A28 Island Road/A291 Sturry Hill Junction Improvements (part of this application)

Details of the proposed alterations to the A28 Island Road/A291 Sturry Hill junction are shown and described in Figure 39.



Key observations;

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- All traffic movements will be signal controlled and linked to the operation of the Sturry crossing
- Traffic w/b on the A28 will be encouraged by signing to travel northbound on to the A291 to access the Link Road and the viaduct to cross over the railway as an alternative to the level crossing
- -Traffic forecasts predict a 55-60% reduction in traffic on the level crossing during peak hours
- Signalised pedestrian crossings provide improved and safer crossing facilities offering good access to the station
- Vehicular access to the station is maintained
- A28 w/b traffic continues unimpeded when the level crossing barriers are down, provided local traffic waiting at the crossing does not back up into the new junction.
- Traffic s/b on the A291 to head e/b on the A28 will also continue unimpeded whilst the level crossing barriers are down provided local traffic waiting at the crossing does not back up into the new junction.

Figure 39: Proposed layout for the A28/A291 junction

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Preferred option selection process

In setting the requirements to be met for the junction alterations, the key objective was to reduce the amount of traffic crossing the level crossing by encouraging use of the new Link Road and thereby improving its operational safety.

Additionally, the opportunity exists to improve aspects of the existing junction that are not ideal, including;

- reducing congestion when the level crossing barriers are down
- improving its layout to become more efficient
- provide better, more formal and safer pedestrian facilities

Three competing alternative junction layouts emerged following a quantitative assessment of key effects, including;

- Amount of potential traffic reassignment
- Reduction of traffic on the level crossing
- Impact on local accessibility and effects (Community severance/noise/air quality)
- Junction performance
- Congestion effects with the level crossing barriers down
- Pedestrian/cyclist benefits
- Improving journey time reliability, including buses
- Access to station forecourt
- Road safety
- Impact on Network Rail operations

The alternatives took the form of two signal controlled options and one give-way priority option, each including for some prohibited movement as illustrated below. These options were presented for comment and discussion at the public consultation event (see Section 8), where respondents were asked if they had a preference.

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Concerns over traffic re-routing through the local estate roads and the



impact on accessibility to local facilities were the main points for debate. It was evident that there was no clear and outright preference between the options although one option did emerge as the most preferred amongst residents and other key stakeholders and was accordingly selected. Following concerns raised by the planning committee in refusing the application CA/19/904(KCC/CA/0091/2019) in March 2021. This has been amended as Figure 39 to allow all traffic movements giving a greater emphasis on local traffic but still balancing local needs, congestion relief and reduced traffic on the level crossing.

8 Public Consultation

A public consultation exercise was held to present and gather feedback on the SLR proposals over a 6-week period from 26 July to 6 September 2017. The consultation offered the opportunity to open a dialogue with stakeholder organisations and the public so their comments and concerns could be incorporated into the on-going work to finalise the scheme design.

Details of the proposals were available to view and download online with feedback obtained via a questionnaire which asked for views on the road layout, its features and its impact on the surrounding environment including suggestions for improvement. In total, 116 questionnaires were received.

Three local exhibition events were also held with over 250 people attending. KCC also hosted a virtual exhibition online which received 928 views and 170 comments.

The analysis and findings of the feedback to the public consultation are discussed in detail within the 'Consultation Report' provided as part of this application as a supporting document. In addition, the report summarises the consultation process and the engagement and promotional activities. The report also states how the feedback has been used to update and enhance the proposal.

Overall, there is generally good support for the SLR in the wider surroundings however locally there is an equal mix of opinion. Key reasons for support were; reduced congestion through Sturry, improved journey times and the opportunity to avoid the Sturry level crossing. Wider congestion and increased air pollution were the main concerns of consultees not in support of the SLR, many of whom took the view that the SLR would not reduce congestion but just move it to another area.

Comments on the layout of the SLR proposals focused heavily on pedestrian and cycle provisions and if the balance between all the competing transports demands were equitable. Examples included suggestions for additional and wider cycle routes, segregated cycle/pedestrian provisions and requests for more signal controlled crossings.

Representations from organisations including Sturry, Chestfield and Westbere Parish Councils, CPRE (Campaign to Protect Rural England), SPOKES East Kent Cycling Campaign and Broad Oak Preservation Society, although not stating any clear support or objection to the SLR proposals, made several comments in relation to their specific area of interest with suggestions for improvement. Many of these were cycling and pedestrian related.

The proposed options for the A28/A291 junction attracted much local interest and were for many the key focal point of the consultation. The views and preferences given contributed strongly to the final decision on the junction choice.

In response to the suggestions and comments made during the Consultation, the scheme design was updated including;

- Shared use footways widened (additional 0.5m)
- Additional shared use footway included (Shalloak Link, south)
- Provision of an additional signal controlled pedestrian crossing
- Setting back bus stops into laybys where practicable
- Relocation of attenuation pond at new A28 roundabout

9 Indicative Construction Methodology

To understand the likely construction issues that would need to be addressed an indicative construction methodology has been prepared.

The nature of the works involved with the scheme includes a high volume of earthworks materials imported and removed from the site, deliveries of construction materials for both road and bridge works and delivery of new steel beams and concrete and steel for the viaduct. It is estimated that this would generate on average up to fifty heavy goods vehicle movements per day on both the A291 and A28 accessing the site potentially for up to 6 months depending on the final construction phasing.

The following outlines how construction of the scheme might be undertaken including mitigation to minimise its impact on the surrounding environment and the local road network. The actual methodology will be as determined by the appointed contractor and any planning conditions and the specific requirements of KCC. It is expected that KCC will require the contractor to implement an approved Code of Construction Practice and Environmental Management Plan.

Programme/Phasing

Construction from the A28 Sturry Road over the railway up to and including the western roundabout is expected to be undertaken by KCC. The remaining section to the north of the railway is expected to be constructed as part of the housing development phases. At this stage, the precise phasing of the works is unknown and dependent on funding timescales and progress of the new development. Each section of works could however be expected to be concurrent to some degree. Construction of the KCC section is anticipated to be for duration of 18 months with completion in 2024.

Access for construction traffic

Access into and out of the site is limited to three locations where the SLR connects with the A291 Sturry Hill, on A28 Sturry Road and Shalloak Road. Movements of plant and deliveries of materials could potentially have a major effect on traffic flows along the A28 Sturry Road and generally around the Canterbury area and through Sturry.

To manage and control the impact on traffic flows the following requirements could be implemented with respect to construction traffic movements into and out of the site:

- Delivery and removal of earthworks materials off peak 09:30 to 15:30 hours daytime during the week with controlled access using 3-way temporary manually controlled traffic signals on both the A291 Sturry Hill and A28 Sturry Road. During off peak times the flow of construction traffic out of the site accesses should be controlled further by 'stacking' construction vehicles and not activating the signals for every individual vehicle to exit. It is considered that daytime construction traffic movements during peak times at the weekend are acceptable.
- There should be no access for construction traffic at the Shalloak Road/Broad Oak Crossing end of the site to the west.
- For the purposes of access to carry out viaduct construction activities it may be necessary to provide separate vehicular access points from the A28 Sturry Road to gain access between tributaries of the Great Stour and railway line. These access points will need to be agreed with landowners and suitable temporary haul route construction installed. The control of these access points will be as above.

- The most suitable route to and from the site access locations for construction deliveries and removal of materials through Canterbury City is using the A2 Dover Road, A2050/A290 Rheims Way, A28 Pin Hill/Upper Bridge Street/Lower Bridge Street/Broad Street/Military Road/Tourtel Road. The use of other routes into the City Centre are considered unsuitable due to environmental factors, residential disturbance and potential traffic congestion. Measures to control construction vehicle movements would need to be implemented.
- The nature of the site and construction traffic within it has the potential to deposit detritus onto the public highway. At each vehicular access onto the highway there would need to be a means of effectively cleaning construction plant and vehicles prior to exiting onto the public highway. Methods to be considered are wheel washes, scrubbers and hardened bound run off areas in advance of the entry point to the public highway. There should also be mechanised road sweeping capability onsite that can be deployed immediately if a problem with road cleanliness arises.
- Where possessions are required of the railway line these may be restricted to overnight (or Sundays). On these occasions, it may be necessary for construction traffic to access the site outside normal working hours and there should be an enhanced level of public notification and engagement carried out to surrounding properties to communicate this.
- At certain times of the year there are possible traffic management embargos put in place. For the city of Canterbury this would generally be during the Christmas, New Year and

Easter shopping period. During any periods the highway should be free of any traffic management affecting the flow of traffic.

General Construction Activities

Key areas of construction are discussed below.

A28 Sturry Road

To the south end where the new SLR connects to the A28 Sturry Road there is a 3-arm (plus development access) roundabout proposed to be constructed. The roundabout is generally at grade with most of the roundabout able to be constructed off to the north side of the existing A28 Sturry Road. There is however a need to construct carriageway and associated infrastructure to tie in to the existing road. Much of these works are such that their installation could not be achieved over relatively short term overnight road closures. The consequence of this is that construction of these tie-ins could have a potential adverse effect on the flow of traffic along the A28 if not managed correctly.

Design constraints prevent the roundabout being constructed fully off line so consideration to mitigate the effects on the public highway would include:

- Provision of temporary carriageway construction to the south side of the existing A28
- Provision of temporary construction to the north side of the existing A28 in conjunction with utilising the new roundabout construction
- Limiting A28 road closures to overnight only or potentially weekends
- Avoiding underground utility service diversions if possible in favour of protection measures only

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- Any traffic signal control required should be off peak and the signals manually controlled
- Designing infrastructure requirements at the tie-ins to limit such works that could be installed quickly and effectively under traffic management constraints

A291 Sturry Hill

The proposals include for the existing Sturry Hill just north of Old Vicarage Gardens being diverted to a new 4-arm roundabout to the west. In carrying out the construction of the tie-ins to the existing road the relevant 'bullet items' above for the A28 Sturry Road should be considered.

Link Road to the North of Railway Line

Construction of the new earthworks embankment and bridge structure directly to the north of the existing railway can, realistically, only be achieved by the installation of a haul route from the A291. Ideally, this haul route could be formed by the installation of the permanent works to the new carriageway of the link road in addition to some temporary works to limit potential damage to the permanent works by construction traffic. This will need to be considered in the early stages of the planning of the construction phases.

Viaduct Structure

Due to poor ground conditions within the existing flood plain the structure requires piled foundations. To install these foundations heavy piling equipment will be required. This will likely require the installation of temporary piling pads to spread any loading. Temporary works will also be required so that mobile cranes can be sited to lift the steel beams that form part of the viaduct deck. To gain access to these locations at the viaduct it is likely that temporary haul routes will be required to be constructed in between the Great Stour tributaries and the Great Stour and railway line. Further investigation could be carried out to assess whether railway cranes could be employed under a possession of the railway track so that access can be gained directly adjacent to the north end of the viaduct.

The following construction sequence would be staged along the length of the viaduct and therefore run congruently to save time:

- excavate to base of pile cap elevation
- pile foundations
- cast pile cap
- cast abutment/columns
- backfill as necessary
- cast capping beams
- install bearings and temporarily fix guided/free bearings
- assemble pre-fabricated steel girders with permanent and temporary formwork for deck casting
- lift beams into position starting with pier section then abutment/span sections
- bolt together girder sections, once girders are connect directly to the permanent fixed bearing the temporary fixings can be released
- cast the deck and coping in segments

- install parapets
- remove temporary formwork
- lay carriageway and footway surfacing with provisional ducts for future services
- finishing works and demobilisation.

Site Compound

A potential location for the site compound is on the adjacent area of undeveloped land to the west of the new A28 roundabout which has been set aside for employment use in the Local Plan. This land has the benefit of enabling direct access from the A28 and ultimately being served by the new access spur on the new roundabout. The land is currently used for grazing only and unlikely to be subjected to flooding as it lies outside the 1% (1 in 100 year) flood risk extent. The land is also remote from large groups of residential properties with only a small number of isolated properties in the vicinity.