
TECHNICAL NOTE

Project Title: Land South of Grevatts Lane/ A259

Report Reference: JNY10830-07

Date: 20th May 2022

APPLICATION REF: M/16/22/PL – WSCC HIGHWAY AUTHORITY COMMENTS

Introduction

- 1.1 This Technical Note (TN) has been prepared on behalf of Hallam Land Management (HLM) to address the comments provided by the Local Highway Authority, West Sussex County Council (WSCC) dated 11th March 2022 in respect of the Transport Assessment and Travel Plan submitted in support of the above planning application.
- 1.2 The comments provided by WSCC are identified in *blue italics* and the response provided by RPS is provided in black text.
- 1.3 The Appendices included with this Technical Note include the following;
 - 1 – Proposed Access Layout
 - 2 – Updated RSA & Designers Response
 - 3 – TRICS Data
 - 4 – Parking Accumulation
 - 5 – Internal Swept Path Analysis
 - 6 – Amended Parking Layout sketch

Site location and access arrangements

- 1.4 *Although reference is made to the design of the turning lane and access being compliant with Design Manual for Roads and Bridges (DMRB), no formal design check appears to have been submitted. As such, the applicant should provide one for the CHA to consider, including identification of any Departures from Standard (DFS). Additionally, a revised plan should be submitted with dimensions added including kerb-to-kerb widths of running lanes either-side of the proposed refuge island. Lighting may need to be considered for the junction arrangements*
- 1.5 The drawing included in Appendix A of the TA includes details of the road widths, radii etc., the DMRB standards for a ghost island right turn lane are provided in CD123 Geometric Design of at-grade priority and signal controlled junctions.

1. The provision of a ghost island right turn lane is required where the 2-way AADT flow is greater than 300 on the minor road or greater than 13,000 on the Major Road. The busiest period for the golf course will be on a weekend and from TRICS, it is predicted that for a 27 Hole Course there are likely to be around 500 two-way movements on a Saturday. Over a whole week the average 24hr AADT flow will be 494 Therefore a ghost island right turn lane is required.

2. The design parameters for the ghost island are as follows;

- Table 6.1.1 – Design Speed = 100Kph Taper for central islands = 1:30,
- The geometry guidance is based on Figure 6.3a as illustrated below

Figure 6.3a Major / minor priority junction with a ghost Island on single carriageway

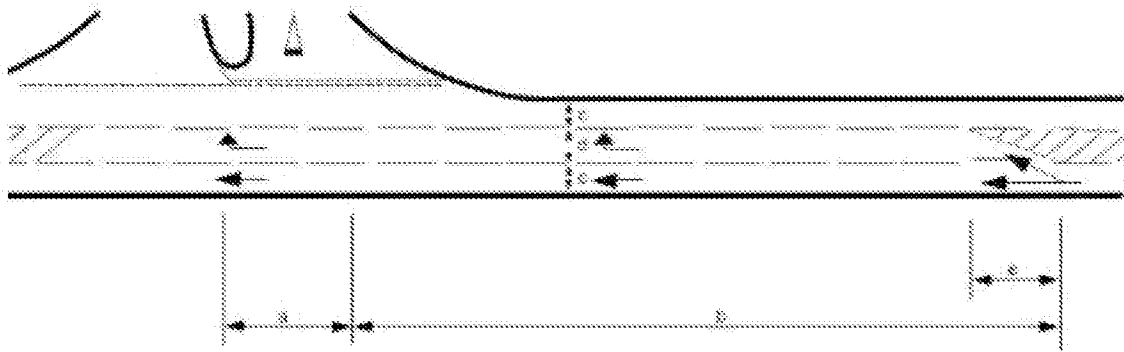


Table 1 – CD123 Geometric Design Guide for Ghost Island right turn lanes

Ref:	Design Requirement	Access Design (Drawing No. JNY10830/09F)
a	the turning length (plus the queueing length if required) Minimum turning length	(Para 6.4) = Minimum 10m Total Turning length provided = 11m
b	Deceleration length	Table 5.22 : 100Kph 0-4% = 80m Deceleration Length = 80m
c	Through lane width	(Para 6.8) Minimum of 3.0m and a maximum of 3.65m Through Lane width = 3.5m in both directions
d	Turning lane width	(Para 6.10) Minimum turning lanes 3.5m or 3.0m for new junctions or 2.5m for improvements to existing junctions. Turning Lane width = 3.5m
e	Direct Taper Length	Table 5.22 : 100kph = 25m Direct Taper = 25m
	Taper for Central Island	1:30 = 52.5m Taper = 57m

- 1.6 The width of the right turn lane has been increased to 3.5m following feedback from WSCC Technical Team and the width between kerbs at the traffic island/pedestrian refuge is 4m.
- 1.7 The proposed pedestrian refuge is 3.5m in depth to allow for both pedestrians and cyclists, Table E/4.7 in CD 143 advises that the desirable minimum depth for shared use is 3.0m.
- 1.8 CD143 also advises in Para E/4.6 '*Refuge Island shall not be provided where the speed limit is greater than 40mph except where the refuge island is incorporated into a single lane dualling design.*' The proposed refuge islands are therefore a departure from Standard and the DoS form has been completed for this and included in **Appendix 1**.
- 1.9 The above dimensions are shown on drawing No. JNY10830/09F included in **Appendix 1**.
- 1.10 It is acknowledged that lighting may be required although this can be a condition of planning if considered necessary. Lighting is presently shown for the proposed traffic islands.
- 1.11 Following further discussions with WSCC, a review of the existing accesses serving the adjacent fields was requested to ensure the proposals did not affect the ability for farm vehicles to manoeuvre into and out of the fields. The review shows that there is one field access close to the proposals, this is situated some 220m west of the proposed access arrangement and is shown on Drawing No. JNY10830/18A. The proposals will actually improve the ability for farm vehicles to turn in as the road will be widened in this location together with centre line hatching to join the access serving the proposed access arrangement that will serve the new Crematorium.
- 1.12 *Walking – A shared foot and cycle path is present on the northern-side of the A259 opposite the site. This forms part of the South Coast Cycle Route 02 and provides for an off-road route between both Bognor Regis and Littlehampton, extending further to Chichester. The applicant proposes a refuge island within the right-hand turning lane shown serving the site which would assist with movement of both pedestrians and cyclists in and out of the site and to-and-from the aforementioned cycle and walking route. On the south-side of the road, a new section of shared foot and cycle way is proposed that leads a short way into the site. This should be extended into the site to marry-up with access to the proposed driving range, main clubhouse and associated cycle parking areas, and thereby, segregated from the vehicular access into the site.*
- 1.13 The proposal includes a shared footway cycleway into the site access for a distance of 15m, thereafter cyclists are provided with a dropped kerb to enable them to cycle on road.
- 1.14 Within the Department of Transport's recent LTN1/20 publication, Section 7.1 'Quite mixed traffic streets and lanes' advises in para 7.1.1 '*Where motor traffic flows are light and speeds are low, cyclists are likely to be able to cycle on-carriageway in mixed traffic, as shown in Figure 4.1. Most people, especially with younger children, will not feel comfortable on-carriageways with more than 2,500 vehicles per day and speeds of more than 20mph.*' The proposed access leading into the site will be restricted to a 20mph speed limit and as the daily traffic movements will be considerably less than 2,500 it is considered that on road cycling into the site will be acceptable. The distance from the point where cyclist travel on road to the clubhouse is only 150m so will take cyclists less than 1min to travel.

- 1.15 Following further discussions with WSCC, the cycle route has been extended slightly further into the site together with a looped arrangement to ensure cyclists leave the footway facing the road to allow cyclists to clearly see approaching traffic in both directions.
- 1.16 *Additionally, a Public Right of Way (PRoW) (Public Footpath) runs N-S along the western boundary of the site. Comments about this will be made separately by the WSCC PRoW officer.*
- 1.17 WSCC PRoW officer provided comments on 23rd March 2022 which have been responded to as a separate Technical Note.

Travel Plan

- 1.18 *A DRAFT Travel Plan has been submitted alongside the planning application. Following review, the CHA has the following comments to make:*
- *1. Commitment to Standard Assessment Methodology (SAM) surveys should be included.*
 - *2. Under measures, additional information should be included to further promote sustainable access to and from the site -- for staff and customers.*
 - *3. The trip rate reduction target should be clearly stated.*
 - *4. The applicant should include commitment to all the Travel Plan measures set-out in the CHA's pre-application response dated 23 September 2021.*
 - *The Travel Plan and associated Monitoring Fee of £3,500 will need to be secured by S106 Agreement.*
- 1.19 The Travel Plan has been amended to advise that SAM surveys will be undertaken and additional information is included to assist in the promotion of non-car use to staff. The Travel Plan does include Trip Rate targets in Table 6.1, the revised TP has been submitted as a separate document to this TN. Noted re the Monitoring fee

Road safety considerations

- 1.20 *A Stage 1 Road Safety Audit (RSA) has been undertaken for the proposed access works. This makes nine recommendations, a summary of which is provided below:*
- *1. Right-hand turning lane -- Risk of overtaking manoeuvres*
 - *2. Scheme extents -- Risk of open drainage ditch to errant road user*
 - *3. Proposed refuge island -- Risk of refuge not being large enough to cater for users, thereby leading to risk of vehicle/cycle collisions*
 - *4. Development access road -- Risk of pedestrians/cyclists falling into drainage ditch*
 - *5. Proposed refuge island -- Lack of pedestrian/cyclist provision may result in pedestrian/cyclist to vehicle collisions*
 - *6. Footway tie-in to shared facility -- Lack of signage and corduroy paving could result risk of cyclist to pedestrian type collisions*
 - *7. Development access junction -- Lack of guidance for cyclists to gain access to the off-road facility may increase the risk of cyclist to vehicle type collisions*

- 8. Proposed ghost island turning lane – Lack of deflection 'kicker' arrows may increase the risk of vehicle to street furniture and/or pedestrian type collisions
 - 9. Proposed refuge island – Lack of signage/lighting may increase the risk of vehicles mounting the refuge island and colliding with non-motorised users
- 1.21 The Design Organisation (consultant working on behalf of the applicants) has replied to each point and that document with CHA responses will follow separately to this response
- 1.22 The above points are Noted. From subsequent discussions with WSCC, the RSA for the access has been updated and a copy of the updated RSA and Designers response is provided in **Appendix 2**.
- 1.1 The proposed arrangement takes on board the comments raised by the Road Safety Auditor as well as including the extent of works proposed as part of the Crematorium access proposals to the west of the site. The layout including the Crematorium access is included in **Appendix 1**.

Traffic impact

- 1.2 Based on the TRICS vehicle trip rates, the applicant suggests that a typical free-standing private golf course is likely to generate around 19 and 30 two-way trips in the AM and PM Peak hours respectively. The AM Peak is less than that surveyed at the existing golf course but comparable in the PM Peak. They consider that use of the existing trips is appropriate for the new site. However, it is not clear how 27 holes have been used to inform the resultant data – applicant to confirm, please.
- 1.3 The TRICS calculation factor was 18 holes. To establish the trips for 27 holes, the Trip rate was divided by 18 and then multiplied by 27.
- 1.4 As a comparison, further review of the TRICS database provides trip rates based on per hole for sites with more than 18 holes, the results are provided in the table below and a copy of the TRICS data is included in **Appendix 3**.

Table 2 – TRICS Data from sites with more than 18 holes – (27 Holes Proposed)

	Arrivals		Departures		Two-Way	
	Trip Rate (per hole)	No. Trips	Trip Rate (per hole)	No. Trips	Trip Rate (per hole)	No. Trips
Weekday AM Peak (08:00-09:00)	0.626	17	0.130	3	0.756	20
Weekday PM Peak (17:00-18:00)	0.431	12	0.569	15	1.000	27
Daily Movements (18hr 06:00 – 00:00)	6.157	166	6.183	166	12.340	333

- 1.5 The above shows similar results to that provided in the TA and the conclusion to use the original Trips associated with the existing site is considered acceptable.
- 1.6 The CHA also requires that the applicant provides further information about other uses of the club (e.g. parties, functions etc.) and also whether the club's membership is proposed to increase following redevelopment of the site. Additionally, trips to the new proposed driving range and nine-hole course would also generate further activity and it is not clear whether these have been accounted for in the traffic figures and when such trips would likely occur.

- 1.7 The club current operates private functions/ parties in the clubhouse and this is expected to be no different with the new golf course although the regularity of these functions may increase. The site currently has on average 2 functions a month which predominantly occur on Friday/ Saturday nights. It is anticipated that with the new club the frequency of these functions will increase to at most 1 per week, although still only in the evenings and likely to be mostly on Friday and Saturday's.
- 1.8 *What would assist here is a table showing a comparison between the existing site and the proposed site, including number of members (including maximum number of users that at any one time), number of functions (and what types), including any new uses and management thereof.*
- 1.9 The table below gives an indication of the changes expected when the new club opens for business.

Table 3 – Predicted use of Proposed Golf Course

	Existing Club	New Club	Change
Evening Functions	2 per month	1 per week	+1 per fortnight
Number of people attending evening functions	60-70	100	+30-40 people
No. People that use the course (max at any one time)	120 (18 hole)	120 (18 hole) + 48 (9 hole)	+ 48 people
Number of people that would use the club house/practice facilities (daytime) (Max at any one time)	120	220 (Max seating capacity)	+100 people
Practice Facilities (Max at any one time)	6	20	+14 people
Members	Circa 850	Circa 1,100	
No. Staff	38 (full time /Part time)	50-55 (full time /Part time)	+12-17 people

- 1.10 Based on the above, there is expected to be a maximum of 343 people on site at any one time which includes 168 max on the courses at any one time, 20 at the practice facilities, 55 staff (of which some would be part time) and potentially up to 100 for evening events. Although in reality it is unlikely that there would be a full demand on the course at the same time as an event occurring.
- 1.11 Assuming as a worse case that every person arrives by car and every other person travels as a single occupant then there would be a maximum of 229 cars on site at any one time. The proposal is to provide 241 car parking spaces, although with the inclusion of 13 disabled spaces (see para 1.36 below) there would be reduction of 4 standard spaces so an overall provision of 237 spaces. However, this will still be sufficient to cater for the likely level of use even assuming all use the car as their main mode.

Distribution of traffic

- 1.12 *As already mentioned in this response, the applicant should also provide information about new members (numbers, types), users of the driving range, 9-hole course (and whether non-members would be permitted to use the facilities) and where they would likely be travelling from. The CHA also needs to know if there a finite capacity for the club in both existing and proposed guise (and at any one time), how many members are there at present and what any new membership figure is proposed to rise to. And finally, would events such as parties increase and whether other events planned to take place at the new site.*
- 1.13 The majority of the above is addressed in Table 3, in terms of direction of travel it is assumed that new members would travel from similar locations as existing club users which sees 85% of members travelling from the west and 15% from the east.

Parking

- 1.14 **Car parking** - *The applicant proposes a total of 241 car parking spaces on the site which includes 12 spaces for the maintenance area, 7 spaces in front of the club house (2 of which will be disabled), and 222 within the car park and overflow area (including 4 disabled spaces).*
- 1.15 *The applicant states that the existing golf course off Downview Road, Felpham, has approximately 110 spaces for visitors and members with an additional 10 spaces for staff. However, they add that this level of parking – particularly at weekends - is often exceeded and parking occurs on the local residential roads. They consider that the addition of a 9-hole course is also likely to result in the duration of stay being greater than currently experienced. Therefore, to ensure that there is sufficient parking available, the level identified has been considered by the club to be sufficient to meet its needs.*
- 1.16 *The applicant correctly identifies that there are no specific parking standards that cover golf clubs and so they consider their approach is considered acceptable. The parking layout can be seen in plans attached to the TA.*
- 1.17 *Of the parking spaces provided, 6 spaces will be dedicated for disabled use and 20% will include Electric Charging facilities. All other spaces will have the appropriate infrastructure provided to be able to accommodate electric charging facilities as and when they are required in the future.*
- 1.18 *The Department of Transport recommendation for disabled parking for leisure uses is 3 bays or 6% of the total parking (whichever is the greatest) which would require a provision of 13 disabled spaces. However, given the type of use, the applicant considers that the number of disabled users will be less than other leisure facilities and therefore a provision of 6 disabled spaces will be sufficient to meet their needs. Given the need for inclusiveness for all (particularly as additional facilities are proposed on-site), the CHA considers that the full 13 spaces should be provided at a suitable and convenient location for such users.*
- 1.19 The TRICS data included in **Appendix 3** identifies the sites used with more than 18 holes, these sites include the following;

Lakeside Lodge Golf Centre – Free Standing site near Huntingdon this site includes;

- 42 Holes

- 230 Car parking spaces (0 disabled spaces)
- Golf Shop
- On-Site Accommodation (17 bedrooms)
- A Function Room capable of seating up to 100 people
- Licensed club house bar/ restaurant
- 1200 members
- 30 employees (15 full time 15 part time)

Crane Valley Golf Club – Free standing site near Verwood. This site include;

- 27 Holes
- 103 Car parking spaces (3 disabled spaces)
- Golf Shop
- Licensed club house bar/ restaurant
- Has special days- Ladies Day, Seniors Day & Weekend Competitions

Dorset Golf & Country Club – Free standing site near Wareham. This site include;

- 27 Holes
- 174 Car parking spaces (0 disabled spaces)
- Golf Shop
- On-Site Accommodation (16 bedrooms)
- Licensed club house bar/ restaurant
- 700 members
- 40 employees (25 full time 15 part time)
- Has special days- Corporate Golf Day packages

Bondhay Golf Club – Free standing site near Worksop. This site include;

- 27 Holes
- 257 Car parking spaces (0 disabled spaces)
- Golf Shop
- Licensed club house bar/ restaurant
- 250 members
- 25 employees (8 full time 17 part time)
- Has special days- Singles only event night

1.20 The trips identified for these sites are considered typical for this development site, the information available within TRICS does not identify any functions occurring at the time of the surveys being undertaken, although these sites do have facilities and events that occur. In

terms of parking provision, based on the average parking provision identified in the sites above which equates to 6 spaces per hole, the average parking requirement for 27 holes would be around 167 spaces. The proposal is to provide a total of 241 spaces.

- 1.21 The level of disabled parking at Golf Clubs is evidently very low at existing clubs and the existing site only has one disabled space. The provision of 13 disabled parking spaces will have a knock effect on the overall parking reducing this to 237 spaces although this is still considered sufficient to meet the needs of the site based on the facilities being proposed and therefore the required provision of 13 disabled spaces will be provided. A revised sketched layout is shown in **Appendix 6** which WSCC have confirmed is acceptable, a revised parking layout will therefore be issued to Arun District Council.
- 1.22 *To better inform parking demand, the applicant should provide details of likely demand for each of the uses on offer and patterns of use by customers – e.g. how long do they stay, how many can use the component parts of the club at any one time etc. including maximum number of users that could be on-site at any one time. And are any special events planned or take place; how many spaces needed for functions, parties etc. and whether they would coincide with usual golf activities?*
- 1.23 The maximum number of people expected to be on site at any one time is 343 people (including staff). Therefore as a worse case assuming everyone arrives by car and every other person arrives separately the maximum parking provision would be 229. This assumes the maximum number of golfers on site at the same time as a evening event although this is unlikely to occur at the same time. In addition those that attend evening events are likely to have a much higher number of people in the cars accessing the site.
- 1.24 Using the TRICS data, it is possible to make an assessment of the potential parking accumulation on a typical day, the analysis of this data is included in **Appendix 4** and summarised in the table below.

Table 4 – Car Parking Accumulation

Day	Max Accumulation
Weekday (Tuesday / Wednesday)	81
Saturday	98
Sunday	118

- 1.25 The TRICS data for standalone sites is limited during the week, however it is considered that the weekend accumulation will represent the typical busiest period.
- 1.26 *Cycle parking - The TRICS data in Section 2 of the TA suggests that less than 1% of trips to golf courses are made by cycle. However, to encourage this mode the site will include a total of three cycle stands located close to the golf club entrance which will accommodate up to 6 cycles. The applicant has said that the racks will be in a lit and sheltered location. For the cycle parking, secure, covered and overlooked Sheffield Stands (or very similar) should be provided.*
- 1.27 It is confirmed that the cycle parking as well as being close to the Golf Club entrance will be in a safe, secure location that will be lit and sheltered from the elements. The details of this storage can be secured by way of condition.

- 1.28 *Bus and coach parking (and waste and serving requirements) - None has been shown. Applicant to provide details of such uses/requirements and plans showing access, parking and turning arrangements for such vehicles.*
- 1.29 The Club has advised that the site is expected to not have more than one coach accessing the site at any one time and that this would be a very infrequent occurrence, possibly once a month. The proposal includes a lay-by within the maintenance area for the coach to wait. The tracking of a coach is included in **Appendix 5**.

Configuration of fairways

- 1.30 *From scrutiny of the submitted drawings, some of the fairways appear to require users to tee-off towards the A259. The applicant should provide details of how the public highway would be protected from stray balls being pitched towards it.*
- 1.31 Our Golf Course Designer has advised the following ‘There are currently no legal requirements outlining the separation between a golf hole and a road but the new golf course layout follows and, wherever possible, improves upon the normal minimum safety setbacks implemented within the industry.’

Short Course

- 1.32 As a general rule of thumb most wayward shots tend to be struck left or right of the target as opposed to flying beyond it. Consequently, normal industry practice is to ensure that there is a minimum of 60m setback either side of the centre target line and a minimum of 30m from the centre of the green to an external boundary or hazard beyond the green. This would tend to be increased when playing downhill as this would increase the risk of a golf ball flying beyond the target but in this instance the terrain is very flat. The two holes where the setbacks have been questioned (holes 1 and 3 on the short course) currently measure 48m and 43m respectively from the middle of the green to the edge of the road so comfortably exceed the minimum safety recommendations. While this does not guarantee that a golf ball will not reach the road the risk posed, in our opinion, is **extremely unlikely**. There are many examples of golf courses throughout the UK that have similar distanced setbacks to major roads and external boundaries without ball stop netting or screening features that have operated for many years without any notable issues. Importantly, the hard landscaping drawings show that extensive areas of woodland planting, up to 23m deep, will be provided along the boundary of the western parcel / proposed nine hole course with the A259. We have reviewed the planting scheme and are proposing further canopy and hedgerow planting to supplement the existing boundary planting to the rear of the greens at holes 1 and 3. In addition to the generous setbacks the proposed planting would also provide an effective buffer to protect the A259 from any stray balls.

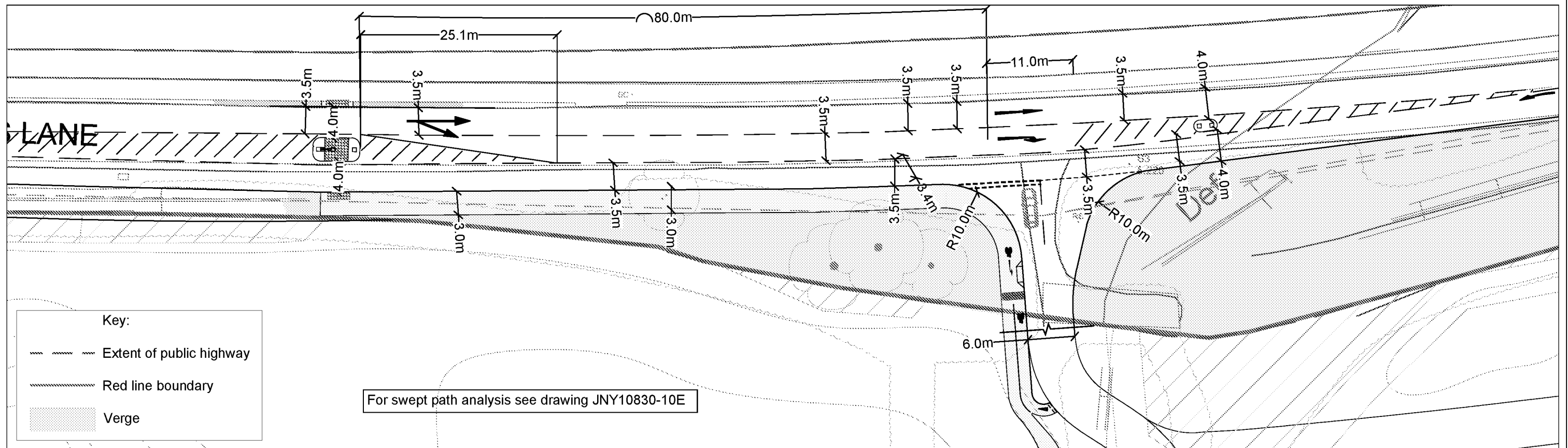
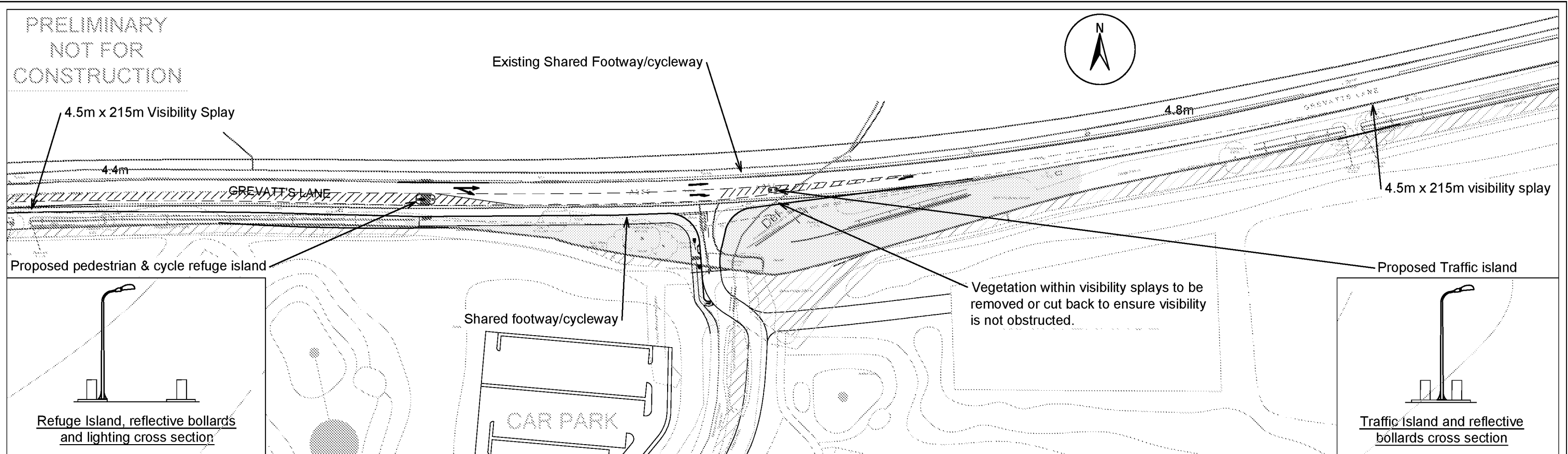
Driving Range

- 1.33 The driving range has been specifically designed to avoid the need for ball stop netting. It is angled so that players hit away from the road and the setback from the centre target line starts at 120m in front of the tees and increases to over 200m at the end of the range. With such a large setback from the road it is extremely unlikely that a golf ball will ever reach the road and we are very comfortable with the decision not to install ball stop netting in this location.

Appendices

Appendix 1 – Proposed Access Layout

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20 Farringdon Street, London EC4A 4AB
T: +44(0)20 3691 0500 E: transport@rpsgroup.com

Client Hallam Land Management

Project Bognor Regis

Title	Proposed Access Arrangement to New Golf Course
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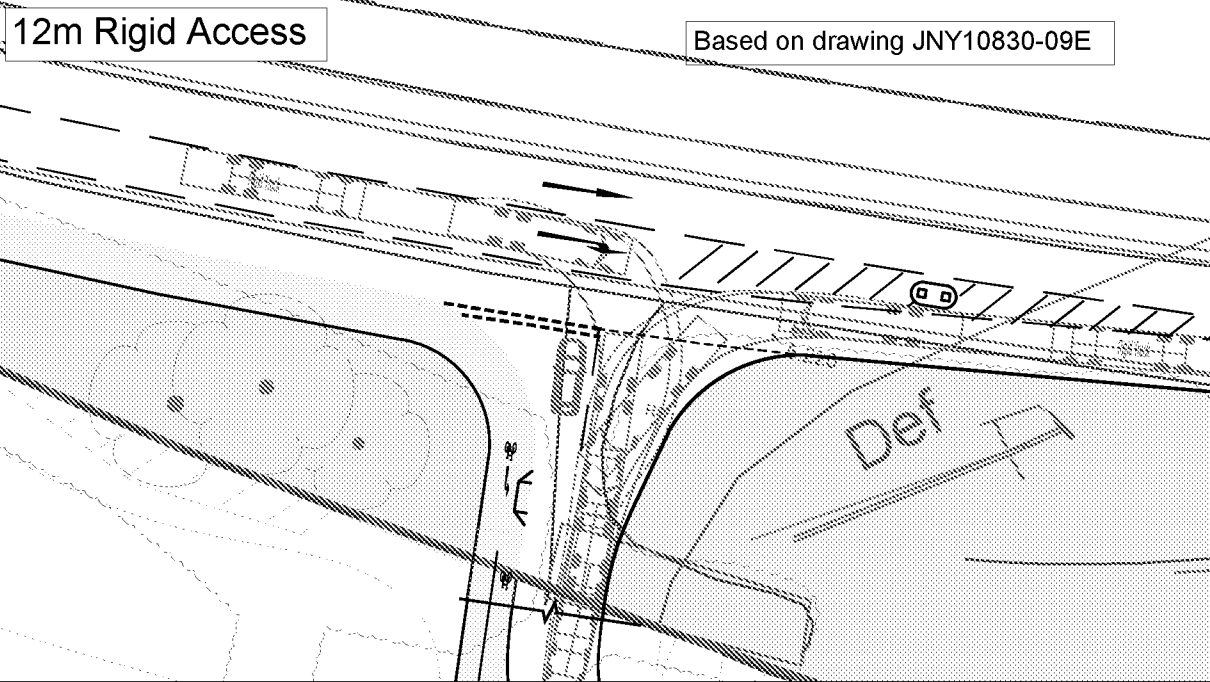
F	Adjustments made to reflect WSCC comments	MA/AJ	MA	11:05:2
E	Adjustments made to tie into Crematorium access arrangement & address RSA Comments	MA	MA	22.04.2
D	Additional Dimensions Added	MA	MA	23.03.2
C	Footway Width Amended	MA	MA	26.01.2
B	Topo survey added	AJ	MA	16.12.2
A	Following RSA comments	AJ	MA	25.11.2
Rev	Description	By	CB	Date

Status	Drawn By	FM/Checked by
PRELIMINARY	AJ	MA
Project Number	Scale @ A3	Date Created
JNY10830	1:200 /1:500	10/11/21
RPS Drawing/Figure Number		Rev
JNY10830-09		F
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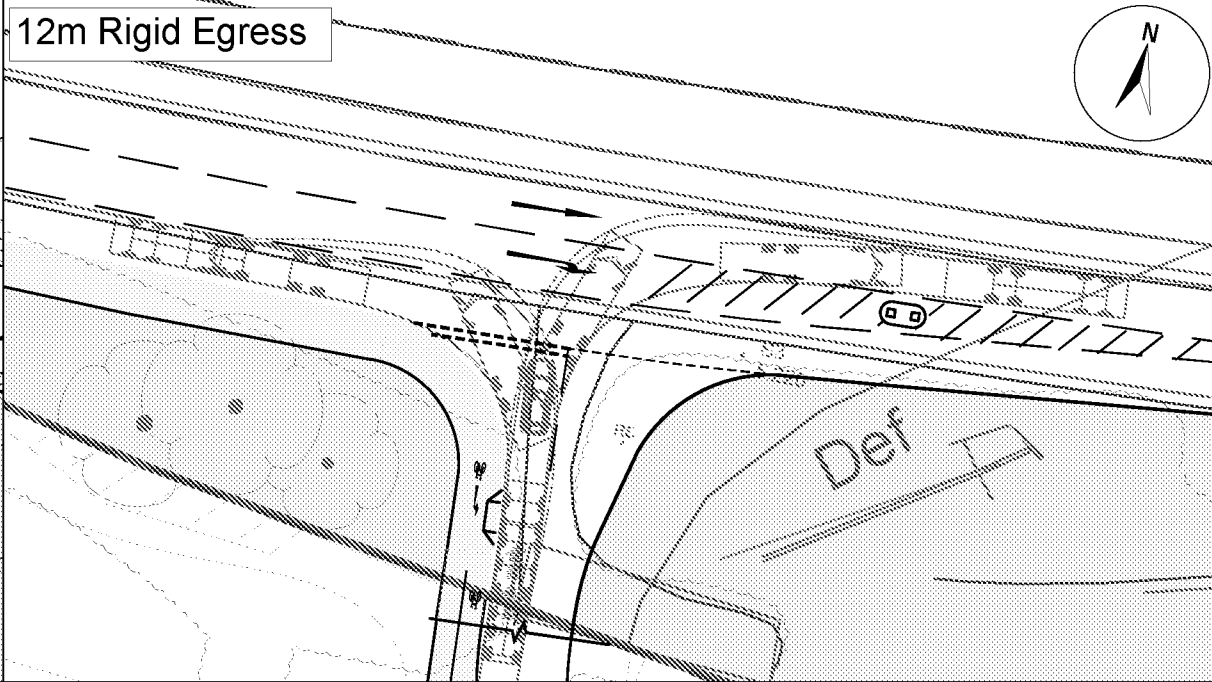
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12m Rigid Access

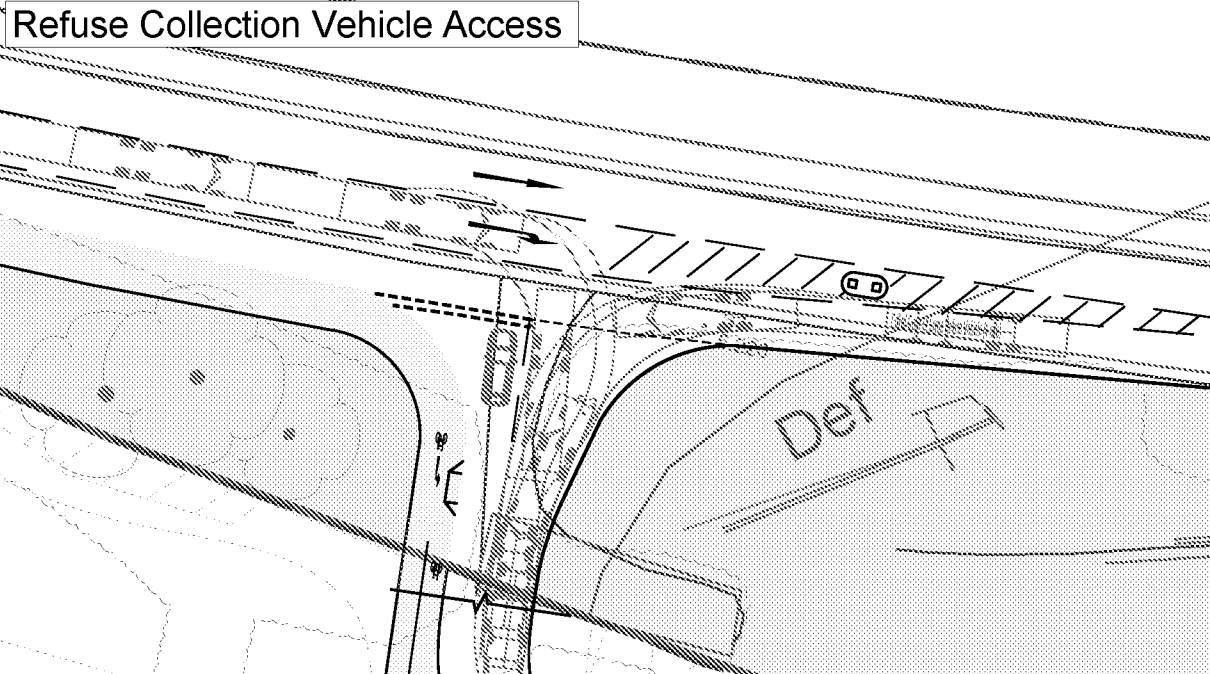
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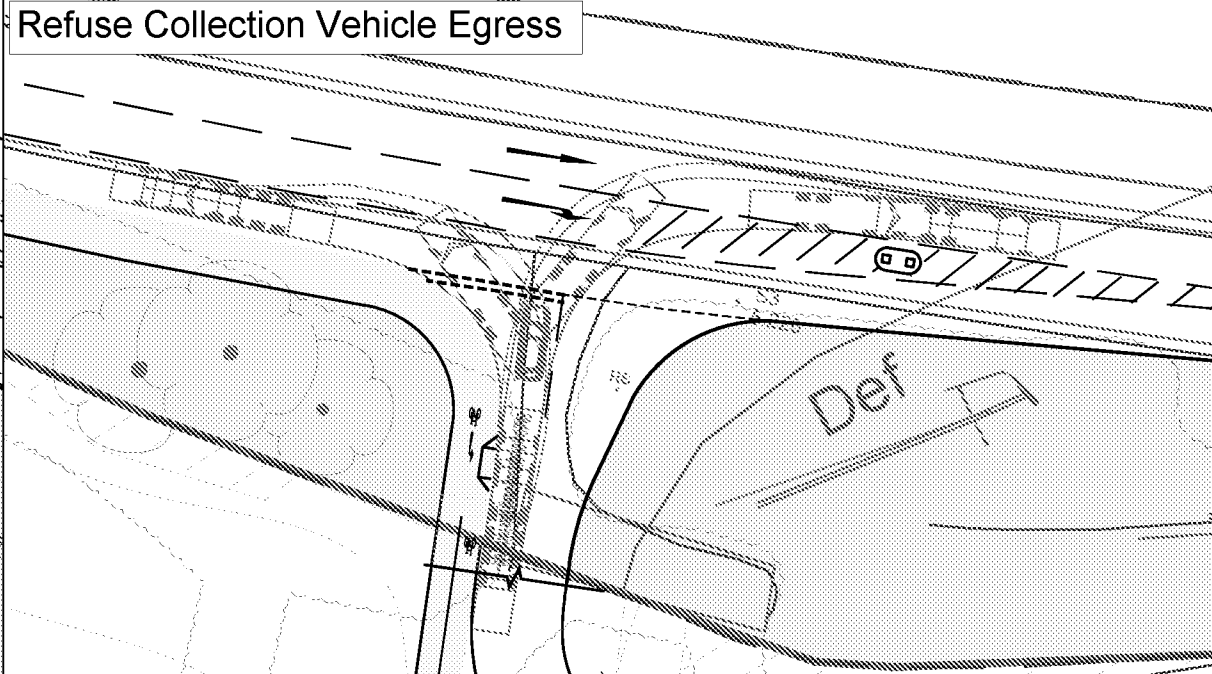
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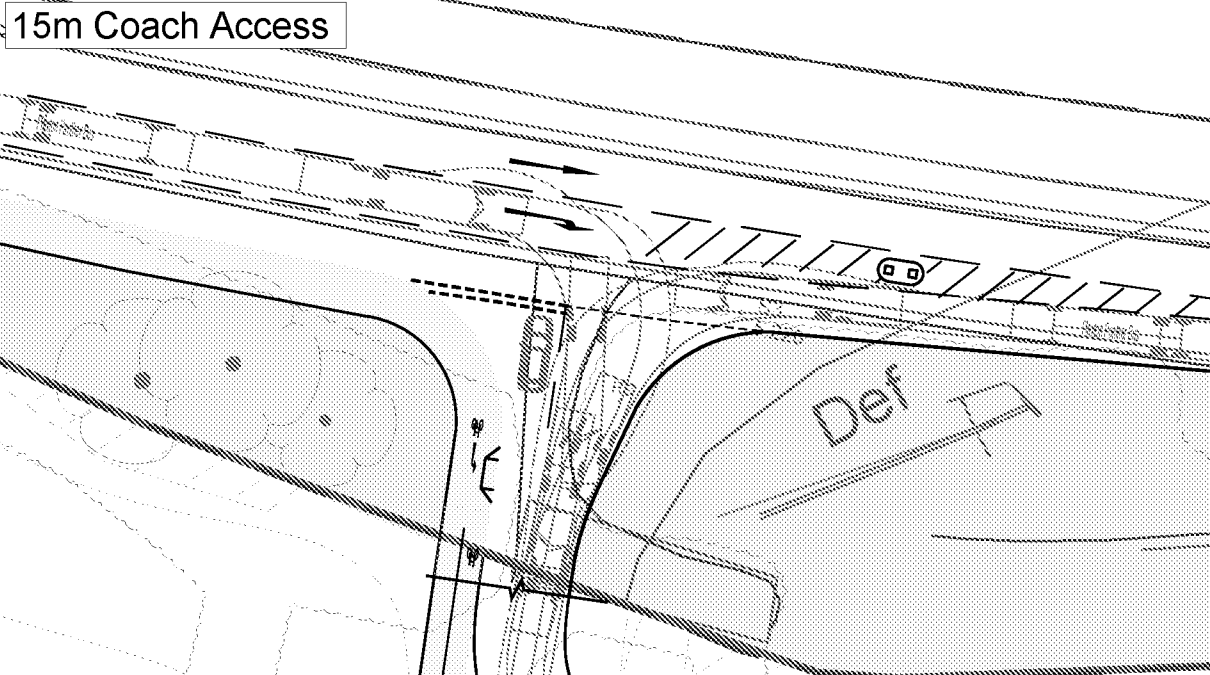
Refuse Collection Vehicle Access



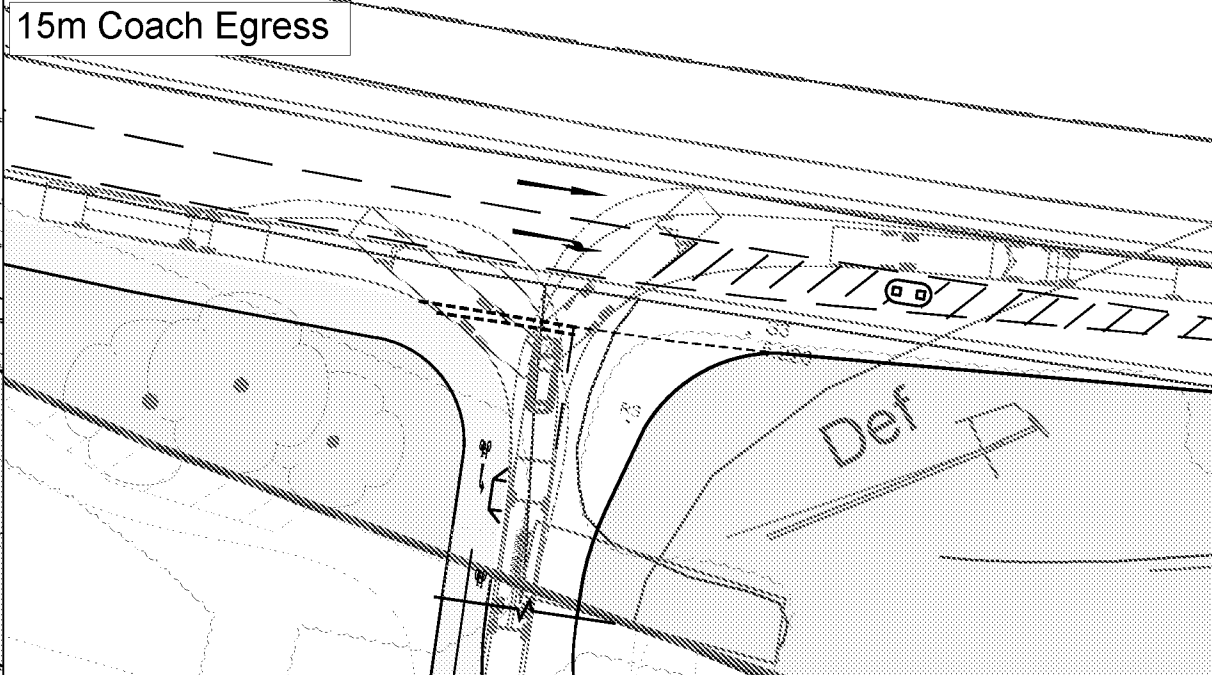
Refuse Collection Vehicle Egress



15m Coach Access



15m Coach Egress

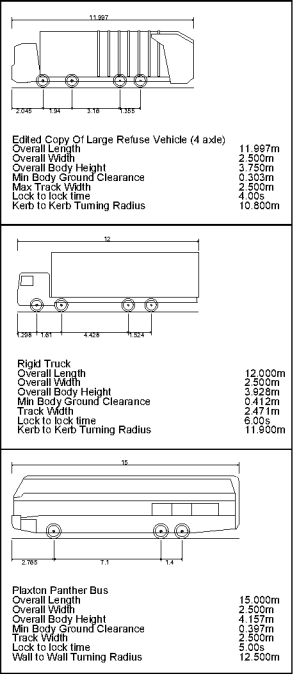


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Vehicle Profiles



E	Tracks adjusted to suite Drawing JNY10830-09F	AJ	MA	11.05.22
D	Layout adjusted to suite Drawing JNY10830-09E		MA	22.04.22
C	Footway Width amended		MA	26.01.22
B	Topo survey added	AJ	MA	16.12.21
A	Following RSA comments	AJ	MA	25.11.21
Rev	Description	By	CB	Date



20 Farringdon Street, London EC4A 4AB
T: +44(0)20 3891 0500 E: transport@rpsgroup.com

Client Hallam Land Management

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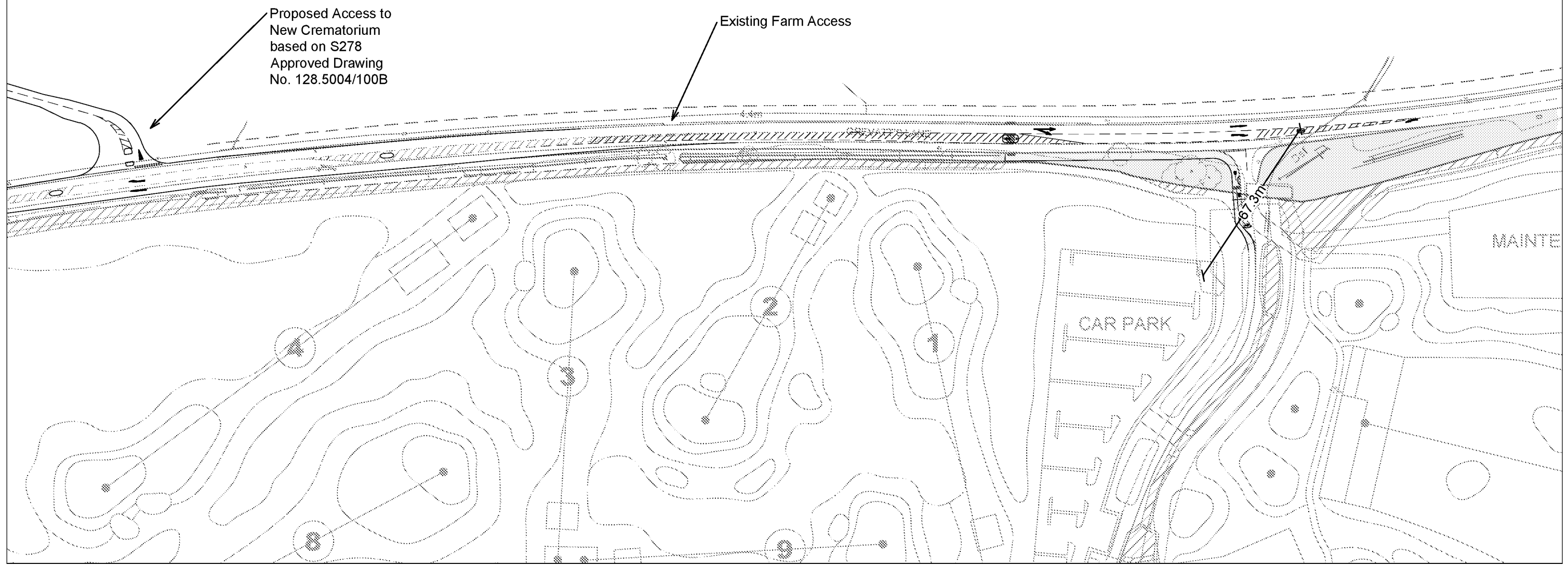
Title Proposed Access Arrangement to New Golf Course - Swept Path Analysis

Status	Drawn By	PM/Checked by
INFORMATION	AJ	MA
Project Number	Scale @ A3	Date Created
JNY10830	1:500	10/11/21

RPS Drawing/Figure Number	Rev
JNY10830-10	E

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20 Faringdon Street, London EC4A 4AB
T: +44(0)20 3691 0500 E: transport@rpsgroup.com

Client Hallam Land Management

Project Bognor Regis

Title Proposed New Golf Course and Crematorium Access Arrangement

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Road Widths amended following comments from WSCC				
MA				11.05.22
Rev	Description	By	CB	Date

Status	Drawn By	PM/Checked by
PRELIMINARY	AJ	MA
Project Number	Scale @ A3	Date Created
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RPS Drawing/Figure Number		Rev
JNY10830-18		A
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SUBMISSION TO WEST SUSSEX COUNTY COUNCIL FOR DEPARTURES FROM STANDARD

Project Name	Land South of Grevatts Lane/ A259
Applicant Organisation	RPS
Applicant Ref	M/16/22/PL
Highway Authority Ref	
Applicant Contact Details	Melanie A'Lee Associate Director melanie.alee@rpsgroup.com
Date Submitted	20/05/2022

1) PROJECT DETAILS

A	Description	Development of new Golf Course off Grevatts Lane to replace the existing Bognor Regis Golf Course.
B	Location	Grevatts Lane, Bognor Regis
C	Road Category	TA 79/99 UAP1
D	Road Type	S2
E	Design Speed	100A kph (determined by TD 9/93 Urban Road Speed Limit)
F	Speed Limit	60mph (Derestricted)
G	Traffic Flows	Two Way 22165 24hr (5 Day Ave) 21014 (7 Day Ave) 1594 AM Peak (5 Day Ave) 1849 PM Peak (5 Day Ave)
H	NMU Flows	Not Know

2) DEPARTURE DETAILS

A	Discipline	Road Geometry
	Type	Provision of Refuge Island
B	Relevant Standard(s)	CD143 - E/4.6 Refuge islands shall not be provided where the speed limit is greater than 40mph except where the refuge island is incorporated into a single dualling design.
	Clause	
C	Difference Between Standard(s) and proposed design	The proposed ghost island access arrangement includes for a pedestrian refuge island that will accommodate shared use and is 3.5m in depth which is deeper than the standard advised in Table E/4.7. Lighting will be provided as part the proposal
D	Reason for Departure (overview)	The proposed refuge island is proposed to accommodate pedestrian/cycle movements across the A259 in accessing the proposed Golf Course site and encourage the use of non-car modes.
E	Associated Project Departures	
F	Other Options Considered	Other option is that the refuge island is not provided

3) JUSTIFICATION (POTENTIAL POSITIVE AND NEGATIVE IMPACTS)

A	Safety	Positives Provision of a pedestrian refuge will allow any pedestrians/ cyclists to cross the A259 in two stages. It should be noted that the access is in the location of an existing PRow which continues across the A259. The ability for pedestrians/cyclists to be able to cross A259 more easily will encourage the use of more sustainable means of travel to the site. Lighting will be provided at the site, details to be agreed with WSCC, together with appropriate signage. The proposed arrangement has been reviewed by an independent Road Safety Auditor. It is understood that there are proposals to provide a new roundabout at the A259/B2233 and at the A259/B2132 junction which are approx 1Km east and west of the site, these junctions will assist in slowing vehicle speeds down. Negatives Motorists will be travelling at high speed and maybe inclined to overtake which could result in conflict with the proposed refuge island. The A259 along this section does not currently have any traffic islands.
B	Congestion/ Delay	NA
C	Environmental / sustainability	
D	Capital and whole life cost/value	
E	Accessibility	The provision of a refuge Island will encourage access to the site by non-car modes improving accessibility to the site
F	Integration	Forms part of the proposed access arrangement to the site
G	Structural	NA
H	Network resilience & Maintenance	Built to standard design standards

4) COMPENSATORY MEASURES

A	Included Measures	Lighting and Signage
B	Rejected Options	

5) DESIGN ORGANISATIONS CONCLUDING REMARKS

--

6) ATTACHMENTS AND OTHER INFORMATION

A	List of Attachments	Drawing No, JNY10830/09F Stage 1 RSA & Designers Response
B	Consultations	
C	Other Information	

7) DECISION – (HIGHWAY AUTHORITY USE ONLY)

NAME 1			
ROLE			
SIGNED		DATE	
NAME 2			
ROLE			
SIGNED		DATE	
MARK ONE BOX:	1- APPROVED ☐	2-APPROVED WITH COMMENTS ☐	3- REJECTED ☐
COMMENTS			

Appendix 2 - Updated RSA & Designers Response

A259 GREVATTS LANE BOGNOR REGIS

Proposed Access Arrangement for New Golf Course

Road Safety Audit - Stage 1

Final Report

April 2022

TBL19/286

Taylor Bowie Ltd
ROAD SAFETY & TRANSPORTATION CONSULTANCY

REPORT APPROVAL

Project Details

Project Title	A259 Grevatts Lane, Bognor Regis		
Project Subtitle	Proposed Access Arrangement for New Golf Course		
Road Safety Audit	Stage 1		
Document Reference	TBL19/286 Rev 0	Audit Brief Date	7 th April 2022
Overseeing Organisation	West Sussex County Council		
Design Organisation	Melanie A'Lee	RPS	
Client	-	Hallam Land Management	
Maintaining Agent Details	-	-	

Approvals

This document requires the following approvals:

Name	Title
Sarah Bowie	Audit Team Leader
Linda Irons	Audit Team Member

Distribution

This document has also been distributed to:

Name	Title & Organisation
Melanie A'Lee	Associate Director – RPS (Transport & Engineering)

1 INTRODUCTION

1.1 The Scheme and its Purpose

This report results from a Stage 1 Road Safety Audit (RSA) carried out on the proposed golf course on land south of A259 Grevatts Lane, Bognor Regis, West Sussex.

The proposal is to relocate the existing Bognor Regis Golf Course onto land south of Grevatts Lane. Access to this site will be provided in the form of a priority junction arrangement with a ghost island right turn lane. As part of the access arrangement a new refuge island is proposed on Grevatts Lane to allow a safe crossing point for pedestrians and cyclists using the existing combined footway/cycleway that continues along the northern side of Grevatts Lane. A new 3m wide footway/cycleway is then proposed on the southern side to the proposed site access where cyclists will be able to continue on road into the site.

1.2 Terms of Reference & Audit Report

The Road Safety Audit Brief was approved and issued by Melanie A'Lee of the Design Organisation. The RSA team has been approved by the Design Organisation.

Table 1 - Audit Team Membership

Membership	Name	Details
Audit Team Leader	Sarah Bowie	IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp
Audit Team Member	Linda Irons	MCIHT, MSoRSA, HE RSA Cert Comp

The Road Safety Audit was undertaken in accordance with the requirements of GG 119. No additional audit requirements were requested. The audit comprised of an examination of the brief and the documents provided to the Audit Team, listed in **Appendix A**.

The audit took place at Taylor Bowie Ltd Cambridgeshire office during April 2022 and both Audit Team Members examined the site together in daylight hours on the morning and afternoon of 9th April 2022 between the times of 1130 and 1230hrs. The weather during the site visit was mild and sunny. The carriageway was dry. Traffic flows at all times were moderate. One pedestrian and six cyclists were observed during the site visit.

The scheme has been examined, and this report compiled only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

No Departures from Standards (DfS) have been provided to the Audit Team. It is important that if there are any DfS, then they are submitted to the Overseeing Organisation (OO) as soon as possible with appropriate mitigating measures for the OO to approve.

All Problems and Recommendations are referenced to the design drawings and the locations have been indicated on the A4 plan supplied for use by the Audit Team in **Appendix B** (where applicable).

1.3 Audit Administration

Issues identified during the audit and site visit which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the OO, will be set out in a separate letter. These issues could include maintenance items and operational issues.

The Audit Team have not identified any issues during this Stage 1 RSA and site visit that are considered to be outside the Terms of Reference.

2 ITEMS RAISED AT PREVIOUS ROAD SAFETY AUDITS

The safety aspects of the Proposed Access Arrangement for New Golf Course were the subject of comment in the November 2021 Stage 1 RSA undertaken by Taylor Bowie Ltd.

The previous design proposed a similar junction design located further east along Grevatts Lane.

The design has subsequently been amended and the design reviewed as part of this RSA incorporates a ghost island right-turn junction relocated approximately 100m westwards, lighting and bollards on the pedestrian refuge island, additional traffic island to the east of the right-turn facility.

3 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1 Local Alignment

PROBLEM	1
Location	Grevatts Lane, west of proposed development access (Drwg.no. JNY10830-09 REV D)
Summary	Abrupt westbound kerblines may increase the risk of kerb strikes and single vehicle loss of control type collisions.
The kerblines to the west of the Golf Course access appear to have an abrupt alignment adjacent to the proposed pedestrian refuge and at the exit taper tie-in to the existing kerblines. This may increase the risk of kerb strikes and single vehicle loss of control type collisions.	
RECOMMENDATION	
The Audit Team recommend that the proposed westbound southern kerblines tie into the existing kerblines using a smooth transition.	

3.2 General

No Problems identified in this category at this Stage 1 Road Safety Audit.

3.3 Junctions

PROBLEM	2
Location	Development access junction (Drwg No. JNY10830-09 REV D)
Summary	Reduced visibility splays may increase the risk of vehicle pull-out type collisions.
The site visit has established that the achievable visibility splays may be impacted upon by the presence of vegetation along the southern kerblines.	

A lack of visibility at the junction may increase the risk of pull out type collisions.

RECOMMENDATION

The Audit Team recommend that the achievable visibility splays are not compromised.

3.4 Walking, Cycling and Horse Riding

No Problems identified in this category at this Stage 1 Road Safety Audit.

3.5 Traffic Signs, Carriageway Markings and Lighting

No Problems identified in this category at this Stage 1 Road Safety Audit.

END OF PROBLEMS IDENTIFIED & RECOMMENDATIONS OFFERED IN THIS STAGE 1 ROAD SAFETY AUDIT

4 AUDIT TEAM STATEMENT

We certify that this Road Safety Audit has been carried out in accordance with GG 119.

AUDIT TEAM LEADER	
Name	Sarah Bowie - IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp
Signed	
Position	Director
Organisation	Taylor Bowie Ltd
Date	22 nd April 2022

AUDIT TEAM MEMBER	
Name	Linda Irons - MCIHT, MSoRSA, HE RSA Cert Comp
Signed	
Position	Associate Consultant
Organisation	Taylor Bowie Ltd
Date	22 nd April 2022

APPENDIX A

Documents Forming the Audit Brief

Drawings:

DRAWING NO.	TITLE
JNY10830-09 Rev D	Proposed Access Arrangement to New Golf Course
JNY10830-10 Rev C	Swept Path Analysis

APPENDIX B

Problem Location Plan

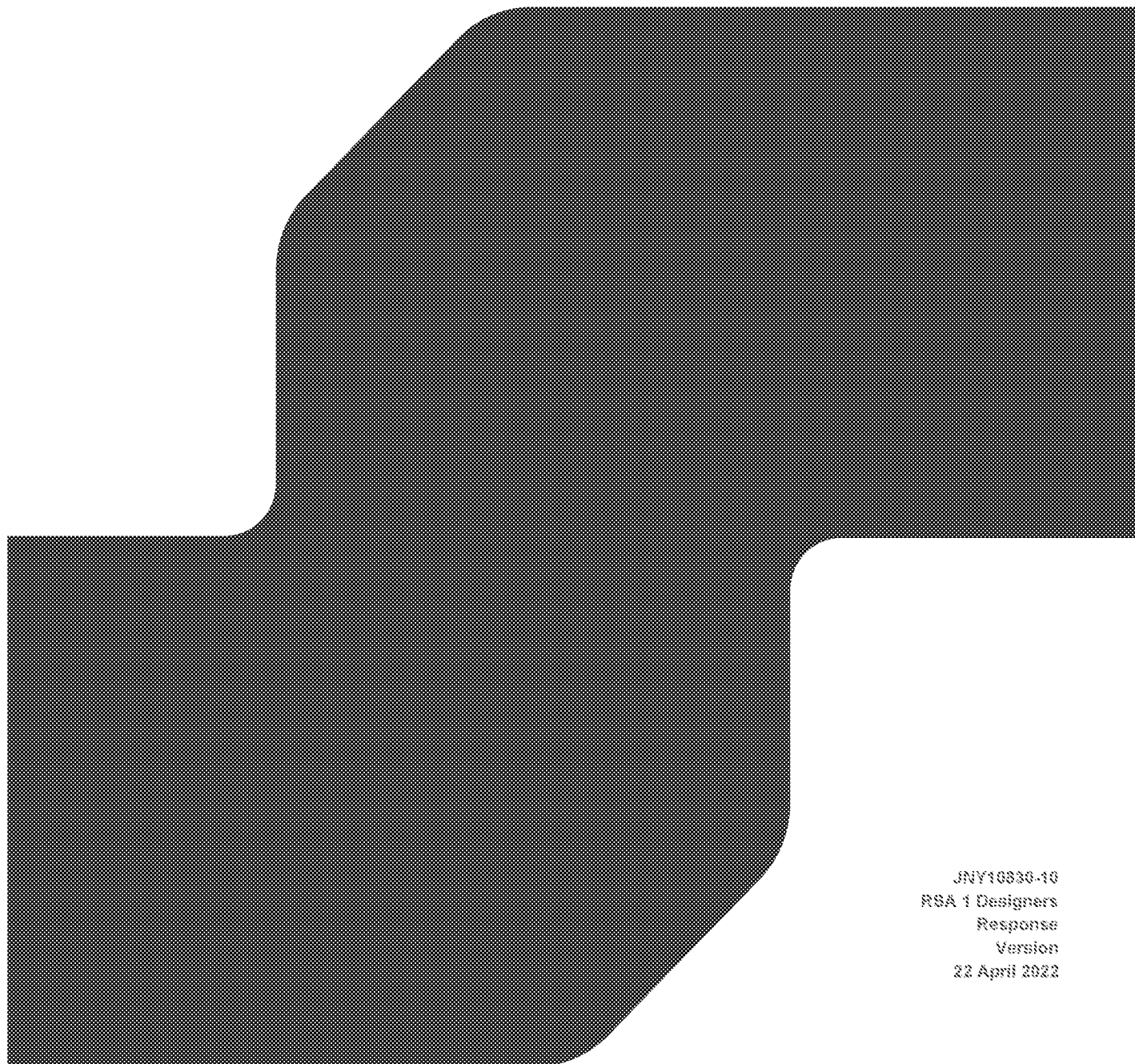
Taylor Bowie Ltd
ROAD SAFETY & TRANSPORTATION CONSULTANCY

E: info@taylorbowie.co.uk

W: www.taylorbowie.co.uk

LAND SOUTH OF GREVATTS LANE/ A259 – PROPOSED GOLF COURSE ACCESS

Stage 1 Road Safety Audit – Designers Response



JNY10830-10
RSA 1 Designers
Response
Version
22 April 2022

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Prepared by:

Prepared for:

RPS Consulting Services Ltd

Hallam Land Management

Name: Melanie A'Lee
Title: Associate Director

20 Farringdon Street, London EC4A 4AB

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AUDIT REF	Problem Summary and Recommendation	Designers Response	WSCC Comments
3.1 - 1	Summary – Abrupt westbound kerb line may increase the risk of kerb strikes and single vehicle loss of control type collisions. Detail – The kerb line to the west of the Golf Course access appears to have an abrupt alignment adjacent to the proposed pedestrian refuge and at the exit taper tie-in to the existing kerb line. This may increase the risk of strikes and single vehicle loss of control type collisions. Recommendation – the Audit Team recommend that the proposed westbound southern kerb line ties into the existing kerb line using a smooth transition.	The layout has been amended in line with the recommendation provided. The layout also includes for link to the proposed crematorium access approximately 450m west of the proposed site.	
3.3 - 2	Summary – Reduced visibility splay may increase the risk of vehicle pull-out type collisions, Detail – The site visit has established that the achievable visibility splays may be impacted upon by the presence of vegetation along the southern kerb line. A lack of visibility at the junction may increase the risk of pull out-type collisions. Recommendation – The Audit Team recommend that the achievable visibility splays are not compromised.	The extent of visibility from the site access will be kept clear of vegetation in excess of 0.5m, a note to this effect has been added to the drawing.	

Design Organisation Statement

On behalf of the design organisation, I certify that:	
1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation	
Name	Melanie A'Lee
Signed	
Position	Associate Director
Organisation	RPS
Date	22/04/2022

Overseeing Organisation statement

On behalf of the Overseeing Organisation, I certify that:	
1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and	
2) The agreed RSA actions will be progressed	
Name	
Signed	
Position	
Organisation	West Sussex County Council
Date	

Appendix 3 – TRICS Data

RPS 1st Floor West London

Licence No: 515506

Calculation Reference: AUDIT-515506-220323-0302

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 09 - GOLF
 Category : C - PRIVATE > 18 HOLE COURSES

TOTAL VEHICLESSelected regions and areas:

03	SOUTH WEST	
	DC DORSET	2 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS	
	NT NOTTINGHAMSHIRE	1 days

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

Primary Filtering selection:

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

Parameter: Number of holes
 Actual Range: 27 to 42 (units:)
 Range Selected by User: 18 to 63 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/90 to 26/06/13

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

Selected survey days:

Tuesday	2 days
Wednesday	2 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Free Standing (PPS6 Out of Town)	4
----------------------------------	---

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

Selected Location Sub Categories:

Out of Town	4
-------------	---

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

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Licence No: 515506

Secondary Filtering selection:Use Class:

F2(c) 4 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less 3 days

1,001 to 5,000 1 days

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

Population within 5 miles:

5,001 to 25,000 2 days

25,001 to 50,000 1 days

75,001 to 100,000 1 days

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

Car ownership within 5 miles:

1.1 to 1.5 4 days

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

Travel Plan:

Not Known 3 days

No 1 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 4 days

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

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Licence No: 515506

LIST OF SITES relevant to selection parameters

1	CA-09-C-01	GOLF CENTRE		CAMBRIDGESHIRE
	FEN ROAD			
	NEAR HUNTINGDON			
	PIDLEY			
	Free Standing (PPS6 Out of Town)			
	Out of Town			
	Total Number of holes:	42		
	Survey date: TUESDAY	10/09/02		Survey Type: MANUAL
2	DC-09-C-01	GOLF CLUB		DORSET
	B3081 VERWOOD ROAD			
	NEAR VERWOOD			
	Free Standing (PPS6 Out of Town)			
	Out of Town			
	Total Number of holes:	27		
	Survey date: WEDNESDAY	22/04/98		Survey Type: MANUAL
3	DC-09-C-02	GOLF CLUB		DORSET
	OFF PUDDLETOWN ROAD			
	NEAR WAREHAM			
	HYDE			
	Free Standing (PPS6 Out of Town)			
	Out of Town			
	Total Number of holes:	27		
	Survey date: TUESDAY	09/07/02		Survey Type: MANUAL
4	NT-09-C-01	GOLF CLUB		NOTTINGHAMSHIRE
	BONDHAY LANE			
	NEAR WORKSOP			
	WHITWELL WOOD			
	Free Standing (PPS6 Out of Town)			
	Out of Town			
	Total Number of holes:	27		
	Survey date: WEDNESDAY	26/06/13		Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

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Licence No: 515506

TRIP RATE for Land Use 09 - GOLF/C - PRIVATE > 18 HOLE COURSES

TOTAL VEHICLES**Calculation factor: 1 HOLES****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HOLES	Trip Rate	No. Days	Ave. HOLES	Trip Rate	No. Days	Ave. HOLES	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	27	0.111	1	27	0.037	1	27	0.148
07:00 - 08:00	4	31	0.496	4	31	0.033	4	31	0.529
08:00 - 09:00	4	31	0.626	4	31	0.130	4	31	0.756
09:00 - 10:00	4	31	0.740	4	31	0.285	4	31	1.025
10:00 - 11:00	4	31	0.626	4	31	0.211	4	31	0.837
11:00 - 12:00	4	31	0.455	4	31	0.325	4	31	0.780
12:00 - 13:00	4	31	0.496	4	31	0.455	4	31	0.951
13:00 - 14:00	4	31	0.415	4	31	0.528	4	31	0.943
14:00 - 15:00	4	31	0.398	4	31	0.626	4	31	1.024
15:00 - 16:00	4	31	0.366	4	31	0.569	4	31	0.935
16:00 - 17:00	4	31	0.350	4	31	0.569	4	31	0.919
17:00 - 18:00	4	31	0.431	4	31	0.569	4	31	1.000
18:00 - 19:00	4	31	0.350	4	31	0.512	4	31	0.862
19:00 - 20:00	2	27	0.167	2	27	0.426	2	27	0.593
20:00 - 21:00	2	27	0.037	2	27	0.519	2	27	0.556
21:00 - 22:00	2	27	0.037	2	27	0.259	2	27	0.296
22:00 - 23:00	2	27	0.019	2	27	0.093	2	27	0.112
23:00 - 24:00	1	27	0.037	1	27	0.037	1	27	0.074
Total Rates:			6.157			6.183			12.340

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

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

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Parameter summary

Trip rate parameter range selected: 27 - 42 (units:)
 Survey date range: 01/01/90 - 26/06/13
 Number of weekdays (Monday-Friday): 4
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

RPS 1st Floor West London

Licence No: 515506

TRIP RATE for Land Use 09 - GOLF/C - PRIVATE > 18 HOLE COURSES

OGVS**Calculation factor: 1 HOLES****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HOLES	Trip Rate	No. Days	Ave. HOLES	Trip Rate	No. Days	Ave. HOLES	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	27	0.000	1	27	0.000	1	27	0.000
07:00 - 08:00	4	31	0.000	4	31	0.000	4	31	0.000
08:00 - 09:00	4	31	0.008	4	31	0.000	4	31	0.008
09:00 - 10:00	4	31	0.000	4	31	0.008	4	31	0.008
10:00 - 11:00	4	31	0.033	4	31	0.024	4	31	0.057
11:00 - 12:00	4	31	0.008	4	31	0.008	4	31	0.016
12:00 - 13:00	4	31	0.024	4	31	0.024	4	31	0.048
13:00 - 14:00	4	31	0.008	4	31	0.008	4	31	0.016
14:00 - 15:00	4	31	0.000	4	31	0.008	4	31	0.008
15:00 - 16:00	4	31	0.008	4	31	0.000	4	31	0.008
16:00 - 17:00	4	31	0.008	4	31	0.008	4	31	0.016
17:00 - 18:00	4	31	0.000	4	31	0.008	4	31	0.008
18:00 - 19:00	4	31	0.000	4	31	0.000	4	31	0.000
19:00 - 20:00	2	27	0.000	2	27	0.000	2	27	0.000
20:00 - 21:00	2	27	0.000	2	27	0.000	2	27	0.000
21:00 - 22:00	2	27	0.000	2	27	0.000	2	27	0.000
22:00 - 23:00	2	27	0.000	2	27	0.000	2	27	0.000
23:00 - 24:00	1	27	0.000	1	27	0.000	1	27	0.000
Total Rates:			0.097			0.096			0.193

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

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

RPS 1st Floor West London

Licence No: 515506

TRIP RATE for Land Use 09 - GOLF/C - PRIVATE > 18 HOLE COURSES

CYCLISTS**Calculation factor: 1 HOLES****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HOLES	Trip Rate	No. Days	Ave. HOLES	Trip Rate	No. Days	Ave. HOLES	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	27	0.000	1	27	0.000	1	27	0.000
07:00 - 08:00	4	31	0.000	4	31	0.000	4	31	0.000
08:00 - 09:00	4	31	0.000	4	31	0.000	4	31	0.000
09:00 - 10:00	4	31	0.008	4	31	0.000	4	31	0.008
10:00 - 11:00	4	31	0.000	4	31	0.000	4	31	0.000
11:00 - 12:00	4	31	0.000	4	31	0.000	4	31	0.000
12:00 - 13:00	4	31	0.000	4	31	0.000	4	31	0.000
13:00 - 14:00	4	31	0.000	4	31	0.008	4	31	0.008
14:00 - 15:00	4	31	0.000	4	31	0.008	4	31	0.008
15:00 - 16:00	4	31	0.000	4	31	0.000	4	31	0.000
16:00 - 17:00	4	31	0.000	4	31	0.000	4	31	0.000
17:00 - 18:00	4	31	0.008	4	31	0.008	4	31	0.016
18:00 - 19:00	4	31	0.000	4	31	0.000	4	31	0.000
19:00 - 20:00	2	27	0.000	2	27	0.000	2	27	0.000
20:00 - 21:00	2	27	0.000	2	27	0.000	2	27	0.000
21:00 - 22:00	2	27	0.000	2	27	0.000	2	27	0.000
22:00 - 23:00	2	27	0.000	2	27	0.000	2	27	0.000
23:00 - 24:00	1	27	0.000	1	27	0.000	1	27	0.000
Total Rates:			0.016			0.024			0.040

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

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

Appendix 4 – Parking Accumulation

TRICS 7.8.4

Trip Rate Parameter: Number of holes

TRIP RATE for Land Use 09 - GOLF/C - PRIVATE > 18 HOLE COURSES

Calculation Factor: 1 HOLES

Count Type: TOTAL VEHICLES

Tuesday & Wednesday

55 Staff

Time Range	ARRIVALS		DEPARTURES		Acc	25 staff
	Trip Rate	Trip	Trip Rate	Trip		
06:00-07:00	0.111	3	0.037	1		27
07:00-08:00	0.496	13	0.033	1		39
08:00-09:00	0.626	17	0.13	4		53
09:00-10:00	0.74	20	0.285	8		65
10:00-11:00	0.626	17	0.211	6		76
11:00-12:00	0.455	12	0.325	9		80
12:00-13:00	0.496	13	0.455	12		81
13:00-14:00	0.415	11	0.528	14		78
14:00-15:00	0.398	11	0.626	17		72
15:00-16:00	0.366	10	0.569	15		66
16:00-17:00	0.35	9	0.569	15		60
17:00-18:00	0.431	12	0.569	15		57
18:00-19:00	0.35	9	0.512	14		52
19:00-20:00	0.167	5	0.426	12		45
20:00-21:00	0.037	1	0.519	14		32
21:00-22:00	0.037	1	0.259	7		26
22:00-23:00	0.019	1	0.093	3		24
23:00-24:00	0.037	1	0.037	1		24
Daily Trip Rates:	6.157	166	6.183	167		

TRICS 7.8.4

Trip Rate Parameter: Number of holes

Saturday

TRIP RATE for Land Use 09 - GOLF/C - PRIVATE > 18 HOLE COURSES

Calculation Factor: 1 HOLES

Count Type: TOTAL VEHICLES

Time Range	ARRIVALS		DEPARTURES		Acc	25 staff
	Trip Rate	Trip	Trip Rate	Trip		
07:00-08:00	1.073	29	0.135	4		50
08:00-09:00	0.99	27	0.167	5		73
09:00-10:00	0.74	20	0.292	8		85
10:00-11:00	0.594	16	0.448	12		89
11:00-12:00	0.688	19	0.354	10		98
12:00-13:00	0.708	19	0.958	26		91
13:00-14:00	0.771	21	0.844	23		89
14:00-15:00	0.708	19	0.906	24		84
15:00-16:00	0.594	16	0.854	23		77
16:00-17:00	0.583	16	1.219	33		59
17:00-18:00	0.323	9	0.792	21		47
18:00-19:00	0.688	19	0.927	25		40
19:00-20:00	0.444	12	0.481	13		39
20:00-21:00	0	0	0.296	8		31
21:00-22:00	0	0	0.111	3		28
22:00-23:00	0.148	4	0.519	14		18
23:00-24:00	0	0	0	0		
Daily Trip Rates:	9.052	244	9.303	251		

TRICS 7.8.4

Trip Rate Parameter: Number of holes

TRIP RATE for Land Use 09 - GOLF/C - PRIVATE > 18 HOLE COURSES

Calculation Factor: 1 HOLES

Count Type: TOTAL VEHICLES

Sunday

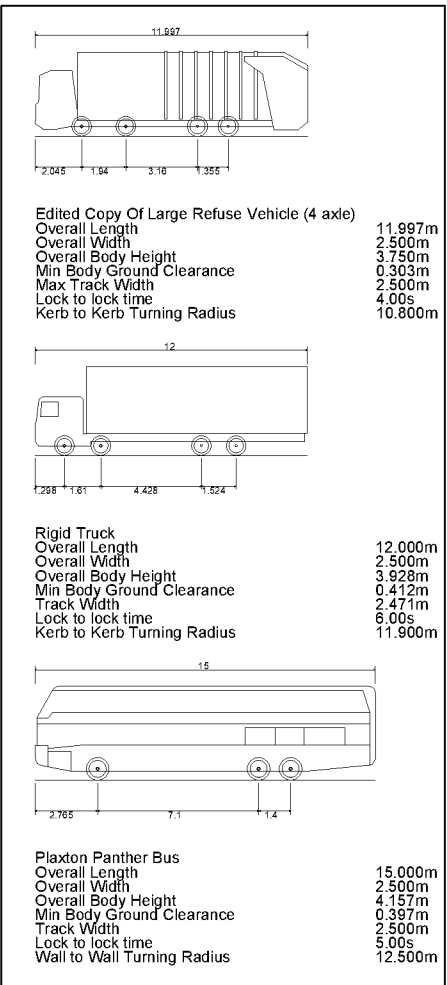
25 staff

Time Range	ARRIVALS		DEPARTURES		Acc
	Trip Rate	Trip	Trip Rate	Trip	
07:00-08:00	1.073	29	0.122	3	51
08:00-09:00	1.154	31	0.154	4	78
09:00-10:00	1.024	28	0.309	8	97
10:00-11:00	1.203	32	0.561	15	114
11:00-12:00	0.935	25	0.797	22	118
12:00-13:00	1.179	32	1.195	32	118
13:00-14:00	0.854	23	0.846	23	118
14:00-15:00	0.829	22	1.195	32	108
15:00-16:00	0.813	22	1.398	38	92
16:00-17:00	0.602	16	1.024	28	81
17:00-18:00	0.537	14	1.138	31	65
18:00-19:00	0.374	10	1.211	33	42
19:00-20:00	0.16	4	0.58	16	31
20:00-21:00	0.062	2	0.58	16	17
21:00-22:00	0	0	0.136	4	13
22:00-23:00					
23:00-24:00					
Daily Trip Rates	10.799		11.246		

Appendix 5 – Internal Swept Path Analysis

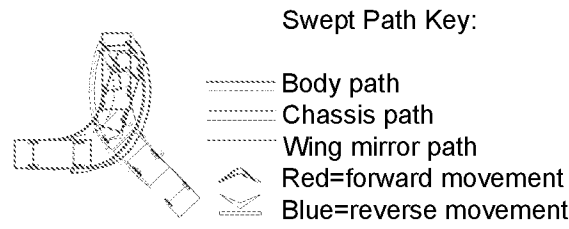


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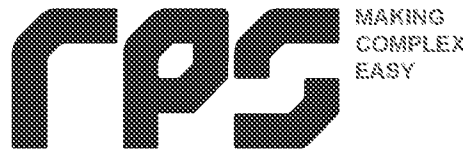


Based on drawing Z0624-NOV-V4-XX-M3-A-0001_Site_220422

PRELIMINARY
NOT FOR
CONSTRUCTION



C	Latest layout added (Z0624-NOV-V4-XX-M3-A-0001_Site_220422)	AJ	MA	26.04.22
B	Coach tracking re-routed and layby added	AJ	MA	07.01.22
A	Coach tracking re-routed	AJ	MA	06.01.22
Rev	Description	By	CB	Date



20 Farringdon Street, London EC4A 4AB
T: +44(0)20 3681 0500 E: transport@rpsgroup.com

Client Hallam Land Management

Project Bognor Regis

Title Proposed New Golf Course
Internal Swept Path Analysis

Status	Drawn By	PM/Checked by
INFORMATION	AJ	MA
Project Number	Scale @ A1	Date Created
JNY10830	1:1000	06/01/22
RPS Drawing/Figure Number	Rev	
JNY10830-13	C	

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Appendix 6 –Sketched Car Park Amendment

