mayer brown

SENIOR LIVING URBAN (EPSOM) LTD
PROPOSED ACCESS ARRANGEMENTS
GUILD LIVING CARE COMMUNITY, EPSOM HOSPITAL

STAGE 1 - ROAD SAFETY AUDIT

MAY 2020

the journey is the reward

Report title:	**Senior Living Urban (Epsom) Ltd Proposed Access Arrangements Guild Living Care Community, Epsom Hospital Stage 1 - Road Safety Audit**
Date:	**May 2020**
Document reference and revision:	**S/SLUEpsom.1.6 Rev B**
Prepared by:	**Martyn Parr - Mayer Brown Ltd**
Approved by:	**John Reid - Mayer Brown Ltd**
On behalf of:	**Senior Living Urban (Epsom) Ltd**
Status:	**Final**

Mayer Brown Limited, Lion House, Oriental Road, Woking, Surrey GU22 8AR
Telephone 01483 750508 Fax 01483 750437 wokingoffice@mayerbrown.co.uk www.mayerbrown.co.uk

Senior Living Urban (Epsom) Ltd
Proposed Access Arrangements
Guild Living Care Community, Epsom Hospital
Stage 1 - Road Safety Audit

List of Contents

Sections

Appendices

1 Introduction

1.1 This report results from a Stage 1 Road Safety Audit carried out following instructions from Mayer Brown Limited on proposed access arrangements for a new 'Later Living Community' on land at Epsom General Hospital

1.2 As set out in the Audit Brief, the proposals comprise of the *"redevelopment of a part of the existing Epsom Hospital, including the demolition of some 'unfit for purpose' hospital buildings on the site to provide a 'Later Living' development. Access and egress to the site is provided via separate entrance and exit points on Woodcote Green Road, with the entrance located near the southwestern corner of the site and the exit located just to the west of the existing hospital access that is being stopped up. The hospital access that is being retained is located further to the east of the proposed exit.".* In addition, priority at the vehicular entrance and egress will be given to pedestrians over other road users.

1.3 The Road Safety Audit took place on 20th May 2020.

1.4 The Road Safety Audit comprised an examination of the Audit Brief provided by Mr Richard Gregory at Mayer Brown Ltd (Design Team), provided in **Appendix C**.

1.5 The Overseeing Organisation is Surrey County Council.

1.6 Gemma Ruff of Surrey County Council approved the composition of the Audit Team.

1.7 The Road Safety Audit Team membership was as follows:

Team Leader

John Reid — MSc, DipHTE, MCIHT, FSoRSA, MITAI, HECoC
Technical Director (Safety) – Mayer Brown Limited
(Certificate of Competency in Road Safety Audit gained in April 2012)

Team Member

Martyn Parr — MSoRSA, MCIHT, HECoC
Road Safety Manager – Mayer Brown Limited
(Certificate of Competency in Road Safety Audit gained in February 2015)

1.8 At the time of the site inspection(s), Her Majesty's Government advised that the general public should social distance themselves as a result of the Covig-19 global pandemic. On this basis, and following Highways England procedures during the pandemic, the

Audit was undertaken using online mapping and other material without a further site visit being undertaken at this stage.

1.9 This Stage 1 Road Safety Audit was subsequently prepared and issued on this basis.

1.10 The terms of reference of the Road Safety Audit are as described in GG 119, with the exception that the Audit Brief was not approved prior to issue to the Audit Team and that this Audit was undertaken using online mapping or other material without a site visit (for reasons as set out in Paragraph 1.8 on the previous page).

1.11 This Audit is concerned only with the works that are intended for adoption by Surrey County Council.

1.12 For reference, a reduced-scale copy of drawing B/GLEPSOM.1/02 is provided in **Appendix B** of this report.

1.13 The Audit Team are not advised of any Departures from Standard.

2 Items Raised at Previous Road Safety Audits

2.1 The Audit team are not aware of any previous Road Safety Audits having been carried out on the scheme proposals.

3 Items Raised at the Stage 1 Road Safety Audit

General

3.1 **Problem**

Location: General

Summary: Surface Water Drainage

This matter can be addressed at the detailed design stage.

Standing water within the carriageway may result in loss of control for vehicles, especially during sub-zero conditions, and standing water on the footway surface may result in slip hazard for pedestrians, especially during sub-zero conditions.

Recommendation

Ensure that carriageway and footway drainage is provided to current design standards.

3.2 **Problem**

Location: General

Summary: Maintenance / inspection covers – Two-wheel vehicle loss of control.

This matter can be addressed at the detailed design stage.

New service provision may be required for the proposed development. Inspection covers which become polished by traffic action may create skid hazards for two-wheeled vehicles; this could lead to a loss of control and result in rider and / or passenger injury

Recommendation

Ensure as far as practical that no manholes or inspection chambers are located where they are likely to be traversed by two-wheeled vehicles during turning manoeuvres. Where this is unavoidable, use skid resistant covers and ensure that they are regularly inspected and maintained.

3.3 **Problem**

Location: General

Summary: Lighting Provision

This matter can be addressed at the detailed design stage

Details of the proposed lighting provision are not provided at this stage. Inadequate and/or uneven levels of illumination may result in drivers failing to correctly identify the various junction layouts associated with this development, with consequent kerb strikes and loss of control.

Recommendation

Provide carriageway and footway lighting in accordance with current design standards.

Non-Motorised Users (NMUs)

3.4 **Problem**

Location: Site frontage/Rear edge of footway between the proposed vehicular ingress and egress (please refer to reference point 3.4 in **Appendix B**)

Summary: Risk of vehicles overrunning footway/Pedestrian straying on to the internal vehicle recirculation lane

The recirculation lane provided within the development site abuts the rear edge of footway between the vehicular ingress and egress. The Audit Team are concerned, that without some for of physical measures being provided, vehicles turning right into the recirculation lane could over run the footway, and potential strike pedestrians using the footway. Conversely, without some form of physical measure being provided, pedestrians using the footway may inadvertently stray off the footway and onto the recirculation lane, and subsequently being at risk of being struck by a moving vehicle.

Recommendation

It is recommended that some form of pedestrian restraint barrier and full height kerb is provided at the rear edge of footway/site boundary. It will be important to ensure that any pedestrian restraint barrier does not obstruction junction visibility splays.

3.5 **Problem**

Location: Woodcote Green Road/Proposed vehicular ingress and egress (please refer to reference points 3.5 in **Appendix B**)

Summary: Risk of vehicles overrunning footway

The full height kerbed radii provided at both the site ingress and egress tie into the rear edge of the existing footway on Woodcote Green Road. This could result in vehicles following the kerb alignment and entering the footway, potentially leading to pedestrian/vehicle collisions.

Recommendation

It is recommended that if a bell mouth junction arrangement is to be provided, then the kerbed radii should tie into the channel line of Woodcote Green Road.

3.6 **Problem**

Location: Woodcote Green Road/Proposed vehicular ingress and egress (please refer to reference points 3.6 in **Appendix B**)

Summary: Layout of vehicular access points do not indicate pedestrian priority

The Audit Team are advised that pedestrians using the footway on the northern side of Woodcote Green Road should be given priority over other road users accessing the development. It is also understood that for this reason tactile paving is not to be provided at either access to aid vision impaired users.

However, the proposed access arrangements include the provision of full height kerbed radii at both access points. This conventional bell-mouth type arrangement may indicate that vehicles accessing the site have priority over crossing pedestrians, this could result in confusion, driver hesitation and/or pedestrian being struck by a moving vehicle. Additionally, lack of provision of tactile paving at dropped crossing points on either side of the vehicle ingress and egress points could result in visually impaired pedestrians inadvertently walking into the site access vehicular routes.

Recommendation

It is recommended that both the ingress and egress are formed of a crossover arrangement including dropped kerbs.

Junctions

3.7 **Problem**

Location: Site frontage/Rear edge of footway between the proposed vehicular ingress and egress (please refer to reference point 3.7 in **Appendix B**)

Summary: Potential obstruction to junction visibility splays

Whilst some visibility splays have been formally identified on the drawings submitted, it will be important that all visibility splays remain free from obstruction.

A number of trees are shown along the site frontage, one of which appears to be within the junction visibility splays, or if not within the visibility splays then very close to them. Even if the trees are intended to be of relatively small girth and have clear stems, they will inevitably have some impact on sightlines; this effect will be greater the closer they are to the egress and will increase with time as the trees grow. This will increase the risks of vehicles emerging from the egress and being struck by passing traffic.

Recommendation

i. Provide visibility splays in accordance with relevant design standards and ensure that the splays will be kept free from obstruction.

ii. Any vegetation within the splays should be maintained to ensure that it does not extend beyond a vertical height of 0.6m.

iii. Do not plant trees within the visibility splays.

3.8 **Problem**

Location: Proposed vehicular ingress and egress (please refer to reference points 3.8 in **Appendix B**)

Summary: Signage and road markings

It will be important to provide appropriate signing and road markings to ensure that road users are able to differentiate between the vehicular ingress and egress, in order to reduce the risk of sudden braking and/or late turning manoeuvres.

Recommendation

It is recommended that appropriate 'No Entry' signing and 'No Entry' markings should be provided at the site egress to ensure vehicles are prohibited from turning into the site egress.

It is also recommended that appropriate 'Entry' signing, and 'Entry' or 'One Way' markings should be provided within the site ingress to ensure vehicles enter the site using the appropriate access point.

4 Audit Team Statement

Audit Team Statement

4.0 We certify that this Road Safety Audit has been carried out as described in GG119 with the exception that that the Audit should was undertaken using online mapping and other material without a site visit being undertaken at this stage.

Road Safety Audit Team Leader

John Reid - MSc, DipHTE, MCIHT, FSoRSA, MITAI, HECoC
Technical Director (Safety)
Mayer Brown Limited
Lion House
Oriental Road
Woking
Surrey
GU22 8AR

Signed 

Date 20/05/20

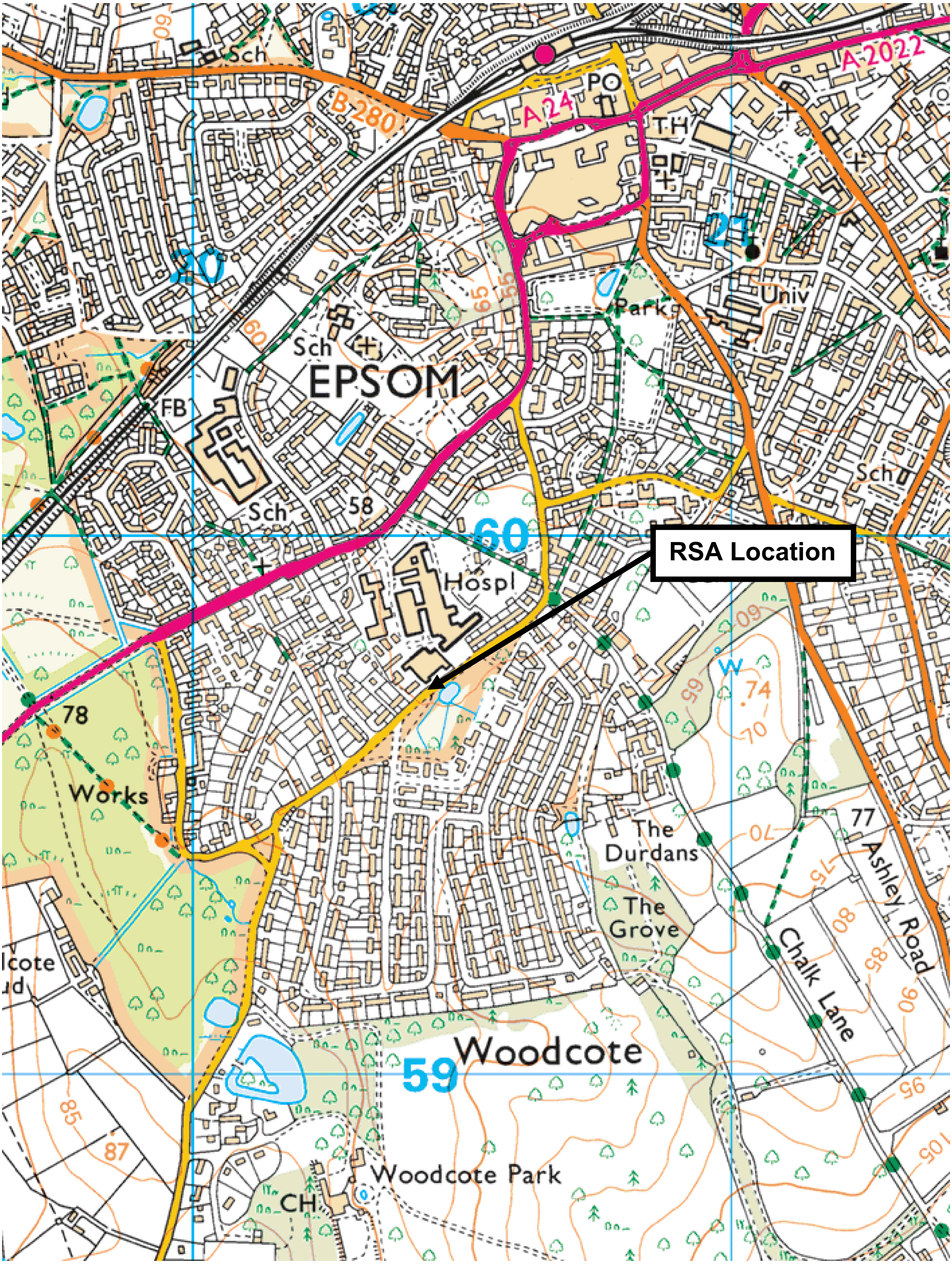
Road Safety Audit Team Member

Martyn Parr – MSoRSA, MCIHT, HECoC
Road Safety Manager
Mayer Brown Limited
Lion House
Oriental Road
Woking
Surrey
GU22 8AR

Signed 

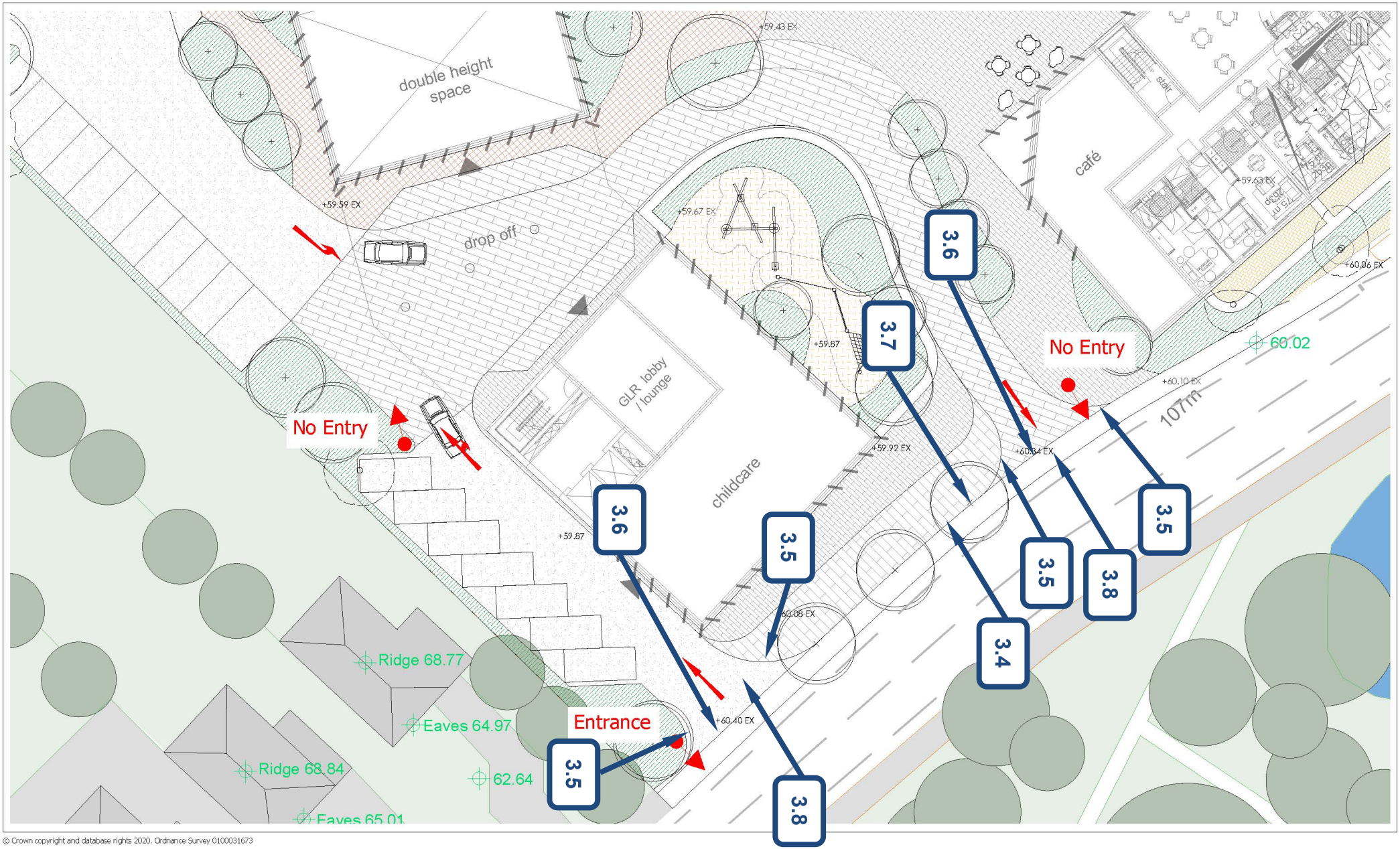
Date 20/05/20

APPENDIX A: Site Location Plan



RSA Location
EPSOM
Sch
B 280
A 24
PO
TH
A 2022
Univ
Parks
FB
Sch
58
60
Hospl
78
Works
The Durdans
The Grove
Chalk Lane
Ashley Road
77
74
Woodcote
59
Woodcote Park
CH
87
85
20
21

APPENDIX B: Reference Plan



mayer brown

Mayer Brown Limited
Suite 501 CityPoint Temple Gate Bristol BS1 6PL
Telephone 0117 9251027 Fax 0117 9251029
bristoloffice@mayerbrown.co.uk www.mayerbrown.co.uk

client
GUILD LIVING

project
PROPOSED LATER LIVING DEVELOPMENT
EPSOM GENERAL HOSPITAL

title
DIRECTION SIGNAGE PLAN

scale	1:250 @ A3	drawn by	RB	checked by	RG
date	APRIL 2020	cad file	200416 - 02 - SIGNAGE		

drawing number
B/GLEPSOM.1/02

rev.
-

APPENDIX C: Stage 1 Audit Brief

Road Safety Audit Brief

Introduction

1.1 Mayer Brown Ltd have been instructed by Senior Living Urban (Epsom) Ltd and approved by Surrey County Council to undertake a Stage 1 Road Safety Audit of the proposed access arrangements for a new Later Living Community on land at Epsom General Hospital. The information contained within this note is intended to serve as an Audit Brief, providing a description of the development proposals with associated drawings appended.

Site Location

1.2 The site is located approximately 1km south of Epsom Town Centre in the borough of Epsom & Ewell. The site is bordered by Woodcote Green Road to the south, Epsom General Hospital to the north and east and residential properties to the west. The surrounding area is mostly residential.

1.3 The site location is shown in **Figure 1**. It currently forms part of the Hospital grounds, with the land having been sold for development as part of the NHS Trust's site delivery plans.

Figure 1: Site Location

Development Proposals

1.4 The proposals comprise redevelopment of a part of the existing Epsom Hospital, including the demolition of some 'unfit for purpose' hospital buildings on the site to provide a 'Later Living' development comprising the following:

- C2 apartments with some care options;
- C2 apartments with additional care options;
- Care suites for residents unable to live independently – this may include some short-term transitory care between hospital and home;
- Up to 35 staff on site (7 overnight);
- Key worker/nurses' accommodation to replace existing units within Epsom General Hospital's Woodcote Lodge;
- Childcare nursery – with spaces for up to 40 children;
- Public amenities, including retail, restaurant and café;
- An Automated Parking System (APS) car park for residents, staff and visitors;
- Additional parking spaces for visitors at surface level;
- Secure and sheltered cycle parking;
- A private, development 'Car Club' with vehicles (located within the APS car park, and space provided for a public 'Car Club' vehicle at surface level; and
- Shuttle buses for resident day trips etc.

1.5 The proposed site layout is illustrated in the architect's drawing attached as **Appendix A** of this Transport Assessment.

Schedule of Accommodation

1.6 A summary of the Schedule of Accommodation for the proposed development is provided in **Table 1** below.

Dwelling Type	No. of Units / Area
Guild Living Residence – 1 bed	*68*
Guild Living Residence – 2 bed (small)	*158*
Guild Living Residence – 2 bed (medium)	*32*
Guild Living Residence – 2 bed (large)	*28*
Guild Living Residence – 3 bed	*20*
Total Guild Living Residences	**306**
Guild Care Residence	10
Guild Care Suite	28
Key Worker Residence (Hospital staff)	24
Childcare (Nursery)	219 sqm (35-40 children)
Amenities (including retail, restaurant and café)	816 sqm

Table 1: Schedule of Accommodation

1.7 The definitions of the three types of accommodation referenced above are as follows:

- Guild Living Residences (GLR) – 1, 2, 3-bedroom main C2 with care options;
- Guild Care Residences (GCR) – larger GCS option / smaller GLR option; and
- Guild Care Suites (GCS) – members requiring greater range of care/services.

Access Arrangements

1.8 Access and egress to the site is provided via separate entrance and exit points on Woodcote Green Road, with the entrance located near the southwestern corner of the site and the exit located just to the west of the existing hospital access that is being stopped up. The hospital access that is being retained is located further to the east of the proposed exit.

1.9 Within the site the separate entrance and exit points create a one-way internal route under Building West where a drop-off area will be provided at the main site entrance to allow residents and visitors to drop off/collect their cars. Departing vehicles will continue along the internal route to the exit, whilst those that have arrived will use (driven by a concierge) a one-way route adjacent to Woodcote Green Road along the front of the site to re-join the internal route just within the entrance of the site. To access the APS to the north of the site, a two-way route is provided as a continuation of the entrance route before it turns under Building West. Following collection from the APS, vehicles re-join the main access route to exit the site at the same location. An additional turning head/roundabout will be provided adjacent to the APS entrance for delivery and emergency vehicles to manoeuvre.

1.10 These access arrangements are illustrated in **Figure 2**.

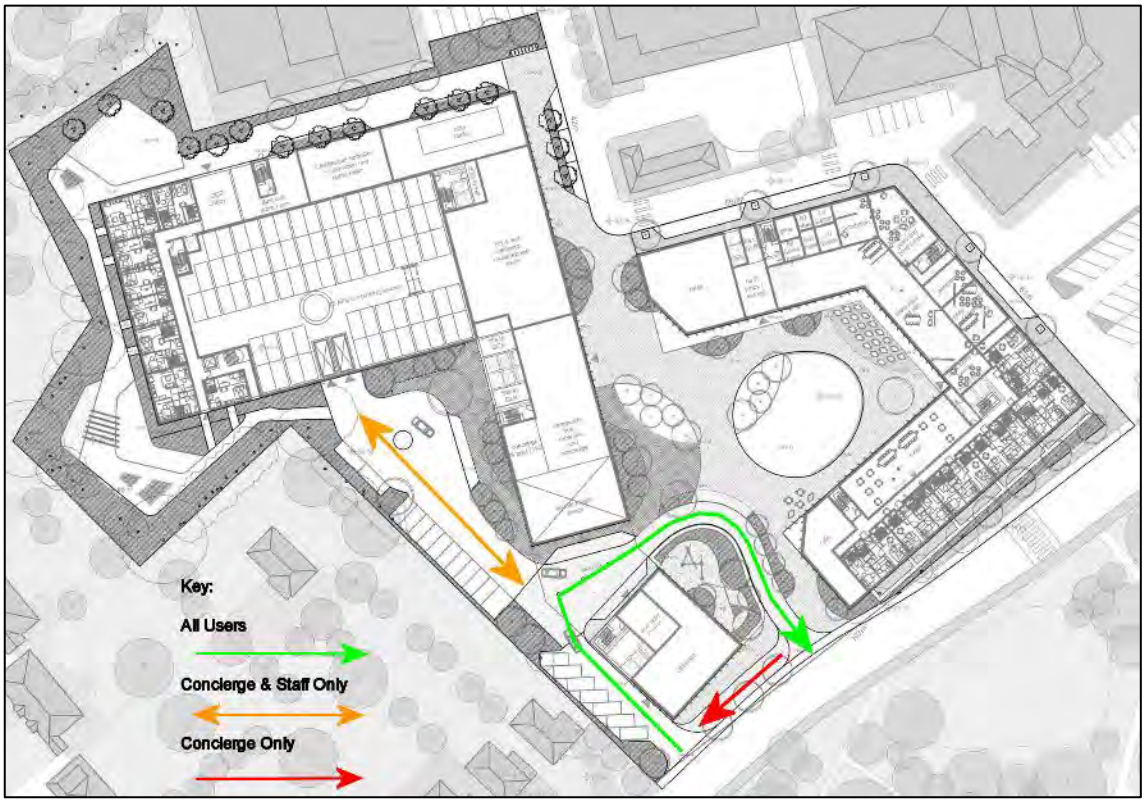


Figure 2: Access Arrangements and Internal Movements

1.11 Drop off/collection for the nursery provided as part of the scheme will be accessed via the main access where parking bays are provided with vehicles departing via the separate egress.

1.12 A drawing showing the proposed signage to assist with access in to, around and out of the site is attached to this report at **Appendix B**.

1.13 The site entrance road is 3.7m wide with 4m radii provided on both sides of the bellmouth where it joins the main carriageway, whilst the egress is 4m wide with 4m radii provided. 2.4m x 43m visibility splays, commensurate with the requirements set out in the Department for Transports (DfT) Manual for Streets (MfS) for a 30mph road, are provided at the site egress and illustrated on the drawing attached to this report at **Appendix C**.

1.14 The entrance/exit manoeuvres from Woodcote Green Road have been assessed via swept path analysis for a large car with the drawing attached to this report at **Appendix D**.

1.15 The site has been designed in a pedestrian friendly manner with vehicle-free access throughout the site and linking to the existing footway and cycle-lane on Woodcote Green Road. It is recognised that some residents at the site will be unable to walk great distances, and therefore buggy/electric scooter storage and charging areas will be provided within the

site. These will enable residents who are not able to walk easily to still travel around the local area on footways.

Parking Provision

1.16 As part of the development proposals a two-storey, 150 APS would be provided onsite for use by residents, staff and visitors. The APS would be accessed via the site access on Woodcote Green Road with a turning head/drop off area provided in the vicinity of the main reception to allow residents and visitors to drop off/collect their cars with a concierge service to drive the vehicle to and from the APS.

1.17 Further parking for visitors is provided at grade for up to 20 vehicles along the western boundary of the site and accessed via the site access on Woodcote Green Road. Drop off/collection for the nursery will also be provided in the same location.

Automated Parking System

1.18 The APS will consist of car lifts, with an Automated Guided Vehicle System which uses traffic management software and lasers for self-guidance to manage the automated storage and retrieval of vehicles on trays.

1.19 The APS is to be managed and used by the operator. Residents and visitors will not be independently using the APS but will instead leave their vehicles at a drop-off area located adjacent to the entrance lobby of the building.

1.20 A basic guide to the operation procedure is provided below:

- The car is driven onto a pallet in the APS entrance lobby area and automatic signs/signals guide the driver to position the vehicle correctly.
- The robotic system measures the car's size to determine a suitable parking space available for the car.
- After turning off the engine, the driver and passengers (if any) lock the car, exit the lobby area and collect a ticket at the ticket machine nearby.
- Once sensors determine that everyone is clear of the lobby area, the outside lobby doors are automatically closed and inside doors leading into the APS opened.
- Mechanical systems transport the car on the pallet from the lobby to the parking area and place it in a parking space automatically. An empty pallet is returned to the entrance.
- The parked car remains in its parking space until the driver requests its return.
- To retrieve the car the driver enters their ticket into the ticket machine and is directed to the exit lobby area, where the car will be delivered.

- After the car is placed in the exit lobby, inside doors close and outside lobby doors open, allowing the driver and passengers to enter the car and drive away.

1.21 In relation to the proposed development, it is envisaged that drivers would drive to one of the drop off areas adjacent to the main reception and pass their keys to the concierge who in turn would utilise the APS and retain the ticket. The concierge would also collect the vehicle when requested by the driver, delivering it to the drop off area to enable the driver and any passengers to alight.

1.22 The benefits of utilising an APS includes:

- Significant energy efficiency improvements compared to conventional car parks.
- Improved BREEAM, LEED and Green Star Credit scoring.
- Reduction in the amount of space required for a specific number of spaces.
- Reduced running cost.
- Significant reductions in CO2, ECO2, NOx and PM10 emissions.

1.23 APS systems have specific spaces with charging points built in so that electric cars can be charged whilst they are parked.

Servicing Arrangements

1.24 Dedicated bays for servicing and refuse collection are provided and accessed via the hospital access that will remain post-development. This will allow the potential for existing refuse collection routes to be used and will restrict access into the proposed development by larger vehicles.

Cycle Parking

1.25 There are 50 secure, covered cycle spaces provided for residents, staff and visitors located throughout the site.

Author: RG
Date: 13th May 2020

APPENDIX A: Proposed Site Layout Plan

GENERAL NOTES.

This drawing remains the copyright of Andy Sturgeon Garden Design Limited.
All dimensions to be checked prior to commencement of any works,
and/or preparation of any shop drawings on site.
Any dimensional discrepancies and alterations to be referred to the designer.

DO NOT SCALE FROM THIS DRAWING.

KEY

▭	**Project Boundary**
▭	**Existing trees retained**
○	**Proposed Trees: 62no.**
○	**Proposed Multi-stem Trees: 15no.**
▨	**Paving type 1: 1361m2**
▨	**Paving type 2: 586m2**
▨	**Paving type 3: 157m2**
▨	**Paving type 4: 694m2**
▨	**Paving type 5: 400m2**
▨	**Paving type 6: 573m2**
▨	**Paving type 7: 391m2**
▨	**Access Road/parking: 945m2**
🟩	**Proposed Planting: 2179m2**
☰	**Feature hedge: 105 Lm.**
🟩	**Lawn: 676m2**
▭	**Seating units: 51Lm**
○	**Spill out furniture**
☰	**Bike Stands**
□	**Tree grille: 10no.**
▭	**Play Features**
▥	**Pergola**
—	**Gate**

0m 5m 10m 20m

Scale 1:200 @A0

Iss	Date	Issue notes	Drawn By	Checked By	Approved By
P03	16.12.19	Issue for PPA4	JW	NH	AS
P02	07.10.19	Issue for PPA3	JW	NH	AS
P01	20.08.19	First Issue	JW	NH	AS

ANDY STURGEON DESIGN

7 Marlborough Place, Brighton BN1 1UB
Tel: 01273 672575 info@andysturgeon.com www.andysturgeon.com

project no.	drawing no.	issue
596	_P_00_100	P03

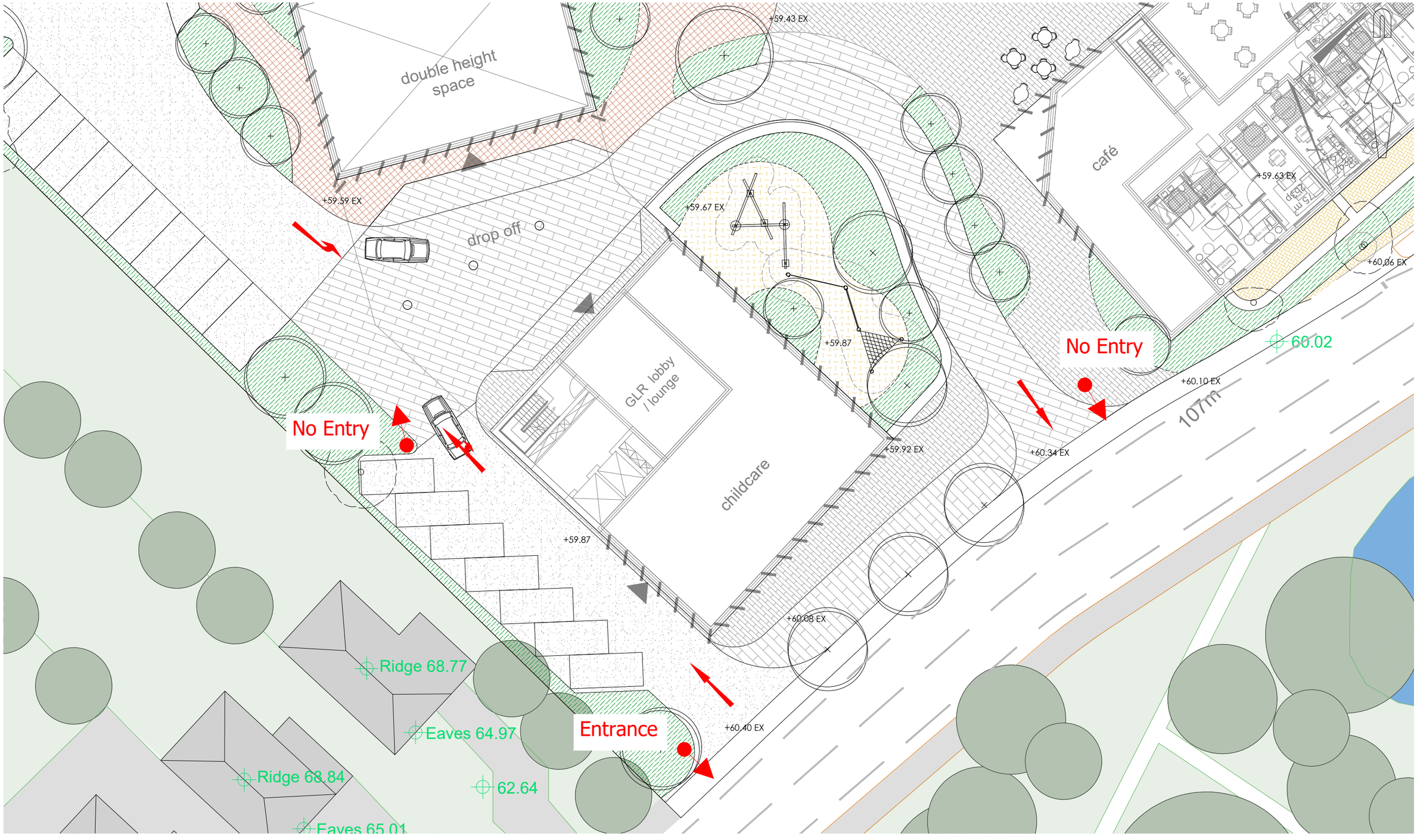
client: Guild Living

project: Epsom
Guild Living

drawing: Ground Floor Masterplan

scale 1:200@A0
1:400@A2

APPENDIX B: Proposed Signage Plan



mayer brown

Mayer Brown Limited
Suite 501 CityPoint Temple Gate Bristol BS1 6PL
Telephone 0117 9251027 Fax 0117 9251029
bristoloffice@mayerbrown.co.uk www.mayerbrown.co.uk

client
GUILD LIVING

project
PROPOSED LATER LIVING DEVELOPMENT
EPSOM GENERAL HOSPITAL

title
DIRECTION SIGNAGE PLAN

scale	drawn by	checked by
1:250 @ A3	RB	RG

date	cad file
APRIL 2020	200416 - 02 - SIGNAGE

drawing number
B/GLEPSOM.1/02

rev.
-

APPENDIX C: Visibility Plan

mayer brown

Mayer Brown Limited
Suite 501 CityPoint Temple Gate Bristol BS1 6PL
Telephone 0117 9251027 Fax 0117 9251029
bristoloffice@mayerbrown.co.uk www.mayerbrown.co.uk

client
GUILD LIVING

project
PROPOSED LATER LIVING DEVELOPMENT
EPSOM GENERAL HOSPITAL

title
JUNCTION VISIBILITY SPLAYS
WOODCOTE GREEN ROAD EGRESS

scale	drawn by	checked by
1:250 @ A3	RB	RG

date	cad file
APRIL 2020	200416 - 01 - VISIBILITY

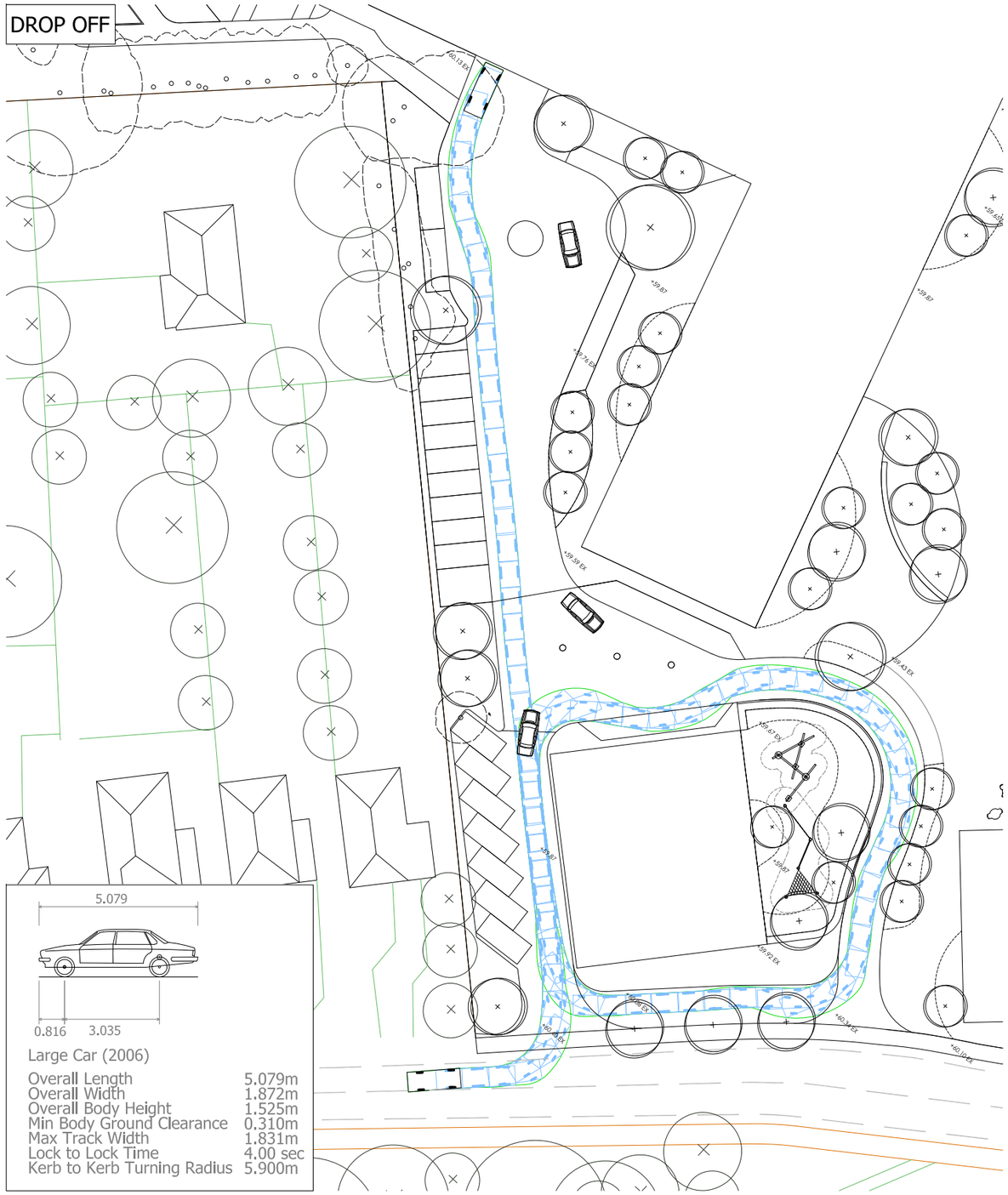
drawing number
B/GLEPSOM.1/01

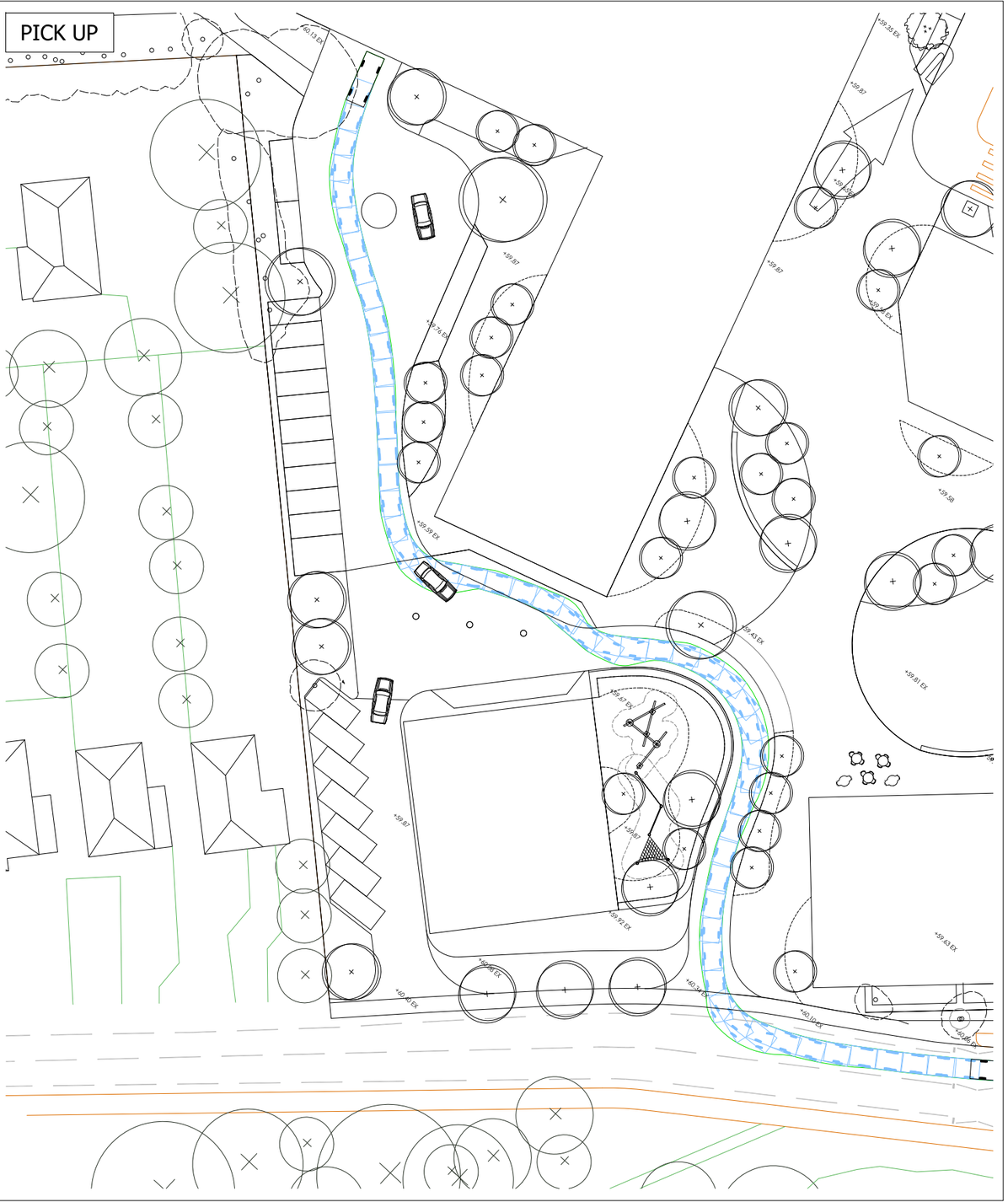
rev.
-

APPENDIX D: Swept Path Analysis

DROP OFF

PICK UP





mayer brown

Mayer Brown Limited
Suite 501 CityPoint Temple Gate Bristol BS1 6PL
Telephone 0117 9251027 Fax 0117 9251029
bristoloffice@mayerbrown.co.uk www.mayerbrown.co.uk

client
GUILD LIVING

project
PROPOSED LATER LIVING DEVELOPMENT
EPSOM GENERAL HOSPITAL

title
SWEPT PATH ANALYSIS
LARGE CAR ACCESSING PICK UP & DROP OFF AREAS

scale	1:500 @ A3	drawn by	RB	checked by	RG
date	NOVEMBER 2019	cad file	191219 - TRACKING		
drawing number	B/GLEPSOM.1/TK01	rev.	C