Wednesday, 16 October 2013

TRANSPORT WORKING PARTY

A meeting of **Transport Working Party** will be held on

Thursday, 24 October 2013

commencing at **4.00 pm**

The meeting will be held in the Meadfoot Room, Town Hall, Castle Circus, Torquay, TQ1 3DR

Members of the Committee

Councillor Hill (Chairman)

Councillor Addis
Councillor Amil
Councillor Brooksbank
Councillor Cowell
Councillor Davies
Councillor Doggett
Councillor Pountney

Working for a healthy, prosperous and happy Bay

For information relating to this meeting or to request a copy in another format or language please contact:

Patrick Carney, Town Hall, Castle Circus, Torquay, TQ1 3DR
(01803) 207710
Email: governance.support@torbay.gov.uk
www.torbay.gov.uk

TRANSPORT WORKING PARTY
AGENDA

Minutes of the Transport Working Party

5 September 2013

-: Present :-

Councillor Pete Addis, Councillor Stephen Brooksbank, Councillor Darren Cowell, Councillor Ian Doggett, Councillor Ray Hill (Chairman), Councillor Michael Hytche and Councillor Mark Pountney

(Also in attendance: Patrick Carney, Sue Cheriton, Councillor Steve Darling, Councillor Bobbie Davies, Councillor Robert Excell, Heidi McBride, Tim Northway and Councillor Roger Stringer)

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114. Apologies for absence

Cllr Nicole Amil – represented by Cllr Hytche

115. Minutes from meeting held on 25th July 2013

Agreed

Proposed by: Cllr Doggett
Seconded by: Cllr Brooksbank

In favour: All
Against:
Abstention:

116. Transport Asset Management Plans and Maintenance Priorities - Presentation (No report)

Patrick Carney presented the Transport Asset Management Plan and Maintenance Priorities.

The report shows various trends that have been experienced over the years in respect of maintenance issues of the highways to include pot holes on highways and footways, pavement defects, third party claims, customer satisfaction etc. Patrick Carney advised his team work to a strict inspection regime which is published and highlighted the importance of this when receiving any compensation claims. It was reported action is taken to repair pot holes when the depth of 20 mm is reached on a footway and 40 mm on a highway.

Patrick Carney advised that the budget of £965k allocated to the highways section for repairs and maintenance at the end of the last financial year was not ring fenced and as a result £300k was re-allocated to other services within the council.

Patrick Carney advised the funding required over the next 10 years to manage the deterioration of the roads throughout the Bay would be £40 million but based on current funding levels this would mean that 53% of the network would be classed as poor or very poor condition. Patrick Carney went on to say that the government has announced there could be further funding in the future but this has yet to be confirmed.

Councillor Darling reported of an incident whereby a member of the public had fallen over and injured themselves in Cary Park and this information is to be reported to the Ward Members.

117. Hele & Coombe Pafford Traffic Action Zone, Torquay

Patrick Carney presented the Hele & Coombe Pafford Traffic Action Zone report and brought attention to points 4.2 and 4.4 advising these had been duplicated in error and apologised for this.

Patrick Carney advised the consultation with the residents had been carried out on the 23rd & 24th August 2013 and advised a further consultation is planned to take place regarding the removal of the pelican crossing and replacing with a zebra crossing on Hele Road.

Councillor Brooksbank raised concerns regarding the implementation of previous Traffic Action Zones as believes some aspects have not been fully completed and requested for this to be looked into. Patrick Carney advised he and his team will review this but highlighted that this function will be carried out to ensure the Traffic Action Zone is fully completed and would not be to open up any new issues. Councillor Davies advised she supports Councillor Brooksbank's comments. Patrick Carney is to meet with the Ward Members.

Councillor Darling asked for clarification regarding white access lines proposed to be implemented on the highway at Audley Avenue and wanted to know what the impact be for drivers and residents parking over these lines. Patrick Carney advised the white access lines are advisory only and are there to advise drivers' access is required to properties etc. A resident can park over their own access line so long as they are not obstructing any neighbouring premises. Drivers who park on a white access line who are causing an obstruction can expect to received a penalty charge notice issued by the Police or if requested by the resident, by a Civil Enforcement Officer.

Councillor Darling advised he is happy with the proposals for the crossing on Barton Hill Road.

It was reported it is the Council's statutory duty to improve air quality for residents which is funded separately from the Local Transport Plan. Patrick Carney advised

changes have been carried out in Hele Village in order to try and improve the air quality and he is waiting for the initial results of these changes.

Patrick Carney advised in addition to the improvements suggested in this report for Happaway Road, there is a separate proposal to install double yellow lines along Happaway Road at the entrance of Lummaton Quarry and would prefer for this work to be undertaken using Section 106 funding.

Councillor Stringer raised concerns regarding the speed of the traffic along Barton Hill Road and as a result Patrick Carney and his team are to conduct speed surveys of this area.

Councillor Cowell raised concerns regarding the consultation with the residents of Audley Avenue and believes further consultation is required. Councillor Excell highlighted his concerns regarding the plan advising amendments have yet to be made following the feedback received from the consultation. Patrick Carney confirmed that the plan had been subject to public consultation at the exhibition which took place on the 23rd & 24th August 2013 and is to send a copy of the plan to Ward Members who will arrange to meet residents on site with view to finalising.

Recommendation

Officers to commence the implementation of the proposals as outlined under option 6.1 in the Issues Paper with the addition of the installation of double yellow lines at Happaway Road and for further consultation to be undertaken by Ward Members with the residents of Audley Avenue.

Proposed by: Cllr Addis
Seconded by: Cllr Brooksbank

In favour: All
Against:
Abstention:

Councillor Darling and Councillor Stringer left the meeting

118. Local Sustainable Transport Fund - Proposed Cycle Route

Patrick Carney presented the Local Sustainable Transport Fund – Proposed Cycle Route report.

Councillor Hytche asked if after implementing the scheme it proved not to be successful, could the cycleway be removed. Patrick Carney advised schemes are reviewed by Officers and on occasion by the Road Safety Auditor generally 6 to 12 months after implementation to ascertain its success and confirmed cycle ways can be removed if deemed appropriate.

Councillor Cowell advised he has concerns with the cyclists using Fleet Walk and the possible accidents that may occur with pedestrians. Patrick Carney advised

there will be a designated running lane installed in Fleet Walk and it is hoped cyclists will keep to this area.

Councillor Cowell proposed that the issue concerning Torre and the possible reversal of the route is put on the agenda to be discussed at the next Transport Working Party meeting.

Councillor Pountney advised he has concerns with cyclists using the area around the banjo. Patrick Carney advised he is currently reviewing the options available for a cycling route in respect of this area.

Recommendation

Officers to proceed with the next stage of the implementation of the cycle routes using the ring fenced funding available.

Proposed by: Cllr Cowell
Seconded by: Cllr Pountney

In favour: 5
Against:
Abstention: 1

Councillor Excell left the meeting

119. Fleet Street Regeneration Scheme - Update of the Phase 1 Construction

Patrick Carney presented the Fleet Street Regeneration Scheme – Update on Phase 1 Construction report where he advised that works will re-commence on site to complete phase 1 from Monday 16th September 2013. It is expected these works will be completed by the end of October 2013.

Patrick Carney went on to say a decision needs to be made as to whether to proceed with phase 2 as originally planned in the autumn of 2014 or to consult with traders to ascertain if they would like to delay the second phase by a year.

Councillor Cowell advised the traders are due to meet on the 17th September 2013 at 6 pm at Camelot in Fleet Walk

Recommendation

Officers to consult with traders and if in support to progress the works as per the planned schedule to commence phase 2 in September 2014.

Proposed by: Cllr Addis
Seconded by: Cllr Doggett

In favour: All
Against:
Abstention:

120. LSTF Update - Ferry Tender (Verbal update)

David Whiteway reported the ferry tender had been sent out but due to a technical issue raised by solicitors concerning innocuous wording of the document which could not be verified at the time, it had to be withdrawn. David Whiteway went on to say that it is hoped the tender will be re-submitted within the next 10 working days and confirmed that a single operator is being sought to operate the ferry service and it is hoped responses will be received by multiple companies.

121. Local Transport Board (Verbal update)

David Whiteway advised the Local Transport Board have approved funding for schemes in 2015. £7.3 million has been awarded for the western corridor and £3 million for the joint Edginswell project. David Whiteway went on to say that further funding is required for the Edginswell project which is being sought from the LEP.

David Whiteway reported the application for funding in respect of the Torquay Gateway was unsuccessful and further work is required to identify individual issues before being re-submitted.

122. Date of Next Meeting

24th October 2013, 4.00pm

Meeting: Transport Working Party **Date: 24th October 2013**

Wards Affected: St Marychurch

Report Title: Cary Park Parking Alterations – Review

Executive Lead Contact Details: Sue Cheriton – Executive Head Residents & Visitor Services

Supporting Officer Contact Details: John Clewer - Senior Engineer - Highways Development & Traffic

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1. **Purpose**

1.1 This report is in response to comments received following the review of the alterations made to various parking restrictions in and around the Cary Park area of St Marychurch. The area of the review is as shown in **Appendix 1**.

2. **Proposed Decision**

2.1 It is recommended that members approve the advertising and implementation, should no objections be forthcoming, of the changes to the current parking restrictions as per option 6.1. Any objections will be presented to a future meeting of the Transport Working Party.

3. **Action Needed**

3.1 That the restrictions as identified in section 6.1. be advertised and if no objections received, implemented.

4. **Summary**

4.1 The Devon and Torbay Local Transport Plan 2011-2026 sets out how transport should be delivered over the next 15 years. It is the adopted Council policy document on transport, guiding all transport development and encourages the provision of additional dedicated coach loading bays in all three town centres to meet the demand from coach operators.

3.2 The report presented to the Transport Working Party on 10th May 2012 was as a result of reviewing a specific section of the Torbay Parking Policy 2006 (version 3 – TMA) which noted that coaches play a significant role in the provision of long distance travel and commuter services and in the provision of transport for specific

groups such as educational parties, theatre visitors, tourists and people with mobility difficulties.

4.4 Reports have subsequently been presented to the Transport Working Party on 16th February 2012 (Coach Parking Review), 29th March 2012 (Coach Parking Review – Shedden Hill Car Park Update), 10th May 2012, 2nd August 2012 and 25th October 2012 (Cary Park area).

4.1 This report is in response to comments received following the review of the alterations made to various parking restrictions, in an attempt to regulate the parking of coaches, in and around the Cary Park area of St Marychurch. The area of the review is as shown in **Appendix 1**.

Supporting Information

5. **Position**

5.1 This report is in response to comments received following the review of the alterations made to various parking restrictions, in an attempt to regulate the parking of coaches, in and around the Cary Park area of St Marychurch.

5.2 The Devon and Torbay Local Transport Plan 2011-2026 sets out how transport should be delivered over the next 15 years. It is the adopted Council policy document on transport, guiding all transport development and encourages the provision of additional dedicated coach loading bays in all three town centres to meet the demand from coach operators.

5.3 The report presented to the Transport Working Party on 10th May 2012 was as a result of reviewing a specific section of the Torbay Parking Policy 2006 (version 3 – TMA) which noted that coaches play a significant role in the provision of long distance travel and commuter services and in the provision of transport for specific groups such as educational parties, theatre visitors, tourists and people with mobility difficulties.

5.4 Reports were subsequently presented to the Transport Working Party on 16th February 2012 (Coach Parking Review), 29th March 2012 (Coach Parking Review – Shedden Hill Car Park Update), 10th May 2012, 2nd August 2012 and 25th October 2012 (Cary Park area).

5.5 Following the meeting on 25th October 2012, a works order was placed to implement the changes to the restrictions in and around the Cary Park area and the works were completed by the 9th January 2013.

5.6 A petition was received (attached as **Appendix 2**) and was presented to the members of the Transport Working Party on 25th April 2013 and a delegated decision (attached as **Appendix 3**) was made on the 24th May 2013 stating that the six monthly review will be carried out as scheduled. The final decision on whether any changes will be made would depend upon the results of the consultation.

5.7 Consultation has been undertaken in the local area in the form of on-street notices, a press release to the local media, a specific page for the review on the torbay.gov.uk website and letters being distributed to local businesses, coach companies, hotels, local members, community groups and other stakeholders. Comments were requested to be made on or before 4th October 2013 and a good response has been forthcoming.

5.8 The comments received are as attached in **Appendix 4** and can be summarised as follows:

Aveland Road

- Request for 'cars only' restrictions as in St Georges Crescent, preferably extended to Warbro Road
- Coaches are making it difficult / unsafe to access / exit driveways due to visibility
- Coaches – servicing student use, bowling club, football club, school and Anchorage Hotel (possibly coaches of a greater size that can access the frontage?) are parking and causing problems
- Double yellow lines requested to be implemented at the junction of Aveland Road / Warbro Road to ease access / visibility.

Cary Avenue

- Vehicles (e.g. ice cream vans) are parking on the restrictions by the entrance to the play park and trading. This area could be built out to prevent parking and create an uncontrolled crossing point for pedestrians. Whilst not part of this review members may wish to present this idea as part of a future road safety initiatives report.
- Coaches are regularly parking in the 'Cars Only' bays by the play park.
- Enforcement of the new restrictions is poor.
- Removing the parking of vehicles outside the tennis club (during the summer months) has allowed vehicle speeds to increase; request parking is reinstated all year round, with the consequent reduction in vehicle speeds.
- Reduce the number and size of the parking signs around the park area to lessen the visual impact of the scheme. Unfortunately this cannot be done as all signage has to be to Department for Transport specification.

Palermo Road

- No comments

St Albans Road

- No comments

St Annes Road

- Day time coach parking should be changed to free car parking for shoppers, between the hours of 9am – 5pm
- Various objections to coach parking due to loss of free parking for shops, loss of privacy, loss of coach parking revenue, coach parking not compatible

in conservation and residential areas, pollution and safety when crossing from park fronting church, inc Mrs Williams petition, requesting coaches be removed from St Annes Road

- Coach parking is restricting visibility and blocking access when turning into / out of Churchway.

St Georges Crescent

- A great success.

General Comments

- Cary Ave – lines don't go far enough, take around bend towards Stanley Road (outside boundaries of review area)
- Coaches and other large vehicles parking in 'cars only' area
- Good job, keep it free parking no meters!
- Coach drivers are abusing the parking restrictions
- Manor Road – DYL's from cnr with Cary Park Road to first entrance (outside boundaries of review area)
- Provide free overnight parking for coaches (3pm – 10am) in appropriate local car parks
- Coach companies feel it is working well.
- Remove the three disused bus bays around the park area to deter coaches and leave them free for car parking.
- Local Community Partnership are in favour of the changes which have been made and would ask for the double yellow lines to be extended around the corner by the dance school as this gets very congested (outside boundaries of review area)

5.9 After considering the above comments, the following works are proposed as per the plans attached as **Appendix 5**

Aveland Road

- Extend 'cars only' restrictions to the junction with Warbro Road.
- Implement double yellow lines restrictions at the junction of Aveland Road / Warbro Road.

St Annes Road

- Implement parking restrictions in the current coach bay to allow limited waiting between 8am – 6pm 1 hour no return in 2 hours, therefore enabling car parking during the day and coach parking in the evening 6pm – 8am, as was previously in place.
- Alter the existing parking restrictions fronting the property known as 'Valetta', from 8am – 6pm 1 hour no return in 1 hour to limited waiting between 8am – 6pm 1 hour no return in 2 hours.

6 Possibilities and Options

6.1 The members of the Transport Working Party are requested to approve the advertising of the restrictions as listed in 5.9 and implement, should no objections be forthcoming. Any objections will be presented to a future meeting of the Transport Working Party.

6.2 The members of the Transport Working Party may wish to recommend the implementation of some of the restrictions as listed in 5.9

6.3 The members of the Transport Working Party may wish to recommend that the proposed alterations to the existing Traffic Regulation Order are not advertised.

6 Preferred Solution/Option

Members are recommended that the option in 6.1 above would be the most appropriate action.

7 Consultation

Consultation has been undertaken in the local area in the form of on-street notices, a press release to the local media, a specific page for the review on the torbay.gov.uk website and letters being distributed to local businesses, coach companies, hotels, local members, community groups and other stakeholders. Balanced feedback has been received.

8. Risks

By making the best use of the available road and car park space the Council will be able to reduce congestion and improve pedestrian safety during the busy summer months, whilst retaining car parking during the football season, therefore reducing the number of wasted journeys made by drivers as they search for on-street parking spaces. If this change to the existing Traffic Regulation Orders (TRO) is not approved, congestion will continue and wasted journeys undertaken (as car drivers / local shoppers search for parking spaces) may increase with the resultant rise in both traffic movements and vehicle emissions.

Appendices:

Appendix 1 – Plan of the review area

Appendix 2 – Copy of petition received

Appendix 3 – Copy of the delegated decision

Appendix 4 – Copy of comments and photographs received during the review process

Appendix 5 – Details of the proposed changes to the parking restrictions

Additional Information:

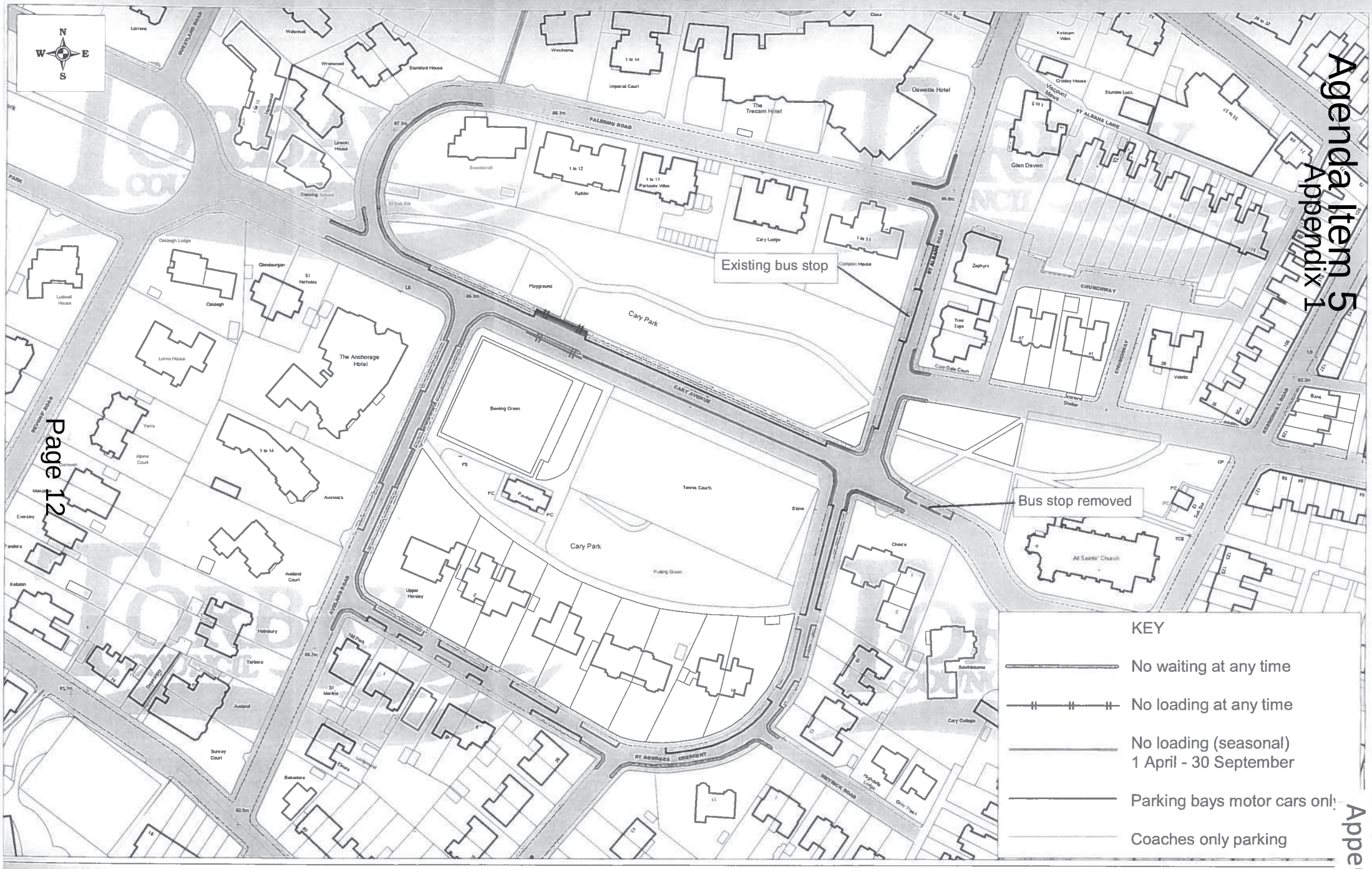
None

Documents available in Members' Rooms:

None

Background Papers:

Torbay Council Parking Policy 2012 - 2015



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Cary Avenue - New parking restrictions - Torquay

TORBAY COUNCIL

PUBLIC PETITION

Topic: Nuisance and hazards to public health resulting from permanent parking for large passenger coaches outside residential property adjacent St.Annes road. The local community has been greatly affected by lack of adequate parking for local businesses and the people of the community are being ticketed as a result of the loss of parking spaces.

What do you want the council to do?: Passenger coaches are permanently making use of temporary parking facilities in order to avoid parking fees for use of the correctly sized coach station facilities built specifically for their use.

The coaches obstruct visibility to pedestrians crossing from St. Anne's road to their local amenities. Present hazards to children playing in the park for the same reasons and also as a result of emissions from the engines, which the coach drivers leave idling for the majority of the time they are parked.

Furthermore the rights to privacy from overlooking are being infringed for the properties facing onto St.Annes rd. Passengers in the coaches are able to see directly into bedrooms of the adjacent property.

Noise and emission pollution impacts the rights property owners and tenants have to enjoy their own property, the coaches are staying in the bays for hours at a time and running loud diesel engines consistently throughout their stay, residents are losing sleep as a result of constant starting and stopping of engines and face increased health risks from the concentration of emissions from several large vehicles, there is no formal timetable being adhered to for the stay and it is evident the coach companies are exploiting a poorly thought-out parking strategy to avoid paying parking costs elsewhere.

Lead petitioner: Name:

Telephone:

Address:

Babbacombe, Torquay

We, the undersigned, want Torbay Borough Council to:

Reverse the decision to allow Passenger Coaches to Park adjacent Residential Property on St.Annes Rd. on the grounds set out in this petition.

SIGNATURES

NAME	ADDRESS	SIGNATURE
312 SIGNATURES		

TORBAY COUNCIL – ENVIRONMENT SERVICES

DELEGATED DECISION – No. 1/2013

Petitions Relating to Streetscene

Decision

Petition requesting to Reverse the Decision to allow Passenger Coaches to Park adjacent to Residential Property on St Annes Road

That the six monthly review will be carried out as scheduled. The final decision on whether any changes will be made will depend on the results of the consultation.

Reason for Decision

The petition and supporting information was referred to the Service Manager (Streetscene & Place) for decision, in consultation with the Executive Lead Member. The decision was made after consideration of the issues set out in the petitions.

Information

The Council had amended the parking restrictions in St Annes Road, Torquay to allow coaches to park all day. The original restriction was for night time only parking. The changes had been made as the Highways Authority had received a number of complaints regarding coach parking in the area of Cary Park which was affecting the visibility for pedestrians crossing the road.

It was proposed that providing some all day parking for coaches in the area would ensure that the coaches were not displaced to another inappropriate area.

All new parking restrictions receive a review after six months if concerns have been expressed and the restrictions are due to be reviewed. Members of the Transport Working Party have also visited the site and have recommended that the restrictions should be reviewed after six months.

If changes are to be made to restrictions then the Council's policy is to consult with resident and stakeholders, their views will be considered. Any changes would also be subject to a formal advert of the legal order.

Alternative options considered at the time of the decision

- Proceed
- Not to proceed

.....	.....
Patrick Carney Service Manager (Streetscene & Place)	In consultation with Councillor Ray Hill, Executive Lead for Transport

Date: …24th May 2013 .....

J Clewer
Highways Management
Resident & Visitor Services
Lower Ground Floor
Town Hall
TORQUAY TQ1 3DR

18 FEB 2013

7 February 2013

Dear Sir

Coach Parking - St Annes Road Babbacombe Torquay

It has been brought to my notice today that the hours of use for the coach parking bay opposite the entrance to Churchway have been increased to all day and night.

Whilst I appreciate that the Order has now been made and it is too late to raise a formal objection, please note my objection to this extension of hours when the matter comes up for review, as I understand it will, in the next 6 to 12 months.

My objections to 24 hour parking of coaches at this location are as follows:

1. The presence of coaches in this parking bay directly opposite Churchway causes traffic coming from the junction of St Annes Road with Reddenhill Road to pull into the centre of the road to overtake. Traffic coming from the opposite direction (the Cary Park end) also have to pull towards the centre of the road due to parked cars on their near side. Therefore vehicles trying to pull out of the Churchway cul-de-sac are faced with turning into a restricted road width and can expect to find traffic from both the left and right hand side coming at them from the centre of the road thus increasing congestion and the accident risk.
2. Churchway, although a residential cul-de-sac, is used by shoppers and traders in Reddenhill Road, and so the density of traffic coming and going at the junction is higher than might be expected for a road of its type. The pedestrians in the area during the day tend to be elderly and often less mobile and the additional congestion may be a hazard for them.
3. There are two entrances to Coronation Park which discharge directly into St Annes Road and these are frequently used by adults, with and without dogs, and children. The presence of coaches in the bay between these two entrances significantly reduces the visibility for people attempting to cross the road at these points.
4. There will be an increase in the amount of diesel exhaust and engine noise.

Overall it would seem that whilst the economics and convenience of coach parking for the operators and hoteliers has been taken into consideration, it is being 'paid for' instead by the residents of St Annes Road and Churchway by way of a reduction in the perceived amenity value of the area, and increased noise, fumes and traffic density.

Please notify me of the review date and what the details of the review procedure will be.

Yours sincerely

INCOMING EMAIL

From:
To: Highways <EX:/O=TORBAY COUNCIL/OU=CIVIC OFFICES SERVER/CN=ENVIRONMENT/CN=HIGHWAYS/CN=HIGHWAYS.>
Date: 11/02/2013 13:30:11
Subject: OBJECTION

Attention John Crewer I am currently seated in my lounge opposite Cary Park: I am logging a very strong objection with regard to the coaches which are parked outside the property. There is absolutely no privacy here any longer. I have a very nice bay window which I used to be able to sit in whilst working with my laptop. These coaches are noisy, smelly, restrict my view of the park which I pay rates for and totally unacceptable. Your comments please

INCOMING EMAIL

From:
To: Highways <EX:/O=TORBAY COUNCIL/OU=CIVIC OFFICES SERVER/CN=ENVIRONMENT/CN=HIGHWAYS/CN=HIGHWAYS.>
Date: 12/02/2013 10:20:12
Subject: st annes road bus parking.

ieeiFAO Mr John Clewer, senior engineer.
Dear sir,

As a trader in reddenhill road it was the task of the babbacombe and st marychurch traders association to ask the council to remove the coaches only parking in st annes road, this took some ten months to get implicated and the council allotted two new bus parking spots, one in st albans road and one in cary park road on the other side of the green.

It would seem that overnight this car parking area which allowed shoppers to park near by there local shops was taken away,the traffic wardens were having a field day for the first few days till the regulars understood what had happened.

We now have coaches parking in three areas to which the are often parked all day and night some with the engines running when then should be parking at the coach station where they belong, it has been said that the drivers parking at st annes road and pocketing the cash for coach parking as you have given them free parking to all for as long as they want, and to add insult to to this there are passengers parking in the area and getting on the coaches leaving cars there all day or all week.

All business are under strain in the area and would ask your department to re think about this unwanted alteration to this area. We understand that since the coaches have wrecked Palomo road and it was repaired at great cost to the rate payers,or did wallace arnold ect pay for the damage that the coaches caused to the highway and footpath, may be thats a contributary factor why the shoppers parking was taken away or is that coaches bring people to the delight of the hotels and deprive the local traders of the extra near by parking.

yours sincerly

Dear Mr Cower

Further to my previous correspondence with you I am writing to confirm my strong objections to the coach parking which has been allowed adjacent St.Annes road.

The coaches parking as they are represent a gross invasion of my family's personal privacy, both my own and my daughter's bedroom face onto St.Annes road, the height of the coaches and there close proximity to the property allow unobstructed views into the bedrooms, the result is that both my daughter and I must close the curtains whilst the coaches are parked and this forgoes our own right to free use of our own property. There are at least 4 further properties affected in a similar fashion and several businesses who are unhappy with the decision to move coach parking to the area, all of them have given their support for my petition.

It is not fair or correct that private coach users should be able to inhibit the rights of property owners to enjoy their own property in this way. It is a breach of my rights to privacy which the council is duty bound to protect. It is difficult to see what economic purpose the parking facilities legitimately supply to the area and in fact there is evidence that the coach drivers only make use of the facilities in order to avoid parking fees.

Aside from the overlooking, there are health risks associated with the pollutants in the exhaust gases of the vehicles, ordinarily moving traffic will disperse such pollutants but in this circumstance the coaches run their engines whilst parked to provide power and heating for the drivers for several hours at a time. This creates a concentration of contaminants which will migrate into my property, both when we are indoors and especially when we attempt to enjoy the use of the adjacent garden.

The engines also create an inordinate amount of noise, it is the direct equivalent of having several large diesel generators running hours on end outside your property, the noise levels are absolutely unbearable, the effect of the noise pollution is made even worst by the fact that the coaches stop and start their engines as and when they see fit, meaning that my sleep and privacy is interrupted indiscriminately. The percussion from even one of the engines starting is sufficient to rattle the windows of my property, even without recording the noise levels officially I hope this serves to demonstrate just how loud they are.

A further concern of a number of the residents is the visibility problems that the coaches are causing, prior to there being permission for parking these vehicles in their current positions, drivers were able to check for clear visibility when turning into St.Annes road and progressing along it, now that visibility is severely checked, the danger of a small child being hit as they cross from the park adjacent St.Annes road has been dramatically increased by the decision to move coach parking to the area. If there is an accident that results from the lack of visibility to road users and the public, then it will be an tragic and avoidable one.

I hope that this letter serves to formally record in writing the objections of both myself and other residents of the local community who are opposed to the provision of coach parking at St.Annes.

Sincerely

14/02/17

Torbay Council
Highways Department

18 FEB 2013

Re Coaches in St Annes Road

Dear Sirs,

The thoughtless decision made by members of the council ;allowing Coaches to park in St Annes Road has had a considerable impact on the small Traders in Reddenhill Road. This small local community has been greatly affected by the lack of parking.

People of the community being ticketed as a result of the loss of parking spaces.

The coaches obstruct visibility to Pedestrians. The coaches present a hazzard for local children. Not to mention the emissions from engines that fill the air.

The Traders in Reddenhill Road are earning considerable support from the Local Community, which will will present to you shortly.

Inconsiderate Decisions made by Council members are affecting Trade in this desirable area of Torbay.

Signed by Traders of Reddenhill Road 14 Signatures provided.

John Clewer
Highways Management
Town Hall
Torquay.

20 MAR 2013

18th. March, 2013

Dear Mr. Clewer,

There are three carparks in St. Marychurch. Is it really necessary for coaches to park in St. Annes Road? It is a busy road with junctions at each end and Churchway in the middle. It is not a wide road and with coaches parked there pulling out of Churchway can be hazardous.

Parking in Babbacombe is very limited and shoppers have great difficult finding a space. This, of couse means local traders miss

out on valuable custom. I would hate to see more shops here having to close due to lack of business.

Babbacombe is a tourist spot and should not be blighted by coaches parking in such an obvious location.

Yours sincerely,

INCOMING EMAIL

From: Transportation <EX:/O=TORBAY COUNCIL/OU=CIVIC OFFICES SERVER/CN=STRATEGIC/CN=STRATEGY & RESEARCH DIVISION/CN=TRANSPORTATION>
To: Highways <EX:/O=TORBAY COUNCIL/OU=CIVIC OFFICES SERVER/CN=ENVIRONMENT/CN=HIGHWAYS/CN=HIGHWAYS.>
Date: 21/03/2013 08:56:21
Subject: FW: Coach parking in Cary Park

Please can you respond to the email below

Regards,

David Whiteway

Senior Transport Planner
Torbay Council
Spatial Planning
2nd Floor Electric House
Castle Circus
Torquay
TQ1 3DR
Tel: 01803 208828
david.whiteway@torbay.gov.uk
http://www.torbay.gov.uk/index/transportandstreets.htm

-----Original Message-----
From: [redacted]
Sent: 20 March 2013 20:54
To: Transportation
Subject: Coach parking in Cary Park

Dear Sir,

I'm writing to express my objection to the new coach parking bay in Cary Park, specifically St. annes road.

To turn what was needed parking for the local shops over to commercial use, in the centre of a conservation area, a residential area, and where families and children go to recreate is appalling.

The buses block the view in and out of the park making it unsafe, especially at night. The engines are left running for hours on end. It is now very dangerous to cross as

there is no pavement that side of the road so anyone wishing to exit the park has to walk into the middle of the road before being able to see if its clear to cross. Local hotels with their own coach parking facilities now send their coaches here out of their way.

After paying a premium to buy property in a conservation area this has made my property undesirable and devalued it by making it a free commercial parking area.

The park which was a favoured place to go with my child is now little more than a glorified grass verge in a coach park. Does the conservation area status not apply to the council?

Yours Sincerely

INCOMING EMAIL

From:
To: Highways <EX:/O=TORBAY COUNCIL/OU=CIVIC OFFICES SERVER/CN=ENVIRONMENT/CN=HIGHWAYS/CN=HIGHWAYS.>
Date: 31/03/2013 11:15:31
Subject: Fw: double yellow lines & railings

----- Forwarded Message -----
From:
To: "Highways@torbay.gov.uk"
Sent: Thursday, 1 November 2012, 15:40
Subject: double yellow lines & railings

Dear sir,

Some suggestions as to where double yellow lines might be useful.

1. Manor road from the corner of Cary park road about 25 yds to first entrance up Manor road.. (this area causes a narrowing

of the road approaching the box junction when cars are parked there, & sometimes gridlock when cars are alongside the parked

cars close to the box junction waiting for the lights to change)

2. Opposite Wellswood church for a distance of approx. 50 yds. (when cars are parked both sides of the road, traffic has problems getting through particularly large vehicles, eg. lorrys & buses.)

I would also like to point out that the railings at Kilmorie end of Meadfoot beach are rusty & dangerous and need replacing.

Paignton has replaced many yards of railing all over the area at Goodrington and very nice it looks and feels too.

Yours sincerely

INCOMING EMAIL

From:
To: Highways <EX:/O=TORBAY COUNCIL/OU=CIVIC OFFICES SERVER/CN=ENVIRONMENT/CN=HIGHWAYS/CN=HIGHWAYS.>
Date: 26/06/2013 19:52:26
Subject: FAO Andy Hooper

26TH June 2013

Mr Andy Hooper
Highways Management
4th Floor
Roebuck House
Abbey Road
Torquay

Coaches Parking On Aveland Road

Dear Mr Hooper
Having in the past e mailed you my concerns about coaches parking in Aveland Road on the 4th September 2012 and your department deciding not to put parking restrictions up the rest of Aveland Road to stop coaches from the Anchorage Hotel from parking I have again photographic evidence and witnesses that on Monday 24th June 2013 a coach belonging to from registration number Tel Number , was parked right outside our driveway, that being Avonwick, Aveland Road, Babbacombe, Torquay.
I have spoken to both the manager of the Anchorage hotel concerned, who denied it was his coaches and the coach driver, who informed me that he could park there, as there was no restrictions
As you are fully aware, your department is duty bound by law to provide a safe environment for people to exit their property from and have all the powers to enforce traffic regulations to stop coaches from parking on residential streets.
I have to inform you that I WILL COMMENCE COURT PROCEDDINGS AGAINST YOUR DEPARTMENT IF AN ACCIDENT HAPPENS, DUE TO NO FAULT OF MY OWN OR OUR RESIDENTS , as their vision will be impaired, as they will be unable to see up or down our road if a coach is parked in their way.
I am therefore, asking you to ADD FURTHER RESTRICTIONS AND STOP

COACHES PARKING ON OUR ROAD, which should have been done when the plans were last passed.
I hope that you make this an urgent priority, as I have now informed you twice regarding this matter, as well as our local councillors Mr Peter Addis and Ray Hill. I will allow 3 working days for your response (that being Monday 1st July 2013), in which, if I am not convinced that you take me seriously and am not guaranteed that you will address my concerns, I will contact the local Herald Express regarding the above issue and bring it to every ones attention in our neighbourhood.

Yours faithfully,

1 - JUL 2013

Dear Sir

Sometime ago you were
about the parking of coaches
the Anchorage Hotel, causing
abstruction. Also it was not
to see left & right when
out of our drive. The situat
greatly improved with doubl
lines & parking for cars.

Unfortunately this has n
abused by the coach drive
only are they parking on dou
lines but also partially
the entrance of our d

I hope you may be abl
resolve this situat
again. Thank yo

2nd July 2013

Dear Mr Hooper

Re: Aveland Road, Babbacombe, Torquay

As a resident of Aveland Road, Babbacombe, I am writing to request that consideration is given to the introduction of double yellow lines at the junction of Aveland Road with Warbro Road. Aveland Road is consistently used by coaches accessing various hotels within the vicinity as well as school coaches for the use of Westland school children. Cars frequently park right up to the junction making egress in and out of the road for these large vehicles extremely difficult, often entailing frequent manoeuvres forwards and backwards.

In addition concern has also been expressed by residents regarding the parking of these coaches in this road for long periods of time making access onto the road from driveways extremely hazardous as their size completely blocks visibility. Can some restriction be put on the parking of coaches in this residential road? I fully understand that it is necessary for coaches to access the road in order to drop of their passengers, but I then consider that the drivers should make use of the public car parks or the designated parking bays that are within the vicinity.

I trust that full consideration will be given to this request.

Yours sincerely,

From:
Sent: 20 September 2013 11:58
To: Clewer, John
Subject: RE: Cary Park - Review of recent changes to parking restrictions

Dear John,

Thank you for your email concerning the review of parking in Cary Park.

Firstly, apologies for the slight delay in responding.

I think the best way to get a response from the visiting and resort based coach trade on this particular issue is for you to contact direct the coaching hotels in the Cary Park area. They will have a good idea overall how coach movements have been improved - or not - given their day to day contact with drivers visiting their establishments I think the hoteliers responses would be more representative than either mine or me asking a few drivers who may not be aware of the changes that have been made fgiven the turnover of different drivers visiting the area.

The hotels that you would need to contact are the Anchorage on Aveland Road and the Trecarn Hotel in Palermo Road. All the other coaching hotels in the Babbacombe area have on site parking facilities and as such would not be affected. You also correct to say that . coaches do park their vehicles in the area. Plus, you get a number of coaches taking visiting bowlers to the green in Cary Park. It might be an idea to contact the people at the bowling club(?) to consider their responses as coaches taking bowlers there can be parked up all day.

From my own pointof view, from what I have seen, the scheme does appear to be working quite well and I have not heard any complaints myself from the sections of the coach trade that I have come in contact with.

Of pressing concern though is the situation in Shedden Hill Car park. You will recall that three coach bays were sited there. These are proving to be insufficient for the demand. The facilities provided are adequate for the Coaches that can't park at their own hotel, the Regina on the harbour side. can have up to three coaches in resort at any one time. Additionally, the Richmond Hotel does not allow coaches to park on site any longer, so if they are not parked in Croft Road, they are increasingly in Shedden Hill. In addition, the drivers staying at the TLH hotels in Belgrave Road, particularly the Derwent, which does not have it's own on site facilities, are parking their coaches in Shedden Hill. The net result is that there can be up to six or seven coaches in Shedden Hill. The parking department have been very helpful in allowing this situation to continue and providing no blockages are caused, then coaches parked

outside of the official bays are not being given tickets. This is because they are aware of the main reason why drivers prefer Shedden Hill to Lymington Road, security. You may recall there was a spate of coach break ins in Lymington Road and the resort attracted some very unwelcome publicity when it was discovered that the CCTV had been withdrawn without any warning. A case of looking for someone to blame perhaps, but when coach operators are sending their front line coaches valued up to 300,000 here on tours, security is a real concern. Shedden Hill I have been assured does have CCTV cover and being a better area, has not had the problems, fingers crossed, that have occurred in Lymington Road. I would also note that there is more than adequate space for an improvement to the coach facilities in Shedden Hill.

I would therefore ask that the issue of inceasing the number of official coach bays be raised and resolved so that additional spaces can be provided in Shedden Hill. I have raised this with Ray Hill and I understand that he was waiting for the six monthly(?) meeting to take place to discuss this issue.

I hope that the above helps.

With regard to my role, I would not describe myself as any sort of representative; that would be a case of assuming a role that no one has chosen or elected me to carry out and which could therefore be questioned. I would like to think however, given my overall contact with the coach trade, that my views would be representative of the difficulties that the coach trade can encounter trying to operate 21th century vehicles in a Victorian resort. Given the importance of the coach trade to the economy of Torbay - over 70 coach parties in resort last week for example - hopefully such views can be considered and acted upon.

Kind regards

Subject: Cary Park - Review of recent changes to parking restrictions
Date: Tue, 17 Sep 2013 15:04:49 +0100
From: John.Clewer@torbay.gov.uk
To: coachdrivers@hotmail.co.uk

Please read the Council's email disclaimer notification which is located at the end of the email message.

Hi Alan,

We are undertaking a review of the recent changes to the parking restrictions in and around the Cary Park area of Torquay.

24 September 2013

The Service Manager
Street Scene & Place
Resident and Visitor Services
Lower Ground Floor
Town Hall
Torquay
TQ1 3DR

Dear Sir

You will note that I live at St George's Crescent Babbacombe. I have seen a sign on a post asking for observations on parking restrictions etc. for Cary Park and adjoining streets.

I wish to write and congratulate the Council on what they have done. I would not wish it to be changed in any way whatsoever.

The quality of our lives has improved dramatically. We are no longer woken at 6am by coaches warming up their engines. We no longer get coaches going round in circles using St Georges Crescent as a means of looking for parking. We used to be plagued with lorries and commercial vehicles parked in our street by people who do not live there and either won't or can't park their commercial vehicles outside their own houses.

I moved into St Georges Crescent ' years or more ago; then it was a quiet residential area becoming of a park environment (part of the park has been changed into a playground which is the only blot on the horizon).

In my view the Council are to be congratulated on what was a serious problem and the safety of children in the area has been improved dramatically. When coaches and commercial vehicles could park throughout the area I felt there was a very distinct possibility that a child would one day be killed.

Continued.....

Finally there is only one problem we find which is that since the parking areas have been marked out there is a tendency for cars to park opposite my gate even if the rest of the street is empty. This is a little annoying because it is very difficult for me to get in and out of my drive with a car parked on the other side. There are literally inches to spare and I have to shunt backwards and forwards, being careful not to touch the parked car or scratch my own car on the gate pillars. This used to happen occasionally in the past but it is now almost a permanent feature. When the street was being marked out my wife tried to ask the workmen to shorten the parking space so that we have more room but of course they had to comply with their instructions. If somebody could look into this aspect or talk to me about it I would be most grateful.

Yours faithfully

INCOMING EMAIL

From:
To: Highways <EX:/O=TORBAY COUNCIL/OU=CIVIC OFFICES SERVER/CN=ENVIRONMENT/CN=HIGHWAYS/CN=HIGHWAYS.>
Date: 26/09/2013 10:01:26
Subject: cary park parking

Can I say the designated car parking along Cary Avenue opposite the tennis courts is still being filled up with coaches,often National coaches,which still makes it difficult to see when crossing. Councillor Pete Addis is aware,perhaps some fines are in order?

INCOMING EMAIL

From: /
To: Highways <EX:/O=TORBAY COUNCIL/OU=CIVIC OFFICES SERVER/CN=ENVIRONMENT/CN=HIGHWAYS/CN=HIGHWAYS.>
Date: 26/09/2013 11:31:26
Subject: Cary Park Review

Attn: John Clewer.

John I am distributing your letter and should have all Fore St and nearby covered by middle of next week. I will be submitting a formal response myself shortly but want to point out that despite all the restrictions coaches are still parking in the Avenue. This morning two there from overnight and one still there now at11.30 am. Photos available!

From:
Sent: 26 September 2013 11:46
To: Addis, Pete; Hill, Ray; Faulkner, Alan; Clewer, John;

Subject: Cary Park Restrictions

I am planning to submit a formal response to the review letter sent by John Clewer recently but in the meantime I hope you will forgive my keep letting you all know about the failings of the new restrictions as they occur. This is probably the 20th such incident I have reported!

I wanted to point out the yet again coaches are parking in the 'car only' sections right outside the play park. It should be noted that most of us had no problem with this in the first place but if you are going to have a scheme aimed at 'removing coaches' and 'making the road safer' you should make sure it is enforced! Of course the sensible alternative is to recognise that the scheme cannot be enforced effectively nor met its aims and remove it all!

Photo (taken at 08.30) of two coaches parked overnight and into this morning one of which is still there as I send this message at 11.40am!

(1) 26Sep130.jpg(1 KB)
(2) 26Sep131.jpg(917 B)


TORBAY
NOTICE OF CONSULTATION REGARDING THE
REVIEW OF CHANGES TO PARKING RESTRICTION
CARY PARK AND SURROUNDING ROADS
NATIONAL HOLIDAYS


P
NATIONAL HOLIDAYS
NATIONAL HOLIDAYS

INCOMING EMAIL

From: .
To: Highways <EX:/O=TORBAY COUNCIL/OU=CIVIC OFFICES SERVER/CN=ENVIRONMENT/CN=HIGHWAYS/CN=HIGHWAYS.>
Date: 26/09/2013 01:03:26
Subject: Cary Park Area - Review of Changes to Parking Restrictions.

Dear Mr Clewer

May I ask that a pedestrian crossing with the appropriate safety barriers on the pavement and zig zag lines on each side of the road be considered from the park entrance opposite the tennis court and bowls club? This is because ice cream vans and works vans have taken to parking on the yellow lines by this entrance and I think apart from being illegal, it is very dangerous for children who might run into the road to get to/from the tennis courts and park.

Coaches are also ignoring the short drop off allowance and continue to park outside hotels in car only zones.

Photographs of parking offenders can be seen on the Facebook site 'keep your fishy fingers off Babbacombe downs' which is a community page for residents and traders in the area. Photographs were posted on 28 Aug, 1 and 23 June, 5 and 31 May, 22 Feb and 31 Jan, and only cover a small percentage of offenders who seem to be ignoring the yellow lines and car only zones.

Many thanks for asking for comments. Kind regards

Sent from my iPad

26th September 2013

Service Manager

Street Scene & Places

Resident & Visitor Services

Lower Ground Floor, Town Hall

TORQUAY TQ1 3DR

Dear Sir

REF:- PARKING AROUND CARY PARK ROADS

At first when I saw posts going up reference the above I was afraid that parking meters were going to be installed which would have been detrimental to this thriving little shopping area which is busy all year round whereas in Torquay the shops are dying with enforced expensive parking, all the work that was done in Fleet Walk during the whole of the summer and the subsequent increased rents where no trade was possible at all. Speaking to the Pine Shop which is now closed down in Union Square, they told me they have re-located to Newton Abbot where their business is thriving. As a frequent visitor to Teignmouth, that town is also doing well.

With the children's park now being used daily in Cary Park after a make-over and the coaches gone, free parking amongst this area is a joy for everyone concerned and I would be grateful if this situation could remain as it is now. I just hope other people will make their feelings known.

Yours faithfully

John Clewer- senior highways engineer
Torbay Council
Town Hall
Castle Circus
Torquay. TQ1 3DR

SEP 20

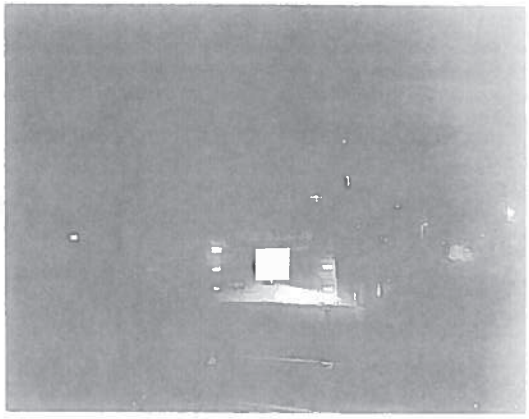
27th September 2013

Dear Clewer,

Re: Coach Parking St.Anne's Road.

I write with regard to your consultation concerning the above. We are against Coach parking in St.Anne's Road for the following reasons:

- The provision robs the rate payers of Torbay of parking revenue fees of approximately £18,000 p.a Current lost revenue for Coach parking in Lymington Road is: £2 for 1 hour, £6 for 4 hours, £10 for 24 hours
- This provision represents an unfair business subsidy and is contrary to free market economic principles
- The free provision is inconsistent with the Council's previously expressed duty to maximise revenue for rate payers such as for example the harbour table tax, car parking revenue in the top 5 councils in the country and business district improvement taxes.
- Coach parking is not compatible with a residential neighbourhood
- Coach parking is not compatible in a conservation area and has led to the loss of amenity views
- Coach drivers are inconsiderate and wake up my household at 6.00AM through starting their engines.
- It is often difficult to turn into Churchway as Coaches block access as in the attached photograph taken on 26/09/13 at 20.30 hours on my smartphone
- Suitable and appropriate alternative provision is provided in the specialist Lymington Road, Coach car park and no further provision is necessary or desirable.



THE ENGLISH RIVIERA BABBACOMBE

English Riviera GLOBAL GEOPARK

NO SMOKING

AA ★★★★

AA Breakfast Award

1 - OCT 2013

Mr A Hooper
Residents & Visitor Services
Highways Management
Lower Ground Floor
Town Hall
Torquay
TQ1 3DR

30th September 2013

Dear Sir
When undertaking the review of the parking restrictions around Cary Park could you please consider the following information.

Since the introduction of the parking restrictions along Cary Avenue the traffic flow and has been greatly improved, making it a safer environment for the people using the recreational facilities in Cary Park.
There are still some coach operators and commercial vans parking there even though the signage clearly states cars only.
This could be addressed by marking out individual bays for vehicles which would deter the parking of commercial vehicles along the play park side of the road to enable clearer vision for those crossing the road there.

Parking restrictions for Aveland Road were put in place from the junction of Cary Avenue to the junction of St Georges Crescent. At the time of consultation residents and businesses in Aveland Road voiced their concerns that the coaches and vans would park where there were no restrictions in place. We asked for the restrictions to be extended for all of Aveland Road to the junction of Warbro Road.
We were told by the council that we would have to wait for a six month period before this could be considered.

Since the implementation of restrictions in Aveland Road, coaches for the Anchorage Hotel, Westlands School and team coaches for TUFC and The Bowls Club park in Aveland Road where there are no restrictions. Some coaches even park on the pavement giving limited access for pedestrians.
(Photographs enclosed)
This has made it very difficult for residents and businesses to get in and out of their driveways safely as it is impossible to see oncoming traffic up or down the road.
Aveland Road is not a wide road and when coaches are parked with other vehicles parked on the opposite side of the road, guests staying at our hotel have on occasions been unable to turn out of the driveway to proceed along Aveland Road.

When reviewing further parking restrictions could the council also consider putting double yellow lines on the corners at the junction of Warbro Road and Aveland Road .
Vehicles park right up to this junction making it difficult to turn in and out of Aveland Road this is particularly noticeable on match days and during term time at Westland School.
For larger vehicles, delivery lorries and coaches who come to hotels and businesses throughout the year this has caused a lot of problems and invariably the roads becomes completely blocked as they are unable to make the turn in one go and have to reverse back on to Warbro Road.

The council has a duty of care and I would now ask for the safety of residents, businesses and visitors to Babbacombe that parking restrictions be put in place for all of Aveland Road.

Yours faithfully


AA


HG


HG

- 2 OCT 2013

To Mr A. Hooper.
Highways Management.
Tawe Hall.
1/10/13.

Re. Aveland Rd Coach parking.

Dear Mr. Hooper,

Since the new parking regulations along Cory Ave. were introduced it seems to have made the road a lot safer for people using the play park and drivers using the road but during the Summer I have seen Ice Cream Vans, Coaches + Commercial vans parked where it says cars only + even the library van parked on the double yellow lines opposite

When the plans were first suggested we asked for the restrictions to be for the whole length of Aveland Rd as we had concerns about where the coaches that used to park there would go, fearing they would be pushed up to the top of Aveland Rd, and this is what has happened. Myself + neighbours + businesses have off road parking + these coaches parking outside + opposite our driveways make it impossible sometimes to reverse out + turn up or down the road. We often get our cars out on the road early in the morning to enable a safe exit.

We have lived here for - + I appreciate that people need to earn a living but many of these coaches are nothing to do with Aveland Rd.

P.T.O

They are Student coaches, Bowling Club coaches, Football coaches, School coaches + Anchorage Hotel coaches which seem too big to park in their car park.

Hopefully this problem can now be watched after the 6 month trial period by making the whole of Weland Rd a car parking only zone

Yours sincerely.

Mr A. Hooper
Residents + Visitor Services
Highways Management
Lower Ground Floor
Town Hall
Torquay
TQ1 3DR

-2 OCT 2013 1/10/2013

Re: Cary Park/Avel and Road parking

Dear Mr Hooper,

With reference to the new parking regulations in our area, I would agree that they have improved the safety of the Park users and car drivers. but unfortunatly there are still coaches + commercial vehicles parking there

At the time my neighbours and myself had concerns about where the very large coaches and commercial vans would park. During this summer they have been parking at the top of our road. On one occassion where I could not get my car out of my drive at all to take my Grandson to living Coasts. We had to walk and take a bus which meant I had to pay a bus fare!.

I think we should have parking bays for cars only like St Georges Crescent and hopefully the problem will be solved. If we dont, this

[illegible] problem will only get worse

Yours faithfully

INCOMING EMAIL

From:
To: Highways <EX:/O=TORBAY COUNCIL/OU=CIVIC OFFICES SERVER/CN=ENVIRONMENT/CN=HIGHWAYS/CN=HIGHWAYS.>
Date: 04/10/2013 10:43:04
Subject: Coaches parking near Reddenhill Road shops

for Andy Hooper,
I shop using the Reddenhill Road shops two or three times a week. I am fairly fit and active and can park a few minutes away up towards the children's playground BUT many people who use those shops would find the extra walking hard, I think. Often there are no coaches in the huge designated bays close to the shops (I have seen coaches parked in the car bay near the playground). At a time when we should all be supporting our local shops this coach bay has made that harder. Also where would the refreshment van (mentionrd in the Herald Express) park if it is allowed back ?. Strikes me that all this is to make life lovely for parents taking children to the playgriond and worse for just about everyone else!!

INCOMING EMAIL

From:
To: Highways <EX:/O=TORBAY COUNCIL/OU=CIVIC OFFICES SERVER/CN=ENVIRONMENT/CN=HIGHWAYS/CN=HIGHWAYS.>
Date: 06/10/2013 20:24:06
Subject: Cary park road changes

Sent from my iPad

Dear sir. I would like to say the parking in Cary park,is a good thing,but for a couple of places. I refer to parking on Cary ave: by the dancing club,the yellow lines do not go far enough ,they need to go a round the bend towards Stanley road.the traffic down this road is very busy,and with cars parked both sides by the beauty salon,and traffic both ways,leading to just one lane to drive through, there is going to be a collision there be fore long ,as coaches and transport use this road.

Yours sincerely

CARY PARK.

Residents and Visitor Services
Lower Ground Floor
Town Hall
Torquay
TQ1 3DR

9th October 2013

Dear Sirs,

Cary Park Area – Review of changes to parking restrictions

I write in response to your letter of 18th September Ref JCC/SM.

The new restrictions were put in place at not inconsiderable cost with the aim to, as you say in the letter, 'improve traffic flow and pedestrian safety in and around the area of the Cary Park play area…'

To date there is no evidence to support your conclusion that you believe 'the scheme has achieved what we set out to do in relation to improving safety around the park'. After all there were no reported incidents or accidents in that location before implementation and as far as I know none since.

There is however clear evidence that coaches are still parking frequently in the areas designated for cars only and there is proof that vehicles of all kinds – service trucks, cars and even the ice cream van – use the 'No Stopping at Any Time' zone right outside the access gate to park.

There is evidence to show that vehicles now travel on the road past the play area at greater speeds than before thus increasing the risk – particularly when there are vehicles obstructing the view of the gate. The 'No Parking at Any Time' restriction outside the tennis courts allow for much faster traffic than we saw previously and is of course those are only effective for half the year anyway.

On the numerous occasions illegal parking has been reported through local Councillors and/or Officers at Highways no effective action has been taken therefore drivers continue to ignore the rules. Even where double yellow lines have been introduced we still see 'blue badge' holders parking there – particularly on football match days. I appreciate there will always be individuals who do not abide by parking restrictions and therefore on occasions rules will be broken; those people should be made to pay an appropriate penalty.

I contend that there is little point introducing schemes such as this unless there is an effective ongoing enforcement plan to make sure the new rules are adhered to in order to meet the initial aims. It is worth noting that when local police officers have lately been involved they took the common sense approach and made sure coach drivers and management at the hotels they serve were briefed and that has made a considerable difference. I have to point out that this was one of the measures we suggested before all that public money was spent!

From the outset many in the business community and residents saw this scheme as posing a threat to the area with a probable negative visitor experience and of course the adverse visual impact of the signage and lines. We know from feedback that this has been the case.

There will be little appetite for spending more public money removing the entire scheme but I would urge some amendments to it to make it more 'visitor friendly', to reduce the adverse aesthetic affect whilst at the same time making it more effective:

1. Introduce a proper regime of education and enforcement to make sure the rules are adhered to (most of the time) with a particular emphasis on the clear area outside the gate.
2. Improve the integrity of fencing by that gate which currently allows children to nip through. Put in suitable warning signs inside the park at the gates.
3. Create a physical barrier to stop vehicles parking in the clear area by the gate, perhaps by extending the pavement into the road outside the gate and moving the protective fencing out to the edge of it.
4. Remove the no parking at any time restrictions from outside the tennis courts to allow parking on that side year round with a consequent inevitable reduction in traffic speed.
5. Provide free parking in appropriate local car parks for coaches overnight (3pm-10am) and encourage them and the hotels they serve to use the concession.
6. Reduce the number and size of signs with the car symbol on to lessen the visual impact around the park area.
7. Change the coach parking bays in St Annes Road to allow shoppers parking 9am – 5pm but coaches overnight.
8. Remove the three disused 'Bus Stop' bays in the park area to deter coaches and leave them free for car parking

If those reviewing the scheme would like to see any of the supporting evidence and photographs I am happy to provide it.

Yours faithfully,

Aveland Road April 2013

Cary Avenue 8th August 2013

Cary Avenue 8th August 2013

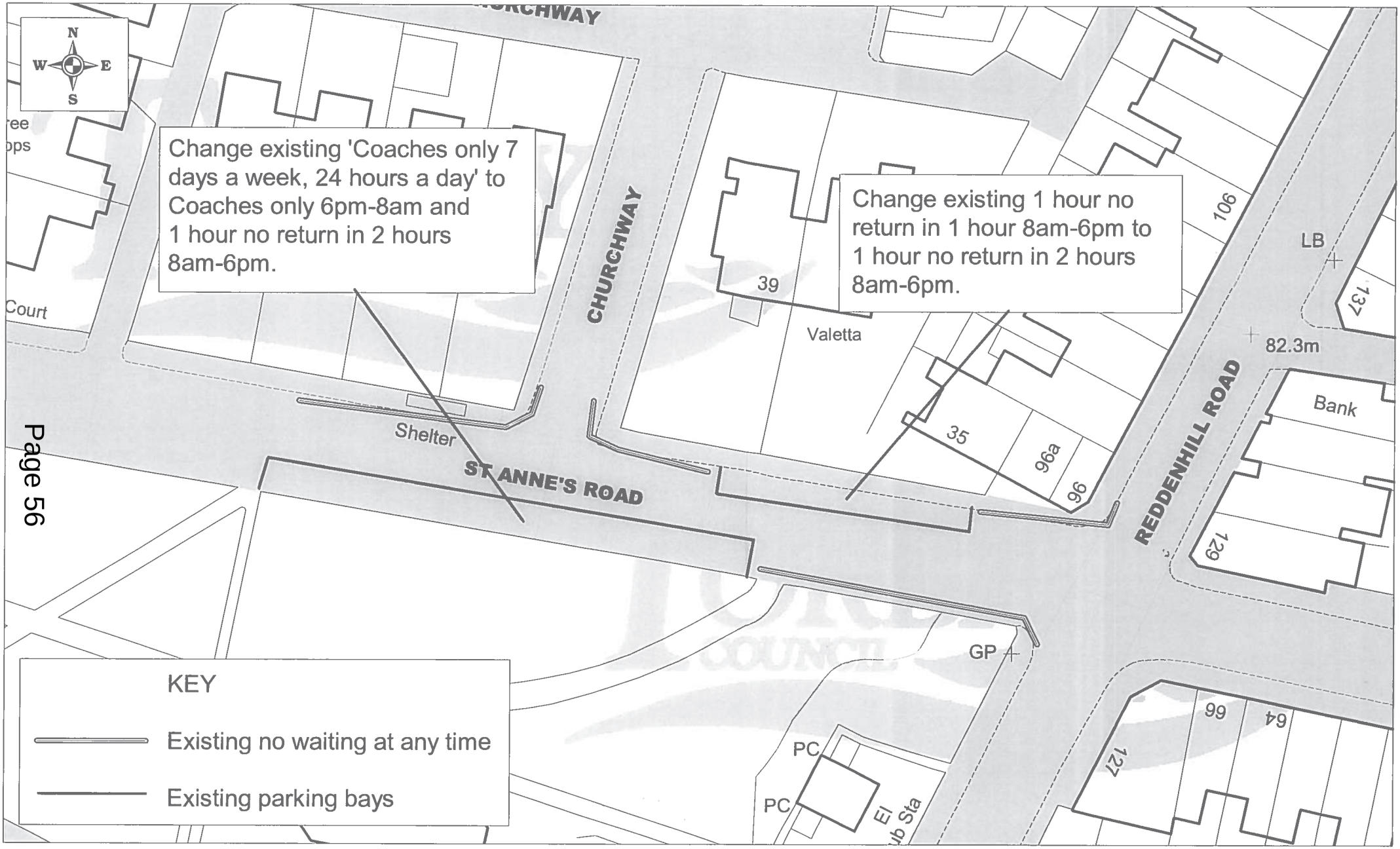
Cary Avenue 3rd September 2013

Cary Avenue 9th September 2013

Cary Avenue 26th September 2013

1:1000 scale

Aveland Road proposed parking restricitons - Torquay



1:500 scale

St Annes Road - proposed parking restriction changes - Torquay

TORBAY COUNCIL

Meeting: Transport Working Party **Date: 24th October 2013**

Wards Affected: Cockington with Chelston

Report Title: Cockington – Residents Parking

Executive Lead Contact Details: Sue Cheriton

Supporting Officer Contact Details: John Clewer

---

1. **Purpose**

1.1 This report is in response to an objection received following the advertising of a section of residents parking on Cockington Lane, to the North side of the village centre. Members are asked to consider the objection attached as Appendix 2.

2. **Proposed Decision**

2.1 That members recommend the implementation of the advertised parking restrictions as per **Appendix 1**.

3. **Action Needed**

3.1 That the proposals are implemented as advertised should Members recommend progression of the scheme.

4. **Summary**

4.1 The Cockington Forum support the idea of an area of Residents Parking to the North of the village centre which, with the relaxation of restrictions on carriageway markings, may be implemented without seeking Department for Transport approval.

4.4 It should be noted that there is currently no budget for these works and therefore residents would have to pay an increased fee for the first couple of years to cover the capital costs of the scheme, expected to be in the region of £1,000, before the permit fee would reduce to the current fee of £30 per year.

Supporting Information

5. **Position**

5.1 This report is in response to objections received following the advertising of a section of residents parking on Cockington Lane, to the North side of the village centre.

5.2 A report was presented to the members of the Transport Working Party on the 25th April 2013 in response to correspondence received from residents of Cockington Lane requesting better facilities for on-road parking and from comments made at the meeting of the Cockington Forum (4th December 2012) to introduce a section of residents parking on Cockington Lane.

5.3 The Cockington Forum supports the idea of implementing an area of Residents Parking to the North of the village centre and Highways subsequently carried out a written consultation with sixteen properties, located in the area of Meadow Farm Stables and Rosery Grange. Seven replies were received, of which four were in favour of the implementation of a residents parking zone. This was a response rate of 44%, with 57% of those replying in favour.

5.4 The Working Party recommended that these changes would be appropriate and this report is in response to an objection received following the advertising of a section of residents parking on Cockington Lane, to the North side of the village centre as detailed below.

> Create 10 no. residents only parking bays in the vicinity of Rosery Grange. These bays, for which a permit will have to be paid for, will be available for use by the properties shown in **Appendix 1**.

5.5 The objections received and Highways response is as attached in **Appendix 3**.

6 Possibilities and Options

The members of the Transport Working Party are requested to consider the objection, a copy of which is attached as **Appendix 2** and could recommend one of the following options.

6.1 Reject the objections and implement the changes to the Traffic Regulation Order, as detailed in **Appendix 1**.

6.2 Members may wish to uphold the objections and recommend that the Traffic Regulation Order is re-advertised.

6.3 Members may wish to uphold the objections and recommend that the Traffic Regulation Order is not implemented.

7 Preferred Solution/Option

Members are recommended that the option in section 6.1 above would be the most appropriate action.

7 Consultation

Consultation letters were sent out to sixteen properties regarding the possibility of a residents parking zone in the area of Cockington Lane, located in the area of Meadow Farm Stables and Rosery Grange. Seven replies were received, of which four were in favour of the implementation of a residents parking zone.

8 Risks

If these changes to the existing Traffic Regulation Orders are not approved due to objections, there will be a greater risk of residents parking inappropriately causing delays to other road users due to the possibility of carriageway width and visibility being restricted by inconsiderate parking.

Appendices:

Appendix 1 – Plan 1 shows the proposals to alter the existing Traffic Regulation Orders.

Appendix 2 – Copy of objections received

Appendix 3 – Details of objections and Highways response

Additional Information:

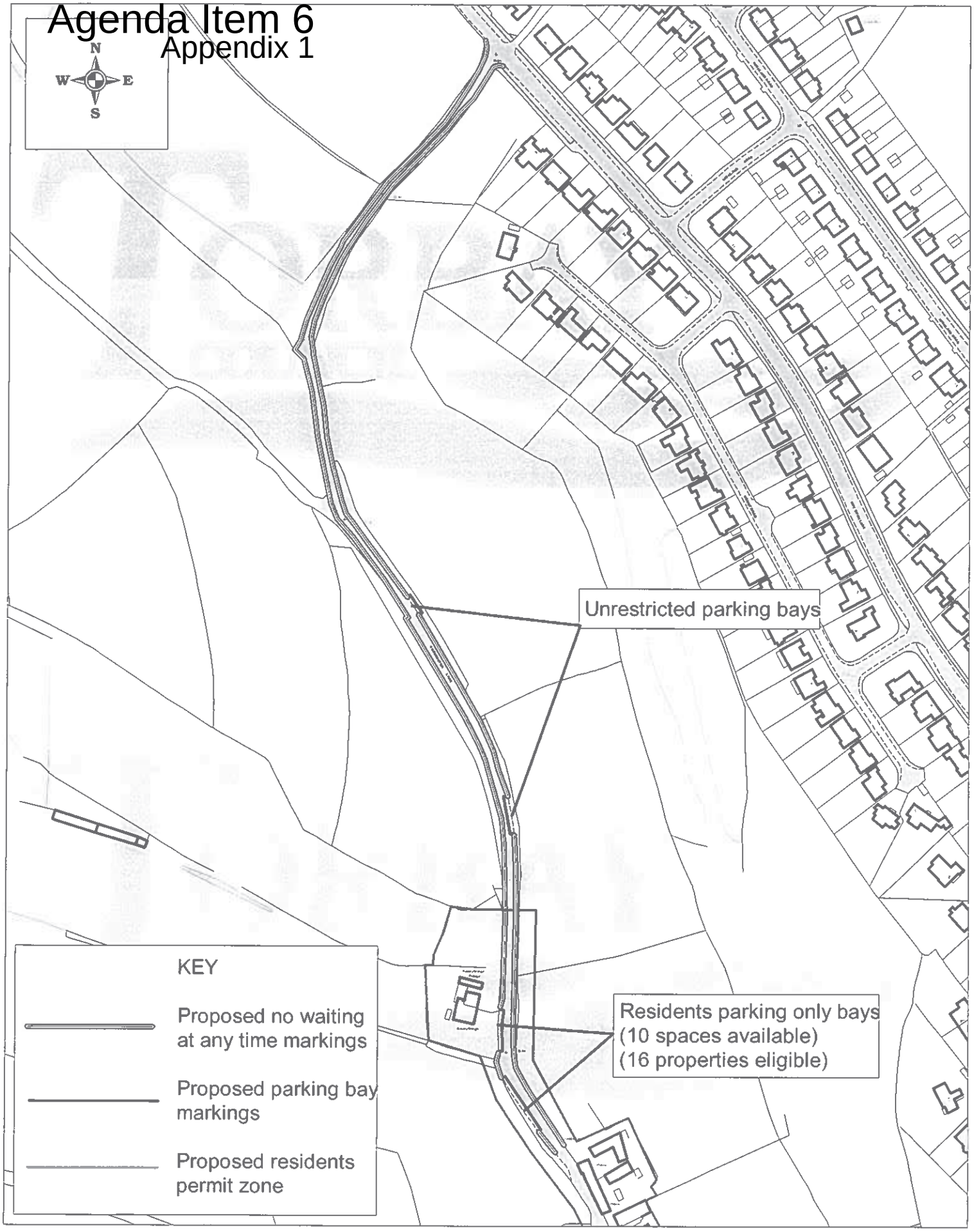
None

Documents available in Members' Rooms:

None

Background Papers:

Torbay Council Parking Policy 2012 - 2015



1:2500 scale

Proposed permit parking zone
- Cockington - Torquay

TORBAY COUNCIL

14 September 2013

Torbay Council
Residents & Visitors Services,
Highways Management,
Torbay Council,
Town Hall,
Castle Circus,
Torquay, TQ1 3DR.

Dear Sirs

BOROUGH OF TORBAY, (COCKINGTON LANE, TORQUAY), (CONTROL OF WAITING, LOADING AND UNLOADING), AMENDMENT ORDER No.5 2013

I object to the above proposed order on the following grounds.

1. It is in contravention of the Council's recently published new Parking Policy 2012-2015.

Specifically:-

Appendix B, "Criteria for the consideration of Waiting Restrictions on the Public Highway", of which Paragraph 8 - 'Residents Parking' states:-

- "Residents Parking Schemes will only be considered in recognised Controlled Parking Zones."

2. There are contradictory price change dates in the proposed order.

Specifically:-

The 'Statement of Reasons' states:-

- ".....Residents Parking Permit, the charge of which will initially be £100 per 12 months, but being reduced to £30 per 12 months as of 1st October 2013."

However, the section - "Authorisation and use of Residents' Parking Permits", states:-

Paragraph 18 (4)

(2) The charge for the issue of a Resident's Parking Permit and Protective Cover shall be –

(a) £100 on any applications received from the date of commencement of this Order until 30th September 2016;

(b) £30 on any applications received on or after 1st October 2016;

Clearly there is some confusion and residents needed to be advised of what the correct charges were going to be **before** making their decision on these proposals.

I look forward to the proposals being rejected on the above grounds and in accordance with Council Policy.

Yours faithfully

OBJECTION

Borough of Torbay (Cockington Lane, Torquay),
(Control of Waiting, Loading and Unloading), Amendment Order No.5 2013

Objection 1

It is in contravention of the Council's recently published new Parking Policy 2012 – 2015.

Specifically Appendix B, "Criteria for the consideration of waiting restrictions on the Public Highway", of which Paragraph 8 – 'Residents Parking' states:-

"Residents Parking Schemes will only be considered in recognised Controlled Parking Zones."

Answer

The objector is correct in saying that the Parking Policy states that "Residents Parking Schemes will only be considered in recognised Controlled Parking Zones." and at this stage we would be unable to alter the Traffic Regulation Order (TRO) for the area of Cockington Lane to be classed as a Controlled Parking Zone (CPZ) instead of just a residents parking place.

Due to the nature of the Cockington village environment it has always been agreed that the implementation of carriageway markings would not be appropriate and therefore the current level of reduced signing for parking restrictions, has always been subject to Department for Transport approval.

However, in an effort to reduce the number of street signs currently in place, the members of the Cockington Forum have agreed that carriageway markings are acceptable on the approach to and exit from the village centre.

The area in question in on the exit from the village centre and is planned to be signed as a 'Residents Parking Scheme', rather than a 'Controlled Parking Scheme'.

The issues paper showing the proposals for Cockington Lane was put before the Transport Working Party on 25th April 2013 with the clear indication that the proposals were to implement a residents parking scheme and the 'Parking Policy 2012-15' was noted at the end of the issues paper in the background papers section.

Therefore the information in the parking policy was available to the members, prior to them making a decision at the meeting and that, should they have wished, they could have refused the proposals based on item 8 of Appendix B in the Parking Policy.

Objection 2

There are contradictory price change dates in the proposed order.

Specifically:-

"….Residents Parking Permit, the charge of which will initially be £100 per 12 months, but being reduced to £30 per 12 months as of 1st October 2013."

However, the section – "authorisation and use of Residents 'Parking Permits", states:-

Paragraph 18 (4)

(2) The charge for the issue of a Residents' Parking Permit and Protective Cover shall be –

(a) £100 on any applications received from the date of commencement of this order until 30th September 2016;
(b) £30 on any applications received on or after 1st October 2016;

Answer

The officer who processes the Traffic Regulation Orders states that the date error in the 'Statement of Reasons' does not invalidate the amendment order that it refers to, as the statement is only required to give a brief account of why the authority proposes to make the order.

Specific details such as charges being proposed in the order are not required to be included in the statement, and on this occasion the charge information was included as additional information. The order itself is the legal document that we cannot alter once it has been advertised, and as the information contained within article 18 is correct there is no need to revoke the order at this stage.

Meeting: Transport Working Party **Date: 24 October 2013**

Wards Affected: All wards in Torbay

Report Title: Torbay Council Highways Design Guide For new Developments

Executive Lead Contact Details: **Sue Cheriton, Executive Head – Residents & Visitor Services**

Supporting Officer Contact Details: **Barry Johnson – Contracts & Development Engineer**

1. Purpose

1.1 Torbay Council has produced this Design Guide to aid Developers, Designers and other professionals, and to consider how their proposals will affect the highways and transportation infrastructure.

2. Proposed Decision

2.1 That the Torbay Design Guide in **Appendix 1** to this report is approved and adopted for future developments which affect existing or proposed areas of public Highway and to be followed for the adoption of future infrastructure.

3. Action Needed

3.1 The approved policy will be actioned and put on Torbay councils website for Developers to view and include in developments where there is an involvement with existing and new adoptable Highway.

4. Summary

4.1 Torbay council requires its own Highways Design guide to reflect its Unitary Authority status.

4.2 The Torbay Design Guide will be unique to Torbay replacing the use of Devon County Council's Design Guide.

Supporting Information

5. Position

5.1 Torbay Council has continued to use The Devon County Council Design Guide for new adopted Developments, since becoming a Unitary Authority. The Devon Design guide does not reflect Torbay's environment and is not updated to reflect the recent guidance documents, Manual for Streets 1 & 2 published by The Department of Transport.

5.2 Legislation, policies and specification also require updating. Since Torbay Council has become a Unitary Authority it requires its own Design Guide which will have its own unique identity reflecting the three Historic seaside towns and outlying villages. The change of guidance, should ensure consistency, include updated specifications and updated policies.

5.3 The new document will be a live document on the Internet which will continue to be updated to reflect any future changes to guidance and Legislation. The document is proposed as a technical guide and does not affect strategic planning policy.

5.4 Torbay Council has produced this Design Guide to aid Developers, Designers and other professionals, and to consider how their proposals will affect the highways and transportation infrastructure. It explains the Design Philosophies, Criteria, and Council requirements, and sets out the procedures for application and processes to be followed for adoption of the infrastructure. It also sets out the requirements for compliance with Legislation, Health and Safety, Environmental and Public Protection.

5.5 At the Transport Working Party of the 25th of April 2013, officers outlined the reasoning for a design guide and suggested that the decision is deferred and members feedback to officers any comments on this early draft. This deferral was recommended by members and further consultation has been undertaken. Highways have also taken the opportunity to consult further with the planning Department. Further to this consultation, some amendments have been made, and a revised document is now being presented to the Working Party.

6. Possibilities and Options

6.1 The Authority may carry on using Devon County Councils Design Guide, which is out of date and does not comply fully with current policies and standards.

6.2 The Authority may consider each Development on its own merits, using current guidance where appropriate.

7. Preferred Solution/Option

7.1 To adopt Torbay Councils own design guide as current policy and standards and to suit the Bays characteristics and ensure consistency.

8. Consultation

8.1 The document has been consulted upon with the relevant professional departments and the Elected Members through the Transport Working Party.

9. Risks

9.1 If no design guide is in place, Highways may have difficulty in commenting on some Developments resulting in sub standard applications with a danger of an adverse affect on the Highway network.

9.2 If no Design guide is in place, then there is an increased risk that Highways in new Developments may become a future maintenance liability.

Appendices:
Appendix 1 - Policy Document: Torbay Council Highways Design Guide For new Developments

Additional Information:
None

Documents available in Members' Rooms:
None

Background Papers:

Manual for streets 1 & 2 published by the Department for Transport

Design Manual for Roads and Bridges published by the Department for Transport
Devon Design Guide

TORBAY COUNCIL

HIGHWAYS DESIGN GUIDE FOR NEW DEVELOPMENTS

CONTENTS

Introduction

In recent years the approach to the design of the space between buildings has evolved away from the traditional dominance of the engineered carriageway. There is now a recognition that the public realm has many wider functions than just the movement of vehicles. This has been recognised in the national launch of the planning policy and guidance, PPS3, and its companion guide 'Better places to live by design and Manual for Streets 1 and 2 by the Department for Transport and the Department for Communities and Local Government. The manual can be found on the **Department for Transport website**.

Torbay Council has produced this Design Guide to aid Developers, Designers and other professionals, and to consider how their proposals will affect the highways and transportation infrastructure. It explains the Design Philosophies, Criteria, and Council Policies, and sets out the procedures for application and processes to be followed for adoption of the infrastructure.

It also sets out the Council's requirements for compliance with Legislation, Health and Safety, Environmental and Public Protection.

To include:

Road and personal safety: To achieve developments that: are safe for all users; promote road safety; and reduce personal safety risks (whether real or imagined).

Accessibility: To achieve developments accessible to all road users (vehicles, cyclists, pedestrians, including those with sensory and mobility impairments. providing socially-necessary local bus services, publishing bus and bus information strategies and promoting high-quality rural and urban services that encourage greater use of public transport

Sustainability: To promote sustainable, high-quality alternatives to the private car, it introduces the key issues of sustainable travel (public transport, cycling and walking), and to encourage using sustainable materials wherever possible.

The impact on highways and transportation infrastructure: To ensure the highways and transportation infrastructure is not adversely affected by developments, including safety and congestion, and impact on people and the environment is minimised.

Design quality and future maintenance: To achieve highway and transportation infrastructure that: contributes to high-quality developments that can be properly and efficiently maintained, and encourages development layouts to be adopted, wherever possible, to safeguard homeowner's interest.

- Developments with more individuality and less of a 'one size fits all' approach;
- Developments that better reflect and respect local character, for example in terms of layout and architecture;

- Developments that better provide for local needs, for example in terms of the shopping or play facilities that they provide;
- Higher-quality developments that enhance their surroundings and provide a safe, accessible and attractive environment in which to live, work and play.

Design Criteria

The guidance contained in this part is intended to help you design development layouts that provide for the safe and free movement of all road users, including, cars, lorries, pedestrians, cyclists and public transport. You should select and assemble appropriate design elements to:

- provide road layouts which meet the needs of all users and restrain vehicle dominance;

- create an environment that is safe for all road users and in which people are encouraged to walk, cycle and use public transport and feel safe doing so; and

- help create quality developments in which to live, work and play.

We believe that such an approach, coupled with the flexibility that our guidance allows, already reflects many key themes of the Manual for Streets ,MfS2. Also, we have revised certain aspects of Torbay's design guide to reflect specific MfS2 guidance, particularly with regard to visibility splays. descriptions and guidance. To seeking residential development layouts that recognise that roads have a wider role to play in creating a sense of place and community as opposed to simply having a functional transport role.

Where this cannot be achieved by development layouts that are explicitly covered by this guidance, we are prepared to be flexible Where development proposals do not align with either the principles or guidance set out in this document it is likely that we will seek to resist those proposals in the interest of the users of the highway network and its primary role in providing safe and effective transport for all. However if the proposals are significantly out of line with the principles and guidance the Council may recommend a refusal.

NEW DEVELOPMENT HIGHWAY TYPES

Design criteria for the following categories of new roads are specifically dealt with in this section of the guide. The following hierarchy applies;

- Footways (adoptable)
- Cycle Tracks (adoptable)
- Single Private Drives (not adoptable)
- Shared Private Drives (not adoptable) where less than 5 properties served.
- Shared Surfaces (adoptable)
- Home Zones (adoptable)
- Minor Access Roads (adoptable)
- Major Access Roads (adoptable)
- Local Distributor Roads (adoptable)
- Industrial and Commercial Access Roads (may be considered for adoption)

FOOTWAYS

The layout and design of footways should aim to provide safe, reasonably direct, secure and visually attractive routes for pedestrians. The provision of convenient and easy to use car parking facilities will be a significant factor in discouraging indiscriminate parking on pedestrian routes.

Whenever footways interconnect with carriageways at pedestrian crossing points, dropped crossing kerbs should be installed to assist wheelchair users and those with prams or pushchairs. The gradient should be no more than 1:12 and the kerb should be flush with the carriageway (refer to Specification for allowable tolerances). Tactile paving should be provided at dropped kerbs to assist blind and partially sighted people, unless instructed otherwise by highway officers.

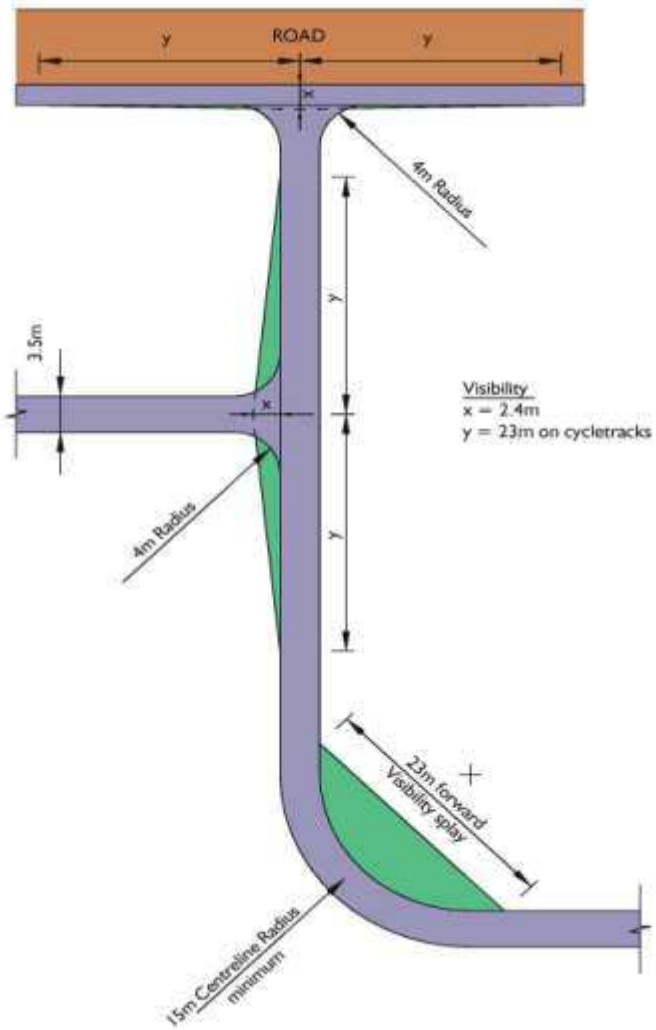
Footways should be designed to take account of:

- The type and function of adjacent carriageways
- The location of apparatus for statutory and other services
- The types of pedestrian movement
- The number of pedestrian movement including
- In the vicinity of schools, play areas shops or other community buildings there may be a need for variations in design compared to those adjacent to dwellings.
- Requirements of pedestrians where the nature of the development includes a high proportion of the very young or people with disabilities.
- The space occupied by street furniture such as street lighting columns, traffic signs etc
- The provision of access to dwellings for the emergency services; appropriate car parking can help save such access without obstructing footways.
- Methods for reducing the damage to footways resulting from over running or parking of vehicles, particularly at junctions.

- Footways should always be provided where the use of shared surfaces would not be appropriate. Footway widths should normally be 2m, shared footway/cycleway surfaces should be desired 3.5 m, minimum 3m.
- Linking footways between cul-de-sacs will need to be carefully designed so that the security of the users and adjacent dwellings is not adversely affected. The designer will also need to include design features that may reduce nuisance to the adjoining householders from inconsiderate users of this type of footway.

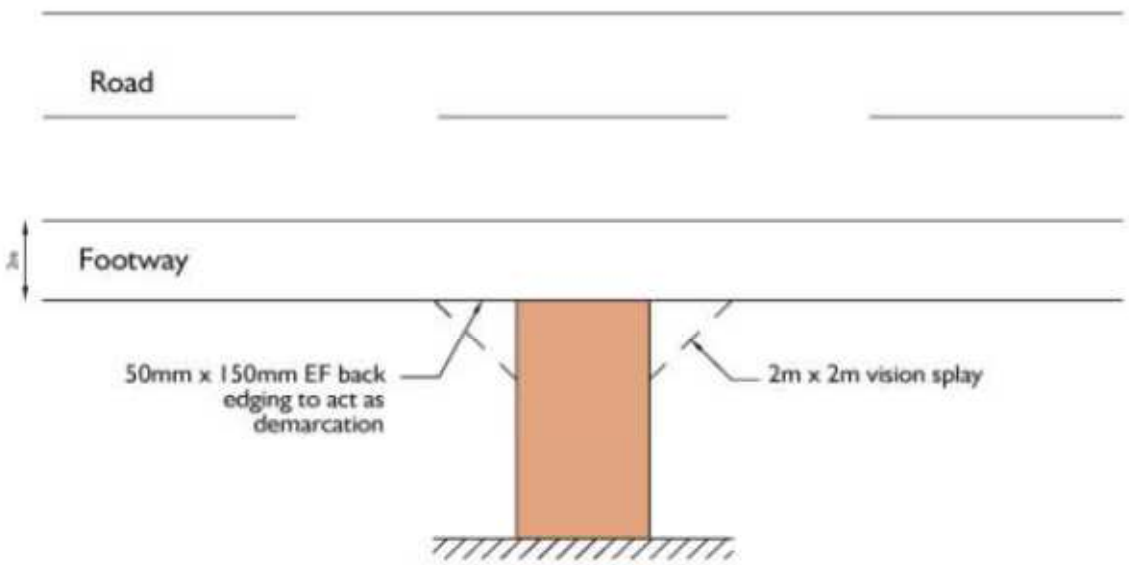
CYCLETRACKS

- Design speed - 15mph
- Desired 3.5m, 3.0m minimum width for shared facility with pedestrians
- 2.5m wide for segregated facility with additional 1.5m for pedestrians
- Visibility at junctions with roads
- Signs and lines to be provided in accordance with Traffic Signs Manual
- Residential roads may form part of local cycle advisory routes and networks



SINGLE PRIVATE DRIVES

- Will not be adopted as public highway
- Water from driveways must not be allowed to discharge onto the highway
- Driveway to be surfaced with self draining bound materials (loose material not allowed)
- The connection to the priority road shall be laid out as a dropped crossing to be set out at 90 degrees to road where possible
- Installed gates must be set back 6m from the highway boundary and open inwards
- Turning Area to be provided where deemed necessary by the highway authority
- Visibility splay in accordance with Manual for streets and Design Manual for roads and Bridges.



Driveway width 3.2 Min

Driveway Length 6.0m Min

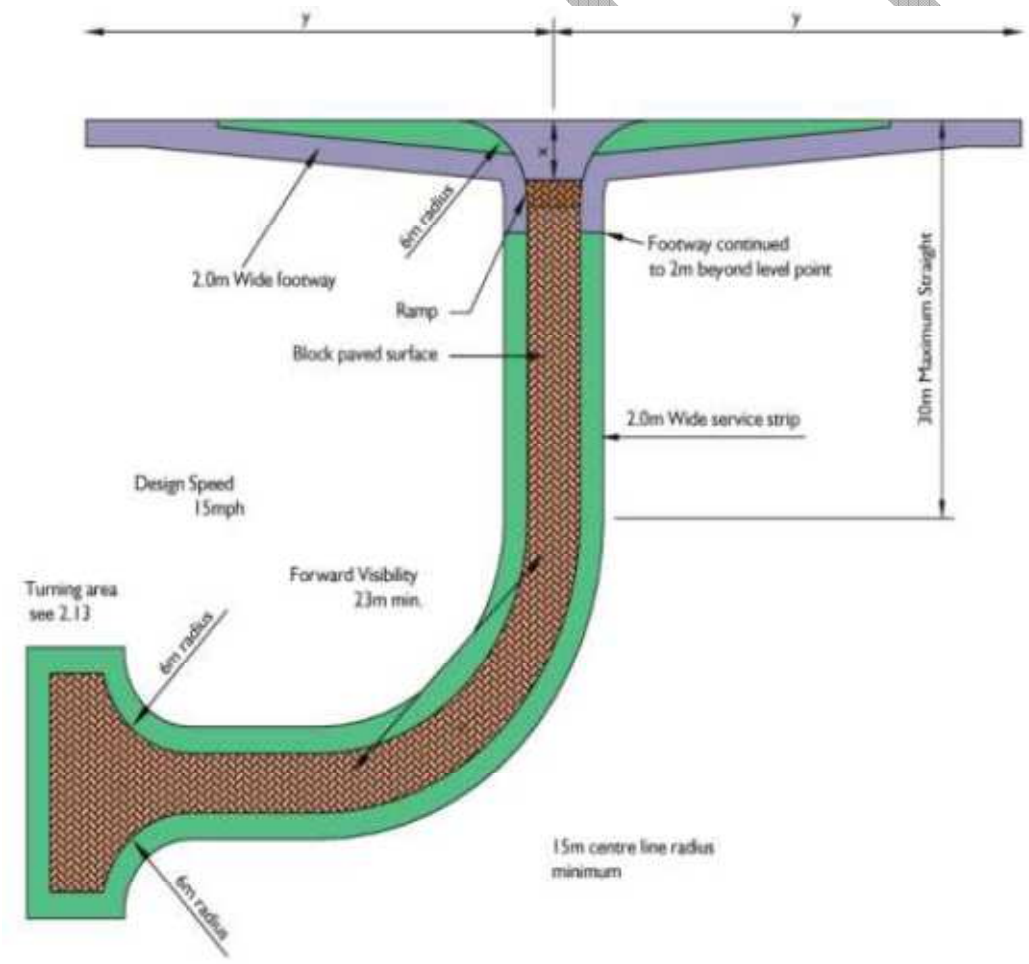
Longitudinal fall to Driveway Max 1:12 towards the carriageway, max 1:15 away from the carriageway.

SHARED PRIVATE DRIVES

- A shared surface which forms a cul-de-sac or courtyard serving a maximum of 5 houses
- Will not be adopted as public highway (unless over 5 properties served)
- Design speed 10mph
- Turning area to be provided for cars where length is less than 25m
- Where length exceeds 25m a turning area for refuse vehicles and passing bays should be provided
- 2m x 2m vision splays to be provided at the rear of the footway minimum width of 3.5m
- Junction spacing to be 30m on the same side where shared drive is on a major access road
- To be set out at 90 degrees to the road where possible
- Visibility splay in accordance with Manual for streets and Design Manual for roads and Bridges.
- Maximum gradient 1:8

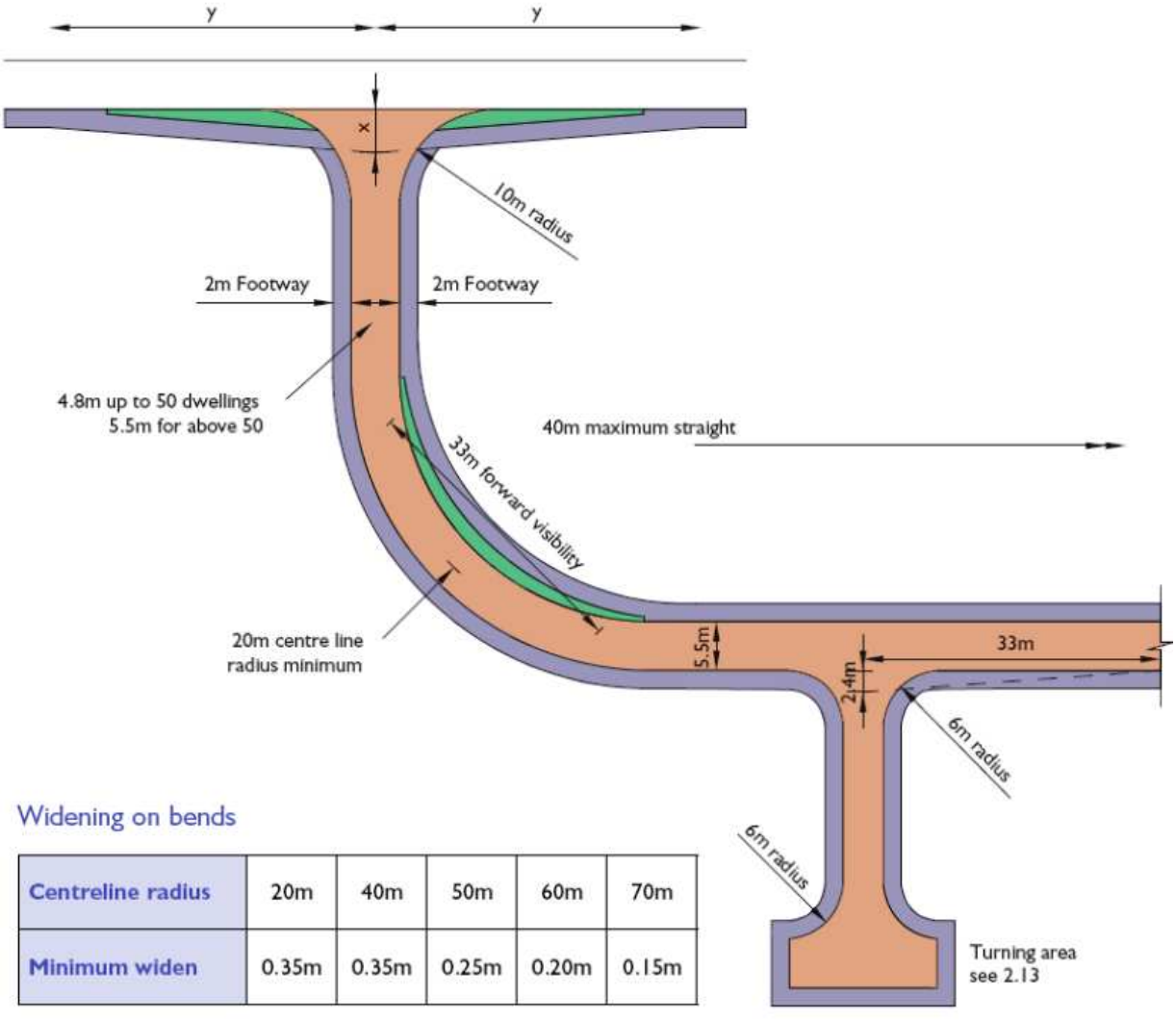
SHARED SURFACES

- Serving up to 25 dwellings (max 50 dwellings with two access points to higher category roads)
- Design speed 15mph
- Minimum carriageway width 4.8m
- Footways not required beyond entrance ramp
- Turning areas in accordance with Manual for streets
- Visibility splays in accordance with Manual for streets and Design Manual for roads and Bridges.
- A single hard surface for use by pedestrians and vehicles without segregation
- Service strip 2m wide where provided
- Surface to be block paved or imprinted coloured Bituminous Material Design mix at the Engineers Specification
- Forward Visibility splay in accordance with Manual for streets.



MINOR ACCESS ROADS

- Serving up to 100 dwellings
- Design speed 20mph
- Standard carriageway width 5.5m, may be reduced to 4.8m where less than 50 houses are served
- 2m wide footways to be provided on each side where dwellings have direct access
- Turning areas in accordance with diagram 2.13
- Visibility splays in accordance with Manual for streets,(Design Manual for roads and Bridges to be used when joining strategic routes).
- Shared use may be considered providing designated parking provision is provided.
- Consideration of connecting footways/cycle ways to adjacent access roads.



Widening on bends

Centreline radius	20m	40m	50m	60m	70m
Minimum widen	0.35m	0.35m	0.25m	0.20m	0.15m

Entry Radii

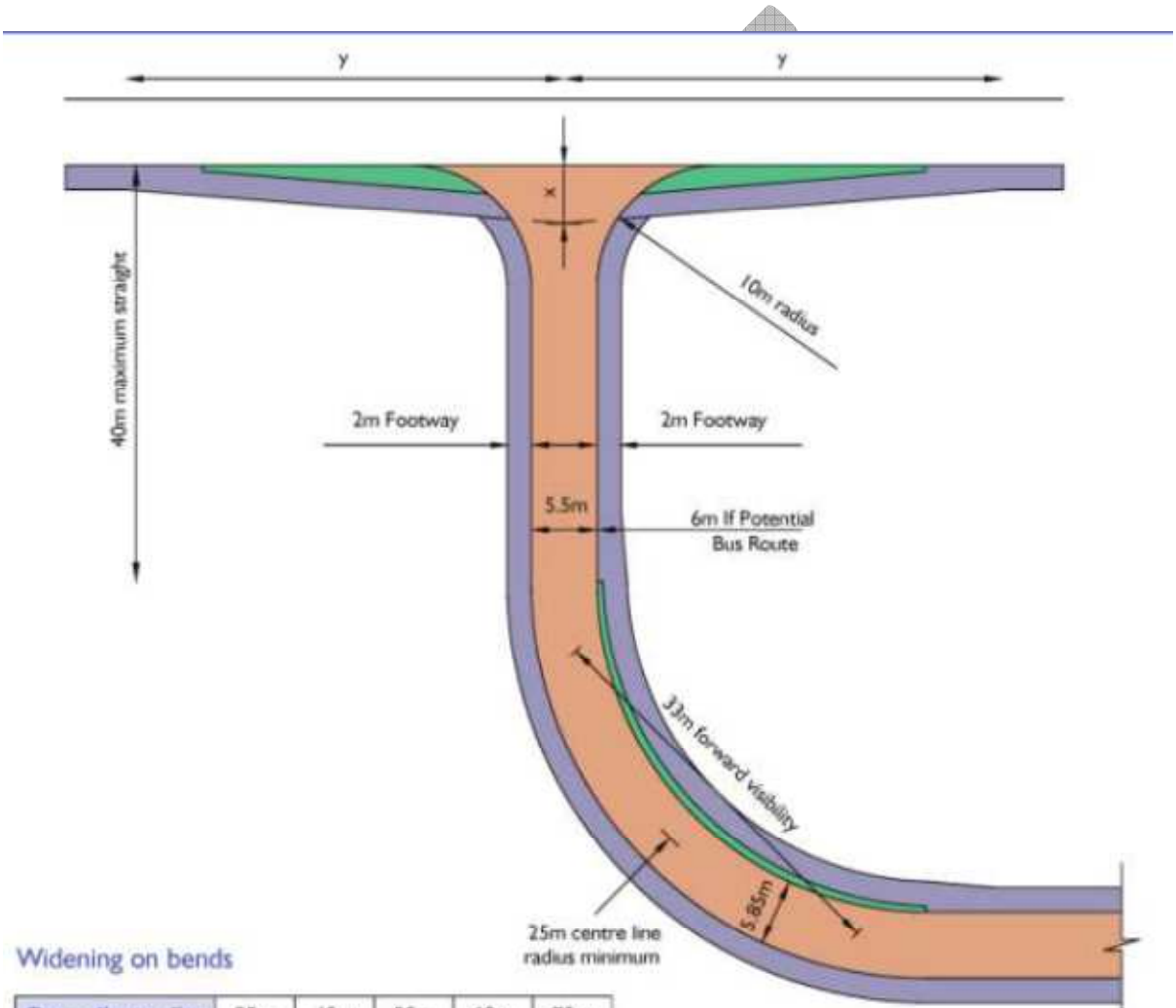
With major access road
With higher category road

Junction Spacing

6m minimum Same Side Not restricted
10m minimum Opposite side Not restricted

MAJOR ACCESS ROADS

- Serving between 100 and 300 dwellings
- If a cul-de-sac then max 200 dwellings + emergency link required
- Design speed 20mph
- 5.5m wide carriageway, 6m if possible bus route
- 2m wide footways on both sides ,3m wide if shared pedestrian /cycleway.
- Turning areas in accordance with Manual for streets
- Visibility splays in accordance with Manual for streets 1and 2 (Design Manual for roads and Bridges when joining strategic routes).



Widening on bends

Centreline radius	25m	40m	50m	60m	70m
Minimum widen	0.35m	0.35m	0.25m	0.20m	0.15m

Entry Radii
With higher category road 10m minimum

Junction Spacing
Same Side 30m
Opposite side 15m

LOCAL DISTRIBUTOR ROADS

- Design speed 30mph
- Road Width 7.3m
- Minimum centre line radius 40m
- Forward visibility 60m
- Individual Private access only in exceptional circumstances
- Minimum of two access to existing highway network
- 3.5m shared pedestrian/cycleway
- Visibility in accordance with Manual for streets 1 and 2 (Design Manual for roads and Bridges when joining a major access roads and strategic routes).

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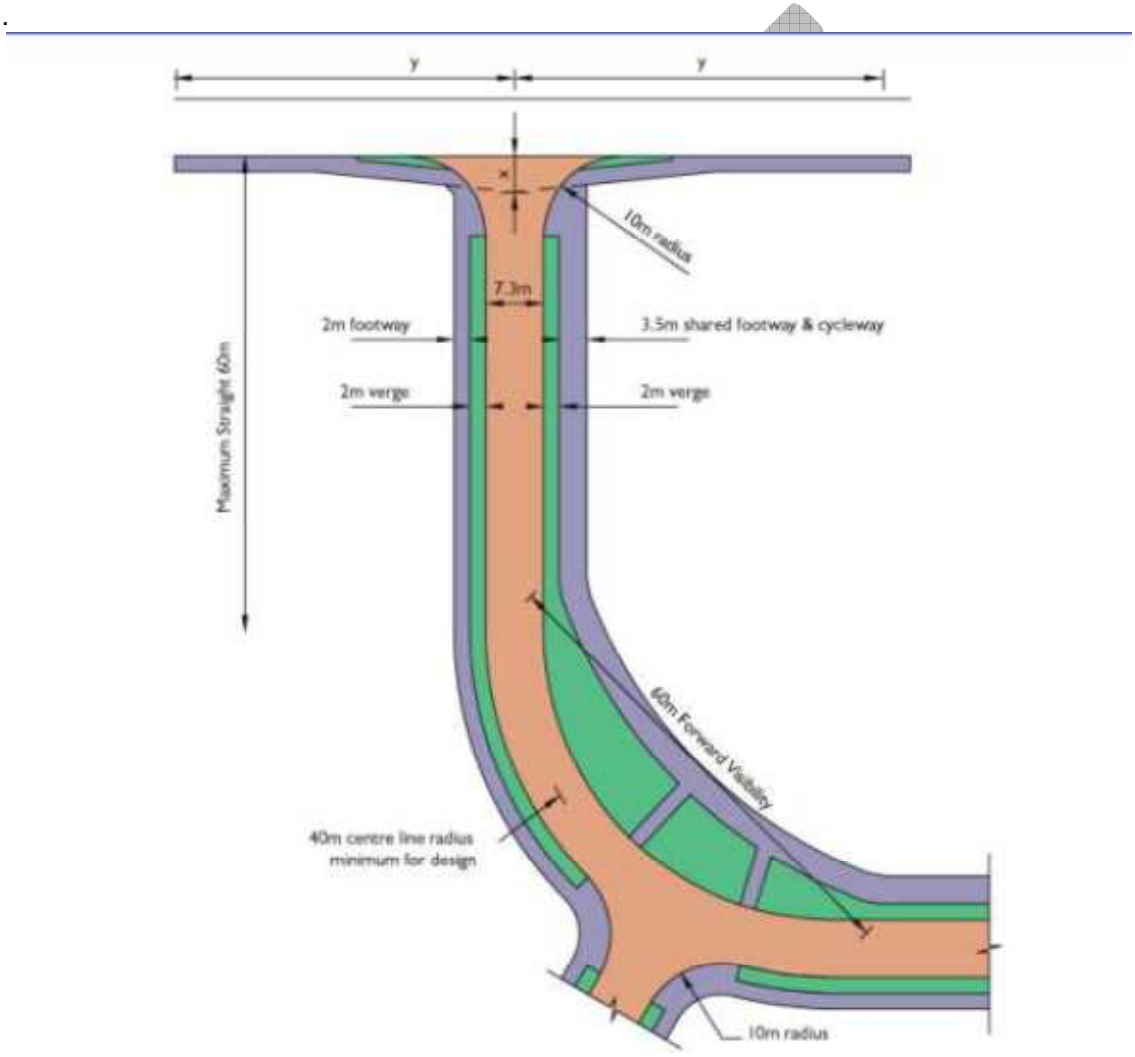


Entry Radii
With higher category road

Junction Spacing
Designed in Accordance with HA TD 42/95
Same Side 100m
Opposite side 50m

HOME ZONES

A Home Zone is essentially a shared surface road but laid out so pedestrians and other users have equal priority with vehicle users. In essence, the Home Zone should make motorists feel they are guests in a pedestrian environment, and should drive accordingly. Although the introduction of a Home Zone can contribute to road safety, the main benefit to local people is a change in how the street can be used. Home zones may consist of shared surfaces, indirect traffic routes, areas of planting, and features to encourage the use of the street, such as seating. Gateways and signing will be needed to mark the limits of the zone. The key benefit of a Home Zone is that it turns a residential street into valued public space, and not just a place for movement.

A speed retarder ramp and/or pinch point will be required to define the zone limits together with relevant signage and design features to create a sense of identity. Home Zones must be designed to meet the needs of all members of the community. Disabled people will have particular requirements, which must be taken into account. Shared surfaces cause problems for blind and partially sighted pedestrians and this is highlighted in Manual for Streets.

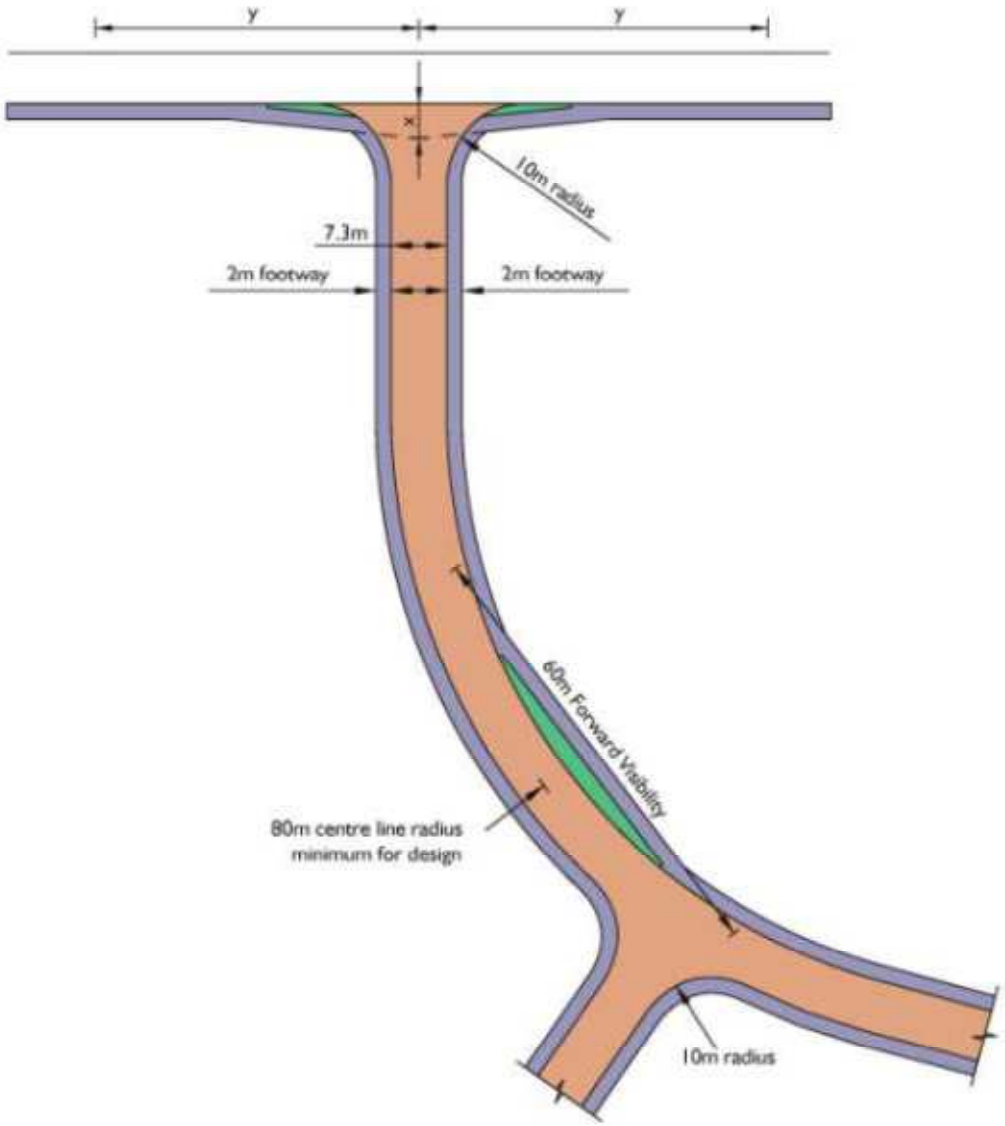
Vehicle speeds shall be kept to substantially less than 10mph by means of design layout, specifically substantial changes in direction of the traffic route. The minimum forward visibility splay shall be 12m. Swept path analysis will be required to demonstrate that highway design, and speed restricting alignments can adequately accommodate appropriate vehicles, including large refuse freighters and emergency services vehicles.

Road Safety Audits and Risk Assessments will be required for Home Zones. Properties adjoining the highway must comply with CDM regs. to ensure safe access for property maintenance is provided.

Home zones will only be considered on roads which meet the criteria for shared surface roads in this guide.

INDUSTRIAL AND COMMERCIAL ACCESS ROADS

- Design speed 30mph
- Carriageway width 6.7m, increased to 7.3m if large no. of HGV's served
- 2m wide footways on both sides
- 3m wide shared pedestrian/cycleway
- Turning areas in accordance with diagram 2.13
- Visibility splays in accordance with Manual for streets (Design Manual for roads and Bridges).



Entry Radii
With higher category roads
Designed in accordance with HA TD 42/95

Junction Spacing
Within the industrial estate
30m on same side
15m on opposite side
100m on same side

VERTICAL ALIGNMENT

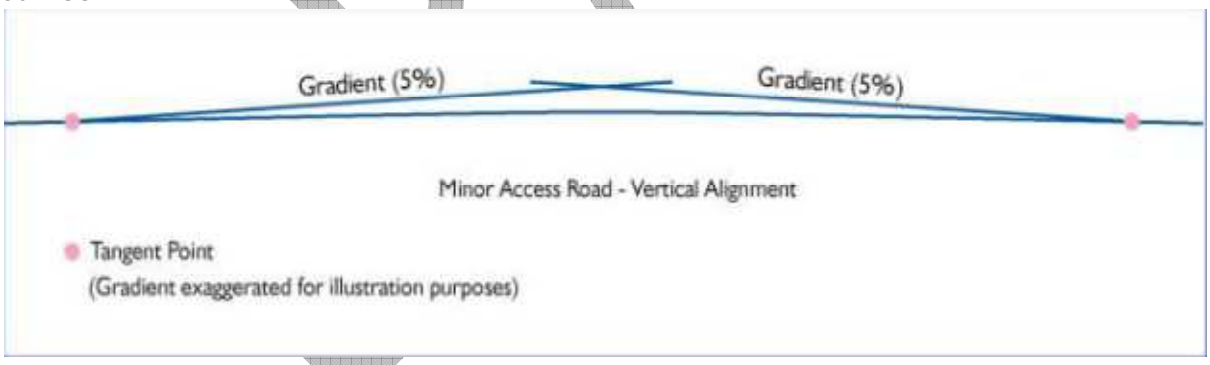
The Developer must consider the following when designing vertical curves on new developments. Generally, the maximum and minimum gradients allowable on new developments will be as detailed within the table below:

Category	Maximum Gradient	Minimum Gradient
All road categories	1:20 (5%) desirable but consideration may be given to gradients up to 1:10 (10%)	1:150 (0.67%)
Cycle tracks and footways	1:15	1:150 (0.67%)

Additionally, the Developer must consider the curvature of the new highway. The design curve length will be a function of the algebraic change of gradient, expressed as a percentage, multiplied by the „K" value. „K" values are provided in the table below:

Category	Minimum 'K' value
Major access and above + Minor access and below	6 2
Cycle track	2

Example, Minor Access Road - Vertical Alignment:
The example below has been included to assist Developers in designing vertical curves.



The Developer should note that side road gradients into junctions should be set at a maximum of 1:20 (5%) for the first 10m. Additionally, the minimum vertical curve length of any section of road should be not less than 20m.

In the above example, assuming it is a Minor Access Road, and the curve length will be 20m

The „K" Value is given by: Design curve length / Algebraic change of gradient = 20m /10 = 2
Therefore the above example falls within the design criteria and would be acceptable.

HEADROOM

Additionally, the Developer must also consider in the design that the minimum allowable
headroom for all new highways intended for adoption shall be as follows;

Category	Minimum Headroom
All Roads	5.3m
Cycleway	2.7m
Footway	2.7m

VISIBILITY

Junctions and Accesses

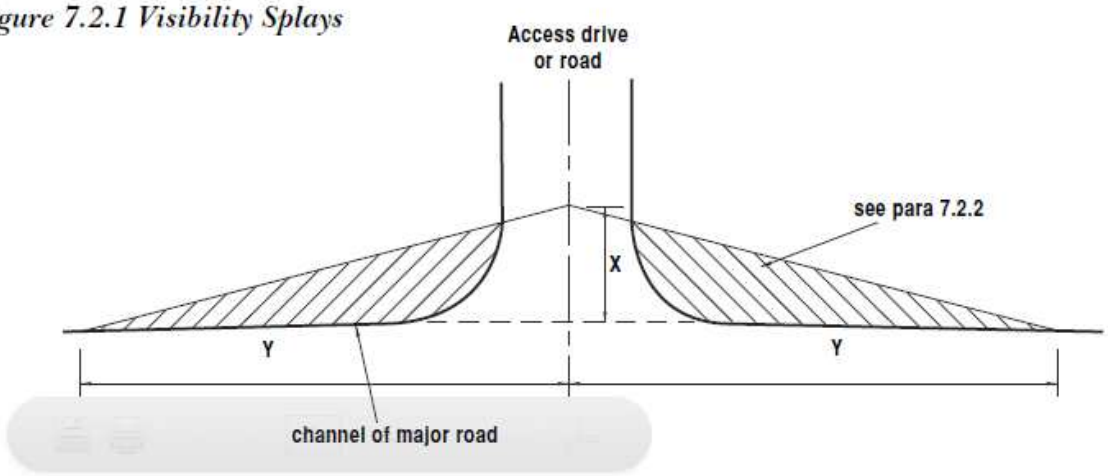
The provision of adequate visibility at junctions is vital for the safety of all road users. The table below gives the basic dimensions required for the different road types.

	Major Road Type															
	Strategic Routes					Roads Within Residential Estates										
Major Road Design Speed Kph	100	85	70	60	48	16	20	24	25	30	32	40	45	48	50	60
Mph	62	53	44	37	30	10	12	15	16	19	20	25	28	30	31	37
X Distance (m) (1)	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Y Distance (m) (2)	215	160	120	90	70	11	14	17	18	23	25	33	39	43	45	59

Notes
(1) The X distance will be increased in special circumstances as required by the Engineer e. g. where greater capacity is required or specific safety issues are apparent etc.

(2) Speed readings can determine the requirements for 85th percentile speeds therefore the Y distance can be reduced if lower speeds can be proven .
For higher speed roads and strategic routes, i.e. with an 85th percentile speed over 40mph, it may be appropriate to use longer SSDs, (Y Distance) as set out in the (*Design Manual for Roads and Bridges)*.

Figure 7.2.1 Visibility Splays



Clearance of Obstructions

Visibility Splays should be clear of any obstructions that are higher than 300mm above the channel level over the hatched area of the figure above. This will then allow any planting to grow a further 300mm, but in any case the overall height should never exceed 600mm at any time of year. Vertical obstructions to visibility such as lamp columns and trees will be accepted provided that in combination they do not create a solid visual barrier.

Speed

Influence of geometry on speed

Research carried out in the preparation of MfS considered the influence of geometry on vehicle speed and casualties in 20 residential and mixed-use areas in the UK. Two highway geometric factors stand out as influencing driving speed, all other things being equal. They are:

- forward visibility; and
- carriageway width.

Improved visibility and/or increased carriageway width were found to correlate with increased vehicle speeds. Increased width for a given visibility, or vice versa, were found to increase speed. These data are summarised in Fig. 7.16.

The relationship between visibility, highway width and driver speed identified on links was also found to apply at junctions. A full description of the research findings is available in TRL Report 661.[15]

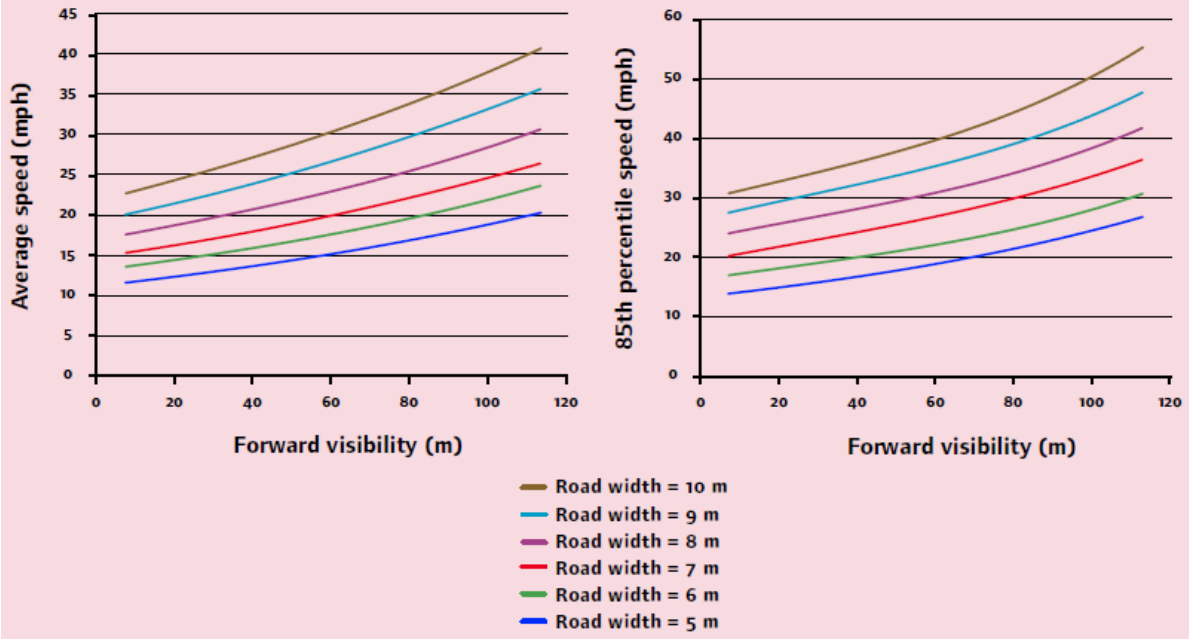


Figure 7.16 Correlation between visibility and carriageway width and vehicle speeds (a) average speeds and (b) 85th percentile speeds. These graphs can be used to give an indication of the speed at which traffic will travel for a given carriageway width/forward visibility combination.

Speed limits for residential areas are normally 30 mph, but 20 mph limits are becoming more common. If the road is lit, a 30 mph limit is signed only where it begins – repeater signs are not applicable. All other speed limits have to be signed where they start and be accompanied by repeater signs.

A street with a 20 mph limit is not the same as a 20 mph zone. To create a 20 mph zone, it is a legal requirement that traffic calming measures are installed to ensure that low speeds are maintained throughout. In such cases, the limit is signed only on entering the zone, and no repeater signs are necessary.

Any speed limits below 30 mph, other than 20 mph limits or 20 mph zones, require individual consent from the Secretary of State for Transport. Designers should note that such approval is unlikely to be given. A speed limit is not an indication of the

appropriate speed to drive at. It is the responsibility of drivers to travel within the speed limit at a speed suited to the conditions.

However, for new streets, or where existing streets are being modified, and the design speed is below the speed limit, it will be necessary to include measures that reduce traffic speeds accordingly.

Difficulties may be encountered where a new development connects to an existing road. If the junction geometry cannot be made to conform to the requirements for prevailing traffic speeds, the installation of traffic-calming measures on the approach will allow the use of a lower design speed to be used for the new junction.

This section provides guidance on stopping sight distances (SSDs) for streets where 85th percentile speeds are up to 60 km/h. At speeds above this, the recommended SSDs in the *Design Manual for Roads and Bridges* may be more appropriate. This information can be found in Volume 6 section 2, TD 42/9s Table 7/1.

Stopping sight distance

The stopping sight distance (SSD) is the distance within which drivers need to be able to see ahead and stop from a given speed. It is calculated from the speed of the vehicle, the time required for a driver to identify a hazard and then begin to brake (the perception–reaction time), and the vehicle's rate of deceleration. For new streets, the design speed is set by the designer. For existing streets, the 85th percentile wet-weather speed is used.

The basic formula for calculating SSD (in metres) is:SSD = $vt + v2/2d$ where: v = speed (m/s) t = driver perception–reaction time (seconds) d = deceleration (m/s2) The desirable minimum SSDs used in the *Design Manual for Roads and Bridges* are based on a driver perception–reaction time of 2 seconds and a deceleration rate of 2.45 m/s2 (equivalent to $0.25g$ where g is acceleration due to gravity (9.81 m/s2)). *Design Bulletin 32***17** adopted these values.

Drivers are normally able to stop much more quickly than this in response to an emergency. The stopping distances given in the Highway Code assume a driver reaction time of 0.67 seconds, and a deceleration rate of 6.57 m/s2. While it is not appropriate to design street geometry based on braking in an emergency, there is scope for using lower SSDs than those used in *Design Bulletin 32*. This is based upon the following: a review of practice in other countries has shown that *Design Bulletin 32* values are much more conservative than those used elsewhere; research which shows that the 90th percentile reaction time for drivers confronted with a side-road hazard in a driving simulator is 0.9 seconds (see TRL Report 332);carriageway surfaces are normally able to develop a skidding resistance of at least 0.45g in wet weather conditions.

Deceleration rates of $0.25g$ (the previously assumed value) are more typically associated with snow-covered roads; and of the sites studied in the preparation of this manual, no relationship was found between SSDs and casualties, regardless of whether the sites complied with *Design.*

Table 7.1 Derived SSDs for streets (figures rounded).

Speed	Kilometres per hour	16	20	24	25	30	32	40	45	48	50	60
	Miles per hour	10	12	15	16	19	20	25	28	30	31	37
SSD (metres)		9	12	15	16	20	22	31	36	40	43	56
SSD adjusted for bonnet length. See 7.6.4		11	14	17	18	23	25	33	39	43	45	59
		Additional features will be needed to achieve low speeds										

The SSD values used in MfS are based on a perception–reaction time of 1.5 seconds and a deceleration rate of 0.45*g* (4.41 m/s2). Table 7.1 uses these values to show the effect of speed on SSD.

Below around 20 m, shorter SSDs themselves will not achieve low vehicle speeds: speed-reducing features will be needed. For higher speed roads and strategic routes, i.e. with an 85th percentile speed over 60 km/h, it may be appropriate to use longer SSDs, as set out in the *Design Manual for Roads and Bridges*.

Gradients affect stopping distances.

The deceleration rate of 0.45g used to calculate the figures in Table 7.1 is for a level road. A 10% gradient will increase (or decrease) the rate by around 0.1g.

Visibility requirements

Visibility should be checked at junctions and along the street. Visibility is measured horizontally and vertically.

Using plan views of proposed layouts, checks for visibility in the horizontal plane ensure that views are not obscured by vertical obstructions.

Checking visibility in the vertical plane is then carried out to ensure that views in the horizontal plane are not compromised by obstructions such as the crest of a hill, or a bridge at a dip in the road ahead. It also takes into account the variation in driver eye height and the height range of obstructions. Eye height is assumed to range from 1.05 m (for car drivers) to 2 m (for lorry drivers). Drivers need to be able to see obstructions 2 m high down to a point 600 mm above the carriageway. The latter dimension is used to ensure small children can be seen (Fig. 7.17). 7.6.4 The SSD figure relates to the position of the driver. However, the distance between the driver and the front of the vehicle is typically up to 2.4 m, which is a significant proportion of shorter stopping distances. It is therefore recommended that an allowance is made by adding 2.4 m to the SSD.

Visibility splays at junctions

The visibility splay at a junction ensures there is adequate inter-visibility between vehicles on the major and minor arms

The distance back along the minor arm from which visibility is measured is known as the X distance. It is generally measured back from the 'give way' line (or an imaginary 'give way' line if no such markings are provided).

This distance is normally measured along the centreline of the minor arm for simplicity, but in some circumstances (for example where there is a wide splitter island on the minor arm) it will be more appropriate to measure it from the actual position of the driver.

The Y distance represents the distance that a driver who is about to exit from the minor arm can see to his left and right along the main alignment. For simplicity it is measured along the nearside kerb line of the main arm, although vehicles will normally be travelling a distance from the kerb line. The measurement is taken from the point where this line intersects the centreline of the minor arm (unless, as above, there is a splitter island in the minor arm).

When the main alignment is curved and the minor arm joins on the outside of a bend, another check is necessary to make sure that an approaching vehicle on the main arm is visible over the whole of the Y distance. This is done by drawing an additional sight line which meets the kerb line at a tangent.

Some circumstances make it unlikely that vehicles approaching from the left on the main arm will cross the centreline of the main arm – opposing flows may be physically segregated at that point, for example. If so, the visibility splay to the left can be measured to the centreline of the main arm.

X distance

An X distance of 2.4 m should normally be used in most built-up situations, as this represents a reasonable maximum distance between the front of the car and the driver's eye.

A minimum figure of 2 m may be considered for private drives and in some very lightly-trafficked and slow-speed situations, but using this value will mean that the front of some vehicles will protrude slightly into the running carriageway of the major arm. The ability of drivers and cyclists to see this overhang from a reasonable distance, and to manoeuvre around it without undue difficulty, should be considered. Using an X distance in excess of 2.4 m is not generally required in built-up areas. Longer X distances enable drivers to look for gaps as they approach the junction. This increases junction capacity for the minor arm, and so may be justified in some circumstances, but it also increases the possibility that drivers on the minor approach will fail to take account of other road users, particularly pedestrians and cyclists. Longer X distances may also result in more shunt accidents on the minor arm. TRL Report No. 184 found that accident risk increased with greater minor-road sight distance.

Y distance
The Y distance should be based on values for SSD (Table 7.1).

Speed readings can determine the requirements for 85th percentile speeds therefore the Y distance can be reduced if lower speeds can be proven .

For higher speed roads and strategic routes, i.e. with an 85th percentile speed over 40mph, it may be appropriate to use longer SSDs, as set out in the (*Design Manual for Roads and Bridges)*.

SIGHTLINES

These are required to enable drivers to see a potential hazard in time to slow down or stop comfortably before reaching it. It is necessary to consider the driver's line of vision, in both vertical and horizontal planes, and the stopping distance of the vehicle.

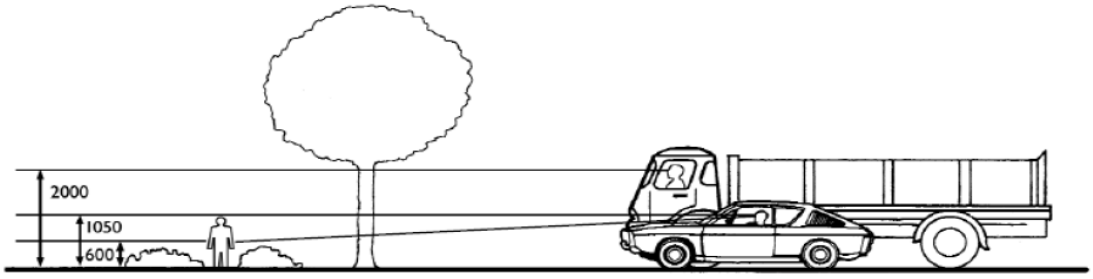
The design of sightlines is discussed in detail in both Manual for streets and DMRB. This section draws together the advice in both documents.

The guidance given here needs to be assessed in the circumstances of each case. Sightlines should never be reduced to a dangerous level.

The diagrams and commentary given here describe the most salient points involved using both Manual for streets and DMRB.

VERTICAL VISIBILITY ENVELOPE

The required vertical visibility envelope is defined below:



To enable drivers to see a potential hazard in time to slow down or stop comfortably before reaching it, it is necessary to consider the driver's line of vision, in both the vertical and horizontal planes, and the stopping distance of the vehicle.

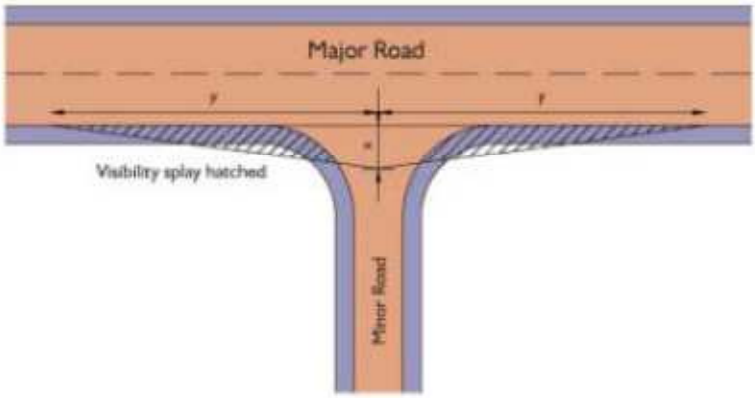
As general guidance, it is suggested that a height of 600mm be taken as the point above which unobstructed visibility should be provided wherever the potential exists for conflicts between motorists and young children. This will apply along all sections

of residential roads and is especially important where shared surface roads are used.

JUNCTION VISIBILITY

To ensure that drivers preparing to exit a minor road can see and be seen by traffic proceeding along the major road, clear visibility is required to both sides of the major road as shown below. Any junction must be constructed and maintained so that nothing is placed, installed or planted that will obstruct the visibility splay. Where possible, visibility splays should be defined with footways to the rear of the splay to clearly define the splay and to prevent misuse.

The following junction diagram and tables indicate the X and Y dimensions to be calculated for junction visibilities.



X DIMENSIONS

To be measured along the centreline of the side road, from the channel of the priority road.

9m Only to be used at major new junctions at the discretion of the Engineer

4.5m The maximum standard required for major new road junctions, for junctions of busy access roads, and for busy strategic routes.

2.4m The minimum necessary for junctions within development to enable a driver who has stopped at a junction to see down the major road without encroaching onto it.
To be used on cycle track junctions

2m For single dwellings or small groups of up to 6 dwellings

Less than 2m only in exceptional circumstances will a distance of less than 2m be Considered

TURNING HEADS

Turning Heads are to be provided at the ends of all cul de sac and at other relevant places required by the Engineer. Informal shapes are encouraged, provided that minimum standards are maintained.

Careful design of turning heads in relation to house layout can often minimise excess highway space while ensuring adequate access by service vehicles. If private drives etc. are appropriately positioned parking in turning heads can be curtailed. Entrances to communal parking areas etc. can often provide an effective opportunity for vehicles to turn.

Where a footway or adoptable verge surrounds the turning head, the dimensions can be reduced, refuse vehicles etc. can be assumed to overhang these adopted areas. Therefore, no street furniture (lighting columns etc) should not be placed in the shaded areas, nor should there be the possibility that cars will be parked within them.

Irregular shapes are acceptable, provided that a standard turning head can be accommodated within them.

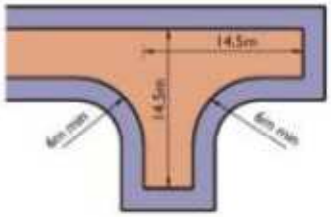
Area of overhang over verge or footway, to be kept clear of obstruction

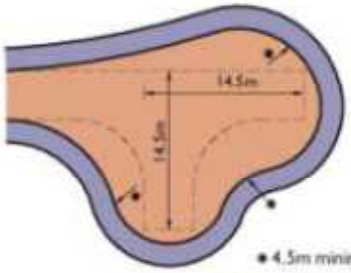
The layout of turning spaces should be designed to:

Allow for refuse vehicles to turn when they would otherwise have to reverse more than 40m.

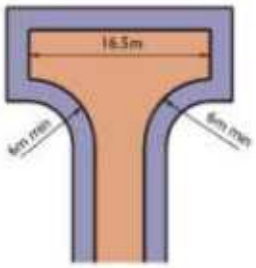
Provide an area that will be easily maintained by a mechanical sweeper.

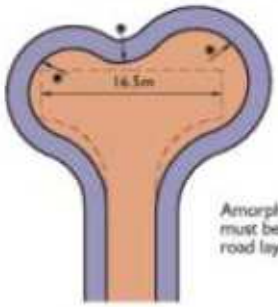
Residential Roads:





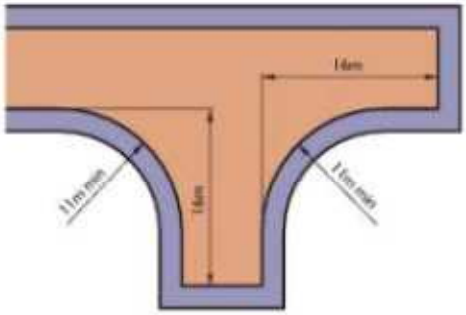
• 4.5m minimum radius

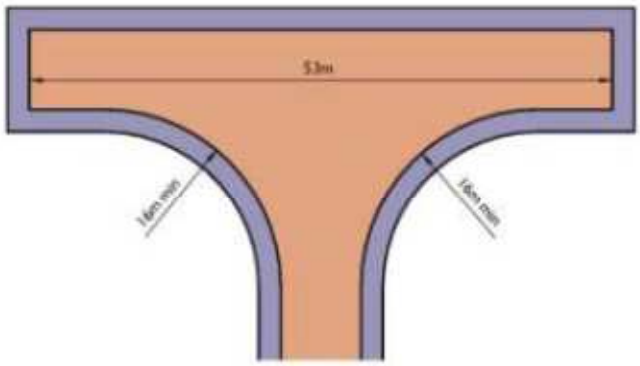




Amorphous Shapes allowable, but must be able to accomodate the road layout dimensions as indicated

Industrial Roads:





LANDSCAPING

A general presumption exists for the retention, wherever practically possible, of existing landscape features of value. Potential benefits may range from simple aesthetics that enhance the visual landscape through to important environmental or cultural associations.

Any potential for the feature/s to provide wildlife enhancements should be considered such as its role as a present or future wildlife corridor, provision of habitats and so on. Therefore the preliminary design of residential access roads, cycleways and footpaths to serve the development should as far as possible be sympathetic to the Authorities wishes and be in accordance wherever possible of any pre-application guidance obtained and be relevant to the emerging Local Plan.

So, for example, if a tree of value was situated within the visibility splay, all attempts should be made to reposition the access if this can be done safely. In residential areas the Highway Authority will normally only adopt the paved surfaces and verges which are key to the functioning of the highway. Small areas of grass must be avoided, as they are likely to produce future maintenance problems.

Trees must not be planted near structures or services unless due consideration is given for future root growth, final crown size and the species potential to cast shade.

Existing trees, which will become maintainable at public expense, shall be the subject of a pre adoption condition survey to ascertain their health, the results of which should be forwarded to the Engineer who may wish to seek guidance from the Natural Environment Services prior to acceptance. Commuted sum payments are likely to be required to cover their future maintenance costs.

Newly planted trees should be produced, installed and maintained in accordance with the following British Standards.

- B.S.3936 Specifications for trees and shrubs
- B.S.4043 Recommendations for Transplanting root balled trees
- B.S.4428 Code of Practice for general landscape operations

Highway landscape features should be maintained by the developer for a period of 5 Years, which may be controlled by way of planning conditions if applicable.

Thorned species will not be accepted immediately adjacent to footways and cycletracks. If existing hedges contain thorned species, cycle tracks shall be positioned at least 3 metres from the extremities of the hedge to prevent problems with hedge-cutting debris. Existing hedges adjacent to the existing highway shall be transferred to frontages for maintenance.

Any new carriageway should be outside the canopy (or reduced canopy if reduction is deemed suitable) of any existing tree to prevent damage to the new construction by the tree roots. Any work under the canopy of deciduous trees or within a radius of half of the height of coniferous species shall comply with BS 5837: 2012 Trees in relation to design, demolition and construction - Recommendations

DRAINAGE

General Requirements

In general, drainage systems shall be designed in accordance with the current edition of Sewers for Adoption and with the Specification accompanying this Design Guide.

All pipes that only carry surface water from the adoptable highway are prospectively maintainable by the Highway Authority. Their design and construction shall comply with the standards required in this document.

Pipes that carry surface water from the adoptable highway as well as other areas such as roofs, private drives etc must be adopted by the water authority and must comply with their requirements.

Lateral connections into public sewers will remain private but shall be designed and constructed to adoptable standards. All such connections shall run approximately at right angles to the centreline of the road to minimise their length.

Adoption Requirements

Where foul or surface water sewers are to be laid under the adoptable highway or where the highway drainage is to connected into a surface water sewer, written assurance must be obtained beforehand that the water authority will adopt the sewers, subject to compliance with their adoption procedure.

The Highway Authority will normally decline to adopt any highway covered by a Section 38 agreement until the water authority has confirmed the adoption of all sewers within the highway. This also includes any other sewers not within the adoptable highway but which carry water from it.

All drains that are intended to be adopted as highway drains shall discharge to a pipe or watercourse at a point approved by the Highway Authority. Evidence will be required that the developer has right to discharge, free of any liability which may be binding upon the Highway Authority when the drain is adopted.

Private drains will not normally be permitted within the adoptable highway. All prospectively maintainable highway drains shall be located within land that is to be adopted by the Highway Authority. Only in exceptional circumstances will they be permitted in land that is to remain private. Where such circumstances do arise the land owner at the time of completing a Section 38 Agreement will be required to give a grant of easement keeping 3m each side of the pipe clear of all obstructions, which will be binding on successors in title. The developer is strongly advised not to sell any land that will contain a highway drain before completion of such an Agreement. The Highway Authority will not accept any different form of undertaking, which dilutes the rights conferred on it.

Outfalls and Watercourses

Where the outfall is into a ditch or watercourse the approval of the Environment Agency must be obtained in writing.

Where the outfall is proposed to be through an existing highway drain the developer will be required to prove its capacity and condition before approval for the connection can be given. This will include a CCTV survey of the drain and the carrying out of any improvement works found to be necessary.

Where the highway drain discharges into a watercourse, calculations shall take into account the possibility that the watercourse may be flooded.

Drainage Design

Gully spacing shall be determined using the recommendations of HA 102/00, Spacing of Road Gullies. Gullies will be required immediately upstream of block paviours, pedestrian crossing points and road junctions, and shall never be located on a crossing point. It is the developer's responsibility to demonstrate and ensure that the number and positioning of gullies is adequate to drain the highway.

The proposed drainage system is to be designed using „Micro Drainage" or similar approved. A disc containing the input data and the output must be submitted to the Engineer for checking prior to any works taking place.

The parameters to be used during the drainage design are as listed below:

The system should be designed under pipe fall conditions to accept the following design storm (i.e. without surcharging above pipe soffit).

Rainfall average return period	2 years
Rainfall average return period where consequences of are severe	10 Years
Time of entry	4 Minutes
Design flow velocities	1m/s (Min), 7.5m/s (Max)
Minimum gradient	1:150
Minimum pipe diameter	225mm Highway drain 150mm Gully connection

The Council may consider the use of combined kerb and drainage systems depending on the situation and design submitted for approval.

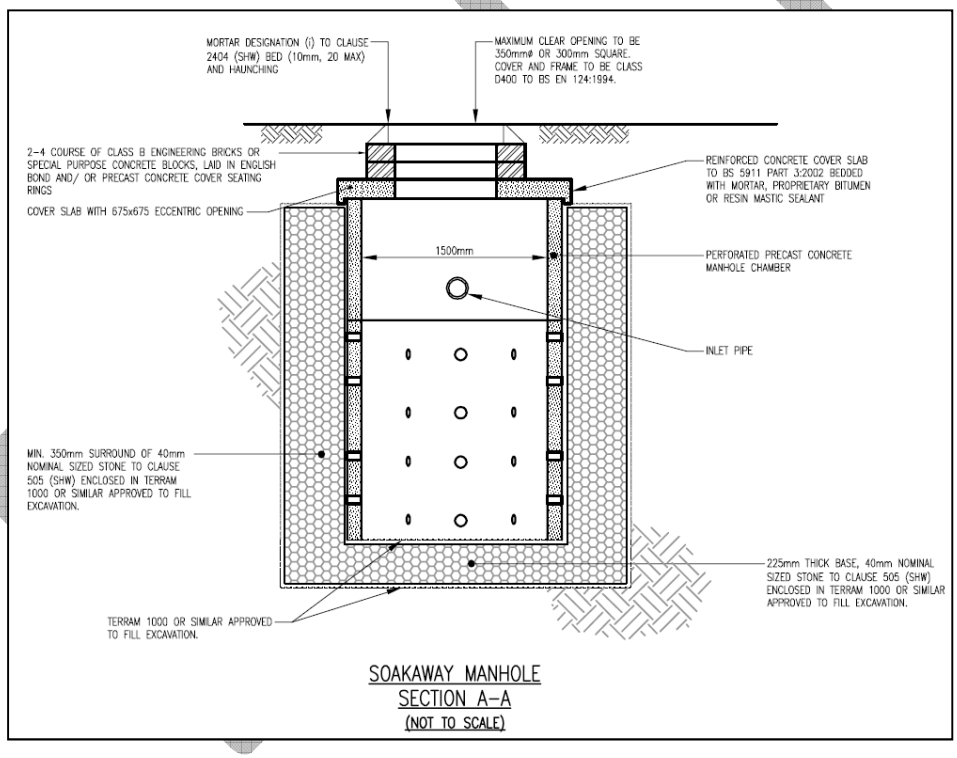
In certain cases the Council may require the provision of a larger capacity drain than would normally be needed in order to accommodate the drainage of adjoining land and/or future development.

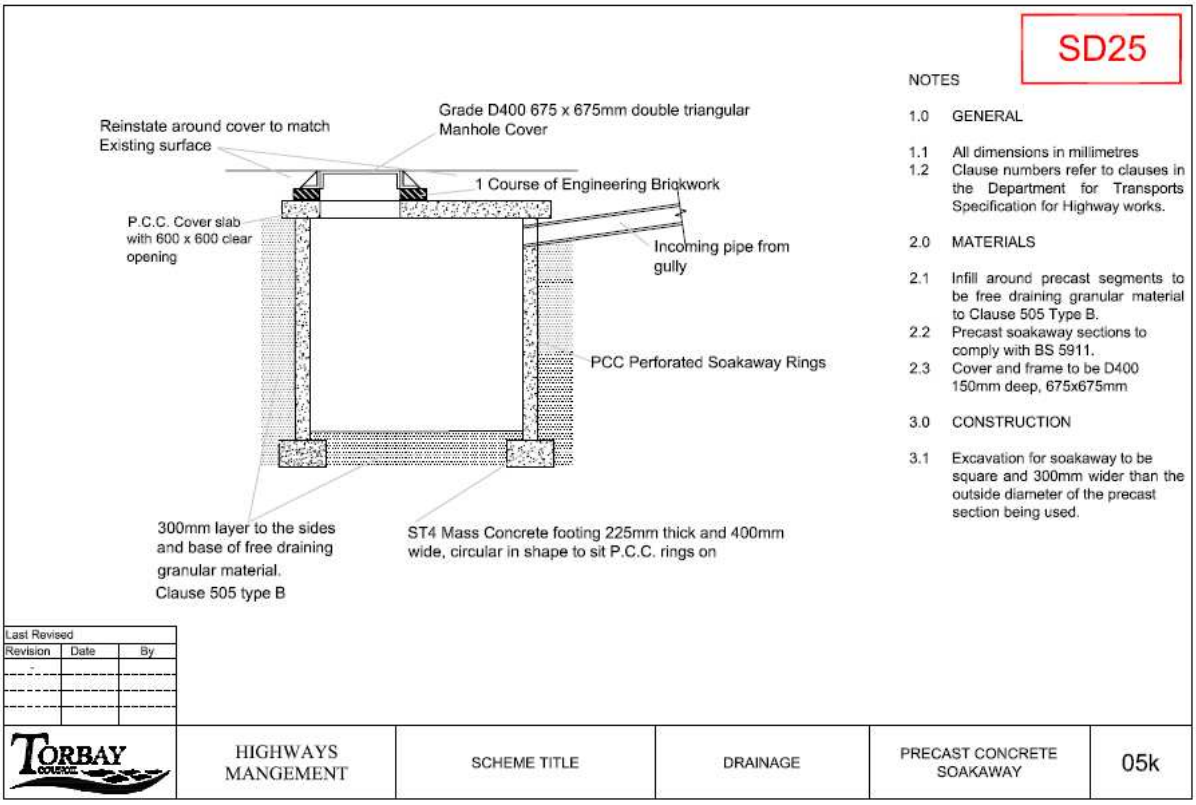
Soakaways

Where soakaways are to be considered it will be at the discretion and approval of the Engineer and will be considered as a last resort only (refer to Specification, Section). The Developer is to note that a commuted sum of £5000 may be charged for each soakaway installed. The minimum diameter shall be 1500mm.

If more than one soakaway is planned, they are to be linked by a 225mm diameter pipe.

The soakaways are to be surrounded by Terram or similar, laid between the chamber and the filter material. The appropriate filter material to be used will vary according to prevalent ground conditions. Where possible, the soakaway is to incorporate an overflow link (minimum diameter 225mm) to an existing highway drain/outfall system which may include a sum for the replacement if appropriate. Percolation tests will be required to determine capacity.





TYPICAL SOAKAWAY DETAILS

SUSTAINABLE URBAN DRAINAGE (SUDS)

PPG 25 makes clear the need for measures to control surface water run-off and prevent flooding. While issues exist as to the acceptance of SUDS by various bodies, Torbay Council expects developers to incorporate storage, attenuation and filtration measures in accordance with “SUDS- A Guide for Developers” by the Environment Agency and “SUDS - A Design Manual for England and Wales” by CIRIA.

Torbay Council will examine all proposals for SUDS and judge them on their merits. Permeability tests and hydrology surveys will be required to verify the suitability of the designs and commuted sums will be required for ongoing maintenance of the systems. The amount of the commuted sums will be calculated by the Council and will reflect the special maintenance requirements of the proposed system. Which may include a sum for total replacement if appropriate.

Flooding from the drainage system.

The drainage design should demonstrate that the SuDS will cater for the full range of storms up to the 100 year event (with a 30% allowance for climate change for all storms), without causing any significant unplanned flooding. The design should demonstrate that any blockage in the drainage system will be accommodated by suitable overflows, and exceptional rainfall by exceedance flow routing. When SuDS are overwhelmed by exceptional rainfall then exceedance routes protect people and property by providing unobstructed overland flow routes through the development and should be considered for all drainage schemes.

The SUDS proposals for a development shall be submitted along with geology and hydrology information, at planning application stage. Any proposals for outfalls into existing watercourses or ponds shall be accompanied by an environmental impact report and obviously such outfalls will need Consent to Discharge from the Environment Agency.

STRUCTURES

Structures which are to be built under or adjacent to the highway will require structural Approval in Principle by the Highway Authority, Torbay Council.

Adoption of Structures by the Council

The Council may adopt certain structures adjacent to, under or over the highway. In normal circumstances, the only structures that will be considered for adoption are those upon which the Highway relies for support and are constructed on Highway land.

All structures to be adopted should have received Structural approval in principal in accordance with the procedures below and through BD 2/12.

Approval of Structures not to be adopted by the Council

The following structures although not necessarily to be adopted by the Council require Structural Approval in accordance with the procedure of BD 2/12. Any wall or basement constructed on private land by an individual or developer that affects the support of the highway;

Bridges crossing the Highway where there is no public access to the bridge; Retaining walls where any part of the retaining wall is 1.5 m above the boundary of the highway nearest that point; and Structures over 0.9m span (diameter) carrying sewage plus others as per BD/12.

Assessment of Existing Structures

Any existing structure to be modified for the purposes of the development or to be subjected to increased magnitude or frequency of loading shall be assessed according to BD21/01.

Approval submissions

General arrangement showing location and extent of all structures and in the case of walls detailing lengths to be adopted and/or over 1.5 m high if applicable; Designers Risk Assessment typically;

Sufficient to determine wall heights, giving ground levels, behind and in front of wall and any features affecting loadings such as cover to culverts;

Clearances to deck soffit and piers/abutments shall be submitted for bridges;

Site investigation details and geotechnical assumptions on which the design has been based. This must be given in sufficient detail on the drawing to allow the designers assumptions to be compared with the conditions actually found on site by those responsible for construction;

Construction details and material specifications;

Design calculations with full reference to the design standards used; and For structures that are to be adopted or for structures upon which the Highway relies for support: Design and Construction Certificates and “As Built” Drawings for the CDM Health and Safety File otherwise as per BD2/12.

An Introduction to BD 2/12

This Chapter describes specific TA requirements for bridges and other highway structures and must be read in conjunction with Chapters 1 and 2.The TA requirements must be applied without limitation to:

(a) Design and execution of new structures.
(b) Assessment and related construction work, whether refurbishment, maintenance or strengthening, that affects structural integrity.

(c) Assessment relating to loading beyond that or which a structure has been designed or previously assessed.
(d) Assessment relating to loading for which a structure has been designed or previously assessed but the condition of the critical structural elements has subsequently deteriorated to the extent that a reassessment is required.

Scope

The procedures described In this Chapter must be applied to the following highway structures:

(a) Bridge, buried structure, subway, underpass, culvert and any other structure supporting the highway with clear span or internal diameter greater than 0.9m.
(b) Overhead crossing carrying conveyor or utility service.
(c) Moveable inspection access gantry, gantry rail and gantry support system.
(d) Earth retaining structure where the effective retained height, i.e. the level of the fill at the back of the structure above the finished ground level in front of the structure, is greater than 1.5m .
(e) Reinforced/strengthened soil/fill which is an integral part of another highway structure.
(f) Portal and cantilever sign and/or signal gantry.
(g) Cantilever mast for traffic signal and/or speed camera.
(h) Lighting column.
(i) High mast of more than 20m in height i.e. the vertical distance from top of post to bottom of flange plate, for lighting.
(j) Mast for camera, radio and telecommunication transmission equipment.
(k) Cantenary lighting support system.
(l) Environmental barrier.
(m) Proprietary manufactured structure or product.
(n) Traffic sign/signal posts of more than 7m in height, i.e. the vertical distance from top of post to bottom of flange plate or top of foundation whichever is the lesser.

Design and Construction Certificates

Design and Construction Certificates are required if the structure is to be adopted or for structures upon which the Highway relies for support. These certificates must be in the form given in these notes and must be submitted at the appropriate stage. The positions in the organisation of the signatories and their qualifications must be stated. If a section of the work is to be undertaken by another party, such as a precast concrete supplier ,then it would be appropriate for that party to take responsibility for their section of the work and complete a separate Certificate.

Bridge Maintenance Manual/Health and Safety File

On completion of the work the Developer must provide a Bridge Maintenance Manual containing: Details of the materials used in construction and the supplier; Requirements for future maintenance;

Any survey and geotechnical details undertaken on the site of the Structure;

Details of problems encountered during construction that may have a long-term effect on the structure;

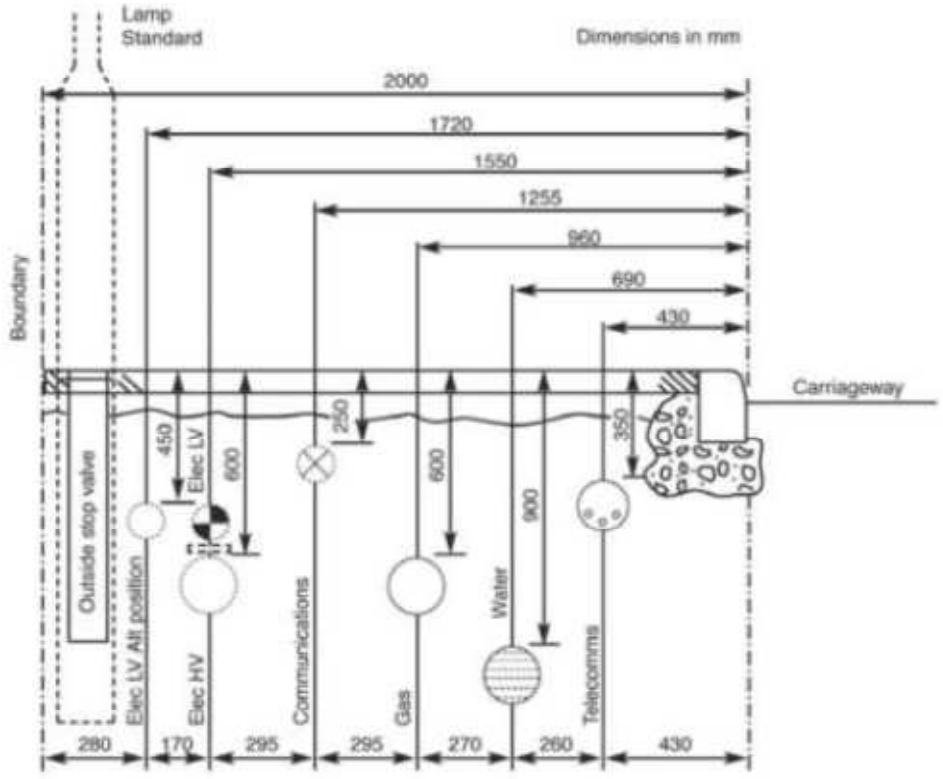
Any access arrangements for future maintenance;

As built drawings as electronic AutoCAD files;

Design calculations; and Special arrangements required for demolition.
The above information will comprise the documentation you have to legally provide under the CDM Regulations.

STATUTORY AND OTHER SERVICES

New estate roads should be designed to accommodate services and liaison with all statutory undertakers and communications providers should be done at the earliest stage possible to ensure that their equipment is installed in an efficient manner and as much as possible to comply with the recommendations of the National Joint Utilities Group.



Although this idea is not always possible it is important to ensure that services do not conflict.

All categories of estate road should have either footways or service strips in which services will be located. The Highway Authority will not adopt land the sole purpose of which is to contain services. Any land must have a justifiable connection with the highway and be clearly adoptable as highway.

The laying of apparatus within the carriageway will not generally be permitted although at junctions and in the case of public sewers exceptions are clearly unavoidable.

Service strips shall be dedicated to the Highway Authority as part of the public highway.

The Highway Authority will not object to the adjoining householder maintaining the service strip provided they do not erect walls, fences or structures or plant deep-rooted plants or any plant, which can exceed a height of 600mm.

The Developer shall ensure that service strips are clear of trees, walls and hedges. Any trees shall be located so that their root systems when mature will neither damage apparatus, nor be damaged during the laying and maintenance of apparatus. Root deflection barriers should be used. Developers should consult the Local Planning Authority regarding any Tree Preservation Orders and should act in accordance with BS 5837: 1991 during construction works.

Service strips shall be delineated from private property by Highway Boundary concrete marker blocks.

When selecting routes for services, dual mains installations should be the norm to prevent carriageway crossings weakening the road structure and preventing the need to dig up the carriageway.

PARKING CRITERIA

Parking is an important consideration in the planning and design of highway networks, particularly in urban areas. General guidance on the development of parking strategies is given in the IHT publication ‘Parking Strategies and Management’ (2005)69 and the document ‘Car Parking, what works where’70 provides a comprehensive analysis of the design of parking in residential and mixed-use areas.

On-street car parking can be a vital component of highways, particularly where routes pass through town centres and commercial areas. The decision whether or not to provide on-street car parking should take into account its positive and negative effects, as summarised in MfS1:

Positive Effects

- A common resource, catering for residents’, visitors’ and service vehicles in an efficient manner.
- Able to cater for peak demands from various users at different times of the day, for example people at work or residents.
- Adds activity to the street if short stay and turnover promoted.
- Typically well overlooked, providing improved security.
- Popular and likely to be well-used.
- Can provide a useful buffer between pedestrians and traffic.

Negative Effects

- f there are few places for pedestrians to cross with adequate visibility it can introduce a road safety problem, particularly if traffic speeds are above 20mph.
- Can be visually dominant within a street scene and can undermine the established character.
- May lead to footway parking, unless the street is properly designed to accommodate parked vehicles.
- Vehicles parked indiscriminately can block vehicular accesses to premises and emergency services.
- Cars parked on-street can be more vulnerable to opportunistic crime than off-street spaces.
- Providing parking bays potentially reduces footway space, which could also be used for cycle parking.

Where car parking is provided, a good solution is to break it into discrete groups of spaces with build outs that provide opportunities for pedestrians to cross with good visibility.

Well-integrated on-street parking.

On-Street Parking and Servicing

Car parking alongside carriageways can be longitudinal, echelon or at right angles to the kerb.

Longitudinal parking will be more appropriate where traffic speeds and volumes are higher, since vehicles entering and exiting the spaces cause less interruption to traffic flow. In town centres and other locations where speeds are low, echelon and right angled parking may be the best solution, since it is more efficient and creates a stronger statement that the area is for ‘place’ activities as well as for movement.

Echelon parking may be more difficult for pedestrians to pass through than longitudinal and right angled parking, depending on the spacing of parked vehicles, and can provide a greater barrier to crossing the street. This can be solved by leaving regular gaps between parked vehicles, however. It is easier too for vehicles to enter and exit echelon than right angle spaces and so the former have less impact on through traffic.

With echelon and right angle parking, care has to be taken that overhanging vehicles do not have an adverse impact on the available footway width. This can be addressed by providing generous footways, or using street furniture or wheel stops, in the form of dished channels, to prevent vehicles from encroaching too far.

On-street servicing bays are often required in urban centres where commercial premises can only be accessed from the front. Where they are designed as laybys, they can be difficult to keep clear of parked cars and take space away from pedestrians that is empty for much of the time. Some authorities are placing loading areas on strengthened areas of the footway, which makes it much less likely that space will be used for parking, and allows pedestrians to use the space when there are no vehicles present.

This approach has been used in numerous locations in London in recent years. The minimum widths required to manoeuvre to/from 2.4m wide parking spaces are as follows:

- 90° - 6m
- 60° - 4.2m
- 45° - 3.6m
- 30° `- 3.6m

Where parking is provided on street, this manoeuvring width will generally be provided by the carriageway.

For echelon and right angle parking, manoeuvring space can be reduced by providing wider spaces.

SPECIFICATION FOR ESTATE ROADS - CONSTRUCTION AND MATERIALS

CONTENTS

Section

Note: the Section numbers follow the pattern of Highways Agency's Specification for Highway Works Volume 1. However, within each Section the clause numbering departs from the above document.

SECTION 0
INTRODUCTION

0.1 This Part of the Design Guide for Highways in Residential and Commercial Estates specifies how Developers can construct roads, footpaths etc. in such a manner that they can be adopted as highways maintainable at public expense. It should be considered in conjunction with Parts 1, 2 and 3 of this Guide, which covers highway design and layout.

0.2 **PURPOSE AND STATUS OF THIS DOCUMENT**

0.2.1 Whether Developers carry out the works themselves, or employ a contractor to undertake the works, they must prepare a statement of specification which shall be considered an integral part of the Section 38 Agreement.

The "SHW"

0.2.2 The specification applicable to a particular Agreement should be prepared on the basis of this Part of the Guide and as further enlarged upon by the Highways Agency's Manual Of Contract Documents For Highway Works Volume 1 Specification For Highway Works (hereafter referred to the SHW). The SHW can be viewed here: www.standardsforhighways.co.uk/mchw/index.htm This Specification is a general parent specification that covers the provision of all anticipated works.

This Specification and the "SHW"

0.2.3 This Part of the Guide gives the requirements for the vast majority of cases. Where a matter is not covered herein, however, the current Specification for Highway Works applies and is to be consulted.

0.2.4 The specification prepared by the Developer shall cover all carriageway, footway, margin, verge, footpath, cycleway, surface water drainage system, service provisions and street lighting being constructed or installed as part of a development and which the Highway Authority will adopt as a highway maintainable at public expense.

Definition of "Engineer" and "Developer"

0.2.5 In this Part of the Document the term Engineer shall mean the Authority's Service Manager with responsibility for Highways Management or his representative. The term Developer means the principal of the Section 38 Agreement with whom all negotiations are transacted; where the Developer employs a contractor neither are absolved from the requirements of this Specification.

0.2.6 It is strongly advised that copies of the relevant parts of this specification is made available to groundworks and surfacing

works contractors and also forms part of any contract review process.

GROUND INVESTIGATION BEFORE START OF WORKS

0.3

0.3.1 For the purposes of determining the required highway structure the Developer shall be required to commission the Devon County Council's UKAS accredited Materials Laboratory, Exeter (tel. 01392 386500, e-mail: materials.laboratory@devon.gov.uk) to undertake a ground investigation. Adequate notice shall be given to enable the investigation to be scheduled and the resultant report produced and issued or any accredited UKAS materials laboratory.

0.3.2 Ground investigation will also include, but not be limited to, determination of permeability where a SuDS system is proposed, and corrosivity to any buried steel structures. The developer will render any assistance required in conducting these tests, e.g., provision of water bowser and soakaway medium.

0.3.3 A choice to use maximum construction thickness does not obviate the need for trial pit or borehole investigation where there is a potential for deeper lying problems, e.g., soft spots, caused by peat, limestone cavities etc

0.3.4 Where the site is underlain by deep deposits of made ground, peat etc. special consideration may need to be given in relation to the investigation and any measures required for the construction of the highway.

SECTION 1
GENERAL ITEMS

1.1 NOTICE FOR INSPECTION

1.1.1 The Developer shall give the Engineer 14 clear days notice in writing of the date upon which roadworks will start, and then two days notice for any covering up of works during the course of the development. This will enable the Engineer to arrange the inspection of the stages of road construction without delay. No work shall be covered up without the Engineers approval. Where work is covered up without the Engineers approval, it is at the Developers risk, and the Developer will bear any costs in demonstrating that the work is satisfactory.

1.1.2 It is the Developers responsibility to ensure that all work is carried out in accordance with the Specification or with supplementary advice given by the Engineer. All work shall be carried out strictly in accordance with the approved plans. (See also Part 3, Appendices 3D and 3E).

1.2 WORK ON PUBLIC HIGHWAYS

1.2.1 If, in the development of an estate, it is necessary to carry out works affecting an existing public highway (including carriageway, footway, footpath, verge or public right of way), the Developer shall make a written application to the Engineer for permission to carry out these works, which, unless covered by a Section 38 Agreement for the estate road works, will require a separate Agreement with Torbay Council as Highway Authority. Plans of the proposed work will be required by the Engineer and the Developer shall give an appropriate indemnity to Torbay Council in respect of the proposed work, together with an inspection fee. Notice to open up excavations in a public highway may need to be given, in accordance with the New Roads and Streetworks Act 1991.
Torbay Council has Embargo periods on its Highway network which Developers /Contractors must strictly adhere to when commencing there works. To view the Embargo Periods please use the link Torbay.gov.uk

1.2.2 Before undertaking any works that may affect apparatus belonging to a Statutory Undertaker the Developer must give at least 28 days notice to the appropriate body. If permission is refused, the Engineer may carry out the works at the Developers expense. An estimate of the cost of work will be sent to the Developer prior to the commencement of work and confirmation shall be given by the Developer of his agreement to bear the cost of the work.

1.2.3 No work on the public highway shall be commenced before these requirements have been met. The Developer shall also ensure that at all times adequate access is maintained to all land and premises. If at any time it is found necessary to close any existing means of access, the Developer shall, at the Developers own expense, provide adequate temporary means of access.

1.2.4 Road closures require a minimum of 3 months notification to the Engineer, and the Developer is to supply, erect and maintain diversionary signing at the Developers own expense.

1.2.5 Work on the public highway is to be carried out expeditiously and in such a manner as to cause no unnecessary inconvenience to the public.

1.2.6 The developer shall comply with the street works and works for road purposes Communications Policy.

1.4 SAFETY

Traffic Safety 1.4.1 Where work has to be carried out on or adjacent to an existing public highway or a highway to which the public have access, the Developer shall comply in all respects with the recommendations contained in Chapter 8 Traffic Safety Measures for Roadworks of the Traffic Signs Manual (HMSO May 1991). Traffic signs, lamps, barriers and traffic control signals shall be in accordance with the current editions of the Traffic Signs Regulations and General Directions. The Engineer may require additional measures in certain instances to safeguard the highway user.

Temporary Traffic Signals 1.4.2 Temporary Traffic Signals may be used with the permission of the Engineer, with a minimum of 14 days notice. Diesel or petrol generators are not to be used outside the hours of 8am to 6pm in residential areas.

Use of Explosives 1.4.3 The use of explosives will be subject to Regulation 19 of the Construction (General Provisions) Regulations 1961. The use of explosives within the highway will not be permitted except with the written consent of the Engineer, and then it will be subject to any conditions that he imposes. In all cases where this permission is given, the Developer shall carry out all blasting operations in compliance with the relevant requirements of the Police and the Home Office. The Developer shall be responsible for all costs resulting from accidents or damage due to the use of explosives. If, in the Engineer's opinion, the operations are being carried out in a dangerous or unsatisfactory manner, the Engineer may withdraw permission.

Danger to Children on Construction Sites 1.4.4 Developers should take account of the serious dangers to children on construction sites particularly when the site is vacated after working hours. Developers should therefore ensure that all reasonably practical precautions are taken. This relates in particular to:-

(a) liaison with school heads and publicity visits to schools
(b) exclusion of all children from the site during working hours, except for properly supervised educational visits
(c) provision of perimeter fencing to the site
(d) guarding to edges of excavations
(e) safe stacking of materials, e.g., pipes, topsoil etc.
(f) removal of access to elevated areas
(g) isolation of electricity and other energy sources
(h) correct storage of hazardous materials.

1.5 POLLUTION & NUISANCE

1.5.1 The Developer is to carry out work in such a manner that avoids pollution, nuisance or danger to adjacent occupiers or users of the public highway.

1.5.2 Measures shall be taken to prevent the generation of excessive dust or noise during construction operations. Guidance on measures to reduce dust & noise during construction can be found in BRE Report 456 & BS 5228 respectively.

1.5.3 Under the Control of Pollution Act 1974, the District Council can impose maximum noise levels permissible during the construction of works and can enforce them; the District Council can also restrict working hours in sensitive areas. The Developer should contact Torbay Council Environmental Protection before work starts to ascertain the permissible noise levels.

1.5.4 Measures to prevent degradation of local air quality shall include measures such as ensuring that all plant, both static & mobile are regularly serviced and where possible comply with the most recent Euro standard.

1.5.5 For works within designated Air Quality Management Areas it is recommended that advice is sought from the Environmental Health Department of Torbay Council

1.5.6 Measures shall be taken to prevent the generation of excessive mud on to the Highway network by use of a wheel wash when exiting the site. The Council has powers to enforce this through The Highways Act 1980.

1.6 SERVICES

1.6.1 The procedures adopted for the excavation and reinstatement of trenches must be in accordance with the normal safe practices for such work and subsequent appropriate sections of this document.

Laying Mains

1.6.2 The Developer shall be responsible for contacting the Statutory Undertakers at the commencement of works to determine what mains, cables and services exist and are proposed, and he shall be responsible for ensuring that such cables, mains and services are completed before commencing any construction work that may be affected.

Appendix 4B shows the standard detail indicating the relative location of services.

Protection of Mains

1.6.3 The Developer shall comply with the requirements of the New Roads and Streetworks Act 1991 and shall take all reasonable measures required by a Statutory Authority for the full protection of its mains, pipes, cables or any apparatus during the progress of the works (see also paragraph 5.8.3). Where privately owned services pass through the site and are affected by the works the Developer shall provide an alternative service to the satisfaction of the owner of the service and the Engineer.

Coordination of Works

1.6.4 The Developer shall be responsible for the co-ordination of all Statutory Authorities works related to the development.

1.7 STANDARDS OF MATERIALS AND SAMPLES

Submission of Samples and Test Certificates

1.7.1 Unless otherwise specified, all materials shall comply with the current edition of the appropriate British Standard or British Standard Code of Practice (BS), European Standard (EN) or Harmonised European Standard Specification that supersedes the relevant BS.

1.7.2 All materials shall be transported, stored and used in accordance with the requirements or recommendations of that Specification. Where available and unless otherwise specified, materials and articles produced under a Sector Scheme for Quality Management in Highway Works, KiteMark or Safety Mark, Highways Authorities Product Approval Scheme (HAPAS) or other accredited third part certified scheme shall be used.

1.7.4 Samples of construction materials will be taken as considered necessary by the Engineer. The Developer will provide all necessary assistance. The names of the suppliers shall be submitted for approval in advance of materials being ordered, and no source of supply shall be changed without the Engineer’s consent prior approval. Bituminous materials may only be obtained from plants accredited to the National Sector Scheme for Asphalt Production (Sector Scheme No. 14). When any material or article is required to comply with a European or British Standard such material or article or its container shall bear the stamp of the UKAS registered certification trademark. Alternatively, the Contractor shall submit test certificates furnished by the supplier or manufacturer of the material or article indicating compliance with the relevant British Standard. The test certificates should

be from a UKAS laboratory accredited for the particular test. A UKAS testing service is available from the Devon County Council Materials Laboratory. Subbase shall be from a DCC-approved source that has been assessed as capable of supplying compliant material under an appropriate quality control regime. Certificates of compliance for frost heave and required aggregate properties from a UKAS accredited laboratory shall represent the current production quality and be no more than 12 months old.

Storage of Materials

1.7.5 All materials liable to deterioration or damage shall be stored in such a way that they shall be in accordance with the Specification at the time of use.

1.8 DEVELOPER'S RESPONSIBILITIES

Damage to Highways

1.8.1 The Developer shall be responsible for any damage to existing roads, footways, verges, drains and Statutory Undertakers property, whether forming part of the works or not, which have arisen from the works, the transport of men, materials and plant to or from the works, or because of the diversion of normal or extraordinary traffic from their customary routes due to the construction of the works. The Developer shall repair and make good all damage to the satisfaction of the Engineer, or shall pay for the repairs to be carried out by the Engineer. The Developer shall be responsible for arranging with the Engineer for any necessary joint survey.

Mud, Materials or Equipment on Highway

1.8.2 Materials are not to be stored on the public highway, nor is equipment to be deposited on the highway so as to damage or obstruct it. The Developer shall keep adjacent carriageways, footways and footpaths, drains and ditches near the works free from mud, debris or dust arising from the works. Surface water from the works shall not be permitted to flow on to any existing public highway.

Clear up on Completion

1.8.3 The whole of the works shall be left in a neat and tidy condition on completion, free from refuse, litter and debris of all kinds.

Maintenance Period

1.8.4 For a period of at least 12 months after completion of the works the Developer will be required to fully maintain the new road (including sweeping, gully emptying, grass cutting, shrub beds etc.), and repair any defects to any part of the works that may arise. Such repairs shall be carried out to the Engineer's satisfaction.

1.9 Recycled Materials, Secondary Aggregates & Energy Minimisation

1.9.1 Torbay Council encourages the use of recycled materials and secondary aggregates within highway construction. Wherever possible and practicable consideration should be given to maximise the use of these materials when it can be shown that there will be no detriment to the durability and serviceability of the highway. Approval has already been given for many more sustainable materials. These include bituminous materials that contain a percentage of reclaimed aggregates, glass and concrete. These materials are readily available from many quarries within & bordering Devon. Where any doubt exists, guidance can be sought from Devon County Council Materials Laboratory.

1.9.2 It is widely recognised that minimising our use of energy, particularly from the so called fossil fuels is an essential element in society's drive for greater sustainability. This specification, although containing no specific element of energy minimisation, seeks to achieve the most durable construction, which in itself should minimise both materials demand and energy usage over the whole life of the highway. One example of how energy usage can be reduced is by obtaining materials from local sources. If the Developer wishes to propose any further ways in which overall energy demand can be reduced whilst still achieving the required level of durability this will be considered.

SECTION 2
SITE CLEARANCE

2.1 UNDERGROUND OBSTRUCTIONS

2.1.1 Underground structures and chambers shall be demolished, properly cleaned out, filled with acceptable material and compacted in compliance with paragraph 6.3.2. Disused foul and surface water drains within 1.0m of formation level shall be removed and trenches backfilled in accordance with paragraph 5.4.5. Other disused drains shall be effectively stopped up.

2.2 EXISTING MATURE TREES, STUMPS AND ROOTS

2.2.1 No existing trees shall be felled in contravention of a Tree Preservation Order. Any trees that are to be felled must be with the full written consent of the Planning Authority. Where shown on drawings approved by the Planning Authority trees shall be uprooted or cut down as near to ground level as possible. All felled timber shall be removed from the site.

2.2.2 Stumps and tree roots within the vicinity of roadworks shall, unless otherwise agreed with the Engineer, be totally removed and disposed of. Holes left by the stumps or roots shall be filled with acceptable material and compacted in compliance with paragraph 6.3.2.

SECTION3 NOT USED

SECTION4 NOT USED

SECTION 5
DRAINAGE AND SERVICE DUCTS

NOTE: If roof water or water from any source other than the highway is to be carried by a surface water drain, then the drain will be defined as a sewer which will be the responsibility of South West Water or its agents to whom reference should be made for its requirements. The requirements of this Section, therefore, apply to
a) the excavation of surface water drains carrying highway water
b) the laying of pipes etc. of surface water drains carrying highway water, and

c) the backfilling of all trenches whether they contain highway surface water sewers, other surface water sewers, or foul sewers, where they lie within the carriageway, together with their associated manholes, catchpits etc.

5.1 PIPES FOR DRAINAGE

5.1.1 The class of pipe should be calculated in accordance with Simplified Tables of External Loads on Buried Pipelines (HMSO). The internal surfaces of all pipes and fittings shall be subject to the approval of the Engineer in respect of smoothness. Surface water drainage pipes shall have a minimum diameter of 150mm.

Acceptable materials for sewers

5.1.2 Pipes for drainage shall be selected from the following alternatives, and as more fully described in Table 5/1 of the Specification for Highway Works:
a) Vitrified clay pipes shall be normal or surface water pipes as defined in BS65. They shall have Type 1 flexible joints unless otherwise approved by the Engineer and be of the strength stated on the approved drawings.
b) Concrete pipes (with Portland cement or sulphate resisting cement when necessary) shall comply with BS5911 – 3:2010, have flexible joints and be of the strength class shown on the approved drawings.
c) Unplasticised polyvinyl-chloride (UPVC) solid wall concentric external rib-reinforced pipes shall comply with BS4660 or BS EN 1401-1:2009 and with the relevant provisions of WIS (Water Industry Specification No 4-31-05).
d) Cast iron or ductile iron pipes shall be Class B, have spigot and socket flexible joints, shall comply with BS437 or BS EN 545 and shall be used where agreed with the Engineer.

5.1.3 Pipes and fittings other than those included in Table 5/1 may be used with the approval of the Engineer provided that they hold a current British Board of Agrément Roads and Bridges Certificate stating that they are a suitable alternative for the usage specified in Table 5/1. Rigid jointed pipes are not normally permissible.

5.1.4 Pipes for land drainage, including French Drains, shall comply with the paragraph 5.1.2 above and SHW clause 501.3 and Table 5/1 of the Specification for Highway Works.

5.2 EXCAVATION FOR PIPES AND CHAMBERS

Trenches

5.2.1 Excavation in trenches and pits within the boundaries of highways to be adopted shall have vertical sides unless the

specific approval of the Engineer is obtained to batter them. The sides of trenches and pits shall be adequately supported at all times so as to maintain the stability of the adjacent ground. Trenches and pits shall be kept free of water at all times, and shall remain open only for the minimum period necessary before backfilling.

5.2.2 Widths of pipe trenches shall be either
a *maximum* of external pipe width plus 600mm, or
a *minimum* of the external pipe width plus 300mm,
unless otherwise required by the Engineer.

Overbreak

5.2.3 In the event of an overbreak, slip, or if the Developer allows the bottom of trenches or pits to become unsuitable, the loose or unsuitable material shall be removed, the bottom of sides trimmed horizontally and vertically and the excess excavation treated as follows:-

i. In the bottom of the trench or pit the excess excavation shall be filled with concrete Mix ST2 to BS 8500-2 and BS EN 206-1 or granular material for which specific written approval has been obtained
ii. Where the pipe or manhole is designed to have a concrete protection, the excess width of excavation shall be filled with extra concrete of the quality of the proposed protection.
iii. Where the pipe or manhole is not designed to have a concrete protection, the excess width of excavation shall be filled with the pipe surround material shown on the drawings i.e. pipe bedding material or selected fill, as agreed with the Engineer.

5.3 SUB-SOIL DRAINS

When Required

5.3.1 An adequate system of sub-soil drainage is to be constructed where:-

i. the winter height of the water table is within 600mm of formation, or
ii. the sub-soil is unstable because it is waterlogged, or
iii. springs, drains or watercourses are encountered, or
iv. there is likelihood of water running off or out of adjacent ground.

5.3.2 Sub-soil drains shall be accurately laid in trenches to suitable alignments and gradients. The gradients shall be sufficient to produce a self-cleansing velocity of 0.75m per second. Pipelines shall be properly linked with junction pipes, discharge into catchpits or manholes and outfall into the surface water drainage system.

5.3.3 Sub-soil drains shall consist of perforated earthenware, concrete or open jointed pipes complying with the appropriate British Standard and Section 5.1 below. Sub-soil drains shall be surrounded with a free-draining filter material as Type A, as shown in Table 1. French drains shall be surrounded with filter material Type B and shall be filled with this material up to ground level. Standard Construction Details are shown in Appendix 4A.

5.3.4 Additionally, the filter material Type A or Type B shall, where more than 2% of the material passes a 425µm test sieve, be non-plastic. The material shall have a soaked 10% fines value of not less than 50kN, and have a water soluble sulphate content of less than 1.9 grammes per litre.

Land Drains

5.3.5 Existing land drains and springs severed by the work shall be connected into the surface water drainage system.

Table 1

Table 1: Grading and geometrical requirements for filter drain material		
	Type A	Type B
Standard	BS EN 13285	BS EN 13242
Size, mm	0/20	20/40
Grading and oversize categories	G_F (with an additional sieve)	G_C80-20
Oversize category	OC_{80}	-
Category for tolerances at mid-size sieves	-	GT_{NR} (no requirement)
Category for maximum fines	UF_3	F_{NR} (no requirement)
Summary grading requirements		
Sieve size, mm	Percentage by mass passing	
80	-	100
63	-	98 – 100
40	100	80 – 99
20	80 – 99	0-20
10	50 – 90	0 – 5
4	30 -75	-
2	15 – 60	-
0.500	0 – 35	-
0.125	0 – 4	-
0.063	0 – 3	-
% in size fraction		
4/10	5 – 35	-
2/4	5 – 35	-

Pipe Bedding Material

5.4.1 To prevent the intrusion of fine-graded soils such as clays, silts or fine sands into the bedding or the pipe of sub soil and French drains, especially under wet conditions, a permeable geotextiles material, approved by the Engineer, shall be used

as a separator.

Pipelaying 5.4.2 All pipe laying shall commence at the outfall unless agreed with the Engineer, and pipes shall be laid true to line and level as shown on the approved drawings. Pipes should be laid as soon as possible after excavation of the trench.

Concrete Protection 5.4.3 Concrete surround shall be provided to pipes having less than 1.2m cover unless otherwise agreed with the Engineer. Where concrete surround is required, it shall be concrete Mix ST2 to BS 8500-2 and BS EN 206-1 with separation at the joints of expanded polystyrene or other approved material as agreed with the Engineer. After inspection and testing the pipeline the concrete shall be placed in compacted layers to a height of 150mm above the pipe. In the case of flexible pipes, an alternative method is to protect the pipe by a bridging slab, minimum thickness 150mm, formed from concrete class C20P.

Backfilling of Trenches 5.4.4 The fill material to be used up to carriageway formation level shall, in the absence of quantifiably suitable on-site material, be suitable imported recycled or secondary material, or Type 1 granular sub-base material to SHW clause 803, and shall be deposited and compacted in compliance with SHW clause 505.

Upon Completion 5.4.5 On completion of the works all manholes and pipes shall be rodded or flushed from end to end with water and left clean and free from obstructions, witnessed by the Engineer. In certain cases, video inspection may be required e.g. where the whole drainage system is to be adopted by the Highway Authority. All testing or inspection is to be at the Developers expense.

5.5 MANHOLES AND INSPECTION CHAMBERS

Manholes and Inspection Chambers 5.5.1 Manholes and inspection chambers shall be constructed as specified below and in accordance with the standard details shown in Appendix 4A. Manholes may be constructed of precast concrete ring sections, to the requirements of BS5911, or brick-work, and must be to the Engineers satisfaction and watertight on completion. All manholes on sewers of 600 mm diameter or greater must be provided with safety chains (galvanised wrought iron close link 10mm) on the downstream side. Benching shall be at least 335mm wide on one side. Step irons for manholes shall be galvanised malleable cast iron complying with BSEN 13101.

5.6 MANHOLE COVERS AND FRAMES

Covers and Frames

5.6.1 Manhole covers and frames in carriageways shall
• comply with the requirements of EN124 ref D400 and be Kitemarked
• be of ductile iron or other approved material
• be square in plan
• have clear opening of 675mm
• have a polished Skid Resistance Value (SRV) of >45 (for guidance on covers that meet this requirement please contact the Materials Laboratory on 01392 386500)

In footways and verges the requirements are similar except that the covers may be to EN124 ref B125 as agreed with the Engineer.

5.6.2 Manhole covers and frames are to be bedded on an approved polyester resin or proprietary cementitious high strength mortar, used in accordance with the manufacturer's instructions, on at least two and not more than four courses of 225mm Class B Engineering brickwork and shall be fixed so as to be flush with adjacent surfaces. For the treatment of manhole covers in block paving see paragraph 11.8.3.

5.7 GULLIES

Gully pots for Carriageways

5.7.1 Gullies shall be trapped as described in clause 508 of the Specification for Highway Works and be in accordance with the standard details shown in Appendix 4A. Where in-situ gullies are formed with permanent shuttering such as plastic, such shuttering is to have a current British Board of Agrément Roads and Bridges Certificate.

Gully pots for footways

5.7.2 Gully pots for footways shall be:-
• salt glazed ware to BS65 round street gully with rodding eye, stopper and chain and trap, 300mm diameter x 600mm deep with 150mm diameter outlet, or
• concrete to BS5911 Part 2 unreinforced street gully with rodding eye, stopper and chain and trap, 300mm diameter x 600mm deep with 150mm diameter outlet, or
• in-situ concrete formed with permanent shuttering (e.g. plastic gullies) such shuttering to have a current British Board of Agrément Roads and Bridges Certificate.

Gully Connections

5.7.3 Gully connections shall be of pipe complying with the requirements of paragraphs 5.1.2. or 5.1.3. and be of a minimum of 150mm diameter. The pipes including collars shall be bedded and surrounded, unless otherwise agreed with the Engineer, with concrete Mix ST2 to BS 8500-2 and

BS EN 206-1 to a minimum thickness 150mm, over the full length of the connection, in accordance with paragraph 5.4.4.

Gully Gratings and Frames

5.7.4 Gully gratings and frames in residential estate roads shall
- be certified as complying with the requirements of EN124 ref C250
- be of ductile iron
- have dimensions to be agreed with the Engineer
- be hinged and/or lockable where required by the Engineer
- have flanges on three sides only (except where agreed with the Engineer) so that they can be placed immediately adjacent to the kerb face.

5.7.5 Gully gratings and frames in commercial estate roads shall
- be certified as complying with the requirements of EN124 ref D400 or C250 as agreed with the Engineer
- be of ductile iron
- be double triangular 450mm x 450mm.

5.7.7 Gully gratings and frames shall be so fixed as to be 3 mm below the surface of the road channels, carriageway or footway surface.

5.7.8 Double gullies shall be provided at low points.

Connections to Existing Drainage

5.7.9 Existing sewers, drains and culverts shall be properly connected to the new system as construction proceeds. (See also the requirements of paragraph 1.2.2). When ironwork has to be reset on trafficked roads, it shall be bedded on an approved polyester resin.

5.8 SERVICE DUCTS

5.8.1 All service ducts shall be constructed in accordance with the requirements of the Statutory Undertaker concerned.

5.8.2 Service ducts shall have smooth internal bore and be constructed of:-
unplasticised polyvinyl chloride pipes complying with Class B or C. of BS 3506, or BS 4660, or BS EN 1401-1, bedded on, and surrounded with concrete Mix ST2, or
steel pipes and joints complying with BSEN 10311, BSEN 10224, or
internally glazed vitrified clay ducts with plastic flexible sleeve joints. When tested in accordance with Appendix B of BS 65 the ducts shall conform with the extra strength requirements of that British Standard, or
glazed earthenware pipes with Type 1 sockets with flexible

joints, manufactured in accordance with the extra strength requirements of BS 65

5.8.3 Inspection pits for Statutory Undertakers apparatus shall be consistent with those authorities' requirements. Covers for all pits, including draw pits, shall be capable of sustaining vehicle loading, and shall not be constructed in plastic.

5.8.4 All Statutory Undertakers and the Highway Authority must be advised at least 7 days in advance of any proposed and approved works taking place. When excavating within a highway, highway drains, sewers or statutory undertakers apparatus must be located in advance of machine excavation. If any apparatus is encountered during excavation, the Highway Authority or Statutory Undertaker must be notified immediately and no pipe or cable shall be disturbed without their approval. (Some Statutory Authorities have free phone numbers for use in determining the location of their services.)

5.9 SOAKAWAYS & SUSTAINABLE DRAINAGE SYSTEMS

5.9.1 Soakaways for highway surface water drainage shall, where permitted by the Engineer, be designed in Accordance with Building Research Establishment Guidance in BRE Digest 365. Alternative designs based on CIRIA guidance or Environment Agency recommendations may also be considered.

5.9.2 In the absence of any additional allowance for Climate Change impacts being made in national guidance a capacity factor of +20% will be applied.

5.9.3 Guidance on acceptable forms of SuDS can be found in Part 3 of this design guide.

SECTION 6
EARTHWORKS

Note: The classification and confirmation of acceptability of earthworks materials shall be carried out by the Engineer based on soils information to be provided in accordance with paragraph 0.3.1. If pre-construction testing was undertaken during design, a reassessment of the CBR and moisture content of soils may be necessary at the commencement of works, and any changes to construction thicknesses etc. are to be made where required.

The references to the Highways Agency's Specification for Highway Works in this section can be found here: www.standardsforhighways.co.uk/mchw/vol1/pdfs/series_0600.pdf

6.1 CLASSIFICATION AND USE OF EARTHWORK MATERIALS

Unacceptable Material

6.1.1 Unacceptable material shall not be used in the Permanent Works. Unacceptable material includes:-
a) peat, material from swamps, marshes and bogs
b) logs, stumps and perishable material
c) material in a frozen condition
d) clay having a liquid limit determined in accordance with BS1377: Part 2, exceeding 90 or plasticity index determined in accordance with BS1377: Part 2, exceeding 65
e) material susceptible to spontaneous combustion
f) non-hazardous materials other than those permitted in Table
6/1 of the Specification for Highway Works
g) material having hazardous chemical or physical properties requiring special measures for its excavation, handling, storing, transportation, deposition and disposal.

Acceptable Material

6.1.2 Acceptable material is material excavated from within the site or imported onto the site, which meets the requirements of Table 6/1 in the Specification for Highway Works for acceptability for use in the Permanent Works.

Stripping Topsoil

6.1.3 Turf and topsoil shall be stripped from the whole area of the road works and stored in stockpiles of height not exceeding 2 metres unless otherwise agreed with the Engineer.

Corrosion Potential

6.14 All earth works materials including capping and fills within 500mm of metallic items (including lighting columns and sign posts) shall be quantified as non aggressive if the following conditions are met:
(all tests in accordance with Series 600 of the Specification for Highway Works)
pH Value: 6 minimum 9 maximum
Chloride ion content: 0.025% maximum
Water soluble sulphate content: 0.25g/l maximum
Resistivity: 5000ohms.cm minimum
Redox Potential: 0.43volts minimum.

6.2 EXCAVATION

6.2.1 Excavation shall be carried out to the widths and depths shown on the approved plans and cross section or to such other dimensions as may be considered necessary by the Engineer to secure an adequate foundation.

6.2.2 If the correct depth of excavation is exceeded the levels shall

be made up with approved granular material to SHW clause 803 or other material approved by the Engineer. If any soft areas are encountered within the area of the formation or the formation becomes puddled or soft, the affected material shall be removed and replaced with acceptable material, which shall be deposited and compacted as specified for the formation of embankments. The low spots shall be suitably drained by land drains where required by Engineer.

6.2.3 Construction plant shall not run on the formation unless the Developer maintains the level of the bottom surface at least 300mm above formation level. Any damage to the subgrade shall be made good by the Developer as specified in paragraph 6.2.2.

Trimming Side Slopes

6.2.4 The side slopes of cuttings and embankments shall be trimmed to the slope shown on the Approved Drawings or to such other gradually changing slopes that the Engineer may direct. Should the slopes of any cuttings be excavated beyond the widths shown on the Drawings, the Developer shall make good each affected area in a manner satisfactory to the Engineer.

6.3 FORMING OF EMBANKMENTS AND FILLS

6.3.1 Embankments and other areas of fill shall be formed of material defined as acceptable material in paragraphs 6.1.2. Where embankments traverse areas subject to flooding they should be constructed in granular material up to 300mm above anticipated maximum flood level.

6.3.2 Embankments shall be built up evenly over the full width and shall be maintained at all times with a sufficient camber and a surface sufficiently even to enable surface water to drain readily from them. During the construction of embankments the Developer shall control and direct construction traffic uniformly over their full width. Damage to compacted layers by constructional traffic shall be made good by the Developer.

6.3.3 It is not good practice to allow road embankments to remain unfinished or unprotected for any length of time. Weather protection should be provided by placing 300mm minimum compacted thickness above formation level. The material should be of the same type as that used in the sub-formation.

6.3.4 A method statement for the transportation, storage, handling, placement & compaction of fill materials shall be provided for approval prior to commencing any such works.

6.4 PERMEABLE BACKING TO EARTH RETAINING STRUCTURES

6.4.1 Permeable backing to earth retaining structures shall consist of one of the following materials:-
i. granular material 4/20 Gc 90/15 in accordance with BS EN 12620:2002 , to a minimum thickness of 300mm, or
ii. precast porous concrete blocks laid in stretcher bond with dry joints in 225mm thick walling.

6.5 COMPACTION OF EMBANKMENTS AND FILLS

6.5.1 Fill shall be acceptable excavated material or granular filling as described Section 6.1. It shall be spread and compacted as soon as practicable after deposition in layers in accordance with Table 2 below.

6.5.2 The developer shall supply a documented procedure for the formation and compaction of embankments and/or fill. This is to include details of site control procedures for the materials and their placement together with measures to verify that the required results have been obtained at all stages in the works. Such measures should include the use of SPT or similar methods for quantifying that adequate levels of compaction have been achieved.

6.5.3 The Engineer may at any time carry out comparative field density tests in accordance with BS1377: Part 9: 1990 Clause 2.1/2.2 on material which he considers has been inadequately compacted. If the test results, when compared with the results of similar tests made on adjacent approved work in similar materials show the state of compaction to be inadequate the Developer shall carry out such further work as the Engineer may decide is required, and the costs of testing reimbursed to the Engineer.

6.5.4 The Developer shall, not less than 72 hours before he proposes to carry out compaction processes, apply to the Engineer for permission in order that the Engineer may make proper provision for the supervision of compaction in the permanent work.

6.5.5 Where materials of widely divergent characteristics are used in embankments and fill areas they shall be spread and compacted in separate clearly defined areas.

6.6 CAPPING LAYER

Capping Layers

6.6.1 In cases where the CBR value of the sub-grade soil is less than 5%, a capping layer of material complying with SHW Types 6F2, 6F3 or 6F4 may be provided. This shall comprise non-argillaceous material and, where the material size permits, shall have a CBR value of at least 15% when tested in accordance with BS1377: Part 4:7 at the in-situ moisture content following compaction. Appropriate thicknesses of capping layer are given in section 7.1.

6.6.2 If the capping layer is within 350mm of the road surface it shall be non-frost susceptible. This requirement shall be deemed to be met if the material after compaction, when wet sieved, produces 8% or less passing the 63µm sieve.

6.7 PREPARATION OF FORMATION

6.7.1 Immediately prior to laying the sub-base the formation shall be prepared as follows:-
i. All surfaces shall be cleaned and any wet materials, mud, slurry, unsound or unstable material removed.
ii. The surface shall be brought to the formation level shown on the approved drawings by the addition of fill material or by grading-off high spots.
iii. The formation shall then be compacted in accordance with Table 2.
iv. The surface shall be regulated and trimmed to within a tolerance of plus 20mm or minus 30mm of true level and given one further pass with the roller.

6.7.2 Where the formation is not immediately covered with sub-base or base course material, it may be protected by a membrane of 125$_{\mu}$m thick impermeable plastic sheeting with 300mm laps set to prohibit ingress of moisture. If the Developer allows the moisture content of accepted compacted material to reach a value above the maximum permitted for the material for compaction the Developer shall allow the material to revert to an acceptable moisture content and if directed by the Engineer, make good the surface by re-compaction before laying the subbase in accordance with 6.7.1(i) to (iv) inclusive.

6.8 EARTHWORKS TO BE KEPT FREE OF WATER

6.8.1 The Developer shall arrange for the rapid dispersal of any water shed on to earthworks or completed formation or which

enters the earthworks from any source. Where practicable, the water shall be discharged to the permanent outfall for the piped drainage system.

6.8.2 The Developer shall provide where necessary temporary water courses, ditches, drains, pumping or other means of maintaining the earthworks free from water. Adequate means for trapping silt shall be provided before any water from the site is discharged into permanent drainage systems.

6.9 VERGES

Preparation

6.9.1 Verges which are to seeded shall be carefully prepared by being thoroughly dug over or ploughed one spit deep, levelled and thoroughly cleared of existing turf, weeds, rubbish, large stones etc. ready to receive topsoil. The top 100mm shall be approved topsoil lightly compacted and then the top 25mm worked to a fine tilth.

6.9.2 Immediately prior to seeding or turfing, fertiliser shall be applied to the prepared verge at a rate of not less than 75g per square metre. The fertiliser shall consist of a compound containing not less than 10% nitrogen, 15% phosphoric acid and 10% potash and shall be submitted for the Engineers approval.

Seeding

6.9.3 Grass seed as specified below shall be evenly sown at the rate of not less than 1kg to 30 square metres and lightly raked into the soil. In case of failure the sowing shall be repeated until the grass is established. The seeded area is to be maintained, including mowing, until the road is adopted.

Turfing

6.9.4 The grass seed shall be a tested mixture from an approved source; certificates of purity and germination shall be provided at the request of the Engineer. Unless otherwise agreed with the Engineer, the following mixture shall be used.

Chewings Fescue (Festuca Rubra Commutata)	24%
Smooth Stalked Meadow Grass (Pod Pratensis)	24%
Hard Fescue (Festuca Rubra)	24%
Brown Top (Agrostis Tenuis)	8%
Perennial Ryegrass (Lolium Perenne) Ranger	20%

6.9.5 Where the area is to be turfed, turves shall be clean and strong and shall comply with BS3969. The turfs shall be well bonded and tamped into the prepared topsoil bed. Where turfs are required to be laid on side slopes they shall be laid diagonally and pegged as necessary using wooden pegs left flush with the surface.

6.9.6 All turfs shall be laid within 1 week of cutting during the period 1st April to 31st August or within two weeks of cutting during the remainder of the year. Laid turfs shall be maintained and may require additional watering until the road is adopted.

Trees

6.9.7 Trees planted in verges shall be nursery grown Standard trees and shall be planted within seven days of being taken up from the nursery during the months of October to March inclusive. A list of recommended trees and shrubs is given in Appendix 4C.

6.9.8 The trees shall be planted in prepared holes at least 1.0m x 1.0m x 0.5m deep with the bottom broken up to a further 0.3m depth. The tree roots should be properly spread out in the hole and topsoil backfilled in layers gently trodden in with the foot. Trees shall be staked, fastened and protected as necessary.

6.9.9 The position of the trees is to be as shown on the Drawings or as agreed with Engineer.

SECTION 7

ROAD PAVEMENTS - GENERAL

Construction Thicknesses

7.1.1 The required **minimum** depth of construction for each type of Residential and Commercial Roads is given below in Tables 3 and 4.

Construction Thicknesses in New Development Highway Types Residential
Table 3:

	Block Paved Shared Surfaces Home Zones 0.1 m.s.a.	Minor Access Roads 0.1 m.s.a.	Major Access Road 0.2 m.s.a.	Distributor Roads up to 1.5 m.s.a	Design Mix Heavy Traffic Junctions to Prevent Rutting at Engineers Discretion
Surface Course	80mm block pavers	40mm of 0/6mm SMA	40mm of 0/10mm SMA	40mm of 0/10mm SMA	Depths to manufacturers design
Binder Course	-	60	60	60	[4] See below
Sand Bedding Course	25 [2]	-	-	-	
Base (Roadbase)	50 [1]	80	85	100	
	Foundation thickness for all types of road				
CBR of subgrade:	Sub-base alone [3]	Sub-base plus Capping Layer		Geotextile required	
1% or less	not permitted	Special conditions apply with the Engineer		To be agreed	
less than 2% but greater than 1%	not permitted	150 + 600		Yes	
2%	not permitted	150 + 450		Yes	

3% 4% 5% 6% 7% 8%) 10% 15%	not permitted not permitted 240(350) 220(290) 200(250) 190(225) 170(225) 150(225)	150 + 350 150 + 300 150 + 250	Yes
Notes:	* Where the block paving is integral to any SuDS system this will be subject to a design provided by the block manufacturer & approved by the Engineer.		
[1]	A 50mm of dense asphalt concrete binder course is required when the sub-base is to carry construction traffic in which case the depth of the sub-base may be reduced by 50mm.		
[2]	Thickness of sand is given in paragraph 11.8.5.		
[3]	(220) - for figures in brackets, see para. 7.1.2.		
[4]	Torbay Council will require a Premier bituminous design mix at the Engineers discretion at stressful areas such as bends, bus bays and junctions where rutting will occur at the developers costs		

Table 4: Construction Thicknesses in Commercial Estate Roads

Area of Development			
acres	under 15	15 to 70	70 to 120
hectares	over 6	6 to 28	28 to 48
Surface Course	40mm of 10mm SMA	40mm of 10mm SMA	40mm of 0/14mm SMA
Binder Course	60	60	60
Base (Roadbase)	150	155	200

7.1.2 The water table should not rise to within 600 mm of the formation; subsoil drainage or raising the embankment may prevent this, but if neither of these are practicable the construction thicknesses shown in brackets in Tables 3 and 4 are to be used.

Surface Levels and Surface Regularity of Pavement Courses

7.1.3 The level of any point on the constructed surface of the pavement courses shall be the design level subject to the following tolerances:

Surface Course	+ or - 6mm
Binder course	+ or - 6mm
Base	+ or - 15mm
Sub-base	+ 10mm to - 30mm

7.1.4 Notwithstanding the tolerances permitted in surface levels of pavement courses, the cumulative tolerance shall not result in a reduction in thickness of the pavement, excluding the sub-base, by more than 12mm from the specified thickness.

7.1.5 The surface course thickness stated is the minimum acceptable, i.e., there is no lower tolerance . It is therefore advisable to ensure that the target thickness of the surface course in the laying operation takes this into account.

Checking of Longitudinal Surfaces

7.1.6 A straight edge 3 metres long shall be used to check longitudinal surface regularity and the maximum allowable difference between the surface and the underside of the straight edge, when placed parallel with, or at right-angles to, the centre line of the road at points decided by the Engineer shall be:

for pavement surfaces	3mm
for binder courses	6mm

On lengths of surface course in excess of 75 metres, a calibrated rolling straight edge will be used. Tolerances are:

Length Tested	Maximum number of irregularities		
	4mm	7mm	Greater than 10mm
75m	9	1	0
300m	20	2	0

Surface Irregularities out of Specification

7.1.7 Where surface levels or irregularities do not comply with the above the Developer will be required to rectify the matter to the satisfaction of the Engineer. The minimum area the Engineer would except would be 15m x lane width .

Use of Surfaces by Traffic and Construction

7.1.8 Where the Developer proposes to use the sub-base for construction plant he shall improve the sub-base to accommodate the method of construction and the type of plant and vehicles which he proposes to use, in order to avoid damage to the sub-

Plant		base, any capping and the subgrade. Any permanent thickening shall be across the whole width of the pavement, unless otherwise agreed with the Engineer. Temporary thickening shall not impede drainage of the subbase or the sub-grade.
Order of Work	7.1.9	All drainage and sewerage works, statutory undertakers mains and services, street lighting cabling and ducting etc., shall be installed and the trenches properly reinstated before carriageway binder course is laid.
Traffic Calming Features	7.1.10	Where ramps, plateaux and other sections where texture changes are required in estate roads, the sub-base and upper bituminous layer shall be laid to provide a smooth running temporary surface for construction traffic and afterwards shall be carefully removed over the necessary area and to the required depth in order to construct the ramp, table etc.
Weather conditions for laying bituminous materials	7.1.11	Laying of road pavement materials containing bitumen binders may proceed during light precipitation provided that both the surface to be covered and the air temperature are above 0°C, except where otherwise specified in this Clause. Responsibility for working methods shall remain with the Contractor including all necessary adjustments to suit changes in weather conditions.
	7.1.12	Laying of road pavement materials containing bitumen binders may proceed provided that the temperature of the surface to be covered is 0°C or more, the air temperature is at or above − 1°C and rising and the surface to be covered is dry, unfrozen and free from ice, snow, salt and grit, except where otherwise specified in this Clause
Wind Speed	7.1.13	Wind speed shall be measured by anemometer positioned near the laying site to accurately reflect conditions at the laying site. The anemometer shall be fitted with a digital accumulative device. Although compaction will be assessed by means of the air voids test it is strongly recommended that the acceptable laying conditions given in the following charts are adhered to. In the case of handlay work additional allowance may need to be made to achieve the specified level of air voids, i.e., higher ambient temperature and/or lower wind speed.

FIGURE 7/1: Wind Speed and Air Temperature Laying Restraints for up to 35mm Thickness of SMA Surface Course

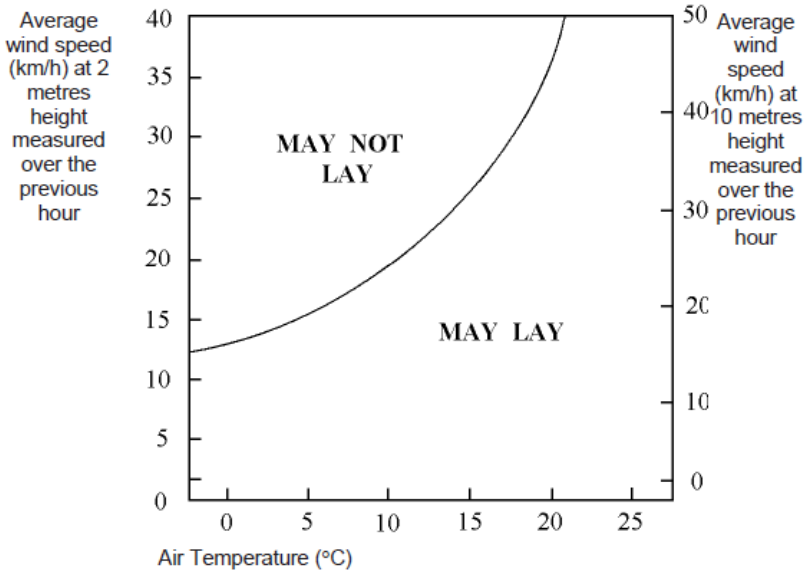
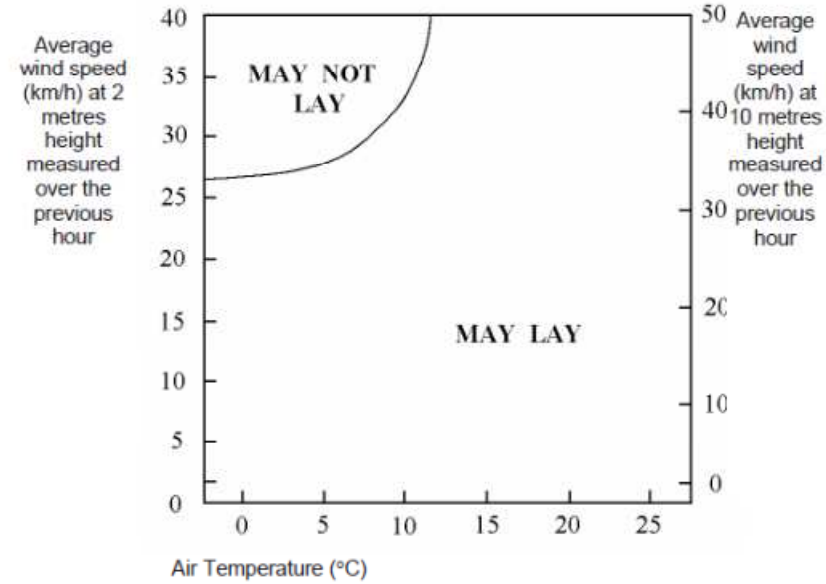


FIGURE 7/2: Wind Speed and Air Temperature Laying Restraints for Dense Concrete Asphalt Surface Course or Binder Course



SECTION 8
ROAD PAVEMENTS – UNBOUND MATERIALS

The Sub-base

8.1.1 The Sub-base shall be granular material Type 1 to SHW clause 803. If the material is to be placed within 350mm of the surface a certificate of frost heave compliance shall be provided. The test will have been carried out no longer than 12 months prior to supply. Other subbase materials will be considered on a site-specific basis. Details of such alternatives shall be notified to the Engineer at least 2 weeks prior to intended use.

8.1.2 The material shall be transported, handled and laid without drying out or segregation. It shall be spread evenly in layers to the required shape and total thickness shown on the approved drawings either by hand or machine, and compacted as shown in Table 5 below.

Sub-base Protection for Block Paved Roads

8.1.3 Where carriageways are constructed in concrete or clay paviours, if the sub-base is to be used as a running surface by construction traffic, a layer of 0/20mm nominal size dense bitumen base-course macadam shall be laid to a minimum thickness of 50mm. Any damage or deformation to the carriageway shall be made good to the Engineers satisfaction and the bituminous layer shall have holes (between 100mm and 150mm diameter) drilled at the rate of one per square metre and filled with 2,8/6,3mm clean chippings prior to laying paving blocks.

Table 5 (table 8/1 of the Specification for Highway Works
Compaction Requirements for Granular Materials

Type of compaction	Category	Number of passes for layers not greater than		
		110mm	150mm	225mm
Smooth-wheeled roller (or vibratory roller operating without vibration)	Mass per metre width of roll :			
	over 2700kg up to 5400kg	16	Unsuitable	Unsuitable
	over 5400kg	8	16	Unsuitable
Pneumatic-tyred roller	Mass per wheel:			
	over 4000kg up to 6000kg	12	Unsuitable	Unsuitable
	over 6000kg up to 8000kg	12	Unsuitable	Unsuitable
	over 8000kg up to 12000kg	10	16	Unsuitable
	over 12000kg	8	12	Unsuitable
Vibratory roller	Mass per metre width of vibrating roll			
	over 700kg up to 1300kg	16	Unsuitable	Unsuitable
	over 1300kg up to 1800kg	6	16	Unsuitable
	over 1800kg up to 2300kg	4	6	10
	over 2300kg up to 2900kg	3	5	9
	over 2900kg up to 3600kg	3	5	8
	over 3600kg up to 4300kg	2	4	7
	over 4300kg up to 5000kg	2	4	6
	over 5000kg	2	3	5
Vibrating plate compactor	Mass per unit area of base-plate			
	1400kg up to 1800kg	8	Unsuitable	Unsuitable
	over 1800kg up to 2100kg	5	8	Unsuitable
	over 2100kg	3	6	10
Vibro-tamper	Mass			
	over 50kg up to 65kg	4	8	Unsuitable
	over 65kg up to 75kg	3	6	10
	over 75kg	2	4	8

Power rammer	Mass			
	100kg up to 500kg	5	8	Unsuitable
	over 500kg	5	8	12
During the compaction the surface profile shall be trimmed so that the finished surface levels are within plus 10mm and minus 30mm of those shown on the approved plan.				

SECTION 9
ROAD PAVEMENTS - BITUMINOUS BOUND MATERIALS

9.1 OVERALL REQUIREMENTS

From April 1st 2008 all bituminous surfacing shall be carried out by companies certificated to National Highways Sector Scheme 16 for the Laying of Asphalt Mixes. Details are available here: www.ukas.com/Library/downloads/publications/NHSS%2016.pdf

Only materials supplied by a manufacturer certificated as complying with the Quality Assurance Sector Scheme No. 14 for the manufacture of asphalt (bituminous materials) will be acceptable. All delivery tickets will be made available to the Engineer when required.

The surfacing contractor shall only use material supplied by coating plants that have a current Q level (as defined in the National Sector Scheme for the Production of Asphalt Mixes) no worse than Q4 provided that the plant has maintained a Q level of Q3 or better in two of the previous four weeks.

9.1.1 Details of any non complying material notified by the supplier to the surfacing contractor shall be passed on to the County Council's Materials Laboratory immediately. No material shall be accepted under the supplier's concession arrangements in respect of any non-compliance with the required specification.

Transporting of Bituminous Materials

9.1.2 Bituminous materials shall be transported in clean vehicles that have fully insulated bodies and shall be double sheeted or quilted when in transit or awaiting tipping (an Easysheet-type system is also acceptable). The use of dust, coated dust, or water on the interior of the vehicles to facilitate discharge of the mixed materials is permissible but the amount shall be kept to a minimum by tipping or brushing prior to loading. Under no circumstances is diesel to be used.

Laying of Bituminous Materials

9.1.3 Bituminous materials shall be spread, levelled and tamped by approved self-propelled pavers. The materials shall as soon as possible after arrival at the site be supplied continuously to the paver and laid without delay. The rate of delivery of material to the paver shall be so regulated as to enable the paver to be operated continuously and it shall be so operated whenever practicable. The rate of travel of the paver and its method of operation shall be adjusted to ensure an even and uniform flow of material across the full laying width, freedom from dragging, tearing and segregation of the material. Diesel is not to be used for lubrication or cleaning of any part of the paver that may come into contact with the

bituminous material, e.g., the screed mechanism or hopper.

Hand Laid Work

9.1.4 Hand laying of any bituminous materials will be permitted only in the following circumstances:-

i. laying regulation courses of irregular shape and varying thickness
ii. in confined spaces where it is impracticable for a for a minipaver to operate
iii. in footways

9.1.6 Compaction of bituminous materials should commence as soon as the uncompacted material will bear the effects of the rollers without undue displacement or surface cracking. Compaction should be substantially completed before the temperature falls below the minimum rolling temperatures. Rolling shall continue until all roller marks have been removed from the surface.

9.1.7 Compaction shall be carried out preferably using self propelled vibratory rollers operated in accordance with the manufacturer's instructions (particularly in respect of amplitude and frequency of vibration) or by using 8-10 tonnes dead weight smoothwheeled rollers having a width of roll of not less than 450mm, or a combination of these rollers.

9.1.8 Vibratory rollers should be capable of achieving at least the standard of compaction of an 8-tonnes deadweight roller.

Adequacy of Compaction of Bituminous Materials

9.1.9 The adequacy of compaction of bituminous materials will be determined by the Engineer from the attained air void content of the laid material using the method specified in BS598: part 104 except that 100mm diameter cores shall be used. The Engineer will take samples in accordance with the following:-

i. pairs of 100mm diameter cores shall be taken when the new material has attained ambient temperature
ii. for sites exceeding 1000 sq. m in area, three core pairs per 1000 sq.m
iii. for sites of less than 1000 sq. m, three core pairs for the complete site.

The air void content of each of the individual layers will be determined and shall not exceed the limits given in Table 6.

Table 6

Material	Mean of 6 cores Min%	Mean of 6 cores Max%	Mean of any pair Min%	Mean of any pair Max%
Dense macadam base (asphalt concrete) (BS4987-1 Clause 5.2)	2	7	1.5	9
Dense macadam binder course (asphalt concrete) (BS4987-1 Clause 6.5)	2	6	1.5	8
Stone Mastic Asphalt (SMA) 14mm nominal size	2	6	1.5	7
Stone Mastic Asphalt (SMA) 10mm nominal size	2	8	1.5	9
Stone Mastic Asphalt (SMA) 6mm nominal size	2	10	1.5	11
Dense macadam and close (asphalt concrete) graded macadam surface courses- Machine laid (BS4987 Clause 7.5)	2	9	1.5	11

Notes:

1. The maximum permissible air void content given in Table 6 may be increased by 1% for hand laid materials in accordance with paragraph 9.1.4.

2. Air voids results will be rounded to the nearest whole number for the purpose of assessing compliance over a core pair and to the nearest 0.5% for single core pair compliance.

3. The measured mix density will be used in the calculation. This figure is based on data from laboratory analysis of the mix density. The figure used will be the most recent mix density measured for the same material type from the supplying quarry. For referee purposes a 200mm diameter core may be extracted for subsequent analysis of mix density.

Making of Joints

9.1.10 Where joints between laying widths or transverse joints have to be made in surface courses, the material shall be fully compacted and the joints made flush by cutting back the exposed joints to a distance of not less than the specified thickness. This cutting back shall result in the removal of any visually segregated material. All loosened material shall be discarded and the vertical face so formed shall be coated completely and evenly with a suitable bitumen-based product immediately prior to the abutting part of the layer is placed. A cold thixotropic bitumen can be used as per BS4987:Part 2.
All joints shall be offset at least 300mm from parallel joints in the layer beneath.

Delivery Temperatures

9.1.11 The delivery temperatures for bituminous bound materials shall comply with the recommendations of BS4987, as summarised in Table 7 below. A calibrated thermometer suitable for checking the above-specified temperatures shall be provided by the Developer and kept available for use by the Engineer. The calibration will have been carried out within the previous 12 months and will provide clear evidence of traceability to National Standards e.g. via a UKAS certificate.

Table 7

Delivery Temperatures			
Material	Maximum Temperature on Delivery °C	Minimum Temperature of mixture immediately prior to laying °C	Minimum Temperature immediately prior to rolling °C
85 pen SMA	190	140	130
125 pen SMA	185	140	125
125 pen DBM (concrete asphalt) (laid by machine)	160	120	95
125 pen DBM (concrete asphalt) (laid by hand)	150	120	95

9.1.12 The carriageway shall not be used as a haul road for heavy construction loads until the binder course has been laid, but before the surface course is laid. Any damage or deformation to the carriageway shall be made good to the Engineer's satisfaction prior to the laying of the surface course.

9.1.13 A bituminous tack coat emulsion of K1-40 or K1-60 to BS434 shall be applied to the clean, dry or barely damp surface immediately prior to laying successive courses of (concrete asphalt) bituminous materials, i.e., between base and binder course and before any regulating layer. It shall be applied at a metered rate in accordance with the following tables.
K1-70 emulsion, formulated with bitumen having a maximum penetration value of 220dmm and less than 1% w/w of added volatile flux oil may also be used.

Table 8 — Recommended Tack coat application target rates in kg/m^2 of residual bitumen for Newly laid asphalt – New construction.

Binder content upper layer	Binder content lower layer		
	≤ **4%**	4.1 – 5.0%	≥ 5.1%
≥ 5.1%	0.15	0.15	0.15
4.1 – 5.0%	0.20	0.15	0.15
≤ 4%	0.25	0.20	0.15

Table 9 — Recommended Tack coat application target rates in kg/m^2 of residual bitumen for trafficked surfaces.

Binder content upper layer	Nature of lower layer/existing surface (see Note below)		
	Fretted/ binder lean	Planed asphalt	Binder rich
≥ 5.1%	0.20	0.15	0.15
4.1 – 5.0%	0.25	0.20	0.15
≤ 4%	0.25	0.25	0.20

NOTE: Application rates in this standard are quoted in kg/m^2 .of residual bitumen. This differs from previous standards, which quoted rates in l/m^2 of total emulsion. For example, the rate 0.15 kg/m^2 residual bitumen would approximately equate to 0.35l/m^2 of K1-40 or 0.25l/m^2 of K1-60 emulsion.

If the surface is contaminated the carriageway shall be thoroughly washed to effectively remove the detritus. The bitumen emulsion spray shall be applied evenly and no puddles shall be allowed to form. The emulsion shall be allowed to break (turn from brown to black) before the next course is laid. For all areas of machine laid surfacing this tack coat shall be applied by mechanical means fitted with a spraybar certificated as complying with the requirements of BS 1707. A certificate to this effect will be available for inspection when required. Calibration is to be carried out at least annually using a K1-40 or K1-60 grade of bitumen emulsion.

9.1.14 A polymer-modified bond coat applied in accordance with the manufacturer's instructions will be required to be applied immediately prior to laying the SMA surface course. The bond coat shall be applied in accordance with the manufacturer's recommendations. Bond coats shall be applied by a calibrated sprayer in accordance with 9.1.13.

9.2 THE BASE (Roadbase)

9.2.1 Before laying base (Roadbase) material the sub-base surface shall be clean and free from standing water.

9.2.2 Base material shall consist of 0/32mm size asphalt concrete to BSEN 13108

9.2.3 The binder shall be 125 pen to BSEN 12591. For Commercial Estate Roads the grade shall be 50 pen.

9.3 THE BINDER COURSE

9.3.1 Binder Course material shall be asphalt concrete binder course to BSEN 13108 with 0/20mm nominal size crushed rock aggregate. The material shall be spread evenly to the correct profile and compacted.

9.3.2 If the binder course is used as a temporary running surface or if laying of the surface course does not take place within three days, the surface of the binder course shall be thoroughly cleaned and a bond coat applied before the surface course is laid. An aggregate of PSV >50 will be required in the upper layer of the binder course if it is trafficked for longer than 28 days. The Engineer shall be consulted on the actual PSV requirements.

9.3.3 The binder shall be 100/150 grade (125 pen). For Commercial Estate Roads the grade shall be 40/60 grade (50 pen).

9.4 THE SURFACE COURSE

Residential Estates

9.4.1 Surface course material shall be as shown in Table 3. The penetration grade of the bitumen shall be 85pen. Guidance on an appropriate material can be obtained by contacting Devon County Council's Materials Laboratory.

9.4.2 Hand-raking of surface course material which has been laid by a paver and the addition of such material by hand-spreading to the paved area for adjustment of level will be permitted only at the edges of the layers of material and at gullies and manholes, or where otherwise agreed with the Engineer. Segregation is to be avoided in all cases.

Gritting of SMA

9.4.3 On all carriageways and any bridleways where SMA is used this shall be gritted using clean 3mm crushed quartzite or approved 3mm steel slag complying with the grading requirements in Table 8. This shall be applied evenly during the initial rolling at a metered rate of 0.6 - 1.0kg per square metre. The excess will be thoroughly removed on the completion of final rolling and before opening to traffic.

TABLE 8: Grading of Grit for Surface Application to SMA

BS test sieve:	% passing
6.3mm	100
5.0mm	95 - 100
3.35mm	66 - 90
1.18mm	0 - 20
600µm	0 - 8
75µm	0 - 1.5

PSV of Aggregate

9.4.4 The Polished Stone Value (PSV) concrete asphalt for bituminous materials to be used as a surface course shall be at least that stated in Table 9.

9.4.5 The risk rating of the site is defined as either:

Potentially High Risk
Includes:
Traffic signals, pedestrian crossings, railway level crossings – including 50 m approaches
Roundabouts and their exits – including 50 m approaches
Bends < 100 m radius where the speed limit > 40 mph (65 kph) – including 50 m approaches
Downhill gradients > 10% for more than 50 m
(single or dual carriageway)
Uphill gradients > 10% for more than 50 m
(single carriageway only)

or Average or Low Risk

All other situations on single and dual carriageways, including:
Generally straight sections of carriageway
Approaches to and across major/minor road junctions
Bends of 100 m radius or greater, at any speed limit
Downhill/Uphill sections of 10% gradient or less

TABLE 9: PSV Requirements for surface course materials

Road Type	Potentially High Risk	Average or Low Risk
Distributor Road	68	60
Major Access Road	65	55
Minor Access Road	60	50
Cycleways	55	50
Footways	55	50

Commercial Estates

9.4.6 Surface course material shall be as above except that 50pen grade bitumen with natural latex modification (0.2 – 0.3% by mass of the total mix) shall be used or an alternative modified binder may be submitted to the Engineer for approval.

9.4.7 Where frequent turning movements by heavy goods vehicles is likely an Premium Bituminous Design mix at the Engineers discretion will be required. Guidance on an appropriate material can be obtained by contacting Devon County Council's Materials Laboratory.

SECTION 10
ROAD PAVEMENTS - CONCRETE AND CEMENT BOUND MATERIALS

10.1 CONCRETE CARRIAGEWAY

10.1.1 Concrete carriageway construction shall comply with the provisions of the Department of Transports Specification for Highway Works and requires written agreement of the Engineer.

SECTION 11
KERBS, FOOTWAYS AND PAVED AREAS

11.1 PRECAST CONCRETE KERBS, CHANNELS, EDGINGS AND QUADRANTS

11.1.1 Precast concrete kerbs, channels, edgings and quadrants that are to be handled by specialist machinery or handling devices shall be hydraulically pressed and shall comply with the requirements of BS EN 1340. Tapered kerbs, quadrants and some of the less popular sizes of radius kerbs may not be manufactured in pressed form and in these cases only, hammer compacted products will be accepted, provided that they too comply with the requirements of BS EN 1340. Such machine handled kerbs shall also comply with clause 11.1.2.

11.2 NATURAL OR SIMULATED STONE KERBS

Natural Stone Kerbs

11.2.1 Stone kerbs shall be of granite or sandstone, or other approved stone, clean and of regular shape, sound and free from cracks, weathering or faults. They shall be laid in a manner similar to precast concrete kerbs.

Reconstituted Stone Kerbs

11.2.2 Reconstituted stone kerbs may be used in Residential Estates subject to the approval of the Engineer. The County Kerb produced by Redland, the Conservation Kerb produced by Marshalls and the Countryside Kerb CSK2 and CSK3 produced by Charcon are typical products. Radii, quadrants and dropping kerbs are to be used where necessary.

11.3 LAYING KERBS

11.3.1 Kerb and edging bases shall be constructed in concrete Grade ST2 to BS 8500-2 AND BS EN 206-1 to paragraph 14.1.3 properly compacted by tamping. For light weight kerbs refer to 11.1.3. Kerbs may be laid direct on to the wet concrete base or on a mortar bed 10mm to 40mm thick laid on previously constructed base. The concrete should not be used if more than two hours have elapsed since the mix was batched.

11.3.2 Edging shall be laid in a minimum 125 mm base of homogeneous concrete and must be bedded in the wet concrete.

11.3.3 After laying, the line of the kerbs is to be approved by the Engineer, and then shall be backed and/or haunched with concrete Grade ST2 to BS 8500-2 AND BS EN 206-1.

11.3.4 Precast concrete kerbs shall be laid butt jointed, without the use of mortar infill.

11.4 FOOTWAYS AND PAVED AREAS - GENERAL

11.4.1 All drainage work, statutory undertakers mains and services and street lighting cabling which runs along the footways or footpaths must be installed and properly backfilled and compacted before footway or footpath construction commences.

Preparation of Formation

11.4.2 The formation shall be prepared by removing all vegetation growth, water, mud, slurry and unsound or unstable material and the surface brought to formation level by the addition of acceptable granular material and rolled with a smooth wheel roller weighing not less than 2.5 tonnes or by an equivalent vibrating plate or roller. The level of the approved formation shall be within plus or minus 20mm of levels shown on the approved drawings.

Foundation

11.4.3 The foundation material shall be granular sub-base material to SHW clause 803 spread evenly and without drying out or segregation to the required profile in one layer of 125mm compacted thickness.

11.4.4 Compaction shall be achieved by rolling with a smooth wheel roller weighing at least 2.5 tonnes or by an equivalent vibrating roller until no further compaction can be achieved.

11.4.5 The level of the foundation material shall be within plus 10mm or minus 30mm of the levels shown on the approved drawings.

Application of Weed-killer

11.4.6 The application of weed-killer is required prior to footway construction and prior to final surfacing works. The chemical weed-killer is intended as a weed growth preventant and shall be Dichlobenil. It shall not be applied during or before weather conditions that would render their use ineffective or result in the contamination of surrounding areas.

11.4.7 The chemical is to be applied by an approved method by the Engineer using purpose built plant or applicators. The Contractor shall ensure that a good treatment technique is adopted and that contamination of surrounding areas, plantings, grass, watercourses is avoided.

11.4.8 The Contractor shall only undertake chemical weed-killing using operatives who are certified as being competent by an authorised organisation or body for the purposes of Conditions 6 and 7 of the consent in use of pesticides given by Ministers on the 6th October 1986 in exercise of the power in the Control of Pesticides

Regulations 1986. Operators Certificate of Competence must be available for inspection at the request of the Engineer.

11.4.9 The use of chemical weed-killer shall be strictly in accordance with the manufacturers recommendations, recommendations issued by DEFRA, The Control of Pesticides Regulations 1986, and any amendments thereof. Chemical weed-killers shall be of an approved type licensed for the appropriate use by the DEFRA and be non-corrosive, of low toxicity to humans, animals, fish and bees, and non-flammable.

11.4.10 The Contractor's attention is drawn to the requirement to state the type, product trade name and active ingredients of the weed-killer(s) he proposes to use for the Engineer's approval. The Contractor shall also submit full details and specifications of the product, including Health and Safety Data sheets. The Contractor shall state whether "full" or "provisional" approval has been given to the product under the Control of Pesticides Regulations. All the above is to be submitted to the Engineer at least three days before the weed-killer is to be used.

11.4.11 The use of chemical weed-killers containing any of the following shall not be permitted:

(i) 2 - 4 - 5T
(ii) Aldrin
(iii) Substances from the triazine group
(iv) or any other nationally banned substance.

Surface Course

11.5.2 On Residential Estates the surface course shall be 0/6mm SMA. The grade of bitumen used for surface course shall be 100/150 grade (125pen). On Commercial Estates the surface course shall be SMA of 6mm nominal size. The grade of bitumen used for surface course shall be 70/100 grade (85pen).

The material shall be spread and compacted to the required profile and to a finished layer thickness of not less than 20mm by means of a vibratory roller delivering the appropriate compactive effort (recommended to be at least a 3 tonne deadweight roller).

The finished surface shall be within plus or minus 6mm from the surface level as shown on the approved drawings and flush with adjacent kerbs, covers etc.

Limestone surface course will not be acceptable. No area of segregated material will be permitted.

The air voids limits for the compacted layer are given in Table 6.

Tack/Bond coat

11.5.3 Tack coat is required where existing surfaces are to be overlaid irrespective of how newly laid. Older and visually contaminated

surfaces will require thorough cleaning e.g., water jetting prior to the application of tack/bond coat. Bond coat is required beneath all SMA surfaces laid on carriageways.

11.6 FOOTWAYS AND PAVED AREAS - PRECAST CONCRETE PAVING SLABS, PAVIOURS OR SETTS

General Requirements 11.6.0 All materials used in the footways shall be capable of maintaining a minimum in-service slip resistance of 40SRV (45 on gradients of 10% or greater) when measured using a standard slider and pendulum-type skid resistance meter on a sample of the paving that has been subject to an approved accelerated polishing regime.

Precast Concrete Paving Slabs 11.6.1 Precast concrete paving slabs shall be hydraulically pressed and shall comply with the requirements of BS EN 1339:2003. The slabs shall be a minimum of 60mm thick and shall be a maximum size of 400mm x 400mm square or 450mm x 300mm rectangular. They shall be laid on an all over bed of 35mm uncompacted thickness of sand complying with Table 10a. Limestone coarse aggregate or fines shall not be used unless evidence of satisfactory in-service slip resistance can be provided. Joints shall be butt-jointed and sealed with dry sand brushed in.

Concrete Paving Blocks 11.6.2 Concrete paving blocks for footways shall be in accordance with paragraph 11.9.1 except that the blocks shall not be less than 65mm thickness. They shall also generally conform to the requirements of paragraphs in the series 11.8 and 11.9.

Bricks or Clay Paviours 11.6.3 Clay and calcium silicate pavers shall conform to BS7533-3. Paviours shall be rectangular in shape and not less than 50mm thickness, and shall be laid in accordance the above Standard. The thickness of sand bedding material to be used when clay and calcium silicate pavers are the surface course shall be in accordance with BS 7533 and shall be not less than 50mm. The Engineer will require Polished Paver Values (PPVs) for any clay paver before approval for use is given.

11.7 STEPS AND RAMPS

Steps 11.7.1 Steps shall be constructed of either precast or in-situ concrete Grade C30P or of approved natural stone. All materials used in their construction shall be capable of maintaining a minimum in-service slip resistance of no less than 45SRV when measured using a standard slider and pendulum-type skid resistance meter. For in-situ concrete the formwork shall provide adequate support to the wet concrete to prevent deformation. A252 mesh reinforcement shall be placed parallel to the ground and positioned to have 40mm of cover.

11.7.2 The steps shall normally be 1.8 metres wide. Landings shall be of the same width as the steps and have minimum length of 2m. A

flight of steps shall consist of not more than 12 risers of 150mm, and where there are 4 or more risers a handrail shall be provided. Where the width exceeds 2 metres a central bollard and handrail shall be erected. The treads should have a going of 300mm and have 6mm head fall, shall have a non-slip finish to the surface and the nosings shall have arrises of 10mm radius. The minimum throat dimension (i.e. the minimum thickness of the slab) shall be 150mm.

11.7.3 Walls flanking the steps, bollards, free standing handrails and handrails attached to walls are to be to a design approved by the Engineer.

11.7.4 Adequate drainage and lighting shall be provided to steps, ramps, landings and approach paths.

11.8 PAVIOURS IN CARRIAGEWAY – OVERALL REQUIREMENTS

11.8.1 All materials used in the carriageway shall be capable of maintaining a minimum in-service skid resistance of 40 SRV (45 on gradients of 10% or greater) when measured using a standard slider and pendulum-type skid resistance meter. The Engineer may specify a higher level of skid resistance where a particular risk rating requires it.

11.8.2 Paving blocks are to be laid in accordance of the Code of Practice for Laying Precast Concrete Block Pavements, published jointly by the Cement and Concrete Association, the County Surveyors Society and the Interlocking Paving Association (Interpave). The blocks are to be laid to a 45-degree herringbone pattern and have sufficient edge restraint to be provided to prevent outward migration of the blocks.

11.8.3 In cases where purpose made edge blocks cannot be used, soldier courses laid at edges (including those adjoining manholes, gullies. etc.) are to be in accordance with the above Code of Practice, and as illustrated in the Appendix 4A. Blocks shall be cut so that no individual block shall be less than half of a block in length. To satisfy this requirement the last two courses adjacent to the edge of the carriageway or other obstruction shall be adjusted as necessary, e.g. where the gap is, say, 1/4 block in length, cut two 5/8 blocks. Alternatively, some manufacturers produce a block that is one and a half times the size of a normal block, which can assist in forming such edges.

11.8.4 Paviours will have nibs which run the full height of the block/brick.

11.8.5 Paving blocks shall be bedded on sand in accordance with the following grading thicknesses as shown in Tables 10a and 10b below:

Table 10a

Grading of Bedding Sand for Paviours	
Sieve (mm)	Percentage Passing
6.3	100
5	90 - 100
2.36	75 - 100
1.18	55 – 90
0.600	35 – 75
0.300	8 – 35
0.150	0 – 10
0.075	0 – 0.5

Table 10b

Thickness of Bedding Sand		
	Max	Min
	Thickness (mm)	
Blocks laid on:		
Asphalt concrete DBM Binder course	25	25
Sub-base	25	55

The material shall be naturally occurring silica sand, free of deleterious salts and contaminants, with particles of a rounded or sub-rounded shape. Advice on suitable sources of approved sand can be obtained from the Engineer.

11.8.6 All joints shall be sealed with a proprietary joint sealing material approved by the Engineer. Care shall be taken to ensure that the sealant does not contaminate the surface of the blocks/bricks so as to cause discoloration or reduction in skid resistance.

Fin Drains

11.8.7 Fin drains to the approval of the Engineer shall be incorporated to ensure drainage of the sand bed at all low channels etc. where water could pond in the sand, and the surface of the subbase or bituminous under layer shall be graded to ensure that no local ponding will occur.

11.9 PAVIOURS IN CARRIAGEWAY – CONCRETE PAVING BLOCKS (AS ABOVE)

11.10 PAVIOURS IN CARRIAGEWAYS – CLAY PAVIOURS AND ENGINEERING BRICKS

11.10.1 Clay paviours shall be laid only where approved by the Engineer. When permitted, clay paviours shall be capable of achieving a minimum in-service Skid Resistance Value (SRV) of 45 after 2 years trafficking or, on gradients of 10% or steeper, a minimum in-service SRV of 50 after 2 years trafficking. The Engineer may specify a higher level of skid resistance where a particular risk rating requires it. The paviours shall be not less than 65mm thick and shall be laid in accordance with the provisions of the appropriate part of BS 7533. The Engineer will require Polished Paver Values (PPVs) for any clay paver before approval for use is given.

Engineering Bricks

11.10.2 Prior to work commencing, the Engineers approval in writing shall be obtained to the type of brick to be used. Bricks used for this purpose should not contain frogs or holes. Engineering bricks shall be class A or B of BS3921 and shall be laid on edge and in a similar manner to concrete block paving.

11.11 VEHICLE CROSSINGS OF FOOTWAY OR VERGE

11.11.1 Construction thicknesses for light and heavy duty crossings are shown in Table 11.

11.11.2 Where paving blocks are to be laid directly on to Type 1 subbase the surface shall be blinded using a dry limestone “3mm to dust” and vibrated using a plate compactor to produce a void-free surface. Additional blinding and vibratory compaction may be required dependant upon the nature of the subbase surface so as to achieve complete filling of any surface voids.

Table 11

Vehicular Crossing of Footways and Verges	
Residential Roads	
Bituminous Crossing	Minimum of 30mm of 6mm SMA*. Binder penetration grade 85pen (May – September) & 125pen (October – April). Aggregate minimum PSV 50. 60mm thick 0/20mm DBM binder course*. Binder grade 125 pen. 150mm thick Type 1 sub-base**
Block Pavers	80mm thick block pavers# 25mm sand# 150mm thick Type 1 sub-base**
Concrete	100mm pavement quality air entrained concrete Grade C3O/37 Waterproof membrane 100mm thick Type 1 sub-base**
Where it is likely that vehicular crossings will be used by commercial vehicles of over 1.5 tonnes unladen weight, the crossing shall be constructed to the same specification as the carriageway and in the case of concrete to the specification for Commercial roads (see below).	
Commercial Roads	
Concrete	235mm pavement quality air entrained concrete Grade C30/37 with A193 mesh reinforcement to BS4483 in top and bottom of slab Waterproof membrane 265 thick Type 1 sub-base**

SECTION 12
TRAFFIC SIGNS

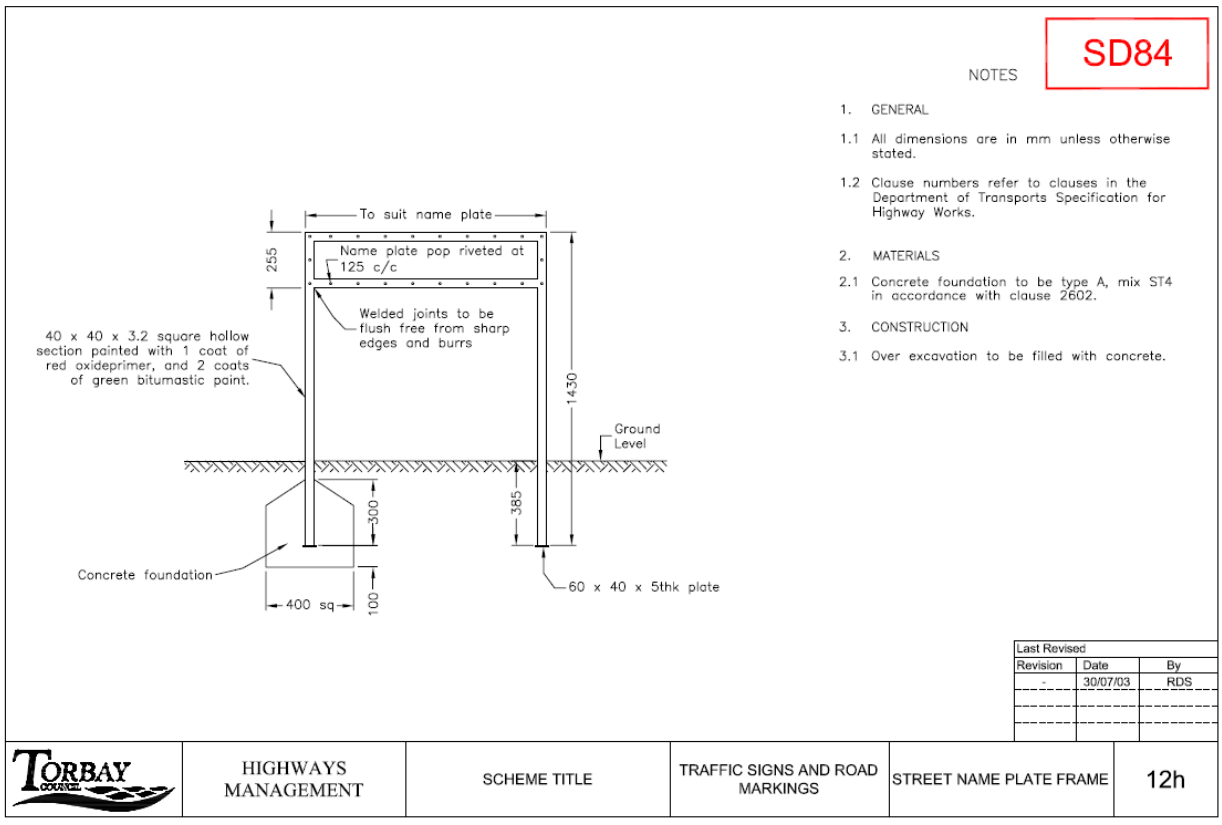
12.1 TRAFFIC SIGNS

12.1.1 Traffic signs are to be provided where directed by the Engineer, and shall conform with the Specification for Highway Works Series 1200. Any electrical connections shall be made at the same time as those for street lighting.

12.2 STREET NAMEPLATES

12.2.1 Street nameplates shall be of a design and material approved by Torbay Council. Nameplates shall be provided by the Developer and erected before any premises in the street are occupied. The nameplates shall be fixed to the satisfaction of Torbay Council and the Engineer.

12.2.2 Where appropriate, the street nameplate shall incorporate a “No Through Road” sign.



12.3 ROAD MARKINGS

12.3.1 Roadmarkings shall be provided where directed by the Engineer, and Deep Cream (to BSEN 1436) lines 50mm wide where an on-street parking order has been imposed. The markings shall be Thermoplastic or Acrylic material and be certificated as capable of meeting the performance criteria outlined in 12.3.3. Certificates to this effect will be considered as acceptable if produced by a UKAS accredited laboratory with those tests in their schedule.

12.3.2 All road marking shall be carried out by a contractor certificated to the National Highways Sector Scheme No. 7.

12.3.3 All white roadmarking shall meet the following requirements from BSEN 1436. The minimum period for maintaining these levels is 24 months from the time of application or notification of the Engineer whichever is the greater. Measurement shall be in accordance with BS EN 1436.

12.3.4 Deep Cream marking shall have a minimum skid resistance of S1 in accordance with BS EN 1436.

SECTION 14

MATERIALS

14.1 CONCRETE

General Requirements	14.1.0	Ready mixed concrete shall be supplied by a company certificated for the design and supply of the relevant mixes, e.g., the Quality Scheme for Ready Mixed Concrete (QSRMC). Delivery tickets and mix design information will be made available to the Engineer upon request.
Concrete Grade C30P	14.1.1	Concrete grade C30P shall be an ordinary prescribed mix complying with BS 8500-2 AND BS EN 206-1. The nominal maximum size of aggregate shall be 20mm and the mix shall have medium workability. In accordance with Table 1 of BS 8500-2 AND BS EN 206-1 the mix shall contain 460kg of dry aggregate per 100kg of cement.
Concrete Grade C20P and ST4	14.1.2	Concrete grade C20P and ST4 shall be an ordinary prescribed mix complying with BS 8500-2 AND BS EN 206-1. The nominal maximum size of aggregate shall be 20mm and the mix shall have medium workability. In accordance with Table 1 of BS 8500-2 AND BS EN 206-1 the mix shall contain 600kg of dry aggregate per 100kg of cement.
ST2	14.1.3	Concrete grade ST2 shall be an ordinary prescribed mix complying with BS 8500-2 AND BS EN 206-1. The nominal maximum size of aggregate shall be 20mm and the mix shall have medium workability. In accordance with Table 1 of BS 8500-2 AND BS EN 206-1 the mix shall contain 900kg of dry aggregate per 100kg of cement.
Water for Concrete	14.1.5	Water for concrete shall be obtained from a mains supply or otherwise comply with EN 1008. No additional water shall be added to ready mix concrete after the initial plant batching.
Aggregates	14.1.6	Unless otherwise specified or agreed with the Engineer, aggregates shall comply with EN 12620 Aggregates for concrete or EN 13055-1 Light-weight aggregates for concrete.:-
Admixtures	14.1.7	Unless agreed with the Engineer neither admixtures nor cements containing additives shall be used.
Ready Mixed	14.1.8	Ready mix concrete shall comply with the requirements of BS 8500-2 AND BS EN 206-1.

Curing of Concrete	14.1.9	Immediately after compaction and for 7 days thereafter, concrete shall be protected against harmful effects of weather, including rain, rapid temperature changes, frost and from drying out. The methods of protection used shall be subject to the approval of the Engineer. The method of curing used shall minimise the loss of moisture for the concrete. On concrete surfaces that are to be waterproofed, curing membranes shall not be used. Details for all curing methods to be used shall be subject to the approval of the Engineer.
Cold Weather Working	14.1.10	Concreting shall not be continued when a descending air temperature in the shade falls below 3°C, nor shall it be resumed until an ascending air temperature in the shade reaches 3°C
	14.2	**REINFORCEMENT**
General	14.2.1	Steel reinforcement shall be stored in clean conditions. It shall be clean and free from loose rust and loose mill scale at the time of fixing in position and subsequent concreting. Only reinforcement supplied by a manufacturer/fabricator registered with the CARES quality scheme shall used.
Bending of Reinforcement	14.2.2	Reinforcement shall be bent to the dimensions given in the Bar Schedules. All reinforcement shall be bent at temperatures in the range of 5°C to 100°C.
Placing of Reinforcement	14.2.3	Reinforcement shall be placed and maintained in the position shown in the Contract. Unless otherwise permitted by the Engineer, all bar intersections shall be tied together and the ends of the tying wires shall be turned into the main body of the concrete. 1.2mm diameter stainless steel wire shall be used for in-situ members having exposed soffits. 1.6mm diameter soft annealed iron wire shall be used elsewhere.
Cover Block	14.2.4	Concrete cover blocks to ensure that the reinforcement is correctly positioned shall be as small as possible consistent with their purpose, of a shape acceptable to the Engineer, and designed so that they will not overturn when the concrete is placed. They shall be made of concrete with 10mm maximum aggregate size. Tying wire shall be cast in the block for the purpose of tying them to the reinforcement.
	14.3	**BRICKWORK**
Bricks	14.3.1	Bricks shall be of a type approved by the Engineer for the purpose for which they are required, and shall comply with the particular requirements of BSEN772. Bricks for the construction of manholes,

		inspection chambers, catchpits, public utility boxes etc., shall, unless otherwise approved by the Engineer, be clay engineering bricks conforming the requirements of BSEN771 for Class B bricks.
Mortar	14.3.2	Cement mortar used shall be composed of 3 parts sand to 1 part cement and all joints shall be flushed up solid. Sand for mortar shall be a natural sand or crushed natural stone or a combination of both, as specified in BS1200.

14.4 MISCELLANEOUS MATERIALS

Re-constructed stone	14.4.1	Reconstructed stone shall conform to the requirements of BSEN 771-5
Timber Preservation	14.4.3	All timber shall comply with the 300 Series of the SHW. Copies of all treatment certificates shall be forwarded to the Engineer. Preservative treated timber will only be accepted from sources certificated as complying with National Quality Assurance Sector Scheme 4: “The Natural and Conferred Durability of Timber.”

APPENDICES

APPENDIX 4A

STANDARD CONSTRUCTION DETAILS

The following standard drawings are included, being the most commonly needed details in highway construction. Other details can be obtained from the Department of Transports publication Highway Construction Details, or specific details from Torbay Council on request from the developer

Figure Description

4A-1 Precast Concrete Manhole - depth to soffit 1.35m to 3.0m

4A-2 Precast Concrete Manhole - depth to soffit 3.0m to 6.0m

4A-3 Brick Manhole - depth to soffit not exceeding 1.0m, pipe diameter not exceeding 450mm

4A-4 Brick Manhole - depth to soffit not exceeding 1.0m, pipe diameter 450mm to 900mm

4A-5 Typical Vertical Backdrop Detail

4A-6 Subsoil Drain and French Drain Gully

4A-7 Block Paving Details

4A-8 Block Paving Details (showing fin drain)

APPENDIX 4B

Location of Services in Straight Routes on Estates

NOTES:

1. The layout of mains is in accordance with the Recommended Positioning of Utilities Mains and Plant for New Works (1986) published by the National Joint Utilities Group.
2. The dimensions shown represent the preferred arrangement in straight routes on residential and commercial estates. Variations may be necessary at curves and changes of gradient.
3. The space allocated is considered to be the absolute minimum and in certain circumstances e.g. where both high voltage and low voltage cables are laid the low voltage cable will be laid in the alternative position and additional width may be required.

4. Where buildings are to be connected to gas mains, a minimum instance of 2.0m is required between the building and the centre line of the main.

5. The prior approval of each of the utilities with plant present is required before the dimensions shown are varied to suit wider footways or verges which may be present in some estate layouts.

APPENDIX 4C
RECOMMENDED TREES AND SHRUBS

TREES		Location Suitability					Design Factors				Soil Suitability							
Botanical Name	English Name	Local distributor	R1, G1	R2, R31, R32, C2	R33 Shared Surface	Private Drive	Slope	Mass or Screen	Group	Specimen	Rapid growth Height (m)	Deciduous	Evergreen	Coastal Margin	Moist soils	Clay soils	Chalk soils	Light acid soils
Acer campestre	Field Maple	•					•	•	•		14	•			•	•	•	
Acer plationdes	Norway Maple	•	•				•		•	•	• 20	•			•	•	•	
Acer pseudoplatanus	Sycamore	•					•			•	• 25	•		•	•	•	•	•
Acer rubrum	Red Maple	•	•				•			•	• 20	•			•	•	•	
Aesculus indica	Horse Chestnut	•					•		•	•	• 25	•			•	•	•	•
Ailanthus altissima	Tree of Heaven		•				•			•	• 22	•			•	•	•	
Alnus cordata	Italian Alder	•	•	•			•	•	•		• 16	•		•	•	•	•	
Alnus incana	Grey Alder	•	•	•			•		•		• 13	•		•	•	•	•	•
Arbutus unedo	Strawberry Tree		•	•	•	•	•	•	•	•	10		•	•	•	•	•	
Betula pendula	Common Silver Birch	•	•	•	•	•	•	•	•		• 15	•			•	•		•
Betula pubescens	White Birch	•	•	•	•	•	•	•	•		• 13	•			•	•		•
Carpinus betulus	Common Hornbeam	•	•	•			•	•		•	16	•			•	•	•	
Castanea sativa	Sweet Chestnut	•					•		•	•	• 25	•		•		•		•
Cotoneaster frigidus	Himalayan Tree-cotoneaster		•	•	•	•	•	•	•	•	• 6	•		•	•	•	•	
Crataegus crus-gallii	Cockspur Thorn	•	•	•	•	•	•	•	•	•	6	•		•	•	•	•	
Crataegus prunifolia	Broad-leafed Cockspur Thorn	•	•	•	•	•	•	•	•		5	•		•	•	•	•	
Fagus sylvatica	Common Beech	•					•	•	•	•	27	•			•	•	•	
Fraxinus excelsior	Common Ash	•	•					•	•		• 30	•		•	•	•	•	
Fraxinus ornus	Manna Ash	•	•				•		•	•	• 22	•			•	•	•	
Gleditisia triacanthos	Honey Locust	•	•			•	•		•	•	• 24	•			•	•	•	•
Ilex aquifolium	Common Holly	•	•	•		•	•	•	•	•	12		•		•	•	•	
Juglans nigra	Black Walnut	•					•			•	20	•			•	•	•	
Koelreuteria paniculata	Pride of India		•	•	•	•				•	12	•				•	•	
Larix decidula	European Larch	•			•		•	•	•		• 25	•			•	•		•
Larix Kaempferi	Japanese Larch	•			•		•	•	•		• 25	•			•	•		•
Ligustrum lucidum	Chinese Privet		•	•	•	•	•			•	• 14		•	•	•	•	•	
Liriodendron tulipifera	Tulip Tree	•	•				•			•	28	•			•	•	•	
Malus hupehenis	Hupeh Crab		•	•	•	•		•	•		7	•		•	•	•	•	
Malus sylvestris	Crab Apple		•	•	•	•		•	•		8	•			•	•		•
Morus nigra	Black Mulberry				•	•	•			•	7	•			•	•	•	
Pinus nigra var maritima	Corsican Pine	•				•			•		• 25		•	•	•		•	•
Pinus radiata	Monterrey Pine	•					•				• 27		•	•	•			•
Pinus sylvestris	Scots Pine	•				•	•	•	•		• 25		•	•	•		•	•
Platanus x hispanica	London Plane	•	•				•			•	• 30	•		•	•		•	
Prunus avium	Wild Cherry	•							•	•	• 20	•			•	•	•	
Prunus padus	Bird Cherry	•				•			•		15	•			•	•	•	
Pterocarya fraxinifolia	Caucasian Wing -nut	•				•	•			•	• 22	•				•		
Quercus carris	Turkey Oak	•							•	•	30	•		•	•	•	•	•
Quercus ilex	Holm Oak	•	•				•			•	30		•	•	•	•	•	•
Quercus palustris	Pin Oak	•	•			•	•	•	•	•	20	•				•		
Quercus petraea	Sessile Oak	•	•			•	•			•	30	•		•		•		•
Quercus robur	English Oak	•	•			•	•		•	•	30	•		•	•	•	•	
Quercus ruba	Red Oak	•	•			•	•			•	• 25	•			•	•	•	
Robinia pseudoacacia	False Acacia	•	•	•		•	•		•	•	• 22	•		•	•	•	•	•
Salix alba in var	White Willow	•					•	•	•		• 20	•		•	•	•	•	
Salix pentandra	Bay Willow	•					•				• 22	•		•	•	•		
Sorbus aria	Whitebeam	•	•	•	•	•	•	•	•	•	6	•		•	•	•	•	
Sorbus aucuparia	Rowan	•	•	•	•	•	•	•	•		7	•		•	•	•	•	•
Sorbus terminalis	Wild Service Tree	•	•	•	•	•	•			•	• 10	•			•	•	•	•
Taxus baccata	English Yew	•					•	•	•	•	10		•		•	•	•	•
Tilia cordata	Small-leaved Lime	•					•			•	• 23	•			•	•	•	•
Tilia euchlora	Caucasian Lime	•			•				•	•	• 18	•			•	•	•	
Tilia petiolaris	Silver Pendent Lime	•					•			•	• 28	•			•	•	•	
Tilia platyphylios “tubra”	Red-twigged Lime	•			•		•			•	• 30	•			•	•	•	

APPENDIX 4C
RECOMMENDED TREES AND SHRUBS (cont)

SHRUBS	Design Factors														Soil Suitability			
Botanical Name	Visual screen	Barrier Hedge	Formal hedge	Informal Hedge	Ground cover	Climbers	Coastal margin	Vandal Tolerant	Dominance	Height	Spacing	Maintenance	Deciduous	Evergreen	Moist soils	Clay soils	Chalk soils	Shade tolerant
Acer ginnala	•								•	4.00	4.00		•			•		
Amelanchier lamarckii	•								•	4.00	3.00		•		•	•		•
Aralia alata										3.00	3.00				•	•		•
Aucuba japonica	•		•							2.00	1.50			•	•	•		•
Berberis candidula		•		•	•			•		1.00	0.50			•	•	•	•	
Berberis darwinii	•	•		•	•			•		2.50	2.50			•	•	•	•	
Berberis julianae	•	•		•				•		2.50	1.00			•	•	•	•	
Berberis panlanensia	•	•		•				•		1.50	3.00			•	•	•	•	
Berberis X stenophylla	•	•		•				•		2.50	2.00			•	•	•	•	
Berberis thunbergii		•		•				•		2.00	2.00		•		•	•	•	
Berberis wilsoniae		•						•		1.00	1.00		•		•	•	•	
Betula nana					•					1.00	0.50		•		•	•		•
Buddleia davidii	•			•				•		0.50	2.50	•	•		•	•	•	
Buxus sempervirens	•	•	•						•	2.50	4.00	•		•	•	•	•	•
Calluna in var					•					0.50	0.40			•		•		
Carpinus betulus	•		•						•	2.50	0.30		•	•	•	•	•	•
Chaenomeles japonica		•		•				•		1.50	1.50		•		•	•		
Choisya ternata		•		•				•		2.00	1.50			•	•	•		
Cornus alba		•						•		2.00	2.00	•	•		•	•	•	
Cornus sanguinaea		•						•		2.00	2.00		•		•	•		
Cornus stolonifera		•						•		2.00	2.00		•		•	•	•	
Corylus avellana	•								•	3.00	0.40	•	•		•	•	•	•
Corylus maxima	•								•	3.00	3.00		•		•	•	•	
Cotinus coggyria	•			•				•	•	2.50	2.50		•			•		
Cotoneaster horizontalis					•			•		0.50	1.50		•		•	•	•	•
Cotoneaster lacteus		•		•			•			4.00	2.00			•	•	•	•	•
Cotoneasier simonsii		•		•			•			3.50	2.00		•		•	•	•	•
Cotoneaster 'Skogholm'					•		•			0.50	1.00			•	•	•	•	•
Crataegus monogyna/oxycantha	•	•	•	•			•		•	3.00	0.30	•	•		•	•	•	•
Eleagnus X ebbingei	•	•		•			•	•		2.00	3.00			•	•	•	•	•
Eleagnus pungens		•		•			•			1.50	2.50			•	•	•	•	
Erica var					•					0.50	0.40			•		•		
Escallonia macrantha		•		•			•	•		2.00	2.50		•	•	•	•	•	
Euonymus alatus		•								2.00	2.50		•		•	•	•	•
Euonymus fortunei radicans					•		•	•		0.30	0.40			•	•	•	•	
Euonymus japonicus	•	•	•	•			•			2.50	1.00				•	•	•	•
Fagus sylvatica	•		•							2.50	0.30	•	•		•	•	•	•
Garrya ellipita		•		•			•			1.50	1.00			•	•	•		•
Genista hispanica		•			•		•			0.50	1.00			•	•	•	•	•
Hebe brachysiphon					•		•	•		1.00	0.50				•	•	•	•
Hebe cupressoides					•		•	•		0.50	0.50				•	•	•	
Hebe pinguifolia 'Pagei'					•		•	•		0.50	0.50				•	•	•	
Hedera canariensis					•	•					1.00				•	•		
Hedera colchia					•			•			0.50				•	•		•
Hedera helix 'Hibernica'					•			•			0.50				•	•	•	•
Hippophae rhamnoides	•	•		•			•	•		4.00	2.50		•		•	•		
Hydrangea 'Bluewave'							•			1.00	1.00	•	•		•	•		•
Hydrangea petiolaris						•				1.00	1.00			•	•	•		•
Hydrangea paniculata							•			1.00	3.00	•	•		•	•		•
Hydrangea 'Whitewave'							•			1.00	1.00	•	•		•	•		•
Hypericum calycinum					•		•	•		0.5	0.50			•	•	•	•	•
Hypericum 'Hidcote'					•		•	•		0.50	0.50			•	•	•	•	•

APPENDIX 4C

RECOMMENDED TREES AND SHRUBS (cont)

SHRUBS	Design Factors														Soil Suitability			
Botanical Name	Visual screen	Barrier Hedge	Formal hedge	Informal Hedge	Ground cover	Climbers	Coastal margin	Vandal Tolerant	Dominance	Height	Spacing	Maintenance	Deciduous	Evergreen	Moist soils	Clay soils	Chalk soils	Shade tolerant
Ilex aquifolium	•	•	•	•			•	•	•	3.00	0.60	•		•	•	•	•	•
Laurus nobilis	•		•				•	•	•	3.00	0.40	•		•	•	•	•	•
Lavatera olbia							•			1.00	0.50			•	•	•	•	
Lavendula spica 'Hidcote'					•		•			0.50	0.30			•	•	•		
Lonicera nitida		•	•				•	•		2.00	0.50	•		•	•	•	•	•
Lonicera pileata					•		•	•		0.50	0.50			•	•	•	•	•
Mahonia aquifolium		•		•				•		1.50	1.00			•	•	•	•	•
Mahonia 'Charity'		•		•				•		1.50	1.00			•	•	•	•	•
Parthenocissus quinquefolia						•					4.00		•		•	•	•	
Parthenocissus tricuspidata						•					4.00		•	•	•	•	•	
Polygonum baldschuanicum						•					5.00		•		•	•	•	
Potentilla arbuscula					•		•			1.00	1.00		•		•	•	•	
Potentilla fruticose in var		•					•			1.00	1.00	•	•		•	•	•	
Prunus cerasifera	•	•	•	•					•	2.50	0.30	•	•		•	•	•	
Prunus laurocerasus	•		•	•					•	3.50	0.50	•		•	•	•	•	•
Prunus lusitanica	•	•		•				•	•	3.00	1.00	•		•	•	•	•	•
Prunus spinosa	•	•		•			•	•		2.50	0.30	•	•		•	•	•	•
Pyracantha 'Oranage Glow'				•			•	•		2.50	0.50	•	•		•	•	•	
Pyracantha rogersiana		•		•			•	•		2.50	0.50	•	•		•	•	•	
Rhamnus cathartica	•								•	3.00	2.50		•		•		•	
Rhododendron ponticum	•		•	•					•	4.00	1.00	•		•		•		•
Rhus typhina									•	4.00	2.50		•		•	•	•	
Rosa canina							•	•		1.50	1.00		•		•	•	•	
Rosa pimpinellifolia							•			1.50	1.00		•		•	•	•	
Rosa rubrifolia							•	•		1.50	1.00		•		•	•	•	
Rosa rugosa							•			1.50	1.00		•		•	•	•	
Rosmarinus officinalis							•			1.50	1.00			•	•	•	•	
Rubus cockburnialis		•					•	•		2.00	1.00		•		•	•	•	
Rubus tricolor					•		•	•		0.50	1.00		•		•	•	•	
Salix caprea	•						•	•	•	4.00	2.00		•		•	•	•	•
Salix daphnoides	•						•	•	•	5.00	3.00		•		•	•	•	
Salix purpurea	•						•	•	•	4.00	2.00	•	•		•	•	•	
Salix viminalis	•						•	•	•	5.00	3.00		•		•	•	•	
Sambucus nigra							•	•	•	4.00	2.00		•		•	•	•	•
Sambucus racemosa							•	•		2.50	1.50		•		•	•	•	•
Senecio greyii					•		•			1.00	1.00			•	•	•	•	
Spirea X arguta		•		•			•	•		1.50	1.50		•		•	•	•	
Spirea X bumalda				•			•	•		0.50	0.50		•		•	•	•	
Symphoricarpus X chenaultii 'Hancock'					•			•		0.30	0.50		•		•	•	•	•
Viburnum davidii				•			•			0.50	1.00			•	•	•		
Viburnum lantana	•			•				•		2.00	1.00		•		•	•	•	
Viburnum opulus	•			•						2.00	1.00		•		•	•	•	•
Viburnum rhytidophyllum							•			3.50	2.00			•	•	•		
Viburnum tinus	•	•		•			•	•		2.00	1.00		•		•	•	•	•
Vinca major/minor					•		•	•		0.30	0.50			•	•	•	•	•
Villis cognetti						•					4.00		•		•	•	•	•

APPENDIX 4D
CARRIAGEWAY CONSTRUCTION DESIGN PRINCIPLES

D.2.1 Carriageway design is based on the principles in the Highways Agency's Design Manual for Roads and Bridges, Volume 7 Pavement Design and Maintenance.

Road Pavement: The total depth of construction of all layers supported by the sub-grade. It distributes the traffic loads over the sub-grade and protects it from the weather.

Sub-grade: The in-situ ground surface or top of fill which, together with the sub-base, forms the foundation for the pavement.

Formation: The surface of the sub-grade or capping layer prepared to receive the pavement.

Sub-base: A second part of the foundation of the road, which also serves as, a frost protective layer of material placed directly on the formation.

Base (Roadbase): The principal load carrying layer of material which distributes the applied traffic loading and which supports the surfacing in a flexible pavement

Surfacing: The top load-carrying and water-proofing layer(s) of a flexible pavement which enables a good ride quality to be achieved; it comprises:-

(a) **surface course** - the layer which carries the traffic, and gives appropriate levels of safety, e.g., resistance to skidding etc.

(b) **binder course** - the layer immediately beneath the surface course.

D.2.2 Design is based on two main factors:

1) the quality of the sub-grade, expressed in terms of the California Bearing Ratio (CBR) etc.

2) the total number of commercial vehicles (i.e. exceeding 1500 kg unladen weight) expected to run on it throughout its design life, expressed in million standard axles.

For convenience, acceptable construction thicknesses are set out in a table in Section 7.

D.2.3 To ascertain the subgrade conditions the Developer shall request the County Materials Laboratory to carry out a site investigation.

An assessment should also be made of the frost susceptibility of the sub-grade. No material within 350 mm of the road surface should be frost susceptible.

D.2.4 If a preliminary investigation is made during the design process, the assessment of the CBR value etc. is also to be confirmed at the time of excavation.

D.2.5 The water table is to be prevented from rising to within 600mm of the formation level by either using sub-soil drainage or raising the formation by embankment whenever practicable. If neither is practicable the appropriate construction thicknesses shown in brackets tables 4 and 5 must be used.

D.2.6 In summary, the design process is as follows:-

i. Establish the mechanical, physical & chemical properties (including hydraulic properties where appropriate) of the subgrade.

ii. Obtain the thicknesses of sub-base, base and surfacing appropriate to the type of road from relevant guidance, including Tables 3 and 4 in Section 7.

iii. Check that if the sub-grade is frost susceptible at least 350mm of pavement thickness is provided by increasing the sub-base thickness as necessary.

iv. Determine the appropriate PSV of the aggregate for the surface course or the performance capabilities of the paving bricks or blocks where appropriate.

APPENDIX 4E

List of Documents Referred to in the Guide to the Specification

Highways Agency Manual of Contract Documents for Highway Works Volume 1, Specification for Highway Works 1998 with any subsequent amendments

BRE Reports 365 & 436

Control of Pollution Act 1974

Chapter 8 of the Traffic Sign Manual Traffic Safety Measures for Roadworks, published May 1991.

The Construction (General Provisions) Regulations 1961

Guidance Note GS7 (Revised 1989) issued by the Health and Safety Executive

The New Roads and Street Works Act 1991

British Standard Specifications (BS)

European Specifications (EN)

Simplified Tables of External Loads on Buried Pipelines

Code of Practice for Laying Precast Concrete Block Pavements, published jointly by the Cement and Concrete Association, the County Surveyors Society and the Interlocking Paving Association (Interpave).

Recommended Positioning of Utilities Mains and Plant for New Works (1986)

Highways Agency Design Manual for Roads and Bridges, Volume 7 “Pavement Design and Maintenance”.

When publications referred to in this document are revised or replaced, the current editions or replacement documents shall apply unless otherwise agreed with the Engineer.

Developers’ attention is drawn to all current legislation relative to construction sites. Nothing stated in this document shall be taken to relieve Developers or their agents of responsibility in this respect

HIGHWAY ADOPTION PROCEDURES

INTRODUCTION

This Part of the Design Guide describes how a developer can advance his proposals in order to achieve an adoptable road. (An adoptable road is one which by its function, condition, layout and specification is suitable for the Council to adopt and maintain at public expense.) It sets out the purpose and status of this Guide, the planning framework within which proposals are considered, what roads are eligible for adoption, and how such adoption is achieved. All developers are strongly advised to complete a Section 38 Agreement for the adoption of estate roads before work commences on them.

PURPOSE AND STATUS OF THE GUIDE

This Design Guide is a policy document approved by Torbay Council. It replaces the previous documents entitled “Residential Estates Design Guide - Highways and Footpaths” and “Residential Estates - Specification” published in April, 1989. It details the hierarchy, layout and specification for highways that would be eligible in principle for adoption and sets out the procedures that should be followed to achieve a highway adoption Agreement.

Torbay Council is the Local Highway Authority for all the publicly maintained highways in Torbay and, as such, is responsible for the adoption of these new highways in Torbay.

A highway consists of all vehicular and pedestrian thoroughfares that are available for public use; it may thus include roads, footpaths, footways, cycleways, alleyways, courtyards, and their related verges, visibility splays and service margins.

The purpose of the document is to set out the principles and philosophies to be considered in the design of estate highway layouts and to provide advice on appropriate dimensions. It sets out the Council’s requirement for compliance with legislation regarding Health and Safety Environment Protection and Mobility impaired users. Developers and estate designers are encouraged to interpret this advice so as to achieve a pleasant environment and to provide safe and adequate pedestrian, vehicle and cycle access to the residential or commercial premises.

The principal pedestrian, cycle and vehicular access routes to residential and commercial premises should be eligible for adoption to safeguard their future maintenance, drainage and lighting. The current legislation as contained in the Highways Act 1980 enables new streets to be adopted by an Agreement between the developer and the Local Highway Authority; this procedure means that the Advance Payments Code does not apply. (How this code is applied is covered in Section 1.7.)

This Guide takes into account the advice from circulars and technical memoranda provided and aims to reflect the Government’s planning policy PP53 and its companion guides Manual for Streets 1 and 2.

Throughout the guide various links will appear to direct the user to sites containing relevant information and further reading these are shown in blue.

THE PLANNING FRAMEWORK

Planning applications for new estate development are determined by Torbay Council's Planning Authority.

Developers and their agents are encouraged to meet the representatives of the Planning Authority and the Highway Authority to discuss their proposed estate layout in advance of the submission of a planning application.

Determination by the Planning Authority of any planning application is governed by the Development Plans, namely the Torbay Structure Plan and the relevant Local plan. Also, there may well be a Development Brief, which sets out how the development is to be integrated into the surrounding area.

The Structure Plan is prepared by Torbay Council and is a written statement of broad policy for up to 15 years ahead. It sets out policies and proposals for major land uses that include residential and industrial land, and for highways and their relationship to development.

The Structure Plan also defines the Road Network, which consists of a Major and Minor Road Network. The Major Road Network comprises the National Routes and Primary and Secondary County Routes, while the Minor Road Network comprises Local Distributor, Collector and all other roads. The design of the junctions of residential roads with existing roads is dependent on a number of factors, including their classification in the Road Network, traffic flows and existing road width.

The Local Planning Authority is responsible for preparing Local Plans for this area. The Local Plan makes detailed proposals for the future pattern of development by interpreting the general proposals of the Structure Plan. Structure Plans, are statutory documents and are of prime importance in the determination of any planning application or appeal.

HIGHWAYS IN RESIDENTIAL AND COMMERCIAL ESTATES - DESIGN GUIDE

Developers are urged to establish at an early stage from these Plans and other local policies whether there are any constraints on access to the site or specific requirements for roads, footpaths and cycleways. For instance, developments in Conservation Areas will need special consideration in order not to prejudice their singular character.

It is recommended that a Design Brief is prepared for residential estates larger than 50 dwellings and for commercial developments of more than 1.2 hectares (3 acres). This Brief may be prepared by the Planning

Authority, in consultation with the Highway Authority, and where appropriate with the developer. The preparation of the Design Brief could include these factors:-

- site characteristics and features
- connections with existing highways
- pedestrian and cyclist desire lines
- relationship to off site facilities
- penetration by public transport
- existing private street APC liability
- any proposed highway schemes
- any existing new street orders, building lines
- access visibility
- access and site gradients - i.e. whether a road alignment is feasible
- surface water disposal
- off site highway works
- highway stopping up or diversion orders
- general highway characteristics in the locality

(speed restriction zones etc).

Much of Torbay's landscape is of exceptional quality; It makes the Bay attractive to both visitors and residents; The development should contribute to the quality of the environment rather than detract from it. The design of new housing and commercial estates in such environmentally sensitive areas should respect and complement the character and scale of the landscape or townscape that provides the setting for the site.

The layout of the street and the use of materials in constructing it are an important and integral element of design, and are just as significant as choice of materials in the buildings or their elevation in detail in contributing to the sense of local distinctiveness.

As soon as the Planning Authority has granted full planning permission and approved all the reserved matters regarding an estate road layout, it is recommended that the developer makes an application to the Authority for a Section 38 Agreement so that the estate roads and footpaths will be adopted. (The details of the prospective highways that are agreed with the Local Planning Authority and Local Highway Authority should be consistent with those necessary for the Section 38 Agreement. Therefore, Section 38 Agreement discussions should commence at this stage). It should be noted that there are several steps after the granting of any necessary planning permission. Sustainable development attached here.

HIGHWAYS ELIGIBLE FOR ADOPTION

Engineer refers to the Service Manager for Streetscene and Place or his representative.

Carriageways are parts of the highway which are intended for use by vehicles.

Footways are parts of the estate highways which are intended for use by pedestrians and which generally are parallel with the carriageway and only separated by a kerb or verge.

Footpaths are pedestrian routes which are located away from carriageways.

Verges are grassed or ground cover planted parts of the highway that are provided for highway visibility, vehicle overhang and statutory undertakers' mains and apparatus routes.

Cycleways are routes particularly identified for cycles and may be part of a carriageway, adjacent to a footway or footpath, or otherwise separate.

The roads and footways that are eligible for adoption are those that

(i) serve more than a single commercial property, or more than five individual dwellings
(ii) provide a principal means of access for pedestrians, vehicles and cycles
(iii) are laid out in accordance with the principles of this Design Guide, and
(iv) conform to the current construction specification of the Council.

At the detailed planning approval stage those areas that could be adopted should be identified and agreed with the Engineer.

The Highway Authority will expect all visibility areas to be offered for adoption. Other verges and planted areas are eligible for adoption if:

(a) the verges are adjacent to Local Distributor Roads
(b) the verges are adjacent to Residential Access Roads or Ways and which are provided in the place of footways as a vehicle overhang margin or to accommodate the statutory undertakers' mains and apparatus and other services
(c) landscaped areas are within the highway envelope, e.g. at traffic calming features
(d) landscaped areas are slightly in excess of what is required for visibility etc., in order to achieve a more satisfactory layout.

Small areas of privately maintained ground sandwiched between publicly maintained areas are unacceptable.

An agreed commuted sum for maintenance may be required for any soft landscaping within the adopted highway, following which the County Council will make arrangements for the long-term maintenance of any landscaped areas.

Footpaths and cycleways will be adopted if they are the primary means of access to a group of five or more dwellings or a number of commercial units or if they provide desirable and/or essential links within the estates.

Normally, car parking areas outside the highway envelope, specifically allocated to individual dwellings or to which access is gained separately from the carriageway (e.g. garage courts), will not be adopted. Furthermore, communal areas of parking, for instance in Housing Courts, are to be outside the highway envelope and will not be adopted. Structures - i.e. embankments and retaining walls - that support the highway, whether it be carriageway, footpath, footway or verge, may be adopted by the Council.

Structures that support land above the highway will not be adopted; however, calculations and details of these will normally be required to ensure that there is no possibility of an adverse effect on the highway.

They will also be subject to inspection, and therefore the estimate of the construction cost of the wall will be included in the calculation of the inspection fee. To insure against the developer being in default of the Agreement and the Highway Authority having to complete the works including the construction of retaining walls above or below the carriageway, the estimated cost of these retaining walls will be included in the Bond calculated by the Engineer.

Lighting of streets and footpaths will be adopted.

Street names and numbering are the responsibility of the Council and there is a charge for each dwelling and each new road. Details should be agreed with the Council, and the developer should provide street nameplates in accordance with that Authority's specification. Any scheme for the provision of new highways outside a residential or commercial estate, or the alteration of existing highways, is to be subject to a Highway Safety Audit, both during the design process and when the works are completed. The developer is responsible for any alterations as a result.

The Highway Authority will normally be responsible only for those drains carrying surface water from the highway. If roof water or water from any other source is introduced, the drain will then become a surface water sewer to be adopted and maintained by South West Water. In such circumstances the developer must enter into a separate agreement with South West Water for its adoption. Only the gullies and their connections will be adopted by the Highway Authority where a surface water sewer carries anything other than highway water. (The Council will complete a Section 38 Agreement only when a Section 104 of the Water Industry Act 1991 or similar agreement has already been made with the Water Authority). Furthermore, outfalls require the consent of the Environment Agency and South West Water, for which a fee may be payable.

Before the new highway is adopted by the Council all service pipes or cables etc. must be approved and adopted by the appropriate statutory authority. Developers may be required to provide written evidence of acceptance by these authorities before the works can be approved before the commencement of the maintenance period.

STATUTORY PROVISION FOR THE ADOPTION OF STREETS

The Highways Act 1980 requires that a Highway Authority should protect the owners of residential and commercial premises from the ultimate liability of private street works charges; the two provisions within the Act that are relevant are:

(a) the Advance Payments Code under Sections 219 - 225
(b) a Highway Adoption Agreement under Section 38.

The Advance Payments Code (APC) of the Highways Act 1980 has been adopted by the Council as Highway Authority. Consequently, once building regulation approval is

obtained and building works commence, a developer is obliged to deposit or secure to the satisfaction of the County Council a sum of money representing the estimated future liability for street works charges within the proposed development.

At the discretion of Torbay Council it may utilize the above provisions.

A schedule of exemptions is detailed in Section 219 of the Act; one of the exemptions is the completion of a Section 38 Agreement for the ultimate adoption of the street.

A Section 38 Agreement is a voluntary Agreement between the Highway Authority and the owner of the street for its ultimate adoption, and is the normal method of ensuring that works are carried out to an adoptable standard. The Council has adopted the Model Agreement produced by the Association of Metropolitan Authorities in 1988 on behalf of the Local Authority Associations and the House Builders Federation.

ALL DEVELOPERS ARE STRONGLY ADVISED TO COMPLETE A SECTION 38 AGREEMENT FOR THE ADOPTION OF NEW STREETS BEFORE ANY WORK COMMENCES ON THEM.

SECTION 38 AGREEMENTS (DETAILED REQUIREMENTS)

A Bond to cover the cost of the works necessary to achieve an adopted highway and the associated administration costs for each Section 38 Agreement, as estimated by the Engineer, must be provided by a member of the British Insurance Association or one of the Joint Stock Clearing Banks. The purpose of the Bond is to ensure that the Highway Authority can complete the highway works if the developer defaults for any reason.

An Inspection Fee is also payable, currently 6% of the Engineer's estimate of the cost of the works. (See also Appendix 3D, paragraph 2.3).

Developers proposing to enter into a Section 38 Agreement should make early contact with the appropriate area office of the Highway Authority for the following reasons:

(a) early discussion with the Highway Authority can avoid unnecessary and abortive design work
(b) if the developer has begun work on site and a Section 38 Agreement is still being pursued but has not been completed, then the APC deposit must be paid in the interim period; (APC deposits will be repaid to developers upon the signing of a Section 38 Agreement); the Highway Authority will not discuss Section 38 matters unless and until such APC sums have been deposited
(c) early completion of the Section 38 Agreement will avoid difficulty with the eventual adoption of the works due to absence of inspection.

In advance of the initial discussion with the Highway Authority, the developer may well wish to consider the Design Brief for the development, and those factors outlined in section 1.3 for smaller sites and those not having a design brief.

There are some useful Appendices at the end of this Part of the Design Guide, as follows:-

Appendix 3C: A check list that may prove helpful in ensuring a layout includes sufficient detail
Appendix 3D: Information on documentation required for a Section 38 Agreement
Appendix 3E: Information on procedures for inspection and adoption of the works
Commuted sums for the future maintenance of landscaping may be required by the Highway Authority, as outlined in paragraph 1.4.3.

CONSTRUCTION OF NEW STREETS WITHOUT A SECTION 38 AGREEMENT

If a developer constructs a private street, that is, a street not maintainable at public expense, the Advance Payments Code contained in the Highways Act 1980 applies (clauses 219 to 225). This Code protects future frontagers of any street constructed by a developer that is not maintainable at public expense. Firstly, it requires that before new buildings are erected in private streets (i.e. a road or street not maintainable at public expense) the sum likely to be needed for street works shall be paid to the local authority, or security given for it.

Secondly, it provides that when development has reached a certain stage frontagers are able to require the carrying out of street works and the adoption of the street.

Therefore, where a development involves the construction of new estate roads it is common for developers to enter into a Section 38 Agreement with the Highway Authority under which the developer constructs the street to the satisfaction of the authority. Where such an agreement is entered into the Advance Payments Code has no application.

However, if the developer is unable or unwilling to enter into a Section 38 Agreement, the provisions of the Advance Payments Code will be fully applied, thus normally requiring the payment of a deposit to the Council representing the liability estimated by the Engineer for street works charges on each property in the development.

As a consequence, the new roads will not be inspected by the Engineer during the construction period; if subsequently the developer decides that he wishes the new roads to be adopted, he must then enter into a Section 38 Agreement, with agreed drawings, and he will be required to i) prove the quality of the works to the satisfaction of the Engineer; (in order to do this, it will normally be necessary to complete a series of inspections, boreholes, drainage tests and camera survey as required by the Engineer, at the developer's cost) ii) the developer will then be required to undertake any necessary remedial or reconstruction works.

Only after this can the maintenance period commence (the minimum length of which would be twelve months).

Even under the above circumstances where the new street or road is not offered for adoption, it will still be necessary for a developer to agree with the Engineer the

works required to the existing highway in order to complete the connection to the existing road network and mains services.

The developer is not permitted to proceed with any works within, or that affect the highway, until these verge crossings and road opening procedures have been completed, together with any necessary notices to the Statutory Undertakers.

HIGHWAY ALTERATION, STOPPING UP AND DIVERSION AGREEMENTS

Off-site highway works may be necessary to achieve a satisfactory development e.g. alterations to an existing road, or the resurfacing of adjacent roads or footpaths. Contributions may be required for off-site

works where damage may be caused to the existing highway network as a result of construction traffic. In such cases a separate legal agreement with Torbay Council as Local Highway Authority is required before any of these works commence, as it is an offence to carry out works in a public highway without legal authority.

If the development involves the diversion or stopping up of an existing public highway, footpath, bridleway or County Road, then an Order under the Town and Country Planning Act 1990 has to be obtained from the Department of Transport before the part of the development that is dependent upon the diversion or stopping up of the existing highway is commenced.

The Agreements for the highway works will normally provide consent for opening of the existing highways or crossings within a verge or footway. Reinstatements are to be carried out in accordance with the procedures outlined in the New Roads and Street Works Act 1991.

Private sewers or drains in the proposed or existing highway may well require a licence.

On certain identified traffic sensitive routes, (normally the principal traffic routes), there are embargo periods when works that affect the highway will not be permitted. Details of the these periods and the affected routes can be obtained from the Torquay Town Hall or Torbay Councils Website

SUSTAINABLE DEVELOPMENT

The latest Government guidance places sustainability in development, transport and drainage at the core of design practice. Provision for the car shall take second place compared to peoples‟ and communities‟ needs for a pleasant and safe living environment. The Council through its joint Local Transport Plan with Devon County Council 2011 to 2026 is committed to developing an integrated, sustainable transport system for Torbay, as a means to reduce traffic congestion, pollution and promote healthier forms of travel.

An Integrated Passenger Transport Strategy has been specifically developed in Torbay. This strategy aims to meet all journey needs, including work, education, health and leisure within Torbay.

Public Transport should adequately support all developments and where none exists, contributions may be sought from developers for its provision.

Permeability is the key to successful sustainable transport and essentially means the ease with which pedestrians and cyclists can move through the built environment and take the shortest and most pleasant routes to their destination.

It must be ensured that adjacent roads have similar levels of access for all users with safe footways and cycleways, crossing points, low traffic speeds and easily reached quality bus stops allowing permeability for non-motorised traffic through the development. In designing cycle facilities initial consideration should be given to making links with the strategic network of routes defined by the Council. It is considered appropriate for cyclists to share a network of streets where the 85%ile speed of vehicles does not exceed 20mph and/or where there will be less than 100 dwelling units.

Most development proposals will trigger the need for extra facilities for the needs of the development (e.g. public transport links, pedestrian crossings etc) or to mitigate the impact of development upon existing community facilities. These facilities, either developer funded and/or provided shall be secured by agreement under Section 106 of the Town and Country Planning Act 1990.

Torbay Council will pursue Sustainable Drainage Systems (SUDS) as required and in compliance with the Floods and Water Act.

Meeting: Transport Working Party **Date: 24th October 2013**

Wards Affected: Shiphay with the Willows

Report Title: Parking Restrictions – Crosspark Avenue, Torquay

Executive Lead Contact Details: Sue Cheriton, Executive Head – Residents & Visitor Services

Supporting Officer Contact Details: Richard Brown - Service Manager - Culture, Leisure and Transport

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1. **Purpose**

1.1 This report is in response to requests from the local bus company for additional parking restrictions in Crosspark Avenue to aid access for the local bus route and for members to consider the possible advertising of changes to the current Traffic Regulation Orders (TRO).

2. **Proposed Decision**

2.1 It is recommended that members approve the proposals outlined in **Appendix 2** to advertise and implement, should no objections be forthcoming.

3. **Action Needed**

3.1 The proposals outlined in **Appendix 2** to be advertised and implemented should no objections be forthcoming. Any objections will be referred to a future meeting of the Transport Working Party.

4. **Summary**

4.1 Following completion of the Controlled Parking Zone, in Shiphay, Torquay, Crosspark Avenue was not included within the CPZ and consequently drivers who originally parked within the CPZ are now parking outside the zone causing access problems for the local bus route.

4.2 The current restrictions in Crosspark Avenue do not reflect the requirements of the bus route and the bus has been withdrawn from this road on a number of occasions due to vehicles which are legally parked blocking access to the bus service. Drivers have taken to parking on one or both sides of the road, obstructing the safe passage of the bus service which also has to negotiate the trees which line this avenue.

4.3 The bus operator has submitted a request for an increase in parking restrictions to assist the bus service and also maintain punctuality on this route (Stagecoach Bus Route 32 and Local Link Bus Route SB6 operate along this road).

Supporting Information

5. **Position**

5.1 Following the completion of the CPZ in Shiphay, Highways Officers implemented some waiting restriction improvements around junctions in an attempt to alleviate some of the problems the bus drivers were having in Crosspark Avenue. The original budget for the CPZ had been fully committed therefore any further physical works within this area were not possible under the scheme.

5.2 Certain sections of carriageway along Crosspark Avenue have no parking restrictions and due to the narrow nature of the carriageway and the fact that this is a tree lined avenue bus drivers are finding it extremely difficult to gain access to this road at all times and on occasions have had to divert along Higher Cadewell Lane and miss out this road completely. Sometimes vehicles are parking on both sides of the road. This does not allow for the buses to access this road in addition to having to negotiate past the large trees.

5.3 A number of local residents rely on the Bus Services in order to access vital areas including Torquay Town Centre and Torbay Hospital. The bus service is only able to operate in one direction along Crosspark Avenue due to the narrowness of the road and grounding at junctions therefore is a lifeline to residents within this area.

5.4 It is unfortunate the roads are narrow in places and the density in parking has increased. The double decker buses cannot be replaced with single decker buses because the smaller vehicles would leave customers behind further along the route where the demand is high.

5.5 The proposal, as detailed in **Appendix 2**, is as follows:

To extend the existing no waiting restrictions on the north side of Crosspark Avenue for the whole length of the road, and to extend the existing no waiting at any time between the junctions of Collaton Road and Wallace Avenue on the south side.

This will allow for easier and safer movement of large vehicles along this road without the risk of congestion or obstruction of the bus route.

5 Possibilities and Options

The Working Party is requested to consider whether they wish to support amendments to traffic regulation orders in the area as detailed below:

6.1 Advertise and implement, should no objections be forthcoming, the changes to the Traffic Regulation Orders as detailed in **Appendix 2**. Any objections will be referred to a future meeting of the Transport Working Party.

6.2 Members may wish to recommend that no changes are considered at the present time.

7 Preferred Solution/Option

Members are recommended that the option in 6.1 above would be the most appropriate option. However, members should be aware that advertising amendments to the existing traffic regulation orders may attract objections, which will have to be presented to a future meeting of the Transport Working Party.

8 Consultation

8.1 A consultation letter was sent to 70 properties within the vicinity of Crosspark Avenue of which the Council received two responses as detailed in **Appendix 1.**

9 Risks

9.1 There is a risk that advertising amendments to the existing traffic regulation orders may attract objections, which will have to be presented to a future meeting of the Transport Working Party.

Appendices:

Appendix 1 – Copy of the comments received

Appendix 2 – Copy of revised restrictions to be advertised if approved

Additional Information:

None

Documents available in Members' Rooms:

None

Background Papers:

None

Crosspark Informal Consultation with Residents

File Ref	Resident	Approve Parking Restrictions	Comments
1	Yes	No	I object strongly to the proposal of adding even further parking restrictions to an area that already suffers from an obvious abuse of Double Yellow Lines. This area is residential and as you can see from the plan that you supplied very few of the residents have the luxury of their own parking spaces. If you combine the lack of parking that exists at present , the additional strain provided by the school run and the fact that employees of the hospital use every parking space they can find, more Yellow Lines can only add to the farce. It is already a struggle for residents to find a parking space due to the prevalence of commercial vehicles that have sprung up over the last few years.I do not understand why the bus can not be routed past the Co-op as it is when it travels in the opposite direction or alternatively use a smaller bus (Bayline). As a resident I feel that a public road should be for the use of the public , not a personal right of way for a private company.This is impingeing on our rights as residents.
2	Yes	Yes	With regard to your recent letter re the proposed parking restrictions on Crosspark Avenue, I am in favour of the said proposal, providing it can be policed and is it possible to ensure that no one parks on the grass verges or along the Walks, which give us access from our front doors to the pavements on Crosspark avenue. For those of us who do not drive the bus service is vital, and there are a lot of elderly people whose only means of transport is the bus, so we would hat to lose it, as it only comes from the hospital to crosspark and then into town, not from the town to crosspark and then the hospital. So if it was lost through careless parking, we would have to walk to Exe Hill, and not everyone is able to do this.


1:1000 scale - proposed parking restrictions - Crosspark Avenue - Torquay
N
W
E
S
Cottages
Crosspark
Birch Walk
Larch Walk
Fir Walk
HIGHER CADEWELL LANE
CROSSPARK AVENUE
TCB
LB
El Sub Sta
Maple Walk
WALLACE AVENUE
KEY
Existing no waiting at any time restrictions
Proposed extension of no waiting at any time restrictions
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