

Road Safety Study Risk Assessment

Project Manager	Joanna Redshaw	Project Title and Reference	Grove Park/Chadwick Rd
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CPZ ref.	Hazard Description	Probability (P)	Severity (S)	Risk Classification (R)	Response/Control Measure	P	S	R	Details
1	<ul style="list-style-type: none"> A reduction in the length of double yellow line to one metre either side of a vehicle crossover is a potential hazard because it reduces visibility splays for drivers. Southwark's design standards state that two metres either side of a vehicle crossover is sufficient. 	2	2	4	<ul style="list-style-type: none"> Accept as low risk. Design standard DS132 3.5.7 states that <i>Vehicles must be able to exit private land in forward gear.</i> Grove Park is a 20mph road and thus vehicle speeds should be low enough to permit this exception. In Grove Park there have been no collisions as a result of vehicles entering or exiting a driveway in the 36 months up to December 2016, in spite of an absence of 	2	2	4	<ul style="list-style-type: none"> With the removal of commuter parking that the parking zone should provide, there should be less traffic and all traffic should be travelling at a low speed. Less parked vehicles may lead to a greater feeling of space and thereby encourage higher vehicle speeds. The additional 23 parked cars should have some traffic calming effect.

					<p>any yellow lines across driveways currently.</p> <ul style="list-style-type: none">• In Chadwick Road there have been no collisions as a result of vehicles entering or exiting a driveway in the 36 months up to September 2017, in spite of an absence of any yellow lines across driveways currently.• A review of collision data will be carried out once available for the twelve month period after implementation.				
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Probability (P)	Severity (S)					Risk Classification (R)
	Minor harm (Minor damage or loss no injury)	Moderate harm (Slight injury or illness, moderate damage or loss)	Serious harm (Serious injury or illness, substantial damage or loss)	Major harm (Fatal injury, major damage or loss)	Catastrophic harm (Multiple fatalities, catastrophic loss or damage)	
Extremely unlikely (Highly improbable, never known to occur)	1	2	3	4	5	Low (1–9) Ensure assumed control measures are maintained and reviewed as necessary
Unlikely (Less than 1 per 10 years)	2	4	6	8	10	Medium (10–19) Additional control measures needed to reduce risk rating to a level which is equivalent to a test of 'reasonably required' for the population concerned
Likely (Once every 5–10 years)	3	6	9	12	15	
Extremely Likely (Once every 1–4 years)	4	8	12	16	20	High (20–25) Activity not permitted. Hazard to be avoided or risk to be reduced to tolerable
Almost Certain (Once a year)	5	10	15	20	25	

DS.002

Yellow line and tab waiting and loading restrictions

Rev.	Status	Created by	Date	Approved by	Date
A	Final	D.Farnham/T.Walker	28.09.12	D.Waters	02.10.12
B	Final	D.Farnham/T.Walker	02.05.13	D.Waters	08.05.13
C	Final	D.Farnham/T.Walker	05.12.13	M.Hill	12.12.13

1 Introduction

1.1 Notes

- a. This design standard explains requirements about how yellow line waiting restriction and yellow kerb-blip loading restriction road markings should be arranged when they are required. It does not explain the circumstances in which such restrictions should be introduced for parking demand management purposes – only for road safety purposes.
- b. See standard DS.900 for definitions of terms used in this design standard. Note in particular the definitions for 'should', 'will', 'may', 'level 1 departure', 'level 2 departure' and 'approving officer' as used to describe requirements. Note also the definition of 'Waiting Restrictions That Are Enforceable at Any Time' which is central to this standard.
- c. See SSDM/PR procedure PC.082 about the status of any revised version of this standard that may be issued during the active life of a project.
- d. See the SSDM webpages at www.southwark.gov.uk/ssdm for a list of frequently asked questions about the design of streets and spaces.

1.2 Discussion

- a. Single and double yellow line markings to TSRGD diagrams 1017 and 1018.1 are used in many circumstances to indicate areas where decriminalised prohibitions against waiting exist. In lay terms, 'waiting' means parking for a length of time. This is different to 'loading' (and unloading) or 'stopping' (quickly setting down or collecting passengers). However, where certain kinds of zonal parking schemes exist it may be possible to introduce waiting restrictions without the need to mark out yellow lines. See standard DS.001 for further discussion. Similarly, in a limited range of circumstances Section 86 of the Traffic Management Act 2004 makes it an offence to waiting in certain areas – irrespective of whether they are marked with yellow lines. Broadly this applies to lengths of carriageway that are level with the footway like at Raised Tables and dropped kerbs (including those associated with both Vehicle Crossings and Formal Crossings). Finally, zig-zag markings associated with Stand-Alone Controlled Crossings (e.g. pelicans, puffins and zebras) also serve to effectively prohibit loading, making introduction of yellow lines unnecessary.
- b. If it is necessary to introduce yellow line waiting restrictions then supporting upright signs may need to be provided along with each length – though this will depend upon the type of prohibition, its times of operation, and whether it is within a particular type of zonal parking scheme. However, this is only generally necessary if the restriction applies part of the time (rather than around the clock). Even where this is not the case, introducing zonal parking schemes can often reduce the number of upright signs required (as the times of operation of the temporary restriction can be stated on larger signs located at the entrances to the zone).

- c. Yellow kerb blips to TSRGD diagrams 1019 or 1020.1 are used to indicate areas where decriminalised prohibitions against loading (and unloading) exist. They operate in much the same way as yellow line prohibitions on waiting. Unless these or a few other special prohibitions are introduced then vehicle users have the right to stop for brief periods of time to load or unload their vehicles (providing they are not obstructing the highway). This remains true even where yellow line waiting restrictions are applied along a length of kerb. Unlike yellow line waiting restrictions, up right signs need to be provided in association with loading blips in the majority of circumstances – even when they operate around the clock.
- d. Where yellow lines or yellow kerb blips are introduced then these apply to the entire width of that side of the highway (including footways) about the real or notional centre line of the carriageway.
- e. As instances of very visible traffic management infrastructure, yellow lines and blips (and associated upright signs) can have a significant impact on the visual quality of streetscape proposals. For this reason designers are often keen to avoid or minimise their use. Whilst this is generally supported the remaining prohibitions need to be enforceable and easily understandable for vehicle users since tickets issued for contraventions are often appealed against. This can be a costly process for all parties. Moreover, where appeals are successful this can have wide ranging implications for the Highway Authority's design and enforcement operations, potentially requiring expensive borough-wide changes to prohibitions.
- f. Achieving all these aims generally requires the arrangement of restrictions and associated line and blip markings to be carefully considered at an early stage in the design process. Where it is left until after most other aspects of the design are agreed in detail then outcomes are seldom successful – either in visual or enforcement terms.
- g. Wherever yellow lines or loading blips are introduced then they need to be supported by an associated Traffic Management Order (TMO). This is a detailed written legal document held by the Highway Authority that describes where and when the prohibition applies. In practice the yellow lines and blips give visual indication of the existence of these orders so as to avoid entrapment of road users.
- h. Both yellow line waiting restrictions and yellow blip loading restrictions can be important for purposes that extend beyond parking demand management. The most obvious of these are road safety and pedestrian accessibility – since vehicles waiting or loading in inappropriate locations can obscure visibility between road users else block access to crossings. Both of these are of particular concern at junctions. Consequently, designers often introduce waiting and loading restrictions at junctions, bend and crossing points.
- i. Finally, notwithstanding the presence of any formal waiting or loading restrictions, members of the public should note that the Highway Code makes provisions about parking close to junctions. Rule 243 states "do not stop or park opposite or within 10 metres (32 feet) of a junction, except in an authorised parking space". Road users are expected to be proactive in complying with this. Whilst the Highway Code cannot be directly enforced by either the Police or the Highway Authority, non-compliance with it may be considered in the event of a road accident and individuals may be prosecuted on that basis.

2 Use requirements

2.1 General requirement for Traffic Management Orders

- a. As per discussion in section 1.2, in most circumstances introducing or modifying waiting or loading restrictions requires related TMOs to be confirmed in accordance with Statutory and Constitutional procedures. Neither yellow lines nor blips may be introduced until this happens. Consequently, if it is required by this or other design standards to introduce yellow lines or kerb blips then – if making TMOs is not possible owing to Objections received during related Statutory and Constitutional consultations, it should be appreciated that design proposals will likely need to be revised.

NOTE: Generally, if there are existing yellow lines or kerb blips on a street which are already backed by a TMO then, if the carriageway is just being narrowed and lines and blips will only move transverse across the street, then the TMO need not be amended. However, if the longitudinal

length or position of the prohibitions along the street will alter at all, then the TMO must be amended in accordance with Statutory and Constitutional procedures.

2.1.2 Around junctions

- a. Notwithstanding the Highway visibility requirements of standard DS.114, Waiting Restrictions That Are Enforceable At Any Time (see '1.1b') should be provided within all parts of junction spaces and for a minimum distance of 10m back along any arms that feed into them. In the case of side roads the 10m distance should be drawn back from the edge of the major road carriageway. In the case of major roads it should be drawn back from the intersection with the project line of the nearest edge of the side road carriageway before commencement of corner radii. Where a level 1 departure is agreed then this value may be reduced to 7.5m. Where officers are minded to permit such a departure then it should first be granted In Principle Only. This aspect of the proposals should then be raised as a Point Of Enquiry in a Road Safety Audit. Final Confirmation should be subject to a review of the findings of the Road Safety Audit. Normally that review will take place in a following Quality Audit (see notes 1 and 2).

NOTE 1: See SSDM/PR procedure PC.040 for further information about Road Safety Audits – including how to raise Points Of Enquiry. See SSDM/PR procedure PC.022 for further information about Quality Audits.

NOTE 2: Similar departure requirements exist for reductions on stopping sight distances for highway visibility purposes as standard DS.114. In practice, the two departures can be verified by the same Road Safety Audit.

- b. See standard DS.118 about the introduction of footway Build Outs through and in the vicinity of junctions to help make parking restrictions self-enforcing and further improve pedestrian accessibility. It should be noted that introduction of these facilities is a requirement is a significant number of circumstances.

2.1.3 In the vicinity of Vehicle Crossings

NOTE: See standard DS.132 for further requirements about the use and design of vehicle crossings.

- a. If a Vehicle Crossing is located on a Classified Road (an A or B Road) then Waiting Restrictions That Are Enforceable At Any Time (see '1.1b') should be provided for the entire length of the Crossing plus the entire length of any section of the nearside kerb on either side of this that is within the visibility Splay required in standard DS.114.
- b. If a Vehicle Crossings is not located on a Classified Road then Waiting Restrictions That Are Enforceable At Any Time (see '1.1b') should be provided for the entire length of the Crossing plus \geq 2m to either side.

2.1.4 In the vicinity of Uncontrolled Formal Crossings

- a. Notwithstanding the Highway visibility requirements of standard DS.114, Waiting Restrictions That Are Enforceable At Any Time (see '1.1b') should be provided to the entire extent of any Uncontrolled Formal Crossing (as defined by the extent of the blister tactile surfacing provided to its associated waiting areas as standard DS.207) and to the following distances either side.
 - i. To the upstream side of the Crossing (the side on which traffic using the nearside lane approaches)
 \geq 4m
 - ii. To the downstream side of the Crossing
 \geq 2

2.1.5 In the vicinity of Controlled Formal Crossings

- a. See standard DS.308 about the use of yellow line waiting restrictions in proximity to Stand Alone Controlled Crossings (e.g. zebra, puffin, pelican, toucan or equestrian crossings). The need for these will depend upon the length of the controlled area markings (zig-zag lines) associated with the Crossing as these otherwise serve to prohibit waiting for most vehicles.
- b. See section 2.1.7 about the use of waiting restrictions in the vicinity of formal controlled crossings provided as part of signalised junction arrangements.

2.1.6 In the vicinity of dropped kerbs (excluding those associated with Formal Crossings)

NOTE: See standard DS.205 for further requirements about the use and design of the various types of dropped kerb discussed below.

Disabled parking bay access dropped kerbs

- a. As dropped kerbs for these purposes should be located beside designated disabled parking bays, there is no need to provide waiting restrictions in front of these features.

Cycle access dropped kerbs

- b. Notwithstanding the Highway visibility requirements of standard DS.114, restrictions against waiting that are enforceable at anytime (see note) should be provided to the entire extent of any cycle access dropped kerb and for a minimum distance of 2m to either side of this.

Cycle access dropped kerbs

- c. Waiting Restrictions That Are Enforceable At Any Time (see '1.1b') should be provided for the full width of the feature. No such restrictions are required for any distance to either side however.

2.1.7 At signalised junctions

- a. Waiting Restrictions That Are Enforceable At Any Time (see '1.1b') should be provided to all lengths of kerb within the limits of any signalised junction. Where associated crossing facilities are included in the overall signalised junction arrangement then - assuming that these define the limits of the signalised junction - similar restrictions should be provided on the approach-to/exit-from these into/out-of the signalised junction as if they were uncontrolled formal crossings as section 2.1.4.

2.2 For parking demand management purposes

- a. It is not the purpose of this design standard to explain when waiting or loading restrictions should be introduced for parking demand management purposes – only to explain how yellow lines and blips should be laid out when a decision is taken that such restrictions are required for these purposes. For details about the Highway Authority's policy on introducing restrictions for these purposes, see the Southwark Network Management Policy (NMP).

3 Design requirements

3.1 Yellow line waiting prohibitions

NOTE: Yellow line markings are not always required in order for waiting restrictions to be enforceable. Refer to the definition of Waiting Restrictions That Are Enforceable At Any Time in DS.900 for further details.

3.1.1 *Review of all yellow line proposals by the Parking Design Manager*

- a. Similar to all other types of marked parking restrictions (e.g. bays, loading restrictions and associated upright signs) all proposals to introduce or modify yellow line markings are subject to review by the Parking Design Manager. They may instruct changes as they see fit via the approving officer. Such reviews may occur
 - i. during Officer Design Workshops (in advance of the submission of design proposal information for Output Check). See SSDM/PR procedure PC.006 for further information about Design Workshops and procedure PC.021 about Output Checks
 - ii. as part on Output Checks of submitted design proposals. See procedure PC.021 for further information about Output Checks
 - iii. during Quality Audits (though it will need to be confirmed in the Quality Audit Report). See procedure PC.022 for further information about Quality Audits

Their instruction may include omission of markings that are otherwise required as per this standard if they consider either that

- iv. waiting restrictions will be adequately enforceable under Section 86 of the Traffic Management Act 2004
- v. the local geometric layout of the Highway is likely to naturally discourage foolish motorists from waiting.

3.1.2 *Width and colour of lines*

- a. In new streets and spaces, all diagram 1017/1018.1 single/double waiting lines should be primrose yellow in colour and 50mm in thickness (see note).
- b. In existing streets and spaces, the width and colour of diagram 1017/1018.1 single/double waiting lines should be as follows appropriate to the extent and location of the works (though see 'c' about the refreshment of existing lines as part of the councils annual relining programme).
 - i. 50mm thick primrose yellow lines should be used where any of the following circumstances apply (though see 'e' below about raised table features).
 - Where new isolated stretches of single/double waiting line of any length are introduced to a side of the street along which there are no existing non-50mm primrose single/double waiting lines within the lesser of the following distances.
 - 45m
 - The entire length of the carriageway to that side of the street measured junction to junction.
 - Where lengths of existing single/double yellow line that are not 50mm wide and primrose in colour are extended and the length of the extended section is $\geq 30\text{m}$ (see notes 1 and 2).
 - Where existing single/double waiting lines that are not 50mm wide and primrose in colour exist along one side of street and the underlying carriageway to that side of the street is resurfaced or reinstated as follows.
 - For any reinstatement/resurfacing beneath of an isolated stretch of line that extends for any of the following.
 - o The entire length of that stretch of line
 - o Greater than 80% of the length of that stretch of line where the length of line is $> 25\text{m}$ but $\leq 50\text{m}$ (see note 1)

- o Greater than 60% of the length of that stretch of line where the length of line is $\leq 25\text{m}$ (see note 1).
- For any reinstatement/resurfacing beneath a stretch of line that connects to a length on a surface not being reinstated/resurfaced – where the length of line upon the area to be resurfaced is $\geq 45\text{m}$ (see notes 2 and 3).
- ii. Lines of a width and colour matching the existing should be used in all circumstances other than those covered by 'i'.

NOTE 1: The extent of the reinstatement/resurface should be extended to the entire extent of the line such that this can all be replaced with a 50mm primrose line.

NOTE 2: Where 100mm wide lines run into 50mm lines and the restriction is the same then a brief taper section of not longer than 1m length should be used to transition between the two lines widths.

NOTE 3: If a line is to be extended to within 5m of a junction, then the existing line should be burnt off (or remove by some other agreed method) back to the junction edge and replaced with a 50mm wide primrose line so as to place the transition between the two line types at a logical location.

- c. In the case of the Council's own relining works to refresh existing single/double waiting lines, if those lines are
 - i. 50mm in width and primrose in colour, then they should be refreshed to match.
 - ii. not 50mm in width and/or primrose in colour then they should be reviewed by the Parking Design Manager (or other individual delegated by them or the Board) who will instruct how to proceed.

3.1.3 Minimum length of stretches of blips

- a. Individual marked segments of yellow line should be $\geq 2.5\text{m}$ long.

NOTE: This applies to each 'as seen' marked section of line – not the length of the overall restrictions as per its Traffic Management Order.

3.1.4 Application to Raised Tables

- a. Arrangements for diagram 1019/1020.1 single/double waiting lines on Raised Tables will be advised by approving officers on a case specific basis in consultation with the Parking Design Manager. This includes the width and colour of line to be used in existing streets and spaces when new raised table features are introduced.

NOTE 1: In many instances, omission from in front of significant lengths of kerb may be possible under Section 86 of the Traffic Management Act 2004.

NOTE 2: The above applies equally to Side Road Tables, Link Tables and Intersection Tables.

3.1.5 Coordination with channel details

- a. If a modular unit channel runs along the edge of a bituminous mixture surfaced carriageway (see note) then, where that detail is $\leq 300\text{mm}$ in width, waiting lines should be laid on the bituminous surface to the edge of the modular detail – not on the modular detail (see note). In other instances (including where the entire carriageway is modular unit surfaced), the waiting lines should be laid on the channel detail. See standard DS.129 for further details.

NOTE: Where existing yellow lines on such a channel need to be refreshed then approving officers should be consulted to determine the appropriate course of action. They shall decide this in liaison with the Parking Design Manager.

3.2 Loading restrictions

NOTE: Yellow kerb blip markings (and associated Traffic Management Orders) are not always required in order for loading restrictions to be enforceable. Where a Restricted Parking Zone exists (see standard DS.001) and this includes loading prohibitions, then they will not generally be required and should be avoided unless this would result in a confusing road layout. However, additional upright signs will then be required as standard DS.003. In addition, where a stretch of carriageway falls within the controlled area of a pedestrian crossing (as defined by its zig-zag line markings – see standard DS.308) then restriction against loading will also be enforceable without introduction of further yellow blip markings (and related Traffic Management Orders).

3.2.1 Review of all kerb blip proposals by the Parking Design Manager

- a. Similar to all other types of marked parking restrictions (e.g. bays, waiting restrictions and associated upright signs) all proposals to introduce or modify yellow kerb blips are subject to review by the Parking Design Manager. They may instruct changes as they see fit via the approving officer. Such reviews may occur
 - i. during Officer Design Workshops (in advance of the submission of design proposal information for Document Check). See SSDM/PR procedure PC.006 for further information about Design Workshops and procedure PC.021 about Output Checks
 - ii. as part of Document Checks of submitted design proposals. See procedure PC.021 for further information about Output Checks
 - iii. during Quality Audits (though it will need to be confirmed in the Quality Audit Report). See procedure PC.022 for further information about Quality Audits

3.2.2 Minimum length of stretches of kerb blips

- a. Individual marked segments of yellow blip (see note) should be $\geq 10\text{m}$ long.

NOTE: This applies to each 'as seen' marked section of blips – not the length of the overall restrictions as per its Traffic Management Order.

3.2.3 Colour of blips

- a. Diagram 1019/1020.1 single/double loading blips should be primrose yellow in colour.

NOTE: All roads in Southwark for which Southwark Council is Highway Authority are considered to be environmentally sensitive areas.

3.2.4 Arrangement of blips on kerb faces

- a. Blips should be installed only to the horizontal surfaces of kerbs and footways. They should not be extended down upstand kerb faces.

3.2.5 Spacing between blips (along the carriageway)

- a. Diagram 1019/1020.1 single/double loading blips should be located at 4m centres. This may be reduced to a minimum of 2m between centres towards the ends of the restrictions for the purposes of fitting these into the limits.