# Appendix B Road Safety Rebuttal

## Highways Rebuttal to PoE

**London Electricity Board Depot, Churchfields Road**

**Churchfields Road BR3**

SLR Project No.: 237324

5 August 2025

# CHURCHFIELDS ROAD DEPOT, CHURCHFIELDS ROAD, BECKENHAM

## Existing Access onto Churchfields Road

## Rebuttal to Proof of Evidence by Nojan Rastani, London Borough of Bromley Requested by SLR Consulting

## August 2025

## Contents



## Appendices



Gateway RSE
Road Safety Engineering

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*Gateway RSE Ltd is registered in England Number 14087123*
*Registered Office: Cheyanne House, West Street, Farnham GU9 7EQ*
*01483 679350*

*admin@gateway-rse.co.uk*
*www.gateway-rse.co.uk*

# 1 INTRODUCTION

1.1 My name is Stephen Anthony Giles, and I hold a Bachelor of Engineering Degree with honours in Civil Engineering. I am a Fellow of the Institute of Highway Engineers, a Member of the Institution of Civil Engineers, a Member of the Chartered Institution of Highways and Transportation, a Chartered Member of the Institute of Logistics and Transport, and a Member of the Society of Road Safety Auditors.

1.2 I am a Director in the firm of Gateway RSE and have over 40 years' experience in the fields of transport planning, highway engineering and road safety in both the public and private sectors. I was first engaged in collision data analysis in 1982 with Surrey County Council's Road Safety Unit and have been involved in road safety auditing since the early 1990s.

1.3 I understand my duty to the Inquiry to help the Inspector on matters within my expertise and that this duty overrides any obligation to the person from whom I have received instructions or by whom I am paid. I have complied, and will continue to comply, with that duty. I confirm that this written evidence identifies all facts which I regard as being relevant to the opinion that I have expressed, and that the Inquiry's attention has been drawn to any matter which would affect the validity of that opinion. I believe that the facts stated within this proof are true and that the opinions expressed are correct.

1.4 The purpose of this document is to consider the Proof of Evidence of Nojan Rastani (NJ) in as far as it addresses road safety matters, and to respond where appropriate.

## Background

1.5 In March 2025 I led an Audit Team in the completion of a Stage 1 Road Safety Audit of the existing site access and, in July 2025 the same Audit Team provided an updated audit report, considering additional drawings provided by SLR Consulting. Neither audit identified any road safety problems.

1.6 In July 2025, under instruction from SLR and in response to NJ's Proof of Evidence, I authored a report setting out a Road Safety Assessment. This comprised an analysis of recorded collisions in Churchfields Road and a risk assessment comparing the situation without and with traffic associated with the Masons Scaffolding yard.

1.7 Paragraph 2.3 of Mr Rastani's proof states that SLR's position has altered from the time of the original planning application, to which he raised no objections, to the submission of a traffic survey at the site conducted in November 2024. The additional information provided by SLR clarifies traffic conditions at the site and contains nothing that would materially affect the consideration of road safety matters.

1.8 The number of light vehicles associated with Masons Scaffolding increases slightly from the earlier estimates, but not the extent that a material road safety impact arises. The number of HGVs does not increase, thereby undermining any attempt to link HGV movements with a deterioration in road safety conditions. Certainly, this change does not justify moving from 'no objection' to *"substantiated safety concerns"* (paragraph 2.7).

## 2 RESIDENTS' PHOTOS AND VIDEOS

2.1 At paragraph 2.5, Mr Rastani refers to videos and photographs provided by residents. I have viewed them and do not agree that they demonstrate *"misuse of the designated access road by HGV drivers"* or that they *"reveal repeated instances of near misses and behaviours that pose a considerable risk to highway and pedestrian safety."*

2.2 In broad terms the residents' videos and photographs show some traffic congestion and some slow but free-moving traffic, both of which are common in built-up areas, particularly during the weekday peak hours and near schools at drop-off and collection times. However, congestion does not necessarily lead to safety risks, and in some circumstances, it can have a positive effect by slowing vehicles. Many of the images show a clear road with drivers and pedestrians moving freely and safely.

2.3 It is difficult to interpret road user behaviour from photographs, which can be misleading or lacking context, but they provide no evidence of road safety problems. Vehicle/pedestrian/cyclist proximity does not necessarily imply an unacceptable risk, otherwise most highway environments would be considered unsafe.

2.4 In the videos all road user interactions take place safely. Drivers and pedestrians demonstrate due care in accordance with the Highway Code, except for one van parked on the school keep clear marking, which appears to be school-related. However, it causes no identifiable road safety problem and is a matter of enforcement for the Council. One video shows the well organised arrival of three Masons flatbed lorries entering the site smoothly and safely while children and other pedestrians pass on the other side of Churchfields Road or stop and wait. This video appears to show exemplary and voluntary behaviour on the part of Masons drivers/operatives (including a trained banksmen directing the safe movement of all road users).

2.5 In another video, a car leaving the recycling centre waits for a Masons lorry to pass before emerging onto the access road. This looks to me like good driving, not a near miss. Indeed, none of the videos and photographs show any form of near miss. At the junction, a car approaching Churchfields Road stops to allow a supervised 'crocodile' of school children cross the access before proceeding safely.

2.6 Having reviewed the images and videos provided by residents, I strongly disagree with Mr Rastani's interpretation. On the contrary, I believe they demonstrate that no substantive road safety problems exist, and, on that basis, they support the findings of the Stage 1 Road Safety Audit (RSA) and the Road Safety Risk Assessment.

## 3 POLICIES

3.1 Within paragraph 3.9 Mr Rastani accurately quotes the objective of the road safety audit process as set out in DMRB document GG 119, which is aimed at engineering interventions on the trunk road network, and the CIHT guidance for use on local road networks. Both documents clearly state that RSAs are primarily used in the assessment of new highway schemes. Occasionally, an RSA is requested by a local highway authority or offered by a third party where no physical changes are proposed, as is the case here. However, the guidance documents are not written for that scenario, and I am led to believe that this Council does not have a policy basis for this. Indeed, Mr Rastani did not request such an Audit at the application stage, prior to concluding that he had no grounds to object to the scheme.

3.2 My other observations on Mr Rastani's Section 3 are as follows:

i) Stage 1 is the most appropriate stage of Road Safety Audit where no physical changes are proposed (NJ's para. 3.10). Stage 2 takes place upon detailed design and, since there is no design, is not possible. Stages 3 and 4 occur in the post-construction phase and, again, are not relevant in the absence of new highway works.

ii) Suitable access sightlines (visibility) from the site access along Churchfields Lane are available, as demonstrated by SLR drawing 237324/AT-D03 (NJ para. 3.11/A). The sightlines are clear in both the horizontal and vertical planes.

iii) The relatively small kerb radii at the site access junction help to control vehicle speeds, in accordance with Manual for Streets (MfS), which is welcomed in road safety terms (NJ para. 3.11/B). Furthermore, they assist pedestrians by minimising the crossing distance (NJ para. 3.11/D). Mr Rastani's assertion that the junction presents a safety hazard is therefore not supported by MfS, which actively encourages small junction radii in urban environments. Relevant extracts are provided at **Appendix A**.

iv) The reason for Mr Rastani's reference to 'Access Management' at paragraph 3.11/C is unclear since, in this respect, MfS addresses the provision of new access roads, not existing accesses. The swept path analysis provided by SLR and the videos supplied by residents demonstrate adequate existing geometry to accommodate manoeuvres without reversing.

v) A more general point regarding MfS is that it focusses on lightly trafficked *residential* streets (see 'Status and Application' on page 45). It is acknowledged that many of its key principles may be applicable to other types of street, for example high streets and lightly trafficked lanes in rural areas, but it is the responsibility of users to ensure that its application is appropriate away from residential streets. Streets serving industrial uses are not explicitly addressed by MfS, and whilst it provides a helpful starting point in this case, particularly in relation to visibility splays, its geometric recommendations should be applied flexibly. This principle is endorsed by the second edition of Manual for Streets (MfS2), which at section 3.2 notes concerns about an over-reliance on technical standards, and the need to use the available guidance as just that: guidance. It goes on to acknowledge that such guidance cannot be expected to cover the precise conditions and circumstances applying at the site under examination.

## 4 SITE ACCESS

4.1 At paragraph 6.1, Mr Rastani provides a description and photograph of the site access road. A width of 6.47 metres is entirely adequate to accommodate the traffic associated with industrial uses, and a width of 6.0 metres is routinely provided within industrial estates across the country. MfS (Figure 7.1) shows that a width of 5.5 metres will allow two HGVs to pass in a residential road, whilst the additional 0.5 metres provides a greater degree of comfort where HGVs form a larger proportion of the flows (which is not the case here).

4.2 The photograph below paragraph 6.2 (NJ) shows a minimum width of 6.04 metres, excluding a marked 1.3 metre margin for pedestrians. Vehicle speeds and pedestrian/cycle flows are low within the access road, and I have no concerns about the safety of all classes of road user in this environment owing to its alignment affording excellent intervisibility along its entire length.

4.3 Paragraph 6.5 of Mr Rastani's Proof of Evidence refers to drawings showing swept path analysis appended to SLR's Transport Statement of February 2024. These drawings, which I presume he considered when issuing his response to the planning application, are based on a generic rigid design vehicle and are therefore not necessarily representative of the real situation at Churchfields Road. Despite that, the design vehicle performs the left and right turns within the road space left by vehicles parked opposite the site.

4.4 The July 2025 Stage 1 Road Safety Audit considers more recently prepared swept path drawings, based on a topographical survey (which is more reliable than the Ordnance Survey digital base used previously) and a digital flatbed lorry more closely resembling the real-world vehicles used by Masons Scaffolding. Whilst the relatively small differences between the two sets of swept path analyses do not alter my conclusions, the recent analysis shows the more relevant flatbed lorries completing the manoeuvres more comfortably, providing a greater degree of confidence. It is also consistent with the videos and photographs provided by local residents and the Council, upon which Mr Rastani is placing significant weight in his evidence (ref. paras. 2.5, 6.6, 6.10, 6.12, 6.14, 6.15 and 9.4).

4.5 Mr Rastani refers at paragraph 6.5 to the perceived problem of vehicles crossing the centre line of Churchfields Road to complete their turning manoeuvres. He says this creates a potential conflict with vehicles approaching from the other direction, but this situation is common in urban areas and indeed is encouraged by MfS, to help reduce vehicle speeds and improve conditions for pedestrians and cyclists. MfS2 goes further, advising (at para. 9.4.10) that the widespread application of minimum 6m corner radii should not be taken as best practice when the needs of vulnerable road users are to be prioritised.

4.6 MfS2 paragraph 9.4.11 notes, with an accompanying diagram, that *"In many cases it may be better to…accept that larger vehicles occasionally cross into the opposing lane."* The relevant page is reproduced at **Appendix B**.

4.7 It is therefore not clear why Mr Rastani believes that the turning movements at Churchfields Road are unsafe, particularly in the absence of any historical collisions (as he confirmed in his application response) and in the context of the site's long-term industrial use.

4.8 Paragraphs 6.6 to 6.12 of Mr Rastani's proof continue this theme, and I can only reiterate that nothing in his text or embedded photographs suggest a road safety problem. Neither Churchfields Road nor the site access road may reasonably be described as 'narrow' and, should the kerb radii be increased as he suggests, conditions for pedestrians and cyclists would deteriorate for the reasons described by MfS and MfS2. The photographs do not, of course, show dynamic interactions between road users and are therefore inconclusive on the matter of road safety.

4.9 I see no road safety problem with a recycling site operative assisting manoeuvres in mixed use environments, and indeed such provisions are common in planning conditions and site management plans. The act of pedestrians, including a child in a pushchair (presumably under the supervision of a responsible guardian), waiting on the footway for the vehicle to complete its manoeuvre strikes me as entirely normal and in no way unsafe.

4.10 It is interesting to note that Mr Rastani considers the operational/staff junction serving the recycling centre (some 25 metres west of the site access) as acceptable in terms of sightlines and junction radii. I question this because the sightlines at both accesses satisfy those suggested by MfS and, at the operational access, the crossing width for pedestrians is longer and the corner radii facilitate higher vehicle speeds. Mr Rastani's position on the two accesses is inconsistent.

4.11 At paragraph 6.13, Mr Rastani considers that the *"occasional crossing of the centre line by large vehicles"* referenced by MfS is not reflected on the ground for numerical reasons. In other words, he does not regard the 20 Masons movements per day as occasional. I am not aware that MfS defines 'occasional', but I would have thought 20 HGVs over the course of 10 hours, i.e. an average of two per hour (one in, one out) satisfies that description regardless of whether they all cross the centre line. There is no constant stream of HGVs turning at the junction, unlike at a distribution centre or last mile warehouse, for example.

4.12 I believe the booking system introduced by the Council has substantially reduced queuing for the recycling centre and that concurs with my own observations, hence the situation described by Mr Rastani at paragraph 6.14 is largely a thing of the past. Nevertheless, the situation illustrated by his Photograph 6 is not unsafe because both speeds and passing flows are low, and ample visibility is available from both ends of the static vehicle queue.

4.13 Drivers travelling to/from the scaffold yard and electricity undertaker's sites will be familiar with the environment and will give way as necessary. Moving vehicles are simply passing a static queue, not 'overtaking' or 'weaving', hence Mr Rastani's reference to the Highway Code is irrelevant. I am advised that Masons Scaffolding now instructs drivers to pass a queue only when it has cleared the exit from the recycling centre. I understand the exit has been upgraded in recent months to show a more prominent stop line and advisory signs reminding drivers that they do not have priory when exiting the recycling centre. These are material road safety considerations.

4.14 Photographs 7 and 8 show that the HGV does not encroach into the marked pedestrian area, and I do not understand why Mr Rastani feels this represents a risk to pedestrians. The emerging vehicle in Photograph 8 appears to be exiting the site safely after the HGV has passed.

4.15 In respect of the behaviour of Masons' drivers (NJ para. 6.17), no relationship exists between the act of passing a static queue within the access road and any interaction with pedestrians (including school children) on Churchfields Road, both of which I have addressed separately above.

4.16 Mr Rastani refers at paragraph 6.18 to a damage-only collision, which he correctly notes would not be recorded by Crashmap or other collision databases, including that maintained by Transport for London. For that reason, the ad-hoc reporting of damage-only collisions provides an unreliable source of data in road safety analysis and is contrary to NJ's stated position in his response to the application.

4.17 Damage-only collisions are assigned a substantially lower value in cost-benefit analyses widely employed by highway authorities when prioritising engineering interventions. The DfT's published data for 2023 indicates a damage-only cost of £2,880, which is only 2.1% of the overall average cost of a collision leading to personal injury (£133,307). It is therefore unreasonable to criticise the use of Crashmap, or to imply that damage-only collisions are routinely relied upon to determine whether a given road environment is safe.

4.18 Furthermore, Crashmap does not record only KSI (killed or seriously injured) collisions, as suggested by Mr Rastani (para. 6.18). It also records slight casualties, which made up 81% of all casualties recorded in 2023.

4.19 The cumulative impact of the Masons Scaffolding use on congestion, emergency services access and road safety is overstated by Mr Rastani (para. 6.23). The 66 vehicles generated by the site equates to a maximum of 2.5% of daily flows along Churchfields Road. It follows that, if such problems exist, they will exist with or without Masons.

4.20 Furthermore, Mr Rastani suggests that traffic congestion leads to reduced road safety but offers no explanation for this position. On the contrary, traffic congestion often creates safer conditions for pedestrians by stopping or slowing vehicles.

4.21 The access road was designed for and accommodates traffic associated with industrial uses such as Masons Scaffolding and the two other uses, including HGVs. The booking system introduced at the recycling site maintains an even flow of light vehicles and site operatives are on hand to assist when required. The available collision data provides no evidence of a road safety problem over at least 25 years, despite the ongoing industrial uses on site during that period.

4.22 Mr Rastani's evidence fails to support his view that the Masons Scaffolding activity compromises road safety on the site access or in Churchfields Road.

4.23 I understand general concerns about the safety of young children travelling to and from school, but I do not accept that this environment represents a particularly unsafe one for that group of road users, for all the reasons set out above. Indeed, most primary school pupils are accompanied by guardians/carers. Furthermore, I do not believe the Masons Scaffolding operation alone materially affects road safety conditions or justifies remedial measures. Nevertheless, I do see the merits in general terms of reducing the number of HGV movements near schools during drop-off and collection times.

## 5 STAGE 1 ROAD SAFETY AUDIT

5.1 Paragraph 8.2 of Mr Rastani's Proof of Evidence refers to the classification of vehicles attending the site, placing emphasis on the fact that the Clancy (electrical undertakers) site attracts primarily LGVs of up to 3.5 tonnes, not HGVs. This rather misses the point of an RSA, which beyond the usual design drawings relies principally on the auditors' observations on site. Traffic flows and composition are relevant to a point because they are usually design inputs, but engineering aspects of the existing and planned physical environment are paramount. GG 119 is clear on this matter in its multiple references to engineering interventions, design standards, highway schemes, and so on.

5.2 During the RSA site visit the Audit Team witnessed several Masons Scaffolding lorries turning to and from the site access without causing road safety problems, which is consistent with the residents' videos. I am therefore confident that we were able properly to consider the physical environment. We also observed an articulated HGV entering the recycling centre via the operational access but stopping on the public highway for about one minute whist waiting for the gate to open, as seen in the photograph below.

5.3 I do not suggest that this is unsafe, and significantly it is little different to the situation at the site access over which Mr Rastani expresses substantial concerns in relation to the smaller Masons Scaffolding vehicles. The car simply waits for the lorry to clear and then proceeds. This situation may be a little inconvenient for the car driver, but it is not unsafe. It is possible to see danger in an image without context if one wishes to, but such danger does not necessarily exist.

5.4 At paragraphs 8.3 and 8.4 Mr Rastani further demonstrates a misunderstanding of the RSA process. As previously mentioned, Stages 2, 3 and 4 are inappropriate and indeed not possible where no highway works are to be carried out. The more appropriate response is a Stage 1 RSA and, if a more detailed analysis of the collision record is deemed appropriate, a road safety study/risk assessment, which we have now provided on behalf of the Appellant, is suitable.

5.5 The focus of paragraph 8.5 (NJ) is on the peak period for Masons vehicles and states that the RSA is inaccurate in its statement that *"few of these trips occur during the conventional peak hours."* I should clarify that the statement referred to HGVs, which (according to Table 4.2 to the proof of James Bancroft) amount to one or two movements in the morning peak hour (08:00-09:00); six occur in the two-hour afternoon school peak period (14:00-16:00) and none occur in the conventional afternoon/evening peak (17:00-18:00. These trip numbers must reasonably satisfy the description 'few'.

5.6 Paragraph 8.6 (NJ) further criticises the RSA in relation to traffic flows and a reliance on collision data. I have dealt with these matters at length but would question his reference to the traffic flow/composition changes as 'significant'. In road safety terms at least, they are not. I am also entirely satisfied that the collision data and swept path analysis that we have seen represents the best available source data and adequately equips us to conduct the audit, and we have observed real world vehicle manoeuvres at both accesses (and these have been confirmed by the residents' videos). Accordingly, Mr Rastani's assertion that the RSA is contrary to GG 119 is wholly unsubstantiated.

5.7 Regardless of the timing of the site visit (NJ para. 8.7 and 8.8), the Audit Team was able to observe the vehicle movements of concern to Mr Rastani, while Churchfields Road and the site access were typically busy for a Friday morning, with a steady flow of vehicles, pedestrians and cyclists. The Audit Team has reviewed the images and videos captured by residents at other times, including busy school periods, and has seen nothing that would justify raising a road safety problem within the guidelines set out by GG 119.

5.8 At paragraph 8.8 Mr Rastani attempts to cast doubt on the reliability of the RSA, based on an assumption that it does not assess the 'design' from the perspective of all road users, as required by GG 119. To be clear, Mr Rastani was not party to the Audit and therefore cannot know what was or was not discussed. I confirm that the Audit did indeed consider all road users, fully in accordance with GG 119, and this much is clear from the report structure and Auditors' Statement. Nevertheless, no hazards were identified.

## 6 MITIGATION

6.1 I have been asked by SLR Consulting to comment on a new drawing (ref. 237324/AT-D12), showing potential improvements to the site access road.

6.2 The key elements of this potential scheme include:

i) replacement of the existing gates with a new set of gates set back 18 metres from Churchfields Road.

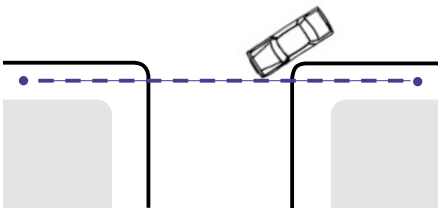
ii) A transition from the existing kerbed footway within the site access road, extending past the new gates and comprising a footway with 20mm bullnose kerb, leading to the existing marked virtual footway.

iii) Potentially, give way junction markings including a triangle, in accordance with the Traffic Signs Manual.

6.3 Whilst I do not consider these improvements essential to remedy an unsafe current situation, they undoubtedly provide some benefit. The gate set-back reduces the likelihood of arriving vehicles stopping on the carriageway and the extended footway provides added protection to the limited number pedestrians using the site access road. The give way markings provide extra clarity at the junction, benefitting all road users.

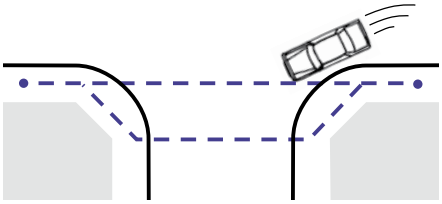
# APPENDIX A
# Extracts from Manual for Streets

**Small radius (eg. 1 metre)**

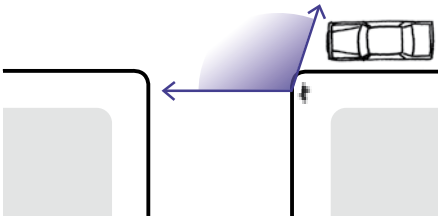


- **Pedestrian desire line (---) is maintained.**
- **Vehicles turn slowly (10 mph – 15 mph).**

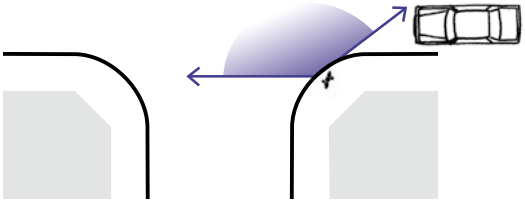
**Large radius (eg. 7 metres)**



- **Pedestrian desire line deflected.**
- **Detour required to minimise crossing distance.**
- **Vehicles turn faster (20 mph – 30 mph).**



- **Pedestrian does not have to look further behind to check for turning vehicles.**
- **Pedestrian can easily establish priority because vehicles turn slowly.**



- **Pedestrian must look further behind to check for fast turning vehicles.**
- **Pedestrian cannot normally establish priority against fast turning vehicles.**

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**Figure 6.3 The effects of corner radii on pedestrians.**

6.3.12 Pedestrian desire lines should be kept as straight as possible at side-road junctions unless site-specific reasons preclude it. Small corner radii minimise the need for pedestrians to deviate from their desire line (Fig. 6.3). Dropped kerbs with the appropriate tactile paving should be provided at all side-road junctions where the carriageway and footway are at different levels. They should not be placed on curved sections of kerbing because this makes it difficult for blind or partially-sighted people to orientate themselves before crossing.

6.3.13 With small corner radii, large vehicles may need to use the full carriageway width to turn. Swept-path analysis can be used to determine the minimum dimensions required. The footway may need to be strengthened locally in order to allow for larger vehicles occasionally overrunning the corner.

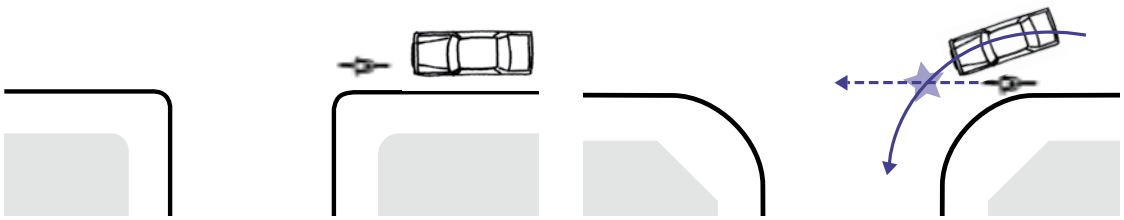
6.3.14 Larger radii can be used without interrupting the pedestrian desire line if the footway is built out at the corners. If larger radii encourage drivers to make the turn more quickly, speeds will need to be controlled in some way, such as through using a speed table at the junction.

6.3.15 The kerbed separation of footway and carriageway can offer protection to pedestrians, channel surface water, and assist blind or partially-sighted people in finding their way around, but kerbs can also present barriers to some pedestrians. Kerbs also tend to confer an implicit priority to vehicles on the carriageway. At junctions and other locations, such as school or community building entrances, there are benefits in considering bringing the carriageway up flush with the footway to allow people to cross on one level (Fig. 6.4). This can be achieved by:

- raising the carriageway to footway level across the mouths of side roads; and
- providing a full raised speed-table at 'T' junctions and crossroads.

**Small radius (eg. 1 metre)**

**Large radius (eg. 7 metres)**



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- **Cycle and car speeds compatible.**
- **Danger from fast turning vehicles cutting across cyclists.**

**Figure 6.15 The effect of corner radii on cyclists near turning vehicles.**

## 6.4 Cyclists

6.4.1 Cyclists should generally be accommodated on the carriageway. In areas with low traffic volumes and speeds, there should not be any need for dedicated cycle lanes on the street (Fig. 6.14).

6.4.2 Cycle access should always be considered on links between street networks which are not available to motor traffic. If an existing street is closed off, it should generally remain open to pedestrians and cyclists.

6.4.3 Cyclists prefer direct, barrier-free routes with smooth surfaces. Routes should avoid the need for cyclists to dismount.

6.2.4 Cyclists are more likely to choose routes that enable them to keep moving. Routes that take cyclists away from their desire lines and require them to concede priority to side-road traffic are less likely to be used. Anecdotal evidence suggests that cyclists using cycle tracks running adjacent and parallel to a main road are particularly vulnerable when they cross the mouths of side roads and that, overall, these routes can be more hazardous to cyclists than the equivalent on-road route.

6.4.5 Cyclists are particularly sensitive to traffic conditions. High speeds or high volumes of traffic tend to discourage cycling. If traffic conditions are inappropriate for on-street cycling, the factors contributing to them need to be addressed, if practicable, to make on-street cycling satisfactory. This is described in more detail in Chapter 7.

6.4.6 The design of junctions affects the way motorists interact with cyclists. It is recommended that junctions are designed to promote slow motor-vehicle speeds. This may include short corner radii as well as vertical deflections (Fig. 6.15).

6.4.7 Where cycle-specific facilities, such as cycle tracks, are provided, their geometry and visibility should be in accordance with the appropriate design speed. The design speed for a cycle track would normally be 30 km/h (20 mph), but reduced as necessary to as low as 10 km/h (6 mph) for short distances where cyclists would expect to slow down, such as on the approach to a subway. Blind corners are a hazard and should be avoided.

6.4.8 Cyclists should be catered for on the road if at all practicable. If cycle lanes are installed, measures should be taken to prevent them from being blocked by parked vehicles. If cycle tracks are provided, they should be physically segregated from footways/footpaths if there is sufficient width available. However, there is generally little point in segregating a combined width of about 3.3 m or less. The fear of being struck by cyclists is a significant concern for many disabled people. Access officers and consultation groups should be involved in the decision-making process.

6.4.9 Cycle tracks are more suited to leisure routes over relatively open spaces. In a built-up area, they should be well overlooked. The decision to light them depends on the circumstances of the site – lighting may not always be appropriate.

# APPENDIX B
# Extract from Manual for Streets 2

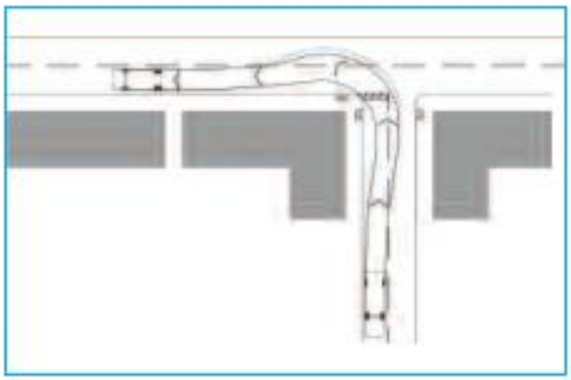
**9.4.8** Right turning lanes make it more difficult for pedestrians to cross major roads and lead to higher traffic speeds and authorities should therefore consider carefully all of the effects before deciding to provide them. Removing unnecessary right turn lanes can also be considered, and will bring substantial benefits to non-motorised users.

**9.4.9** Where right turn lanes are to be provided or retained, refuges should be provided within ghost islands to facilitate pedestrians crossing.

Ghost island junction with pedestrian refuge

**9.4.10** As noted in Sections 6.3 and 6.4 of MfS1, tight corner radii help pedestrians and cyclists to travel across and through junctions by reducing the speed of turning vehicles. Advice contained in TD 42/95[34], that minimum corner radii should be 6m in urban areas, should therefore not be taken as representing best practice when the needs of vulnerable road users are to be prioritised.

**9.4.11** Larger vehicles can still negotiate junctions where minimal (1m or less) corner radii are used, depending on the width of the junction arms they are turning to and from. In many cases it will be better to have slightly greater carriageway widths at the junction, rather than generous corner radii, or accept that larger vehicles occasionally cross into the opposing lane. This approach allows the vehicle to take a larger radius than the junction kerb, as shown below. This can be tested by vehicle tracking software rather than relying on fixed standards.



Despite the small corner radius, with sufficient carriageway width (X) a long vehicle can still negotiate a junction.

**9.4.12** Designers are sometimes reluctant to use tight corner radii on the grounds that vehicles slowing to turn into the minor arm may cause shunt collisions on the major road. This may be the case where speeds are high, but in urban areas the overall emphasis of MfS is that speeds should be reduced to appropriate levels of 30mph or below through design and the use of tight corner radii is consistent with this approach.

**9.4.13** Moreover, there are junctions on very busy routes where tight corner radii have existed for a considerable time, as shown above.

**9.4.14** Footway crossovers can be used instead of more formal priority junctions, which will give further prominence to pedestrians. Footway crossovers are often used successfully at accesses to commercial premises, as illustrated below, demonstrating that they can be used at busy locations.