Design Summary Document Appendix E WSCC Questions 290721 – final

Overarching key comments applicable to whole scheme.

Comment provided by WSCC 29.07.21 following issue of Design Commentry Report by PF 11.06.21 - Final

Drawing change
(Highlighted yellow)

WSCC COMMENTS		DEVELOPER RESPONSE
Q1	**Speed Limit/Design Speed.** I note that you still refer to the discussions that took place at the A29 Delivery Group meetings about the principle of a 30mph for the road. There is obviously history to this and discussions about the speed limit on the adjacent WSCC section clearly have influenced your 30mph speed limit selection for the Southern Consortium's section of the new A29. If it is deemed appropriate to have the whole road with a speed limit of 30mph then the road should be designed in a way that supports compliance with the 30mph. Basically, the road will need to demonstrate that any design speed chosen is self-enforcing and this, of course, will be influenced by design speed related parameters but also by the road width, alignment and layout constraints e.g. – number and type of junctions, pedestrian crossings, frontage activity, accesses, bus stops and level of frontage development and associated activity. Urban roads TA 79/99 provides advice about this. Turning to what you have submitted and, in particular, to DMRB, with regard to your entry under 'Design Speed' in the table included in the document, you quote CD109 being used for the A29 itself and then follow this with supporting text under 'Stopping Sight Distance' and 'Horizontal Geometry'. This states what distances, horizontal and vertical alignments that are achieved respectively. In your text you are classing the road as an urban road with a 30MPH speed limit so have chosen a design speed of 60KPH. And what you have provided so far in the design statement appears to demonstrate compliance with the parameters for 60KPH design. However, what is not provided is the justification for choice of urban road – i.e. all-purpose 3 if seeking 30MPH. It is noted that there are a number of features i.e. junctions, at-grade crossings and on-carriageway bus stops etc. but given that there is no frontage development or frontage access shown throughout the length of the route there may be issues with compliance with the County Council's Speed Limit policy and, in turn, with users complying with the limit. As such, you will need to justify in your TA how you consider the scheme does meet the criteria set-out in County's policy. Depending on the outcome – particularly if there is a question about compliance with the policy - it may be that additional measures on the road might need to be considered. And the road would also have to be looked at in conjunction with how the various land parcels interact with it (e.g. frontage development and access thereto etc.).	The A29 is planned to be a 30mph speed limit. Many design elements including, crossings, bus stops and left-in/left out restrictions at priority junctions provide features which will manage speeds along the road network. TA 79/99 has been withdrawn with what appears to be no replacement. However awe are looking at a UAP3 Road Type. For a proposed 'road zone', we envisage a mix of dwellings and landscape elements. This will enable dwellings to sit closer to the A29 road corridor than were previously proposed with this zone being a 5m landscape corridor. Broad design principles for the 'road zone' have been set in the Design Principles Document including principles that stipulate that dwellings along this interface should have their primary elevation facing the A29 and corner turning dwellings would be acceptable in some instances. As highlighted above bus stops and crossings in locations that encourage residents to use the A29 active corridor will help in providing increased activity
Q2	**Street Lighting** There are no details of any departures from standard, so these cannot be taken into account at this stage and will need re-visiting.	Lighting design will be part of the Planning Submission. It is noted that the Phase 1 element of the A29 being delivered by WSCC is not being continuously lit. In line with WSCC lighting design guidance we proposed to continually light the proposed road.
Q3	**Hanbury Link** This might need additional features to comply with 20MPH limit.	Additional crossing points to be added Signage to be proposed to signify 20mph zone.
Q4	**Drainage** You reference our drainage guidance notice which is good as we will refer back to that for compliance. The drainage team will, of course, want to see evidence of groundwater monitoring at the appropriate stage. You have provided a wide verge area to accommodate the swale but there will obviously be detail to look at later. However, the proposal of gullies into swales and attenuation is acceptable in principle subject to compliance with WSCC standard details. Separate ordinary water consent will be required for discharge in watercourse. Note – some of the section drawings that we have seen from you still show no kerbs but the design statement states standard kerb with 125mm upstand. This latter point will need to be clarified as part of any formal planning application submission.	We will update drawings (showing kerbs to be alongside carriageway and provide supportive information as part of Planning Submission. Refer to Design Principals Document as part of the Planning Submission
Q5	**Crossings** You still propose to put in one signal-controlled crossing across part of the northern-end of the road (just south of Barnham Road). However, elsewhere you are still proposing a high number of at-grade crossings (all 'zebras' as far as I can see). My understanding from reading the County guidance is that we would not accept these on roads such as the new A29 but might be able to on some lesser or side roads in certain circumstances. As you will know, LTN 1/20 does provide further guidance on such matters specifically to cater for peds and cyclists (see further comments below). I am also aware that you have included in Appendix 'E' your 'Pedestrian Crossing Assessment' using DMRB. However, looking at the County guidance, type of road and type of development to be accessed adjacent and as I indicated in previous correspondence to you, it is clear that zebras would not be suitable on the new A29 and would not fit-in with the role and character of the road. You will also recall that within the Masterplan and associated IDP and associated infrastructure requirement documents it states that crossings of the road would be grade-separated. It is noted that some grade-separation is proposed under the railway bridge but I cannot recall seeing anything else at this stage. Furthermore, nothing is shown provided for other non-motorised users to cross this road (other than peds and cyclists). If you decide to continue to pursue at-grade crossings on the A29, then in my view a number of these should be signal-controlled (particularly those on key desire lines but not exclusively so), that they be suitable for the likely end-user users and be appropriately located. Saying this, it might be that some uncontrolled ones with refuges could possibly be considered (e.g. on lesser routes with very low flows), however their appropriateness would need to be justified.	Taking note of WSCC comments over the use of zebra crossings where we have stand-alone crossings along the A29 we will change these for toucan crossings. The only grade separated crossings considered previously was the green link, now proposed as a signal-controlled crossing. Pedestrian/cycle links are proposed under the Network Rail bridge and shown on the bridge drawings. Crossings around proposed roundabouts are maintained as zebra crossings in line with CD 119 Geometric design of roundabouts (Table 8.1.3 Suggested pedestrian crossing facilities on roundabouts where the approach roads have a speed limit of 40 mph or less)
Q6	**Cycle Infrastructure Design** You have previously stated LTN 1/20 compatibility. The proposed 3m facility may be too narrow for a segregated route. You will need to satisfy us that whatever is proposed is LTN 1/20-compliant. With regard to the segregation, this should not be achieved by simple white lining as this is not recommended in the LTN (different levels, contrasting materials and separating strips are recommended in the LTN). The other question is what is proposed at junctions. I cannot see how cyclists can have priority crossing the main A29 given its purpose – that is why I have raised the need for signal-controlled crossings to be considered at key locations where users are likely to want to cross. With regard to the side roads, if users are to have priority then matters such as location and types of crossings should be carefully considered (and that they be located not too close to exit lanes off roundabouts but not too far away as to be significantly 'off' desire lines). Furthermore, the 10m radii proposed to residential junctions are unlikely to encourage lower speeds upon entry to the side road which should be looked at again. In accordance with the LTN, raised tables should be provided at all crossing points across side roads. With regard to alignment of the cycle routes, it is observed that the routes tend to 'hug' the alignment of the proposed roundabouts. You should look to achieve smoother transitions of routes to-and from roundabouts and crossing points as-per the advice in the LTN. Ongoing routes – There is a planning requirement for you to provide ongoing links to/from Bognor Regis and the National Park. At present, these are not shown. With regard to route continuity at the Barnham Road roundabout - the latter forming part of the County scheme - we need to know how the segregated routes will feed into the routes/infrastructure provided at this tie-in.	We confirm that on the main A29 the pedestrian/Cycle Route is Segregated and 4m wide and shown as different couloured asphalt. A deliniation strip is also proposed. A shared 3m route is shown on E/W Link, Barnham Station Link and Hanbury Link only. Side road crossings are planned to be uncontrolled. 6m Radii will be introduced on side roads to reduce potential traffic speeds. Raised tables can be considered across side roads to complement the cycle infrastructure but this will need to be aligned with the proposed parcel design. Where possible we have considered smooth alignments for cycling, however on the approach to crossings speeds need to be consiudered and therefore the arrangements along the main route will encourage more consideration on approach The pedestrian/cycle route to Bognor and the National Park – we have previously discussed this route and that this route would be along the A29 active corridor with an option to use the proposed off-road segregated route along the rife. This will be shown in the Framework Masterplan (via the underpass), and would join to the A29 active corridor. See above.
Q7	**Left-in/Left-out Features** The scheme still appears to rely on central reservations throughout the whole length to try to prevent right hand turns into and out of junctions (basically 'forcing' drivers to turn at the first available roundabout they come across). If you are promoting an urban road with 30MPH speed limit why are some roads not permitting to allow for right hand turns – i.e. those with low traffic flows perhaps? Otherwise, other junction arrangements should be considered, such as further roundabouts. The central islands might also encourage higher traffic speeds on the main route.	It is considered that the left-in left-out arrangement for priority junctions (and the introduction of the central island) promote speed reduction due to the perception that the road is narrowing. It is considered that allowing all movement (right turns) and the volume of traffic on the A29 will require the priority junctions to be ghost island type, widening the A29 and in turn encouraging speed.

Feature	ROAD TYPE				
	Urban Motorway	Urban All-purpose			
	UM	UAP1	UAP2	UAP3	UAP4
General Description	Through route with grade separated junctions, hardshoulders or hardstrips, and motorway restrictions.	High standard single/dual carriageway road carrying predominantly through traffic with limited access.	Good standard single/dual carriageway road with frontage access and more than two side roads per km.	Variable standard road carrying mixed traffic with frontage access, side roads, bus stops and at-grade pedestrian crossings.	Busy high street carrying predominantly local traffic with frontage activity including loading and unloading.
Speed Limit	60mph or less	40 to 60 mph for dual, & generally 40mph for single carriageway	Generally 40 mph	30 mph to 40 mph	30mph
Side Roads	None	0 to 2 per km	more than 2 per km	more than 2 per km	more than 2 per km
Access to roadside development	None. Grade separated for major only.	limited access	access to residential properties	frontage access	unlimited access to houses, shops & businesses
Parking and loading	none	restricted	restricted	unrestricted	unrestricted
Pedestrian crossings	grade separated	mostly grade separated	some at-grade	some at-grade	frequent at-grade
Bus stops	none	in lay-bys	at kerbside	at kerbside	at kerbside

Table 1 Types of Urban roads and the features that distinguish them

CD 119 Rev date 0 7 8. Designing for pedestrians, cyclists and eques...

8. Designing for pedestrians, cyclists and equestrians at roundabouts

General

8.1 *Where there is demand in the future to encourage pedestrians, cyclists, and / or equestrians at roundabout, these users shall be provided for.*

NOTE 1 Demand for pedestrians, cyclists and equestrians can be catered for off network where it is not suitable to provide facilities on or adjacent to the highway road.

NOTE 2 Requirements and advice on the provision of cycle traffic facilities are given in CD 195 (Part 2).

NOTE 3 Requirements and advice on the provision for pedestrians, equestrians and horse cart facilities are given in CD 143 (Part 2).

NOTE 4 Requirements and advice on the provision for the design of pedestrian and cycling facilities at roundabouts are provided in the National Application Annexes.

NOTE 5 Additional requirements for visibility at crossings are provided in Section 4, 'Pedestrian crossing visibility'.

8.1.1 Where the speed limit within 130 metres of the give way line is greater than 40 mph on any approach, and the traffic flow on any approach is greater than 1500 two way AADT, any pedestrian crossing facilities provided should be either signal-controlled or grade separated.

8.1.2 Where the speed limit within 130 metres of the give way line on any approach is greater than 40 mph and the traffic flow on each of the approaches is less than 1500 two way AADT, crossing facilities may be uncontrolled crossings.

8.1.3 Where the speed limit within 130 metres of the give way line on all approaches is less than or equal to 40 mph, Table 8.1.3 below provides suggestions on what crossing facilities may be provided for pedestrians.

Table 8.1.3 Suggested pedestrian crossing facilities on roundabouts where the approach roads have a speed limit of 40 mph or less

Approach type of road on any approach	Highest two way AADT on any approach	Suggested pedestrian crossing provision
Single	< 8000	Uncontrolled
	8000 - 12000	Uncontrolled / Zebra
	> 12000	Zebra
Dual	< 10000	Uncontrolled / Zebra
	10000 - 15000	Zebra / Signal-controlled
	> 20000	Signal-controlled

NOTE 6 In LTN 1/20, Zebra / Ped. Light crossings are not recommended to be installed to roads with an 85th percentile speed of 30 mph or above.

8.1.4 To keep crossings short, stand alone pedestrian crossing facilities should be outside the flared section, as normal and remote from balconies without the provision of 50 Hz or 60Hz, as shown in Figure 8.1.4.

Extract from CD119 Geometric Design of Roundabout