Pell Frischmann

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Senior Living Urban (Uxbridge) Limited (Guild Living)

Land Off Harefield Road (Units 1 and 2), Uxbridge, UB8 1JS

Transport Assessment Addendum

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Pell Frischmann

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1 Introduction

Overview

1.1 This Transport Assessment has been prepared by Pell Frischmann to accompany an application for full planning permission being submitted by the Applicant, Senior Living Urban (Uxbridge) Limited (Guild Living), to the London Borough of Hillingdon (LBH). The proposal is for a comprehensive redevelopment of the site comprising demolition of existing buildings to provide residential care accommodation (C2), café and nursery (E), car parking, landscaping and associated works.

1.2 LBH act as the local planning and highways authority. The application is referable to the Mayor of London and therefore TfL have been consulted as regional highways authority.

1.3 A Transport Assessment was prepared in support of a full planning application submitted in October 2020 (16299/APP/2020/3313). Following submission of the planning application, the scheme has been altered and reduced in both size and scale.

1.4 In addition to this, the internal access road has been altered to respond to comments from LBH and TfL.

1.5 This Transport Assessment Addendum (TAA) reports on the changes and any implications for the transport strategy.

Report Structure

1.6 Following this introductory chapter, the remainder of this TA is structured as follows:

- **Chapter 2: Development Proposals;**
- **Chapter 3: Multi-Modal Trip Generation;**
- **Chapter 4: Summary and Conclusions.**

2 Development Proposals

Previous Proposals

2.1 The previous proposals include a comprehensive redevelopment of the site comprising demolition of existing buildings to provide residential care accommodation (Use Class C2), nursery (Use Class E) in buildings up to 8 storeys, car parking, landscaping and associated works.

2.2 In total 194 units (66x1 bed units, 123x2 bed units and 5x3 bed) were proposed together with integrated nursing care and associated communal and support services including ancillary communal, care and well-being facilities including a restaurant, cafe/bar and wellness centre/gym and a 319 sqm children's nursery.

Revised Proposals

2.3 As a result of the proposed amendments, the floor areas and unit numbers have been reduced and are presented in **Table 2.1**.

Table 2-1: Schedule of Accommodation

Use Class	Previous Scheme	Revised Scheme	Previous Scheme	Revised Scheme
	GIA (sqm)		Units	
Guild Living Residences (C2) Guild Care Suites (C2) Guild Care Residences (C2)	11,276 654 391	10,717 604 233	161 26 7	153 24 5
Nursery (E)	319	281	-	-
Food and Drink (E)	520	350	-	-
Wellness Centre (D2)	303	259	-	-
Total	**13,513**	**12,444**	**194**	**182**

Source: Marchese & Partners

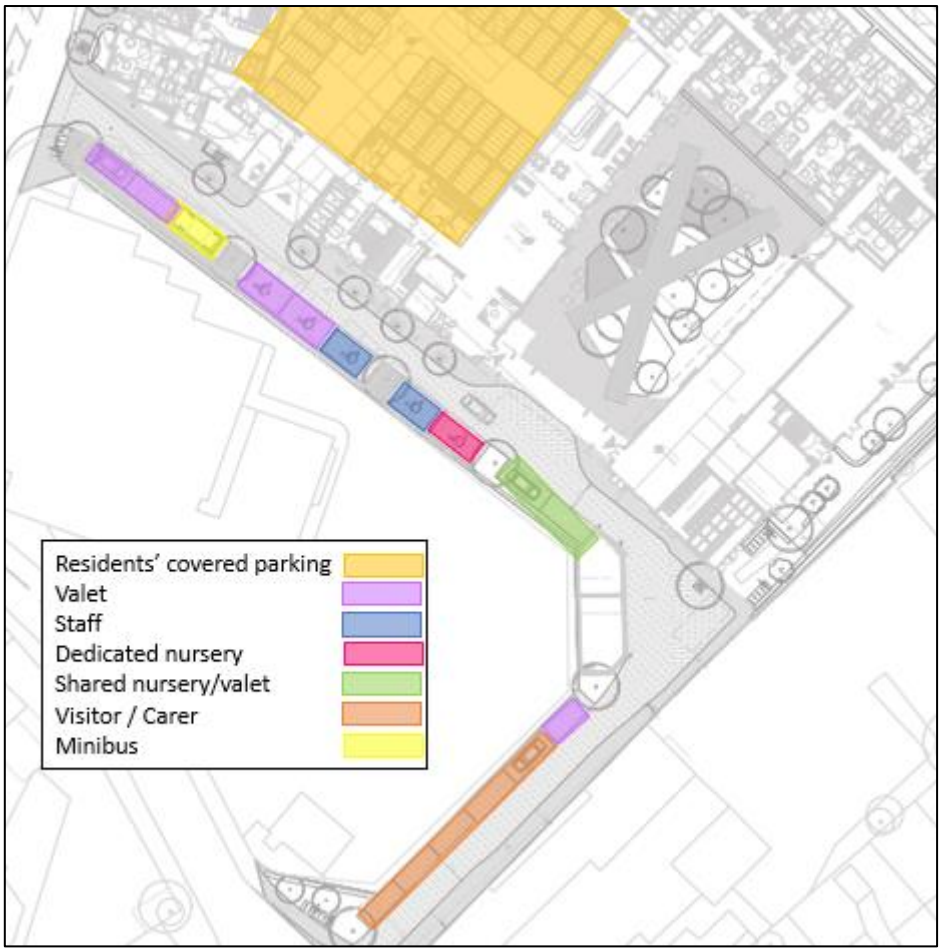
2.4 Overall, there is a reduction in both unit numbers (-12) and floor area (1,019sqm). The reduction in floor area and unit numbers will reduce the density of the scheme and therefore have a positive impact upon transport when compared against the previously submitted scheme.

Car Parking

2.5 The internal car park has reduced in size from 80 spaces (in the original scheme) down to 76 (in the revised scheme), with a car parking ratio of 2.4, which is in line with the previous scheme put forward in October 2020.

2.6 The external car parking located on the access road has been reconfigured to accommodate a minibus bay and to align with comments from LBH. The layout and allocation of car parking spaces is shown in **Figure 2.1** below.

Figure 2.1 Car Parking



Disabled Car Parking

2.7 Following comments from LBH and TfL, further information has been provided in relation to the disabled car parking.

2.8 The undercroft parking provides a height of 4.2m. With each stacker allocated a 2.6m (w) x 5.3m (l) x 4.2m (h) bay. The intention is to provide a system which would accommodate large SUV vehicles as well as a range of wheelchair accessible vehicles. The managed concierge parking arrangement allows for accessible vehicles with a rear boot hoist and if necessary the wheelchair can be removed / placed in the vehicle prior to being put on the stackers as residents would be assisted as required. Further information is enclosed within **Appendix A**.

2.9 Full detail of the stackers (and exact product) will be subject to a planning condition.

Electric Charging

2.10 As noted in the original TA, 20% active and 80% passive electric charging points are to be provided within the car park. In addition, electric vehicle charging points will be provided for the surface level parking at 20% provision (and 80% passive) and this can form part of a planning condition.

Visitor / Carer Car Parking

2.11 The visitor parking bays provided are a mix of regular and oversized bays and not specified for disabled users only, although blue badge holders would be given priority when booking the bays. The five spaces provided is considered a suitable provision to support the development, with options for visitors to park in the town centre.

2.12 Further information regarding the management of the parking is included in **Appendix A**.

2.13 Nurses and carers will be allowed to use the visitor bays and can book ahead to reserve a space. These workers will be prioritised over general visitors to the development. Further information regarding the management of the parking is included in **Appendix A**.

Cycle Parking Provision

2.14 The Transport Assessment assessed cycle parking against the C2 landuse for the London Plan 2021. However, following comments from the TfL, the Specialist Older Housing landuse has been applied to the cycle parking requirement. This shown in **Table 2.2** below.

Table 2-2 Cycle Parking in line with London Plan 2021

Previous Land Use Designation	Long Stay	Short Stay	Total
Specialist Older Housing	18	5	23
D1 Nursery	4	10	14
D2 Wellness Centre	2	3	5
A3 Restaurant/bar	2	9	10
Total	**26**	**27**	**52**

2.15 Overall, the scheme is providing in excess of the long stay cycle parking requirement, with 32 spaces located in a secure cycle store, including a Sheffield stand to provide 5% enlarged spaces.

2.16 A total of 44 short stay cycle spaces (also in excess of the standards) is provided in the form of Sheffield stands located in the landscaped area.

2.17 These amendments have been made to respond from comments from TfL and LBH, and are shown below on **Figure 2.2**.

Figure 2.2 Cycle Parking



Mobility Scooters

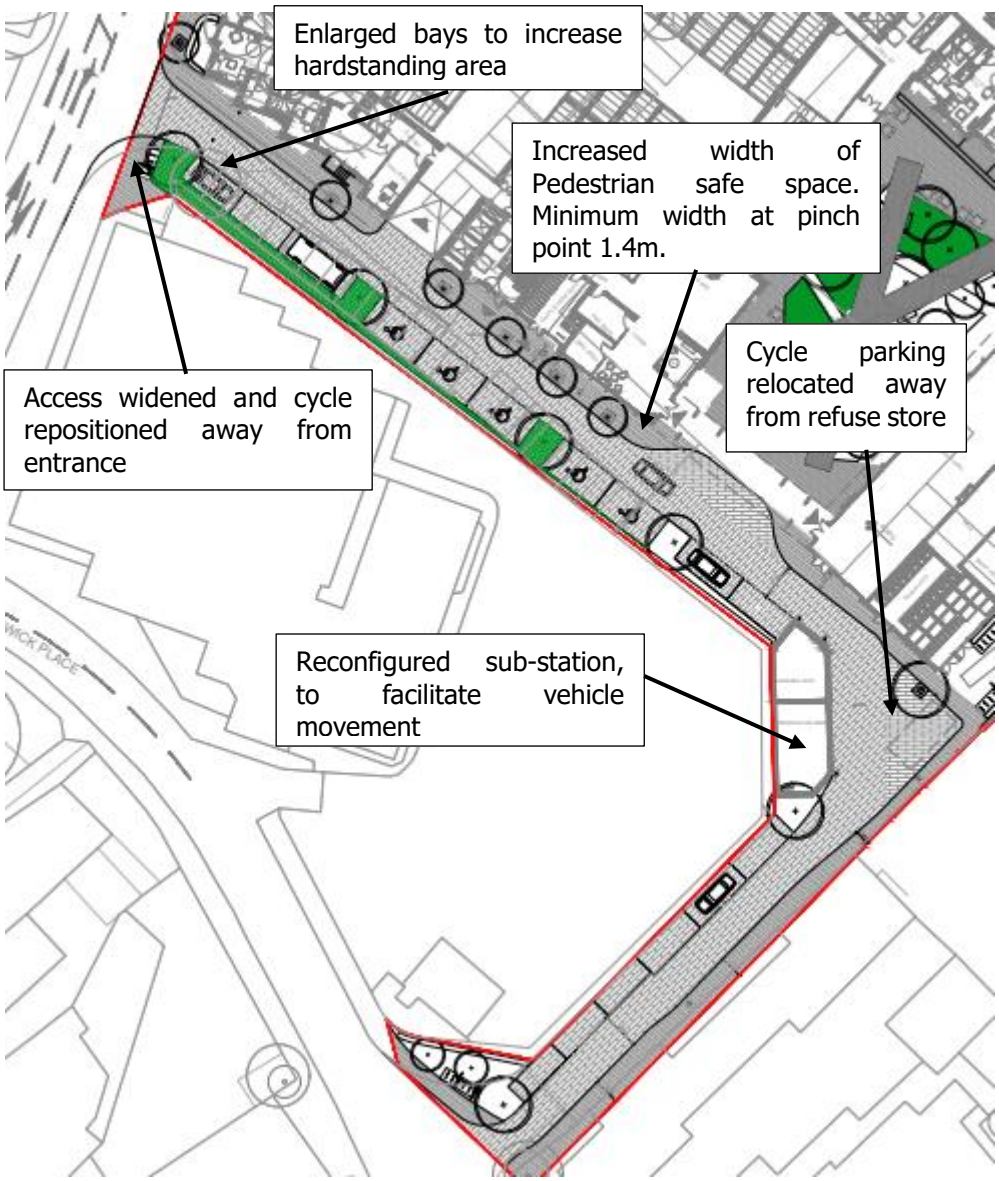
2.18 The number of mobility spaces has been increased to provide 10% provision. These are to assist mobility impaired users and will be instead of motorcycles which are not deemed to be appropriate for the type of users expected at the development. The mobility scooters will have access to charging points and there location is shown in **Figure 2.2**.

2.19 Following comments from LBH, additional mobility scooters have been provided. They have also been relocated to a more accessible location, which can be accessed directly from the outside.

Amended Road Layout

2.20 A number of amendments have been made to the access road, in response to comments received from LBH and TfL. The amendments to the ground floor layout are shown as annotations in **Figure 2.3**.

Figure 2.3 Amended Access Road



2.21 Overall the changes to the road are considered minor alterations, to provide a slightly improved layout. Therefore, the Healthy Streets Designer's Checklist assessment remains as per the original TA.

2.22 Full swept path analysis is included in **Appendix B** demonstrating all vehicle manoeuvres can be achieved.

2.23 It is noted that the gradient of the access road is shallower than 1 in 20 and is therefore DDA compliant.

3 Multi-Modal Trip Generation Assessment

Introduction

3.1 Following the updated proposals, the proposed floor areas associated with the development have decreased. This results in an overall reduction of over 1,053 sqm floor area as well as a reduction in rooms and therefore, the trip generation assessment has been reviewed to reflect the decrease in predicted traffic flows.

3.2 The trip rates remain unchanged from the agreed rates included within the TA that are based on comparable trip rates derived from the industry-standards TRICS trip rate database.

Existing site vehicle trip generation

3.3 The existing trip generation remains as per the trip generation, but has been recreated below for ease of reference.

3.4 At this time, due to COVID-19 it is not possible to undertake reliable surveys and therefore the existing site trip generation has been determined using trip rates derived from TRAVL.

3.5 A review of TRICS (Version 7.7.1) for DIY Superstores did not yield a comparable site or weekday survey. However, TRAVL does include a Retail Warehouse site which has a comparable PTAL and therefore this has been used.

3.6 It is noted that a Vectos TA for the proposed site in 2018 referenced four sites from the TRAVL database: B&Q Sutton on a Saturday and a Friday; Homebase Haringey; and Homebase Redbridge. In the below trip rates and generation table, Pell Frischmann have used only the 429 B&Q Sutton site from the Friday as the Saturday survey is not considered to be appropriate to use. This was agreed with LBH.

3.7 **Table 3-1** includes the trip rates and the trip generation and is based on a floor area of the Wickes and Halfords combined (3,196 sqm).

Table 3-1: Existing site use vehicle trip rates and generation

Time period	Trip rate (per 100 sqm)			Trip generation		
	In	Out	Total	In	Out	Total
08:00 – 09:00	0.0058	0.0033	0.0091	19	10	29
17:00 – 18:00	0.0082	0.0129	0.0210	26	41	67
Daily	**0.1466**	**0.1466**	**0.2933**	**469**	**469**	**937**

Source: TRAVL database with Pell Frischmann calculations
Note: Numbers may not sum due to rounding

Proposed development vehicle trip generation

Later Living trip generation

3.8 The following TRICS site selection criteria have been used to identify survey sites with similar characteristics to the care residences element of the proposed development site, in accordance with best practice:

- 03 – Residential;
- O – Retirement and Care Community;
- Multi-modal surveys;
- Sites in South-East England only;
- Sites of between 36 – 149 dwellings;

- Surveys undertaken since 1st January 2012;
- Edge of Town Centre, Edge of Town and Free-standing only;
- Weekday surveys only

3.9 A total of three survey sites were identified using the aforementioned criteria. The resulting trip rates and trip generation by various modes is set out within this chapter for AM and PM peak hours and daily rates. The full TRICS output is included at **Appendix E** for information.

3.10 The total people trip rates and resulting trip generation that could be expected to be generated by a 182-dwelling later living community, are provided in **Table 3-2**.

Table 3-2: Later living community total people trip rates and trip generation

Time period	Trip rate (per 100 sqm)			Trip generation		
	In	Out	Total	In	Out	Total
08:00 – 09:00	0.231	0.114	0.345	42	21	63
17:00 – 18:00	0.169	0.118	0.287	31	21	52
Daily	**2.49**	**2.482**	**4.972**	453	452	905

Source: TRICS (v7.6.3) and Pell Frischmann calculations
Note: Numbers may not sum due to rounding

3.11 As shown in **Table 3-2,** the proposed development will be expected to generate 63 trips in the AM peak hour, comprising 42 arrivals and 21 departures, and 52 trips in the PM peak hour, comprising 31 arrivals and 21 departures. This is approximately 7% less than the previous TA, which had 965 daily trips across the day.

3.12 The modal split of the trip rates has been calculated from the same TRICS data, resulting in the modal split presented in **Table 3-3**.

Table 3-3: Mode split as a % of total people trips

Mode of travel	Percentage split
Vehicle passengers	15.5%
Total vehicles	69.2%
Cyclists	0.6%
Pedestrians	9.9%
Bus passengers	4.7%
Rail passengers	0.1%
Total people	**100.0%**

Source: TRICS (v7.6.3) and Pell Frischmann calculations
Note: Numbers may not sum due to rounding

3.13 The modal split in **Table 3-3** has been applied consistently to the trip generation in **Table 3-2** and the results are presented in **Table 3-4**, alongside a detailed vehicle trip generation.

Table 3-4: Later living community trips generated per mode

Mode of Travel	Number of Trips								
	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)			Daily		
	In	Out	Total	In	Out	Total	In	Out	Total
People									
Vehicle passengers	7	3	9	5	4	8	70	70	141
Total vehicles	29	14	43	22	15	37	313	312	625
Cyclists	0	0	0	0	0	0	3	3	6
Pedestrians	4	2	7	3	2	6	45	45	89
Bus passengers	2	1	3	2	1	3	22	22	42
Rail passengers	0	0	0	0	0	0	0	0	1
Total people	**42**	**21**	**63**	**31**	**22**	**53**	**453**	**452**	**905**

Source: TRICS (v7.6.3) and Pell Frischmann calculations
Note: Numbers may not sum due to rounding

3.14 As shown in **Table 3-4**, a maximum of 625 vehicle trips per day will be expected to be generated by the later living community element of the proposed development, including 43 trips at the AM peak hour and 37 trips at the PM peak hour. These trips will enter the proposed development via the northern end of the access road, and will exit in forward gear via the southern end.

Nursery trip generation

3.15 The following TRICS site selection criteria have been used to identify survey sites with similar characteristics to the nursery element of the proposed development site, in accordance with best practice:

- 04 – Education;
- D – Nursery;
- Multi-modal surveys;
- Sites in England only;
- Sites of between 500 – 750 sqm;
- Surveys undertaken since 1st January 2012;
- Edge of Town Centre only;
- Weekday surveys only

3.16 A total of two survey sites were identified using the aforementioned criteria. The resulting trip rates and trip generation by various modes is set out within this chapter for AM and PM peak hours and daily rates. The full TRICS output is included at **Appendix E** for information.

3.17 The total people trip rates and resulting trip generation that could be expected to be generated by a 281sqm nursery, are provided in **Table 3.5**.

Table 3-5: Nursery total people trip rates and trip generation

Time period	Trip rate (per 100 sqm)			Trip generation		
	In	Out	Total	In	Out	Total
08:00 – 09:00	6.48	3.04	9.52	18	9	27
17:00 – 18:00	3.2	5.44	8.64	9	15	25
Daily	**20.08**	**20.08**	**40.16**	**57**	**57**	**114**

Source: TRICS (v7.6.3) and Pell Frischmann calculations
Note: Numbers may not sum due to rounding

3.18 As shown in **Table 3-5**, the proposed development will be expected to generate 27 trips in the AM peak hour, comprising 18 arrivals and 9 departures, and 25 trips in the PM peak hour, comprising 9 arrivals and 15 departures. This is approximately 12% lower than the previous TA.

3.19 The modal split of the trip rates has been calculated from the same TRICS data, resulting in the modal split presented in **Table 3-6**.

Table 3-6: Mode split as a % of total people trips

Mode of travel	Percentage split
Vehicle passengers	20.9%
Total vehicles	47.0%
Cyclists	0.8%
Pedestrians	29.7%
Bus passengers	1.6%
Rail passengers	0.0%
Total people	**100.0%**

Source: TRICS (v7.6.3) and Pell Frischmann calculations
Note: Numbers may not sum due to rounding

3.20 The modal split in Table **3-6** has been applied consistently to the trip generation in **Table 3-5** and the results are presented in **Table 3-7**, alongside a detailed vehicle trip generation.

Table 3-7: Nursery trips generated per mode

Mode of Travel	Number of Trips								
	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)			Daily		
	In	Out	Total	In	Out	Total	In	Out	Total
People									
Vehicle passengers	4	2	5	2	4	5	11	11	24
Total vehicles	9	4	12	4	7	11	27	27	53
Cyclists	0	0	0	0	0	0	1	1	1
Pedestrians	5	3	8	3	4	7	17	17	34
Bus passengers	0	0	0	0	0	0	1	1	2
Rail passengers	0	0	0	0	0	0	0	0	0
Total people	**19**	**9**	**27**	**9**	**15**	**25**	**57**	**57**	**114**

Source: TRICS (v7.6.3) and Pell Frischmann calculations
Note: Numbers may not sum due to rounding

3.21 As shown in **Table 3-7**, a maximum of 53 vehicle trips per day will be expected to be generated by the nursery element of the proposed development, including 12 car trips at the AM peak hour and 11 car

trips at the PM peak hour. These trips will enter the proposed development via northern end of the access road, and will exit in forward gear via the southern end.

Combined trip generation

3.22 Numbers from **Table 3-4** and **Table 3-7** have been combined in the below table.

Table 3-8: Combined trips generated per mode

Mode of Travel	Number of Trips								
	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)			Daily		
	In	Out	Total	In	Out	Total	In	Out	Total
People									
Vehicle passengers	10	5	15	6	7	14	82	82	165
Total vehicles	38	18	56	26	22	48	340	339	679
Cyclists	0	0	0	0	0	0	4	4	7
Pedestrians	9	5	15	5	6	13	62	62	123
Bus passengers	2	1	3	2	1	3	22	22	44
Rail passengers	0	0	0	0	0	0	0	0	1
Total people	61	29	89	40	37	77	510	509	1019

Source: TRICS (v7.6.3) and Pell Frischmann calculations
Note: the numbers include rounding

Net site vehicle trip generation

3.23 In **Table 3-9** below, the existing trips in **Table 3-1** were removed from the combined trips in **Table 3-8** to give a net vehicle trip generation for the proposed development.

Table 3-9: Net vehicle trip generation

Mode of Travel	Number of Trips								
	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)			Daily		
	In	Out	Total	In	Out	Total	In	Out	Total
Vehicles									
Total vehicles	19	8	27	0	-19	-19	-129	-130	-259

Source: TRICS (v7.6.3) and TRAVL and Pell Frischmann calculations
Note: the numbers include rounding

3.24 The net trip generation of the proposed development shows that there is forecast to be a small increase in traffic generation in the AM peak, but this is not considered significant enough to warrant highway capacity assessments; and a reduction in trips and vehicles in both the PM peak and across the day as a whole.

3.25 This concludes that the change in floor areas and bedrooms have a positive impact on the outcome of the trip generation compared with the previous analysis.

Sensitivity Test Nursery Pick Up / Drop Off

3.26 The nursery drop-off has been designed so that there is one full time dedicated nursey drop off bay and then during peak times an additional two of the valet bays are given over to the nursey during pick

up and drop off during peak times. It has been calculated that this would provide enough bays for the nursery drop off, with the Port Cochere or Visitor bays being used if demand exceeded 3 bays.

3.27 For comparison, a similar nursery (Monkey Puzzle) with capacity for a 100 children, near to the site has been contacted to understand how they operate with regards to vehicle drop off and this is set out below:

3.28 On an average day they have circa 100 parents dropping off and picking up children from the nursery, with the following mode share:

1. 50% arrive and leave on foot - about half of these then to travel into London using the tube;
2. 20% use public transport; and
3. 30% use a car.

3.29 There are no defined arrival / departure times (unlike schools), although the peak hours generally coincide with the working day of the parents.

3.30 The nursery has identified a maximum of 5 – 8 arriving parents at any one time. If 30% of these arrive by car (as per the mode share), then 2-3 car parking spaces will be required.

3.31 This compares to the proposed development which has three car parking spaces allocated to the nursery during the peak hours. Demand indicated that this will be sufficient, however if there was an unusually high demand for any reason then they could the Porte Cochere. In an exceptional event, where the nursery spaces and the Porte Cochere are full, then the in-house management team can direct parents to a free visitor bay to ensure that the road does not get blocked.

3.32 The strategy proposed provides the ideal scenario whereby parking is limited to a practical level which does not encourage car drivers, whilst also providing a suitable alternative should there be several cars all arriving at the same time. This approach ensures that traffic will never block back onto Harefield Road.

Trip Distribution

3.33 In order to understand the likely impact of the proposed development on local bus and London underground services, the trip generation in **Table 3-8** has been distributed across the public transport network.

3.34 To do this, an assumed 25% split on each compass direction was used to allocate journeys throughout the day. The proposed development contains a residential aspect and workplaces, as well as a nursery, so it is likely that arrival trips and departure trips will occur in approximately equal measures throughout the day.

Bus Services

3.35 The three bus services with the highest frequency and largest range of destinations have been chosen for each compass direction.

3.36

3.37 **Table** 3-10 summarises the potential increase in daily bus passengers by the service in which they have been estimated to choose.

Table 3-10: Daily bus trip distribution

Route	Direction	Number of services per hour	Arrivals (people per service)	Departures (people per service)
North				
105	To Hemel Hempstead	1		1
	To Uxbridge	1	1	
331	Ruislip Station	3		2
	To Uxbridge Station	3	2	
U1	To Ruislip Station	4		3
	From Ruislip Station	4	3	
East				
U4	To Prologis Park, West Drayton	4		2
	To Uxbridge	4	2	
427	King Street, Acton	5		3
	To York Road, Uxbridge	5	3	
U7	To Lombardy Retail Park	2		2
	To Uxbridge Station	2	2	
South				
U3	Wembley Park Station to	3		2
	To Uxbridge	3	2	
U4	To Prologis Park, West Drayton	4		3
	To Uxbridge Station	4	3	
U1	To West Drayton Station	4		3
	From West Drayton Station	4	3	
West				
3	To Slough via Iver Heath	1		1
	To Uxbridge Station	1	1	
101/2	To High Wycombe	1		1
	From High Wycombe	1	1	
580	To High Wycombe	1		-
	To Uxbridge Station	1	-	

Total trips	**22**	**22**

Source: TfL frequency information and Pell Frischmann calculations

3.38 **Table 3-10** indicates that on a weekday likely maximum increase in bus passengers will be 3 in each hour, equating – in the case of the 427 – to less than one on each service.

3.39 Given the outcome of the local bus service assessment and the consideration of the likely impact the proposed development will have on this, it is expected to have a negligible impact on bus operation and capacities within the local area.

London Underground Services

3.40 It was not deemed necessary to distribute the expected rail passengers at the development due to there being only one daily trip according to the trip generation. In reality, this will likely be slightly higher due to this site's proximity to Uxbridge Underground Station, however even a three times increase will only be three trips, and therefore will not cause undue stress on the rail network.

Public Transport Usage Sensitivity Test

3.41 The trip generation assessment within the TA is considered to be robust. There will be a limited number of people using public transport during the peak network hours due in part to the shift times of staff and the older residents avoiding peak commute times.

3.42 However, a sensitivity test has been prepared to determine what the impact on the public transport network would be if the mode share for bus and rail was increased.

3.43 As previously stated, the care home residents are very unlikely to travel on public transport during the peak hours. However, a number a number of the staff will live locally and arrive at the site by public transport. Overall, there is a total of 68 staff members on site, working different shift patterns:

- Nursery staff arrival / departures likely to be before and after traditional peaks to accommodate working parents;
- Restaurant / cafe staff likely to be outside of peak;
- Care Home staff shift working to provide full time coverage;

3.44 It is therefore reasonable to assume that no more than 10% of the staff will arrive by bus in the peak hour and 10% of staff will arrive by rail / underground in the peak hour. This results in an additional 7 users for each mode of transport in the peak hour. Spread across the hour, the impact of these trips are not considered to have any material impact on public transport in the area.

Delivery and Servicing Trips

3.45 The information for this section comes from Guild Living's other later living communities, providing an estimation of the servicing requirements, and the above trip generation sections.

3.46 It is estimated that due to the size of the ancillary uses, their servicing requirements will be so small as to not warrant a full servicing trip generation. Although the tenants for the nursery use class is not known at this stage, delivery trips for each use class have been estimated and the total daily estimated delivery trips are shown below.

Table 3-11: Servicing trips

Servicing trips	Daily Deliveries		
	In	Out	Total
Later living community	28	29	57
Nursery	2	2	4
Total	**32**	**33**	**65**

Note: numbers include rounding

3.47 In total 65 two-way delivery and servicing trips have been estimated for the proposed development. It is anticipated that servicing will mainly be undertaken by small and medium sized vehicles such as 7.5t box vans. However, it is anticipated that larger vehicles such as fire engines and refuse vehicles will also be required on an ad hoc and regular basis respectively.

3.48 It should be noted that as a robust assessment, servicing vehicles account for 9% of all vehicles in the combined trip generation calculations in **Table 3-8**. Servicing trips were not counted in the TRAVL assessment of the existing land use so it has not been possible to compare servicing trip rates directly. However, it can be assumed that the type of vehicle servicing the site will reduce in size as a result of the proposed land use change, from HGVs to mainly box vans and small vans, which will positively contribute to the local area by decreasing the number of HGVs on the local highway network.

4 Summary and Conclusions

Overview

1.7 This Transport Assessment has been prepared by Pell Frischmann to accompany an application for full planning permission being submitted by the Applicant, Senior Living Urban (Uxbridge) Limited (Guild Living), to the London Borough of Hillingdon (LBH). The proposal is for a comprehensive redevelopment of the site comprising demolition of existing buildings to provide residential care accommodation (C2), café and nursery (E), car parking, landscaping and associated works.

1.8 LBH act as the local planning and highways authority. The application is referable to the Mayor of London and therefore TfL have been consulted as regional highways authority.

1.9 A Transport Assessment was prepared in support of a full planning application submitted in October 2020 (16299/APP/2020/3313). Following submission of the planning application, the scheme has been altered and reduced in both size and scale.

1.10 In addition to this, the internal access road has been altered to respond to comments from LBH and TfL.

Development Proposals

4.1 Overall, there is a reduction in both unit numbers (-12) and floor area (1,019sqm). The reduction in floor area and unit numbers will overall reduce the density of the scheme and therefore have a positive impact upon transport when compared against the previously submitted scheme.

4.2 The internal number of parking spaces has been revised down from 80 to 76 and the road layout has been amended to take into account comments from LBH and TfL.

Multi-Modal Trip Generation

4.3 A multi-modal trip generation assessment has been undertaken to provide proposed trips generated by the proposed land uses. TRAVL and TRICS databases were consulted to provide the most representative trip generation possible for each land use.

4.4 All of the multi-modal trip generation assessments undertaken in this chapter have indicated that the proposed development is unlikely to generate significant parking pressures due to the residents' parking zones surrounding the site and the amount of on-site parking provided. It is anticipated that much of the proposed development's trip generation will be made by sustainable modes.

4.5 In addition, the net trip generation shows a reduction in vehicle and active travel trips, and therefore the proposed development is not anticipated to have a detrimental impact on the local highway network in terms of congestion or road safety.

4.6 Furthermore, a public transport distribution assessment has been conducted for the AM and PM peak periods. This exemplifies that the proposed development will have a minimal impact on local bus and underground services, with residents and visitors being distributed in small numbers across the network.

Conclusions

4.7 This TAA and previous TA has demonstrated that the proposed development at the site will not have a significant impact on the operation on the surrounding roads.

4.8 The reduction in the scale of development will have a slight beneficial effect on the number of trips generated across the day and will result in the proposals exceeding the minimum cycle parking requirements.

4.9 Amendments have been made to the internal access road to improve the pedestrian environment and provide a wider safe space for pedestrians (minimum width 1.4m at pinch points).

Appendix A Car Park Management Principles

AVISON YOUNG

Harefield Road

Parking Principles

1. Introduction

1.1 This note sets out the key parking principles in relation to planning application ref. 16299/APP/2020/3313, relating to the comprehensive redevelopment of the site at Harefield Road.

1.2 The purpose of the note is to provide a non-technical summary of the parking strategy for the proposed development and how this will be operated as part of a comprehensive managed solution. It is intended to underpin the principles for a car parking management plan to be secured by planning condition.

2. Resident Parking (Under croft)

- Whilst alternative modes of transport can be relied upon to some degree for this demographic, the proposed approach to car parking for residents is required due to the specific end user in order to continue to provide independent living.
- Parking will be managed by a concierge service that will be provided as part of the proposed development and will be available 24/7.
- The concierge service will be dedicated to meeting and greeting residents both when they wish to collect and return their cars. The concierge service will include a front of house presence with a fixed member of staff present at all times.
- When a car is requested or returned via the front of house staff, they will contact the relevant member of staff that will be responsible for both delivering and returning cars to and from the stacking system to the relevant (five) external valet bays.
- It is anticipated that all staff will be trained to use the stacker system to ensure that sufficient cover is provided. However, as part of a car park management plan, Guild will monitor and adjust the number of staff required to be available to ensure appropriate staffing during peak hours. This is critical to ensuring an appropriate level of service is provided to future residents.
- The concierge will have internal access to the car park which will be secured to restrict access. Residents will not be allowed to enter the car park and access will be restricted internally through staff access within the building and by a gate to the parking area. This will also prevent members of the public from being able to enter the car park. This has been discussed and agreed with the secured by design Met Police officer.

- Residents will have the option of requesting their car at the concierge desk or to phone down to the concierge from their room to arrange for their car to be brought out.
- When waiting for their car to be provided, residents will have the option of waiting in the various shared spaces provided at ground floor level. The nearest member of staff can be radioed to inform the resident that their car is ready.
- Upon return, residents will leave their cars in the relevant five external valet bays (seven when including the shared nursery/valet accessible bays) and provide their keys at the concierge desk. The concierge will then arrange for the car to be collected and parked by a member of staff.
- Should residents wish to return to their residence briefly (to collect a forgotten item for example) they will have the option of leaving their cars in the valet bays rather than having the car re-parked in the under croft. Residents will be able to arrange this with the front of house service as part of the proposed fully managed solution.
- Due to the temporary and quick turnaround nature of the valet bays, in the unlikely event an additional space is required beyond the five valet bays, a member of staff will be able to co-ordinate with the use of any unoccupied external bays or the additional drop-off space at the porte cochere.
- A total of 76 resident parking spaces are provided in the form of under croft parking utilising parking stackers.
- The parking stackers can accommodate large SUV vehicles as well as a range of wheelchair accessible vehicles.
    - The undercroft parking provides a height of 4.2m. With each stacker allocated a 2.6m (w) x 5.3m (l) x 4.2m (h) bay. The intention is to provide a system which would accommodate large SUV vehicles as well as a range of wheelchair accessible vehicles. The managed concierge parking arrangement allows for accessible vehicles with a rear boot hoist and if necessary, the wheelchair can be removed / placed in the vehicle prior to being put on the stackers as residents would be assisted as required. Further information is included at **Appendix I**.
- As part of the car park management plan, Guild will monitor the frequency of use to ensure that more frequent users' cars are located within easy access (i.e. at the bottom of a stacker), with infrequent users located in the upper stacker spaces.
- Where the car park is not at capacity, the fully managed solution also allows for the following (in co-ordination with the principles discussed below):
    - Where a resident has access to a space, but their vehicle is not present (i.e. a couple where one resident may have taken the car out and another is present at home with a visitor) a booking could be made for the visitor to use their space.
    - Where the total number of resident vehicles is less than 76 (i.e. there are permanent free spaces), these could be used flexibly for visitors, care visitors etc. as managed through the booking system.

3. All Other Parking

- The approach to visitors is to encourage alternative modes of transport given the town centre location and high PTAL, with the level of parking limited to those who require it for accessibility reasons.
- The following parking provision is provided as part of the proposed development along the access road:
  - 5x residential valet bays (including 2accessible bays);
  - 5x visitor bays (all oversized bays)
  - 2x staff parking (shared between all proposed uses);
  - 1x minibus space;
  - 1x dedicated nursery space (accessible bay)
  - 2x shared nursery/valet accessible spaces;
  - Up to 2x drop off/pick up bay (port cochere); and
  - 1x delivery and servicing space.
- The access road is a private road and therefore can be appropriately managed/enforced.
- The proposed levels of parking for this development are underpinned by the evidence base set out within the Transport Assessment and is based upon comparable developments. This ensures that the number of spaces is adequate for the proposed uses.
- Notwithstanding this, should there ever be an occasion whereby the relevant spaces for one use are all occupied the concierge will have the option as part of the managed system to direct users to alternative bays where there is capacity.
- All parking will be controlled as part of a managed solution, through a car parking management plan, where flexibility will be provided as required.
- There are five visitor bays located in the access road, all of which are oversized to facilitate mobility impairments. In addition, as identified where a resident has access to a space but is not using it, they will have the option of using it for personal visitors.
- Visiting carers can utilise the excellent public transport options. Notwithstanding this, where a carer cannot utilise public transport, the scheme provides flexibility to utilise one of the five dedicated visitor spaces provided by co-ordinating with the management. As noted above, there will also be scope for additional visitor spaces should the parking take up be limited which will be controlled as part of the wider managed solution. All visitor bays will need to be booked in advance with management.
- The majority of nursery users will come by foot or utilise the excellent local public transport services which will be an attraction of the location. In addition, the nursery has been provided with one dedicated space and access to two further flexible spaces. These are expected to accommodate the peak number of trips associated with the nursery as set out in the Transport Assessment.

- The proposed nursery and older persons' uses are complementary in this regard as the expected peak hours differ, with older residents generally favouring trips outside of traditional peak hours when parents may be dropping off children at the nursery.
- Notwithstanding this, as part of the managed solution should further need arise at any point the concierge will be able to offer alternative parking where there is availability. The on-site 24/7 management on this private road will ensure co-ordination of this.
- A minibus service will be offered as part of the range of services available to residents. Guild Living as the operator will manage a mini-bus service to provide for organised trips/days out beyond the town centre. These will be scheduled by the management and will form part of the integrated package available to all future residents at no additional cost. A dedicated parking space has been provided on-site which can accommodate the mini-bus. The concierge service and pick-up/drop-off area at the porte cochere will ensure easy of access for all residents who wish to use this service.
- To assist, the following potential scenarios have been prepared which are included at **Appendix II** to diagrammatically demonstrate how the managed solution will work to provide a flexible approach for different future users:
    - Nursery pick up/ drop off: Parent arrives at site and parks in one of the three bays set aside for the nursery during peak times -> drops / picks ups child. In the event that the bays are full, then the parent will be directed by the concierge into an available visitor parking bay.
    - Resident waiting to collect their car: Resident telephones down to the concierge and organises time to collect car-> Resident can wait in their room for the car to be collected or in one of the shared areas at ground floor level -> Valet retrieves car and has it waiting for the resident in a valet bay-> resident gets in car and drives off.
    - Resident returning their car: Resident drops car at valet bay -> keys handed into concierge -> concierge moves car into car park.
    - Visitor/ Carer parking: Visitor/ carer car parking booked in advance -> Visitor arrives and is directed to allocated car parking space. Long stay or regular visitors may be provided space in the internal car park depending on availability.

Appendix I: Details of Car Stackers

1.1 Parking Stacker Space Allowance

The diagrams illustrate the zone which has been provided for each of the proposed two tier parking stackers.

The 4.2m clear height which has been is in excess of the typical requirements for parking stackers for large vehicles such as People Carriers and SUVs.

The following page provides one example of a two-tiered parking stacker which fits within the alloted space. Please note that the applicant has not yet committed to using this specific manufacturer.

The purpose of this document is to demonstrate that sufficient space has been provided to accommodate one of the many products available on the market, to achieve the number of parking spaces proposed.

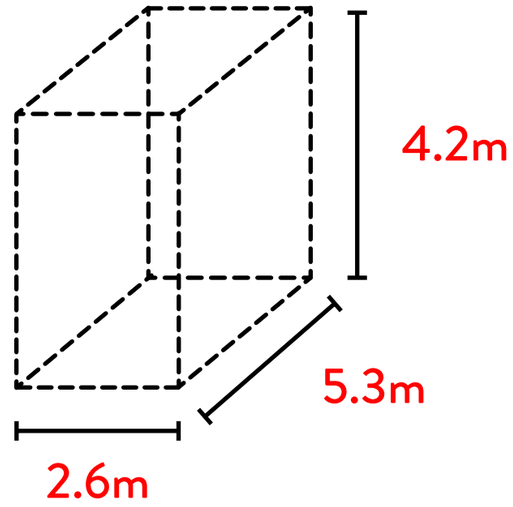
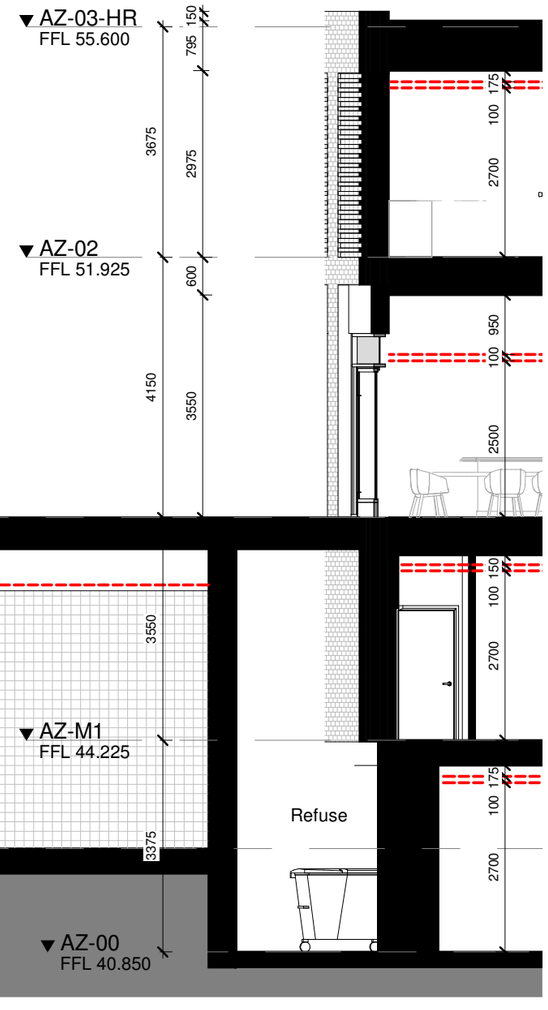


Diagram showing zone allowed for each individual parking stacker.



Plan showing space for parking stackers provided as per planning submission drawings



Section through podium showing clear height provided for parking stacker.

1.2 Product Example - Klaus Single Vario 2061-210

See below specification for Klaus Single Vario 2061 two tier parking system. Note the system is capable of accommodating vehicles of up to 2m in height.

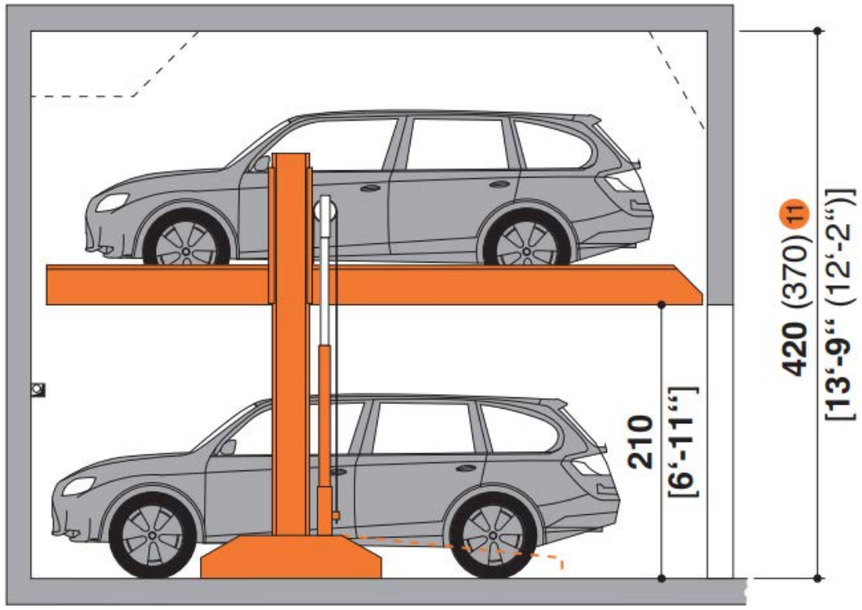
Klaus Single Vario 2061 Specification

The SingleVario 2061 is a simple and cost-effective way of creating two parking spaces from one. Since the system is built without a pit, it can well be used for the modernization of existing houses or or office premises. The great benefit of the SingleVario 2061 is its high flexibility. It can be adjusted individually to existing spatial situations and different heights of vehicles. The lower parking space must always be empty in order for the platform to be lowered. The system is the ideal solution, if, for example, the upper platform is used for long-time parking and the lower parking space for short-time parking.

- Single platforms (EB) for 2 vehicles
- Total height of standard type: 330 cm
- Pit depth: Not required
- Vehicle measurement: Heights 150 to **200 cm**, lengths 500 to 520 cm
- Distance between platforms: Flexibly adjustable, even retroactively
- Usable platform width for standard type: 230 cm, optionally up to max. 270 cm
- Standard design: 2.000 kg per parking space, optional max. 2.600 kg EB
- Horizontal access to parking levels
- Retroactive installation possible depending on local conditions
- Platform surface: StandardGrip, optional AluLongLife or EasyWalk
- dependent parking



Diagram showing dimensions of large accessible vehicle.



Height	Car height upper level	Car height lower level
420 [13‘-9“]	**200 [6‘-7“]**	**200 [6‘-7“]**
(370) [12‘-2“]	150 [4‘-11“]	200 [6‘-7“]





Appendix II: Parking Scenarios

Nursery Pick Up / Drop Off

Parent arrives at site and parks in one of the three bays set aside for the nursery during peak times to drops / picks ups child. In the event that the bays are full, then the parent will be directed by the concierge into an available visitor parking bay.

Nursery Pick Up / Drop off Spaces

Concierge

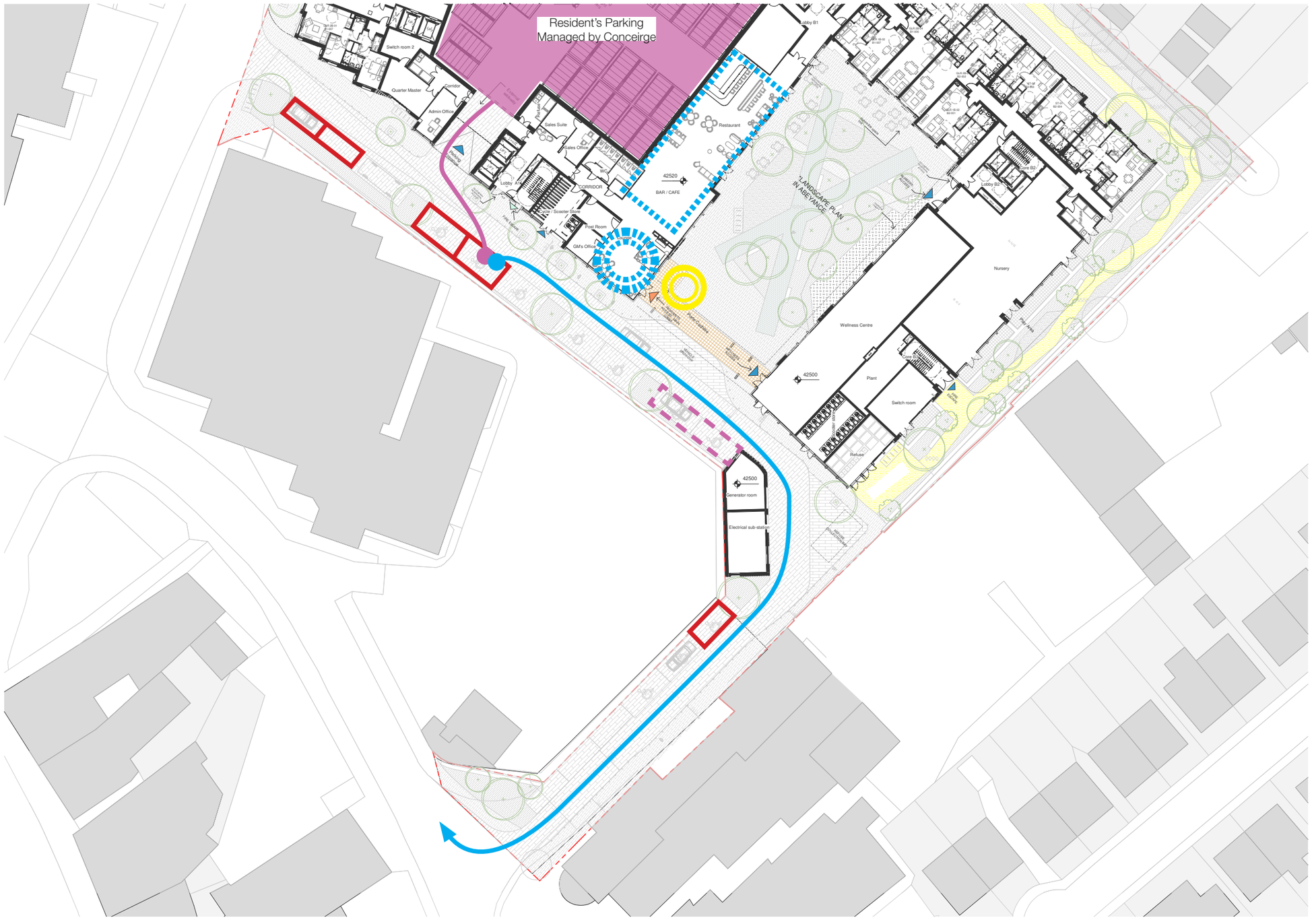
Vistor parking bays



Resident Collecting Their Car

Resident telephones down to the concierge and organises time to collect car. Resident can wait in their room for the car to be collected or in one of the shared areas at ground floor level. Valet retrieves car and has it waiting for the resident in a valet bay. Resident gets in car and drives off .

- Concierge
- Dedicated Resident lobby/ waiting area
- Lounge/Bar serves as alternative waiting area
- Concierge drives car to pick up point
- Resident leaves in vehicle
- Vallet Parking Bays
- Flexible Nursery / Valet Bay



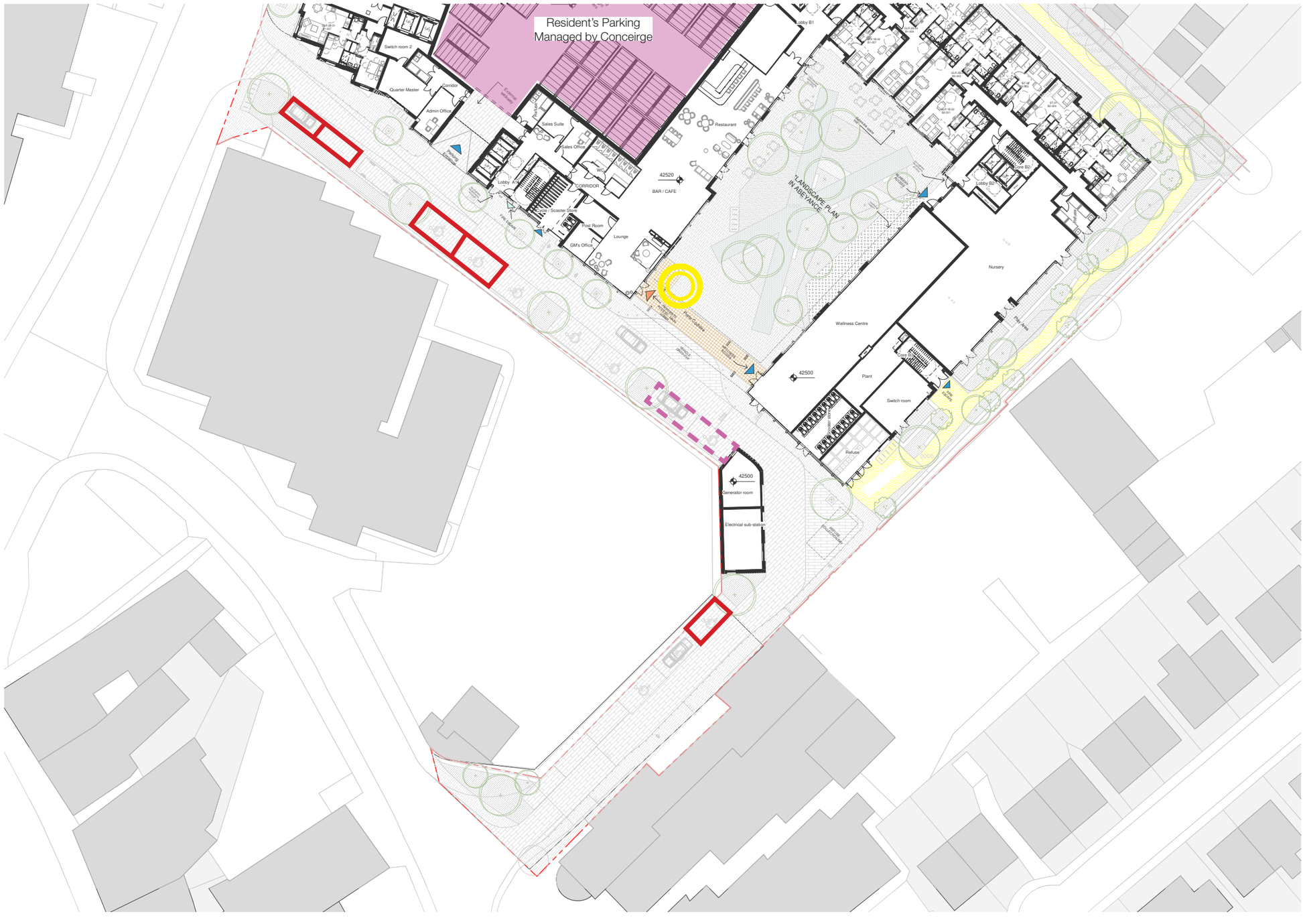
Resident Returning Their Car

Resident drops car in one of 5 valet bays and hands the keys to the concierge. The resident makes their way to their residence and the concierge drives the vehicle to the car park.

Concierge

Vallet Parking Bays

Flexible Nursery / Valet Bay

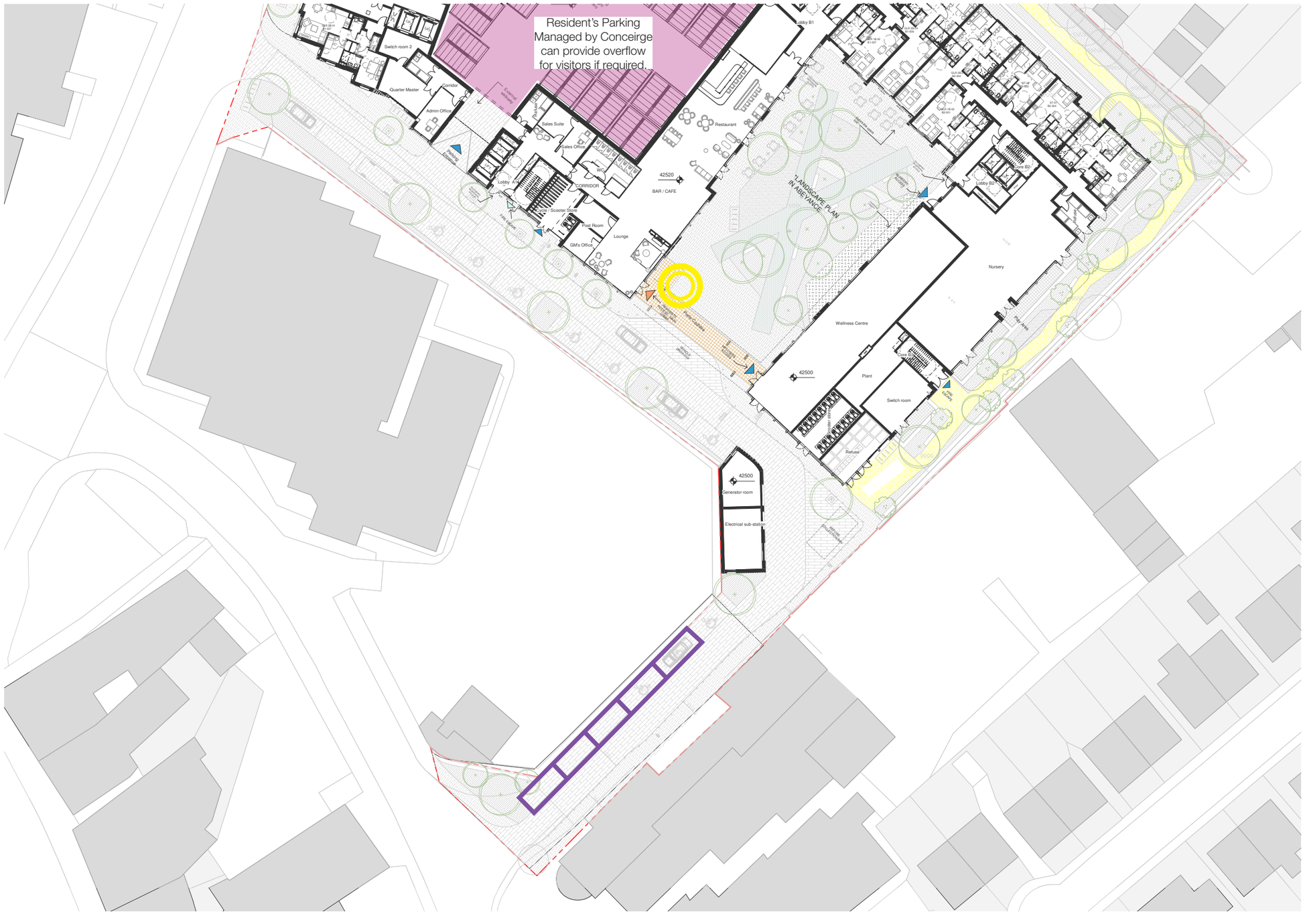


Visitor / Carer Parking

Visitor car parking booked in advance. Visitor arrives and is directed to allocated car parking space.
Long stay or regular visitors may be provided space in the internal car park depending on availability.

Concierge

Valet Parking Bays



Appendix B – Swept Path Analysis



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

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Project

Guild Living Uxbridge

Drawing Title

Swept Path Analysis - External Parking Spaces
Estate Car

	Name	Date
Drawn	AGA	03/03/2021
Designed	AGA	03/03/2021
Checked	DW	03/03/2021
Approved	VB	03/03/2021

Scale: 1: 500 @ A3

File No.: 104182-T-036-RevE.dwg

Drawing Status: DRAFT

Drawing No.: 104182-T-036

Revision: E



Mini Bus

Overall Length	6.330m
Overall Width	2.192m
Overall Body Height	2.601m
Min Body Ground Clearance	0.374m
Track Width	2.192m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.450m

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Project

Guild Living Uxbridge

Drawing Title

Swept Path Analysis - External Parking Spaces
Mini Bus

	Name	Date
Drawn	AGA	04/03/2021
Designed	AGA	04/03/2021
Checked	DW	04/03/2021
Approved	VB	04/03/2021

Scale: 1: 500 @ A3

File No.: 104182-T-037-040-RevE.dwg

Drawing Status: DRAFT

Drawing No.: 104182-T-037

Revision: D



Hillingdon Refuse Vehicle	
Overall Length	10.500m
Overall Width	2.530m
Overall Body Height	3.211m
Min Body Ground Clearance	0.416m
Track Width	2.530m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	12.000m

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Project: Guild Living Uxbridge

Drawing Title: Swept Path Analysis
Refuse Vehicle

	Name	Date
Drawn	AGA	04/03/2021
Designed	AGA	04/03/2021
Checked	DW	04/03/2021
Approved	VB	04/03/2021

Scale: 1: 500 @ A3

File No.: 104182-T-037-040-RevE.dwg

Drawing Status: DRAFT

Drawing No.: 104182-T-038

Revision: F