Appendix C Highway Risk Assessment

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 Site Access onto Churchfields Road

Road Safety Assessment
Requested by SLR Consulting

August 2025

Contents

Gateway RSE
Road Safety Engineering

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1 INTRODUCTION

1.1 This report describes an assessment of collisions, and the risk of collisions, on the highway network surrounding an existing private site access at Churchfields Road, Beckenham, within the London Borough of Bromley. It has been commissioned by SLR Consulting following comments made by the London Borough of Bromley in evidence submitted to the current planning appeal. The access serves the Council's Reuse and Recycling Centre, an electricity undertaker's yard and a Masons Scaffolding storage yard.

1.2 Churchfields Road is a 2-lane single carriageway road running broadly southwest to northeast. It is lit with footways running along both sides and is subject to a 30mph speed limit (20mph when school flashing amber signals are active). The local highway environment is further regulated in the form of school 'keep clear' markings, bus stops, traffic calming (narrowing/raised table), and a semi-box junction at Clement Road.

1.3 The site access road is about six metres wide and its junction with Churchfields Road benefits from an uncontrolled pedestrian crossing with dropped kerbs and tactile paving. It also has a footway running along the southwest side, becoming a virtual footway approximately 12 metres from Churchfields Road. Thermoplastic speed humps along the access road limit vehicle speeds. Junction visibility along Churchfields Road is satisfactory in relation to the 30mph speed limit, and this is confirmed by SLR drawing 237324/AT-D03.

1.4 Operational recycling vehicles, including refuse trucks and staff cars, enter and leave the site via a separate barrier-controlled and gated access 25 metres to the southwest.

1.5 It is understood that the recycling centre is open between 07:00 and 17:30 on weekdays, with slightly reduced hours at the weekend. Outside of those times the gates at the back of the public footway are closed. The Council has introduced a booking system, in which residents are allocated a 15-minute window to visit the site until 17:00 on weekdays. The site's weekday capacity, based on a maximum of 72 booking slots per hour, is therefore 720 residents' trips per weekday. The evidence submitted by Mr Cowan on behalf of the Council suggests activity is in practice more like 630 vehicles.

1.6 A survey commissioned by SLR Consulting and carried out in November 2024 (before the booking system was in place) indicates that 31 vehicle trips occurred during the morning/school peak hour (08:00-09:00), and 184 occurred during the 2-hour afternoon school peak period (14:00-16:00). The booking system therefore increases the potential number of recycling trips during the morning peak and decreases the number in the afternoon peak, in each case by about 40 vehicle movements.

1.7 The electricity undertaker's yard generates a little over 100 vehicle movements per day, including over 40 HGVs. During the morning peak period the yard generates six light vehicles and five HGVs, whilst in the two-hour afternoon school peak the figures are 16 light vehicles and 12 HGVs.

1.8 Masons Scaffolding generates fewer than 66 daily movements, of which 21 are HGVs. Of the light vehicle movements, two are in the morning peak hour and seven occurred during the two-hour afternoon school peak period. One HGV departed during the morning peak hour and five departed in the two-hour afternoon school peak period, together with one further arrival.

1.9 A survey undertaken in November 2024 shows that the recycling centre attract some 770 daily vehicle movements on the access road . Almost all are light vehicles owing to the separate operational access.

1.10 This report considers whether any undue road safety risks arise from the site access with the current operational land uses, including Masons Scaffolding. It first analyses personal injury collisions on Churchfield Road and then sets out a risk assessment.

2 COLLISION DATA ANALYSIS

2.1 The network considered is shown in **Figure 1**. In line with the requirements of Planning Policy Guidance[1], Personal Injury Collision (PIC) information was obtained from the Crashmap database (www.crashmap.co.uk) for the latest available five-year period (2019 to 2023), which is a normal range for road collision studies.

[1] Paragraph: 015 Reference ID: 42-015-20140306 of the Planning Policy Guidance on *Travel Plans, Transport Assessments and Statements* refers.

2.2 No collisions resulting in personal injury occurred close to the site. Two collisions occurred on Beck Lane southwest of the site, one resulting in serious injuries and one in slight injuries. Neither involved vulnerable road users or HGVs. They are both over 200 metres from the site and cannot reasonably be considered directly relevant to the site access under consideration here.

2.3 Nevertheless, excluding junction collisions at either end of Beck Lane/Churchfields Road, only three collisions occurred along its 1.13km (0.7 mile) length during the five-year study period. This is not indicative of an inherently unsafe urban environment.

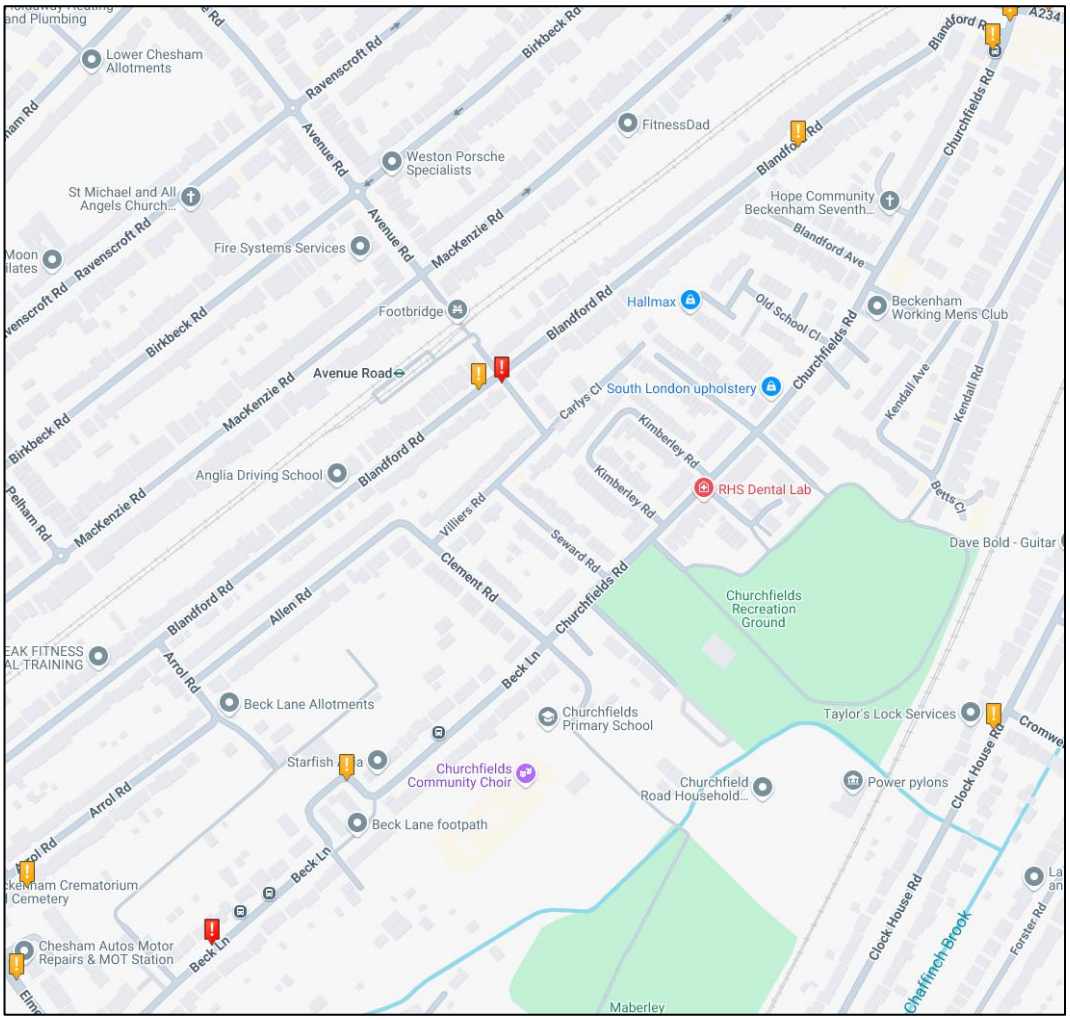

Figure 1: Collision Study Area, with collisions 2019-2023

2.4 For comparison purposes, the 10-year and 25-year collision records have also been considered. In the last 10 years for which data is available (2014 to 2023), one collision occurred at the site access. It was in July 2014 and involved a right-turning car and a motorcycle, which was passing on the offside. The motorcyclist sustained slight injuries. Conditions are described as fine, with a dry road surface, and in daylight.

2.5 One further collision is recorded at the site access in the 15-year period 1999 to 2013. It was in December 2005, in fine/light conditions but on a damp road surface. Two cars collided when one was waiting to turn right, and the other was travelling ahead on Churchfields Road, causing slight injuries to one of the drivers.

2.6 It is significant that no collisions involving pedestrians, cyclists or HGVs have been recorded at the site access during the 25 years for which data is available.

2.7 Beyond the immediate vicinity of the site access, eight collisions occurred along the full length of Beck Lane/Churchfields Road over 10 years, whilst 25 were recorded for the same area over 25 years, giving a long-term average of one per year.

2.8 It may be concluded that the site access junction has a good road safety record, and the wider local highway network is not inherently unsafe. It is understood that the site itself has been used for industrial purposes since the 1990s, and based on this evidence, there is no reason to think that the Masons Scaffolding operation has introduced any new road safety risks to those which have been historically associated with this site.

3 RISK ASSESSMENT

Methodology

3.1 The terms of reference for this road safety risk assessment are broadly as described in the relevant sections of the Institute of Highway Engineers (IHE) document 'Well Managed Highway Liability Risk' (2nd Edition, 2019) and the Design Manual for Roads and Bridges (DMRB) document GG104 'Requirements for safety risk assessment'.

3.2 The IHE guidance recommends that a risk-based approach (RBA) be adopted for all aspects of highway infrastructure maintenance, which may reasonably be extended to include highway modification schemes. It refers to the approach described by ISO 31000: 2009 Risk Management Principles and Guidance, which sets out the principles of risk management and the organisational framework and process required to develop a risk-based approach. This approach is illustrated in **Figure 2** below.

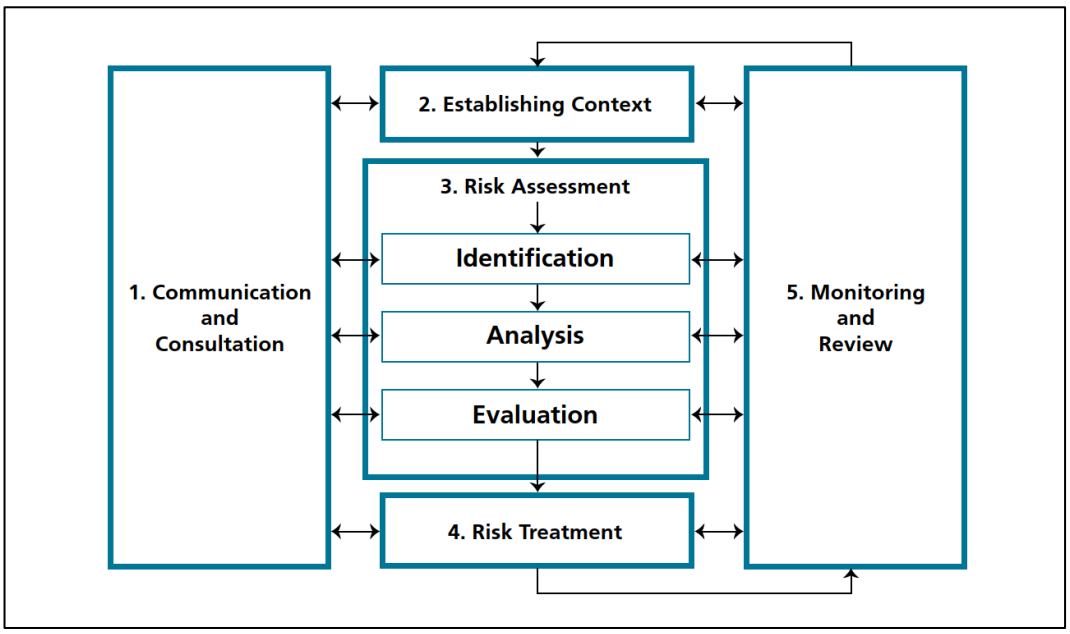

Figure 2: ISO 31000 process

3.3 This report focuses on (3), the central risk assessment, and utilises a variation of the suggested risk matrix which, for comparison purposes, is reproduced at **Figure 3**.

LIKELIHOOD OF EVENT OCCURRING	CONSEQUENCE OF EVENT OCCURRING				
	NEGLIGIBLE	LOW	MEDIUM	HIGH	SEVERE
NEGLIGIBLE	1	2	3	4	5
VERY LOW	2	4	6	8	10
LOW	3	6	9	12	15
MEDIUM	4	8	12	16	20
HIGH	5	10	15	20	25
KEY TO RISKS					
LOW		MEDIUM		HIGH	

Figure 3: IHE suggested risk matrix

3.4 The IHE guidance acknowledges that variations of this model exist, and that it is for the Highway Authority to adopt the method that best suits its requirements. Whichever model is used it is important that it aligns with the principles of RBA.

3.5 An alternative road safety risk assessment methodology that is more directly linked to road safety risk assessment is provided by GG104 (DMRB). The suggested safety risk assessment planning process is summarised in **Figure 4**.

Figure 4: GG104 Safety risk assessment planning process

3.6 **Table 3.1** reproduces GG104 Table D1, which indicates values for likelihood and severity outcomes that may be assigned to qualitative data for the purposes of assessment. It is similar in principle to the IHE risk assessment matrix shown in Figure 3.

Likelihood (L) x Severity (S) x Risk value (R)		**Severity (S)**				
		Minor harm; minor damage, no injury	**Moderate harm: slight injury, moderate damage**	**Serious harm; serious injury, substantial damage**	**Major harm; fatal injury, major damage**	**Extreme harm; multiple fatalities, extreme damage**
Likelihood (L)	Very unlikely; highly improbable, not known to occur	1	2	3	4	5
	Unlikely; less than 1	2	4	6	8	10

Likelihood (L) x Severity (S) x Risk value (R)		Severity (S)				
		Minor harm; minor damage, no injury	**Moderate harm: slight injury, moderate damage**	**Serious harm; serious injury, substantial damage**	**Major harm; fatal injury, major damage**	**Extreme harm; multiple fatalities, extreme damage**
	per 10 years					
	May happen; once every 5-10 years	3	6	9	12	15
	Likely; once every 1-4 years	4	8	12	16	20
	Almost certain; once a year or more	5	10	15	20	25

Risk Value (R)	Required action
Low (1-9)	Ensure assumed control measures are maintained and reviewed as necessary.
Medium (10-19)	Additional control measures needed to reduce risk value to a level which is equivalent to a test of 'reasonably required' for the population concerned.
High (20-25)	Activity not permitted. Hazard to be avoided or risk to be reduced to tolerable.

Table 3.1: GG104 Risk value, likelihood and severity of outcomes

3.7 **Table 3.2** below replicates GG104 Table D.2, which provides an example method to record hazard identification and an analysis of safety risk, risk values and safety risk mitigations.

Activity/ Decision									**Date**
Decision Maker/Assessor									**Contact Details**
Ref	**Hazard/ Risk Description**	**L**	**S**	**R**	**Response/ Control Measure**	**L**	**S**	**R**	**Details/assumptions/monitoring**
1									
2									
3									
4									
5									

Table 3.2: GG104 Hazard Identification and safety risk analysis

3.8 Given the similarities between the IHE and DMRB approaches, and the more directly relevant nature of the DMRB approach to road safety, this road safety risk assessment adopts the risk matrix and methodology suggested by GG104, as illustrated in Tables 3.1 and 3.2 above.

Scope

3.9 The scope of this risk assessment is limited to consideration of the road safety risks to road users associated with the site access without, and with, the Masons Scaffolding operation. The situation without Masons represents the road safety baseline, although in practice it is understood that the site has been in lawful industrial use since the 1990s, so this represents a worst-case road safety risk assessment.

Assessment

3.10 Table 3.3 shows the methodology described above applied to the baseline situation. Crashmap shows that only two collisions occurred close to the site in the last 25 years, none involving pedestrians or cyclists, hence the selected baseline likelihood (L) of 1 or 2. A severity of 2 has been selected to reflect the (albeit remote) possibility of pedestrian or cyclist involvement, whilst also recognising the 30mph speed limit.

Ref	Hazard/ Risk Description	L	S	R	Response/ Control Measure	L	S	R	Details/assumptions
1	Veh/ped collisions	1	2	2	Do nothing	1	2	2	
2	Veh/cycle collisions	1	2	2	Do nothing	1	2	2	
3	Veh/veh collisions	2	2	4	Do nothing	2	2	4	

Table 3.3: Road safety risk analysis - baseline situation

3.11 In the baseline situation, the existing risk value (R) calculated for all perceived collision types at the site is Low.

3.12 In the current situation with Masons Scaffolding, the physical environment, together with pedestrian and cycle flows along Churchfields Road, are unchanged from the baseline situation.

3.13 The most recent information pertaining to vehicle trips associated with Masons is a survey undertaken in November 2024, which records 66 two-way trips (movements) per day, of which 21 are HGVs. These HGVs predominantly depart before the morning peak period and return between 15:00 and 16:00. The remaining 46 daily movements are by light vehicles.

3.14 The other two users of the site access attract up to 820 vehicle movements, including 40 HGVs. The Masons trip generation therefore amounts to an increase of 8% overall. The number of daily HGV movements has increased by 20 from, 40 to 60. Masons deploy a banksman during school drop off and pick up times.

3.15 These trip increases do not necessarily lead to an increase in road safety problems, since driver and other road users' behaviour is the principal determinant of collision risk. The primary cause of collisions and increased injury severity is vehicle speed; our own observations and the videos provided by residents show that speed is not a widespread problem at this location. This observation is consistent with the good local road safety record.

3.16 It is therefore considered that the likelihood and severity of collisions is not materially changed by the Masons Scaffolding operation.

3.17 Table 3.4 sets out the risk assessment for the current situation.

Ref	Hazard/ Risk Description	L	S	R	Response/ Control Measure	L	S	R	Details/assumptions
4	Veh/ped collisions	1	2	2	Do nothing	1	2	2	
5	Veh/cycle collisions	1	2	2	Do nothing	1	2	2	
6	Veh/veh collisions	2	2	4	Do nothing	2	2	4	

Table 3.4: Road safety risk analysis – current situation

3.18 The above road safety risk assessment shows that, in both the baseline and 'with Masons' situations the risk value is low.

4 CONCLUSION

4.1 Based on the foregoing collision analysis and road safety risk assessment, it is considered that the Masons Scaffolding use of the site access introduces no new or increased road safety risks of any significance.