OTTERPOOL PARK

Response to National Highways

FEBRUARY 2023

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1 Introduction

1.1.1 An application for outline planning permission for the Otterpool Park new garden settlement was originally submitted in February 2019 (planning application reference no. Y19/0257/FH). Following submission of the outline planning application (OPA) a number of consultation comments have been received from statutory consultees and the public. Otterpool Park LLP ('the Applicant') submitted amendments to the OPA in March 2022 to address the comments received on the original submission and to assist with the delivery of the development across the long term. The amendments to the OPA were accompanied by an Environmental Statement OP5, with Chapter 16 reporting the assessment with respect to Transport and the

- Transport Assessment as the ES Appendix 16.4
- Transport Strategy as the ES Appendix 16.5
- Framework Travel Plan as the ES Appendix 16.6.

1.1.2 A summary of the key consultation process between National Highways as statutory stakeholders and the Applicant is summarised below.

26.06.2022 - National Highways Comments:

- TA Review Document (24.06.22), where comments have been itemised as numerical Actions, based on comments dated 21.03.22 on a draft version of the TA, dated January 2022.
- National Highways Planning Response (NHPR 21-09) – formal Recommendation to an Application for Planning Permission, dated 24.06.22. Specific comments are also raised as Actions in this document but are not numbered. The majority of these Actions reflect the numbered Actions in the TA Review document, with a few additional.

30.08.2022 – Applicant Response:

- Transport Response Report (TRR) document (30.08.22) where responses were provided to address the comments raised by National Highways and Kent County Council on the submitted OPA Transport related documents.

10.10.2022 – National Highways Comments:

- TRR Review document (10.10.22), comments have been itemised as numerical Actions, based on comments dated 24.06.22 on the TA.
- National Highways Planning Response (NHPR 21-09) – formal Recommendation to an Application for Planning Permission, dated 10.10.22. A summary list of topics are highlighted as transport related aspects that are continually being engaged with the Applicant on.

24.11.2022 – Further Applicant Response:

- Transport Response Report V2 (TRR V2) Document (24.11.22) where responses have been updated in the TRR were provided to address the further comments raised by National Highways and Kent County Council on the TRR.

20.01.2023 - National Highways Comments:

- TA Review Document (20.01.23), where comments have been itemised as numerical Actions, based on previous documents (TA review document 26.02.22 and TR review document 10.10.22).
- National Highways Planning Response (NHPR 22-12) – formal Recommendation to an Application for Planning Permission, dated 20.01.23. Specific comments are also raised in this document but are not numbered. The majority are reflected in the numbered Actions in the TRR Review document.

1.1.3 A response to each of the remaining actions that were not deemed complete is provided in separate tables in Section 2 of this document.

2 Review of Comments

2.1.1 Table 1 provides a response to each of the numerical Actions raised by National Highways from their Transport Response Report Review Document that were not previously considered complete.

2.1.2 Table 2 provides a response to requests by National Highways from their Planning Response (NHPR 22-12) that is not included within the Transport Response Report Review document (20.01.23) as a numerical Action.

Table 1 Response to Actions raised in the TRR (V2) Review Document

NH Action (TA Review Document dated 24.06.22)	Response within Submitted TRR V2 Report	NH Response (TRR V2 Review Document dated 20.01.23)	Further Actions / Comments	Otterpool Park Response
ACTION 14 (M20 Junction 9): Full details of the supporting modelling for the proposed mitigation, plus the associated technical drawings (in CAD format) will need to be supplied to National Highways in order for the acceptability of the proposed mitigation measures to be assessed. A Stage 1 Road Safety Audit and Walking, Cycling, Horse-Riding Assessment Report (WCHAR) will need to be provided as part of the supporting information. The M20 EB slip is most heavily affected in the AM peak, recording a maximum RFC of 103.4% and an MMQ of 32 PCUs in the 2044 8.5k dwellings DS scenario (the 10k dwellings scenario is very slightly higher but it is noted that the 8.5k dwelling scenario is that which corresponds to the actual application). The M20 WB slip and Trinity Road are most heavily affected in the PM peak, recording a DoS of >120% and MMQs of >100 PCUs for the 2044 (10k dwellings) PM scenario (the DoS for the M20 WB slip is 110% in the DS 8.5k scenario, still well beyond capacity). Section 10.4 presents the results of modelling which	The Transport Response document states within Section 10 that “The required junction analysis work has been completed, however this is being reviewed and finalised following audit comments from National Highways (received 25th August 2022) on the baseline modelling previously submitted for review. Comments from KCC are currently outstanding. Subject to this, future year scenarios modelling is complete, and indicative mitigation identified with drawings to be finalised and submitted once all comments received.” It is also stated that the requirements for Stage 1 RSA and WCHAR will be discussed with	It is noted that the Applicant is seeking further dialogue with National Highways regarding approval for the necessary audit briefs and audit teams to carry out the Stage 1 RSAs. National Highways is only able to apply very limited weight to any such assessments carried out before the modelling exercises (and any amendments to proposed mitigation schemes) have been completed and approved; the applicant would therefore proceed with any such activities at this time at their own risk.	The requested additional work has been undertaken and reviewed by National Highways. It is recognised that the monitor and manage strategy should be capable of detecting and measuring future traffic changes at this junction and that the work undertaken to date is sufficient for National Highways to be satisfied that the proposed mitigation would be effective. It is therefore recommended that specific reference to a monitoring schedule for M20 Junction 9 should be included in the final Monitor and Manage strategy documents when these are prepared. Subject to this being undertaken, it is considered that this action	Monitoring schedule for M20 Junction 9 to be included in final Monitor and Manage Strategy documents and will be Conditioned.

NH Action (TA Review Document dated 24.06.22)	Response within Submitted TRR V2 Report	NH Response (TRR V2 Review Document dated 20.01.23)	Further Actions / Comments	Otterpool Park Response
represents a proposed mitigation scheme for Trinity Road, which would increase the flare length of this arm by 30 metres, and also change the movements available from each lane. As noted above, no drawings of this proposed mitigation have been provided. The mitigation modelling results (Table 96, section 10.4.23) indicate that the DoS values referenced above would be reduced to 91/92%, with MMQs reduced to 44 PCUs on the most affected arm. It is not stated or demonstrated whether these reductions would bring queue lengths within the capacity of the relevant storage areas; this needs to be explicitly demonstrated as part of the mitigation proposals.	National Highways once this submission has been made.		will have been appropriately addressed.	
ACTION 15 (M20 Junction 10): The following tasks will need to be completed in order for National Highways to fully assess the impacts of the proposed development on M20 Junction 10, in accordance with the requirements of Circular 02/13: - The model basis for the current assessments (including specific agreement to the use of baseline flows) will need to be agreed through review of the data inputs and model files - Once the models of the	As noted in relation to Action 3 (*NH TRR V2 Review Document dated 20.01.23*), it has been agreed by all parties that it will be necessary to collect new survey data for M20 junctions 10 and 10a to fully address the concerns relating to the representation of these	The current approach to new traffic surveys is considered acceptable in principle; please refer to our comments on Action 3 in relation to current challenges with the collection of new data, and our suggestions for a potential alternative approach to overcome these.	The requested “worst case” scenario modelling has been agreed and has subsequently been reviewed by National Highways. The results of the future year modelling show that the junction will perform in an acceptable manner in the 2044 “Do Minimum” scenario. In the agreed “worst case”	The future survey work and RSAs at M20 Junction 10 is to be Conditioned as stated in the “Further Action / Comments” column.

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required scenarios have been reviewed and accepted by National Highways, the required parameters for mitigation of the effects of the proposed development will need to be agreed - Suitable mitigation measures will need to be proposed by the applicant and assessed by National Highways, to a level of detail where appropriate planning conditions or legal agreements can be put in place as part of any planning consent. (For clarity, this will not preclude the application of a "monitor and manage" strategy where such is able to be agreed between the applicant, National Highways and Kent County Council). The baseline data used to inform the modelling needs to be confirmed as set out in Action 3; as noted at the meeting held on 21st June 2022, this will require new surveys of junction 10 and 10a. In parallel, the applicant should carry out an analysis of the potential for current predicted Junction 10a traffic to use Junction 10 (and vice versa) so that the basis for further sensitivity testing can be either established or eliminated. Once these tasks have been completed, any necessary updates to the modelling and/or the proposed mitigation will need	junctions in the current modelling. The Transport Response document states within Section 4 that "It has been agreed with National Highways and KCC that these junctions and the junctions in the vicinity will be re-surveyed to understand more fully the baseline conditions in this location and update our understanding of potential future operation of the SRN more fully".	As has been noted in the previous TA Review comments, Section 10.4 of the TA sets out mitigation proposals for those junctions which are shown by the modelling to operate over-capacity in one or more scenarios. With regard to M20 junction 10, it is stated that there is "significant uncertainty" over the future performance of this junction (including its relationship to Junction 10a, which is discussed below). The TA states at paragraph 10.4.4 that it is anticipated that demand at junctions 10 and 10a would "balance out" over time, and that therefore the predicted capacity issues at Junction 10 may not arise in practice. It is evident that by 2044, both junctions as currently modelled would begin to experience congestion issues, albeit with fewer	models, the degree of saturation slightly exceeds 90% for one arm in the AM peak and 2 arms in the PM peak, however the changes to delay and queuing are limited and there are no such effects on either the M20 slips or the junction circulatory. As such, it is considered that it has been demonstrated that the proposed development will not result in any material impacts on the SRN at this location and this action is considered to have been completed, subject to appropriate conditions relating to the future survey work and RSAs being included with any planning consent.	

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to be produced and submitted to National Highways; CAD drawings and model input files should be supplied as part of this package. National Highways is willing to undertake checking of base models (to prepare for updated flow assessments) if these are provided (input and output files, plus CAD plans showing geometry measurements).		issues present at Junction 10 itself. It is noted that, if an alternative approach is taken with regard to the use of an uplift figure at these junctions to represent a fully robust "worst case" scenario (as describe previously in relation to Action 3, and Action 13 for Junction 9), this will need to be combined with consideration of the potential re-distribution effects across Junctions 10 and 10a.		
ACTION 16 (A292 Hythe Road/M20 WB On Slip): Mitigation proposals to be developed as part of the exercises outlined for M20 Junction 10. The performance of the A292 / M20 WB On-slip junction will need to be considered as part of the proposed further work associated with M20 Junctions 10 and 10a.	It is stated within Section 10 of the Transport Response document that the required modelling for this junction will be carried as part of the work to address actions 15 and 17.	The suggested approach is considered to be reasonable; National Highways will comment on the additional information once it is available.	The requested "worst case" scenario modelling has been agreed and has subsequently been reviewed by National Highways. The proposed mitigation test (when combined with the 5% uplift) appears to show that the mitigation would limit queue length and delay increases in the AM peak on the M20 on-slip, but in the PM peak this	Following a call with NH and KCC on 07.02.23, KCC will be in contact with NH in relation to this junction following the provision of the modelling results of the scenario 2044 8.5k homes Do-Something, but without the 5% uplift, (the modelling results for this junction in the TRR V2 include a 5%

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			combination results in an increase in queue lengths of 20 PCUs for the M20 On-slip and 10 PCUs for the A292 Hythe Road eastbound. These increases would not specifically impact upon the SRN (as the queued vehicles would be held at the signals on the KCC road network). However, the impacts to the A292 itself will need to be appraised further by KCC and the deliverability of this mitigation proposal will be reliant on their views of these proposals. The submitted General Arrangement drawing for the proposed mitigation is considered sufficient for the purposes of the current appraisals, subject to the previously noted conditions relating to new junction surveys and associated road safety audits being accepted.	uplift of traffic to provide a robust worst case as requested by NH). These results are presented in Appendix 1 for reference. The future survey work and RSAs at this junction is to be Conditioned as stated in the “Further Action / Comments” column.

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ACTION 17 (M20 Junction 10a): The following tasks will need to be completed in order for National Highways to fully assess the impacts of the proposed development on M20 Junction 10a, in accordance with the requirements of Circular 02/13: **-** The model basis for the current assessments (including specific agreement to the use of baseline flows) will need to be agreed through review of the data inputs and model files - Once the models of the required scenarios have been reviewed and accepted by National Highways, the required parameters for mitigation of the effects of the proposed development will need to be agreed and compared against the mitigation proposals set out in Section 10.4 of the draft TA report - Suitable mitigation measures (either based on the current proposals, or new measures) will need to be proposed by the applicant and assessed by National Highways, to a level of detail where appropriate planning conditions or legal agreements can be put in place as part of any planning consent. (For clarity, this will not preclude the application of a "monitor and manage" strategy where	As noted in relation to Action 3 (*NH TRR V2 Review Document dated 20.01.23*), it has been agreed by all parties that it will be necessary to collect new survey data for M20 junctions 10 and 10a to fully address the concerns relating to the representation of these junctions in the current modelling. The Transport Response document states within Section 4 that "It has been agreed with National Highways and KCC that these junctions and the junctions in the vicinity will be re-surveyed to understand more fully the baseline conditions in this location and update our understanding of potential future	The current approach to new traffic surveys is considered acceptable in principle; please refer to our comments on Action 3 in relation to current challenges with the collection of new data, and our suggestions for a potential alternative approach to overcome these.	The requested "worst case" scenario modelling has been agreed and has subsequently been reviewed by National Highways. The results of the modelling show that in the 2044 "do minimum" scenario, there would be particularly high DoS figures (169%) on the M20 Eastbound off-slip; the "do something" scenario with the proposed mitigation applied reduces this substantially to 121%, with the mean max queue reducing from 115 PCUs to 85. Although this arm of the junction will remain congested, the proposed mitigation would alleviate the impacts of the development and also reduce queues on the slip road. As such, it is considered that it has been demonstrated that the proposed mitigation would be capable of	The future survey work and RSAs at this junction is to be Conditioned as stated in the "Further Action / Comments" column.

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such is able to be agreed between the applicant, National Highways and Kent County Council). The baseline data used to inform the modelling needs to be confirmed as set out in Action 3. In parallel, the applicant should carry out an analysis of the potential for current predicted Junction 10a traffic to use Junction 10 (and vice versa) so that the basis for further sensitivity testing can be either established or eliminated. Once these tasks have been completed, any necessary updates to the modelling and/or the proposed mitigation will need to be produced and submitted to National Highways; CAD drawings and model input files should be supplied as part of this package. The TA report presents modelling results at Section 10.4 which represent proposed mitigations including the introduction of a third circulatory lane on the main junction, which would in part make use of existing “hatched out” space on the northern bridge within the existing junction layout. The results of this modelling indicate that the junction would perform within capacity in almost all scenarios, with a 92% DoS on the	operation of the SRN more fully”.		accommodating the “worst case” impacts of the development. The submitted General Arrangement drawing for the proposed mitigation is considered sufficient for the purposes of the current appraisals, subject to the previously noted conditions relating to new junction surveys and associated road safety audits being accepted.	

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M20 Eastbound off-slip representing the only remaining area of concern. However, it is recognised that this modelling does not take account of the previous comments at Junction 10 or seek to measure whether the improved performance of Junction 10a would assist in resolving the remaining observed issues at Junction 10 (which is implied but not clearly expressed in relation to the modelling results for the current Junction 10). In essence, two possibilities are put forward in relation to Junctions 10 and 10a: 1. Junction 10 is forecast to operate in a satisfactory manner in 2037 and 2044, with the exception of one arm in the 2044 10k PM peak. It is suggested that some of the demand from Junction 10a could use the “spare” capacity at Junction 10 and therefore lead to a reduced or removed requirement for improvements at Junction 10a. 2. If this “transfer” of capacity between Junctions 10 and 10a cannot be demonstrated to be realistic, the proposed improvement scheme at J10a would be essential, but would solve almost all issues observed in the Do-				

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Minimum. It is considered that premise 1 should therefore be tested and determined in the first instance (including any amendments to base traffic resulting from Action 3). Should the proposed mitigation at J10a be demonstrated to be required, a suitable level of design information (including RSA1 and WCHAR) will need to be provided. The comments and actions made in relation to M20 Junction 10 (Action 15) are therefore directly connected to and relevant to this action.				
ACTION 18 (M20 Junction 11): Full details of the supporting modelling for the proposed mitigation, plus the associated technical drawings (in CAD format) will need to be supplied to National Highways in order for the acceptability of the proposed mitigation measures to be assessed. A Stage 1 Road Safety Audit and Walking, Cycling, Horse-Riding Assessment Report (WCHAR) will need to be provided as part of the supporting information. The mitigation scheme will need to take account of the interplay between M20J11 and J11a, as covered by the F&HDC/HE SoCG.	The Transport Response document contains additional analysis of available traffic data for M20 junction 11. The data sources which are stated to have been interrogated include: - MIDAS data for 2018, 2021 and the first half of 2022 (not available for all locations within the junction)	The analysis of the available data sources is considered to be robust, and in principle supports the argument that the 2018 flows are higher than those currently experienced at the junction in question. However, for the purposes of the current outline application, it is noted that the available data is less comprehensive than for other locations, and that the reduction in traffic on one of the key approaches to	The requested “worst case” scenario modelling has been agreed and has subsequently been reviewed by National Highways. The results of the future year modelling show that the proposed mitigation measures would substantially improve the operation of the junction, addressing the impacts of the proposed development and delivering additional benefits in comparison to the “do minimum”	The proposed mitigation for M20 Junction 11 is to be conditioned, with its implementation subject to Monitor and Manage approach.

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It is noted that no commentary has previously been provided on the relationship between M20 J11 and J11a.	- 2022 Stantec Surveys - WebTRIS data - 2018 Otterpool Park surveys It is noted that MIDAS data is only available for the eastbound and westbound on-slips at the junction. The presented MIDAS data indicates that traffic flows have remained relatively stable between 2018 and 2022, with the exception of the eastbound M20 on-slip where traffic volumes appear to have fallen substantially since 2018. It is assumed that, since no reference is made to either WebTRIS or Stantec survey data, that no suitable comparable date has been identified from these sources.	Junction 11 is relatively small (5%). It is therefore recommended that, as is the case for M20 Junction 9, a “stress test” be included with the modelling to represent an uplift of 5% of total traffic across the junction. If this test shows no material change to junction performance, or the specific queues within the circulatory system or on the junction off-slips, this will provide considerable additional comfort to National Highways that the eventual implementation of Monitor and Manage can be achieved with a dependable “fall back” position to support this.	scenario. It is therefore considered that the proposed mitigation is acceptable in principle and should be conditioned accordingly; the precise timing of the implementation of the mitigation will need to be determined through assessments in the identified year of the build-out stated in Table 13 of the Transport Response Review document.	

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	An additional analysis of data for 2018 and 2022 has been provided for the A20 Newingreen Junction, which is located to the south of M20 Junction 11. This analysis shows that traffic volumes have reduced in both peaks between these years. However, the reduction in the AM peak flow toward J11 is only 5%. Nevertheless, it is argued that this demonstrates that the 2018 survey data remains robust for use as a "worst case" for the purposes of assessing the proposed development impacts at this junction.			
ACTION 19 (A20 Ashford Road/Ashford Road): Full details of the supporting modelling for the proposed mitigation, plus the associated technical drawings (in CAD format) will	The Transport Response document states within Section 10 that "The required junction analysis work	JSJV and NH have held a meeting with the Applicant's transport consultants (Arcadis) at which the proposed amendments to	Following the completion of action 3, the submitted capacity models have been reviewed by National Highways. It is noted that	The proposed mitigation for A20 Ashford Road / Ashford Road and associated Stage 1

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need to be supplied to National Highways in order for the acceptability of the proposed mitigation measures to be assessed. A Stage 1 Road Safety Audit and Walking, Cycling, Horse-Riding Assessment Report (WCHAR) will need to be provided as part of the supporting information. The mitigation scheme will also need to take full account of the presence and operation of the National Highways Stanford Depot located close to the junction. A suitable model of the signalised approach to the junction will need to be prepared, so that the actual expected impacts of the platooning effect on the Ashford Road traffic can be appraised. This model should only be produced once any changes associated with the baseline traffic calculations set out under Action 3 (and related actions) have been completed.	has been completed, however this is being reviewed and finalised following audit comments from National Highways (received 25th August 2022) on the baseline modelling previously submitted for review. Comments from KCC are currently outstanding. Subject to this, future year scenarios modelling is complete, and indicative mitigation identified with drawings to be finalised and submitted once all comments received."	the baseline models were discussed and agreed in principle. As per the statement in the Transport Response document, National Highways is awaiting submission of the updated baseline models and future year models (the latter will need to reflect any relevant data or outcomes arising from Action 3 within this document). (*NH TRR V2 Review Document dated 20.01.23*)	this junction would be affected by the proposed part signalisation at Junction 11 and it is stated that this would be likely to increase "platooning" of vehicles passing the junction, which would create more opportunities for turns from Ashford Road. It is therefore suggested that this junction be included as part of the monitor and manage strategy; in the event that congestion is observed to arise, a mitigation proposal has been developed which would be implemented if/when an appropriate trigger point (to be agreed as part of the development of the monitor and manage strategy) is reached. It is noted that, at present, no RSA has been submitted to National Highways for this	RSA is to be conditioned, with its implementation subject to Monitor and Manage approach.

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			improvement and this does not appear to be included with the Appendix M RSA reports for other proposed improvements on the A20 corridor. This should be completed prior to National Highways' final response to the outline application being finalised. Notwithstanding this, it is considered that the modelling of the proposed mitigation demonstrates that the proposals would be able to address the impacts of the development if they were to occur as predicted by the "do something" modelling. Subject to the above comments, it is considered that this action is partially completed (pending determination of the approach regarding the RSA requirement).	
ACTION 20 (A20 Ashford Road Small Roundabout): If the monitor and manage strategy envisages a possibility	The Transport Response document	JSJV and NH have held a meeting with the Applicant's transport consultants	Following the completion of action 3 (*NH TRR V2 Review Document dated*	This junction is to be included in the Monitor and Manage

NH Action (TA Review Document dated 24.06.22)	Response within Submitted TRR V2 Report	NH Response (TRR V2 Review Document dated 20.01.23)	Further Actions / Comments	Otterpool Park Response
of physical works being required, corresponding scheme drawings to an appropriate level of detail should be provided for National Highways' consideration. If mitigation is proposed via other means, these should be clearly explained in the TA report within Section 10.4.	states within Section 10 that "The required junction analysis work has been completed, however this is being reviewed and finalised following audit comments from National Highways (received 25th August 2022) on the baseline modelling previously submitted for review. Comments from KCC are currently outstanding. Subject to this, future year scenarios modelling is complete, and indicative mitigation identified with drawings to be finalised and submitted once all comments received."	(Arcadis) at which the proposed amendments to the baseline models were discussed and agreed in principle. As per the statement in the Transport Response document, National Highways is awaiting submission of the updated baseline models and future year models (the latter will need to reflect any relevant data or outcomes arising from Action 3 within this document). As was noted in the TA Review, once the modelling work is complete, the applicant should confirm to National Highways whether physical mitigation is required in order to make the impacts of the proposed development acceptable (i.e. before any consideration of monitor and manage is undertaken). If this is determined to be the case, appropriate highway capacity models (input and	*20.01.23*), the submitted capacity models have been reviewed by National Highways. The results of the future year modelling show that the RFCs for the A20 Ashford Road northbound arm would increase to just under 0.90 in the 2044 Do Something AM Peak scenarios. This is slightly over the standard 0.85 threshold, however the results for queue lengths and delay indicate that in practice this would not be expected to result in any operational issues at the junction. The proximity of this junction to both M20 Junction 11 and the A20 Ashford Road / Ashford Road junctions is noted; it is proposed that this junction should be included in the monitor and manage strategy so that any unanticipated effects from the proposed	Framework which will be Conditioned. The monitor and manage strategy will be clear on how any need for additional mitigation at this junction will be addressed in financial terms.

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		output files) and CAD versions of the proposed mitigation designs will need to be supplied.	mitigation measures at these junctions can be recorded. It is agreed that this is a reasonable approach; the monitor and manage strategy should however be clear on how any need for additional mitigation at this junction will be addressed in financial terms.	
ACTION 21 (M20 Junction 13 – Castle Hill Interchange): The application will need to take full account of the work by F&HDC/KCC/NH as part of the Core Strategy Review; and the evidence produced. If more sophisticated or more up-to-date evidence is to be provided seeking to demonstrate an absence of the impact the CSR evidence suggested at M20J12 & 13 individually and cumulatively (and the interplay between the 2), then full narrative and evidence will be required examining the differences in the assessment methodology, inputs, outputs, interpretations and conclusions. The same will be true for the interplay at individual or collective junctions of their capacity and their merge/diverge	The Transport Response document reproduces analysis from the main TA report of the expected future performance of M20 Junction 13. As was summarised in the National Highways TA review, the junction model outputs indicates that the junction is expected to operate within capacity in the 2018 and 2037 DM scenarios, as well as all further PM scenarios.	As has been stated previously in connection with this action, appropriate technical drawings and supporting information will need to be provided for the referenced improvement scheme. This is so that the scheme details can be reviewed and confirmed to be acceptable for inclusion either as a standard mitigation requirement or as a potential measure for the Monitor and Manage strategy. It will not be acceptable for the Otterpool development to simply make a monetary contribution	The requested additional information relating to the potential monitor and manage scheme has been submitted. It is noted that, whilst National Highways have previously accepted the principle of this junction being addressed via the monitor and manage strategy, it has been requested that suitable mitigation measures be identified which could be implemented if it is determined that these are needed. Drawing 10029956-ARC-XX-DR-T	Mitigation will be secured as the LPA consider appropriate. The “DS” models reported in the TRR V2 does not include the Local Plan mitigation scheme, as this scenario does not consider any mitigation as it is not a committed scheme. The results that include the Local Plan mitigation are presented in Appendix 2. The performance of this junction is shown

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requirements. If the monitor and manage strategy envisages a possibility of physical works being required (of the type described at paragraph 10.4.22 of the draft TA report), scheme drawings to an appropriate level of detail should be provided for National Highways' consideration. It is noted that one of the previously discussed mitigation options is identified as potentially forming part of the Monitor and Manage strategy; if this is to be the case, suitable scheme drawings and supporting information will need to be provided so that these can serve as an appropriate reference for the preparation of the strategy, which will need to provide clarity on what would constitute a "trigger" for the requirement for these works to be implemented.	The model results indicate that the junction will operate slightly over capacity in all further AM scenarios (2037 DS and all 2044 scenarios) on the Churchill Avenue arm. The highest recorded RFC value is 0.95, with a corresponding queue length of 11.9 PCUs. The Transport Response document states that, in terms of traffic flow, the proposed Otterpool Park development would lead to increases of 7% in both the AM and PM peaks. It is stated that, as there is a proposal to upgrade this junction in connection with wider Local Plan requirements, Otterpool Park should make a proportionate	toward the Local Plan scheme as this does not guarantee the provision of the upgrade works in a manner which is consistent with the planning requirements or the physical build-out of the scheme.	0017 which is included at Appendix I of the Transport Response Review document shows a proposed scheme which has been developed for the wider Local Plan (for which the associated technical work included consideration of the Otterpool Park proposals). It is noted from Table 13 of the Transport Review Response document that it is anticipated that the need for these works would be determined via review of monitoring data collected during year 4 of the scheme build-out. It is not clear from the Transport Response Review document whether the "DS" models include the Local Plan mitigation scheme; this will need to be clarified. There is additionally no comment made as to whether these	to be improved with the mitigation.

NH Action (TA Review Document dated 24.06.22)	Response within Submitted TRR V2 Report	NH Response (TRR V2 Review Document dated 20.01.23)	Further Actions / Comments	Otterpool Park Response
	contribution toward the scheme costs.		proposals have been subject to a Stage 1 RSA. Accordingly, these clarifications will be required before this action can be considered to be complete.	
ACTION 23 (User Centric Approach and Sustainable Travel Modes): The TA should provide one or more examples of how the expected changes to trip generation and travel patterns described in sections 12 and 13 would translate to altered demand and impacts upon the road network, including the SRN. This exercise should be undertaken once issues identified previously in this review relating to baseline data and traffic growth have been addressed. Additionally, clarity must be provided in relation to whether mitigation measures are intended to be provided as "core" elements of the Transport Strategy, or to be assessed against future need as part of the monitor and manage framework. The mechanisms proposed for funding all measures must be clearly explained as National Highways is not able to accept	The previous TA Review document includes the following comments: The proposed measures which are intended to deliver the benefits outlined in this section need to be clearly defined, as follows: - What the User Centric Approach entails in terms of measures - How each measure will be funded and physically implemented - Who will have responsibility for implementing and updating the approach (including its relationship	An updated version of the User-Centric Report (V2) has been provided alongside the Transport Response and National Highways response documents. However, this does not confirm which measures are intended to be "core" measures and which (if any) are flexible measures to be used to deliver the Monitor and Manage strategy. It is re-iterated that a stand-alone summary should be provided which links together the Transport Strategy, Monitor and Manage Strategy, Framework Travel Plan and User Centric Report,	Additional clarification has been provided in response to Action 23 with regard to the distinction between "core" and "monitor and manage" elements of the proposed mitigation measures. It is noted that the "core" list does not identify the signalisation of Junction 11; in our view this should be explicitly included as it is clear that this improvement will be required regardless of the performance of the monitor and manage strategy. The content of the TRR report does not contain the requested demonstration of how the different "live"	The list of proposed mitigations and their role each will play in the implementation of the Monitor and Manage Framework will be set out in the Heads of Terms to Section 106 Agreements.

NH Action (TA Review Document dated 24.06.22)	Response within Submitted TRR V2 Report	NH Response (TRR V2 Review Document dated 20.01.23)	Further Actions / Comments	Otterpool Park Response
any risk associated with future funding shortfalls.	to elements such as the site Travel Plans) - How the effectiveness of the approach will be monitored - How the approach will be reviewed and adapted as part of the wider Monitor and Manage Strategy	addressing each of the bullet-points from the previous TA Review report. It is acknowledged that most or all of the necessary information is present in the different submitted supporting documents, however at present it is extremely difficult to appraise exactly how the monitor and manage strategy differs from the wider Transport Strategy, and how the two will work effectively together to deliver the best outcomes for the proposed development and wider networks.	documents relate to one another, and the role each will play in the implementation of the Monitor and Manage strategy; this will need to be provided in order for this action to be considered complete.	
Framework Travel Plan (Document Reference OP5 Appendix 16.6) **ACTION 25: An objective should be included within the objectives list at Table 8 to specifically target the reduction of longer-distance trips by private vehicle.**	The National Highways response document states that "A Travel Plan will be developed for each phase which comes forward as part of Tier 2 / Tier 3 Reserved Matters which will be conditioned and can	The proposed approach is considered to be acceptable and the requested action should be undertaken within the Travel Plan at the appropriate stage.	This action is considered to be complete, subject to a suitable condition being put forward as proposed by the applicant to secure the Travel Plan(s) for completion at the Reserved Matters stage(s).	Travel Plans for completion at the Reserve Matters stage(s) is to be Conditioned.

NH Action (TA Review Document dated 24.06.22)	Response within Submitted TRR V2 Report	NH Response (TRR V2 Review Document dated 20.01.23)	Further Actions / Comments	Otterpool Park Response
	also include this request".			
Framework Travel Plan (Document Reference OP5 Appendix 16.6) **ACTION 26: National Highways should be included as a named stakeholder for the purposes of the Steering Group and/or Transport Management Association, as proposed at paragraph 6.4.2.**	The National Highways response document states that "A Travel Plan will be developed for each phase which comes forward as part of Tier 2 / Tier 3 Reserved Matters which will be conditioned and can also include this request".	The proposed approach is considered to be acceptable and the requested action should be undertaken within the Travel Plan at the appropriate stage.	This action is considered to be complete, subject to a suitable condition being put forward as proposed by the applicant to secure the Travel Plan(s) for completion at the Reserved Matters stage(s).	Travel Plans for completion at the Reserve Matters stage(s) is to be Conditioned.

Table 2 Further queries raised in NHPR 22-12

National Highways Planning Response (NHPR 22-12), dated 20.12.22	Comment/Issue Raised	Otterpool Park Response
General Matters Item 1 (Page 3)	**Implications of new DfT Circular 1/2022 replacing C2/13** It will be noted by all parties that DfT published new Circular 1/22 in December 2022 that replaces the previous transport C2/13. In accordance with policy and practice, applications should be determined on the basis of national policy and other material considerations in force at the time the planning decision, unless they are so far advanced that it would not be appropriate	The items considered relevant in the new DfT Circular 1/2022 have been tabled with commentary on how the Otterpool Park adheres to the latest policy in Appendix 3.

National Highways Planning Response (NHPR 22-12), dated 20.12.22	Comment/Issue Raised	Otterpool Park Response
	to require the application of the new policy and they do not significantly and materially not comply with the new policy. In the case of Otterpool we accept that the application is at an advanced stage and therefore appears capable of being determined in accordance with its compliance with C2/13. However, it is also good practice in such cases for the applicant to prepare a brief paper setting out the extent to which the application also complies with the new policy, highlighting any non-compliance and provide reasons why any non-compliance is not of such materiality that it becomes a determining factor. **We require the applicant to prepare the above-described paper**	
A260 Spitfire Way Junction / A260 Alkham Valley Road junction / A260 Canterbury Road junction (Page 12-13) Also within NH TRR V2 Review Document dated 20.01.23, para. 2.72 – 2.79.	The A260 junctions at Spitfire Way, Alkham Valley Road and Canterbury Road lie in very close proximity to the A20; whilst these junctions themselves are within the remit of KCC Highways, their analysis and proposals remain of interest to us. These junctions have been examined as part of previous Local Plan work and all have mitigation schemes associated with them as a result of this. The work undertaken by the applicant (and reviewed by KCC) indicates that these proposals would (as expected) be sufficient in principle to address the impacts of the Otterpool Park development. The applicant has previously suggested a contributions-based approach to funding the improvements, but both KCC and we have stated that this is not acceptable and that it must be demonstrated that Otterpool Park can deliver either the Local Plan schemes or suitable alternatives at the point in time at which this becomes necessary. The applicant has therefore developed alternative mitigation proposals for the A260 Spitfire Way junction; these proposals are shown on drawing 10029956-OP-ARC-XX-DR-T 0018. These proposals are designed to address the impacts of Otterpool Park in isolation ; it is understood that this scheme could then be further upgraded to the “full” Local Plan scheme when triggered by other Local Plan developments. On the basis that this modelling has been reviewed and accepted by KCC, the results indicate that the partial mitigation would be sufficient to address the specific	A Stage 1 RSA has been undertaken for the A260 Spitfire Way junction and is presented in Appendix 4. This junction will be included as part of the Monitor and Manage Framework which will be Conditioned.

National Highways Planning Response (NHPR 22-12), dated 20.12.22	Comment/Issue Raised	Otterpool Park Response
	impacts of the Otterpool Park development. As such, in principle this would be acceptable for inclusion within the monitor and manage strategy. **It is noted that this work does not include a Stage 1 RSA for the proposed mitigation measures (drawing reference 10029956-OP-ARC-XX-DR-T 0018); this will need to be undertaken in accordance with a scope agreed with us.** **Subject to completion and acceptance of the Stage 1 RSA, specific reference to a monitoring schedule for the A260 Spitfire Way junction shall be included in the final Monitor and Manage strategy documents when these are prepared.** For the A260 Alkham Valley Road junction, reference is made to mitigation shown on drawing 10029956-OP-ARC-XX-DR-T 0019, which is stated in Table 13 of the Transport Response Review document to be the same as the Local Plan proposals. No modelling summary is presented for this junction, although it is stated that this is also proposed to form part of the monitor and manage strategy. Similarly, for the A260 Canterbury Road junction, reference is made to mitigation shown on drawing 10029956-OP-ARC-XX-DR-T 0020 which is stated in Table 13 of the Transport Response Review document to be the same as the Local Plan proposals. No modelling summary is presented for this junction, although it is stated that this is also proposed to form part of the monitor and manage strategy. It is further stated within Table 13 that it is proposed that specific mitigation proposals for these junctions would be shared with National Highways in year 4 of the planned build-out, as it is anticipated that the need (or otherwise) for these works would be able to be determined from monitoring surveys at this time. **It is noted that the current submission for these two junctions does not include a Stage 1 RSA for the proposed mitigation measures (drawing reference 10029956-OP-ARC-XX-DR-T 0018); this will either need to be undertaken in accordance with a scope agreed with National Highways, or evidence of this having been undertaken as part of the development of the proposals for the purposes of the Local Plan will need to be submitted.**	The A260 Alkham Valley Road junction and A260 Canterbury Road junction are on the KCC network. These two junctions are part of the KCC CRM programme and KCC have agreed to a S106 contribution. As such, a Stage 1 RSA are not required for these junctions by the applicant.

National Highways Planning Response (NHPR 22-12), dated 20.12.22	Comment/Issue Raised	Otterpool Park Response
	Subject to clarification with regards to the Stage 1 RSAs, and confirmation of KCC's agreement to the proposed mitigation measures, specific reference to a monitoring schedule for the A260 Alkham Valley Road junction and the A260 Canterbury Road junction shall be included in the final Monitor and Manage strategy documents when these are prepared.	

Appendix 1

A292 / M20 WB On-Slip 2044 8.5k Do-Something scenario with Mitigation junction capacity modelling results (without 5% uplift)

Table A1.1 A292 / M20 WB On-Slip 2044 Mitigation Scheme AM Peak

Traffic Movement	2044 8.5k DM No Mitigation			2044 8.5k DS With Mitigation		
	Degree of Saturation	Mean Max Queue (PCUs)	Ave. Delay per PCU (secs)	Degree of Saturation	Mean Max Queue (PCUs)	Ave. Delay per PCU (secs)
M20 Westbound On-Slip	83.6%	25.8	21.9	**91.8%**	29.3	26.4
A292 Hythe Road Eastbound	84.6%	13.1	54.2	83.2%	10.2	53.8

Table A1.2 A292 / M20 WB On-Slip 2044 Mitigation Scheme PM Peak

Traffic Movement	2044 8.5k DM No Mitigation			2044 8.5k DS With Mitigation		
	Degree of Saturation	Mean Max Queue (PCUs)	Ave. Delay per PCU (secs)	Degree of Saturation	Mean Max Queue (PCUs)	Ave. Delay per PCU (secs)
M20 Westbound On-Slip	**100.6%**	51.9	81	**99.7%**	57.1	68.4
A292 Hythe Road Eastbound	**100.0%**	28.5	107.8	**97.9%**	25.4	95.7

For Reference, junction modelling results for A292 / M20 WB On-Slip with no mitigation is shown below, as reported in Table 49 of the Otterpool Park Transport Assessment (March 2022) [Environmental Statement OP5, Appendix 16.4].

Please note that the differences in the 2044 8.5 DM scenario results in Table A1.3 and those reported in Table A1.1 (AM Peak) and Table A1.2 (PM Peak) is due to the results being updated following modelling comments from National Highways. This assessment will be updated and reissued following the completion of the future survey work, as mentioned in Action 16 in Table 1 of the Response to National Highways (February 2023) document.

Table A1.3 A292 Hythe Road / M20 Westbound On-Slip junction capacity assessment

Traffic Movement	AM Peak			PM Peak		
	Degree of Saturation	Mean Max Queue (PCUs)	Ave. Delay per PCU (secs)	Degree of Saturation	Mean Max Queue (PCUs)	Ave. Delay per PCU (secs)
2018						
A292 Hythe Road Road	65.9%	6.6	42.6	69.0%	6	49.2
M20 Westbound On-Slip	67.0%	14.1	11.1	69.3%	13.6	8.3
2037 DM						
A292 Hythe Road Road	80.9%	9.3	48.4	86.1%	10.9	50.2
M20 Westbound On-Slip	81.3%	22.8	18.6	87.3%	23.9	18.6
2037 DS						
A292 Hythe Road Road	84.4%	10.3	49.7	**90.3%**	12.6	55.2
M20 Westbound On-Slip	85.0%	24.4	18.5	**90.5%**	25.6	22.3
2044 8.5K DM						
A292 Hythe Road Road	78.6%	8.8	47.2	89.3%	12.2	53.8
M20 Westbound On-Slip	77.9%	22.1	17.3	**90.7%**	26.9	23.4
2044 8.5K DS						
A292 Hythe Road Road	**92.5%**	13.9	60.6	**109.0%**	69.9	227.9
M20 Westbound On-Slip	**91.8%**	29	25.7	**107.8%**	94.2	183.7
2044 10K DM						
A292 Hythe Road Road	78.6%	8.8	47.2	89.3%	12.2	53.8
M20 Westbound On-Slip	77.9%	22.1	17.3	**90.7%**	26.9	23.4
2044 10K DS						
A292 Hythe Road Road	**92.5%**	13.9	59.5	**109.9%**	70.5	232.2
M20 Westbound On-Slip	**93.4%**	29.8	25.2	**108.3%**	90.7	177.9

Appendix 2

J21a M20 Junction 13 2044 8.5k scenario with Mitigation junction capacity modelling results

Table A2.1 J21a M20 Junction 13 Local Plan Mitigation Scheme AM Peak

Traffic Movement	2044 8.5k DM No Mitigation			2044 8.5k DS With Mitigation		
	RFC	Queue Length (vehicles)	Ave. Delay per Vehicle (secs)	RFC	Queue Length (vehicles)	Ave. Delay per Vehicle (secs)
M20 Westbound Entry Only	0.65	1.8	8.35	0.64	1.7	7.86
Churchill Avenue	**0.87**	6.2	15.65	**0.88**	6.9	16.12
Cherry Garden Avenue	0.62	1.6	7.19	0.66	1.9	8.16
A20 Castle Hill Bridge	0.6	1.5	4.06	0.77	3.2	8.08

Table A2.2 J21a M20 Junction 13 Local Plan Mitigation Scheme PM Peak

Traffic Movement	2044 8.5k DM No Mitigation			2044 8.5k DS With Mitigation		
	RFC	Queue Length (vehicles)	Ave. Delay per Vehicle (secs)	RFC	Queue Length (vehicles)	Ave. Delay per Vehicle (secs)
M20 Westbound Entry Only	0.47	0.9	6.19	0.45	0.8	5.45
Churchill Avenue	0.77	3.2	8.04	0.79	3.6	8.18
Cherry Garden Avenue	0.74	2.8	10.15	0.84	4.8	16.43
A20 Castle Hill Bridge	0.67	2	5.11	0.81	4.3	10.37

Appendix 3

Commentary on relevant sections of the DfT Circular 1/2022 (updated December 2022), replacing DfT C2/13

Relevant items in the updated DfT Circular 1/2022	Otterpool Park Comment
Principles of sustainable development 12. New development should be facilitating a reduction in the need to travel by private car and focused on locations that are or can be made sustainable. In this regard, recent research on the location of development found that walking times between new homes and a range of key amenities regularly exceeded 30 minutes, reinforcing car dependency. Developments in the right places and served by the right sustainable infrastructure delivered alongside or ahead of occupancy must be a key consideration when planning for growth in all local authority areas. 13. As set out in the Transport Decarbonisation Plan, Gear Change, Bus Back Better and the second Cycling and Walking Investment Strategy, walking, wheeling, cycling and public transport must be the natural first choice for all who can take it. However, where developments are located, how they are designed and how well delivery and public transport services are integrated has a huge impact on people's mode of travel for short journeys. The company will therefore expect strategic policy-making authorities and community groups responsible for preparing local and neighbourhood plans to only promote development at locations that are or can be made sustainable and where opportunities to maximise walking, wheeling, cycling, public transport and shared travel have been identified. 15. The Transport Decarbonisation Plan and the Future of Freight Plan also recognise that local planning and highway authorities need help when planning for sustainable transport and developing innovative policies to reduce car dependency. This includes moving away from transport planning based on predicting future demand to provide capacity ('predict and provide') to planning that sets an outcome communities want to achieve and provides the transport solutions to deliver those outcomes (vision-led approaches including 'vision and validate,' 'decide and provide' or 'monitor and manage'). The company will support local authorities in achieving this aim through its engagement with their plan-	The promotion of sustainable development is present in the Otterpool Park development whereby the design principles include reducing the need to travel as well as the provision of mobility hubs and associated infrastructure to encourage active travel, public transport use and reduce the reliance on the private car. The principles of the Transport Strategy are set out in Chapter 5.3 of the Transport Assessment (TA)(Environmental Statement OP5, Appendix 16.4). Chapter 7 of the Transport Strategy (TS) (Environmental Statement OP5, Appendix 16.5) sets out the Access and Mobility Integration of the development, including: - Walking and Cycling Strategy - Walkable Neighbourhood - Cycle Streets - Bus Provision - Rail Provision - Shared Mobility - Mobility Hubs - Mobility as a Service (MaaS) The concept and approach of 'vision and validate' has been used for the Otterpool Park development in the form of the "User Centric Approach" set out in Chapter 12 of the TA (Environmental Statement OP5, Appendix 16.4).

Relevant items in the updated DfT Circular 1/2022	Otterpool Park Comment
making and decision-taking stages, while recognising the varying challenges that will be presented by certain sites based on their land use, scale and/or location.	The active travel trips estimated using this approach reported in the TA was deemed ambitious by the highway authorities and subsequently an Alternative Scenario has been set out in Chapter 12 of the "Transport Response Report V2" for the purposes of establishing mode share targets for the development, found in Table 57.
New connections and capacity enhancements 18. New connections (for example, new junctions or direct accesses) on the SRN lead to more weaving and turning manoeuvres, which in turn create additional risk to safety and reduce the reliability and efficiency of journeys, resulting in a negative impact on overall national economic activity and performance. 19. On this basis the principle of creating new connections on the SRN should be identified at the plan-making stage in circumstances where an assessment of the potential impacts on the SRN can be considered alongside whether such new infrastructure is essential for the delivery of strategic growth. Moreover, the company will need to be satisfied that all reasonable options to deliver modal shift, promote walking, wheeling and cycling, public transport and shared travel to assist in reducing car dependency, and locate development in areas of high accessibility by sustainable transport modes (or areas that can be made more accessible) have been exhausted before considering options for new connections to the SRN. There may also be limited opportunity for new connections to be considered as part of public funding programmes to support new development, although necessary infrastructure in up-to-date plans and strategies should be favoured in such instances. 21. The company will adopt a graduated and less restrictive approach to the formation of new connections on the remainder of the SRN, determining each case on its own merits. However, the preference will always be that new	18. There are no new junctions or direct accesses on the SRN required for the Otterpool Park development. 19. The Otterpool Park design principles are founded on the delivering a sustainable development that encourages active travel and promotes the reduction of trips, particularly by car through design and offering appropriate amenities and services on-site to reduce potential off-site journeys. See response above to "Principles of sustainable development". 21.Otterpool Park development only makes use of existing connections to and from the SRN. The relevant junctions have been assessed in Chapter 10 of the TA (Environmental Statement OP5, Appendix 16.4). 23. The existing highway network has been assessed based on the baseline and future trip generation. Where capacity or other issues have been identified as part of the TA, appropriate

Relevant items in the updated DfT Circular 1/2022	Otterpool Park Comment
development should make use of existing junctions. In line with the standards contained in the Design Manual for Roads and Bridges (DMRB), new connections to slip or connector roads will not be permitted for safety and operational reasons. 23. Capacity enhancements such as modifications to existing junctions or road widening to facilitate development should be determined on a case-by-case basis. The general principle should be accepted where proposals would include measures to improve community connectivity and public transport accessibility, and this will be weighed against any negative safety, traffic flow, environmental and deliverability considerations, impacts on the permeability and attractiveness of local walking, wheeling and cycling routes, and alternative options to manage down the traffic impact of planned development or improve the local road network as a first preference. 24. Where new connections and capacity enhancements to the SRN would be accepted, the relevant authorities and development promoters should fully consider this outlay with respect to the viability of development.	mitigations have been derived and assessed. The junction capacity analysis and mitigation are found in Chapters 10 and 11 of the TA (Environmental Statement OP5, Appendix 16.4). Whilst further queries raised by National Highways (NH) and Kent County Council (KCC) on the analysis in the TA have been addressed in Chapters 10 and 11 of the "Transport Response Report V2". 24. The development promoters have been liaising closely with NH and KCC to agree the relevant and appropriate capacity enhancements to the SRN.
Engagement with Plan-making – General principles 29. New connections and capacity enhancements to the SRN which are necessary to deliver strategic growth should be identified as part of the plan-making process, as this provides the best opportunity to consider the cumulative impacts of development (including planned growth in adjoining authorities) and to identify appropriate mechanisms for the delivery of strategic highway infrastructure. However, there cannot be any presumption that such infrastructure will be funded through a future RIS. The company will therefore work with local authorities in their strategic policy-making functions in identifying realistic alternative funding mechanisms, to include other public funding programmes and developer contribution strategies to be secured by a policy in a local plan or spatial development strategy.	The principal of housing requirements was considered as part of the development of the F&DC Core Strategy review, which included an allocation at Otterpool. The principles of Local Plan Transport Interventions were agreed as part of the Examination in Public resulting on the adoption of the Core Strategy Review on 30 March 2022. The promoter has been working with the relevant authorities including the Local Planning Authority (Folkestone and Hythe District Council), and the relevant Highway Authorities KCC and NH to scope and confirm the necessary highway assessments to undertake a suitable analysis and develop mitigation on the and strategic highway network. Funding and delivery mechanisms

Relevant items in the updated DfT Circular 1/2022	Otterpool Park Comment
	have been part of these discussions and will be part of the process going forward to agree the Conditions and S106 Agreement.
Integration strategies 36. In line with the aims of promoting sustainable development and the commitment in the Transport Decarbonisation Plan to deliver a world class cycling and walking network in England by 2040, planned improvements to the SRN must include the consideration or development of safe and integrated networks for pedestrians, wheelers, cyclists and horse-riders.	The design principles of the Otterpool Park development and its Transport Strategy promotes strong walking, cycling networks as well as providing wider connectivity by walking, cycling and horse-riding via bridleways.
Assessment of development proposals 47. Where the company is requested to do so, it will engage with local planning authorities and development promoters at the pre-application stage on the scope of transport assessments/statements and travel plans. This process should determine the inputs and methodology relevant to establishing the potential impacts on the SRN and net zero principles that will inform the design and use of the scheme. Development promoters are strongly encouraged to engage with the company to resolve any potential issues and maximise opportunities for walking, wheeling, cycling, public transport and shared travel, as early as possible. 48. Where a transport assessment is required, this should start with a vision of what the development is seeking to achieve and then test a set of scenarios to determine the optimum design and transport infrastructure to realise this vision. Where such development has not been identified in an up-to-date development plan (or an emerging plan that is at an advanced stage), developers should demonstrate that the development would be located in an area of high accessibility by sustainable transport modes and would not create a significant constraint to the delivery of any planned improvements to the transport network or allocated sites. 49. A transport assessment for consideration by the company must also consider existing and forecast levels of traffic on the SRN, alongside any additional trips from committed developments that would impact on the same sections (link or	The Otterpool Park TA and associated documents has been undertaken as described in items 47-50. NH and KCC as the Highway Authorities have been consulted throughout the Outline Planning Application process to agree the scope and scenarios assessed. Regarding item 51, tipping points for the relevant highway infrastructure where the capacity of the junctions are reached or surpassed have been identified in the Tipping Point Identification Report, Appendix K of the Transport Response Report V2. As per Items 52 and 53, the relevant junctions that require mitigation, in line with completion of the development, appropriate conditions are being sought between the promoters and the relevant highway authorities, NH and KCC. These draft conditions make reference to alternative schemes to be agreed based on a Monitor and Manage Framework.

Relevant items in the updated DfT Circular 1/2022	Otterpool Park Comment
junction) as the proposed development. Assumptions underpinning projected levels of traffic should be clearly stated to avoid the default factoring up of baseline traffic. The scenario(s) to be assessed, which depending on the development and local circumstances may include sensitivity testing, should be agreed with the company; where a scenario with particularly high or low growth is proposed, this should be supported by appropriate evidence. Planned improvements to the SRN or local road network should also be considered in any assessment where there is a high degree of certainty that this will be delivered. 50. An opening year assessment to include trips generated by the proposed development, forecasted growth and committed development shall be carried out to establish the residual transport impacts of a proposed development. For multi-phase developments, additional assessments shall be provided based on the opening of each phase. 51. Where a transport assessment indicates that a development would have an unacceptable safety impact or the residual cumulative impacts on the SRN would be severe, the developer must identify when, in relation to the occupation of the development, transport improvements become necessary. 52. The scope and phasing of necessary transport improvements will normally be defined by the company in planning conditions that seek to manage development in line with the completion of these works. In such circumstances, modifications to the SRN must have regard to the need to future-proof the network, while its delivery may require a funding agreement between the development promoter and the company. 53. As a result of investigations undertaken by the company, development promoter and/or local highway authority, it may become apparent that a different form of intervention would better address cumulative development impacts than the option(s) already identified through the plan-making process. In this situation, the company will work with the local planning authority and development promoter(s) to explore a cost sharing mechanism or the phased delivery of a more comprehensive scheme.	

Appendix 4

Spitfire Way Junction Improvements – Stage 1 Road Safety Audit

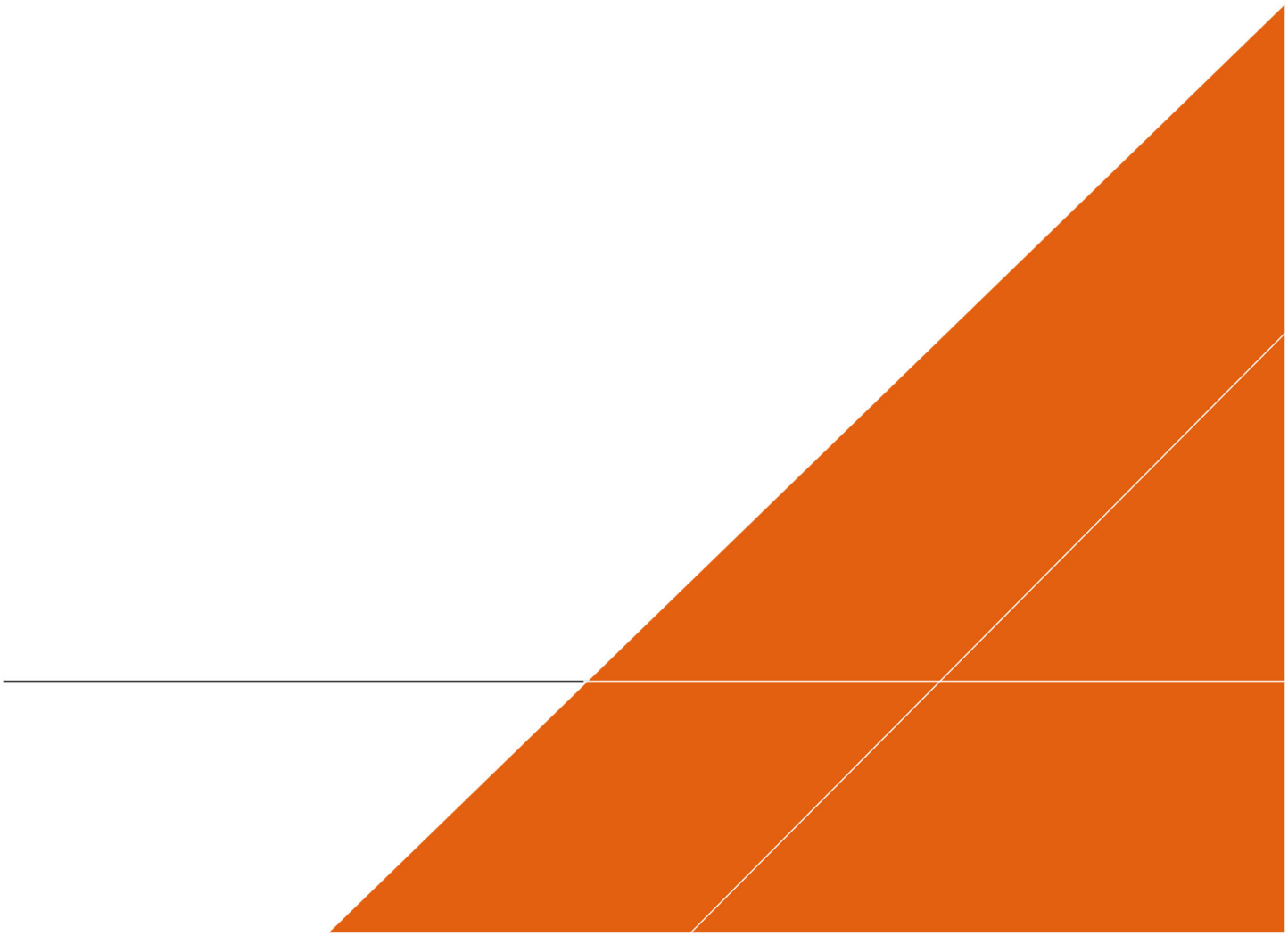
ARCADIS Design & Consultancy for natural and built assets

OTTERPOOL PARK, SPITFIRE WAY JUNCTION IMPROVEMENTS

Final Stage 1 Road Safety Audit

10029956-ARC-XX-XX-RP-HE-0013

FEBRUARY 2023



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Otterpool Park, Spitfire Way Junction Improvements

Final Stage 1 Road Safety Audit

Author	Jon Lewis
Checker	Charles Hutchinson
Reviewer	Nick Henderson
Approver	Nick Henderson
Report No	10029956-ARC-XX-XX-RP-HE-0013
Date	FEBRUARY 2023

Version Control

Version	Date	Author	Checker	Reviewer	Approver	Changes
01	08/02/23	Jon Lewis	Charles Hutchinson	Nick Henderson	Nick Henderson	First Issue

CONTENTS

1 INTRODUCTION

1.1.1 This report results from a Stage 1 Road Safety Audit carried out on the Otterpool Park, Spitfire Way Junction Improvements on behalf of Kevin Bown, Planning Manager, Project Sponsor, National Highways.

1.1.2 The Road Safety Audit Team membership approved by Kevin Bown, Project Sponsor, National Highways (the Overseeing Organisation), was as follows:

Charles Hutchinson	BEng, MSc, CMILT, MCIHT, MSoRSA, Arcadis Consulting (UK) Limited (Highways) (Certificate of Competency in Road Safety Audit gained in June 2014).
Jon Lewis	BEng (Hons), IEng FIHE, CMILT, PRINCE2 Arcadis Consulting (UK) Limited (Highways)

1.1.3 The Road Safety Audit took place at 80 Fenchurch Street office of Arcadis Consulting (UK), as well as home working in February 2023. The audit was undertaken in accordance with the Audit Brief for Otterpool Park, Spitfire Way Junction Improvements, issued on 2nd February 2023 by Leighton Ford, Highway Engineer, Arcadis Consulting (UK) Ltd, and approved by Kevin Bown, Planning Manager, Project Sponsor, National Highways.

1.1.4 The audit comprised an examination of the drawings/documents provided by Arcadis Consulting (UK) Ltd, and listed in Appendix A. These consisted of a preliminary design drawing and a GG142 Walking, Cycling and Horse Riding Assessment and Review (WCHAR) Exemption File Note.

1.1.5 The Audit Team visited the site together on 7th February 2023 between 11:30hrs-12:45hrs during the hours of daylight. Traffic flow along A260 Spitfire Way roundabout including Spitfire Way, White Horse Hill, A20 northbound onslip, A20 northbound offslip and A260 was low. During the site visit the weather was fair, bright and the carriageway surface was dry.

1.1.6 The Terms of Reference of the Road Safety Audit are as described in GG 119 Road Safety Audit. The Road Safety Audit Team has examined and reported on the road safety implications of the scheme as presented and has not been examined or verified for compliance with any other criteria. However, to clearly explain a problem or a recommendation to resolve a problem, it may be necessary to refer to another Standard or Advice Note, but such reference will not conflict with the requirements of the above Terms of Reference.

1.1.7 All comments and recommendations are referenced to the preliminary design drawing and the locations have been indicated on the A3 plan supplied with the Road Safety Audit Brief and provided in Appendix B. It is noted that when making recommendations, any design related strategic decisions agreed by the Overseeing Organisation (i.e., route choice, junction type or departures etc.), may not change irrespective of the Road Safety Audit, as these decisions already reflect an appropriate balance of factors including road safety.

1.1.8 Otterpool Park is a proposed new Garden City development which will comprise up to 8,500 homes together with retail, commercial, education, health, community uses and associated infrastructure. This sustainable new community is a site of strategic importance intended to meet Folkestone and Hythe District Council's identified need for new housing and growth. The proposed improvements include the following features at the A260 Spitfire Way roundabout junction with Whitehorse Hill:

- Widening of carriageway on the eastern side of the roundabout to provide 3 lanes on the roundabout, with dedicated lanes for southbound flows.
- Widening of carriageway on the southern side of the A20 westbound approach to the roundabout to accommodate a 3-lane entry from the A20 off slip with a dedicated left turn lane southbound.

- Widening of the A260 southbound to create lane capacity for traffic flows southbound by providing 2 lane exits with auxiliary lane merging into single lane prior to the constraint of the A20 overpass.
- Widening of carriageway on the northern roundabout entry from Spitfire way. to increase entry width.

1.1.9 The following strategic decisions have been incorporated into the scheme and listed below:

- The current highway improvement proposal is preliminary in status. Therefore, the level of detail incorporated in the design is accepted to be high level and absent of detail that corresponds with that normally required for a Stage 1 Road Safety Audit, such as drainage, street lighting, traffic signs etc. The proposal is expected to be further developed to detail design and a further follow up Stage 2 Road Safety Audit shall be undertaken at that time.
- Some elements of baseline data, such as topographical information, are not available. Corresponding assumptions are inherent to the proposals at this stage.
- Spitfire Way Improvement was a committed Local Plan mitigation measure proposed at this location which signalises the whole junction. A Section 106 contribution from the Otterpool scheme could be made to this proposal based on the percentage impact of the development trips at this location. However, National Highways has raised concerns over this approach as it is not currently confirmed how this scheme would be delivered as part of the Local Plan mitigation.
- This alternative proposal has been suggested from KCC to provide mitigation at this location to a level which mitigates the Otterpool Park impacts, without providing the full signalised junction proposals associated with the Local Plan. (This mitigation provides for two lanes from the A20 Eastbound Diverge, widening to a three-lane entry to the existing roundabout, as well as width increases on the A260 Southbound to allow for a widened exit from the roundabout, southbound).

1.1.10 Collision data for the scheme areas was provided for the five-year period from December 2017 to December 2021. During this period there were 3 slight and 1 serious personal injury collision as shown below.

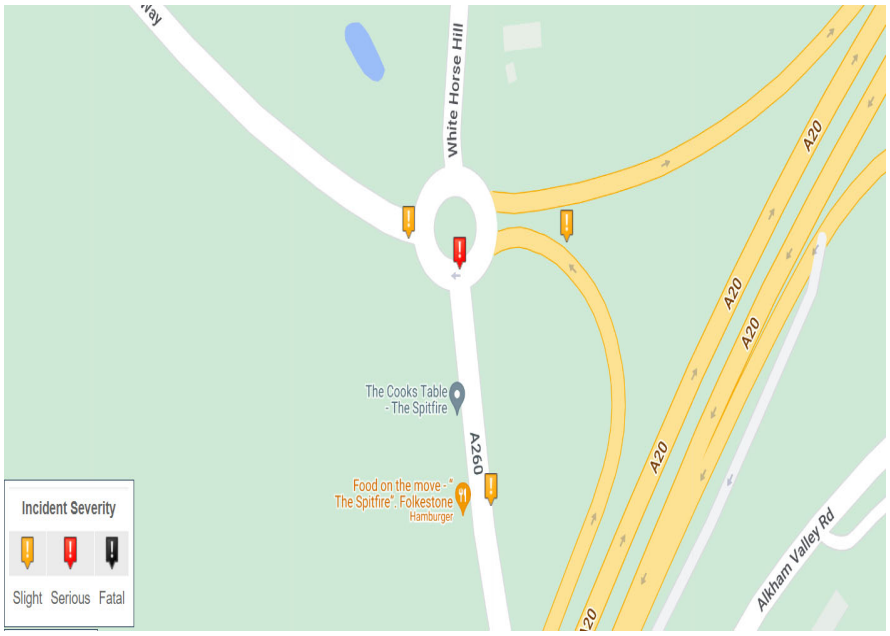


Image 1 – Spitfire Way Roundabout Collision Data Map (www.crashmap.co.uk)

1.1.11 There are no known Departures from Standards that have been recorded and submitted for review by National Highways.

2 ITEMS RAISED IN PREVIOUS ROAD SAFETY AUDITS

2.1.1 The Audit Team are not aware of this scheme being the subject of a previous Road Safety Audit.

3 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1 General

3.1.1 PROBLEM

Location: A - A20 Northbound Offslip to A260 Spitfire Way Junction (Drawing No. 10029956 OP ARC XX DR T 0018 Rev P01).

Summary: Risk of motorists striking street furniture or errant vehicles leaving the carriageway resulting in secondary collisions.

It is proposed to widen the nearside carriageway of the A20 northbound offslip to A260 Spitfire Way Junction from one lane to two lanes (along the offslip carriageway) and then from two lanes to three lanes at A260 Spitfire Way junction. The proposed widening appears to encroach close to, or onto, the nearside verge where traffic signs, lighting and other highway features reside (see photos 1&2).

There is a risk that existing highway furniture located close to the carriageway may be struck by oncoming motorists, or that errant vehicles may leave the carriageway and strike the highway features resulting in a secondary collision.

A similar situation occurs along the proposed southbound merge arrangement associated with A260 White Horse Hill (see photo 3).

RECOMMENDATION

Ensure that all street furniture along the adjacent verge is either suitably relocated, protected by road restraint, or made passively safe. Furthermore, the use of kerbing alongside the verge may also help contain errant vehicles leaving the carriageway.

3.1.2 PROBLEM

Location: A – A20 Northbound Offslip to A260 Spitfire Way Junction (Drawing No. 10029956 OP ARC XX DR T 0018 Rev P01).

Summary: Restricted forward visibility approaching the junction may lead to late braking and shunt collisions.

It is proposed to widen the A20 Offslip into and through the A260 Spitfire Way Junction by utilizing the nearside verge accordingly. The vegetation on the verge is overgrown and in its current form likely to impact on forward visibility (see photo).

There is a risk that motorists forward visibility approaching the junction may be restricted, particularly during summer months. This may result in late braking and shunt collisions.

RECOMMENDATION

Ensure forward visibility to the junction is sufficient to allow approaching motorists to observe the operation of the junction, queuing vehicles or obstructions in the carriageway ahead. This may require vegetation to be cut back and regularly maintained.

3.1.3 PROBLEM

Location: A – A20 Northbound Offslip to A260 Spitfire Way Junction (Drg. 10029956-OP-ARC-XX-DR-T-0018 Rev P01).

Summary: Risk of ponding leading to motorists suffering loss of control type collisions.

There is a risk that carriageway widening proposed to facilitate additional capacity along the A20 northbound offslip may lead to ponding of surface water and skidding / loss of control collisions, particularly during wet weather or icy conditions. Although existing drainage gullies were observed along the nearside kerbline and on the approach to the A260 Spitfire Way roundabout junction they do not appear to be relocated as part of the widening works.

A similar situation occurs along the southeastern quadrant of the roundabout nearside circulatory carriageway, A260 southbound nearside carriageway and nearside eastbound carriageway of Spitfire Lane, where in all cases local widening measures are also proposed.

RECOMMENDATION

It is recommended that suitable drainage is provided along the carriageway kerbline.

3.1.4 PROBLEM

Location: A – A20 Northbound Offslip to A260 Spitfire Way Junction (Drg. 10029956-OP-ARC-XX-DR-T-0018 Rev P01).

Summary: Retention of existing gullies may hinder power-two-wheelers leading to wet road collisions.

Existing drainage gullies were observed along the nearside kerbline of the A20 Northbound Offslip carriageway and on the approach to the A260 Spitfire Way roundabout junction. Where the carriageway widening is proposed this is likely to require relocating the current system of drainage. However, if drainage is retained in the current location, the gullies may pose a skidding risk and unseat riders of powered-two-wheelers using the nearside lane. This situation is likely to be worse due to the horizontal alignment of the carriageway, and particularly during wet weather conditions.

A similar situation occurs along the A260 White Horse Hill southern arm southbound nearside carriageway.

RECOMMENDATION

Ensure that where local carriageway widening occurs drainage gullies are relocated along the new kerbline.

3.1.5 PROBLEM

Location: B – A20 Northbound Offslip to A260 Spitfire Way Junction (Drg. 10029956-OP-ARC-XX-DR-T-0018 Rev P01).

Summary: Risk of loss of control collisions.

The A20 Offslip currently has high friction surfacing albeit in a poor state of repair. It is unclear at this stage whether this is to be replaced and incorporated into the extra lane proposed. There is a risk that if the additional lane does not incorporate high friction surfacing this may lead to skidding or loss of control collisions particularly during wet weather periods.

RECOMMENDATION

It is recommended that the A20 Offslip is treated with a high friction surfacing for a suitable distance from the give-way lines.

3.1.6 PROBLEM

Location: C – A260 White Horse Hill Southbound Carriageway South of A260 spitfire Way Roundabout (Drg. 10029956-OP-ARC-XX-DR-T-0018 Rev P01).

Summary: Risk of merge arrangement leading to late-braking or side-swipe type collisions.

Those travelling southbound along the nearside lane of A260 White Horse Hill will be required to merge. into the adjacent lane some distance from the roundabout. If motorists are not aware of the merging arrangement this may lead to late-braking or side-swipe collisions.

Similarly, there is a risk that this layout could increase the risk of some motorists carrying out nearside overtaking manoeuvres to past slower moving vehicles.

The Audit Team note that the merge facility also terminates rather abruptly.

RECOMMENDATION

It is recommended that suitable warning of the merge through signing and carriageway markings is provided, and that the end of the merge promotes a gradual transition.

3.2 Junctions

3.2.1 PROBLEM

Location: D – A20 Northbound Offslip / A260 Spitfire Way Junction (Drawing No. 10029956 OP ARC XX DR T 0018 Rev P01).

Summary: Additional approach lanes and circulatory lanes may lead to confusion, indecision, or shunt collisions.

Providing an additional lane on the approach to and through A260 Spitfire Way Junction is likely to result in motorists in the middle lane experiencing difficulties observing traffic signs, particularly if flanked by high-sided vehicles. This may lead to confusion, indecision, or shunt collisions.

RECOMMENDATION

It is recommended that suitable lane destination traffic signs and carriageway markings are provided to support traffic management on the approach to and through the junction. The use of 'approach' and 'entry' carriageway markings may also help to promote good traffic management.

3.2.2 PROBLEM

Location: E – White Horse Hill Northern Arm Southbound Approach to the Roundabout (Drg. 10029956-OP-ARC-XX-DR-T-0018 Rev P01).

Summary: Risk of poor lane discipline resulting in side-swipe and late braking collisions.

The southbound approach to the A260 Spitfire Way Junction from White Horse Hill currently accommodated two approach lanes. However, this approach lane arrangement does not appear to be continued as part of the proposed works. There is a risk that the proposed wide approach lane may lead to poor lane discipline and result in side-swipe and late braking collisions. Powered-two-wheelers and pedal cyclists are likely to be particularly at greater risk.

RECOMMENDATION

Ensure that the approach lane arrangement promotes good lane discipline.

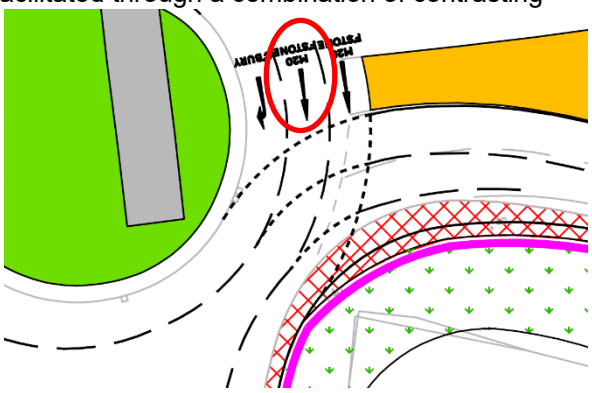
3.3 Traffic Signs, Carriageway Markings and Lighting

3.3.1 PROBLEM

Location: General – A260 Spitfire Way Roundabout Junction (Drawing No. 10029956 OP ARC XX DR T 0018 Rev P01).

Summary: Unconventional roundabout lane markings may lead to poor lane discipline, indecision and result in sideswipe or driver / rider collisions.

Traffic management proposals to increase circulatory lanes, from a consistent wide carriageway to an unconventional two/three lane arrangement, is facilitated through a combination of contrasting spiral and concentric markings. There is a risk that this arrangement in combination with (i) the absence of suitable signage and (ii) inappropriate carriageway / destination markings may result in poor lane discipline, indecision and lead to sideswipe and driver / rider collisions. It is noted by way of example that the circulatory lane carriageway markings indicating 'M20' & 'F'stone' for the middle lane appears misleading as motorists are also permitted to access A260 Canterbury Road and A260 Spitfire Way (see insert).



The situation is likely to become worse as any roundabout congestion may limit opportunity for motorists to change lanes, observe carriageway markings or observe approaching traffic.

The Audit Team notes that under the current junction arrangement the collision record is currently low.

RECOMMENDATION

Ensure that the roundabout layout is simple, uncomplicated and consistent with the proposed approach lanes. Ensure also that carriageway markings are unconfusing and supplemented with suitable traffic signs to aid traffic management. In addition, the use of circulatory guidance markings (where lanes cross and merge) to show a path through a junction may help benefit carriageway marking transitions.

4 AUDIT TEAM STATEMENT

4.1.1 We certify that this Road Safety Audit has been carried out in accordance with GG 119.

ROAD SAFETY AUDIT TEAM LEADER

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Sign [redacted]
Date: 08/02/2023

ROAD SAFETY AUDIT TEAM MEMBER

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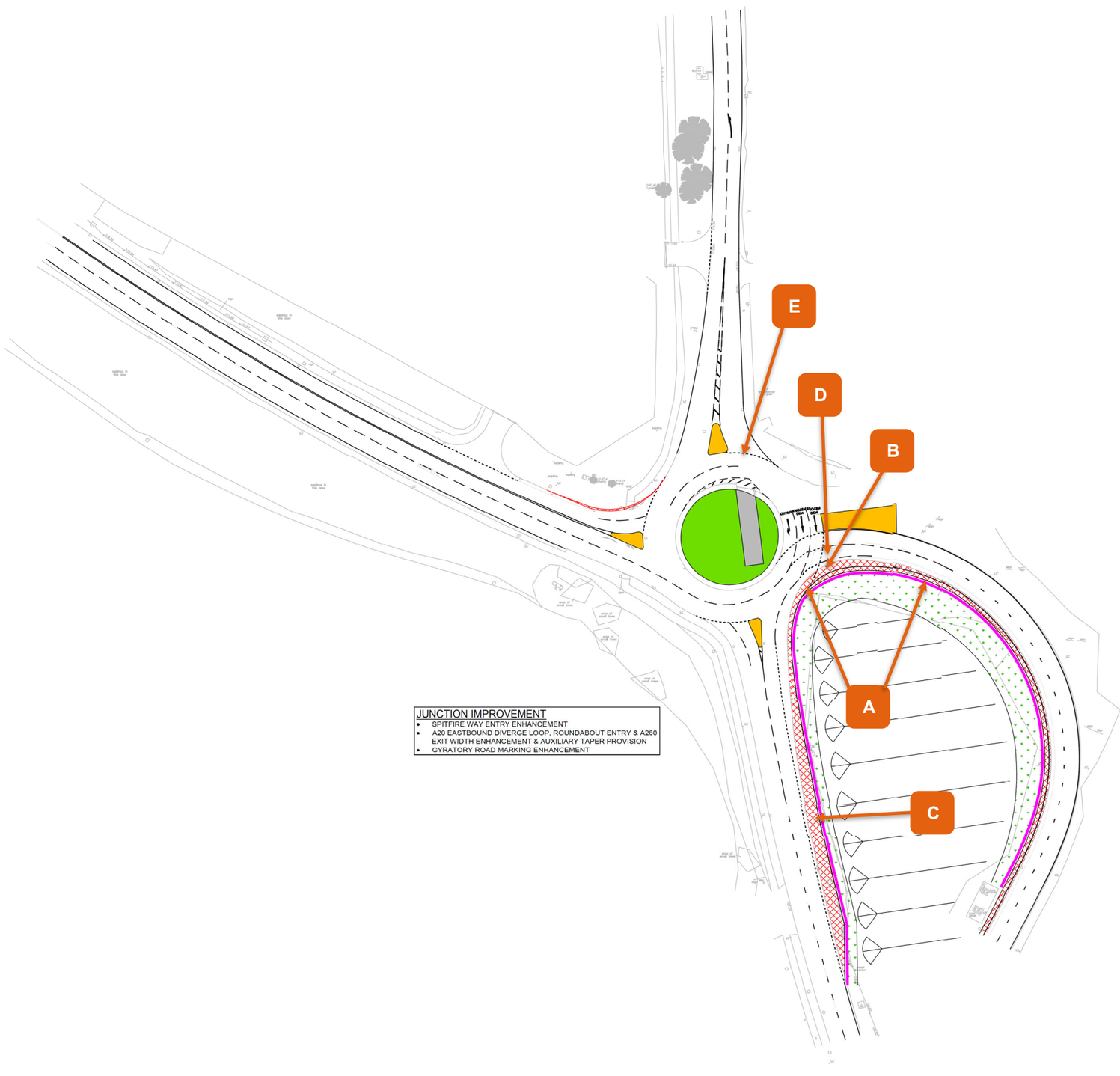
Bristol, BS2 0FR

Signed: [redacted]
Date: 08/02/2023

APPENDIX A – DOCUMENTS FORMING THE AUDIT BRIEF

DRAWING TITLE	DRAWING NUMBER	REV
Spitfire Way Proposed Junction Schematic Plan	10029956-OP-ARC-XX-DR-T-0018	P01
DOCUMENT TITLE	**DOCUMENT NUMBER**	**REV**
WCHAR Exemption File Note Spitfire Way Junction Improvement	10029956-ARC-XX-XX-FN-HE-2	P01
Otterpool Park, Spitfire Way Junction Improvements Stage 1 Road Safety Audit Brief	10029956-ARC-XX-XX-RP-HE-0012	01

APPENDIX B – PROBLEM LOCATIONS



JUNCTION IMPROVEMENT
- SPITFIRE WAY ENTRY ENHANCEMENT
- A20 EASTBOUND DIVERGE LOOP, ROUNDABOUT ENTRY & A260 EXIT WIDTH ENHANCEMENT & AUXILIARY TAPER PROVISION
- GYRATORY ROAD MARKING ENHANCEMENT

KEY:
- ADDITIONAL PAVED AREA
- PHYSICAL ISLAND
- MAINTENANCE HARDSTANDING
- VERGE
- ROAD RESTRAINT SYSTEM

NOTES:
1. THIS IS A SCHEMATIC PLAN, NOT AN ENGINEERING DESIGN. IT IS INTENDED TO DEMONSTRATE IMPROVEMENT VIABILITY ONLY.
2. UTILITIES DATA NOT CURRENTLY AVAILABLE OR CONSIDERED IN THE SCHEMATIC.

0 10 20 30 40 50 METRES
SCALE 1:500 (A1)
SCALE 1:1000 (A3)

REV	DATE	DESCRIPTION	DRN	CHK	REV	APP
P01	15JAN21	FOR INFORMATION	NC	SA	DC	PL
Rev.	Date	Description	Prod.	Chk.	Rev.	App.

Folkestone & Hythe District Council

Project:
OTTERPOOL PARK DEVELOPMENT

Site

Client

ARCADIS Design & Consultancy for natural and built assets

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Drawing Title:
SPITFIRE WAY
PROPOSED JUNCTION
SCHEMATIC PLAN

Designed: N.CLEMENTS	Signed:	Date: 15/01/2021
Produced: N.CLEMENTS	Signed:	Date: 15/01/2021
Checked: S.ARAYAL	Signed:	Date: 15/01/2021
Reviewed: D.CARRIGNON	Signed:	Date: 15/01/2021
Approved: P.LONGMAN	Signed:	Date: 15/01/2021
Design Stage: PRELIMINARY		
Original Size: A1	Grid: OS	Datum: AOD
Suitability Code: S1	Scale: 1:500	Project Number: 10029956

Suitability Description:
PRELIMINARY DESIGN
NOT TO BE USED FOR CONSTRUCTION

Drawing Number: 10029956 - OP - ARC XX - DR - T - 0018
Revision: P01

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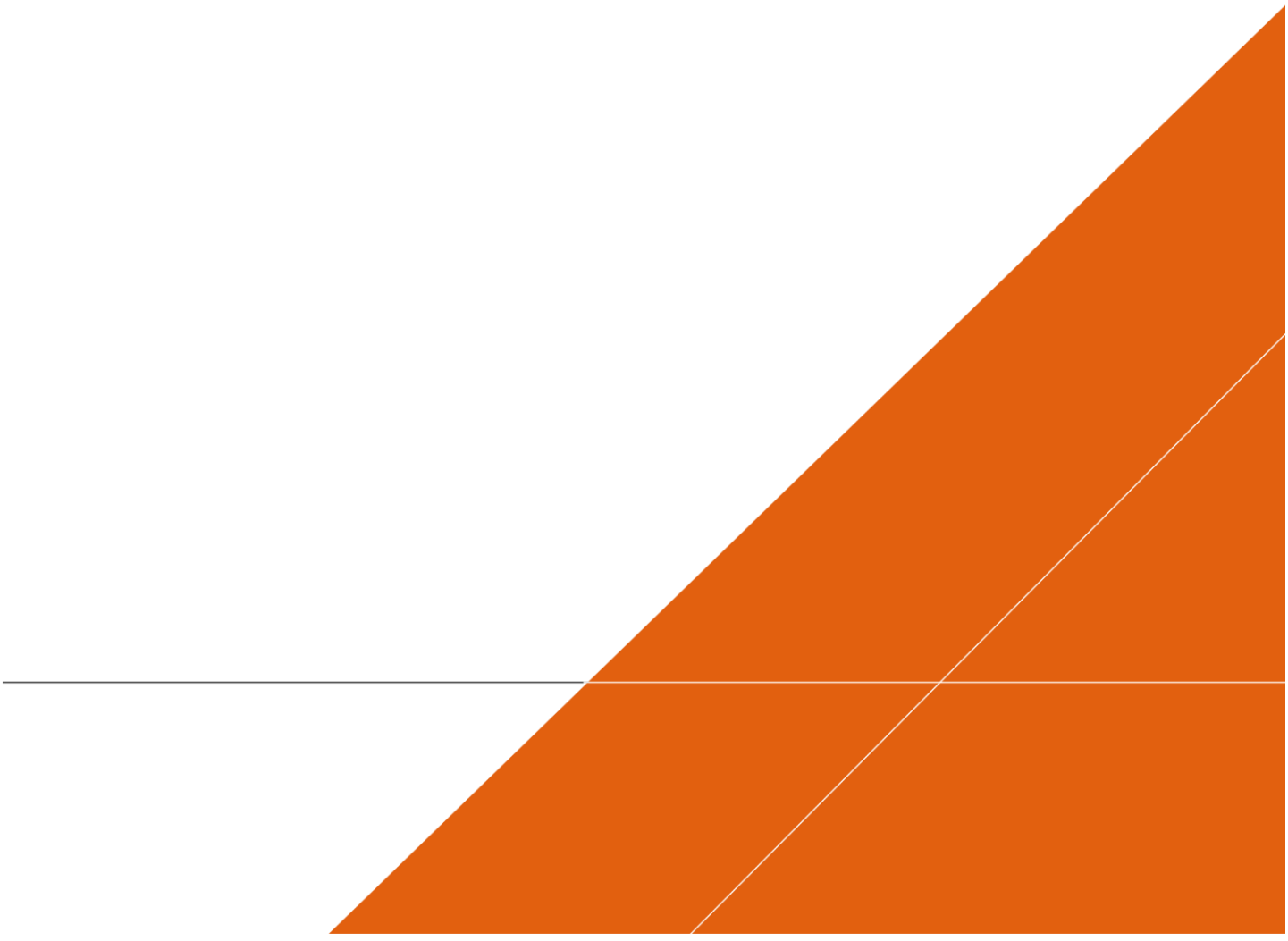
OTTERPOOL PARK, SPITFIRE WAY JUNCTION IMPROVMENT

Stage 1 Road Safety Audit Report Response

FEBRUARY 2023



Spitfire Way Junction Improvement

Stage 1 Road Safety Audit Report Response

Author	Leighton Ford
Checker	John Phillips
Reviewer	Shal Arayal
Approver	Ian Braddock
Report No	10029956-ARC-XX-XX-RP-HE-0014
Date	February 2023

Version control

Version	Date	Author	Checker	Reviewer	Approver	Changes
P01	09/02/23	Leighton Ford	John Phillips	Shal Arayal	Ian Braddock	DRAFT

CONTENTS

1 Project Details

Project Details

Report title:	Otterpool Park, Spitfire Way Junction Improvement - Stage 1 Road Safety Audit Report Response
Date:	13/02/2023
Document reference and revision:	10029956-ARC-XX-XX-RP-HE-0014 – P01
Prepared by:	Leighton Ford - Arcadis
On behalf of:	National Highways

Authorisation Sheet

PREPARED BY:	
Name:	Leighton Ford
Signed:	
Organisation:	Arcadis Consulting (UK) Limited
Date:	
APPROVED BY:	
Name:	Ian Braddock
Signed:	
Organisation	Arcadis Consulting (UK) Limited
Date:	

2 Introduction

Otterpool Park is a proposed new Garden City development which will comprise up to 8,500 homes together with retail, commercial, education, health, community uses and associated infrastructure. This sustainable new community is a site of strategic importance intended to meet Folkestone and Hythe District Council's identified need for new housing and growth.

The impact of the Garden City development has necessitated several mitigation measures to be developed within the Local (Kent County Council) and National (National Highways) highway network areas. One of the junctions and/or links that are proposed to be improved or mitigated for development traffic operation impacts as part of the scope of this Stage 1 Road Safety Audit (RSA) are as follows:

The proposed improvements (referred as the scheme here) includes the following features:

1. Widening of carriageway on the eastern side of the roundabout to provide 3 lanes on the roundabout, with dedicated lanes for southbound flows.
2. Widening of carriageway on the southern side of the A20 westbound approach to the roundabout to accommodate a 3-lane entry from the A20 off slip with a dedicated left turn lane southbound.
3. Widening of the A260 southbound to create lane capacity for traffic flows southbound by providing 2 lane exits with auxiliary lane merging into single lane prior to the constraint of the A20 overpass.
4. Widening of carriageway on the northern roundabout entry from Spitfire way. to increase entry width.

Title	Reference	Revision
Otterpool Park, Spitfire Way Junction Improvements- Stage 1 Road Safety Audit Brief	10029956-ARC-XX-XX-RP-HE-00011	P01
Otterpool Park, Spitfire Way Junction Improvements- Stage 1 Road Safety Audit Report.	10029956-ARC-XX-XX-RP-HE-0013	P01

3 Key Personnel

Key Personnel

Overseeing Organisation:	National Highways Kevin Bown
RSA team:	Arcadis Consulting (UK) Limited Charles Hutchinson – Audit Team Leader Jonathan Lewis – Audit Team Member
Design Organisation:	Arcadis Consulting (UK) Limited

4 Road Safety Audit Decision Log

Road Safety Audit Decision Log

RSA problem	RSA recommendation	Design Organisation response	Overseeing Organisation response	Agreed RSA action
Problem 3.1.1 **Location: A** - A20 Northbound Offslip to A260 Spitfire Way Junction (Drawing No. 10029956 OP ARC XX DR T 0018 Rev P01). **Summary:** Risk of motorists striking street furniture or errant vehicles leaving the carriageway resulting in secondary collisions. It is proposed to widen the nearside carriageway of the A20 northbound offslip to A260 Spitfire Way Junction from one lane to two lanes (along the offslip carriageway) and then from two lanes to three lanes at A260 Spitfire Way junction. The proposed widening appears to encroach close to, or onto, the nearside verge where traffic signs, lighting and other highway features reside. There is a risk that existing highway furniture located close to the carriageway may be struck by oncoming motorists, or that errant vehicles may leave the carriageway and strike the highway features resulting in a secondary collision. A similar situation occurs along the proposed southbound merge arrangement associated with A260 White Horse Hill.	Ensure that all street furniture along the adjacent verge is either suitably relocated, protected by road restraint, or made passively safe. Furthermore, the use of kerbing alongside the verge may also help contain errant vehicles leaving the carriageway.	**Agree** All highway furniture on the verge and elsewhere will be subject to RRRAP and detailed to suit. Kerbing provisions will be driven by safety (including drainage) considerations.		
Problem 3.1.2 **Location:** A – A20 Northbound Offslip to A260 Spitfire Way Junction (Drawing No. 10029956 OP ARC XX DR T 0018 Rev P01). **Summary:** Restricted forward visibility approaching the junction may lead to late braking and shunt collisions.	Ensure forward visibility to the junction is sufficient to allow approaching motorists to observe the operation of the junction, queuing vehicles or obstructions in the carriageway ahead. This may require	**Agree** Drawing indicates widening of verge to provide visibility to the junction.		

RSA problem	RSA recommendation	Design Organisation response	Overseeing Organisation response	Agreed RSA action
It is proposed to widen the A20 Offslip into and through the A260 Spitfire Way Junction by utilizing the nearside verge accordingly. The vegetation on the verge is overgrown and in its current form likely to impact on forward visibility (see photo). There is a risk that motorists forward visibility approaching the junction may be restricted, particularly during summer months. This may result in late braking and shunt collisions.	vegetation to be cut back and regularly maintained.			
Problem 3.1.3 **Location:** A – A20 Northbound Offslip to A260 Spitfire Way Junction (Drg. 10029956-OP-ARC-XX-DR-T-0018 Rev P01). **Summary:** Risk of ponding leading to motorists suffering loss of control type collisions. There is a risk that carriageway widening proposed to facilitate additional capacity along the A20 northbound offslip may lead to ponding of surface water and skidding / loss of control collisions, particularly during wet weather or icy conditions. Although existing drainage gullies were observed along the nearside kerbline and on the approach to the A260 Spitfire Way roundabout junction they do not appear to be relocated as part of the widening works. A similar situation occurs along the southeastern quadrant of the roundabout nearside circulatory carriageway, A260 southbound nearside carriageway and nearside eastbound carriageway of Spitfire Lane, where in all cases local widening measures are also proposed.	It is recommended that suitable drainage is provided along the carriageway kerbline.	**Agree** A safe drainage design will be implemented at detail design stage.		
Problem 3.1.4 **Location:** A – A20 Northbound Offslip to A260 Spitfire Way Junction (Drg. 10029956-OP-ARC-XX-DR-T-0018 Rev P01). **Summary:** Retention of existing gullies may hinder power-two-wheelers leading to wet road collisions. Existing drainage gullies were observed along the nearside kerbline of the A20 Northbound Offslip carriageway and on the approach to the A260	Ensure that where local carriageway widening occurs drainage gullies are relocated along the new kerbline.	**Agree** A safe drainage design will be implemented at detail design stage.		

RSA problem	RSA recommendation	Design Organisation response	Overseeing Organisation response	Agreed RSA action
Spitfire Way roundabout junction. Where the carriageway widening is proposed this is likely to require relocating the current system of drainage. However, if drainage is retained in the current location, the gullies may pose a skidding risk and unseat riders of powered-two-wheelers using the nearside lane. This situation is likely to be worse due to the horizontal alignment of the carriageway, and particularly during wet weather conditions. A similar situation occurs along the A260 White Horse Hill southern arm southbound nearside carriageway.				
Problem 3.1.5 **Location**: B – A20 Northbound Offslip to A260 Spitfire Way Junction (Drg. 10029956-OP-ARC-XX-DR-T-0018 Rev P01). **Summary**: Risk of loss of control collisions. The A20 Offslip currently has high friction surfacing albeit in a poor state of repair. It is unclear at this stage whether this is to be replaced and incorporated into the extra lane proposed. There is a risk that if the additional lane does not incorporate high friction surfacing this may lead to skidding or loss of control collisions particularly during wet weather periods.	It is recommended that the A20 Offslip is treated with a high friction surfacing for a suitable distance from the give-way lines.	**Agree** At detailed design, appropriate DMRB compliant road surfacing will be installed throughout.		
Problem 3.1.6 **Location: C** – A260 White Horse Hill Southbound Carriageway South of A260 spitfire Way Roundabout (Drg. 10029956-OP-ARC-XX-DR-T-0018 Rev P01). **Summary:** Risk of merge arrangement leading to late-braking or side-swipe type collisions. Those travelling southbound along the nearside lane of A260 White Horse Hill will be required to merge. into the adjacent lane some distance from the roundabout. If motorists are not aware of the merging arrangement this may lead to late-braking or side-swipe collisions.	It is recommended that suitable warning of the merge through signing and carriageway markings is provided, and that the end of the merge promotes a gradual transition.	**Agree** Safe traffic signs and road marking details will be developed at detailed design.		

RSA problem	RSA recommendation	Design Organisation response	Overseeing Organisation response	Agreed RSA action
Similarly, there is a risk that this layout could increase the risk of some motorists carrying out nearside overtaking manoeuvres to past slower moving vehicles. The Audit Team note that the merge facility also terminates rather abruptly. .				
Problem 3.2.1 **Location:** D – A20 Northbound Offslip / A260 Spitfire Way Junction (Drawing No. 10029956 OP ARC XX DR T 0018 Rev P01). **Summary:** Additional approach lanes and circulatory lanes may lead to confusion, indecision, or shunt collisions. Providing an additional lane on the approach to and through A260 Spitfire Way Junction is likely to result in motorists in the middle lane experiencing difficulties observing traffic signs, particularly if flanked by high-sided vehicles. This may lead to confusion, indecision, or shunt collisions.	It is recommended that suitable lane destination traffic signs and carriageway markings are provided to support traffic management on the approach to and through the junction. The use of 'approach' and 'entry' carriageway markings may also help to promote good traffic management.	**Agree** Appropriate traffic sign and road marking provisions will be implemented at detail design stage.		
Problem 3.2.2 **Location:** E – White Horse Hill Northern Arm Southbound Approach to the Roundabout (Drg. 10029956-OP-ARC-XX-DR-T-0018 Rev P01). **Summary:** Risk of poor lane discipline resulting in, side-swipe and late braking collisions. The southbound approach to the A260 Spitfire Way Junction from White Horse Hill currently accommodated two approach lanes. However, this approach lane arrangement does not appear to be continued as part of the proposed works. There is a risk that the proposed wide approach lane may lead to poor lane discipline and result in side-swipe and late braking collisions. Powered-two-wheelers and pedal cyclists are likely to be particularly at greater risk.	Ensure that the approach lane arrangement promotes good lane discipline.	**Agree** At the next design development stage, the proposed lane arrangements will be reviewed and enhance to mitigate concerns highlighted above. if practical.		

RSA problem	RSA recommendation	Design Organisation response	Overseeing Organisation response	Agreed RSA action
Problem 3.3.1 **Location:** General – A260 Spitfire Way Roundabout Junction (Drawing No. 10029956 OP ARC XX DR T 0018 Rev P01). **Summary:** Unconventional roundabout lane markings may lead to poor lane discipline, indecision and result in sideswipe or driver / rider collisions. Traffic management proposals to increase circulatory lanes, from a consistent wide carriageway to an unconventional two/three lane arrangement, is facilitated through a combination of contrasting spiral and concentric markings. There is a risk that this arrangement in combination with (i) the absence of suitable signage and (ii) inappropriate carriageway / destination markings may result in poor lane discipline, indecision and lead to sideswipe and driver / rider collisions. It is noted by way of example that the circulatory lane carriageway markings indicating 'M20' & 'F'stone' for the middle lane appears misleading as motorists are also permitted to access A260 Canterbury Road and A260 Spitfire Way (see insert). The situation is likely to become worse as any roundabout congestion may limit opportunity for motorists to change lanes, observe carriageway markings or observe approaching traffic. The Audit Team notes that under the current junction arrangement the collision record is currently low.	Ensure that the roundabout layout is simple, uncomplicated and consistent with the proposed approach lanes. Ensure also that carriageway markings are unconfusing and supplemented with suitable traffic signs to aid traffic management. In addition, the use of circulatory guidance markings (where lanes cross and merge) to show a path through a junction may help benefit carriageway marking transitions.	**Agree** The current feasibility stage road markings and lane designation signs will be reviewed and further enhanced at detail design stage. All traffic signs and road marking details developed at future desing stage will be clear and not liable to be misconstrued.		

5 Design Organisation and Overseeing Organisation Statements

Design Organisation Statement

On behalf of the design organisation, I certify that: **1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.**	
Name:	Leighton Ford
Signed:	
Position:	Senior Engineer
Organisation:	Arcadis Consulting (UK) Limited
Date:	

Overseeing Organisation statement

On behalf of the Overseeing Organisation, I certify that: **1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and** **2) the agreed RSA actions will be progressed.**	
Name:	Kevin Bown
Signed:	
Position:	Spatial (Town) Planning Manager
Organisation:	National Highways
Date:	

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