APPENDIX 3
Chichester DC formal response to A27 Chichester Bypass Improvement consultation

Background

This report sets out Chichester DC's formal response to the Highways England consultation on proposed options for the A27 Chichester Bypass Improvement Scheme.

Included in this response are:

- General comments on the assessment work so far undertaken, including comments on the environmental impacts of options proposed for consultation;
- Comments on the specific junction proposals and other improvements included in the consultation options;
- The Council's overall views on each of the consultation options 1, 1A, 2, 3 and 3A;
- A separate Annex setting out further work that the Council considers should be undertaken as part of the detailed planning of the preferred scheme, including specific design requirements and recommendations in relation to the junction proposals and other improvements included in the options consultation.

These comments are based on a review of the information provided in the Consultation Brochure itself and other published documents, including the Economic Assessment Report (EAR), Environment Study Reports (ESR), and Traffic Forecasting Report (TFR). CDC officers have reviewed these documents and considered the potential benefits and adverse effects of the different A27 options, looking at how they could impact on the Council's own work and how they may affect local communities, businesses and visitors to Chichester District. The analysis and comments below include contributions from across the Council's service areas, including Planning, Economic Development, Environment, Communities and Estates.

General Comments

The traffic congestion on the A27 Chichester Bypass has for a number of years presented a major constraint in planning future development to meet the area's housing and economic needs. The current adopted Local Plan Key Policies (adopted in July 2015) falls short of meeting the full identified housing needs for the Local Plan area, due to environmental and infrastructure constraints of which highways capacity issues related to the A27 Bypass junctions is potentially the most significant. Traffic modelling work undertaken for the Council in 2013 identified a package of developer funded works to the A27 Bypass junctions sufficient to mitigate the traffic impacts of

the new housing proposed in the Plan, but did not test the impacts of higher levels of housing development up to the level of identified need. Despite this, the Plan was found ‘sound’ at examination by an independent inspector, but only with the requirement that the Council should undertake a full Plan review within 5 years in order to meet the identified housing shortfall.

The Council is therefore concerned to ensure that the A27 Scheme taken forward should provide sufficient potential highways capacity to plan for increased housing now and in the period beyond the end of the current adopted Plan (which runs to 2029). At the same time, we would need to be confident that the potential impacts of any A27 scheme on the environment, landscape and local communities are acceptable and can be mitigated.

Traffic Modelling

CDC officers have reviewed the Traffic Forecasting Report (TFR) accompanying the consultation. It is noted that the traffic forecasts incorporate baseline projections of future population and employment growth, and include Government assumptions on the economic parameters to estimate overall changes in travel demand on the highway network. In addition, future planned housing and employment development locations have been factored in within the local area (based on the current Chichester Local Plan and emerging Arun Local Plan) and planned local highways and transport improvements (based on information supplied by WSCC).

However, it should be highlighted that the traffic modelling work does not take account of the additional housing and other development expected to result from the forthcoming Chichester Local Plan Review or the increased housing numbers that Arun DC has been required to provide for at its Local Plan examination (an increase from the submitted Plan target of 580 dwellings per year to at least 845 dwellings per year). It is noted that the traffic forecasting work has included sensitivity modelling of higher and lower traffic growth assumptions, which it is understood would allow for some differences in planned development. However overall, it is considered likely that the level of traffic on the A27 generated from future housing and other development will be higher than that assumed in the traffic modelling work.

In addition, there appear to be inconsistencies between the Consultation Brochure and background documents (TFR and EAR) when describing the alterations proposed for the Portfield roundabout as part of the various A27 options. In the Consultation Brochure, the description given for Options 1, 1A and 2 is ‘Modifications proposed to Shopwhye Lakes development. Roundabout to be re-marked to provide 3 lanes from the southern approach of A27, around to Westhampnett Bypass’, whilst the Options 3 and 3A plans refer to ‘Improvements by Shopwhyke Lakes development’. However, Table 1-2 in the EAR and Table 4-4 in the TFR list Options 1, 1A and 2 as ‘As Do Minimum 2035/2041’ (which assumes the junction alterations

agreed with the Shopwhyke Lakes developer), Option 3 is described as ‘Segregated left turn lane for A27 southbound’ (which is not part of the design agreed for Shopwhyke Lakes) and Option 3A ‘As Do Min 2020’ (which would completely exclude the Shopwhyke Lakes alterations).

It therefore appears that the junction designs used for Portfield in the traffic modelling differ from those described in the Consultation Brochure for all the A27 options under consideration. It is assumed that this would affect the traffic modelling results, although the extent of the difference is not clear.

The traffic modelling indicates that all of the A27 options published for consultation would achieve some improvements in overall journey times. However, the journey time improvements for Options 1A and 3 would be relatively minor and would still lead to a worsening of journey times by 2041. Option 1A proposes no improvements to the Stockbridge and Whyke junctions (although allowing for small scale developer funded improvements), which it is assumed would lead to increasing congestion affecting the Bypass as a whole, whilst Option 3 proposes only relatively limited at-grade alterations to all of the junctions It should be noted that Option 3 is very similar to the junction proposals identified in background work for the Chichester Local Plan, where these improvements were designed only to mitigate the impact of the planned new housing development, rather than address underlying traffic problems on the A27.

Options 1, 2 and 3A would all provide more significant reductions in journey times. However, of these, Option 2 would provide the greatest improvements to journey times, with significant time savings in peak periods.

The analysis of journey times for specific routes and areas shows significant differences between the degree to which different areas and local communities would benefit from the A27 options proposed. Overall the greatest time savings for all options will be for east-west/west-east journeys using the A27 Bypass itself. Many journeys on local roads will see less benefit or (in a few cases) lead to longer journey times. Generally all options provide benefits for routes to/from Chichester city through the elimination of congestion at the existing junctions on the A27 Chichester Bypass. However, the options result in some increases in traffic flows and journey times on other parts of the road network, for example affecting some routes to/from the Manhood Peninsula and the ‘Bournes’ area west of Chichester. Once again, Option 2 appears to show the greatest time savings for journeys between most areas. However, this option still shows minor increases for a few journeys (e.g Havant to Fishbourne).

The Council has some concerns about the impacts on accessibility of the proposals for the Stockbridge and Whyke junctions. The proposed signalised junctions with restricted turns (Options 1, 3 and 3A) or the closing the junctions and replacing with

flyovers (Option 2) will potentially cause traffic re-routeing via less suitable rural and residential routes in the southern parts of Chichester city and south of the A27.

Environmental Impacts

The section below sets out the Council's general comments on the environmental impacts of the A27 options under consideration based on the published material, in particular the Environmental Study Report (ESR).

A separate Annex has been provided which sets out specific comments on additional work that the Council considers should be undertaken as part of the detailed planning of the preferred scheme. The Annex also includes specific design requirements and recommendations in relation to the junction proposals and other improvements set out in the options consultation.

Air quality

The Council notes the ESR conclusion that air quality effects would be beneficial overall for all the options except Option 1A, which would have an overall adverse effect, with the best improvement overall achieved by Option 2. However, all effects are unlikely to be considered significant due to the small numbers of receptors affected. The air quality effects would be beneficial overall for all options at St Pancras AQMA (but not sufficient to bring the AQMA within air quality objective limits).

Additional air quality benefits could be achieved by planning for associated infrastructure to increase rates of walking and cycling for local journeys. For example the Bognor Road pedestrian/cyclist bridge will be lost in Options 1, 1A, 2 and 3A. The A259 Chichester to Bognor cycle path is well used and providing a safe and attractive route through a new junction here will help maintain the route as an attractive piece of infrastructure for cyclists and pedestrians.

Subject to the detail being worked up, the proposed approach for mitigation of impacts during the construction phase appears adequate. Further detailed air quality modelling should be worked up for the final chosen scheme to enable a greater understanding of the wider air quality impacts along the A27 corridor.

Cultural heritage

All of the A27 options, except Option 3, would potentially have significant adverse impacts upon the historic environment during construction, with adverse effects anticipated on the setting of designated assets, buried archaeological remains within the construction area, and the historic setting of the local area.

The Council is concerned about the potential visual impacts associated with the flyovers proposed in several A27 options. These would impact on the setting of the historic city and on significant long distance views towards Chichester Cathedral and to/from the South Downs. The proposed flyover at the Fishbourne junction (Options 1, 1A and 2) would have potentially significant harmful impacts on cultural heritage, especially to views of Chichester Cathedral from the Chichester Harbour AONB. This harm will be mainly due to the elevation of the road and the corresponding lighting, but will also be caused by noise which will travel easily across the flat landscape. Adjusting levels so that the road is lowered in combination with a reduced height flyover may reduce impacts to a degree, as will planting to achieve screening, although it will also be important to maintain long distance views (e.g to the Cathedral spire).

The proposed flyovers at Stockbridge and Whyke junctions (Option 2) have potential to have a harmful impact on the setting of the Conservation Area and certain Listed buildings, as they will alter the sense of entry into the city. The flyover proposed at Stockbridge also appears to involve the demolition of Stockbridge House which is Grade II listed. The SLR (Option 2) also has potential to impact on a number of heritage assets, including Donnington Manor (Grade II listed) and the significant view from Hunston towards the city along the Chichester Canal (depicted in the painting 'Chichester Canal' by JMW Turner).

The proposed flyover at the Bognor junction (included in all options except Option 3) could impact on views to the South Downs and Cathedral from certain locations. The widening of the A27 (Option 3A) would potentially impact on a number of heritage assets, and this would need greater assessment.

There are no designated archaeological assets that would be physically affected by any of the options, however the setting of the Chichester City Walls Scheduled Monument might be slightly adversely affected by the lighting of elevated structures at all the junctions where flyovers are proposed, and the Fishbourne Roman Site Scheduled Monument could similarly be affected by lighting associated with a flyover at the Fishbourne Junction.

The effects on non-designated archaeological assets is largely restricted to the unknown, buried structures or deposits that might be impacted upon by construction works affecting previously undeveloped land, with the impacts likely to be greatest for major new constructions, especially the SLR (Option 2), but also the Vinnetrow Road diversion (options 1, 1A, 2, 3A) and the addition of a third lane to the A27 between the Fishbourne and Bognor junctions (Option 3A). These impacts would be best mitigated by preservation of significance through archaeological investigation and recording ahead of and during construction.

<u>Landscape and visual impact</u>

The Council considers that all the proposed A27 options will result in some landscape/visual impacts, however these will be clearly much greater where the options propose new flyovers, road widening or diversion, and (for Option 2) the SLR.

For the Fishbourne junction, the flyover proposals (options 1, 1A and 2) would involve significant land take, expanding into open land south of Fishbourne Road, encroaching into the adjoining Chichester Harbour AONB and the Fishbourne Meadows SNCI. The flyover would be visually intrusive, especially when viewed from Cathedral Way and the Tesco car park. Until new vegetation establishes, it will also be visible from Fishbourne Road and much of the AONB. It will affect the Fishbourne Conservation Area, the area of Scheduled Ancient Monuments associated with Fishbourne Roman Palace, and the setting of Listed buildings in Fishbourne and Appledram Lane. The alternative signalised 'hamburger' roundabout (options 3 and 3A) would have less visual impact, but could still lead to signal, sign (and potentially lighting) clutter, and loss of vegetation in the centre.

For the Stockbridge and Whyke junctions, the flyovers proposed in Option 2 would be visually intrusive and have a high impact on existing dwellings and land use, particularly at Stockbridge, where it would require the demolition of the Grade II listed Stockbridge House, and 7 early 20th century detached properties to the south of the junction, where construction of a new residential road would also be required[1]. At Whyke, a new alignment for Whyke Road is shown on the north side, which it is understood will require demolition of 4 residential properties[2]. The signalised junction proposals (Options 1, 3 and 3A) would be less intrusive, but could lead to the addition of signals clutter, additional signs and lighting, and loss of vegetation in the centre.

For the Bognor junction, all options except Option 3 propose a flyover and diversion of Vinnetrow Lane onto a new roundabout on the A259, which would require significant land take and encroachment into open countryside. The structures will be visually intrusive, including the widened railway bridge. The flyover would be prominent on approach from Bognor Road on both sides, and Quarry Lane from the north-west. The raised carriageway north of the junction and railway bridge would impact on the Chichester Gravel Pits and Leythorne Meadows SNCI, Chichester Lakeside Holiday Park and Quarry and Long Lakes. The visual impacts from Vinnetrow Road and the south would be lower, provided that vegetation is retained.

[1] The ESR (page 321) refers to demolition of 3 properties along Stockbridge Road north of the A27 Stockbridge junction, but it is not clear from the Consultation Brochure plans which properties (other than Stockbridge House) are referred to.

[2] The ESR (page 321 states the properties requiring demolition to be 91-93 Whyke Road (4 terraced houses on the east side of the road), although the Consultation Brochure plans appear to indicate demolition of 4 houses at Whyke Court on the west side of the road.

The enlarged, signal controlled roundabout proposed in Option 3 would have more limited impact, but would introduce signals/signs clutter and result in potential loss of vegetation on the east side of the junction.

The proposals at the Oving and Portfield junctions (which for all options are similar to those already agreed as part of the Shopwhyke Lakes planning permission) are relatively minor and will have limited visual impacts.

The SLR proposed in Option 2 would have major landscape impacts, including affecting areas of Coastal and Floodplain Grazing Marsh (Priority Habitat Inventory) around the River Lavant (including the River Lavant Marsh SNCI), and other natural habitats e.g. Mile Pond on Birdham Road, and affecting the setting of the listed Donnington Manor. Sections of existing road would be altered and new roundabouts could create signage clutter and possibly include lighting. The route would be raised to bridge the Chichester Canal, affecting views of the Cathedral, and potentially raised above existing ground levels on parts of the route falling within flood risk areas. The proposed route would also result in the loss of high quality agricultural land (shown on Natural England's Agricultural Land Classification map) and potentially lead to pressure for development between the A27 Bypass and the Link Road.

The proposed A27 widening between the Fishbourne to Bognor junctions in Option 3A would erode the often very narrow buffer strips between the road and adjoining uses (e.g the lakes between Bognor and Whyke, industrial and residential areas and open land to the south). Existing footpaths may be affected or removed, such as that along the north side between Whyke and Stockbridge.

Nature conservation

The proposed A27 options would have varying degrees of impact on habitats and biodiversity. Option 3 would have the least ecological impact, causing minimal disturbance. Option 2 would have the greatest impact, particularly due to the new SLR, which would lead to loss of habitats, ponds, lighting/ disturbance, severance of hedgerows and bankside vegetation. Option 3A would have the second greatest impact, due to the widening of the A27 resulting in the greatest loss of habitat at the Chichester Gravel Pits and Leythorne Meadow SNCI (although losses would also occur through Option 2, and to a lesser extent Options 1 and 1A). Some loss of habitat within the Fishbourne Meadows SNCI and the Fishbourne Conservation Area would occur through Options 1, 1A and 2, and within the Chichester Canal SNCI through the SLR (Option 2), whilst the River Lavant would be impacted by all options except Option 3, but particularly by Option 2.

The proposed diversion of Vinnetrow Road (all options except Option 3) would lead to the loss of hedgerow. Protected species (particularly water voles) could be

affected by all options except Option 3, with the greatest potential impact from the SLR (Option 2) which would result in greatest loss of habitats and create severance effects.

Geology and soils

During construction, all options have the potential to impact upon geology and soils, resulting from potentially contaminated land and construction processes. There could be large adverse effects on groundwater from the mobilisation of previously unidentified contaminated material, and moderate adverse effects could result from physical removal and degradation of soils. However, the operational Scheme is not expected to result in any adverse effects for geology and soils, as the drainage design for the preferred option would keep all surface water runoff (and therefore potential sources of pollution) away from the groundwater and soils.

The assessment and proposed mitigation of potential impacts on human health, both during development and the operational phase appear adequate subject to the detail being made available once the final A27 scheme is decided.

Additionally HE should note that land abutting the highway at Portfield Retail Park is known to be gassing and that land at the former MOD Fuel Depot, Bognor Road is known to be affected by hydrocarbon contamination.

Materials

The Council has no comments relating to this issue.

Noise and vibration

The Council considers that suitable mitigation will reduce the likelihood of significant noise impacts due to construction, however this cannot be fully determined until a construction method statement becomes available once the preferred option is selected.

Following implementation, the likelihood and occurrence of significant effects will depend on the balance between changing traffic flows on existing roads, new traffic noise sources on new or improved sections of road, and the level of mitigation designed into the preferred scheme. There would be adverse impacts with all options which would require further mitigation, although improvements for all options may be possible as the design progresses. For all options the number of properties exposed to a higher noise level increases due to improved flows and speed of vehicles. The elevation of the new interchanges/carriageway will also result in greater noise, although this depends on the extent of any acoustic screening.

Road drainage and water environment

Overall Option 2 would have the greatest impact on flood risk and surface water, particularly due to the construction of the SLR, which would intercept flood extents, Main River, Ordinary Watercourses and a pond, with potential to increase flood risk off-site, and is also adjacent to the tidal flood extent, All options would involve junction improvements within Flood Zones 2 and 3, but with low potential for increased flood risk subject to suitable resilience being built into the design. The additional A27 carriageways proposed in Option 3A have the potential to alter local flood extents.

A full flood risk assessment will be required for the scheme taken forward to detailed design. The Environment Agency will provide comments on fluvial and tidal flooding with WSCC providing comments on local flood risk. At this stage tidal flood risk has been scoped out, but further work should be undertaken to show that extreme water levels covering the lifetime of the development have been considered before this approach is acceptable. All flows, including over and underground will need to be maintained, and there must be no net loss of flood storage.

With regard to surface water drainage, there is limited detail at this stage on how the proposed options will be drained. The principles have been set which include the use of SUDS designed for the 1 in 100 year event +30% for climate change, and that any discharge does not exceed the existing levels. Preference should be given to infiltration, which should be practical given the local geology. A detailed surface water drainage scheme will be required at a later stage once the preferred option has been selected.

Effects on all travellers

During the construction period, there will be significant economic and community impacts, particularly for the scheme proposals involving longer delivery timescales (Options 1 and 2, and to a lesser degree Options 1A and 3A). It will be important to mitigate the impacts of construction for both motorised and non-motorised users, as far as possible avoiding lengthy queuing or diversions or the displacement of traffic onto less appropriate side roads. Planning and phasing of the construction works should also take account of the additional disruption linked to the major events held in the vicinity. We would also highlight the need to maintain access to all areas for emergency vehicles both during and after construction, especially for the Manhood Peninsula, where there are already issues around the time it takes to respond to Category A calls. The Council would expect to be consulted on the phasing of works and implementation of measures set out in the Construction Environmental Management Plan (CEMP).

Depending on the preferred scheme taken forward, the proposed highways and junction alterations will potentially create issues of community severance and/or dislocations for local journeys using or crossing the A27, particularly if some of the A27 junctions are permanently closed or restricted. This would apply to trips by private vehicle, public and community bus transport, cycling and walking. The more difficult such crossings are perceived to be, the greater the temptation to short cut the prescribed route, thereby creating road safety issues.

The Consultation Brochure refers to replacing public rights of way where possible. However, the consultation documents provided do not indicate specific design principles for supporting non-car modes in the design of the A27 Bypass improvements. Generally there appears to have been very limited consideration of how non-motorised users will gain access to/from the City. The proposed A27 junction alterations and other proposals have the potential to sever existing cycle and pedestrian routes or require their diversion (e,g through the removal of existing dual use cycle/pedestrian bridges). The transport strategy underpinning the Chichester Local Plan seeks to increase in the proportion of local journeys by non-car modes in and around the City. The A27 scheme proposals should provide non-motorised users with enhanced routes (including pedestrian/cycle and public transport), otherwise an increase in private car use is inevitable especially as new development comes forward.

The Council considers that the provision of safe and attractive routes for non-motorised users is essential. On a case by case basis there may be justification to close some public rights of way, but overall the level of access should be enhanced. Existing cycle and pedestrian routes that cross the A27 should be maintained (and where possible enhanced) or a suitable alternative route provided. This includes a number of routes which are well used by local residents for commuting and other day to day activities, and/or are important for leisure and tourism (e.g the Chichester Canal path, Chichester-Bognor cycle route, Fishbourne underpass, Stockbridge footbridge, Whyke dual use bridge, and the pedestrian crossing at the Oving junction). Provision should also be made to enable access by non-car modes to planned new developments (e.g Shopwhyke Lakes, the MOD Fuel Depot site, and the planned free school at the former Carmelite Convent in Hunston).

The Council would like to see optimal design solutions to encourage non-car modes. Where possible, cycle and pedestrian routes should be segregated from vehicular traffic in order to optimise the attractiveness and safety of related infrastructure.

<u>Community and private assets</u>

As a general comment, the Council would have found it helpful for the consultation documents to provide a clearer description / listing of the buildings proposed to be demolished and the land take required for each of the Options. For example, the

ESR (page 321) refers to demolition of 3 properties along Stockbridge Road north of the A27 Stockbridge junction, but it is not clear from the Consultation Brochure plans which properties (other than Stockbridge House) are referred to. Similarly, the ESR (page 321) states the properties requiring demolition to be 91-93 Whyke Road (4 terraced houses on the east side of the road), however the Consultation Brochure plans appear to indicate demolition of 4 houses at Whyke Court on the west side of the road. It is understood that the proposals under consideration are only indicative designs at this stage, but this lack of clarity (and apparent contradictions between some of the documents) make it harder to judge the potential impacts of the different options proposed.

The Council notes the impacts of the different A27 options on community and private assets, including demolition of private property, loss of both private and public land, effects on both development and agricultural land (a high proportion of which is classed as Grade 1, 2 or 3A), and community severance. It is noted that all the options under consideration would result in increased traffic during construction, particularly since the construction period would overlap with planned major housing developments such as at Shopwhyke, West of Chichester and Tangmere. There would also potentially be community severance due to temporary reduction in access to community facilities.

In addition to the impacts already identified in the ESR, Council officers would also highlight the potential impact of the Bognor junction alterations on the proposed redevelopment of the MOD Fuel Depot site where a hybrid outline planning permission (14/04284/OUT) has recently been granted for B2/B8/Trade uses, a discount food retail unit and 2 ancillary roadside catering units. Grade separation at Bognor junction (Options 1, 1A, 2 and 3A) would require land take from the site, which could require redesign of the development layout. The new roundabout on the A259 associated with the diversion of Vinnetrow Road would also involve some land take and would require redesign of the site access agreed in the hybrid planning permission.

Comments on Specific Proposals

Fishbourne junction - The proposals involve either a grade separated junction with A27 flyover (Options 1, 1A and 2) or a ‘hamburger’ roundabout with traffic light controls (Options 3 and 3A). The flyover option would encroach into the AONB, the Fishbourne Meadow SNCI and Fishbourne Conservation Area, and would have significant impacts on the landscape, particularly in terms of views to/from the AONB and Chichester Cathedral, cultural heritage including the Fishbourne Conservation Area, and biodiversity (particularly the Fishbourne Meadow SNCI). It would also require the loss of land and non-residential buildings, and the diversion of Terminus Road would impact on the Council’s Enterprise Centre scheme (although it is assumed that the re-routeing of the road could be accommodated). The alternative

‘hamburger’ junction would have much more limited impact, but would not reduce journey times or congestion to the same degree. To some extent, the visual and environmental impacts of the flyover could be reduced through good design, tree planting/acoustic screening etc and by compensation for habitat losses (see specific comments and recommendations in the Annex).

On balance at this stage, the Council considers that grade separation with a flyover at Fishbourne is likely to be required in order to provide for a significant improvement to the Bypass. It is also assumed to be necessary to facilitate a Stockbridge Link Road (see below). However, this is a particularly sensitive location and it is acknowledged that the flyover option would potentially have a significant adverse effect in terms of its impact on the wider landscape and the natural and historic environment. It should be noted that Section 85 of the Countryside and Rights of Way Act 2000 places a general duty on public bodies, in exercising or performing any functions relating to or affecting land in an AONB, to have regard to the purpose of conserving and enhancing the natural beauty of the AONB.

Stockbridge and Whyke junctions - The proposals involve either a traffic signal controlled junction with no right turns allowed (Options 1, 3 and 3A), no change to the existing roundabouts (Option 1A), or complete closure of both junctions with the local roads (A286 and B2145) routed over the A27 on flyovers.

The Council considers that leaving the existing roundabouts in place would continue the existing problems of congestion and queuing for traffic to/from the City and Manhood Peninsula and would thereby limit the benefits of any improvements elsewhere on the A27 Bypass. This appears to be borne out by the analysis of journey times, which shows that, despite the introduction of grade separation at the Fishbourne and Bognor junctions, Option 1A would still not perform significantly better than Option 3 in terms of journey times along the A27.

At the other extreme, the closure of the Stockbridge and Whyke junctions and their replacement with overbridges would have significant adverse impacts, in particular requiring the demolition of several residential properties (stated to be 11 at Stockbridge, which includes demolition of the Grade II listed Stockbridge House, and 4 at Whyke), loss of private garden and parking space, whilst the flyovers and associated embankments would cause major visual impact and loss of amenity for a significant number of properties in the vicinity of the junctions. The closure of the junctions would also impact on accessibility and journey times from the A27 to the south of the City where the Council is seeking to promote major redevelopment in the Southern Gateway area. However, closing the junctions would improve journey times to/from the City from the Manhood Peninsula, whilst journeys east or west from the Peninsula would be improved by the SLR.

Traffic light controlled junctions at Stockbridge and Whyke could provide some benefit, but the restriction on right turns would inevitably lead to longer journeys and journey times for some routes, particularly journeys to the Peninsula from the A27 west and from the Peninsula heading east along the A27. This appears to be borne out by the journey time analysis in the TMR and EAR. In addition, unless the junctions are well designed, some drivers may be tempted to ignore the right turn restriction creating increased risk of accidents. There would also potentially be safety concerns due to cyclists and pedestrians seeking to cross the junction, so the existing footbridge would need to be replaced by a better designed dual use cycle/pedestrian bridge (as is already proposed in Option 3A).

The Council considers that there may be some merit in the HE considering options which include the SLR but retain either or both of the Stockbridge and Whyke junctions incorporating more limited improvements. This would avoid the significant adverse impacts of flyovers in these locations, and could reduce the traffic using these junctions whilst maintaining greater accessibility and more direct routes for journeys Officers consider that there may be some merit in HE considering options which include the Stockbridge Link Road but retain either or both of the existing Stockbridge and Whyke junctions, potentially incorporating more limited improvements. This would avoid the significant adverse impacts of flyovers in these locations, and could reduce the traffic using the junctions, whilst maintaining greater accessibility and more direct routes for journeys involving an origin or destination in the south Chichester and Stockbridge areas.

Bognor junction – Four of the five options (Options 1, 1A, 2 and 3A) propose a grade separated junction with A27 flyover, which would also involve a widened railway bridge and the diversion of Vinnetrow Road onto a new roundabout on the A259. The only other option for this junction is a traffic signal controlled roundabout proposed in Option 3. Compared to the Fishbourne junction, the landscape/visual impact of a flyover would be less significant (although it would affect some views of the Cathedral and South Downs) and there would be only minor impacts on the historic environment. However, the required realignment of the A27 would involve some loss of land, including from the Lakeside Holiday Park and Chichester Gravel Pits and Leythorne Meadow SNCI. There would also be some loss of land from the former MOD Fuel Depot site, where a hybrid outline planning permission (14/04284/OUT) has recently been granted for B2/B8/Trade uses, a discount food retail unit and 2 ancillary roadside catering units. The A27 flyover would involve some land take, as would the new roundabout on the A259 associated with the diversion of Vinnetrow Road, and this would require redesign of the proposed site access, and potentially also the development layout. The flyover proposals would also require the loss of the existing bridge across the A27 on the Chichester-Bognor cycle route, although the proposals indicate that this would be replaced with new pedestrian/cyclist crossing facilities.

The Council considers that there are strong arguments for grade separation of the Bognor junction, particularly as the increased junction capacity could be critical in helping to support new development in the Bognor Regis area of Arun District, as well as in the Chichester Local Plan area. In general the impacts of an A27 flyover at the Bognor junction are less significant than at Fishbourne, and mitigation could be achieved through good design and planting/acoustic screening. It would also be important for the design to provide a replacement A27 cyclist/pedestrian crossing to serve the well used A259 cycle route.

Oving and Portfield junctions - All the options include junction designs based on, or very similar to, those already agreed as part of the existing Shopwhyke Lakes outline planning permission (O/11/05283/OUT) - although, as previously noted, there appear to be inconsistencies between the Consultation Brochure and background documents (TFR and EAR) when describing the alterations proposed for the Portfield roundabout in the different A27 options. In the Consultation Brochure, the Options 3 and 3A junction designs are described as being those agreed with the Shopwhyke Lakes developers, whereas the Options 1, 1A and 2 proposals show minor alterations to the Shopwhyke Lakes designs. For the Oving junction, these include complete closure from the east side (whereas the Shopwhyke Lakes proposals allow for buses only crossing the A27), whilst at Portfield, an additional lane is proposed from the southern approach of the A27, around to the Westhampnett bypass (whereas the agreed Shopwhyke Lakes design has the 3-lane approach narrowing to 2 lanes around the roundabout itself).

These proposed junction alterations have already been largely agreed by the Council when determining the Shopwhyke Lakes planning application and will have only minor landscape/visual and environmental impacts. However, these junction proposals were designed specifically to mitigate the impact of the Shopwhyke Lakes development. It is assumed that the HE's traffic modelling indicates that they would be sufficient to accommodate the forecast traffic growth to 2041 associated with the A27 options tested, although it appears that the options tested have given only limited consideration to the design of the Oving and Portfield junctions. The Council is concerned about the capacity of the Portfield roundabout to accommodate traffic flows in the longer term, particularly after closure of the Oving junction and the increase in traffic on Portfield Way/Westhampnett Road as a result of new strategic developments. In addition, the proposals at Portfield would not separate strategic from local traffic or offer opportunities for enhancing public transport, which will become more significant in the future due to the developments planned in this area.

At the Oving junction, it is unclear why the amendments to the Shopwhyke Lakes design proposed in Options 1, 1A and 2 have been considered necessary, the most significant of these being the proposed removal of the bus only access from Oving Road East. It is assumed that WSCC will comment on these points.

Stockbridge Link Road (SLR) – This is included only in Option 2 and is a proposed single carriageway road running from the Fishbourne junction south of Stockbridge to join the B2145 at Hunston. Since it would be a new road, it would have significant impacts on what is currently open countryside. The landscape/visual impacts would be accentuated by the fact that the route runs across flat/low lying areas and would have to bridge the River Lavant and Chichester Canal. There would be significant biodiversity impacts on the River Lavant Marsh SNCI, Chichester Canal SNCI, and other natural habitats (e.g. the River Lavant and Mile Pond on Birdham Road), as well as through loss of hedgerow, severance effects and introduction of noise and lighting into currently tranquil areas. In terms of cultural heritage, the road would affect the setting of the listed Donnington Manor and views of the Cathedral from the Chichester Canal. In addition, the SLR would require the loss of nearly 10 ha of high quality agricultural land (classified mainly Grade 1 and 2).

Although the road would undoubtedly have a major impact on the character of the area that it would run through, it would also potentially provide major benefits in improving accessibility for the Manhood Peninsula as a whole and helping to remove congestion. Without a new east-west link road such as the SLR, there will always be a fundamental difficulty in improving the Bypass junctions to benefit east/west traffic flows along the A27, without this creating greater congestion on the north/south routes crossing the A27 junctions or requiring access restrictions across or onto the A27. Either of these outcomes would tend to lengthen journey times between the Manhood Peninsula and City. Without a Link Road, the existing problems of congestion on local roads on the Peninsula are likely to remain and it would be difficult to plan for future new development.

Widening the A27 - Option 3A proposes widening the A27 by adding a third lane in each direction between the Fishbourne and Bognor junctions. This would require some additional land take, including from the Chichester Gravel Pits and Leythorne Meadow SNCI and some minor losses from residential gardens. Overall, the harm arising from this proposal appears to be relatively limited, although the benefits can only be assessed in the context of Option 3A (see below).

Overall comments on Consultation Options

Option 1

This option proposes grade separated junctions with flyovers at the Fishbourne and Bognor junctions, with traffic signal controlled junctions with no right turns allowed at the Stockbridge and Whyke junctions. This option appears to work reasonably well in reducing journey times and increasing journey time reliability (though not generally as well as Option 2). However the journey time improvements appear to be mainly concentrated on east/west routes along the A27, with indications that journey times to/from the Manhood Peninsula from the west and from the Manhood Peninsula to

the east would worsen (presumably as a result of the right turns restrictions at the Stockbridge and Whyke junctions). It is also noted that this option is predicted to lead to a slight increase in accidents overall, so further refinement of the design would be necessary.

Option 1A

This is a variant of Option 1 that retains the existing Stockbridge and Whyke roundabouts (although potentially allowing for minor developer improvements). This option is somewhat less expensive than Option 1 (by about £43 million) with a substantially shorter construction period, but in other respects it appears to offer few advantages. It retains the A27 flyovers at the Fishbourne and Bognor junctions with their associated visual and environmental impacts, but performs less well than Option 1 for overall peak journey times (particularly along the A27 itself) and is the worst performing option in terms of journey time reliability.

Option 2

This is the most comprehensive of the proposals, involving grade separated flyovers at the Fishbourne and Bognor junctions, with the closure of the Stockbridge and Whyke junctions and the construction of the SLR. Traffic from the Manhood Peninsula heading west would therefore use the Link Road to join the A27 at Fishbourne, and traffic heading east would have to join at the Bognor junction using the B2166 and Vinnetrow Road. As described above, this option would clearly have the most substantial environmental and landscape impacts, particularly resulting from the proposed bridging of the A27 at Stockbridge and Whyke and the SLR. However, this option clearly performs best in terms of overall journey times both for the A27 and local roads, and also scores best in terms of journey time reliability, and reducing accidents. Although it achieves only the second best Benefit to Cost Ratio based on the HE's criteria, it performs best in terms of the costed benefits for businesses, commuters and other users.

Although it has the longest construction time (together with Option 1), the Council considers that Option 2 will have the greatest positive impact on the economy in the longer term. This is demonstrated by the 60-Year Benefits Profile (presented at Figure 5-2 in the EAR), which shows that Option 2 will provide substantially more growth than any of the other options and over twice the amount for Option 3. From an economic development perspective, it is the scheme most likely to encourage inward investment and to benefit existing local businesses, by making the District more accessible. In particular, it provides the greatest reductions in journey times, not only along the A27 itself, but also to/from Chichester city and (to a more limited degree) to/from the Manhood Peninsula. It also offers the greatest potential to support future development and would therefore provide most benefit for the forthcoming Local Plan Review. However, this option would have considerable

environmental impacts and further work would be needed to reduce these to a minimum and provide acceptable mitigation or compensation.

Option 2 is the most expensive of the consultation options by a considerable margin and at £280 million exceeds the reported upper limit of the Road Investment Strategy budget (£250 million). The Council and WSCC have jointly committed to providing an additional £20 million towards the scheme (of which CDC is committed to provide £10 million to be provided through developer contributions from planned strategic housing development which the Council has already begun to secure through planning agreements). This additional funding will help to make the option more viable in terms of overall cost.

As mentioned above, consideration could be given to varying Option 2 by retaining (and potentially altering) either the Stockbridge or Whyke junctions (or both), thereby avoiding the significant adverse impacts of flyovers at these junctions (which would involve demolition of several residential properties) and maintaining greater accessibility for areas close to the junctions, whilst also reducing overall costs. It is accepted that retaining either or both junctions in some form may to some degree reduce the benefits of Option 2 for traffic using the A27, although presumably the SLR will help to divert some traffic away from the junctions.

Option 3

This option proposes relatively minor at grade improvements for all the junctions, and is very similar to the indicative junction mitigation measures identified in the Council's 2013 transport study undertaken to support the Chichester Local Plan. However, the Local Plan measures were designed purely to mitigate the additional traffic impacts of the planned development in order to make that development acceptable in planning terms, and did not seek to address the wider issues of traffic congestion on the A27. In terms of journey times, Option 3 appears to provide some benefits compared to 'Do Minimum' in reducing peak journey times along the A27. However, it would provide very limited reductions for journeys using local roads and would increase journey times for many routes to/from the Manhood Peninsula. In addition, the TFR (paragraph 6.13.5) indicates that journey times for Option 3 along the A27 would by 2035 be slower than in 2014.

For this reason, the Council considers that Option 3 would at best provide a very short term benefit and would not provide significant additional highways capacity in the longer term. Although this option performs best when measured against the HE's Benefit to Cost Ratio, this appears to be largely because it is low cost and requires limited mitigation, rather than because it offers substantial benefits to vehicle and non-vehicle users. It should also be noted that this option at £47 million falls well below the stated Road Investment Strategy budget of £100 - £250 million which has been promised for the A27 Bypass improvements.

Option 3A

This is a variant of Option 3, but includes a grade separated junction with flyover at the Bognor junction rather than a traffic signal controlled roundabout, and also proposes widening the A27 to three lanes each way between the Fishbourne and Bognor junctions. The overall journey time savings for this option are similar although slightly below those for Option 1, as are the construction costs. Compared to Option 1, this option includes a 'hamburger' roundabout design at Fishbourne rather than a grade separated flyover, resulting in less significant impacts on landscape and the historic environment. However, the reduced impact on biodiversity at Fishbourne is counter-balanced by a greater impact on the Chichester Gravel Pits and Leythorne Meadow SNCI, where it would require greater land take than any other option. As with Option 1A, it is also forecast to lead to a slight increase in accidents and it is performs least well against the HE's Benefit to Cost Ratio (although only by a relatively small margin). Generally, Option 3A appears to provide a reasonable alternative to Option 1, if the A27 flyover at Fishbourne is considered to have too great an environmental impact, but still falls a long way short of Option 2 in terms of journey time savings and increased reliability.

Overall Conclusion

Based on the information provided as part of the current consultation, the Council considers that Option 2 appears to offer the greatest long term benefits for the Chichester area. This option clearly performs best in terms of travel and accessibility, providing the greatest reductions in journey times, the greatest improvements in journey time reliability and the best performance in reducing accidents. These benefits would occur not only along the A27 itself, but also to/from Chichester city, whilst the Stockbridge Link Road offers potential journey improvements to/from the Manhood Peninsula. As such, the Council considers that Option 2 (or an amended version of it) offers the greatest potential to support economic growth and future development and would therefore provide most benefit for local residents, businesses and visitors to Chichester District. Option 1 or Option 3A appear to provide some journey time benefits, although not to the same extent as Option 2, and principally for journeys along the A27, with much less benefit for journeys to/from the Peninsula.

Option 2 (or an amended version of it) would increase the potential to plan for future development needs in locations which are most sustainable overall, rather than reaching a future scenario where the location of new development is dictated largely by highways capacity. These advantages will need to be balanced against the potentially significant impacts on the landscape, natural and historic environment, and the loss of land and property. Further

assessment will be needed through additional studies and design work once a preferred scheme has been identified by the DfT.

The Council is concerned that a relatively small scale A27 improvement such as Option 3 would be likely to constrain local economic growth and the scope for planning future housing and other development, and would also limit the locations where such development could be supported. If the DfT funded scheme does not release significant additional capacity on the A27 and local road network, it is not clear how far any additional highways and transport improvements needed to support new development could be funded through developer contributions or other sources available to the Council and WSCC. It should be noted that the current Local Plan measures already require significant developer funding towards transport mitigation collected through S278/S106 agreements and the Community Infrastructure Levy (CIL) (over £20 million, including local transport improvements and 'Smarter Choices' as well as the A27 mitigation).

Other Comments

Council-owned land at Terminus Road

The Council notes that the proposed diversion of Terminus Road to join Cathedral Way (Options 1,1A, 2 & 3A) would involve routeing the road on an embankment across District Council owned land. The schematic plans in the Consultation Brochure show the land as wooded, but it is in fact industrial land. If these road alterations were to take place, the Council would require an access spur from the new link road to access around 3 acres of employment land to the south.

The Council will be commencing construction of an Enterprise Centre in autumn 2016 on land to the east of Cathedral Way to the north of the proposed new section of Terminus Road. The construction works associated with the Fishbourne Roundabout and Terminus Road alterations are likely to have a detrimental effect on gaining and retaining tenants for the building. There may also be an increase in noise levels associated with the Terminus Road alteration once complete as the proposed re-routeing would bring traffic closer to the site of the proposed building. There is also a visual impact associated with having cars queuing on this new embankment to access Cathedral Way.

The Council wishes to seek assurance that HE will take into account the impacts of diverting Terminus Road on the Council's land, and will ensure that the Council's future development proposals are not compromised and that any impacts will be addressed.

Duty under Section 85 of the Countryside and Rights of Way Act 2000

The Council wishes to highlight that Section 85 of the Countryside and Rights of Way Act 2000 sets a general duty on all relevant authorities to “have regard to the purpose of conserving or enhancing the natural beauty” of AONBs when coming to any decisions or carrying out activities relating to or affecting land within these areas. Activities and developments outside the boundaries of AONBs that have an impact within the designated area are also covered by the ‘duty of regard’.’ As noted in the comments above, the proposals for the Fishbourne junction, particularly the grade separated flyover, would encroach into the Chichester Harbour AONB and would have significant adverse impacts on the landscape, cultural heritage and nature conservation within the AONB.

The Council therefore requests that Highways England set out formally how it proposes to meet its duty under Section 85 with regard to the impacts of the A27 proposals on the Chichester Harbour AONB.

ANNEX
Specific Comments on Further Work Requirements and Design Mitigation

In the Annex below, the Council provides comments on the additional work that should be undertaken and specific measures that should be taken into account at the detailed scheme design stage.

General comments

Landscape & visual impact

- A full Landscape and Visual Impact Assessment (LVIA) is needed inform the A27 scheme selection process, addressing each of the individual junction and road improvement proposals. This should determine where structures may be visible from, and their impact on receptors, which should inform the further development of the options and land acquisition strategy.

- Proposals need to show clearly that the land-take required for vegetative screening has been taken into account and that highway land at junctions will be planted. Some options create quite large areas which would appear to offer potential for useful screening. The extent of land acquisition needs to be confirmed, allowing sufficient space to enable mitigation planting to be undertaken.

Historic environment

- The coastal plain surrounding Chichester has medium to high archaeological potential which could be adversely affected by the A27 proposals. This is particularly relevant for the major new constructions proposed (e.g the SLR, diversion of Vinnetrow Road, and widening of the A27) and any works associated with the altered junction proposals. Archaeological investigations and recording will need to be undertaken ahead of and during construction, and any impacts mitigated by preservation of significance.

Nature conservation/biodiversity

- Loss of habitat and severance of habitat and wildlife corridors should be considered and planned for at the design stage.
- Compensation would be required for habitat losses (e.g Loss of lakes associated with Chichester Gravel Pits and Leythorne Meadow SNCI, and potential loss of habitat at Fishbourne Meadows SNCI, Chichester Canal SNCI, and along the River Lavant).

- Like for like replacement of habitat may be required, in particular bankside habitat for water voles.
- Lost hedgerows should be replaced where possible in the same location, with species-rich continuous intact hedgerows along the carriageway.

Air quality

- For the construction phase, the ESR sets out Best Practicable Means in the design of site layout and operational practice so as to prevent and minimise air quality impact. At this stage the proposals look adequately scoped and detailed to provide appropriate mitigation, however the BPM proposals will need to be worked up into more site specific detail once the final scheme is decided.
- Further detailed air quality modelling should be undertaken for the final chosen scheme, in order to enable a greater understanding of the wider air quality impacts along the A27 corridor. The ESR provides no commentary on locations compliant with the NO_2 Objective but where air quality might be negatively impacted by the schemes' proposals (e.g some properties where an additional carriageway brings traffic closer to existing residential properties).

Noise and vibration

- For all Scheme options the number of properties exposed to a higher noise level increases due to improved flows and speed of vehicles. The elevation of the new interchanges/carriageway will also result in greater noise propagation to some extent.
- As all options would affect noise levels across a wide area, it is recommended that a Detailed Level of assessment in accordance with the Design Manual for Roads and Bridges (DMRB) is undertaken at the next stage.
- Once a preferred scheme is selected, detailed modelling should be undertaken which should model as far as is possible the real world situation should the chosen option be implemented. This should include an extensive and detailed noise survey in order to adequately characterise the baseline noise environment.
- For the construction phase, noise levels for typical activities at typical distances are known. Without mitigation, Significant Observed Adverse Effect Level (SOAEL) values (defined in the Noise Policy Statement for England) would be exceeded for some activities, and thus mitigation would be required for those properties within 25m from the works, and in some cases for properties within 50m for particularly noisy activities. The extent and nature of mitigation should be determined as data on construction technique, methodology and duration becomes available.
- For the operational phase, noise mitigation should comprise the following:
  - Thin surface course; and

- Acoustic barriers. The locations of these are yet to be refined, however will be additional to, or in some locations will replace, existing barrier provision.

Drainage & water environment

- Flood risk general - A full flood risk assessment will be required for the scheme which is to be taken forward to detailed design. The Environment Agency will provide comments on fluvial and tidal flooding, with WSCC providing comments on local flood risk.
- At this stage tidal flood risk has scoped out, but further work should be undertaken to show that extreme water levels covering the lifetime of the development have been considered before this approach is acceptable. All flows, including over and underground will need to be maintained, and there must be no net loss of flood storage.
- Suitable flood resilience should be built into the design, e.g finished road levels, and maintaining flood storage and flow paths.
- SUDS should be incorporated into the junction and road designs to reduce risk of pollution incidents.
- Surface water drainage - At this stage there is limited detail on how the proposals will be drained. The principals have been set which include the use of SUDS designed for the 1 in 100yr event +30% for climate change, and that any discharge does not exceed the existing. Preference should be given to infiltration, which should be practical given the local geology. A detailed surface water drainage scheme will be required at a later stage once the preferred option has been selected.

Connectivity & non-car modes

- The A27 scheme proposals should provide non-motorised users with enhanced routes (including pedestrian/cycle and public transport), otherwise an increase in private car use is inevitable especially as new development comes forward.
- Existing cycle and pedestrian routes that cross the A27 should be maintained (and where possible enhanced) or a suitable alternative route provided. This includes a number of routes which are well used by local residents for commuting and other day to day activities, and/or are important for leisure and tourism (e.g the Chichester Canal path, Chichester-Bognor cycle route, Fishbourne underpass, Stockbridge footbridge, Whyke dual use bridge, and the pedestrian crossing at the Oving junction).
- Provision should also be made to enable access by non-car modes to planned new developments (e.g Shopwhyke Lakes, the MOD Fuel Depot site, and the planned free school at the former Carmelite Convent in Hunston).
- Design of junction and highways improvements should encourage non-car modes. Where possible, cycle and pedestrian routes should be segregated from vehicular traffic in order to optimise the attractiveness and safety of related

infrastructure. At grade cycle/pedestrian crossings at the A27 junctions would present a safety risk and should be avoided where possible. Consideration should be given to signing and other measures to encourage use of grade separated crossings.

Infrastructure impacts

The A27 Bypass proposals will have a range of impacts on existing infrastructure, requiring relocation, diversion or replacement of existing facilities. Planning for these should be included at an early stage and considered in relation to existing and proposed vegetation, landscape features, historic materials, views. For example:

- Utility diversions –construction access, easements, other constraints;
- Electrical services to signals, lighting and other installations, including cabling and cabinets;
- Signing including minor signs;
- Barriers and additional structures;
- Drainage installations - treatment of headwalls and outfalls; and
- Maintenance access requirements. These should be realistic, but designed to enable other objectives to be met.

Comments on individual junctions and proposals

Fishbourne junction

All options

- Junction improvements would include land in Flood Zones 2 and 3, and therefore suitable resilience should be built into the design, e.g finished road levels, and maintaining flood storage and flow paths.

Grade separation / flyover (Options 1, 1A and 2)

- Detailed design should seek to mitigate adverse impacts on the landscape and historic environment, in particular Chichester Harbour AONB, Fishbourne Conservation Area (particularly the Grade II listed buildings group, including Fishbourne Church, Manor and Manor Barn), Lawrence Farmhouse (locally listed) and long distance views of Chichester Cathedral and to/from the South Downs.
- Design should seek as far as possible to limit the height of the flyover and adjust levels. Treatment of the flyover is important – material finishes (recessive, non-reflective). Structures on elevated carriageway (e.g signs, lighting columns) will be particularly intrusive.

- Trees within the central roundabout (shown grassed) would be important to break up the impact of the highest section of the flyover. However, tree planting should consider the impact on long distance views from the AONB towards the Cathedral and South Downs.
- Land take should allow for adequate planting to south side of new alignment of Fishbourne Road and new junction with the south part of Appledram Lane.
- The former end of Terminus Road following diversion should be broken out properly and restored to provide mitigation planting.
- Potential impacts from lighting on elevated structures on the setting of the Chichester City Walls Scheduled Monument, Fishbourne Roman site Scheduled Monument, Fishbourne Conservation Area, and the Grade II listed Fishbourne Church, Manor and Manor Barn) should be considered at the detailed design stage.
- It is unclear whether the dual use cycle/pedestrian underpass at Fishbourne Road East (and the link across the A259 to Appledram Lane) will be affected by the proposed carriageway alterations or during the construction phase. Detailed design should give consideration to maintaining this link or providing a suitable alternative route across the A27.
- Detailed design work will need to consider loss of habitats and potential adverse impact on Fishbourne Meadows SNCI and along the River Lavant, and provide suitable mitigation/compensation.

Signalised ‘hamburger’ roundabout (Options and 3A)

- Improve links for non-motorised users
- Planting, including trees, to the split halves of roundabout important.
- Bus priority should be introduced into the proposed signal controls.

<u>Stockbridge junction</u>

All options

- Junction improvements would include land in Flood Zones 2 and 3, therefore suitable resilience should be built into the design, e.g finished road levels, and maintaining flood storage and flow paths.

Signalised junction (Options 1, 3 and 3A)

- Mitigation planting should be provided for all highway boundaries
- Splitter islands should remain green.
- Signing and structures should be minimised to avoid clutter.
- Bus priority should be introduced into the proposed signal controls.

- The existing footbridge across the A27 is inadequate for cyclists and should ideally be replaced by a new dual use cycle/pedestrian bridge (as proposed in Option 3A). Unless a well-designed replacement bridge is provided, the introduction of traffic signals is likely to encourage cyclists to seek to cross the A27 at grade causing safety issues.

A286 Flyover (Option 2)

- Detailed design should seek to mitigate adverse impacts on the landscape and historic environment, in particular Stockbridge House (Grade II listed), Chichester Conservation Area and Chichester Canal. Design should seek as far as possible to limit the height of the flyover and adjust levels. The potential should be considered to alter the route of the flyover to avoid the demolition of Stockbridge House.
- Screening will be essential to integrate the bridge at each end.
- The buffer between the road and housing should be improved wherever possible, with planting to mitigate loss of existing trees.
- The full extent of acquired land (existing houses) should be used to provide buffer planting.
- The footway/cycleway shown along the A286 Stockbridge Road flyover should be segregated from the road for cyclists as well as pedestrians.

<u>Whyke junction</u>

All options

- Junction improvements would include land in Flood Zones 2 and 3, therefore suitable resilience should be built into the design, e.g finished road levels, and maintaining flood storage and flow paths.
- Detailed design work will need to consider loss of habitats and potential adverse impact on Chichester Gravel Pits and Leythorne Meadow SNCI, and provide suitable mitigation/compensation.

Signalised junction (Options 1, 3 and 3A)

- Mitigation planting should be provided for all highway boundaries
- Splitter islands should remain green.
- Signing and structures should be minimised to avoid clutter.
- Bus priority should be introduced into the proposed signal controls.

B2145 Flyover (Option 2)

- Detailed design should seek to mitigate adverse impacts on the landscape and historic environment, in particular Whyke Lodge and the Carmelite Convent sites (both locally listed). Design should seek as far as possible to limit the height of the flyover and adjust levels.
- Trees should be included at the north end of bridge, where shown as grass, to enable this end of bridge to be partially screened.
- Embankments on the south side of bridge should be planted.

<u>Bognor junction</u>

- All Options appear to remove the existing dual use cycle/pedestrian bridge over the A27, which is an important link in the Chichester to Bognor cycle route. The design of the grade separated A27/A259 junction and realigned Vinnetrow Road/A259 junction (Options 1, 1A, 2 and 3A) requires an optimally engineered solution that provides a safe, segregated and reasonable direct cycle route, seeking to avoid (or as far as possible minimise) any conflict between cyclists and vehicles. Similar considerations would apply to the enlarged signalised roundabout proposed in Option 3.
- The junction design should also enable cycle and pedestrian access to the MOD Fuel Depot site which is proposed for redevelopment and now has an extant planning permission for retail and employment uses.
- Junction improvements would include land in Flood Zones 2 and 3, therefore suitable resilience should be built into the design, e.g finished road levels, and maintaining flood storage & flow paths.

Grade separation / flyover (Options 1, 1A, 2 and 3A)

- Detailed design should seek to mitigate adverse impacts on the landscape and historic environment (although much less than for Fishbourne junction), including views towards Chichester Cathedral and the South Downs and the impacts on Brick Kiln Farm.
- Treatment of the flyover and railway bridge is important – material finishes (recessive, non-reflective). Structures on elevated carriageway (.e g signs, lighting columns) will be particularly intrusive.
- Buffer vegetation should be provided to screen the industrial / retail outlets at the roundabout, and along the A27 in each direction, particularly adjoining lakes to the south, where it cannot be replaced. Sufficient land take is needed to accommodate replacement planting.
- Trees should be included on the central area either side of the flyover to reduce its visual impact.
- The lighting of elevated structures associated with the flyover might have a slight adverse impact on the setting of the Chichester City Walls Scheduled Monument, which should be considered at the detailed design stage.

- Detailed design work will need to consider loss of habitats and potential adverse impact on Chichester Gravel Pits and Leythorne Meadow SNCI, and provide suitable mitigation/compensation.
- New hedgerow should be provided to offset the loss of existing hedgerow resulting from diversion of Vinnetrow Road. Consideration should also be given to use of the 'spare' land between the Vinnetrow Road diversion and A27 flyover for SUDS.

Signal controlled roundabout (Option 3)

- Bus priority should be introduced into the proposed signal controls.

<u>Oving junction</u>

All options

- The upgraded A27 pedestrian/cycle crossing proposed as part of the Shopwyke Lakes development should be included in any design proposals for the junction (the proposed crossing is not shown on the A27 scheme plans in the Consultation Brochure).
- The roadside environment on the city side of the A27 should be enhanced with new planting. Existing vegetation on the east side should be protected by careful routing of the proposed footway. Existing hedgerow should be extended with new planting on the south-east boundary.
- Signing and structures should be minimised to avoid clutter.
- Junction improvements would include land in Flood Zones 2 and 3, therefore suitable resilience should be built into the design, e.g finished road levels, and maintaining flood storage and flow paths.

<u>Portfield junction</u>

All options

- Existing pedestrian and cycle links around the junction should be improved, and provision made for future east-west links to the Shopwyke Lakes development area. Green buffers should be maintained and/or provided for footways.
- Green buffers and quality of environment should be maintained, particularly the narrow buffer to the retail sites.
- Junction improvements would include land in Flood Zones 2 and 3, therefore suitable resilience should be built into the design, e.g finished road levels, and maintaining flood storage and flow paths.

Stockbridge Link Road (Option 2)

- Detailed design should seek to mitigate adverse impacts on the landscape and historic environment, in particular the Chichester Canal and views of Chichester Cathedral, Fishbourne Conservation Area and the Grade II Listed Buildings Group (Fishbourne Church, Manor and Manor Barn), Donnington Manor and associated Manor Farm (Grade II listed), Lawrence Farmhouse (locally listed) and historic field patterns.
- The SLR would result in substantial loss of habitat, severance and adverse impact, including the Fishbourne Meadows SNCI, Chichester Canal SNCI, and along the River Lavant. Potential loss of habitat and impacts should be considered and planned for at the design stage. Compensation should be provided for habitat losses, replacing like for like, particular bankside habitat for water voles. Habitat enhancement measures should be incorporated where possible. Land take should be sufficient to allow for loss of vegetation and habitat to be mitigated.
- Screening hedgerow and vegetation should be planted to mitigate loss of tranquillity and visual intrusion of junctions, New hedgerows should be linked to existing to re-establish coherent field boundaries and wildlife corridors, but without prejudicing the long views to the South Downs and Chichester Cathedral. Lost hedgerows should be replaced where possible in the same location, with species-rich continuous intact hedgerows along the carriageway
- The loss of Mile Pond is unacceptable and mitigation should be provided.
- Signing and structures should be minimised.
- Links for non-motorised users should be provided to encourage alternative modes of travel, and re-establish rights of way where disrupted.
- Design proposals for the bridging of the Chichester Canal should take account of the Council's long term aspiration to assist the provision of through navigation or enhancement of the Canal as set out in Policy 53 of the Chichester Local Plan Key Policies 2014-2029.
- The SLR intersects the River Lavant twice, increasing risk of pollution which will need to be planned for.
- The SLR intercepts flood extents, Main River, Ordinary Watercourses and a pond, with has the potential to increase flood risk off-site.
- The SLR route is adjacent to the tidal flood extent. The Flood Risk Appraisal does not consider tidal flooding, but should, given future predicted sea level rise. Scheme should mitigate for the extreme sea level events for the lifetime of the development (EA to confirm).

A27 widening between Fishbourne to Bognor junctions (Option 3A)

- Detailed design should seek to mitigate adverse impacts on the landscape and historic environment, in particular the site of Kingsham House and Garden and

locally listed Barn, Chichester Canal (including the locally listed Poyntz Swing Bridge), Lawrence Farmhouse and Whyke Lodge (both locally listed).

- The widening of the A27 between the Stockbridge and Whyke junctions would potentially lead to the loss of the dual use footway/cycleway that runs parallel to the north side of the A27. This path connects parts of the community to the Chichester Boys High School, Chichester Canal and other destinations. Design proposals should give consideration to alternative/ replacement provision for cyclists and pedestrians.
- Land should be acquired to ensure that a buffer strip is retained, with sufficient planting to achieve screening.
- Design and treatment of the highway boundary should be sympathetic to the character of the Chichester Canal.
- Detailed design work will need to consider loss of habitats and potential adverse impact on Chichester Gravel Pits and Leythorne Meadow SNCI, and provide suitable mitigation/compensation.
- Additional carriageway has the potential to alter local flood extents, therefore suitable resilience should be built into the design, e.g finished road levels, and maintaining flood storage and flow paths.