



Brighton & Hove City Council

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City Speed Limit Review

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1 Introduction

Peter Brett Associates LLP (PBA) has been appointed by Brighton and Hove City Council to carry out a review of speed limits on all A and B class roads. A and B roads are highlighted on drawing number 21930/004/001 on the following page.

This is being carried out following the formal request to review these speed limits by the Secretary of State for transport on 15th December 2005. The Department for Transport (DFT) issued DFT circular 1/06 providing guidance on setting local speed limits. Any implementation of changes to speed limits is to take place by 2011. This has been included in Brighton and Hove City Council's Local Transport Plan (2006/7 – 2010/11).

This report details the process of reviewing the speed limits on the A and B class roads and recommendations (where necessary) of any changes to speed limits.

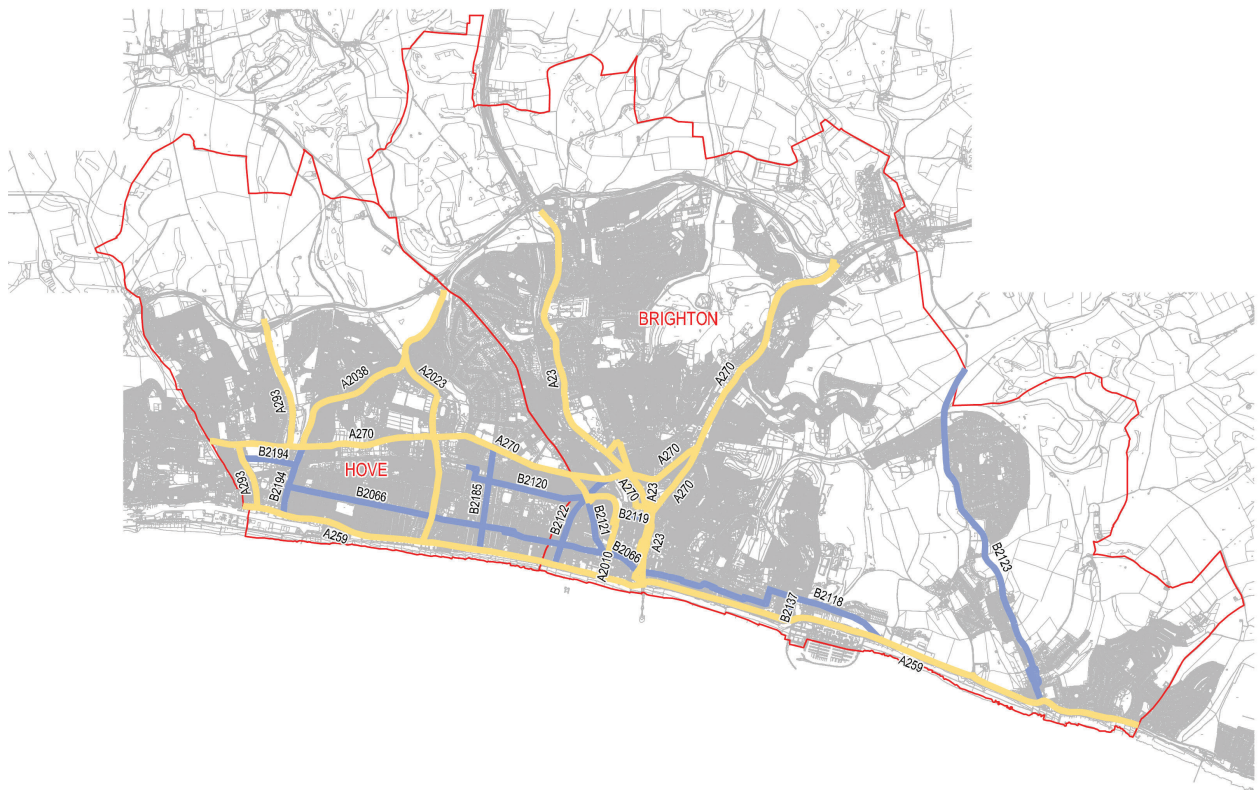


Figure 1.1 Key Plan

2 Data Collection

2.1 Accident Data

Accident data was received for the Sussex Safer Roads Partnership for the period 01 January 2005 to 30 November 2008. Speed related accidents were defined as one of the following:

- Exceeding the speed limit
- Carelessness, recklessness or in a hurry
- Travelling too fast for the conditions
- Aggressive driving
- Following to close.

Data received by PBA had been pre-sorted to speed related accidents. A reasonable sense check has been carried out on the data received. Data has been amended to correct some errors in road classification. Accident data is shown on PBA drg 21390/004/004.

2.2 Speed Survey Data

Speed survey data was received from Brighton and Hove City Council and in the majority of locations from the Sussex Safer Roads Partnership. The locations of the surveys are shown on drawing number 21930/004/005 (REQUIRES UPDATING TO SHOW NEW LOCATIONS).

Where multiple year data was available an average was taken. For this report we have looked at the 85th percentile and the mean speeds. This is in line with the DFT Guidance 01/2006. It is recommended that the mean speeds are used to set local speed limits. However there is generally a relationship between the mean and the 85th percentile speeds. Hence, if this is not the case, DFT guidance states that this indicates there are difficulties on the drivers' part in determining a suitable speed for the road, i.e. the road design does not match the speed limit.

Hence in this report we have looked at both the mean speed and the 85th percentile speed for each road to establish whether this gives an indication as to inappropriate speed limits to road design.

2.3 Site Visits

Site visits took place in order to establish the physical aspects of the roads studied. A video of each A and B classed road was carried out (a copy of which can be found in Appendix D). This allowed office based analysis to take place using a checklist to highlight specific design criteria and properties highlighted in DFT guidance. A drawing of existing speed limits has been produced – drawing number 21930/004/002 (see Appendix B). For each road, several checklists have been completed. We have attempted to keep section breaks to tie in with Brighton and Hove City Councils' road network information.

3 Guidance and Standards

3.1 Department for Transport Circular 01/2006

This guidance has been published by the Department for Transport (DFT) for use in setting local speed limits on single and dual carriageway roads.

Some key points from the guidance are as follows:

- Speed limits should encourage self compliance.
- Mean speeds should be used for determining local speed limits.
- Speed limit changes should be in line with road layout and characteristics.
- The relationship between mean speed and 85th percentile can be used to identify where drivers can not decide on an appropriate speed for the road which shows a lack of coherence between the road design and speed limit.
- Minimum length of a speed limit should not be less than 600 metres.

Speed Limit (mph)	Characteristics
20	In town centres, residential areas and in the vicinity of schools where there is a high presence of vulnerable road users.
30	The standard limit in built-up areas with development on both sides of the road.
40	Higher quality suburban roads or those on the outskirts of urban areas where there is little development. Should be few road users. Should have good width and layout, parking and waiting restriction in operation, and buildings set back fro the road. Should wherever possible cater for the needs of non- motorised users through segregation of road space, and have adequate footways and crossing places.
50	Usually most suited to special roads, dual carriageway ring or radial routes or bypasses which have become partially built up. Should be little or no roadside development.

Table 3.1 Speed limits in urban areas (DFT circular 01/2006)

Speed Limit (mph)	Characteristics
30	Should be the norm in villages
40	Should be considered where there is a high number of bends, junctions or accesses, substantial development, where there is a strong environmental or landscape reason, or where there are considerable numbers of vulnerable road users.

Table 3.2 Speed limits in rural areas (DFT circular 01/2006)

3.2 Design Manual for Road and Bridges

The Design Manual for Roads and Bridges (DMRB) is used for the design of trunk roads. TD9/93 of the DMRB is entitled Highway Link Design and within this section are detailed minimum desirable values for the geometric parameters of the road according to the speed limit. As such this offers us an additional area to check whether the speed limit is suitable for the road. A summary of the suitable radiuses for speed limits is detailed below in table 3.1. Horizontal radiuses of notable bends in the road have been measured, however these have been taken from the OS survey and it should be noted that accuracies are reduced. These bends are highlighted on drawing number 21930/004/005.

It is generally not recommended for the use in the design of single carriageways. However it offers us a good indication of areas of the carriageway which may be unsuitable (in terms of the radiuses relative to the speed limits). It does provide information of potential locations that should be addressed in terms of engineering re-design. Vertical curvature has not been assessed.

Speed Limit (mph)	60	50	40	30
Horizontal curvature (m)				
Minimum R without elimination of adverse camber and transitions	2040	1440	1020	720

Table 3.3 Horizontal curvature relative to speed limits (Summary of table 2 & 3 from DMRB TD9/93)

Potential unsuitable speeds for the horizontal geometry of the roads have been identified on the following roads:

- A259
- A2038
- A293
- A2010
- A23
- A270
- B2123

This is discussed further in the individual breakdown of each road in the chapters 4 and 5

4 A Roads

4.1 A27 – “Shoreham Bypass /Falmer Hill”

This is a Highways Agency road and hence is excluded from this report.

4.2 A23 – “London Road”

Description

London Road/ Preston Road runs north/south from the junction with the A27 to the north of the city, down to Marine Parade on the A259 along the seafront. This report only reviews the speed limit on the A23 up to the Patcham roundabout as past this point the road becomes under the control of the Highways Agency. The location of this road is shown on figure 4.1 below. The A23 is predominately a built up area; to the south is commercial and moving north to Gloucester Street is shop frontages. It then returns to commercial and residential from Preston Circus. The road is currently a 30mph speed limit with the exception of a length of 40mph at the northern end of the road.



Figure 4.1 Location of A23

At Gloucester Street there is some confusion with a 20 mph sign in the adjacent lane. The road continues at 30mph, however past this point there is a high number of pedestrians as there is a local shopping area. This continues up to Preston Circus, from where shop frontages are interspersed with residential.

Travelling north from Stanford Avenue, the speed limit is 30mph, however it has a good width and layout. In addition, there is a segregated/ on road cycle lane and adequate footways to cater for non-motorised vulnerable users. Hence this section could be a 40mph speed according to DFT guidance. However it may be better to approach this area by implementing a traffic calming scheme and retaining the 30mph. It would need to return to a 30mph speed limit at South Road as the area is more built up.

Speed has obviously been an issue along this road as hatching and speed cameras have been used to reduce speeds. The 30mph changes to 40mph at Old London Road where developments are set

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back from the carriageway and there is an increased width of carriageway. Hence this speed limit is appropriate and should remain.

Speed Survey data

1. London Road, south of Patcham Roundabout

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	40	38.7	32.5
Westbound:		40.5	34
All channels:		39.7	33.2

2. Preston Road, between Stanford Avenue and Lovers Walk

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	30	26.4
Westbound:		30.7	27.2
All channels:		30.3	26.8

3. Preston Road Roundabout, between Argyle Road & Springfield Road

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	31.7	26.1

4. Beaconsfield Road, between Ditchling Rose & Springfield Road

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	30.9	24.4

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The speed surveys indicate that the speed limit is appropriate and being taken in account. However the difference between the mean and the 85th percentile speeds indicates local perception of an appropriate speed. For the 40mph speed limit this could be increased with more speed limit repeater signs.

Accident Data

51 speed related accidents took place along the A23, 49 of which were slight, one was fatal and one was serious.

Highway Alignment

There are 3 locations along the A23 that have substandard radii on the bends. These are located in the northern section of the road.

Existing and Proposed Speed Limits

It is recommended that a 20mph speed limit is implemented from Gloucester Street heading north in line with the adjacent 20mph in the bus lane. This area is mainly shop frontages and due to the congestion and traffic lights speeds have been reduced. Hence a 20 mph speed limit would be in line with existing speeds. The location of the proposed amendment to the speed limit on this road is shown on the figure below. 20 mph speed limit should not be installed for a length smaller than 600m and should continue to Preston Circus. This amendment should be considered in conjunction with other schemes in the vicinity to this area. For example, LR2 (London Road- Lewes Road) proposals, local redevelopment and Valley Gardens proposals.



Figure 4.2 Location of proposed speed limits

4.3 A259 – “King’s Road”

Description

The A259 runs from the western to the eastern boundary of the Brighton and Hove City Boundary and runs along the seafront (Portslade by Sea to Saltdean). To the west, the adjacent land use is industrial but moving east it becomes residential and leisure. The location of this road is shown on figure 4.3 below.

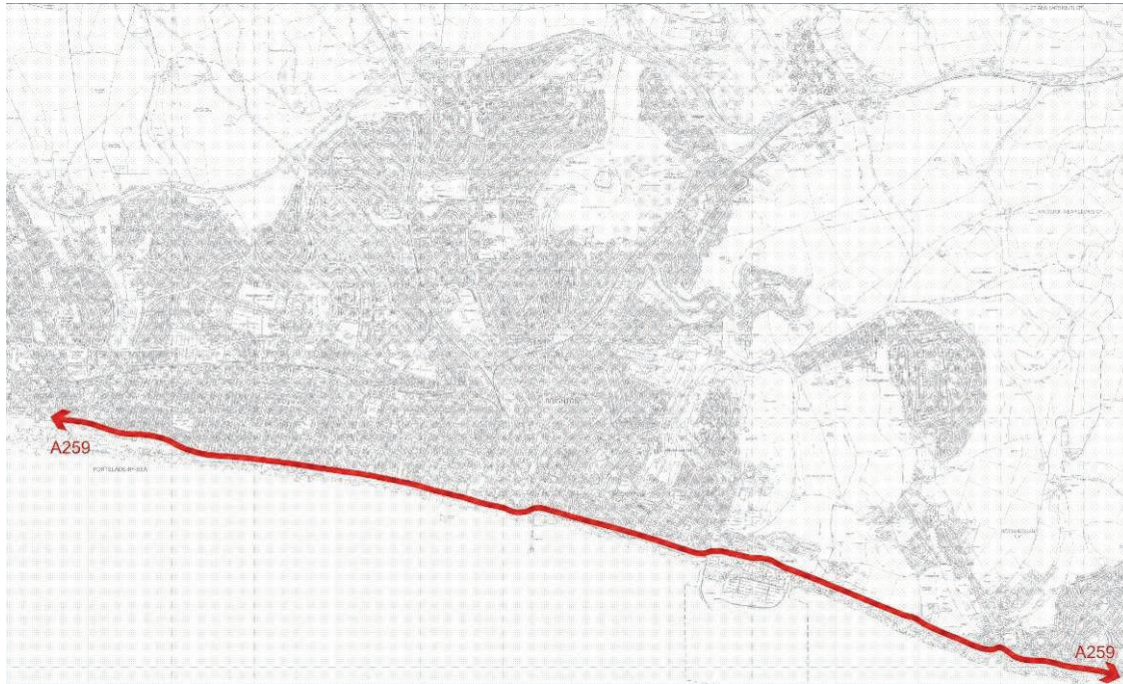


Figure 4.3 Location of A259

Travelling west from the eastern boundary is a section of road with a 30mph speed limit, one side of which is residential in places. There are few vulnerable road users as the bus lane is also a shared cycleway with a pedestrian footway adjacent to this. Exiting Rottingdean moving west the speed limit changes to 40mph then 50mph. Hatching has been used to keep speeds lower by giving the illusion of a reduced carriageway width.

At the Marina, the speed limit returns to 30mph, and has a more urban characteristic; it is more built up on the northern side. From Percival terrace, the road has four lanes. There are clearly issues with the speed limit along this length as vehicle activates signs and speed cameras are in use. The 30mph limit is used here due to the number of vulnerable users that this area by the seafront would attract. Traffic calming or highway re-design would be of benefit at this location in order to give a self enforcing speed limit.

Speed Survey data

5. Wellington Road, between Middle Street and Camden Street

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	35.0	28.9
Westbound:		34.9	29.9
All channels:		35.0	29.4

6. Marine Drive, between Roedean Road and Greenways

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	50	59.4	50.6
Westbound:		59.7	50.2
All channels:		59.6	50.4

7. Marine Drive, west of Chailey Avenue

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	35.6	28.2
Westbound:		33.3	27
All channels:		34.8	27.6

8. Kings Road Roundabout, between Cavendish Place and Oriental Place

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	30.3	23.2
Westbound:		34	27.3
All channels:		32.4	25.3

9. Marine Parade, opposite Camelford Street

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	31	24.5
Westbound:		29.5	23.3
All channels:		30.3	23.9

From reviewing the speed survey data above it is clear that the mean speed is within the current speed limit. This is with the exception of the first location in Marine Drive.

Accident Data

61 speed related accidents took place along the A259, four of which were fatal. In addition there were 5 serious and 52 slight accidents.

Highway Alignment

There are three locations along the A259 that have substandard radii on the bends.

Existing and Proposed Speed Limits

It was initially considered that speed limits along this section were amended: Specifically the 40mph section towards Rottingdean could be a 50mph as there are no roadside developments and currently this is a relatively short section. However local knowledge indicates that there are a number of shunt accidents that have taken place at the 40/30mph speed change. In addition alterations to the junction operations result in tail backs from the cross roads with the B2123. Hence increasing the difference in speed would not be advisable.

The A259 is currently under review as part of the Coastal Transport Review.



Figure 4.4 Location of proposed speed limits (none)

4.4 A2023 – “Sackville Road/ Nevill Road”

Description

The A2023 runs from Kingsway (A259) to King George VI Avenue (A2038) crossing the A270 Old Shoreham Road at approximately its mid-point. The adjacent land use is predominately residential, with a few shop frontages at the southern end. The location of this road is shown on figure 4.4 below.



Figure 4.5 Location of A2023

Speed Survey data

10. Sackville Road near Prinsep Road

	Current Speed Limit at location	85 th Percentile	Mean Speed
Southbound:	30	30.3	26
Northbound:		35	29
All channels:		33.2	27.5

11. Neville Road near Court Farm Road

	Current Speed Limit at location	85 th Percentile	Mean Speed
Southbound:	30	29.6	25.1
Northbound:		33.1	27.6
All channels:		30.8	26.2

From reviewing the speed survey data above it is clear that the mean speed is within the current speed limit.

Accident Data

11 speed related accidents took place on the A2023, all of which were slight accidents. Three of these accidents involved pedestrians (one of which a child was involved). As can be seen on the accident data drawing there is a concentration of accidents to the south of the railway.

Existing and Proposed Speed Limits

The road is currently 30mph for its entirety. To the north of the A270, Nevill Road, school safety zones are highlighted in two locations. A school is in proximity and hence a 20mph speed limit should be considered in the proximity to Hove Park School and Blatchingham Mill School. Due To DFT guidance, this would result in the speed limit of the complete section of road to the north of the A270 being changed to 20mph. This is as a result of the minimum recommended length of speed limit being 600m. The location of the proposed amendment to the speed limit on this road is shown on the figure below.



Figure 4.6 Location of proposed speed limits

4.5 A2038 – “Hangleton Road / King George VI Avenue”

Description

The A2038 runs from the A270 Old Shoreham Road to the roundabout adjacent to the A27 at Dyke Road. The adjacent land use of this road is predominately residential. It is a single carriageway, however a small section is dual carriageway, but on-street parking blocks this additional lane. At this location there are also speed camera warning signs indicating a speed limit issue. The location of this road is shown on figure 4.6 below.



Figure 4.7 Location of A2038

Speed Survey data

12. King George VI Avenue, west of Roundabout

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	50	44.5	38.2
Westbound:		42.2	36.7
All channels:		43.5	37.4

From reviewing the speed survey data above it is clear that the mean speed is within the current speed limit.

Accident Data

8 speed related accidents took place on the A2038. One fatal accident took place on King George Avenue. A further serious accident and 6 slight accidents took place.

Highway alignment

There are 5 locations along the A2038 that have substandard radii on the bends. One of which is highlighted on the road (this is the final bend before Dyke Roundabout. This then moves uphill which is also highlighted as 10% gradient on the descent.

Existing and Proposed Speed Limits

On the approach to the junction with the A2023 (travelling north) the width and lack of development would indicate a higher speed limit may be appropriate. However this area is closely followed by a substandard bend and hence speed limits should remain the same. Local knowledge indicates that the 30mph is too close to this bend, hence we recommend relocating this further up the hill. This distance still ensures that the 600m minimum speed limit length is achieved to the east. The section of dual carriageway would benefit from re-design as the second lane is not been taken advantage of fully due to parked cars and the added width this provides is causing speed issues. The location of the proposed amendment to the speed limit on this road is shown on the figure below.



Figure 4.8 Location of proposed speed limits

4.6 A293 – “Trafalgar Road/ Church Road/ Hangleton Link”

Description

The A293 is split into two sections either side of the A270 Old Shoreham Road; one section to the south connecting to the Wellington Road (A259) and one section to the north connecting to the A27. The location of this road is shown on figure 4.8 below. The northern section is currently a 40mph speed limit which quickly changes into a 60mph (national speed limit). There is no roadside development and it would appear to have little non motorised users, the southern section is currently 30mph and is predominately residential. There is however a primary school near Vale Road.



Figure 4.9 Location of A293

Speed Survey data

13. Hangleton Link Road, Brighton by-pass

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	60	44.3	38.5
Westbound:		45.9	39.2
All channels:		45.1	38.9

Speed survey data indicates that the current speed limit is not realistic of vehicle speeds. Mean and 85th Percentile speeds vary indicating an inability of drivers to perceive an appropriate speed.

Accident Data

5 speed related accidents took place on the A293, all of which were classes as slight. 2 accidents took place to the north of the A270 and 3 accidents took place to the south of the A270. As such no conclusion of location or speed issues can be drawn.

Highway Alignment

There is one location along the A293 that have substandard radius on the bend.

Existing and Proposed Speed Limits

It is recommended that the national speed limit in the northern part of the A293 speed limit is reduced to 50mph to be in line with DFT guidelines. This is not seen as an unreasonable speed limit for this road as speed survey data shows speed of less that 50mph. In the southern section of the A293 a 20mph speed limit should be considered near St Mary’s RC Primary school. It should be taken into account that the minimum recommended length of the speed limit is 600m. The location of the proposed amendment to the speed limit on this road is shown on the figure below.



Figure 4.10 Location of proposed speed limits

4.7 A270 – “Old Shoreham Road/ Lewes Road”

Description

The A270 runs from the West Sussex boundary across the Brighton and Hove to the junction with the A27. The location of this road is shown on figure 4.10 below. The land use adjacent to the road is mixed and is generally commercial or residential use. Moving west, the A270 starts at the junction with the A27. At this point it is a lit dual carriageway, with a 40mph speed limit. The initial section from the junction with the A27 has no adjacent development. The adjacent land to the road then becomes more built up from this point with on road features such as a cycle lane starting at Coldean Lane. This 40mph speed limit section also encompasses the road adjacent to a primary school and the university. For the latter, there is a speed camera in the vicinity to this area indicating an existing issue. Not soon after this point the speed limit changes to 30mph. This area is more built up having commercial, residential and shop frontages.



Figure 4.11 Location of A270

From Newmarket Road, the area becomes mostly shops and commercial being a local centre. The speeds in this area are naturally reduced by controlled pedestrian crossings. This report has proposed that a section of the A23 is amended to a 20mph speed limit; the A270 would cross this at the A23/ Cheapside junction. Cheapside itself has a highway alignment such that speeds are kept to the 30mph speed limit.

Moving west from Cheapside is mainly residential. Notably, the width of the road comes quite wide in place, for example Upper Drive to Goldstone Lane. The speed camera near Avondale Road indicates an issue with speeding, which could be managed by highway re-design. The road continues with a mixture of commercial/ residential properties adjacent to the carriageway.

Near the fire station, by the Cemetery the speed limit increases to 40mph and becomes dual carriageway. Initially this area is not built up, and then once it does there is separation of the residential areas from the carriageway with wide footways/ walls. It should be highlighted that there is a Primary school in this section.

Speed Survey data

14. Lewes Road, north of Coldean Lane

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	40	52.2	45
Westbound:		53.8	46.6
All channels:		53.2	45.8

15. Lewes Road, between Bear Road and Coombe Road

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	31.3	23.1
Westbound:		32.9	26.7
All channels:		32.3	24.9

16. Old Shoreham Road, west of Benfield Way

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	40	40.2	33.8
Westbound:		39.5	33.0
All channels:		39.9	33.6

17. New England Road

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	22.3	17.3
Westbound:		28.0	23.0
All channels:		26.1	20.3

18. Old Shoreham Road, Hove Park

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	40/30	31.3	26.7
Westbound:		32.5	27.9
All channels:		32	27.3

Speed survey data indicates that speed issues are present on the section of Road by Coldean Lane. Mean speeds are greater than the speed limit as are the 85th percentile. Both speeds differ from each other greater showing the drivers' lack of coherence between the road design and speed limit.

Accident Data

58 speed related accidents took place along the A270, 2 were fatal, 3 classed as serious and a further 53 classed as slight. Notably both the fatal took place near each other, one near the junction with Foredown drive and the other by Benfield Way. 19 out of the 58 took place in a 40mph speed limit section.

Highway Alignment

There are 6 locations along the A270 that have substandard radii on the bends.

Existing and Proposed Speed Limits

The A270 is currently either 30mph or 40mph. Generally this reflects the adjacent land use and road layout.

It is recommended that a 30mph speed limit is introduced on the Old Shoreham Road from the B2194 to Foredown Road on account of Benfield Junior School. Ideally this should be 20mph, however it is felt this would be difficult to enforce at this location.

It is recommended that the speed limit is reduced from 40mph to 30mph on Lewes Road from Moulsecomb Way south to the existing 30mph. This is as a result of high numbers of vulnerable road users at both Moulsecomb Primary School and The University of Brighton.

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East of Coldean Lane to the A27, speed surveys and road layout indicates vehicle speeds are greater than the current 40mph speed limit. It is recommended that this is addressed in order to avoid implementing an increase in the speed limit at this location. Also traffic in this area may increase due to the stadium development.

The location of the proposed amendment to the speed limit on this road is shown on the figure below.

Old Shoreham Road (A270 to the west of Brighton City Centre) is part of a study and schemes are in the design process, which may contribute/ amend the above. The Old Shoreham Road scheme aims to support the principles and measures of the Cycling Town projects. These aim to provide cycle lanes, increase bike use facilities, cycle training and other initiatives to improve the health, and travel choices of residents, employees, and visitors. Brighton and Hove City Council propose to provide an east west cycle route along the Old Shoreham Road as part of this. The scheme is currently under public consultation and following this a decision will be made on this section. The area in question is highlighted in yellow on the drawing below



Figure 4.12 Location of proposed speed limits

4.8 A2010 – “Queen’s Road”

Description

The A2010 runs from the A259 north to join the seven dials roundabout. The location of this road is shown on figure 4.12 below. The road passes through the city centre shopping area and hence vulnerable users are present in this area. Moving north there is more separation of pedestrian footways from the road by raised footways and bollards.



Figure 4.13 Location of A2010

Speed Survey data

19. Buckingham Place, between Compton Avenue and Bath Street

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	32.5	26.8
Westbound:		31.5	26.2
All channels:		32.2	26.6

Speed survey data would indicate that vehicles are travelling too fast at this location and the speed is inappropriate as the 85th percentile and the mean speed vary from each other.

Accident Data

10 speed related accidents took place on the A2010, one classed as serious and 9 classed as slight.

Highway Alignment

There is one location along the A2010 that has a substandard radius on the bend.

Existing and Proposed Speed Limits

Currently the whole length of the A2010 is 30mph, with the exception of a very short section of 20mph where the road crosses the B2066. It is recommended that this 20mph section should be enlarged from the A259 to Church Street.

Elsewhere, it is recommended that the speed limit remains at 30mph due to the area being built up and the high numbers of vulnerable road users present (this road runs past the station). Speed on Buckingham Road should be addressed by alternative schemes.

However due to the complexity of the Seven Dials roundabout, it is recommended that the speed limit is 20mph for 300m each side of the roundabout. It should be noted that this report only discuss the A and B roads which are 6 out of the 7 roads which meet at the Seven Dials roundabout. Hence the speed limit of Prestonville Road should also be amended for consistency. This would incorporate the minimum 600m length for speed limit. The location of the proposed amendment to the speed limit on this road is shown on the figures below.



Figure 4.14 Location of proposed speed limits

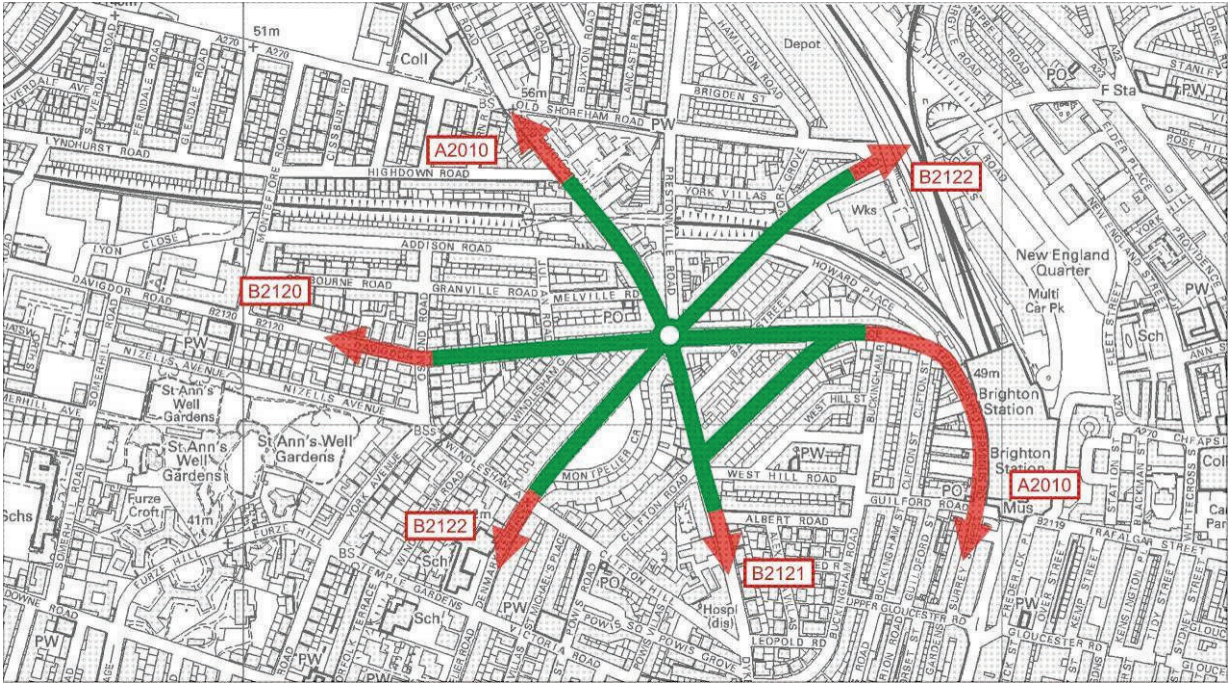


Figure 4.15 Seven Dials Roundabout

5 B Roads

5.1 B2066- “Western Road/ Church Road/ New Church Road”

Description

The B2066 runs in a west/east direction from the A23 in the centre of Brighton, westbound through Hove to the B2194 in Portslade-by Sea. The location of this road is shown on figure 4.14 below. This road connects Brighton centre to Hove centre and Portslade centre. The far eastern end of the B2066 has restricted access to vehicles. Western Road is one way westbound (eastbound is a bus and cycle lane only). The road becomes two-way at the junction with Montpelier Road (B2122). The remainder of the road is 30mph with varying land uses adjacent to the road. The carriageway is generally wide with on road parking.



Figure 5.1 Location of B2066

Speed Survey data

20. New Church Road near Amesbury Crescent

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	32.6	27.7
Westbound:		33.5	28.4
All channels:		33.2	28.1

21. Western Road near Brunswick Place

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	26.7	20.7
Westbound:		25.9	20.9
All channels:		26.2	20.8

22. Church Road near Hove Villas

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	26.1	21
Westbound:		25.5	20.4
All channels:		25.8	20.7

Accident Data

32 speed related accidents took place on the B2066, one serious and 31 slight. As the accident data drawing indicates, this is predominately at the junctions and towards the eastern section of the B2066.

Existing and Proposed Speed Limits

The whole of the B2066 is currently 30mph. It is recommended that the eastern end of the road (western road) should be reduced to 20mph up to Montpelier road as this is in a shopping area with a high number of vulnerable users. The remainder of the B2066 whilst through shopping areas in Hove has a wide road and would be difficult to reduce the speed without further traffic calming. However the 30mph ties in with DFT guidance for built up area and there are already a number of pedestrian crossing facilities along the route, with uncontrolled islands on raised platforms. The section of road with speed cameras on e.g. Near Langdale Gardens should be considered for highway schemes in order to reduce the speeds and encourage a self enforcing speed limit. The location of the proposed amendment to the speed limit on this road is shown on the figure below.



Figure 5.2 Location of proposed speed limits

5.2 B2118 – “Roedean Road/ Bristol Gardens/ St George/s Road”

Description

The B2118 runs from the A259 by Brighton Marina west to the A23 in the centre of Brighton. The location of this road is shown on figure 4.16 below. The section to the west from A23 to Upper Rock Gardens is one way and as such is fairly narrow. This area is mainly shop frontages. The remainder of the B2128 is either residential or commercial.



Figure 5.3 Location of B2118

Speed Survey data

23. St. James Street, between Madeira Place and Cavendish Street

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	20.9	16.7

Speed survey data indicates that the current speed limit at this location is too high and vehicles do not reach this limit

Accident Data

Two speed related accidents took place on the B2118 and were both classes as slight; they took place different locations.

Existing and Proposed Speed Limits

The current speed limit for the entire road is 30mph. The speed limit on the one way section from the A23 to Upper Rock Garden should be reduced to 20mph as it is an area which has a large number of vulnerable road users present. As it is one way the carriageway width is also reduced. This is also backed up by the speed survey data. The remainder of the road from Upper Rock Gardens to the A259 should remain as 30mph. The location of the proposed amendment to the speed limit on this road is shown on the figure below.



Figure 5.4 Location of proposed speed limits

5.3 B2137- “Arundel Road”

Description

The B2137 runs from the A259 at the seafront to the B2118, the location of this road is shown on figure 4.18 below. The land use adjacent to the road is predominately residential with the exception of a small number of shops at the northern end of the road. Pedestrian and cycles were minimal at the time of the survey. The road is a two way single carriageway with on street parking and street lighting. This parking reduces the width of the carriage at the southern junction.

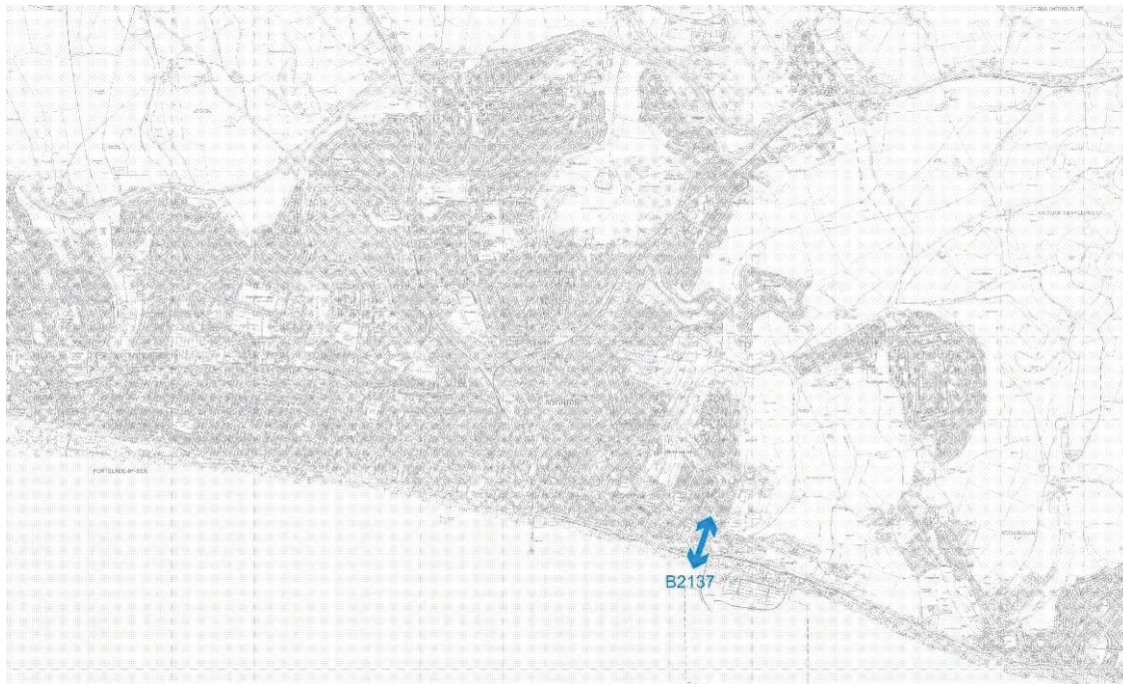


Figure 5.5 Location of B2137

Speed Survey

24. Arundel Road near Eastern Place

	Current Speed Limit at location	85 th Percentile	Mean Speed
Northbound:	30	29.5	24.3
Southbound:		31	25.9
All channels:		30.1	24.8

Accident Data

No speed related accidents took place on the B2137.

Existing and Proposed Speed Limits

The existing speed limit for this road is 30mph. This ties in with the DFT guidance for built – up areas with development on both sides. Hence it is recommended that the speed limit remains as 30mph.

5.4 B2121 – “Dyke Road”

Description

The section of road between Western Road and Upper North Road has vehicular restrictions on it. Traffic is restricted to bus and cycles only. The location of this road is shown on figure 4.19 below. There is a small section of 20mph within this section running from Western Street to upper North Street. The remainder of this section is 2- way traffic in a predominately residential area. There is a small section of shop frontages where the road meets the A2010 Seven Dials roundabout. There are waiting restrictions along the whole length of this road and it is within a controlled zone. There is a small section of on-road parking where the shop frontages are located. At this location the width of the road has been reduced.



Figure 5.6 Location of B2121

Speed Survey data

25. Dyke Street, between Bath Street and Compton Avenue

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	20.5	16.9
Westbound:		23.0	18.8
All channels:		21.6	17.6

There is some discrepancy between the mean and 85th percentile speed, however this is likely to be explained by the approach to the junction and the increase in on road parking. Both the 85th percentile and the mean speed are below the speed limit at the location of the speed survey. Normally this would indicate the speed limit should be reduced, however as data is not available for the complete road we cannot confirm this is the case.

Accident Data

One speed related accident took place on the B2121 and was classed as a slight accident.

Existing and Proposed Speed Limits

This section of road is currently a 30 mph speed limit. There is no obvious major risk to vulnerable users noted at this location; hence 20mph would not be appropriate. It is therefore recommended that the speed limit remains at 30mph. It is noted that the shop frontage area between Compton Avenue and the Seven Dials roundabout may benefit from a reduction in speed as this area has a higher presence of vulnerable road users. Speed survey data would indicate that speeds are already low in this area. As discussed in section 4.8 (A2010) the seven dials roundabout is to become 20mph and hence 300m of this road before the roundabout will be a speed limit of 20mph. The location of the proposed amendment to the speed limit on this road is shown on the figure below.



Figure 5.7 Location of proposed speed limits

5.5 B2122 – “Montpelier Road”

Description

The B2122 runs from the A259 to the A270, the location of this road is shown on figure 4.21 below. The lower section from the A259 along Montpelier Road to Western Road is one way flowing southbound. The remainder and majority of this road is two way. The road is predominately residential with the exception of shop frontages north of Seven dials roundabout and a small commercial access along Chatham Place.

Notably at the time of the survey there was a large amount of queuing traffic at the junction with the A270 at New England Road.



Figure 5.8 Location of B2122

Speed Survey data

26. Denmark Terrace near Clifton Hill

	Current Speed Limit at location	85 th Percentile	Mean Speed
Southbound:	30	31.4	26.6
Northbound:		30.9	26.4
All channels:		31.0	26.5

Accident Data

Although only 2 speed related accidents have taken place, they have both happened at the same junction. This occurred at Windlesham Avenue junction with Clifton Hill junction with Denmark Terrace. Both accidents were caused by a failure to see vehicles on Vernon Terrace and were classed as slight.

Existing and Proposed Speed Limits

Currently this road is a 30mph speed limit. As the road is urban and has no traffic calming measures in place, it is recommended the speed limit remains the same. Vulnerable road users have not been identified as particularly numerous at this location. As discussed in section 4.8 (A2010) the Seven Dials roundabout is to become 20mph and hence 300m on either side of the roundabout will be a speed limit of 20mph. The location of the proposed amendment to the speed limit on this road is shown on the figure below.



Figure 5.9 Location of proposed speed limits

5.6 B2120 – “Cromwell Road/ Davidgor Road

Description

The B2120 runs from the Seven Dials roundabout west along Davidgor Road to Cromwell Road at Hove Station. The location of this road is shown on figure 4.23 below.



Figure 5.10 Location of B2120

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The road layout is generally the same for the length of the road. It is a single carriageway with two way flow. There is parking on road on both sides of the carriageway for the majority of the route. This reduces the width of the road. There are uncontrolled crossings along the route as well as controlled crossings and zebra crossings. There are also online bus stops which reduce the speed of the traffic. The adjacent land use is residential along Davidgor Road, Cromwell Road and Denmark Villas until you reach the station approach where there is an area of shop frontages.

From the site survey, vulnerable road users in the area appear to be predominately pedestrians.

Speed Survey data

27. Davidgor Road near Osmond Road

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	32.2	26.7
Westbound:		30.8	25.9
All channels:		31.5	26.3

Accident Data

Three speed related accidents took place on the B2120, all of which were classed as slight accidents.

Existing and Proposed Speed Limits

The current speed limit is 30mph for the complete route. This in line with the standard limit in built up areas; hence it is recommended that the speed limit remains at 30mph. As discussed in section 4.8 (A2010) the seven dials roundabout is to become 20mph and hence 300m of this road before the roundabout will be a speed limit of 20mph. The location of the proposed amendment to the speed limit on this road is shown on the figure below.



Figure 5.11 Location of proposed speed limits

5.7 B2185 – “Grand Avenue/ The Drive”

Description

The B2185 runs from the seafront on the A259 Kingsway to the Old Shoreham Road A270. The location of this road is shown on figure 4.25 below. The southern section of the route between the A259 to the Eaton Road, whilst being two way, is divided by the two lanes of parked cars in the central area. In addition there is parking on the pavement side of each side of the road.



Figure 5.12 Location of B2185

Speed Survey data

28. Grand Avenue near Ashley Court

	Current Speed Limit at location	85 th Percentile	Mean Speed
Northbound:	30	30.4	25.7

29. The Drive near Bowen Court

	Current Speed Limit at location	85 th Percentile	Mean Speed
Southbound:	30	31.2	26.3

Accident Data

One speed related accident took place on the B2185 and was classed as a slight accident.

Existing and Proposed Speed Limits

The width of the road at the southern end of the B2185 would indicate that a reduction in speed would be inappropriate without additional traffic calming features to physically reduce the speed. Hence it is recommended that the speed limit remains 30mph. This road is currently subject to a post construction review independent of this report. As such no amendments to the speed limit have been considered at this time.

5.8 B2194 – “Victoria Road/ Boundary and Station Road/ Carlton Terrace”

Description

The B2194 runs north- south from the seafront on the A259 Wellington Road to the A270 Old Shoreham Road at Portslade. It also runs east – west from Portslade Station along the Victoria Road to Trafalgar Road on the A293. The location of this road is shown on figure 4.26 below.



Figure 5.13 Location of B2194

Speed Survey data

30. Victoria Road, adjacent to Park

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	33	27.3
Westbound:		34.0	26.5
All channels:		32.6	27.0

The only available speed survey data that is available is on Victoria Road adjacent to the park. Here the mean speed is below 30 mph. There is a discrepancy between the 85th percentile and mean speeds indicating confusion in the perception of the appropriate speed limit for this route.

Accident Data

12 speed related accidents took place on the B2194, all of which were classed as slight. As the accident data drawing shows they predominately took place on the main Portslade High Street or the far eastern section of Victoria Road. This indicates an inappropriate speed limit on this section of road.

Existing and Proposed Speed Limits

Currently this entire road is 30mph speed limit. It is recommended that Portslade centre is a 20mph speed limit due to the number of vulnerable road users and number of accidents that have taken place. This section should be from New Church Road to the A270. The remainder of the B2194 should remain at 30mph. The location of the proposed amendment to the speed limit on this road is shown on the figure below.



Figure 5.14 Location of proposed speed limits

5.9 B2119 – “Trafalgar Street”

Description

The B2119 runs from the A23 to Frederick Place, the location of this road is shown on figure 4.28 below. The area adjacent is predominately shop frontages. Currently the area is a 20mph zone with high levels of pedestrian activity at the time of the survey. The lower part of the road is one way. This is line with guidance for town centres where there is a high presence of vulnerable road users. The layout of the road currently encourages lower speeds through reduced widths along the road. The junction with Sydney Street is on a raised table giving more priority to pedestrian users and reducing vehicle speeds. Hence we recommend no amendments are made to this speed limit.

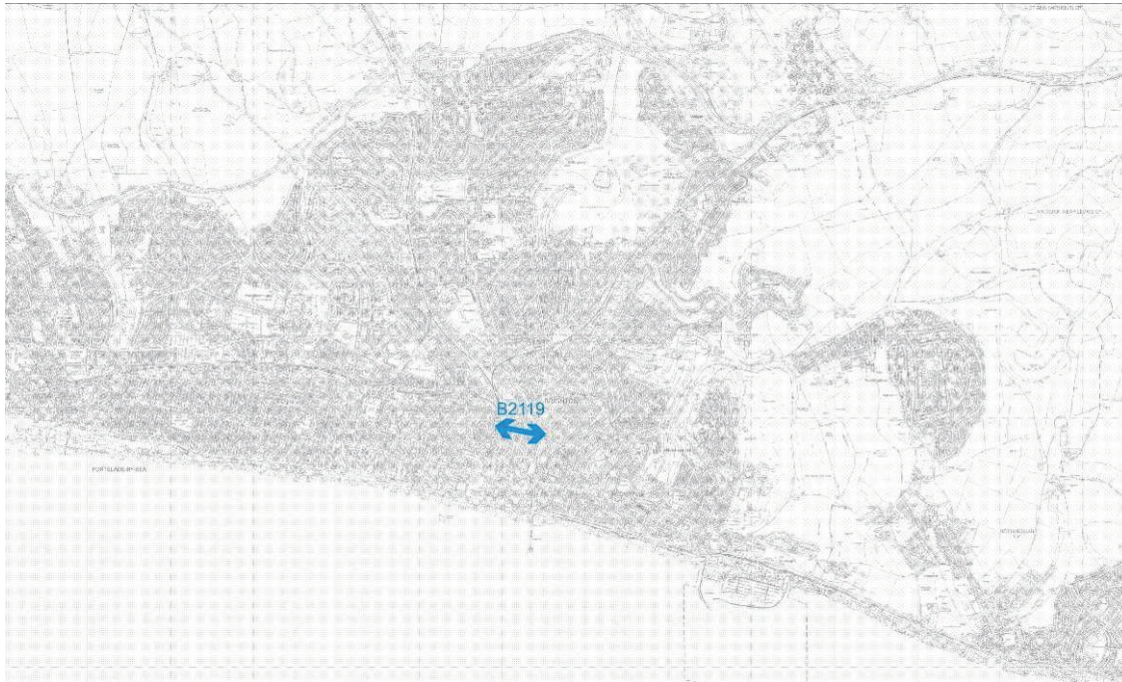


Figure 5.15 Location of B2119

Speed Survey data

31. Trafalgar Street near Blackman Street

	Current Speed Limit at location	85 th Percentile	Mean Speed
Northbound:	20	20.6	16.8
Southbound:		19.1	14.9
All channels:		19.7	15.6

Accident Data

One speed related accident took place on the B2119.

Existing and Proposed Speed Limits

It is recommended that the speed limit remains as the existing speed limit (20mph).

5.10 B2123 – “Falmer Road”

Description

The B2123 runs from Marine Drive (A259) through Rottingdean and Woodingdean to the Brighton and Hove City Council Boundary. The location of this road is shown on figure 4.29 below.



Figure 5.16 Location of B2123

Speed Survey data

32. Falmer Road, north of Bexhill Road

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	30	38.4	31.5
Westbound:		35	25
All channels:		37.1	28.3

33. Falmer Road, Woodingdean/ Ovingdean

	Current Speed Limit at location	85 th Percentile	Mean Speed
Eastbound:	40	38	31.9
Westbound:		37.4	31.1
All channels:		37.7	31.5

There is a significant difference between the 85th percentile and the mean speed indicating a lack of perception in the appropriate speed along these sections by drivers.

Accident Data

15 speed related accidents took place on the have taken place along the B2123. Of these 14 accidents two were classed as serious and the remaining 13 were classed as slight. As the accident data drawing shows, these accidents have taken place along the length of the B2123 and hence definite conclusions cannot be drawn.

Highway Alignment

There are 3 locations along the B2123 that have substandard radii in the 40mph speed limit and 3 locations in the 30mph speed limit.

Existing and Proposed Speed Limits

Currently there is a section of 20mph into Rottingham centre. This is appropriate as there is a reduced width of carriageway, narrow footways and there is a school in the vicinity. Moving north the speed limit changes to 30mph, which is according to the DFT guidance is appropriate of the rural village. It would be beneficial to consider a scheme to enforce the speed limit in the village areas were cameras have been installed to control speeding. The following 40mph section is out of the village area but has a number of bends and there is a shared cycleway/ footway which indicate a number of vulnerable users. To the south of this section there is Longhill High School. Following discussions, it is recommended that the two 30mph sections are joined together and the 40mph section is removed. However enforcement/ traffic calming options will have to be investigated as part of this proposal in order to control speeds. The location of the proposed amendment to the speed limit on this road is shown on the figure below.



Figure 5.17 Location of proposed speed limits

6 Conclusion

Horizontal geometry discussed within this report has not had a large influence on speed limit amendments. Whilst it gives an indication of the characteristics of the road other factors in the DFT guidance have been used to address the speed limit review. These areas do however highlight possible weaknesses in the highway layout which can be addressed independently to this study.

A summary of proposed speed limits as discussed in each chapter is shown in table 6.1. This is illustrated on drawing number 21930/004/003.

Reference Number	Road	Existing Speed Limit (mph)	Proposed Speed Limit (mph)	Details
1	A23	30	20	Gloucester Street to Preston Circus
	A259	Existing speed limit to remain		
2	A2023	30	20	In the vicinity to Hove Park School
3		30	20	In the vicinity to Blatchingham Mill School
4	A2038	50	30	Extent of 30mph limit extended
5	A293	60	50	Northern section of A293
6		30	20	In the vicinity of St Mary's RC Primary School
7	A270	40	30	B2194 to Foredown Drive
8		40	30	Moulsecombe Avenue to Natal Road
9	A2010	30	20	A259 to Church Street
10		30	20	300m before Seven Dials roundabout
11	B2066	30	20	Western Road to Montpelier Road
12	B2118	30	20	A23 to Upper Rock gardens
	B2137	Existing speed limit to remain		
13	B2121	30	20	300m either side of Seven Dials roundabout
14	B2122	30	20	300m either side of Seven Dials roundabout
15	B2120	30	20	300m before Seven Dials roundabout
	B2185	Existing speed limit to remain		

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Reference Number	Road	Existing Speed Limit (mph)	Proposed Speed Limit (mph)	Details
16	B2194	30	20	New church Road to A270
	B2119	Existing speed limit to remain		
17	B2123	40	30	40mph Limit to be removed between Woodingdean and Ovingdean

Table 6.1 Proposed amendments to speed limits

All proposed changes to speed limits shown in the table 6.1 are shown in figure 6.1 below.



Figure 6.1 Proposed amendments to speed limits

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Appendix A

Drawing number 21930/004/002 – Existing Speed Limits

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Appendix B

Drawing number 21930/004/003 – Proposed Speed Limits

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Appendix C

Drawing number 21930/004/004 – Speed Related Accidents on A & B Roads

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Appendix D

Drawing number 21930/004/005 – Substandard bends and speed survey locations

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Appendix E

Pre-determined checklists

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Appendix F

Video Surveys CD

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