

CAREBASE LTD

**PROPOSED CARE HOME:
DANSON ROAD, BEXLEYHEATH**



TECHNICAL NOTE

**REPORT REF. 190320-06
PROJECT NO. 190320
MARCH 2021**

**PROPOSED CARE HOME:
DANSON ROAD, BEXLEYHEATH**

TECHNICAL NOTE

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DOCUMENT CONTROL SHEET

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	Client Draft	AJT	IW	DRAFT	05.03.2021
-	Planning submission	AJT	IW	IW	12.03.2021

1.0 INTRODUCTION

- 1.1 Ardent Consulting Engineers (ACE) has been appointed by Carebase to prepare a Technical Note (TN) to support the proposed redevelopment of the existing site at Danson Road, Bexleyheath.
- 1.2 This TN supports a full planning application for the redevelopment of the existing residential site and its associated land. The redevelopment schedule seeks to provide a 70-no. bedroom care home, associated car parking and internal landscaping.
- 1.3 This TN follows on from a meeting with London Borough of Bexley's highways officers on Tuesday 23rd February 2021 and subsequent email of 26th February 2021, which stated the following.

"As discussed in order for the Highway Authority to consider the proposal and the access arrangements promoted further and possibly withdraw the current objection to the scheme, additional assessment and justification is required.

In line with our discussions the following details should be submitted in the form of a technical note:

- *Based on TRICS data (or any other comparable data survey you may have relating to a comparable care home) the estimated hourly flows for a 24 hour period for all vehicles entering and exiting the site (servicing, staff and visitor), together with a comparison with the existing 4 dwellings.*
- *The assignment of the above vehicle movements at the site's access and egress points and on the adjacent highway based on the assumption of a 50/50 split of north-south traffic on Danson Road (in line with the approximate proportional flow observed in the 2006 traffic survey mentioned by Peter Boulden at the meeting) and an assumed 50/50 split of traffic east-west at the Danson Road/Crook*

Log signal controlled junctions. Diagrams should be provided for the AM and PM network peaks together with the development peak hour;

- *The anticipated and potential routes for vehicles heading back onto the A2 if unable to turn right out of the access;*

- *A review of the starting and finishing times for staff to ensure that these fall outside of busy periods on the road network as far as possible;*

- *Further consideration how the banning of right turns from the site will be prevented and enforced, other than by a formal Traffic Management Order under highway legislation;*

- *The perceived benefits in reducing the number of individual vehicular access/egress points to the site;*

- *An assessment of the cause and potential implications and mitigation measures that would need to be considered as a result of injury accident that occurred in 2019 in the vicinity of the site.*

- *Any other mitigation measures that would assist in reducing vehicle movements which could be incorporated into a traffic management plan and/or a travel plan."*

1.4 This TN goes on to address the above points in the subsequent **Section 2.0**, as follows.

2.0 RESPONSE TO BEXLEY COUNCIL’S COMMENTS

2.1 This section presents *LBB’s* comments followed by **ACE’s** response, as follows.

LBB’s Comment

“• Based on TRICS data (or any other comparable data survey you may have relating to a comparable care home) the estimated hourly flows for a 24 hour period for all vehicles entering and exiting the site (servicing, staff and visitor), together with a comparison with the existing 4 dwellings”

ACE’s Response

2.2 The Transport Statement, submitted in support of the planning application, provided details on the likely existing and proposed vehicle movements. See **Table 5.1**, extracted from the TS below.

Table 5.1: Weekday peak hour trip rates (source: TRICS)

Period and mode	Trip Rates			Trips		
	<i>In</i>	<i>Out</i>	<i>2-way</i>	<i>In</i>	<i>Out</i>	<i>2-way</i>
Weekday AM peak hour (08:00-09:00)						
Existing Site (4 Dwellings)						
<i>Vehicles (per dwelling)</i>	0.121	0.362	0.483	1	2	2
Proposed Development (70 Residents)						
<i>Vehicles (per resident)</i>	0.098	0.073	0.171	7	5	12
Vehicle Difference	-	-	-	+6	+3	+10
Weekday PM peak hour (17:00-18:00)						
Existing Site (4 Dwellings)						
<i>Vehicles (per dwelling)</i>	0.329	0.183	0.512	1	1	2
Proposed Development (70 Residents)						
<i>Vehicles (per resident)</i>	0.048	0.095	0.143	3	7	10
Vehicle Difference	-	-	-	+2	+6	+8

*Figures subject to rounding

2.3 Although the data in the Transport Statement focussed on the network peak hour movements, the TRICS data has been revisited to understand the longer (daily) traffic movement patterns of both the existing residential properties and the proposed carehome.

2.4 **Table 2.1** compares the departure movements of the residential properties predicted against those of the carehome proposal using the TRICS outputs from the original Transport Statement.

Table 2.1: Weekday vehicle departure trip comparison (proposed and existing situations)

Period	Residential Dwellings (4)	Carehome (70 rooms)	Difference
	Departure	Departure	Departure
07:00-08:00	1	5	+4
08:00-09:00	1	5	+4
09:00-10:00	1	2	+1
10:00-11:00	1	5	+4
11:00-12:00	1	5	+4
12:00-13:00	1	4	+3
13:00-14:00	1	5	+4
14:00-15:00	1	4	+3
15:00-16:00	1	7	+6
16:00-17:00	1	6	+5
17:00-18:00	1	7	+6
18:00-19:00	1	3	+2
<i>Total</i>	12	58	+46

2.5 The above **Table 2.1** indicates that the maximum increase in departure movements is expected to be 6 vehicles (one vehicle every 10 minutes on average), and overall throughout the day the increase in departing traffic is expected to be an additional 46 vehicles (an average of around 4 vehicles an hour over a 12-hour period).

2.6 This level of increase is not significant.

- 2.7 ACE has recently supported Carebase on a carehome planning application within the London Borough of Bromley jurisdiction. That scheme was approved at Appeal in February 2021.
- 2.8 As part of that supporting work, traffic surveys were undertaken at an existing Carebase carehome operating at Heathfield Court, within the Northumberland Heath area of Bexley.
- 2.9 Traffic surveys were undertaken to understand the vehicular arrivals and departures of that site on a neutral weekday in February 2020. This was prior to the impacts of the COVID-19 pandemic.
- 2.10 For reference, the Heathfield Court site has a worse PTAL than that of the proposed Danson Road site (PTAL 1b to 2 in comparison to PTAL 4). The Heathfield Court site has 66 bedrooms (compared with 70 proposed at Danson Road) and 18 parking spaces (compared with 17 spaces at Danson Road). Other than the PTAL rating, the site is considered to be an excellent comparator.
- 2.11 The effect of a better PTAL would naturally provide staff and residents of the Danson Road site greater opportunities to travel by sustainable travel rather than private vehicles.
- 2.12 The survey undertaken at Heathfield Court indicates that over a 12-hour period (the full extent of the survey that was undertaken) that there were 65 vehicle arrivals and 64 vehicle departures at the site.
- 2.13 This on average equates to around 1 movement per bedroom in / out per day, but that this covers all staff, visitors and servicing movements.
- 2.14 The data from the Heathfield Court survey is comparable to the movements calculated from the TRICS data.

- 2.15 It is therefore considered that the profiled departure movements are of the correct magnitude when taking into account the site's greater accessibility credentials.

LBB's Comment

"• *The assignment of the above vehicle movements at the site's access and egress points and on the adjacent highway based on the assumption of a 50/50 split of north-south traffic on Danson Road (in line with the approximate proportional flow observed in the 2006 traffic survey mentioned by Peter Boulden at the meeting) and an assumed 50/50 split of traffic east-west at the Danson Road/Crook Log signal controlled junctions. Diagrams should be provided for the AM and PM network peaks together with the development peak hour;"*

ACE's Response

- 2.16 Using the requested assumption of traffic distributing 50%/50% north/south on Danson Road and then 50%/50% on Park View Road/Crook Log this has been applied to the peak hour departure total of 5 exiting vehicle movements during AM peak hour and 7 exiting vehicle movements during the PM peak hour, the likely distribution is as follows.
- 2.17 Without restrictions, 2.5 exiting vehicles in the AM peak hour and 3.5 exiting vehicles in the PM peak hour may wish to head south (based upon those percentage splits). Should those vehicles be redistributed in a northern direction,

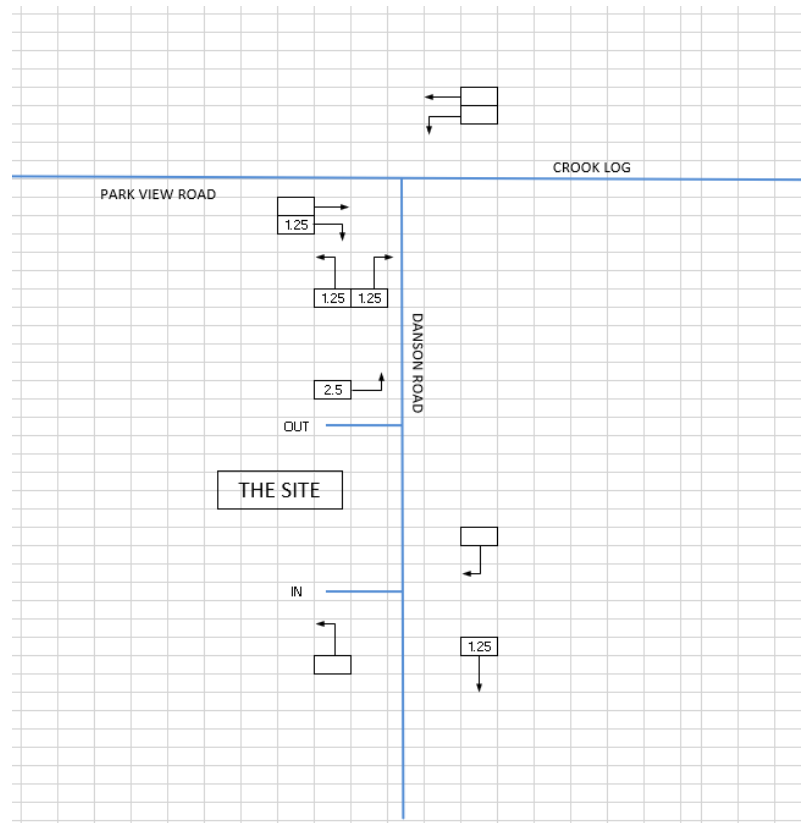


Figure 2.1: – Redirected Proposed Departing Vehicles AM Peak Hour

- 2.18 The above figure indicates that a total of up to 3 vehicle exiting movements may need to be redistributed onto other routes in the AM peak hour in order to head south.
- 2.19 **Figure 2.1** indicates that this could occur either via vehicles turning left into Park View Road and turning in one of the surrounding residential areas, and then coming back to the signal junction to turn right. Or alternatively, by turning right at the lights and taking a route via Dallin Road.
- 2.20 As can be observed, the level of such traffic movements is very small, and this is during the peak operation hours of the carehome. At other periods such movements will be even smaller.

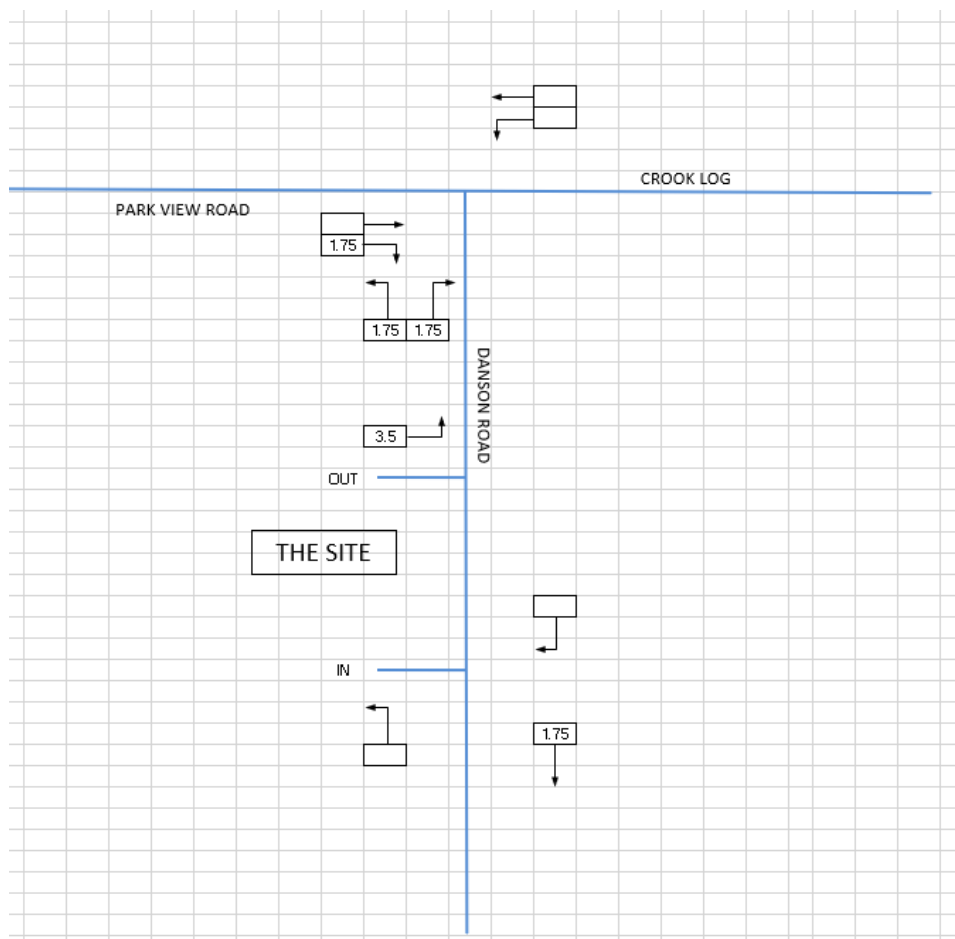


Figure 2.2: – Proposed Departing Vehicles AM Peak Hour

- 2.21 The above **Figure 2.2** indicates that, when distributed, the total traffic wanting to exit southbound may be up to 4 vehicles during the PM peak hour.
- 2.22 The same routes are considered viable for vehicles to use, and the PM peak (when the greatest departing traffic occurs from the site) would only increase redistributed flows by 4 vehicles in total, and up to 2 vehicles most likely either left or right at the signal junction (based upon the 50:50 split suggested by Highways).
- 2.23 As can be observed, the level of such traffic movements is very small, and this is during the peak operation hours of the carehome. At other periods such movements will be even smaller.

- 2.24 Applying these proportions to the daily vehicle movements from TRICS, this would result in 28 vehicles wishing to turn southbound at the exit (58 total departures). Over the course of a typical 12-hour day (as is available in TRICS) this equates to just 5 vehicles per hour across an average day.
- 2.25 When including the effects of existing residential traffic already making turning movements on the network from private driveways this would further lessen traffic impacts.
- 2.26 This analysis is reasonably coarse in nature and is based upon a general 50:50 split of traffic onto each route.
- 2.27 Data contained within the recent Appeal scheme at Bromley (provided by Carebase) indicated that 91% of their staff at Heathfield Court lived within 5-mile radius of the site. Likewise, 65% of their residents come from addresses within 3-mile radius of their carehome.
- 2.28 Overall however, the number of vehicles likely to want to turn right out of the site naturally is still a very small proportion of trips to the site.
- 2.29 It should be noted at this stage that the existing residential properties have no restrictions at all on the movements that vehicles make, meaning that vehicles can turn north or south from driveways as they see fit.

LBB's Comment

"• *The anticipated and potential routes for vehicles heading back onto the A2 if unable to turn right out of the access;*"

ACE's Response

2.30 The banned ability of drivers to turn right out of the proposed development may see some minor redistribution of traffic. As has been identified above, the expected impact of this is a small proportion of vehicles.

2.31 However, as has been requested, we have considered what routes vehicles may take in order to head south or to the A2.

2.32 To this end, the following **Plates (1, 2 and 3)** identify potential routes to the south and to the A2.



Plate 1: Route to the south via Dallin Road / Sydney Road

2.33 The route shown in **Plate 1** allows vehicles to access the south towards the A2 without turning right out of the access. The route utilises Dallin Road and Sydney Road / The Grove for vehicles to gain access back to Danson Road.



Plate 2: Route to the south via Danson Mead

2.34 The route shown in **Plate 2** allows vehicles to turn left out of the access and turn around via Danson Mead. Vehicles are then able to use Danson Road to access the south and the A2.



Plate 3: Route to the south via Upton Road

- 2.35 The route shown in **Plate 3** allows vehicles to access the A2 (eastbound direction only) without having to turn / loop back to Danson Road. The route utilises Upton Road, which provides a direct connection to the A2 for routes to locations such as Dartford or wider to the M25 network.
- 2.36 There are no inherent issues with vehicles using any of these routes, and as has been identified such redistributed traffic will be a very small proportion of the development trips.

LBB's Comment

"• A review of the starting and finishing times for staff to ensure that these fall outside of busy periods on the road network as far as possible;"

ACE's Response

- 2.37 The majority of staff (care staff, housekeeping, chef, kitchen assistant) due to their shifts/working hours, are likely to arrive and depart outside of the typical network peak hours
- 2.38 It is only the manager, deputy manager and maintenance staff who typically have working hours from 9am – 5pm.
- 2.39 As set out in Paragraph 3.23 of the Transport Statement submitted with the application, the vast majority of staff arrive at the site before 8am, with the main carers working 12-hour shifts between 7am and 7pm.
- 2.40 Information provided by Carebase suggests that approximately 86% of staff live within 3 miles of their place of work, and for the Northumberland Heath carehome location this is actually as high as 91%. Given the extensive residential catchment of Bexleyheath, the Danson Road site is expected to have a comparable catchment for staff to be drawn from.
- 2.41 Deliveries are generally in the morning, after the morning peak hour traffic (Monday-Friday).
- 2.42 Visitors are also the most likely to attend site outside of peak traffic hours. Visits occur between set hours in order that other on-site duties can be performed, and to provide routine for residents. It has been identified that 65% of residents have come from addresses within a 3-mile radius of the care home. It would therefore be logical to expect that a high proportion of visitors to see relatives residing in the care home would also be drawn from the immediate area, with familial ties, friendship groups, etc being centred around the former address of the care home resident. This again would provide opportunities for sustainable travel modes to be conducted.

LBB's Comment

"• Further consideration how the banning of right turns from the site will be prevented and enforced, other than by a formal Traffic Management Order under highway legislation;"

ACE's Response

2.43 The proposals to ban the right turn on exit are as follows.

- Kerb alignment to position vehicles so that a right turn is made difficult as shown on **Drawing 190320-004 Rev B**;
- Provide signage to advise of the left only turn out of the site;
- Orientate car parking spaces to encourage entry from the southern access and departure from the northern most access;
- Monitor the movement using CCTV (to be situated on-site); and
- Introduce the right turn mitigation strategy (as shown on the accompanying document at **Appendix A**);
 - Management can enforce staff to exit left and remove parking rights for staff failing to adhere to the situation;
 - Management can make visitors aware of the exit left arrangement when they sign in / out of the reception;
 - Management can advise residents and families of the restrictions when they become residents as part of their contract;
 - Provide information on the website to inform of the left only exit;
 - Advise all suppliers of the left only exit.

- 2.44 The above could be secured through a planning condition for a "Right Turn Mitigation Strategy" which would be subject to approval by the London Borough of Bexley and their Highways Team.
- 2.45 Alternative access points and amendments have been considered. We have looked at provided a central island on Danson Road to physically prevent the right turn, however there is insufficient road space to enable this.
- 2.46 Swapping the access and egress has been considered (in from the north and out from the south) however this would result in vehicles turning right into the site waiting on Danson Road close to the signal junction with Park View Road which could result in rear shunt type accidents and could result in vehicles queuing back to the signal junction.
- 2.47 A new centrally located access has been considered however, this would not enable space for vehicles to turnaround and would result in vehicles reversing out. Pushing the proposed care home to the west would make the scheme unviable through the reduced footprint of the building.

LBB's Comment

"• *The perceived benefits in reducing the number of individual vehicular access/egress points to the site;*"

ACE's Response

- 2.48 The proposals result in the reduction of the current number of vehicle access points from four to two.

- 2.49 Currently, there are no restrictions in vehicle movements into or out of the existing driveways. In particular, property number 2 Danson Road has no restrictions on its movements either inbound or outbound. The proposals will restrict exit only movements at this location in the future, which will stop potential right turn movements in at this point.
- 2.50 This also places right turn 'in' movements further away from the signal junction eliminating the chances of traffic queuing back to the signal junction.
- 2.51 The onerous right turn out movements are eliminated in the proposals.

"• *An assessment of the cause and potential implications and mitigation measures that would need to be considered as a result of injury accident that occurred in 2019 in the vicinity of the site.*"

ACE's Response

- 2.52 The 'serious' incident (01190177108) was a result of a car exiting a driveway, edging out into stationary traffic when a motorcycle emerged from between the queuing traffic.
- 2.53 It should be reminded that this is a single, isolated accident recorded in the 5-year period of the collision data and does not suggest a trend. Indeed, in relation to streets with direct frontage access, the Manual for Streets Guidance (MfS) states.

"It was found that very few accidents occurred involving vehicles turning into and out of driveways, even on heavily-trafficked roads.

Links with direct frontage access can be designed for significantly higher traffic flows than have been used in the past, and there is good evidence to raise this figure to 10,000 vehicles per day. It could be increased further, and it is suggested that local authorities review their standards with reference to their own traffic flows and personal injury accident records. The research indicated that a link carrying this volume of traffic, with characteristics similar to those studied, would experience around one driveway-related accident every five years per kilometre. Fewer accidents would be expected on links where the speed of traffic is limited to 20 mph or less, which should be the aim in residential areas." ACE's emphasis

- 2.54 The recorded accident is an isolated incident and has not been replicated in earlier years (previous 5 years did not experience such an accident).
- 2.55 As has been identified, the banning of the right turn will restrict this manoeuvre, and the movement of vehicles from the site does not occur in significant volumes during the peak hours when traffic would be potentially queuing from the signal junction.

"• Any other mitigation measures that would assist in reducing vehicle movements which could be incorporated into a traffic management plan and/or a travel plan."

ACE's Response

- 2.56 From Carebase's extensive experience, the majority of staff are based locally to the development, and typically walk, cycle or use public transport to travel to and from work. Staff will be encouraged to travel to work by sustainable modes of travel, indeed the site's PTAL of 4 helps achieve this.

2.57 An Employee Travel Plan will be produced in order to enforce and support this.

2.58 The combination of physical restrictions and signage, “marketing” and information to make all staff, employees and visitors aware of this situation, and the focus on Travel Planning measures will help to minimise vehicle movements.

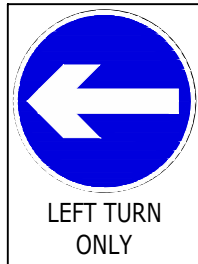
3.0 SUMMARY & CONCLUSIONS

- 3.1 Carebase has instructed Ardent Consulting Engineers to provide transport and highway advice on the proposed care home scheme at Danson Road, Bexleyheath.
- 3.2 The application proposes a 70-no. bedroom care home with associated car parking and access provision.
- 3.3 Following consultation with London Borough of Bexley Highways Department further comments on the proposed access arrangements and operation have been received.
- 3.4 This Technical Note has provided further expansion on the points raised and has fully demonstrated that the site access and egress can operate effectively and safely.
- 3.5 Having fully considered highways/transport matters, we consider that planning permission for the proposed development at the site should be granted.

Drawing



PROPOSED SIGNAGE



2.4m X 43m VISIBILITY SPLAY (SHOWN TO TANGENT)

VIEWPORTS 1 AND 2

PROPOSED CCTV CAMERA

2.4m X 43m VISIBILITY SPLAY

VIEWPORT 3

PROPOSED SIGNAGE



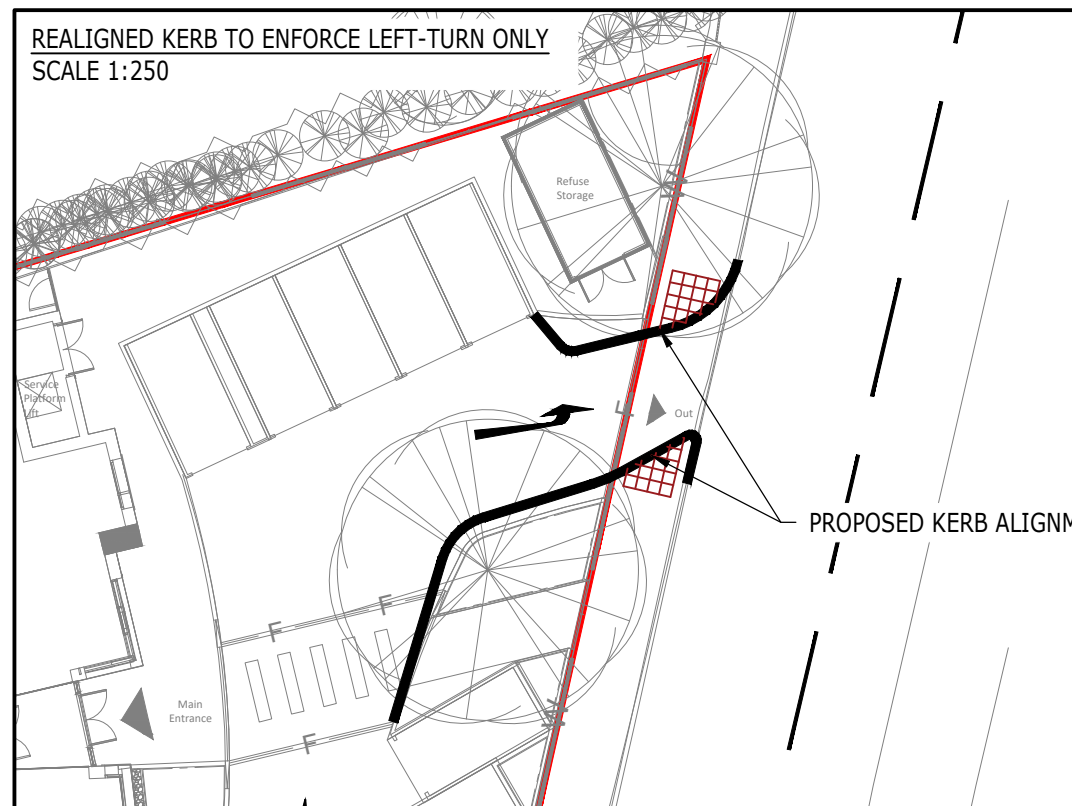
PROPOSED SIGNAGE



VIEWPORT 1 CAR SWEEP PATH

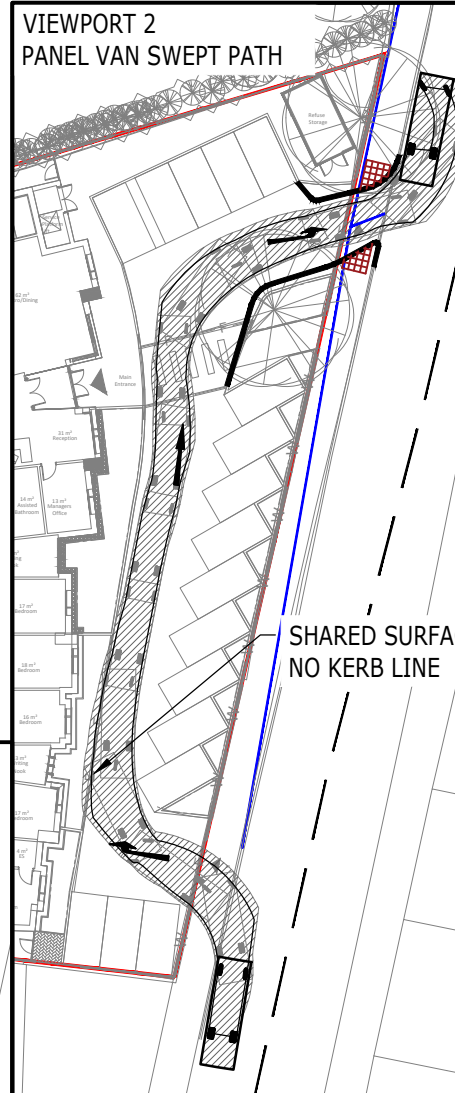


REALIGNED KERB TO ENFORCE LEFT-TURN ONLY
SCALE 1:250

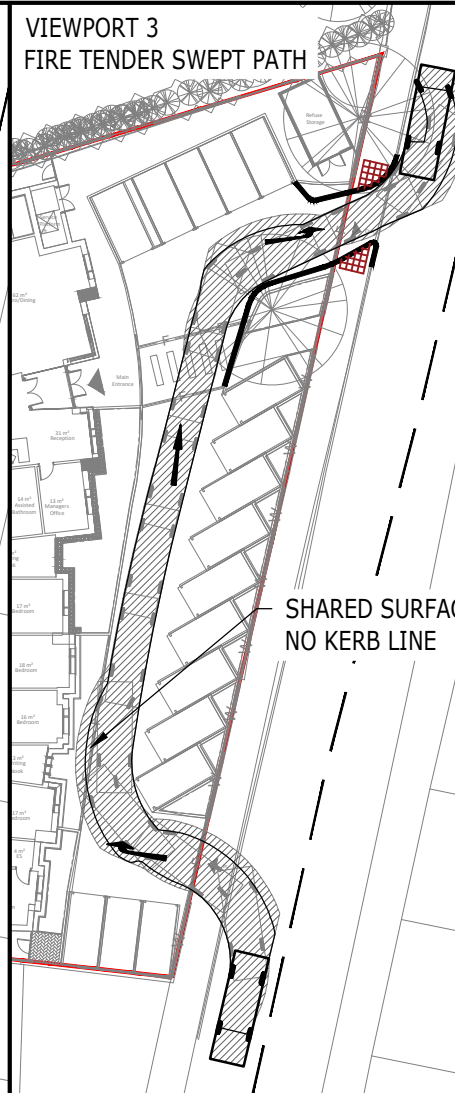


PROPOSED KERB ALIGNMENT

VIEWPORT 2
PANEL VAN SWEEP PATH



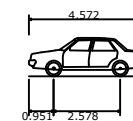
VIEWPORT 3
FIRE TENDER SWEEP PATH



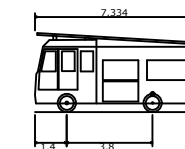
SHARED SURFACE
NO KERB LINE

SHARED SURFACE
NO KERB LINE

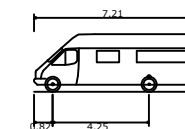
VEHICLE USED:



Car
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



Fire Tender
Overall Length 7.334m
Overall Width 2.286m
Overall Body Height 3.495m
Min Body Ground Clearance 0.380m
Track Width 2.286m
Lock to lock time 5.00s
Kerb to Kerb Turning Radius 8.000m



7.5t Panel Van
Overall Length 7.210m
Overall Width 2.192m
Overall Body Height 2.544m
Min Body Ground Clearance 0.316m
Track Width 1.865m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 7.400m

DRAFT

B	REALIGNED KERB VIEWPOINT MADE LARGER	AA	AT	IW	08.03.21
A	REALIGNED KERB TO ENFORCE LEFT-TURN ONLY	AA	AT	IW	05.03.21
Rev	Description	Drn	Chk	App	Date

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SSIP
BUREAU VERITAS
Certification

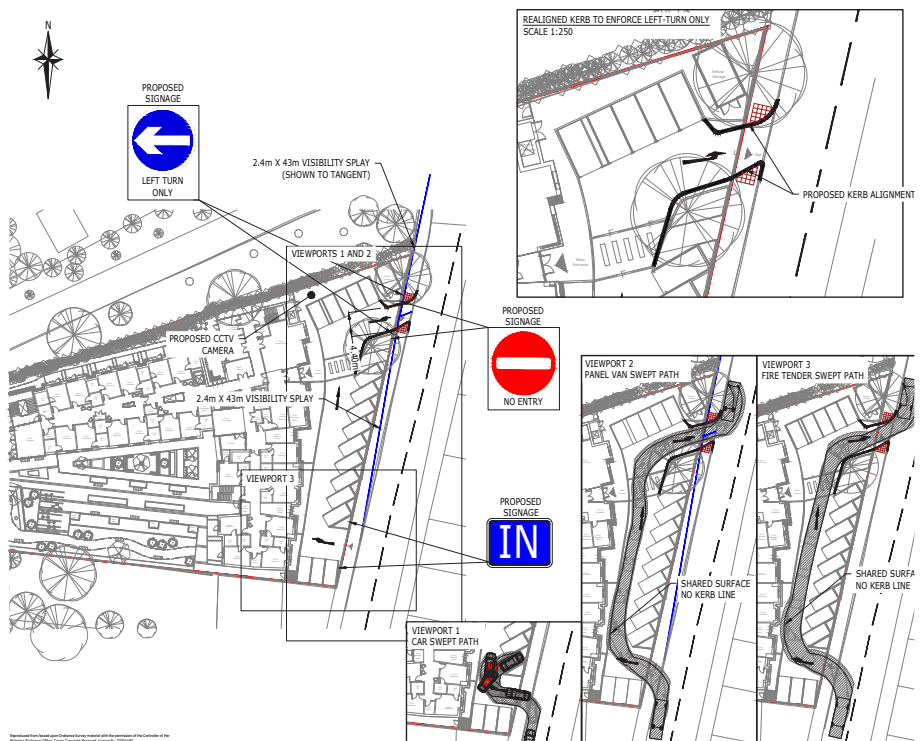
Client
CAREBASE

Project Title:
DANSON ROAD, BEXLEYHEATH

Drawing Title:
PROPOSED INTERNAL ARRANGMENTS

A3 Scale	Date	Designed by
1:500	11.02.21	BT
Drawn by	Checked by	Approved by
BT	AT	
Drawing Number	Rev	
190320-004	B	

Appendix A



Right Turn Mitigation Strategy

2-8 Danson Road
 Bexleyheath
 DA6 8HB



Introduction

Following the highlighting of the potential risks associated with a right hand turn from 2-8 Danson Road, a selection of physical mitigation measures have been added to the access strategy.

These include signage at eye level and on the road level as well as the re-orientation of the angle on the dropped curb to halt vehicles conducting the prohibited manoeuvre. Further details of these measures can be found in the Ardent and Ryder documents that have been provided.

We understand that physical mitigation can be greatly improved by a strong management strategy on an operation level. At Carebase we are extremely committed to highway safety at all of our Nursing Homes.

The below measures are designed to educate, inform and prevent drivers from exiting the property with a right-hand turn. In addition to these measures, we of course welcome any additional suggestions on how we can further ensure highway safety at the property.

Operational Measures

Camera Monitoring System

Carebase will install and monitor a camera and regulate compliance. This will be regulated by contacting non-compliant drivers using the information provided in the sign in sheet (see next point). If possible, Carebase will seek to use a third-party operator to enforce fines if applicable.

Visitor Vehicle Registration

Carebase will implement a physical or digital sign in sheet that will record the name, registration plate and mobile number for any visitor using the car park. The form will include a clear sign that explains exiting the property with a right-hand turn is strictly prohibited as well as highlighting a camera system is utilised.

Supplier Access Document

Any suppliers or regular deliverers will, prior to making their first delivery, receive a document that details how to enter, safely park and exit the property as well as highlight the utilisation of a camera.

Staff Education

All staff will receive an induction to understand the highway risks of turning right out of the property and how this manoeuvre is strictly prohibited.

Due to the accessibility of the Nursing Home and its good local transport links, it is envisaged that we will have very little staff traffic however it is important that all members of staff are clear of the risks in order to assist with the compliance across all vehicles using the car park..

Website

Within the 'Contact' section of the Nursing Home's website, an explanation of the access arrangements will be included, utilising a map and diagram especially highlighting that a right hand turn out of the property is a prohibited manoeuvre. Main public transport links will also be highlighted in this section as all visitors will be encouraged to use public transport where possible.

Visitor and Resident Information

Within the move-in documentation; a clear accessibility section will be included. Within this section it will be clearly explained that exiting with a right turn is prohibited. This section will also detail the easiest way to use the surrounding streets to return to Danson Road in the alternate direction.

