

TECHNICAL NOTE

Project: TEI 397 Rosemary Cottage, Stroud
Date: January 2021
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Title: Technical Note 1 (TNI): Car Parking

Rosemary Cottage, Stroud, Parking Issues - Transport Technical Note

Introduction

1. This Technical Note (TN) has been prepared to examine parking issues at Rosemary Cottage, Stroud. The client has instructed Callidus to investigate the parking objections associated with the site that have been raised by the Local Highway Authority. The objections subsequently resulted in one of the reasons for a planning refusal by Stroud District Council (app. Ref. 17/2666/FUL). The reasons for refusal on highway grounds stated:

The proposed parking area, parallel to the highway, fails to provide safe and suitable access or minimise conflict between pedestrians, cyclists and vehicles contrary to Section 4 of the NPPF and Local Plan policy ES3 (criterion 5)

2. Policy ES3, criterion 5 states:

High quality development, which protects, conserves and enhances the built and natural environment will be supported. Development will be supported where it achieves the following:

5. An appropriate design and appearance, which is respectful of the surroundings, including the local topography, built environment and heritage.

3. Section 4 of the NPPF (2012) relates to the Government's planning policies on promoting sustainable transport.
4. The development proposals were subsequently appealed and dismissed (Appeal Decision ref: APP/C1625/W/18/3203169) by the Planning Inspector on grounds of parking provision. However, all other matters were accepted by the Planning Inspector, subject to planning conditions.



Parking Concerns

5. Callidus has reviewed the Planning Inspector's reasons for dismissing the planning application on the grounds of parking provision and summarises them as follows:
 - Character and appearance: The Planning Inspector held the view that the proposed parking would be '*conspicuous within its surroundings, having a contrived and incongruous appearance*'. Matters of character and appearance are not dealt with by this Technical Note.
 - Parking:
 - The parking provision is of the type parallel to Highfield Road with two parking spaces one behind the other.
 - Parking requires the highway to manoeuvre into the spaces.
 - If two cars are parked, several movements would be required to enter the spaces.
 - Restricted visibility to and from the parking spaces is limited.
 - Proximity to two neighbouring road junctions could result in potential for conflict.
 - The Appeal is determined on the scheme presented to the Inspector and any revisions to the scheme would need to be through the submission of an application.
6. The Planning Inspector concludes that the proposal would increase the risk of conflict and therefore fail to meet the objective of the NPPF, not comply with Local Plan Policy ES3 or the NP Policy W&R-TC1¹.

Observations on site

7. A site visit was undertaken on 17th December 2020 between the hours of 1000 and 1100. Observations and measurements were taken on site and are summarised below.
8. During the period when observations were made, one car travelled along Highfield Road and it was noted that this car travelled significantly slower than the posted speed of 20mph.
9. Measurements of the retaining wall currently at the site varied between 0.9m and 1.5m. The retaining wall can be seen below. This, along with the vegetation on it, will partially obstruct the visibility of drivers leaving the site as the driver's eye-line will be approximately 1.05m from ground level. The average height of a car is over 1.5m therefore, the roof of an oncoming travelling vehicle will be able to be spotted over the retaining wall.

¹ Whitehill and Ruscombe Neighbourhood Development Plan 2016



Figure 1: View looking north east (Approximately 2m from edge of highway)

10. Figure 1 above shows the sightline visibility from the parking area looking north east. The figure shows that the visibility is only partially obstructed and that approaching vehicles from the north east travelling along Highfield Road would be able to be seen. Planting on the top of the wall should be maintained but as the planting belongs to the owner of the site, this will not be a problem.



Figure 2: View looking south west (approximately 2m from edge of highway)

11. Figure 2 above shows the sightline visibility from the parking area looking south west. The curtilage wall partially obstructs the visibility but not to the extent that an approaching vehicle could not be seen. It is also possible to glimpse Main Road as well as vehicles exiting Ferndale Road.

Analysis

12. An Automatic Traffic Count (ATC) recording traffic speed and flow was carried out along Highfield Road, between 12th December 2020 and 18th December 2020. An image of the location of this can be seen below in Figure 3. This was carried out primarily to determine the speed of vehicles travelling in either direction along Highfield Road. It was also used to obtain traffic flow data but this was not its prime purpose.



Figure 3: ATC location

13. A summary of the results from the survey is shown in Table 1. The posted speed limit along Highfield Road is 20mph. However, the average 85th percentile speed from the speed survey was shown to be less than 15mph in either direction. This was measured for in excess of 450 vehicles in either direction over the course of 7 days.

Location	Direction	Speed Limit	Total Vehicles	Veh Flow 5-day Avg.	Veh Flow 7-day Avg.	Average 85 th ile Speed	Average Mean Speed
Highfield Rd, Ruscombe, nr Stroud - Att to T/Pole OSGR - SO 84137 07122	NE	20	493	76	70	14.6	11.0
	SW		464	69	66	14.8	11.3

Table 1: ATC Survey – Summary Results

14. The Stopping Site Distance (SSD) for a vehicle travelling at 15mph in accordance with DfT's Manual for Streets (MfS) guidance is calculated to be 17m.
15. The visibility requirements have been considered for a) sightline visibility for a car exiting the driveway; and b) forward visibility for a car / cycle approaching the driveway from along Highfield Road, in accordance with the standards set out in MfS.
16. The drawings to accompany the analysis can be found in Appendix A, Drawing Nos. TEI397/001, TEI397/002 and TEI397/003. The analysis has assumed the parking of the dwelling to be perpendicular to the highway, rather than parallel, as in practice this appears to be how the parking area is currently being used. This may be considered to be a more conventional and practical means of using the parking area. The drawings show the

following:

- Drawing TEI397/001 - Swept Paths Bay 1: A swept path analysis was carried out using a 'large car' for the parking position to the south west side of the parking area. This demonstrates that a car can reverse from Highfield Road (from a position facing north east) into the parking space in one manoeuvre. The car can depart the parking position in forward motion in a single manoeuvre also.
- Drawing TEI397/003 – Swept Paths Bay 2: A swept path analysis was carried out using a 'large car' for the parking position to the north east side of the parking area. This demonstrates that a car can reverse from Highfield Road into the parking space in one manoeuvre but this has to be from a position facing south west. This would mean approaching the property possibly via Field Road. The car can depart the parking position in forward motion in a single manoeuvre also.
- Drawing TEI397/002 – Sightline Visibility: This shows the sightline visibility from the driveway using criteria set out in MfS i.e. using a x distance back from the carriageway as the location of the drivers' eye and the y-distance to the carriageway. As the road is single lane, visibility is shown to the far side of the carriage. This drawing also shows that as the x distance is reduced and a car edges out to the side of the highway, the visibility is significantly improved. MfS states that 'a minimum x distance of 2m may be considered in some slow-speed situations when flows on the minor arm are low'². As previously stated, for a 15mph speed, MfS states that a visibility splay y-distance of 17m is acceptable.
 - Junction visibility to NE: To the north east, comparing the two visibilities with x distances of 1m and 2m, a y distance of 46m and 20m respectively to the far side of the carriageway can be achieved. This is greater than the 17m required by MfS so an approaching car could be seen.
 - Junction visibility to SW: To the south west the drawings shows the visibility splay to be slightly more obstructed. However, with a car positioned slightly further to the north-east, or edging out slightly further, the visibility is substantially increased and well in excess of that required by MfS.
 - Forward visibility from NE: From north east along Highfield Road looking towards the parking area of the property, the road is straight and has adequate forward visibility to be able to stop in time for a car manoeuvring in or out of the property.
 - Forward visibility from SW: From the south west, from Main Road, which has a 20mph speed limit, the forward visibility can be taken from the centre of Main Road for cars turning. This distance to the parking area of the property is 22m. This is adequate to be able to stop in time for a car manoeuvring in or out of the property. In fact a car turning into Highfield

² MfS para 10.5.8

Road would need to be prepared to stop well in advance of the property were it to meet general traffic coming out of Highfield Road of Ferndale Road.

17. In practice, vehicles will slowly edge out onto the highway to achieve a greater visibility and to ensure their movement is safe before manoeuvring. The figures below show that edging closer to the highway can allow a greater visibility to be achieved.



Figure 4: Visibility of a vehicle's first position



Figure 5: Visibility as a vehicle edges closer to the highway (Approximately 2m)



Figure 6: Visibility as a vehicle approaches the highway (Approximately 1m)

18. This method of slowly edging out onto the highway to achieve a better visibility can be demonstrated with respect to the dwelling directly opposite the site and other dwellings along Highfield Road. Here, there is no visibility to the North-east up Highfield Road. Therefore, vehicles leaving the dwelling will have to slowly edge out to increase the visibility and manoeuvre once it is safe. Along Highfield Road, many driveways have similar visibility issues with retaining walls etc. Images showing examples of this are shown below.

Reduced visibility
along Highfield Road



Figure 7: Visibility of dwelling opposite the site (Source: google maps)



Figure 8: Other areas on Highfield Road where visibility is obstructed

19. Data for collisions involving injury accidents for the most recent five-year period for which data is available has been taken from the online data provider CrashMap. The data is shown in Figure 9.
20. The figure shows that there have been no accidents in the vicinity of the site or along Highfield Road within a five-year period. One accident took place approximately 140m away to the north-west and this accident's severity was classified as 'slight'. It is unrelated to traffic movements in Highfield Road.

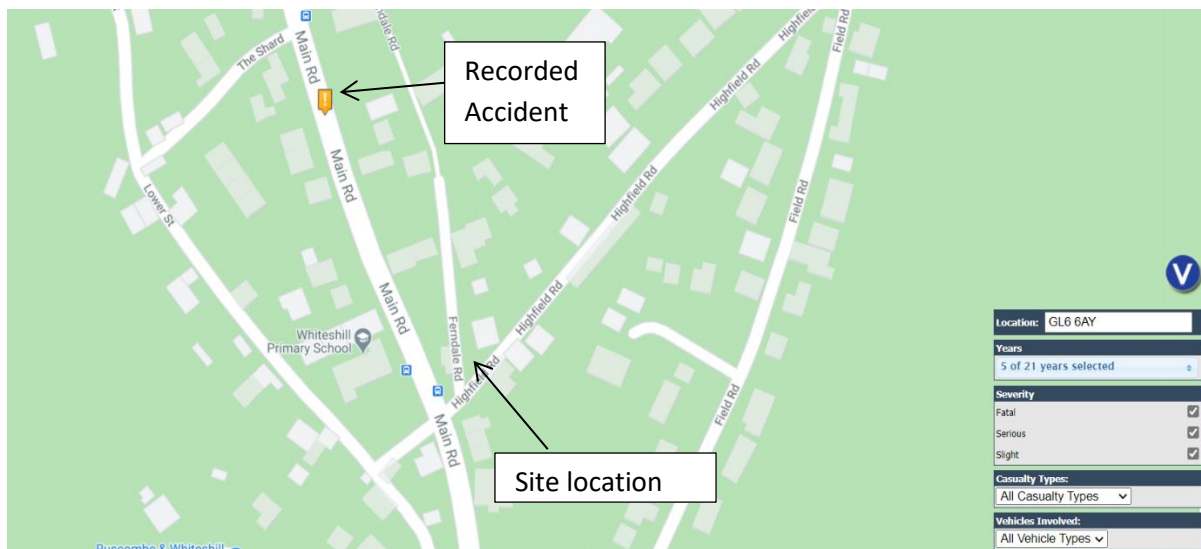


Figure 9: Collision data (source: CrashMap)

Conclusion

21. This Technical Note has examined the parking arrangement at Rosemary Cottage, Stroud. The highway related objection from Stroud district Council relates to the reduced visibility and small area for manoeuvring associated with the property.
22. The property parking area operates in practice as perpendicular parking as opposed to the

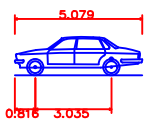
parallel parking that was initially proposed.

23. The swept path analysis of perpendicular parking has proved to be satisfactory, as vehicles can manoeuvre 'IN' and 'OUT' of the given parking area with little difficulty and minimal manoeuvring, which can be seen in drawing TEI397/001 in Appendix A.
24. The parking solution and visibility have been considered in accordance with recognised highway standards i.e. MfS. Due to the nature of Highfield Road and its constrained width of one vehicle shared between cars and pedestrians, vehicle speeds will be low. The speed survey that was carried out showed that the 85%ile speed was 15mph, which is slower than the posted speed of 20mph. This is due to the physically constrained character of Highfield Road at this location.
25. In practice, vehicles leaving their driveways and pulling out onto the highway will do so gradually by nudging out into Highfield Road and slowly increasing their visibility until it is safe to pull out onto the highway. In spite of this, the sightline visibility splays for Rosemary Cottage are reasonably good and certainly far better than many of the neighbouring properties. By careful positioning of vehicles, the sightlines from the parking spaces can be achieved in accordance with MfS. The forward visibility to the parking area of the property meets highway standards from either direction on Highfield Road.
26. Collision accidents in the surrounding road network have been obtained for the most recent five-year period. This has shown that there have been no accidents along Highfield Road within the last 5 years despite visibility issues associated with many properties along this road.
27. Callidus is of the opinion that the parking arrangements at Rosemary Cottage are entirely adequate for this particular property and the continued safe operation of the immediate local highway network. In our opinion, there are no substantive reasons in traffic and highway terms why the parking arrangements at Rosemary Cottage should not be acceptable to the Local Planning or Highway Authorities.

APPENDIX A

FIGURES

A3




Large Car (2006)
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Max Track Width
Lock to Lock Time
Kerb to Kerb Turning Radius

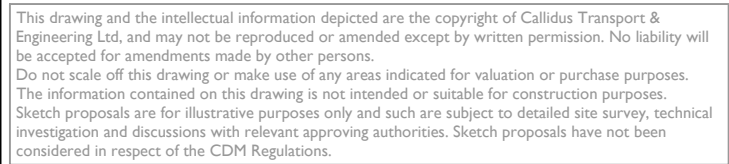
5.079m
1.872m
1.525m
0.310m
1.831m
4.00 se
5.900m




Forward OUT

Reverse IN

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