

Tangmere outline planning application 20/02893/OUT - Appendix One

Highway responses from West Sussex County Council

Further WSCC Highway comments dated 17 March 2021

WSCC Highways have previously issued comments (dated 15th December 2020) on this proposal. A number of points were raised in respects of the information submitted. Further information was then provided by the applicant to the points raised. The following response is based on the RPS letters and associated information dated 6th January 2021 and 4th March 2021.

Access via Malcolm Road

Minor design alterations have been undertaken to the proposed access via Malcolm Road. These changes introduce an additional length of footway from Cheshire Crescent northwards into the SDL as previously requested by WSCC. The changes are shown on drawing JNY9716-SK055 Revision A. The proposed access arrangement is considered acceptable.

A further point was also raised in terms of the potential for the development to increase traffic flows along Malcolm Road. Confirmation was sought in terms of these potential increases. Due consideration is given to the assessment scenario that includes a 2 form entry school and a mixed use local centre as this is what's proposed through the current planning application.

The additional scenario incorporating a 3FE school is noted. Any changes required to the school as proposed to increase its size, will require separate consideration. The increase in school size would be considered through any associated processes (planning permission, would for example, be required if extensions were required to the school building).

With respects to the 2FE/local centre use, the approach applied to the local centre is accepted. It's recognised that vehicle trips along Malcolm Road associated with this could be controlled through limiting the number of parking spaces provided on the Malcolm Road side. Restricting the number of spaces available would then encourage vehicular trips to arrive and depart via the development link road.

With the 2FE school, consideration to additional movements on Malcolm Road is only given in terms of movements associated with staff members. With pupils, it's assumed that all pupils will originate from within the SDL and that all trips consequently arrive and depart from within the SDL itself. It's accepted that once the site is fully built out that a significant number of pupils will live within the SDL.

Given the nature of the school and the fact that this would operate as an academy, there will be no catchment area as such. Pupils may consequently arrive by car from outside the village. It's recognised that where pupils originate from is beyond the control of the developer and that it would be impossible to model with accuracy

exactly how the school will operate. It's therefore fully expected that some pupils will arrive by car via Malcolm Road.

Whilst acknowledged as an aspect for the reserved matters, similar to the local centre, the arrangement of the school should aim discourage school related traffic from using Malcolm Road. Drop off and pick up locations should be designed to take place from within the SDL.

Tangmere Road Accesses

A number of points were raised in terms of the priority and roundabout junctions proposed on Tangmere Road. The most fundamental issue is that the design is based on an assumed 40mph design speed, which the developer will seek to achieve via a reduction of the posted speed limit. As has previously noted, the speed limit reduction is dependent on the successful outcome of a traffic order required to make the 40mph limit enforceable. The granting of planning permission does not guarantee that the traffic order will be made and it will be for the developer to demonstrate that the WSCC Speed Limit Policy is met to progress the proposed speed limit.

For the purposes of the planning application, WSCC Highways acknowledge that the design of the two junctions is fully compliant with the appropriate design standards for a 40mph design speed/speed limit. As such, there is no reason to seek to object to the accesses. However, appropriate mechanisms must be secured through the planning permission to require the developer to fund and progress a traffic order, and for this to be concluded prior to any works commencing on either Tangmere Road junction. Assuming the traffic order is made, the accesses can then progress on the basis of the details submitted. The accesses must also be progressed as a single package of works given the speed reducing impact and benefit the roundabout will have for the priority junction. If the traffic order fails, the applicant will need to suitably revise the design.

The above point aside, the Tangmere Road junctions have been safety and design audited. There is nothing within either audit that cannot either be resolved through the detailed design or controlled through planning permission.

A specific matter was raised with the proposed Tangmere Road roundabout relating to provision for pedestrians and cyclists. The indicative drawings of the roundabout show a foot/cycle way provided running from the development westwards along Tangmere Road, where there is currently no provision for pedestrians or cyclists. The concern was that the foot/cycle way as shown would lead users to a point where there is no safe means of continuing their journey. This matter has been discussed further with the foot/cycle way being retained to allow for future connections. However, if through the detailed design, it is demonstrated that the possibility of an onward connection being provided is very limited, the link can be shortened and terminate within the development.

Safety audits were provided for all of the proposed site accesses and off-site mitigation as part of the original submission. The only exception to this are the works proposed (namely the site access and various pedestrian crossing points) at Temple Bar. These works, and the associated safety audit, are to be agreed with

Highways England. There remains the need for the designers responses to be formally agreed between the developer and WSCC Highways. However, there are no matters within any of the RSA's that cannot be resolved through the detailed design.

Offsite Junction Mitigation

As set out within the initial WSCC Highways comments, the preference is towards a monitor and manage style approach to the delivery of the off-site mitigation at the A285/Roman Road, A285/New Road, and Shopwhyke Road/Tangmere Road/Drayton Lane junctions. This approach is recommended given the long duration of the development buildout and the inherent uncertainty as to potential changes in traffic conditions. A monitor and manage approach would accommodate this uncertainty. This approach may also enable contributions to be taken in lieu of physical works.

This approach and the precise wording would be secured within the s106. The obligation would require a scheme of monitoring (which is suggested to cover both capacity and safety) to be agreed with WSCC through which it would then be determined if mitigation is needed. WSCC would then be able to call upon the requirement to undertake the improvement works or make a contribution in lieu. The monitoring period would expire upon occupation of the 1,300th dwelling.

An alternate approach would be to require the developer to undertake the mitigation works or make a contribution in lieu prior to the occupation of the 1,300th dwelling, unless a scheme of monitoring demonstrates that the works are not necessary. This effectively removes the need for regular monitoring and has a trigger for the completion of the mitigation if this shown as necessary.

Development Phasing

Further information has been provided in respects of phasing. The developer has indicated that,

- An initial southern phase of up to 300 units will make use of the southern junctions (the roundabout and priority junction onto Tangmere Road).
- An initial northern phase of an unspecified number of units accessed from Temple Bar
- That the link road will be completed prior to any further development beyond the initial southern and northern phases.

The initial southern phase will result in increased vehicle trips through the existing village until such time as the link road is completed and open to traffic. The developer is estimating these increases will equate to 75 two way trips in the AM peak hour and 88 in the PM peak hour. The temporary increases are not expected to result in any severe impacts that would justify the early delivery of the link road.

Prior to the occupation of any dwellings within the initial northern phase, access and the various controlled crossing points would be required at the Temple Bar junction. In the absence of any phasing plans that could then be referenced in a condition,

given that the initial southern phase is indicated to comprise up to 300 units, it's recommended that the wording of the condition allows for no more than 300 dwellings to be occupied until the Temple Bar access and crossing works are completed.

It would also be helpful for the developer to include a figure against the number of units to be provided within the northern phase. This figure can then be used to inform the trigger associated with the delivery of the completed link road.

Tangmere Road/Malcolm Road Crossing

The TA submitted originally indicated that the developer would fund but not deliver a scheme of works to provide a crossing over Tangmere Road in the vicinity of the Malcolm Road junction. This arrangement was not accepted by WSCC. The developer has now agreed to deliver a scheme of works. Details will need to be secured by condition. The crossing should be controlled (i.e. push button) rather than uncontrolled.

The crossing will need to be delivered prior to the local centre and/or school being first occupied. The crossing is expected to form part of a wider scheme of improvements to Malcolm Road indicative details of which have been provided within the application. The wider scheme of improvements are also to be secured via condition.

Revisions to Church Lane works

The previously proposed scheme of footway works on Church Lane has now been revised. The new length of footway on the southern side of the carriageway has removed with those works adjacent to Tangmere Road retained. Given the level of traffic using Church Lane, an additional length of footway on the southern side of Church Lane is considered unnecessary.

Cycling

A number of points were raised by WSCC in regards of cycling.

The Movement and Access Parameter Plan indicates several connections into the development with the existing highway network. It has been agreed that details of the access points in the northeast and southeast corners can be secured via condition. These connections will need to be provided to ensure compliance with the M&A Parameter Plan. The SE corner connection is recommended to form part of the requirements for the initial southern phase of development. The NE corner access should be secured as part of the initial northern phase of development.

Confirmation was also sought as to whether improvements are achievable to the width of the cycle route on the Temple Bar overbridge as well as that section leading northwards that then connects with the un-trafficked section of Old Arundel Road. Whilst no details have been provided, the developer has committed to a undertaking a feasibility study and implementing a suitable scheme should this be deliverable. It is recommended that this is included as a s106 obligation.

Land is also to be safeguarded within the northwest corner of the site. This land may then be used by WSCC to provide a short section of a cycle route south of the A27, should this scheme be progressed. The land should be safeguarded through the s106 agreement. The developer will be required to provide a plan showing the land in question. The land should thereafter be safeguarded for a period of 10 years. The period of safeguarding would need to start from an appropriate time and once access is achievable to the safeguarded land through the development.

The only other cycle related matter was the potential contribution from the development towards the delivery of other site cycle routes. This contribution is then considered to satisfy the requirement with the site allocation policy that requires the development to provide *'improved and additional cycle routes linking Tangmere with Chichester city, Shopwhyke, and Westhampnett'*. As previously noted, it is considered unreasonable and beyond the ability of the developer to require them to physically provide new and additional routes towards Chichester outside of land within their control.

A contribution would however enable WSCC to pursue new routes. There is, for example, on-going feasibility work in respects of the Barnham to Chichester cycle route. The feasibility work completed to date indicates that any new route would pass through or adjacent to Tangmere. The TA submitted originally includes reference to a contribution of £630,000, a figure derived from the Infrastructure Delivery Plan prepared to support the adopted Local Plan. It is recommended that a s106 contribution of £630,000 is sought from the proposed development. The contribution would be specifically towards the provision of new or improved cycle routes linking Tangmere to Chichester, Shopwhyke, or Westhampnett. It is fully expected that any new cycle route would ultimately form part of the wider Barnham to Chichester cycle route. The exact payment trigger would need to be resolved through negotiations on the s106 agreement.

Passenger Transport

Discussions on passenger transport provision are on-going with Stagecoach. An obligation will be required in the s106 covering such matters. The obligation is recommended to include a trigger point by which bus services are expected to commence as well as a specification for the service (i.e. destinations, frequency, operating times).

It is considered vital that a review mechanism is also included within any obligation. A review mechanism would cover matters such as changes to the bus service as well as the possibility of service uptake not being as forecasted, this may in turn require further subsidy.

It is accepted that the bus service obligation and any additional subsidy that may be needed through the review mechanism should be capped.

Through subsequent reserved matters applications, passenger infrastructure provision at bus stops as well as the location of bus stops themselves should be determined. It is recommended that shelters, real time screens, and other

appropriate infrastructure (i.e. poles and flags) are provided at all stops within the development.

Travel Plan

There have been further discussions in respects of the travel plan and overall approach to this. For the residential uses, phase specific travel plans are to be provided. These travel plans will need to accord with an overarching framework travel plan that sets the methodology in terms of high level measures, monitoring, reporting and subsequent additional actions should the identified targets not be met. The content of each phase specific travel plan will reflect the build out of the development and the services (i.e. passenger transport, school, community uses) that are subsequently available and that may influence travel habits. An entirely separate school travel plan should be prepared. This would need to be developed with the likely operator of the school. Conditions are recommended in these respects.

The applicant should also note that as of the 1st April 2021, WSCC Highways are planning to introduce a charge to audit travel plans. Such auditing fees would be secured within the s106 agreement.

Road Design Typologies within the Design and Access Statement and Movement and Access Parameter Plan

No formal response appears to have been offered by the developer in respects of the points raised by WSCC Highways towards these matters.

Conclusions

It's acknowledged that there are certain aspects that will need further discussion, primarily in relation to the wording of triggers and s106 obligations. Notwithstanding this, WSCC Highways are satisfied that National and Local Policy requirements relating to highways and transport matters are or can be satisfied (through appropriate conditions or s106 obligations). WSCC Highways are therefore satisfied that the development would not result in unacceptable safety or otherwise severe highway impacts. No highway objection would be raised.

Conditions

Travel Plan - Residential

Prior to the occupation of any dwelling, a framework travel plan shall be submitted to and agreed in writing with the Local Planning Authority. Thereafter, no dwelling within any phase of development shall be occupied until a travel plan based upon the agreed Framework Travel Plan covering the respective phase of development has been submitted to and agreed in writing by the Local Planning Authority. Once agreed, the phase specific travel plan shall thereafter be implemented in accordance with the agreed document.

Travel Plan - School

Prior to the use of the school commencing, a travel plan shall be submitted to and agreed in writing by the Local Planning Authority. Once agreed, the school travel plan shall thereafter be implemented in accordance with the agreed document.

Church Road

No dwelling shall be occupied until a scheme of footway improvements has been undertaken along Church Road and uncontrolled crossing points across Tangmere Road in accordance with the details as indicatively shown on drawing JNY9716-SK058 Revision A.

Tangmere Road Crossing

No dwelling shall be occupied until an uncontrolled crossing point has been provided onto Tangmere Road in the vicinity of the Gamecock Terrace junction in accordance with plans and details submitted to and approved in writing by the Local Planning Authority. The uncontrolled crossing point shall provide for both pedestrians and cyclists.

Malcolm Road Access

Prior to the use of the school or any use within the mixed use village centre first commencing, access from Malcolm Road shall be provided in accordance with the details shown on drawing titled Malcolm Road Proposed Access and numbered JNY9716-SK055 Revision A.

Meadow Way Footway Widening

Prior to the use of the school or any use within the mixed use village centre first commencing a scheme of footway widening shall be undertaken along Meadow Way footway in accordance with plans and details submitted to and approved in writing by the Local Planning Authority.

Malcolm Road Improvements

Prior to the use of the school or any use within the mixed use village centre first commencing, a scheme of public realm and pedestrian footway improvements shall be implemented on Malcolm Road from it's junction with Tangmere Road through to the proposed development in accordance with plans and details and a Stage One Road Safety Audit submitted to and agreed in writing with the Local Planning Authority.

Pedestrian Crossing at Tangmere Road and Malcolm Road Junction

Prior to the use of the school or any use within the mixed use village centre first commencing, a controlled pedestrian crossing shall be implemented in the vicinity of the Tangmere Road and Malcolm Road junction in accordance with plans and details and a Stage One Road Safety Audit submitted to and agreed in writing with the Local Planning Authority.

Temple Bar Crossing Improvements

No more than 300 dwellings shall be occupied until a scheme of highway works based on drawing titled 'Indicative A27/A285 Access with Pedestrian Crossings' and numbered JNY9716-SK028 has been implemented in accordance with drawings submitted to and agreed in writing by the Local Planning Authority.

Link Road

No more than XXX dwellings shall be occupied until the link road is complete and open to through traffic from Tangmere Road to the A27 Temple Bar Grade Separated Junction.

Southern Accesses onto Tangmere Road

No part of the vehicular accesses shown drawing titled 'Indicative Access Junctions Roundabout and Simple Priority T-Junction (40mph) with visibility splays) and numbered JNY9716-SK020 shall be commenced until a Traffic Regulation Order for a 40mph speed limit on Tangmere Road required to enable the indicatively shown accesses to be implemented, have been approved by the County Council and written confirmation of this approval is made available to the Local Planning Authority. No dwelling or any other use permitted shall thereafter be first occupied until vehicular accesses indicatively shown on the drawing numbered JNY9716-SK020 have been constructed in accordance with drawings submitted to and agreed in writing by the Local Planning Authority.

Construction Management Plan

No development shall take place, including any works of demolition, until a Construction Management Plan has been submitted to and approved in writing by the Local Planning Authority. Thereafter the approved Plan shall be implemented and adhered to throughout the entire construction period. The Plan shall provide details as appropriate but not necessarily be restricted to the following matters,

- the anticipated number, frequency and types of vehicles used during construction,
- the method of access and routing of vehicles during construction,
- the parking of vehicles by site operatives and visitors,
- the loading and unloading of plant, materials and waste,
- the storage of plant and materials used in construction of the development,
- the erection and maintenance of security hoarding,
- the provision of wheel washing facilities and other works required to mitigate the impact of construction upon the public highway (including the provision of temporary Traffic Regulation Orders),
- details of public engagement both prior to and during construction works.

Reason: In the interests of highway safety and the amenities of the area.

S106 Obligations

Offsite Junction monitoring

Prior to the completion and opening of the link road to through traffic, a scheme of traffic monitoring shall be submitted to and agreed with WSCC Highways. The scheme of traffic monitoring shall cover the junctions of, A285/Roman Road, A285/New Road, and Shopwhyke Road/Tangmere Road/Drayton Lane.

The agreed scheme of traffic monitoring shall commence upon the opening of the link road to through traffic. The monitoring shall be undertaken in accordance with the agreed scheme until the occupation of the 1300th dwelling, or unless otherwise agreed with WSCC.

In the event the monitoring demonstrates a need at one or more of the junctions, the applicant should seek to secure all necessary consents to implement the scheme or schemes of mitigation as shown on drawings JNY9716-SK043 (Drayton Lane/Tangmere Road Junction Proposed Mitigation), JNY9716-SK044 (A285 Stane Street/New Road Junction Proposed Mitigation), and JNY9716-SK045 Revision 01 (A285 Stane Street/Roman Road Junction Proposed Mitigation), or make an equivalent value contribution to enable WSCC to pursue alternative forms of mitigation.

Safeguarding of land for south of A27 cycle route

A27 Temple Bar Overbridge Widening

Upon commencement of the development, the applicant shall undertake a feasibility study to investigate the potential to widen the existing foot and cycle way on the western side of the A27 Temple Bar Overbridge. Should the feasibility study demonstrate the existing foot and cycle way can be widened, the applicant shall thereafter seek all appropriate consents to deliver a scheme of foot and cycle way widening on the A27 Temple Bar Overbridge in accordance with a timetable agreed with Highways England and WSCC Highways.

Public Transport

Westhampnett Cycle Route Improvements

Upon commencement of the development, the applicant shall undertake a study to determine improvements to the existing Westhampnett Cycle Route from the A27 Temple Bar grade separated junction through to the junction of Stane Street and Old Arundel Road. Once complete, the applicant shall thereafter present potential improvements options to WSCC to agree. Once a scheme has been agreed, the applicant shall secured all necessary consents and implement the scheme of works.

Initial WSCC Highway comments dated 15 December 2020

Background

It is noted that the application seeks outline planning approval with matters of access only to be approved at this stage. Comments are made against:

- Transport Assessment and associated appendices, dated 21st October 2020
- Access and Movement Parameter Plan (drawing no. TOR-PP04 Revision I)
- Design and Access Statement, dated November 2020
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Unless stated otherwise, comments are made regarding the impact on the local road network as maintained by WSCC. Highways England is responsible for the A27 and the slip roads on the A27 Temple Bar grade separated junction.

Policy

The site is allocated within the adopted Chichester District Council Local Plan for 1,000 dwellings and community facilities. A review of the CDC LP is progressing and as part of this the housing numbers at the Tangmere Strategic Development

Area are proposed to be increased. The current application for 1,300 dwellings reflects the LP review although it's recognised that this is not yet formally adopted. For the purposes of the current application, the highway and transport requirements from the adopted LP have been applied to the site as whole. The made Tangmere Neighbourhood Plan also includes policy requirements for the SDL. The acceptability of the site on highways and transport grounds will also be considered against other local and national policy requirements.

Access

Vehicular access is proposed into the site via an additional arm off the southern roundabout forming part of the A27/A285 Temple Bar grade separated junction and two new junctions onto Tangmere Road; one taking the form of a roundabout and a second indicated as a simple priority junction. A new link road will be provided between the additional roundabout arm at Temple Bar and the proposed new roundabout on Tangmere Road.

Additional access is also proposed via Malcolm Road as shown on drawing number JNY9716-SK055. The potential design of this access is noted. The only minor alteration recommended is the provision of an additional length of footway on the eastern side of the realigned Cheshire Close access. As indicated in the TA, improvements are intended to the entire length of Malcolm Road. For consistency, it may be necessary to revise aspects of the proposed Malcolm Road access design (notably the surfacing) as part of the wider scheme of works.

The access from Malcolm Road is intended to provide serve solely car parking associated with the proposed community uses as well as the proposed new school. This will result in some additional vehicular use of Malcolm Road although this will be proportionate to the car parking proposed within the community uses as well as there being peaks associated with the new school. It would be helpful for the applicant to put forward an estimate in terms of the potential increase in vehicle movements resulting from this development. It's acknowledged that at this stage, the exact number of car parking spaces for the community use is not known. Due consideration should be given through the detailed design to ensure an informal through route into the development is not created via the car park.

It's recognised that additional non-vehicular access points will be provided to secure connections between the proposed and existing development within Tangmere. Further comments on these are provided within the 'Accessibility by Sustainable Modes' section below.

The principle of the vehicular access arrangements is considered to comply with the LP policy requirements and as such is also accepted in principle by WSCC Highways. Further information in the form of Design Audits would however be required for the additional roundabout arm at Temple Bar and the new roundabout on Tangmere Road. The Design Audits should demonstrate how the proposed access works comply with current design standards. Design Audits are not considered necessary for the Tangmere Road simple priority junction or Malcolm Road extension.

A full review of the proposed access details, including the Road Safety Audits, will be undertaken once the Design Audit has been submitted. Notwithstanding the full access design review that will follow receipt of the Design Audit, with respects to the two junctions onto Tangmere Road, these have been designed on the assumption that the speed limit would be reduced from 60mph to 40mph. The design of the stopping sight distances on the approaches to the new junction also assumes that actual traffic speed would be 40mph. It is accepted that the presence of the new roundabout would act to reduce vehicle speeds primarily as vehicles have to slow to negotiate it. As such once the roundabout has been constructed, there may be scope to reduce the speed limit once the impact of the roundabout on speeds is known and providing the proposed speed limit complies with the WSCC Speed Limit Policy.

The arrangement as shown based on the assumed 40mph speed limit however is considered unacceptable. It is considered unacceptable as it would be impossible to require by planning condition that vehicle speeds are reduced to 40mph. The design of the two junctions should be based on the recorded 85th percentile speed of traffic or the posted speed limit. The concern with the arrangement presented is that inadequate stopping sight distances (primarily for eastbound vehicles on the approach to the new roundabout and at the priority junction should this be constructed ahead of the new roundabout) will be provided at the two junctions thereby resulting in safety issues.

It is accepted that the only aspects of the design that would be affected by applying a higher design speed is the stopping sight distances and that greater distances can be achieved due to the straight alignment of Tangmere Road. It is also accepted that greater SSDs would require the removal of more hedgerow along Tangmere Road. However, through a scheme of speed monitoring (secured via the s106 agreement) once the new junctions are in place and should speeds be shown as being reduced, it may then be possible to reintroduce further planting on Tangmere Road to reflect speeds at that time. This process may then enable a lower speed limit alongside appropriate additional traffic management measures (if necessary) if such works are compliant with current policy at that time.

The only other comment that would be made regarding the proposed southern roundabout at this stage is regarding the foot/cycle way provision shown on the western side of this. This foot/cycle doesn't connect into any existing provision nor would it appear to connect into any other provision proposed as part of the development. It's recommended that the foot/cycle way on the western side of the roundabout is revised in terms of its extent. The concern otherwise is that pedestrians/cyclists will be led to a point from where they have means of continuing their onward journey.

Road Safety Audits have been submitted for the two Tangmere Road junctions and Malcolm Road. It's understood that an Audit will be commissioned for the Temple Bar roundabout additional arm and other associated works once in principle agreement has been reached with Highways England regarding those works that may affect the A27. As per the requirements within GG119 (the standard by which Road Safety Audits are undertaken), the applicant would also be required to submit

to WSCC Highways a Road Safety Audit Response Template in the correct and editable format. This will then enable WSCC to include its responses to those made by the Design Organisation as well as any Agreed Actions that would be checked as part of any subsequent design or road safety audits. It's recommended that the Response Template is agreed directly between WSCC Highways and the applicant, and then submitted as part of the planning application.

Highway Capacity

Through the preparation of the existing Local Plan, the Chichester Area Traffic Model was created to assess the impact of additional housing and employment growth across the district. The model will also include significant developments from adjoining districts that may result in increased traffic flows within Chichester District. The inputs (i.e. trip generation from the various uses) and outputs from the model have been separately agreed through the LP process. The model will determine potential trip destinations and assign traffic to appropriate routes.

The 1,000 dwellings allocated as part of the Tangmere SDL were modelled as part of the CATM. Given a higher level of development is now proposed, the CATM has been updated to reflect the 1,300 units now proposed. As the purpose of the model has already been accepted as suitable for modelling the Tangmere SDL through the LP process, there are no reasons to challenge the principle in using this for the current planning application. In order to determine the development impact across the network, scenarios have been run for a future year of 2035 (at which point the development is expected to be complete) that include (Do Something) and exclude (Do Minimum) the proposed Tangmere SDL. The future year assessment will include other committed developments and highway improvements.

It should be noted that the link road associated with the SDL is included within the Do Something scenario only. The link road itself will result in the redistribution of some vehicle movements, primarily those using Tangmere Road through Tangmere itself, given this provides an alternate route for traffic. This will be accounted for within the CATM outputs. CATM Do Minimum and Do Something flows have been compared to determine those roads and junctions that will experience a potential increase in vehicle trips as a consequence of the development and the link road. This list of junctions has been further reviewed in discussion with WSCC Highways to determine which junctions should then be taken forward for further capacity analysis using appropriate industry accepted modelling software. The traffic models for the individual junctions have then been validated against observed queue lengths and resultant delays to ensure these are calibrated to reflect the actual junction operation.

Although the modelling follows current best practice, given the future year assessments are 15 years distant, there is the potential for some inherent uncertainty within these. This is not to say the models are incorrect but only to recognise that these can only include committed highway improvements and forecast using current traffic flows. As a result, whilst mitigation has been identified for a number of junctions, the recommendation in the majority of cases is for further traffic monitoring to occur. Should this validate the model flows as forecast, the applicant will be expected to deliver the mitigation as indicated or make an

equivalent financial contribution to WSCC Highways that may then be used towards an alternate scheme of mitigation. A monitor and manage approach will secure the timely delivery of appropriate mitigation should it be proven necessary.

The following junctions on the local highway network have been determined as requiring additional modelling analysis. Taking each of these junctions:

Proposed Roundabout Site Access off Tangmere Road

Notwithstanding the design issues identified above relating to the proposed design speed, the impacts of which are safety orientated as opposed to capacity, the roundabout is forecast to work well within theoretical capacity with minimal queues or delays to vehicles.

Proposed T-junction Site Access off Tangmere Road

Likewise, with the proposed roundabout, notwithstanding the design issues identified above, the junction is forecast to work well within theoretical capacity with minimal queues or delays to vehicles.

Temple Bar Grade-separated Junction (Southern Roundabout)

An additional arm is proposed to be added to this existing roundabout to access the proposed development and the link road. Based on the Do Something scenario, all arms of the roundabout are forecast to operate within theoretical capacity with minimal queues and delays to vehicles.

Temple Bar Grade-separated Junction (Northern Roundabout)

Modelling has been required for this roundabout due to the increase in vehicle movements as a consequence of the development. Based on the Do Something scenario, all arms of the roundabout are forecast to operate within theoretical capacity with minimal queues and delays to vehicles.

Through discussion with the applicant, a discrepancy has been identified with the modelling. This discrepancy relates to the AM Do Something Scenario and affects the A285 overbridge arm. The modelling is indicating a minor queue forming on this arm even though other than u-turning vehicles, movements from this arm would be unopposed onto the roundabout; the arm to the immediate right of the overbridge is the eastbound on-slip onto the A27. Nevertheless, a potential mitigation scheme has been drawn up. This would remove the roundabout and remove any give way lines on the A285 overbridge arm, thereby allowing northbound traffic to be free-flowing. Traffic joining from the A27 eastbound off-slip road would still have to give way as it does presently.

Given the length of the build out programme and the potential uncertainty in future year modelling as well as the possibility of as yet unknown improvements to other routes thereby making these more attractive, it's recommended that a scheme of traffic monitoring be included within the s106 agreement. This would enable traffic flows to be monitored once the development has commenced and allow the

mitigation to be implemented should it be deemed necessary. It's recommended that a s106 obligation allows for a contribution in lieu of works. This would allow for the possibility of a more comprehensive highway improvement should conditions alter significantly.

A285 Stane Street / Roman Road

This is an existing priority junction with ghosted right turning lane. This junction has been modelled due to the potential increase in vehicle trips resulting from the development. The Do Minimum future year scenario is indicating significant queues and delays for traffic turning out of Roman Road onto the A285 in both the AM and PM peak periods. There is also a significant issue for traffic wishing to turn right from the A285 onto Roman Road in the AM peak. This queue will in turn inhibit southbound movements on the A285. Whilst the queues are not significantly increased in the Do Something scenario, the length of delays is increased. WSCC consequently acknowledge the development is not the root cause of queues and delays at this junction but the additional development traffic has the potential to significantly worsen delays. This in turn may affect the safety of the junction as drivers attempt to take inadequate gaps in traffic to pull out.

To address the capacity issues, the applicant has proposed a scheme of mitigation in the form of traffic signals. This scheme has been designed to fit within the available public highway. Whilst the works have been Safety Audited, a Design Audit would be requested for the proposed design to ensure this meets all necessary standards. In principle and based on the modelling, a scheme of signalisation would resolve the impact arising from the development and the issues indicated within the Do Minimum scenario. Again, similar to the works for the northern roundabout of the Temple Bar grade separated junction, it is recommended that a scheme of traffic monitoring be undertaken for this junction once development has commenced. Should this monitoring indicate a worsening of capacity as the modelling suggests, the applicant would be required to implement the proposed scheme of signalisation. This approach is recommended for the same reasons as previously stated.

Again, it's recommended that the s106 obligation allows for a contribution based on the potential cost of the mitigation as shown in lieu of works. This would allow for the possibility of an alternate highway improvement should conditions alter significantly.

A285 Stane Street / New Road

This is an existing simple priority junction. This junction has been modelled due to the potential increase in vehicle trips resulting from the development. The capacity issues at this junction are much the same as those for the A285 Stane Street/Roman Road junction. In the Do Minimum scenario, quite significant queues and delays are forecast for vehicles exiting New Road as well as for vehicles turning right from the A285 onto New Road. In the Do Something scenario, the development is adding to but not the cause of the queues and delays.

Again, the applicant is proposing a scheme of traffic signals at this junction. This scheme has been designed to fit within the available public highway. Whilst the

works have been Safety Audited, a Design Audit would be requested for the proposed design to ensure this meets all necessary standards. This scheme will resolve those impacts arising from the development as well as improving the overall operation of the junction. It is noted that the modelling for the PM peak is approaching the 85% degree of saturation, which is generally taken as a warning that the level of service may start to decrease.

It is also recognised that in improving this junction, it may make the use of New Road more attractive; the potential difficulties in exiting onto the A285 may otherwise act as a deterrent to through traffic and encourage traffic to use other routes. The same would apply to Stane Street, although the impact on New Road and the junctions along it may be more profound. The efficient and safe operation of this junction would need to be considered on balance against the potential for New Road to be viewed as a more attractive route.

Again, it is recommended that a scheme of traffic monitoring be undertaken for this junction once development has commenced. Should this monitoring indicate a worsening of capacity as the modelling suggests, the applicant would be required to implement the proposed scheme of signalisation. This approach is recommended for the same reasons as previously stated. Again, it's recommended that the s106 obligation allows for a contribution based on the potential cost of the mitigation as shown in lieu of works. This would allow for the possibility of an alternate highway improvement should conditions alter significantly.

Tangmere Road / Drayton Lane / Shopwhyke Road

This is an existing simple priority junction. This junction has been modelled due to the potential increase in vehicle trips resulting from the development. The applicant has reviewed the development impact against the current layout as well as that proposed within 11/5283/OUT. The scheme within 11/5283/OUT sought to give priority to movements between Shopwhyke Road and Drayton Lane, with vehicles on Tangmere Road having to give way.

For the purposes of the Tangmere SDL, the improvement within 11/5283/OUT is treated as a committed works. This scheme however isn't secured by condition or within the s106 for 11/5283/OUT and is understood not proposed to be taken forward. For the purposes of Tangmere SDL, this scheme is still taken as committed and the potential consequences modelled.

Whilst a Do Something (i.e., with development) scenario appears not to have been run for the existing layout, it is apparent from the Do Minimum that relatively significant delays (ranging from 135 through to 180 seconds) would be expected. As such, a capacity issue would be expected in a future year regardless of the proposed Tangmere SDL.

With the committed improvement forming part of 11/5283/OUT and accounting for the Tangmere SDL, significant queues and delays would be expected on the Tangmere Road arm particularly in the PM peak. The applicant has consequently proposed an alternate scheme of works comprising traffic signals. The availability of highway is constrained in this location. A simple scheme of traffic signals with each

arm operating separately nevertheless is shown. Again, a Design Audit would be required to ensure the proposed signals comply with all necessary standards.

Even with traffic signals, the junction would be expected to operate over capacity within the PM peak, which is indicating to perform worst. It is noted that the average delay per vehicle with traffic signals are not greatly worse than those forecast within the Do Minimum scenario. However, in the AM peak, the provision of traffic signals would introduce delays for east and west bound movements that would not occur with a priority junction. The presence of traffic signals during inter peak periods would naturally also introduce delays that would not otherwise occur.

It's recognised that the inclusion of traffic signals offers an ability to control flows and thereby allow vehicles to manoeuvre safely without risk from other opposing movements. Even accounting for the negative impact in the AM peak, traffic signals would provide a potential safety benefit particularly on the Drayton Lane arm where visibility to the east and west is partially restricted and where turning movements may become more difficult as traffic flows increase.

As per those other junctions where traffic signals are proposed, it is recommended that a scheme of traffic monitoring be undertaken for this junction once development has commenced. Should this indicate a worsening of capacity as the modelling suggests, the applicant would be required to implement the proposed scheme of signalisation. This approach is recommended for the same reasons as previously stated.

Again, it's recommended that the s106 obligation allows for a contribution based on the potential cost of the mitigation as shown in lieu of works. This would allow for the possibility of an alternate highway improvement should conditions alter significantly.

Drayton Lane / High Street / WSCC Depot

This is an existing staggered junction with the High Street and the WSCC depot being the minor arms. Modelling has been undertaken due to the potential increase in vehicle movements arising from the development. Based on the modelling, this junction will continue to operate within theoretical capacity.

Other Matters

Although not a junction, the applicant has considered the impact on the Drayton Level Crossing. The impact here is considered more in terms of whether increased queuing would occur, which in turn may result in blocking of other junctions or which may result in safety issues should oncoming drivers not be able to see stationary vehicles. The assessment indicates the potential for increased queues. The increases are not significant and adequate forward visibility would still be achievable to the back of a stationary queue. It should be noted that no junctions have been assessed within Tangmere itself. This is due to the proposed link road offering an alternate route for traffic that would currently pass through Tangmere. Traffic flows through the village are expected to decrease once the link road is available.

At the current time, it's unclear when the link road would be complete and available to through traffic. It's accepted in principle that some development would need to be brought forward ahead of the link road being available with it recognised that the link road is effectively required to mitigate the impact of the completed development. There would still need to be a clear timescale put on the delivery of the link road though as well as it demonstrated that the local highway network would operate without severe capacity or unacceptable safety impacts should some development be brought forward in advance of the link road being available to through traffic.

Accessibility by Sustainable Modes

Walking

It's accepted in principle that all the proposed community uses within the development will be within reasonable walking distance (generally accepted as being 1.6km or 1 mile based on the findings within the National Travel Survey). Vice versa, all existing facilities will be within reasonable walking distance of the development. Due to distance, it's accepted that relatively few walking trips are likely to occur from the development towards other destinations.

Pedestrian access is proposed into the development from the existing built-up area of Tangmere at a number of points; Malcolm Road, Chestnut Walk via public right of way number 282, and Church Lane. Further connections are limited due to the lack of public highway or public rights of way that abut the proposed development boundary. Any further connections would require the permission of 3rd party landowners, and therefore are beyond the control of the applicants.

Malcolm Road is anticipated to form the primary sustainable access into the development due to the proposed community uses being proposed at the far western end. An indicative scheme of improvements (as shown on drawing number JNY9716-SK057) is proposed to widen the existing northern footway to 2 metres. Further works are indicated in the form of raised tables at various junctions along Malcolm Road. These are taken as being proposed to restrict vehicle speeds, albeit the limited carriageway width would serve this purpose. Areas of contrasting material rather than raised features may be more appropriate. The applicant will no doubt be aware of the requirement for public consultation associated with the installation of raised features exceeding a certain height. This consultation would be separate to the current planning application.

A scheme of improvements to Malcolm Road would be recommended to be secured via condition. The details proposed as part of the condition would allow for consideration to be given to the design of those improvements proposed for pedestrians as well as those works within the carriageway.

It is recognised that no improvements are proposed to Malcolm Road specifically catering for cyclists. In principle and subject to the applicant providing details on potential traffic flows on Malcolm Road with the community facilities (as already requested above), Malcolm Road may be considered suitable to accommodate on-street cycling as indicated within LTN 1/20.

As recognised within the TA and by WSCC Highways, Malcolm Road will become the main pedestrian route into the development from the existing Tangmere village. Any trips into the development via Malcolm Road will necessitate crossing Tangmere Road. No physical improvements are proposed as part of the development to aid crossing movements across Tangmere Road (although accepted that the proposed link road may remove some traffic from the existing village).

Reference is made within the TA to a contribution being made to enable WSCC Highways to undertake improvements to crossing facilities. This is considered unacceptable. As the development will generate additional crossing movements, the applicant should deliver all improvements necessary to mitigate the impact associated with the development.

A suitable scheme of crossing improvements must be submitted by the applicant to create a route from Tangmere into the proposed development via Malcolm Road. This should include a Design Audit and Road Safety Audit.

The access onto Chestnut Walk via an existing public right of way is indicated as a recreational route. This is likely to be a relatively lightly used route given the uses proposed on Malcolm Road and their associated draw. Details of the path (widths and surfacing) would be expected to form part of subsequent reserved matters applications. It would be anticipated that appropriate surfacing improvements would also be undertaken to the existing public right of way as well. Such works can be the subject of a planning condition.

Access is also indicated onto Church Lane. Church Lane is not adopted highway along its entire length. That section beyond the public highway is indicated within the red edge of the planning application and therefore is within the control of the applicant. Improvements are proposed along Church Lane in the form of additional lengths of footway as shown on drawing number JNY9716-SK058.

With the footway proposed at the western end, it's unclear what this ties into along the private access road serving Saxon Meadows. If there is to be no footway along the private road leading to Saxon Meadows, it would potentially be unnecessary for a footway to be provided within the public highway; pedestrians walking within the carriageway would be unlikely to encounter any additional vehicles when walking along the private access road or the public highway at the far end of Church Lane. An existing footway is then available on the northern side of Church Lane commencing from St Andrews Church towards Tangmere Road. This would render that length of footway proposed on the southern side of the carriageway unnecessary.

At the eastern end of Church Lane, an additional length of footway is shown running northwards along Tangmere Road. Due to the restricted verge width, the footway cannot be continued on the western side of the carriageway. Pedestrians consequently have to cross to make use of the existing footway on the eastern side of the carriageway.

As recognised within the TA, existing footways on potential walking routes between the existing village and the proposed development are of varying widths. Although

revisions are sought to some of the proposed connections and related infrastructure, WSCC Highways are satisfied that improvements are being focused on the appropriate corridors.

Cycling

Cycle connectivity between the proposed and existing development will make use of the same access points as indicated for walking. The only exception to this is Chestnut Walk, which is pedestrian only. Whilst confirmation has been sought as to the appropriateness of cycling occurring along Malcolm Road accounting for the proposed development traffic, Church Lane would be considered appropriate for on-carriageway cycling.

No other cycling improvements are currently proposed on roads within Tangmere although as noted already, the proposed link road has the potential to remove some traffic from Tangmere village. The existing road network within Tangmere is such that the provision of dedicated off-carriageway cycle facilities would be difficult, if not impossible, to achieve within existing constraints. It would still be appropriate for the applicant to consider what improvements may be possible to reduce vehicle speeds and therefore make conditions more conducive for on-carriageway cycling. Any such consideration should be limited to those potential movement corridors along Tangmere Road and Meadow Way.

Connections to routes beyond Tangmere are indicated in the southeast corner of the development onto Tangmere Road, and to the north onto the Temple Bar grade separated junction along with a further route at the north east corner of the development that emerges onto the existing cycle route south of the A27. With regards to the later referenced connection, indicative details should be provided to ensure a link is deliverable and not subject to any constraints resulting from existing trees sited between the development and the existing cycle route.

The connection in the SE corner will access the existing bridleway that runs across the old airfield. It is acknowledged that given the extent of public highway and land within the control of the applicant, there are no constraints on where exactly the crossing would be located taking account of the need to secure adequate visibility for those crossing. It would still be useful for indicative details of this crossing point to be provided as part of the current planning application. The agreed details can then form the indicative basis for the detailed design.

To the north, cycle access is proposed onto the existing route that runs into Chichester via Westhampnett. Details are shown on drawing number JNY9716-SK027. The existing route is somewhat convoluted at Temple Bar and involves a number of road crossings; travelling from the east, the cycle route crosses the westbound A27 off slip road, then crosses the A285/A27 overbridge, then crosses the A27 eastbound off slip road before joining the Old Arundel Road (an untrafficked pedestrian/cycle route) that leads into a recently constructed shared surface route through Westhampnett. The route then connects into existing provisions within Chichester.

The proposed development seeks to retain the existing route of the cycleway on the A27 slip roads and overbridge forming part of Temple Bar. Controlled crossing facilities are proposed over the access road within the development to provide an alternate route for cyclists rather than using the uncontrolled crossing on the A27 westbound off slip road. Controlled crossings are also proposed on the westbound on-slip road and the eastbound off-slip road. It should be noted that the slip roads are maintained by Highways England and not WSCC; HE would therefore be responsible for approving the crossings on the slip roads. WSCC Highways would though consider these crossings as necessary to achieve safe and suitable connectivity between the development and Chichester.

The cycle route on the A27 overbridge (which is subject to shared maintenance by WSCC and HE) is of varying width. This is acknowledged as an existing route but nevertheless is substandard. The applicant is requested to assess what improvements are achievable to improve the usable width of the existing route on the western side. This could entail reducing the width of the hard margin on the eastern side of the bridge to enable a slight carriageway realignment and widening of the western foot/cycle way.

Similar to the above point and whilst involving the HE maintained slip road, due consideration should be given to widening the foot/cycle way leading from the overbridge to the proposed signalised crossing on the eastbound off slip road.

Improvements to that section of the Old Arundel Road are also referenced. As this provides the only cycle connection between the development and Chichester, it's recommended that a scheme of improvements is secured and delivered by the developer. It's considered that the delivery of a scheme of works by the applicant would allow for the works to be delivered in a timely manner. Any works would need to be incorporated within the existing limits of the public highway and could include improved surfacing (if deemed necessary), increased widths (where possible) and the provision of lighting (subject to consideration of any ecological constraints).

The wording of the site allocation policy for the SDL is recognised as requiring: *'Improved and additional cycle routes linking Tangmere with Chichester city, Shopwhyke and Westhampnett. Opportunities should also be explored for improving transport links with the 'Five Villages' area and Barnham rail station in Arun District'.*

Ultimately the development can only provide improvements within land forming part of the public highway or within land under the control of the applicant and forming part of the planning application. New routes involving 3rd party land cannot be reasonably required. Separate to the current planning application, WSCC are investigating the potential for a strategic cycle route between Barnham and Chichester. Whilst a preferred route has not yet been determined, a proportionate contribution would be sought from the SDL towards the delivery of this route. It's considered that the provision of a contribution to the Barnham to Chichester cycle route would satisfy the requirement of the allocation policy.

Relating to the above point, as mentioned within this, there is no preferred route at present. One option identified is for a route south of the A27. This would potentially incorporate land forming part of the current development. The potential for this route

and a requirement for land within the development are indicated on the Movement and Access Parameter Plan. This land should be safeguarded for use as a cycleway for a period of at least 10 years from the occupation of the first dwelling. A plan should be included in the s106 showing the extent of the safeguarded land along with the safeguarding requirement.

Passenger Transport

The passenger transport strategy involves extending the existing number 55 Stagecoach bus service into the development. The 55 service is understood to operate on an entirely commercial basis with no involvement from WSCC Highways. Consequently, the applicant would need to agree with the bus operator the details of what is being indicated. The cost of extending the service along with any additional resourcing would effectively need to be privately agreed with the bus operator.

Providing an agreement can be reached between the developer and the bus operator, for the purposes of the planning application and particularly the related s106 agreement, an obligation should be included requiring the developer to secure the extension into the Number 55 Stagecoach bus service into the development. The exact wording of the obligation should also include a trigger point at which the bus service extension shall commence and the frequency of the service.

It is acknowledged that the full bus routing may not be available for a length of time given the progressive construction of on-site infrastructure. The applicant will need to account for this within their public transport strategy. The bus service should be introduced to the development as soon as it is safe to do so.

Passenger transport infrastructure would also be required at proposed stops within the development. The location and details of such infrastructure should be agreed as part of future reserved matters planning applications.

Travel Plan Framework

It's accepted that separate travel plans will be required for the various uses within the development. The framework travel plan submitted covers just the residential phases. As the school and other retail uses come forward through reserved matters application, travel plans will be requested.

For the purposes of the framework residential travel plan, there are several elements within this that would need to be revised. Referring where possible to the specific numbered points in the FTP.

2.19 - Malcolm Road doesn't have a 20mph speed limit. This should be corrected.

4.15 - Reference is made to CDC Car Parking Guidance. The adopted CDC LP however refers to and requires WSCC Parking Guidance to be applied. This should be updated although car parking is a matter for consideration as part of future reserved matters applications.

6.9 - Given the development is to be built out over a 15-year period, the reference to the 5-year target is inappropriate and doesn't fit with the monitoring indicated to take place at 100, 300, 600, 900, and 1,200 dwelling occupations.

9.4 - Again, this refers to monitoring over a five-year period. For reasons stated above, this would be inappropriate and doesn't tie in with the suggested monitoring triggers.

Overall, it's accepted that a full travel plans will need to be prepared and agreed to cover the various uses proposed. This will be expected to be based upon the framework travel plan currently submitted. Given there are a few discrepancies within the submitted framework, this would need to be reviewed and updated to offer the overarching travel plan strategy for the site.

Layout and Parking

Whilst an illustrative master plan is provided, the details as shown on this are taken as indicative. Further reserved matters applications would be submitted for the various development parcels. As such, no comments are made on the illustrative masterplan. Overarching principles are though included within the Design and Access Statement (primarily the Movement Strategy section), and the Movement and Access Parameter Plan, that will influence the design of any reserved matters.

Regarding the Design and Access Statement and the matters covered within 7.39, the majority of the design typologies are considered appropriate for the context in which proposed. There are aspects that would benefit from clarification or amendment:

- A 4.1 metre carriageway width is indicated for tertiary streets. This is very narrow and will only just enable two opposing vehicles to pass. Ideally, a great range of carriageway widths would be proposed (i.e., 4.1 to 4.5 metres) to enable some flexibility as the design evolves.
- Even though shared foot/cycle ways are proposed along primary roads, shared arrangements are unlikely to appeal to all cyclists. The applicant should aim to create cycle friendly on-carriageway conditions as well.
- Traffic calming for primary and secondary roads should be integral to the design rather than relying on raised features or other such engineering.
- The design principles for the spine road should reflect Manual for Streets even though this may have to accommodate a reasonably high amount of traffic. Aspects such as forward visibility and visibility at junctions should therefore be based on MfS SSDs.
- Services for tertiary streets should where possible be sited within service margins rather than the carriageway.
- It is recommended that reference is included within the D&S to suitable provision being made for cyclists at junctions too. This could include such matters as giving priority to cyclists, where cycle routes cross junctions.

With respects to the Movement and Access Parameter Plan, it's acknowledged that there is flexibility in terms of the precise locations of aspects as shown on this plan. Notwithstanding this, there are a number of aspects that would need to be further considered. This includes:

- Although provision is made for cyclists close to the proposed Tangmere Road Roundabout, it's not particularly coherent with cyclists indicated to have to cross in proximity of the northern arm leading into the development and then cross again a short distance further northwards. It's unclear, for example, why a cycle route could not continue on the eastern side of the link road connecting to that easterly route that leads to the bridleway across Tangmere airfield. The number of crossings over the link road should be limited.
- There's also a notable lack of provision for cyclists within the western parcels. These parcels are recognised as having cycle friendly street design but nevertheless through the reserved matters due consideration should be given to the potential connectivity between parcels and whether these can form potential cycle friendly routes away from trafficked streets.

The alignment of the proposed link road includes a 90-degree bend at the northern end adjacent to the community uses. The severity of this bend should be reduced. It's accepted that the Movement and Access Parameter Plan allows for some flexibility in terms of the design. Confirmation would be sought from the applicant that the severity of this bend would be reduced and better reflect the remainder of the link road design.

High level principles are referenced within the Transport Assessment for parking. Given the extended buildout period for the development, parking requirements (including provision of electric vehicles) would need to be considered against the standards in place when any reserved matters are being considered. Provision for those non-residential uses would be considered separately as part of any respective reserved matters for these uses. With the school in particular, consideration must be given to potential requirements at dropping off and picking up times to ensure adequate provision is made and avoid any significant volumes of overflow parking occurring on-street.

Other Matters

S106 Agreement and Condition Trigger Points

It's acknowledged that the TA assesses the final form of the development proposed. However, the development is to be built over a length of time and in a number of different phases. Necessary infrastructure as identified within the TA to support and enable the development will need to be provided at key times. There are though no details within the application relating to potential phasing to enable infrastructure delivery to be linked specific phases. There will also need to be clarity as to when the link road is to be provided by.

For some of the off-site mitigation, WSCC Highways have indicated a preference towards monitoring traffic conditions ahead of any junction improvement being implemented. The applicant will still need to provide details of when this mitigation would be required by to ensure appropriate infrastructure is secured and provided at the appropriate time.

For the purposes of the mitigation, WSCC Highways have viewed this as being proposed for the development as a whole and completed. Dependent on the

phasing and potential build out other off-site improvements may be required to secure safe and suitable links to these ahead of other development infrastructure coming forward.

Construction Traffic

Matters of construction are not covered within this response. Details in terms of how the site will be built out, including means of access and routing of vehicles will be covered by way of a Construction Management Plan. Any CMP will need to account for existing highway constraints, including the existing weight restriction that applies to certain roads within Tangmere.

Summary

Prior to WSCC Highways making any formal recommendations, the following additional information would be required:

- Provide a footway on the eastern side of the realigned Cheshire Close junction as part of the proposed Malcolm Road access design.
- Revise the designs for the two proposed junctions onto Tangmere Road showing stopping sight distances based on the recorded 85th percentile speeds or the posted speed limit.
- Revise the extent of the foot/cycle way provision on the western side of the proposed southern access roundabout or demonstrate how this ties in with future proposals.
- Design Audits covering the Temple Bar additional roundabout arm and the proposed Tangmere Road Roundabouts access junctions, as well as the four junctions where traffic signals are identified as potential mitigation.
- A Road Safety Audit Response Template as per the requirements of GG119.
- Provide an estimate of potential 2-way vehicle movements at AM and PM peak times on Malcolm Road following the implementation of the development and those uses proposed to be accessed from this.
- Provide details for a scheme of pedestrian crossing improvements across Tangmere Road to Malcolm Road. This should include a Design Audit and Road Safety Audit.
- Confirm provision for pedestrians along the Saxon Meadows private access road and revise as appropriate the proposed footway provision at the western end of Church Lane.
- Review the potential for cycle improvements within Tangmere to enhance connectivity to the proposed development.
- Provide plans for the suggested cycle connections in the north east corner of the development onto the existing cycle route south of the A27 and the at the south east corner of the development onto Tangmere Road.
- Assess potential improvements to increase the western foot/cycle way width on the A27 overbridge forming part of the Temple Bar grade separated junction.
- Confirm that agreement has been reached with the bus operator in regards of the extension of the number 55 bus service into the development.
- Update the framework travel plan to amongst other things better reflect the long term build out of the development.

- Revise or clarify those matters raised regarding the road typologies within the Design and Access Statement.
- Review and revise the Movement and Access Parameter Plan with respects to those matters identified
- Provide further clarification over the potential phasing of the development and the delivery of identified improvements and mitigation.