

COMMENTS ON THE APPLICANT'S DEADLINE 6 SUBMISSIONS

DEADLINE 7

IP Ref: 20018303

**A63 Castle Street Improvement Scheme
HULL
TR010016**



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1. COMMENTS ON THE APPLICANT'S REVIEW OF CENTRAL RESERVATION BARRIER OPTIONS

HCC have considered the submitted Review of Central Barrier Options (HE514508-ARP-HRR-S0_ML-RP-CH-000001 P05 August 2019). Whilst the report contains useful information not previously seen by HCC and provides a perspective of the issues the Applicant has considered, there are a number of areas which HCC would wish to highlight and comment upon below, in accordance with paragraph numbering within the Applicant's Review document.

The Review document refers to TD 19/06 of DMRB: Requirements for Road Restraint Systems. It states that the Standard is intended for situations with speed limits of 50mph or above, and consequently the risk assessment evaluation methodology/tool (RRRAP) has not been developed for the situation on Castle Street. In such scenarios, a separate risk assessment is recommended (and has been produced), which the Standard advises should use the guidance and technical requirements contained within TD 19/06 to aid the decision making process.

Executive Summary

It is not correct to suggest that the matter of concern with a CCRB has only been raised at the Issue Specific Hearings, nor as part of the DCO process only, as HCC have raised this concern consistently for a number of years during discussions over this and previous draft iterations of the scheme, and expressed those concerns directly in response to a Highways England formal consultation exercise as early as September 2013.

The Executive Summary describes a safety imperative for a CCRB within the underpass section of the road, and thereby justifies limiting the review to the Old Town Conservation Area. This does not explain why the extent of the improvement scheme to the west of the underpass has been excluded from the review.

In the final paragraph it is stated that the CCRB outperforms the other two options on all criteria except aesthetics and deterring pedestrians. What it does not say is whether the other options would still be considered, on balance, to be suitable for the particular circumstances of the scheme. For example, the consideration of Risk (TD19/06 RRRAP) is categorised into three areas; Unacceptable, Tolerable and Broadly Acceptable. The report has not provided an insight of where the other options would sit within that grading. In the presentation of the report, it is not apparent how risk category has been determined; Higher Priority/Medium

Priority/Lower Priority. The determination of this could be influenced, for example, by reference to the assessment of the accident records, such as cross referencing the national KSI accident rates for comparable routes against the recorded accident rates for the section of Castle Street under consideration. Such a methodology would highlight the category of risk and guide the level of intervention (central reserve design) that may be considered appropriate.

In the same paragraph, the view is expressed that the route will change. HCC understand and accept the benefits envisaged in overall network performance. It is also acknowledged that the benefits of the scheme include for a reduction in accidents over the 60 year design horizon. Given the anticipated increased consistency and free flow of traffic along the corridor, within the 40mph speed limit, HCC are unclear as to the view expressed in the report that changing the barrier design/type would introduce unnecessary risk to road users or operatives in the future.

1.1 This appears to indicate that all three options are suitable for the situation.

1.3 The suggestion of a concern that speeds will exceed the posted limit is not understood.

It is not clear on what basis 12% HGVs has been graded as 'high', or what assessment was undertaken to determine that only CCRB would provide, for example, adequate safety for maintenance contractors.

The purpose of a Road Safety Audit is understood to be to evaluate the proposed scheme in safety terms, with an emphasis on making it an optimum design. The process is not usually intended to select particular elements of a road scheme design, such as, in this instance, a central reservation treatment.

As highlighted above, whilst the Council have indeed raised its objection to the proposed CSB during the DCO procedure, the matter was raised much earlier. As documented through the DCO process, HCC's objection to the concrete barrier extends beyond the Old Town Conservation Area to the remainder of the city centre streetscape, including the settings of a number of listed and locally listed buildings.

The May 2019 Technical Report has not been provided, only a summary at Appendix B. It is apparent from the summary that dialogue has been internal only, within and between Highways England and its consultants. This includes confirmation, in April 2019, that TD19/06 does not apply rigidly to the scheme. The selection appears to be

based upon consultation with the Area Maintenance Contractor, with reference to unspecified HE Policy, with CCRB being the preferred solution from a maintenance perspective. It is notable that relative frequency of maintenance appears foremost in stated concerns.

1.4 The need for the scheme to incorporate appropriate protection for the pier at chainage 1+510, is accepted. However, HCC question whether the minimum length of barrier quoted at 45m is in accordance with the guidance within Clause 3.26 to TD19/06. Clause 3.28 to the latter, quoted within this part of the Review document, highlights the ability to provide the barrier from more than a single type of product.

2.1 CCRB is quoted as having a Containment level of H1, a High level category, normally associated with environments where speed limits are set at 50mph and above.

2.2 No information has been presented to clarify that Trief kerbs are not approved on HE networks. In recent dialogue the use of Trief kerbs on another road in Liverpool within the Strategic Road Network was provided as an example. In addition the Council have identified Trief in situ on the A184 (T) in Newcastle, north of Gateshead Metro Station.

The text does not explain the safety credentials of the Trief kerb system, which is designed as a passive system to contain and re-direct vehicles.

HCC, of course, respect the engineering judgement expressed by the Applicant's SES team. However, the reference to the likelihood of inducing spinning, high impact angles, or roll over, is not supported by any evidence.

Trief is categorised as having N1 (Normal) Containment level, which is deemed appropriate for roads with a 40mph limit.

It should be noted that the pedestrian guardrail, being mounted on top of a Trief kerb, would represent a higher barrier to deter pedestrians, and that the CCRB is deemed to have lower deterrence value in any event. Reference to anecdotal evidence of pedestrians not being deterred from climbing the existing guardrail appears to contradict assertions elsewhere in the document to the effect that the improved footbridges will negate such a risk in the context of the CCRB poorer performance on pedestrian safety.

3.1 Safety Risk Assessment

HCC would make the following comments on the contents of Appendix C:

4 - The justification for the scoring for Motorcyclist collision for Trief/Guardrail is unclear. The product is designed specifically to act as a warning to road users, with the initial kerb check and redirection component integral to the design. In the opinion of HCC, further analysis into the likelihood of impact is warranted, as the Response/Control Measure comment appears to suggest.

6 - CSB: HCC query whether the Response/Control measure responds to the Risk. The assumption/monitoring comment does not follow.

11 – Trief/Guardrail: HCC highlight that the overall height of the kerb and guardrail would be IRO 1.5m, as compared to 0.9m CSB; HCC consider that the residual Risk score for the former should be less than CSB, as the additional height has the potential to deter pedestrians crossing the central reserve.

14- Trief/Guardrail: HCC query why the Response/Control Measure (same as CCRB) do not result in the same Risk score.

18- Trief/Guardrail: Is this not a duplication of Risk 1 which included reference to the speed limit and reduced likelihood arising.

HCC note that for CCRB, no Risk has been listed for the potential of Roll Over incidents where, due to the rigidity of high (H rated) containment barriers, there is a general tendency for some vehicles with higher centres of gravity (such as HGVs) to roll over the barrier; this being referenced in the 2007 Williams report referred to in this paper.

3.2 Construction Programme

HCC note that Options 2 & 3 are indicated to have only a slight impact on the construction programme.

3.3 High Level Cost Estimate

HCC note that the Williams 2007 paper referenced did not review whole life costs for Trief/Pedestrian guardrail.

HCC would comment that whilst in general terms the Wilson 20017 paper provides helpful information, the context of the report should be recognised, in that it is focused upon analysis undertaken along a section of M25, a very different environment to that of Castle Street. Secondly, and quite importantly, at the end of the paper it makes some key recommendations including the need for further examination before conclusions regarding the suitability of the increasing containment capability of safety barriers can be made.

3.4 Network Performance

HCC note the AMC comment that whilst CCRB is the preferred option (whole life cost) it may not be appropriate in a semi urban environment such as Castle Street. HCC would point out that the Castle Street environment is not semi-urban but truly urban. It runs through the historic city centre of one of the top twenty most populous urban areas in England, as identified by the ONS.

In addition, the comments highlight the risk of pedestrians, the most vulnerable road users, stepping over the CCRB due to its relatively low height.

The comment relating to “Trief kerbs not being approved on HE networks” has not evidenced by any supporting documentation or policy references. The Applicant’s SES, refer to “reservations” with Trief kerb – not that it is not permitted. The opinion expressed that such kerbs are likely to induce spinning, high impact angles, or launch vehicles has not been substantiated by any evidence.

HCC note the concern regarding cross over accidents, and whilst caution should be applied when reference is made to the Williams 2007 report, highlights that that paper refers to the increase in severity indices anticipated with impacts with higher containment barriers (such as a CCRB) and in addition the risk of roll over of high sided vehicles. The report does highlight that the number of cross over accidents is less than that of rebound or retained and this is evident in the accident data for Castle Street.

3.5 Accident Statistics

In HCC's opinion, the high level review of cross over accidents (based on similar roads country wide) should be of limited weight, in the absence of the supporting documentation being provided. However HCC does consider that the accident data for Castle Street is of key relevance in forming a balanced view on the form of central reserve design and appropriate containment level.

The report references 3 cross over accidents occurring since 2009, on Castle Street. Based upon an approximate calculation of a two way AADT of 50,000 x 365 x 10 years, equals 182,500,000 vehicle journeys along this section of Castle Street.

In terms of the basic detail of the 3 accidents, all involved a single vehicle (2 x car, 1 van/goods mgw 3.5T); severity was serious/slight/slight.

As commented above (Executive Summary) the performance of the route is expected to improve as a result of the scheme, although the speed limit remains as current at 40mph. The scheme is predicted to reduce the number of accidents and casualties.

4 Assessment Matrix

Based upon the above comments the Council would question some of the criteria scoring applied within the matrix, and its value from objectivity perspective as a consequence. For example, the score of 1.00 for CSB, when some safety concerns are referenced in the Williams 2007 paper. Similarly, why Trief/Guardrail is scored 0.00 for Network Performance without explanation, and also the substantial score difference in Maintenance Safety, when safe ways of undertaking such activities are well-established and have to be complied with by law.

5 Recommendations

Whilst the Council would question the conclusion reached in the report, in many respects the difference between CCRB and Trief/Guardrail (in most categories) is shown to be quite small and indeed the conclusion does not appear to rule out Option 2. The weakness in the presentation/scoring, on whole life cost (Williams 2007) is highlighted above. It appears that no assessment has been made with regards to the likely maintenance requirements for Option 2. It is assumed that data will be held by the Applicant covering the costs of maintaining the current kerbed central island and guard railing.

The Council would contend the view presented in the report on aesthetics. The Council has explained its objection to the use of a central concrete barrier, a view based on the opinion of Town Planning, Heritage Conservation, Urban Design, Economic Development and Regeneration, and Local Highway Authority staff within the organisation.

The view expressed that transitions between a CCRB and other options will be necessary is not disputed, but will be required with Option 1 where it transitions with the current central barrier, to both the west and east (which are not concrete). Transition between central barriers is a widespread occurrence along the SRN and should be capable of being suitably addressed.

HCC would query whether the Road Safety Audit team would have within its remit, the role of approving/accepting a component of the scheme design.

2. COMMENTS ON THE APPLICANT'S HIGH STREET UNDERPASS SKETCHBOOK.

HCC welcomes the submission of the updated Flood Risk Assessment and related Technical Note. It is noted that the revised document makes specific reference to the proposed presence of a Vertical Concrete Barrier along the centre of the Trunk Road, and models the effect of the same under various scenarios. The ExA will be aware of recent and on-going discussions over the design of the central barrier.

3. RESPONSE TO APPLICANT'S COMMENTS ON DEADLINE 5 SUBMISSIONS.

2.5.1. Earl de Grey public house

If the Applicant's primary concern is reliance on the S.106 agreement for the partial demolition of the Earl de Grey, in order to facilitate the implementation of the scheme in a way which maintains two lanes of traffic, then it should be possible to secure the dismantling and storage of the listed building under the DCO whilst relying upon the S.106 Agreement to facilitate the relocation, thereby mitigating the harm caused to the designated heritage asset.

Any Section 106 agreement to which development proposals are subject carries with it risk of parties thereto being unable to discharge obligations in the event of unforeseen circumstances. This does not prevent their widespread utilisation, including in connection with Nationally Significant Infrastructure Projects.

2.7.1. Central Reservation Barrier

HCC appreciates and values the positive revisions made by the Applicant, both prior to and during the DCO process to date. It also true, however, to note that some longstanding concerns over particular aspects of the scheme, such as the central reservation barrier, have not been amended or justified to the satisfaction of HCC. As relevant local authority, HCC will continue to advocate what it considers to be, on the basis of professional opinion and local knowledge, optimal reasonable solutions.

The Council note in the Applicant's response that the preferred solution remains as Concrete Central Reservation Barrier. The Applicant has suggested that they (as Client) are not in a position to amend a solution recommended by the designer, as this would be contrary to Construction (Design and Management) Regulations 2015. Whilst the roles of each respective party within the CDM regulations are clearly defined, it is entirely within the remit of the Applicant to challenge components of the design.

HCC have provided detailed comments on the Applicant's submitted review document on the subject of the central reserve barrier under Section 1 of this submission. HCC maintains its position that the Concrete Central Reserve Barrier proposed is an inappropriate design solution for the route, and that fully balanced, reasoned, and evidenced justification for the exclusion of identified alternatives has yet to be provided. For these reasons, and in the absence of any revision to this aspect of the submission, HCC considers that details of the scale, design, and materials of the central reserve barrier should be secured and consulted upon as per Requirement 12 to the dDCO.

2.7.2. Myton underpass design

HCC welcomes the submission of the High Street Underpass Sketchbook (Draft 1 August 2019), and on review, has the following comments to make:

The contents of the base scheme provide an indication that the concerns previously highlighted throughout the DCO process by the Council and HAIG are recognised by the Applicant, with a number of key measures now indicated, namely:

- Improved accessibility (dropped crossings/reduced gradients)
- Provision of enhanced street lighting and urban lighting along the route
- Provision of CCTV
- Provision of new low maintenance landscaping

The sketchbook provides a helpful first impression of how such improvements could improve the route and seek to address stated concerns. The Applicant confirms agreement to use surface materials along the route and within the underpass which would represent an uplift over the current specification and be in alignment with the wider public realm improvements which have recently been implemented by HCC. In addition, the Applicant's comments and sketchbook indicate that lighting would be a key component of a comprehensive improvement scheme, being both functional in terms of safety and crime prevention, and having the potential to provide an uplift in the quality of the underpass environment, seeking to address the unwelcoming nature and negative perceptions of the same. The different concepts presented, showing varied and creative use of such lighting is supported by HCC. HCC also notes that CCTV is now included as a component of the Applicant's improvement scheme, and recognises this as a positive development in the development of the proposals.

Similarly, the Opportunities pages helpfully and interestingly explore and suggest ways in which spaces created might be used.

Whilst the indicated lighting proposals do include the area of the underpass to the east of High Street, this does not appear to be included in the other elements, such as the surfacing materials and footway improvements. HCC seek a comprehensive improvement to the full area of the underpass, as this sits within the red line boundary and without will generate a miss-match of quality in environment and materials, and encourage unnecessary pedestrian movements across the highway.

HCC considers that the document represents positive progress and intention, and a welcome indication of the type of improvements which it would wish to see delivered along this critical alternative NMU route. However, given this significance, and the document's initial status, HCC continue to advocate the inclusion of the previously proposed requirement within the dDCO to secure the necessary design detail, and formal consultation on the same.

2.8.1. Cycle routes

HCC seek to reaffirm comments made at Deadline 6, as the Applicant's comments do not address any of the concerns raised, and would result in an unacceptable outcome for non-motorised users, cyclists in particular.

However, HCC wishes to advise the ExA that a meeting was held on 6th September, between HCC, Highways England, their consultants Arup, and Balfour Beatty, with the purpose of exploring the potential to improve currently proposed provision within the submission for NMU's, in particular the level of service afforded for cycling, considering both the north and south side of Castle Street along its entire length from west to east.

The meeting proved to be very constructive, enabling HCC to relay its concerns and for the Applicant to elaborate on its rationale and some of the challenges in achieving provision of space for cycle access. The Applicant confirmed that subject to further internal organisational and designer dialogue, a further revision to the NMU plans and supporting text would be submitted prior to the closure of the examination. HCC welcome and are wholly supportive of these changes.

In brief, these revisions are anticipated to confirm that a shared user route (parallel with Castle Street) will be provided as follows:

North side

- Western scheme limit/boundary (Porter Street) to Ferensway
- Ferensway to Myton Street
- Myton Street to Earle de Grey
- Earl de Grey to Princes Dock Street – the potential for a shared use along this entire length appears feasible in the main although requires further review by the Applicant. A possible width restriction along the frontage of Ask (Warehouse No.6), with a reduction to 1.9m at the eastern corner. An additional length of provision for cyclists to be included between the north east corner of Ask and the junction of Princes Dock Street/Castle Street, in order to provide a complete level of service.
- Princes Dock Street to Market Place
- Market Place to the access to underpass route

South Side

- Blackfriargate to Queen Street (options of north or south side to be explored by the Applicant in dialogue with HCC).
- Queen Street to Humber Dock Street
- Spruce Road to St James Street (western scheme boundary)

Due to limitations in available scheme width along the section between Humber Dock Street to Commercial Road, whilst cyclists will be able to access the new foot and cycle bridge from the Humber Dock Street side and ramps and travel over the bridge itself), east-west movement parallel to Castle Street will not be facilitated on the south side. A width of 2m or slightly below is envisaged which will be designated to serve solely as footway.

Similarly on the section between Commercial Road and Spruce Road (adjacent to Kingston Retail Park) a width of circa 1.95m will again be designated as footway.

The proposed absence of a continuous facility on the south side which would enable cycle journeys to be made parallel to Castle Street remains a source of disappointment from HCC's perspective for the reasons expressed within Deadline 5 and Deadline 6 submissions.

2.8.2 Pedestrian Crossings at Market Place and Queen Street

The Council welcome the confirmation from the Applicant that both crossings will be designed to a controlled specification, in this case through signals, which is consistent with the present facilities. It is assumed that such designs will include for the crossing of both pedestrian and cyclists (Toucan) as the NMU provision on approaches on both the north and south sides of castle Street will at this point provide for both pedestrian and cycle movement. The comment regarding to reaching agreement with Historic England is noted. HCC would be pleased to be involved in any related discussions.