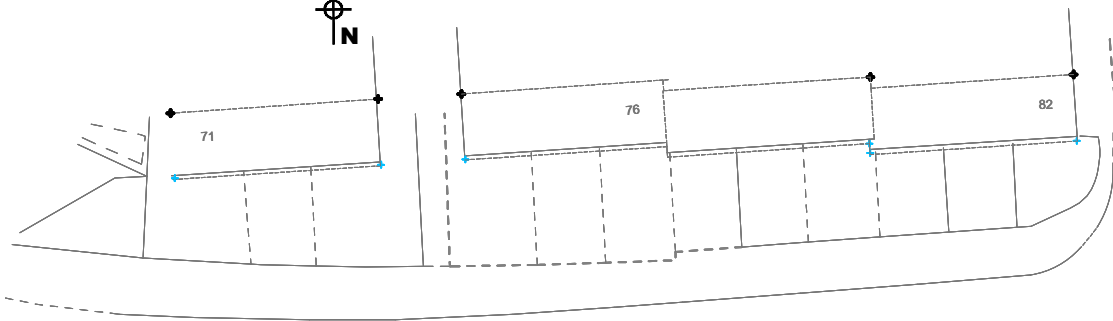


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CAD Reference: A3



5 0 5 10 15 20 25
Metres (1:500)



DB32 Pantechicon
Overall Length 9.570m
Overall Width 2.520m
Overall Body Height 4.571m
Min Body Ground Clearance 0.383m
Max Track Width 2.300m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 10.450m

P2	08.03.23	JM	Updated Design	CS	CS
P1	22.11.22	JM	First Issue	CS	CS
REV	DATE	BY	DESCRIPTION	CHK	APD

client
MCCARTHY & STONE RETIREMENT LIFESTYLES LTD

project
GRFC BOWLS CLUB

title
VEHICLE SWEPT PATH ANALYSIS PANTECHNICON

project	16623	drwg	T-04	rev	P2
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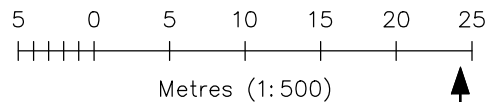
Drawn	Checked	Approved	scale @ A3	date
JM	CS	CS	1:500	08.03.23

status	FOR INFORMATION	P
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CAD Reference: A3

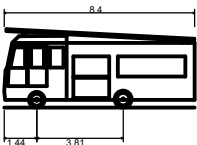


Metres (1:500)



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Kent Fire Appliance	
Overall Length	8.400m
Overall Width	2.480m
Overall Body Height	3.452m
Min Body Ground Clearance	0.337m
Max Track Width	2.121m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	7.910m

P2	08.03.23	JM	Updated Design	CS	CS
P1	22.11.22	JM	First Issue	CS	CS
REV	DATE	BY	DESCRIPTION	CHK	APD

client
MCCARTHY & STONE RETIREMENT LIFESTYLES LTD

project
GRFC BOWLS CLUB

title
VEHICLE SWEEP PATH ANALYSIS
FIRE TENDER

project	16623	drwg	T-05	rev	P2
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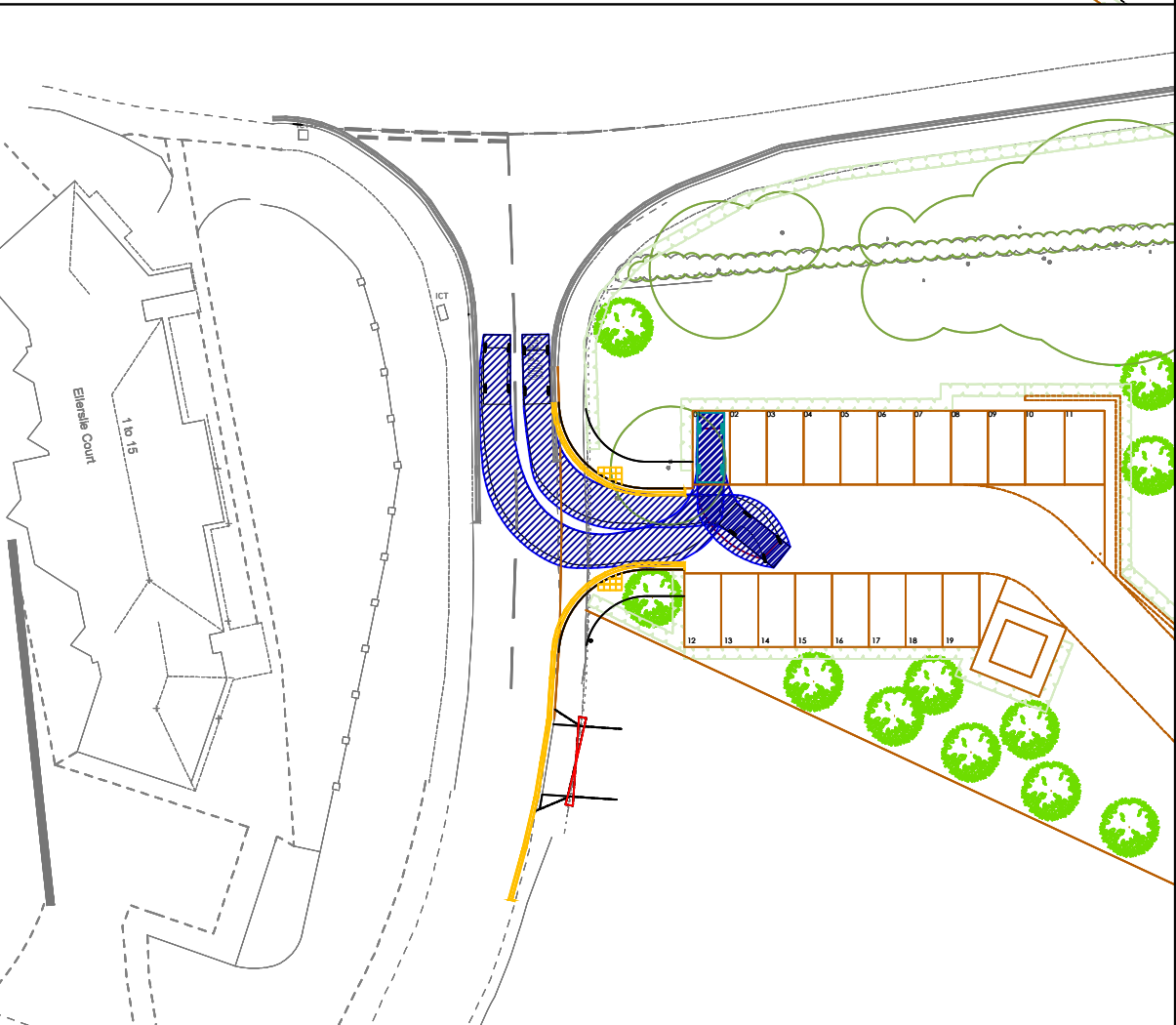
Drawn	Checked	Approved	scale @ A3	date
JM	CS	CS	1:500	08.03.23

status	FOR INFORMATION	P
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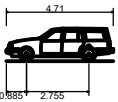
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Estate Car (2006)	4.710m
Overall Length	1.804m
Overall Width	1.442m
Overall Body Height	0.207m
Min Body Ground Clearance	1.756m
Max Track Width	4.00s
Lock to lock time	5.950m
Kerb to Kerb Turning Radius	

P2	08.03.23	JM	Updated Design	CS	CS
P1	22.11.22	JM	First Issue	CS	CS
REV	DATE	BY	DESCRIPTION	CHK	APD

client				
MCCARTHY & STONE RETIREMENT LIFESTYLES LTD				
project				
GRFC BOWLS CLUB				
title				
VEHICLE SWEEP PATH ANALYSIS ESTATE CAR				
project		drwg		rev
16623		T-06		P2
Drawn	Checked	Approved	scale @ A3	date
JM	CS	CS	1:500	08.03.23
status				P
FOR INFORMATION				
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CAD Reference:				A3

APPENDIX G



Calculation Reference: AUDIT-704001-221107-1154

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 05 - HEALTH
 Category : F - CARE HOME (ELDERLY RESIDENTIAL)
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	SP SOUTHAMPTON	1 days
04	EAST ANGLIA	
	PB PETERBOROUGH	1 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	DY DERBY	1 days
	NT NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	BP BLACKPOOL	1 days
09	NORTH	
	TW TYNE & WEAR	1 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days
	SR STIRLING	1 days

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

Primary Filtering selection:

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

Parameter: Number of residents
 Actual Range: 17 to 70 (units:)
 Range Selected by User: 17 to 180 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 02/07/22

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

Selected survey days:

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

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

Selected survey types:

Manual count	12 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	2
Suburban Area (PPS6 Out of Centre)	5
Edge of Town	5

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and

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

Secondary Filtering selection:

Use Class:

C2 12 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000	3 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
25,001 to 50,000	6 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	2 days
50,001 to 75,000	2 days
125,001 to 250,000	3 days
250,001 to 500,000	5 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	5 days
1.1 to 1.5	7 days

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

Travel Plan:

No 12 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 12 days

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

LIST OF SITES relevant to selection parameters

1	BP-05-F-01 LYTHAM ROAD BLACKPOOL SQUIRES GATE Edge of Town Residential Zone Total Number of residents: 31 Survey date: TUESDAY 27/09/16	NURSING HOME 31 27/09/16	BLACKPOOL Survey Type: MANUAL
2	DY-05-F-01 29 VILLAGE STREET DERBY Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of residents: 70 Survey date: TUESDAY 21/10/14	NURSING HOME 70 21/10/14	DERBY Survey Type: MANUAL
3	EB-05-F-01 CRAIGHOUSE TERRACE EDINBURGH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of residents: 56 Survey date: SATURDAY 19/03/16	NURSING HOME 56 19/03/16	CITY OF EDINBURGH Survey Type: MANUAL
4	ES-05-F-02 BATTLE ROAD HAILSHAM Edge of Town Centre Residential Zone Total Number of residents: 69 Survey date: WEDNESDAY 13/07/16	CARE HOME 69 13/07/16	EAST SUSSEX Survey Type: MANUAL
5	NT-05-F-02 MOOR LANE NEAR NOTTINGHAM BINGHAM Edge of Town Centre No Sub Category Total Number of residents: 34 Survey date: MONDAY 14/11/16	NURSING HOME 34 14/11/16	NOTTINGHAMSHIRE Survey Type: MANUAL
6	NY-05-F-05 SEAGRIM CRESCENT RICHMOND Edge of Town Residential Zone Total Number of residents: 37 Survey date: MONDAY 04/03/19	NURSING HOME 37 04/03/19	NORTH YORKSHIRE Survey Type: MANUAL
7	PB-05-F-01 PARK CRESCENT PETERBOROUGH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of residents: 48 Survey date: SUNDAY 16/10/16	NURSING HOME 48 16/10/16	PETERBOROUGH Survey Type: MANUAL
8	SF-05-F-01 COLCHESTER ROAD IPSWICH Edge of Town Residential Zone Total Number of residents: 17 Survey date: FRIDAY 18/09/15	CARE HOME 17 18/09/15	SUFFOLK Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	SP-05-F-01 BOTLEY ROAD SOUTHAMPTON	CARE HOME		SOUTHAMPTON
	Edge of Town No Sub Category Total Number of residents:		42	
	Survey date: TUESDAY		24/11/15	Survey Type: MANUAL
10	SR-05-F-01 PERTH ROAD DUNBLANE	NURSING HOME		STIRLING
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of residents:		60	
	Survey date: WEDNESDAY		18/06/14	Survey Type: MANUAL
11	TW-05-F-03 MOORE STREET GATESHEAD FELLING SHORE	NURSING HOME		TYNE & WEAR
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of residents:		52	
	Survey date: THURSDAY		02/05/19	Survey Type: MANUAL
12	WM-05-F-01 NEARHILL ROAD BIRMINGHAM	NURSING HOME		WEST MIDLANDS
	Edge of Town Residential Zone Total Number of residents:		65	
	Survey date: SUNDAY		08/11/15	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 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)

TOTAL VEHICLES

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	12	48	0.120	12	48	0.048	12	48	0.168
08:00 - 09:00	12	48	0.076	12	48	0.048	12	48	0.124
09:00 - 10:00	12	48	0.067	12	48	0.033	12	48	0.100
10:00 - 11:00	12	48	0.065	12	48	0.045	12	48	0.110
11:00 - 12:00	12	48	0.067	12	48	0.055	12	48	0.122
12:00 - 13:00	12	48	0.069	12	48	0.060	12	48	0.129
13:00 - 14:00	12	48	0.093	12	48	0.084	12	48	0.177
14:00 - 15:00	12	48	0.105	12	48	0.115	12	48	0.220
15:00 - 16:00	12	48	0.091	12	48	0.124	12	48	0.215
16:00 - 17:00	12	48	0.062	12	48	0.112	12	48	0.174
17:00 - 18:00	12	48	0.045	12	48	0.088	12	48	0.133
18:00 - 19:00	12	48	0.038	12	48	0.041	12	48	0.079
19:00 - 20:00	12	48	0.040	12	48	0.060	12	48	0.100
20:00 - 21:00	12	48	0.029	12	48	0.057	12	48	0.086
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.967			0.970			1.937

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: 17 - 70 (units:)
 Survey date range: 01/01/14 - 02/07/22
 Number of weekdays (Monday-Friday): 9
 Number of Saturdays: 1
 Number of Sundays: 2
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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