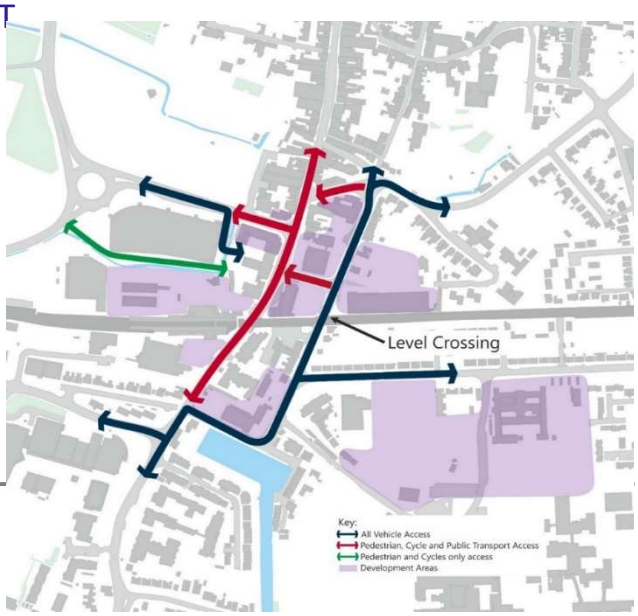
2020

Southern Gateway: Road opportunities

CHICHESTER NEIGHBOURHOOD PLAN BACKGROUND DOCUMENT



Contents

This is a working document

It will be updated as further information arises and consultation takes place, further shaping ideas.

Introduction

Context

1.1 Chichester City Council, together with the residents of Chichester, are in the process of preparing a Chichester Neighbourhood Plan. The Plan can include planning policies, infrastructure projects, and aspirations. This document examines how the local road network could be improved in the vicinity of the Southern Gateway redevelopment area (shown in figure 1, below) and follows on from public consultation through which residents expressed support for a bridge or underpass across the Basin Road level crossing and for re-routing cars out of the city centre.

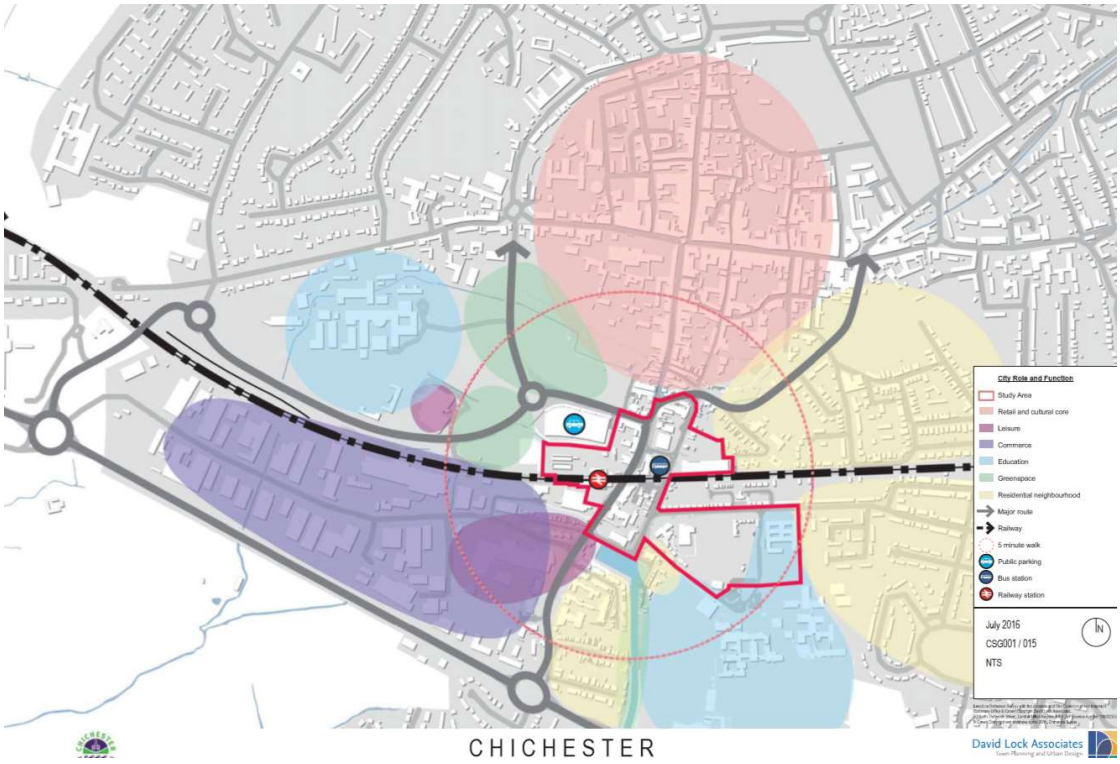


Figure 1: The Southern Gateway redevelopment area

1.2 The area surrounding Chichester's level crossings (the location of which is shown in figure 2, below) is the subject of long-term regeneration and redevelopment plans. The plans are being developed by David Lock Associates (DLA) on behalf of Chichester District Council. The most recent proposals are presented in the *"Chichester Southern Gateway, Draft Masterplan, Version 3"* (June 2017). Having ruled out a number of options already, CDC's only remaining proposal for road improvement in this area involves reducing the southern gyratory to a single lane. This is detailed below, following which two new suggestions are put forward, option NPT1 (pedestrianise Southgate, re-routing traffic out of the city centre) and NPT2 (as NPT1, but with traffic flow supported by an underpass at Basin Road).

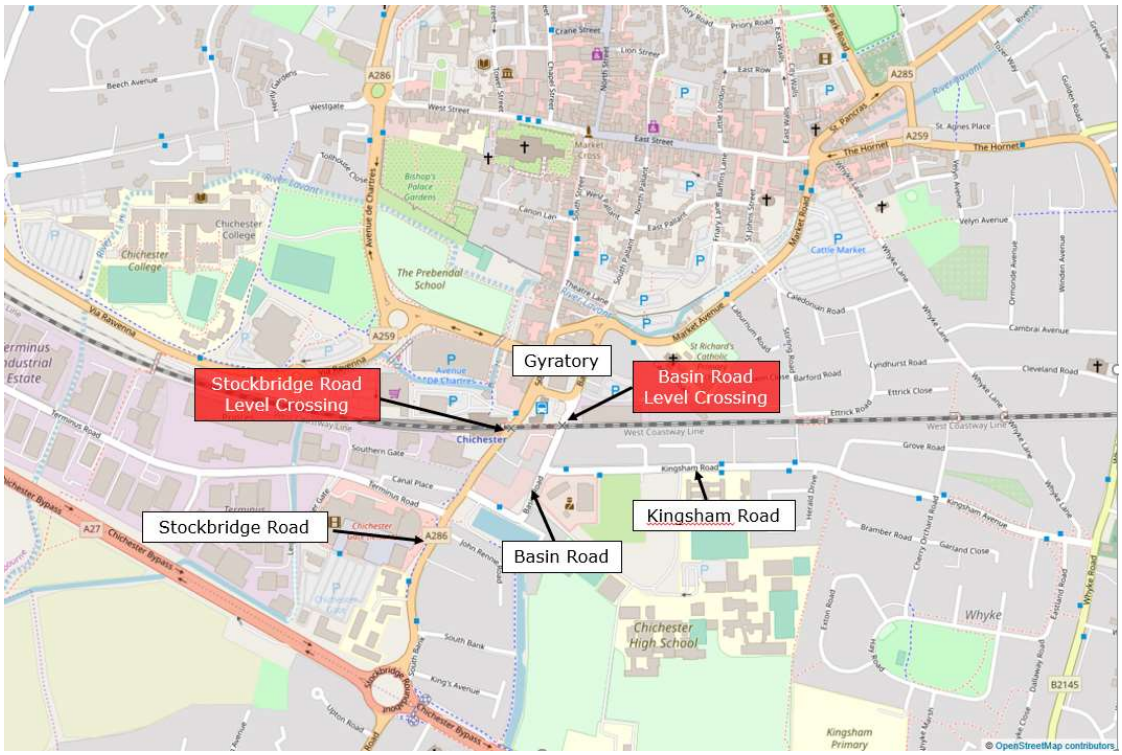


Figure 2: Chichester level crossing locations

1.3 It is important to note that the Neighbourhood Plan alone cannot implement the proposed options. The Option to be taken forward will be decided through agreement by the Highway Authority WSCC, CDC and its development partner and other interested parties. However, public opinion, where there is a clear majority view, may have an influence over the options taken forward for further consideration. The purpose of this paper is therefore to put forward Options NPT1 and NPT2, and to establish public opinion about them.

1.4 A previous version of this paper had set out both of CDC's formerly "preferred options" for road layout changes in the Southern Gateway area as they were presented in CDC's transport appraisal: Option 10 (reduce the gyratory to a single lane) and Option 11 (a new straight road link between Avenue de Chartres and Market Avenue). However, as set out in CDC's 2017 Southern Gateway Masterplan, Option 11 has been entirely discounted, and the single lane gyratory is the only option CDC are currently considering. This document has therefore been amended to reflect this.

The current situation

What's the issue?

2.1 Chichester is a compact city with an attractive, historic city centre, much of which falls within a conservation area. The four main streets, North Street, East Street, South Street and West Street extend out from the central Market Cross. North Street and East Street are mostly pedestrianised, while most of West Street and South Street is open to vehicular traffic. Continuing south from South Street is Southgate which forms part of a gyratory along which is routed the A286, one of the main routes through the city. The railway station and Stockbridge Road level crossing is just south of this.

2.2 The walk between the railway station and the city centre is therefore a poor experience for the pedestrian. It is heavily trafficked and car dominated. The gyratory system which loops traffic around the area and the two level crossings which close for considerable periods of time, multiple times per hour, results in queues of traffic in the city centre throughout the day and gridlock during rush hour, where the problem is compounded by further queueing to join the A27.

2.3 Improvements along the A27 have been sought for many years but no plans for this have yet been finalised. Even once an improved traffic flow along the A27 is achieved, the issue of the queuing traffic at the city centre level crossings will remain, as will the issue of the car dominated feel of the walk between the train station and the city centre. The existing road layout is shown below in figure 3.

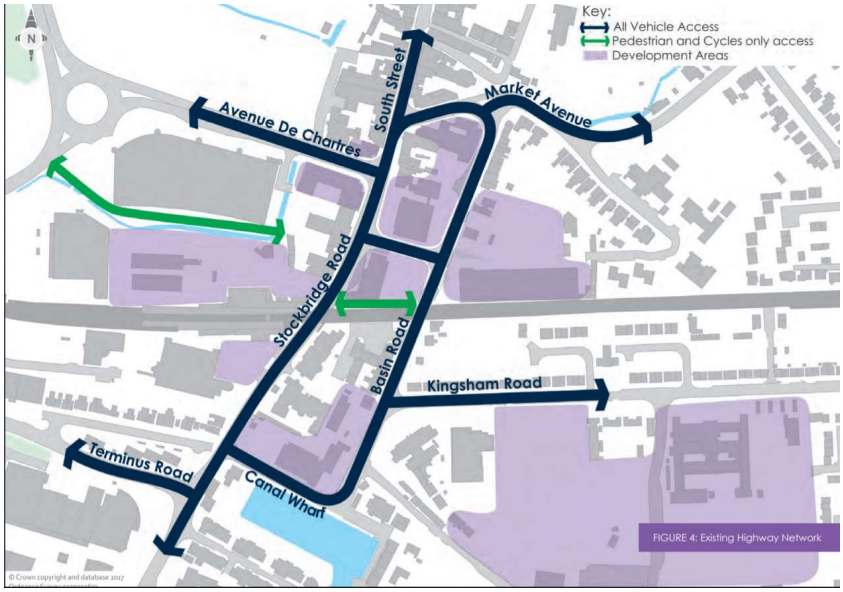


Figure 3: The existing road layout

2.4 The main problems are therefore: Traffic queueing through and into the city centre, the car-dominated pedestrian experience, and the poor quality, road-dominated public realm.

Current issues
A. Traffic queueing through the city centre
B. Car dominated pedestrian experience
C. Poor quality public realm

The CDC option being considered

Southern Gateway Masterplan

3.1 As set out in the CDC Southern Gateway Masterplan, only one remaining option is being considered by CDC to address the traffic and public realm issues in the Southern Gateway area. This is set out below.

CDC Option

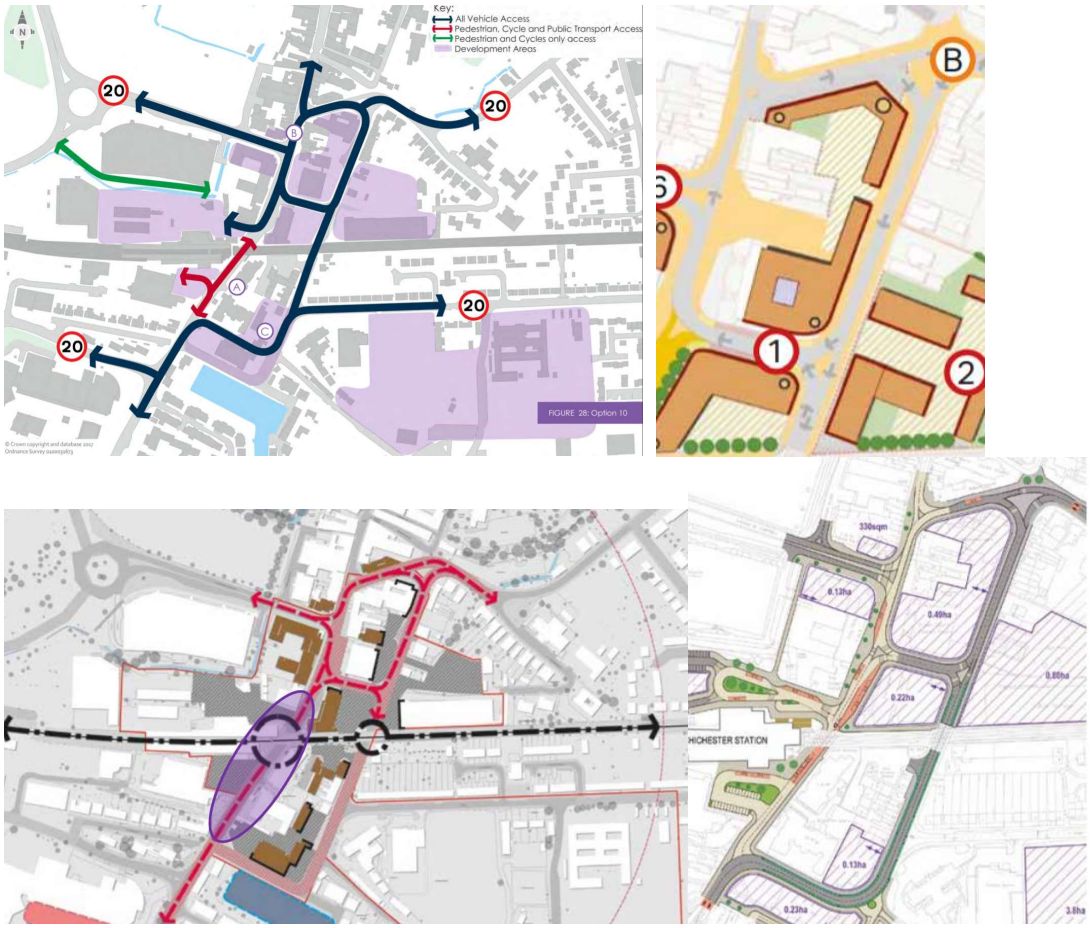


Figure 4: CDC Preferred Option (bottom right). Main vehicular route, dark blue (top left). Gyratory close-up with directional arrows (top right). Red route shows "car dominated" public realm, of which only that in the purple area may be significantly improved through this option (bottom left).

3.2 The CDC option, shown in Figure 4, above, retains both level crossings and the gyratory. South of the railway line it diverts the main route for vehicles on Stockbridge Road to Basin Road via a new road running parallel to the canal but further north, allowing for a pedestrian-only or less-trafficked canal front development site. All north-south traffic is then routed across the

retained Basin Road level crossing, and around the retained gyratory. Access across Stockbridge Road level crossing would be for buses and pedestrians.

3.3 The fundamental problems the road changes are aimed at addressing are:

- The queueing traffic

The traffic around the train station and southern gyratory is largely related to the level crossings and the adjacent gyratory. This option retains the gyratory but removes one of the southern exits (Stockbridge Road) and reduces the Southgate section to one lane. There may be somewhat of a funnelling effect of traffic of traffic as a result if this option, and the problem of queuing traffic appears unlikely to be significantly improved through this option, it may even be made worse.

- The car-dominated pedestrian experience between the train station and city

As shown in figure 4, the area just south of the railway and a small area immediately north of it (between the station and the southern edge of the southern gyratory) would be vastly improved in termed of their current car-dominated feel as a result of this option. However, most of Southgate would remain car-dominated.

- Public realm

A reduction of road space through Southgate to one lane would offer some physical space which could be re-purposed for pedestrian-focussed public ream opportunities. However, the effect may be limited because it involves funnelling all the traffic around a single-lane gyratory with a single southern exit hindered by a level crossing which closes frequently for extended periods of time.

CDC Option

A. Traffic queueing: remains a significant problem
B. Pedestrian experience of car-dominated feel: single lane of traffic, less car-focussed but constant stream of traffic remains.
C. Public Realm: one lane can be repurposed from vehicular to pedestrian.

Alternative approaches

To, not through?

4.1 The aspiration for Chichester's transport is "to, not through". However the CDC option still routes traffic through the centre of the city, through a reduced width gyratory still serving similar amounts of traffic. This does not significantly reduce queueing traffic through and into the city, or make any significant improvement to the public realm.

4.2 The Southern Gateway Masterplan Transport Appraisal reveals that most vehicles using the city centre roads in the southern gateway area are travelling east-west across, or through the city, rather than to it. To be a truly "to, not through" city, we could remove the "through" option by severing the connection between Avenue de Chartres and Market Avenue, preventing drivers cutting through the city and redirecting traffic out of the city centre. It is acknowledged this would have an impact on the A27 as well as other routes through the city and these are outlined in section 5. However, by doing so, a whole section of formerly car-dominated public realm within the heart of the city can be reclaimed and upgraded to a high quality pedestrian-focussed (or pedestrian-only) area, linking the train station to the city centre. Traffic queueing would be significantly reduced by removing all the east-west traffic and re-routing it out of the city centre. Figure 5 shows how this could work, with main vehicular routes in blue (including a new vehicular link to the train station from Avenue de Chartres). Red routes would be either pedestrian only (with servicing and emergency access as per the pedestrianised parts of North and East Street) or could also allow for cycles and/or buses. This option is NPT1 (Neighbourhood Plan transport option 1).

4.3 The same changes could be made with the addition of an underpass at the Basin Road crossing, which would improve traffic flow to the extent that much of the queueing traffic could be avoided altogether. This would be an expensive option, estimated in the region of £15-20m. It would require a pump to operate due to water levels, similar to that which operates at the Chichester College pedestrian underpass. The underpass walls create an opportunity for a living green wall, which would improve air quality and visual amenity. This is option NPT2.

Option NPT1

4.4 Option NPT1 is shown in Figure 5, below. This includes the full closure of Southgate to general traffic as well as the closure of the Stockbridge Road level crossing to general traffic. Traffic could access Chichester Railway station and the adjacent car park and developments from Avenue de Chartres. The Basin Road level crossing remains in use. The red shows pedestrian, cycle and public transport route, however, it is also possible that buses could be excluded from the area to allow for a completely vehicle free, pedestrianised zone.

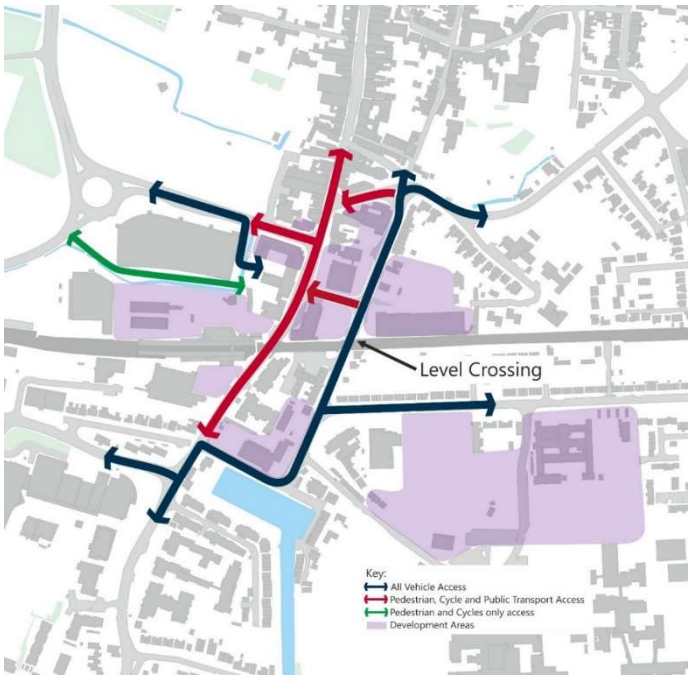


Figure 5: Option NPT1

NPT1 Option

A. Traffic queueing: Vast improvement within city centre itself but queues remain at Basin Road level crossing.
B. Pedestrian experience of car-dominated feel: Vast improvement.
C. Public Realm: Vast area can be repurposed from vehicular to pedestrian (all of Southgate into South Street, if pedestrianised rather than bus-only)

4.5 Important issues to be resolved should this receive sufficient public support to be looked into any further include:

- Should the area where private vehicles are re-routed away from become completely vehicle-free pedestrianised areas (or cycle/pedestrian only), similar to the pedestrianised part of East Street (with restricted time access for servicing only, plus emergency services access), or should buses still be allowed to be routed through the area? Ideally from a pedestrian and public realm perspective, the buses would also be re-routed, so that the area is optimally safe and pleasant, being completely vehicle-free. However, this would only be possible if there are suitable alternative routes and remaining nearby stops for the buses, which many people with limited mobility rely on

to get around. Considerable work would be required on this to establish the options in due course.

- Vehicular access to nearby connecting roads, particularly for residents, for example, the Pallants. Can adequate access be retained for residents, for example by re-arranging one-way routes? Residents will want to see how this would work as a matter of priority, should this idea be taken forward.

Option NPT2

4.6 Option NPT2 is shown in Figure 6, below. This includes all the above detailed NPT1 modifications, as well as changing the level crossing at Basin Road to an underpass.

Figure 6 (right): NPT2

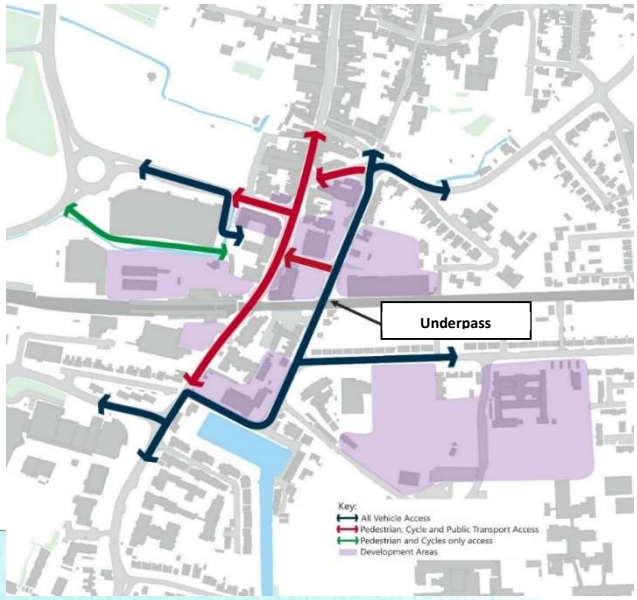


Figure 7 (below): View north from Basin Rd to the NPT2 rail underpass

4.7 The underpass for NPT2 has been assessed by transport consultants Motion to be physically feasible as shown below in figure 8 (extracts from Motion's report). South of the railway line, a new access would be required to be negotiated into the business centre just south of the Basin Road railway crossing; the existing vehicular access could potentially be used to site parking spaces or a new building. Vehicular access to several properties along Basin Road would be severed. Access to Kingsham Road would be retained through re-grading of the street level. The pavement would remain at existing ground level. A pedestrian/cycle path would need to be negotiated along the southern boundary of the railway line to link to the level crossing/bridge at Stockbridge Road. North of the railway line, access to the bus depot redevelopment site would need to be negotiated likely through CDC's car park off Tom Odell Way, and access to the bus station would be moved further north.

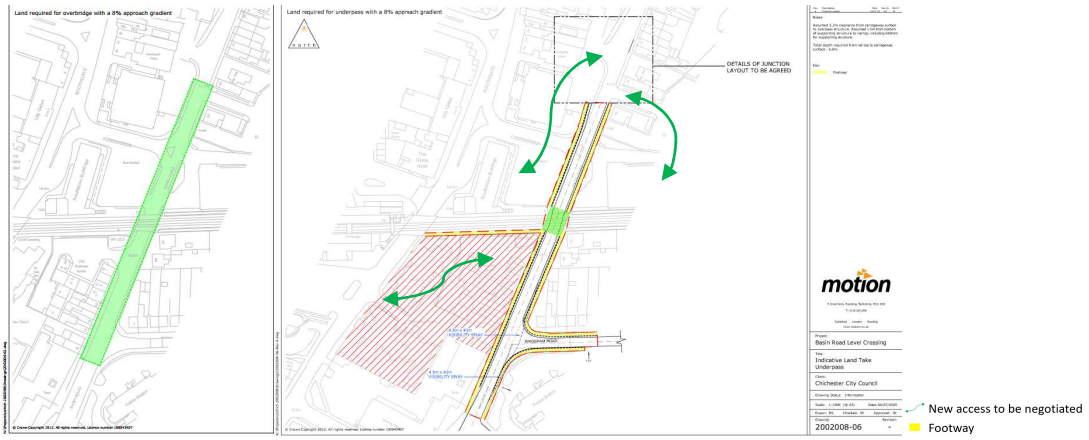


Figure 8: Land required to be re-graded to provide an underpass (left) and further land required to be regraded to maintain vehicular route between Basin Road and Kingsham Road (right). Green arrows show new points of access required to business centre, bus station and bus depot.

4.8 A pump would be required due to ground water levels. A green living wall (examples below in figure 9: St Mary's School, Chiswick and Edgeware Road tube station, London) could be installed along the sides of the underpass to improve air quality and visual amenity. The issues outlined have financial and social implications, and agreements would need to be reached between landowners and interested parties, however, it is not considered that this should preclude the consideration of this option at this stage.

Figure 9: Green living walls example photographs

4.9 Highway design parameters for the underpass are based on guidance in the Design Manual for Roads and Bridges. The main parameters used are:

- 5.3m vertical clearance between carriageway surface and the underside of a structure above the carriageway;
- 1.5m depth between the soffit of the supporting structure to the top of the rail. This allows for structure thickness, ballast and rail height; and
- A maximum road gradient of 8%.

4.10 North of the railway, the underpass, together with the severance of the Avenue de Chartres-Market Road link would allow for an enlarged development plot from the bus station across the disused court buildings, without the division of the plot or loss of the land which would be necessary under the CDC option to retain the gyratory. Tom Odell Way, the entrance to the CDC car park, would require slight re-grading at the entrance to allow continued access.

4.11 NPT1 and NPT2 could encourage walking and cycling by creating a strong pedestrian/cycle link between the city centre, through the Southern Gateway area to the canal, and to Chichester Gate leisure park.

NPT2 Option

A. Traffic queueing: Resolved.
B. Pedestrian experience of car-dominated feel: Vast improvement.
C. Public Realm: Vast area can be repurposed from vehicular to pedestrian

Potential highway impacts

5.1 It should be noted that the highway changes presented here as options NPT1 and NPT2 are primarily a scheme focussed on moving traffic out of the city centre, with the purpose of improving the public realm, reducing air pollution and improving the pedestrian experience of the city centre. The scheme is not primarily aimed at traffic-flow improvement, and there would be a number of traffic flow impacts of the scheme, some routes would see a traffic reduction as a result of the scheme and some would see an increase. Further analysis and detailed solutions to address some of these impacts would be required.

5.2 A study by highways consultants Stantec has been undertaken to assess the traffic impacts. The study uses a traffic modelling computer program developed and run by WSCC, CDC and Stantec. The model has a number of limitations but is the most suitable program available to predict the impacts of route changes within Chichester city. The model takes account of increased traffic anticipated as a result of future developments required under government housing targets and permitted through the planning system. The model assumes that the same number of vehicle journeys will be made regardless of any highway changes, only the routes taken would change. Improving pedestrian experience, cycle or public transport provision may increase decrease vehicle use, however, the model cannot take account of this.

5.3 This model was used in the Southern Gateway transport appraisal to predict the impact of CDC's option, with the results for their remaining preferred option (reducing the gyratory to one lane) shown in figure 10, below.

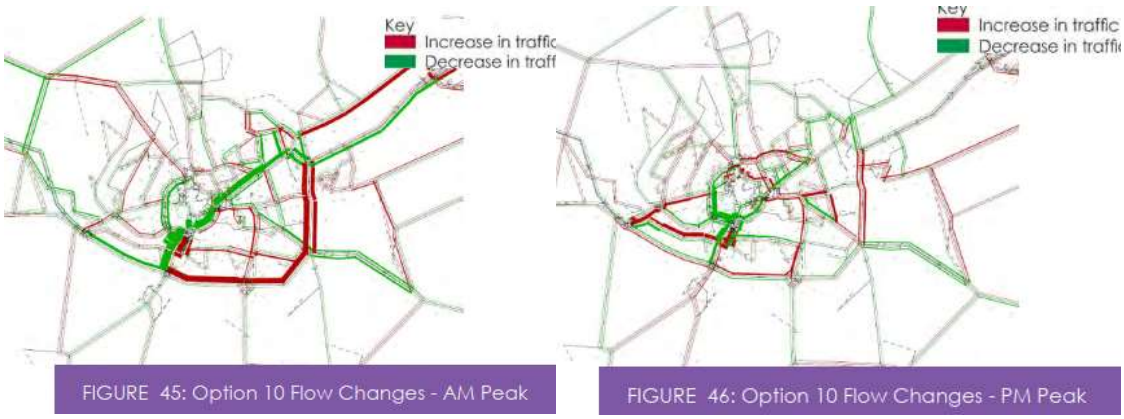


Figure 10: Impacts of the CDC option on peak traffic a.m. (left) and p.m. (right)

5.4 The model takes account of the interruption to the flow of traffic as a result of the closing of the level crossings, but only as per the planned closing times, not actual waiting times. Chichester residents will be aware that the crossings are often closed for extended periods, and further, the queueing traffic often does not clear in one cycle; cars queueing at the

crossings are often stopped by the crossing gates a second (or more) time before being able to cross. Therefore the full impact of the level crossings are not reflected by the model, and it is evident that it doesn't accurately reflect the experience of Chichester residents. The timing inputs for the model could be updated by surveying traffic, particularly at peak times when the difference between planned closing times and actual traffic waiting times is the most disparate. It is noted that this may not be possible to accurately assess while traffic remains affected by covid-19 impacts.

5.5 With those limitations made clear, the following is an indication from the traffic modelling computer program of the traffic impacts of NPT1 and NPT2. The green indicates where traffic would decrease as a result of drivers' route changes, and the red indicates where traffic would increase. Note: this diagram does not show where there is capacity for traffic increase, where there are existing traffic problems, or indicate acceptability of otherwise of the changes (this is discussed later in this paper), nor does it indicate times sitting or queueing traffic may occupy a space; it is simply an indication of increase or decrease in the number of vehicles passing that route.

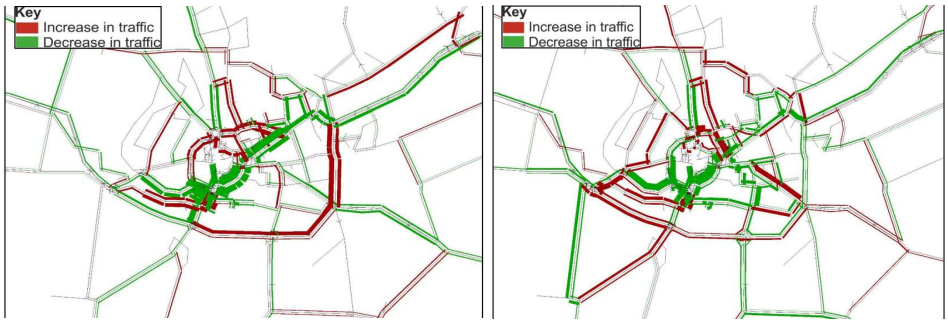


Figure 11: NPT1 impacts on the a.m. peak (left) and p.m. peak (right) traffic

Figure 12: NPT2 impacts on the a.m. peak (left) and p.m. peak (right) traffic

5.6 The modelling, shown above, indicates a significant decrease in traffic movements through the city centre, and traffic reduction along Via Ravenna, Lavant Road, Westhampnett Road. Traffic increases are seen along Orchard Street, Parklands Road and Terminus Road. An increase in traffic on the A27 to some extent is a desired result, because ideally for city residents in terms

of air quality and city traffic congestion, traffic should use the A27 and avoid routing through the city where possible.

5.7 The Stantec study provides limited useful information on traffic times at this stage, and further work based on actual driver experience, behaviour and real waiting times is needed if any new options are to be meaningfully considered. The model predicts journey time increases for most journeys through the city for all options. However, this is based on the five journeys set out below (figure 13), on the basis that each of these is equally likely to be undertaken by drivers and represents approximately one fifth of journeys undertaken in the city. The example journeys used demonstrate a number of the problems outlined in the above paragraphs. Route 1 is directly across the city centre, from one side of option NPT1 and NPT2's pedestrianised area to the other, resulting in a hugely increased journey time according to the model, whereas driving to and from the spots shown (particularly if pedestrianised) is likely to be very rare. This results in a significantly distorted report of the options' impact on traffic times as experienced on typical journeys. Route 3 measures the time to cut across the city rather than using the A27 which would be more appropriate for their journey and more desirable in terms of residents' experiences of congestion and air quality; so this is a journey to be discouraged rather than hastened ideally. The journeys we want to measure are ones our residents are actually taking, for example from homes to shops and employment places in the morning, and from places of employment to homes and to the A27 in the afternoon, taking into account how long they actually queue for level crossings and other junctions.

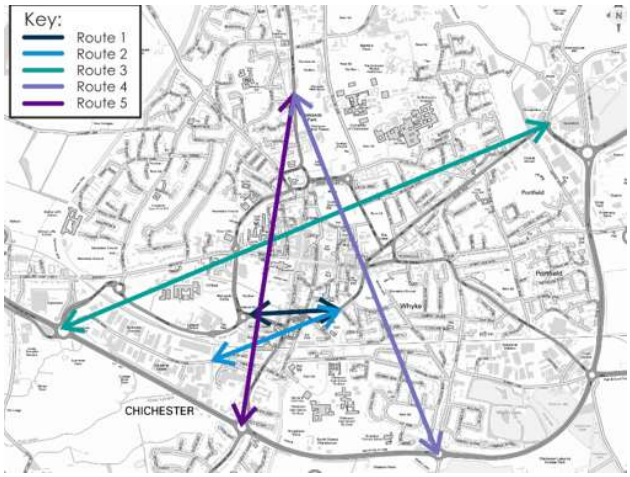


Figure 13: The current basis of journey time calculations (requires refinement)

5.8 The model indicates that options NPT1 and NPT2 would have some impact on junctions, requiring vehicle numbers to be reduced and/or improvements to the junctions to be made. The relevant junctions are shown on figure 15, below, and include Portfield and Fishbourne

roundabouts on the A27, which has required improvement works for a number of years, as well as three junctions within Chichester city:

- Oaklands Way/Spitalfield Lane Roundabout (PM Peak): Vehicle count would be 83% of capacity with a "do nothing" scenario, but would increase to 103% (over capacity) for NPT1/NPT2 with vehicle wait times increasing from 20 seconds to 80 seconds.

- Cathedral Way/Via Ravenna Roundabout (AM Peak): This roundabout is already over capacity and similarly would remain over.

- Terminus Road/Stockbridge Road: The junction (PM Peak): The junction would increase from 87% to 105% capacity, with the model predicting delays from 26 seconds to 112 seconds. However, residents are aware waiting times here are significantly longer due to queues from the level crossing, which if eliminated (through NPT2's underpass) would result in reduced waiting times being experienced by drivers, even if "increased" to 112 seconds as a result of vehicle numbers.

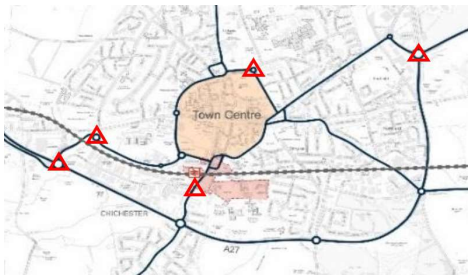


Figure 14: Junction impacts

5.9 Should options NPT1 or NPT2 be taken forward, further detailed traffic modelling work would need to be undertaken, and the details of any necessary junction improvement or other works would need to be established in due course. At this stage, we are looking to establish whether or not there is sufficient public support to continue looking into options NPT1 and NPT2 at all as possibilities.

What happens now?

Further consultation will take place shortly to establish whether there is sufficient public support to continue looking into the new options as possibilities.

In the meantime, any comments can be forwarded to neighbourhood.plan@chichester.gov.uk.