

**A19 / A184 Testo's Junction Improvement
TR010020
7.23 Applicant's note on Cumulative Effects
Assessment**

Planning Act 2008

Rule 8(1)(k)

Infrastructure Planning (Examination Procedure) Rules 2010



Infrastructure Planning

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A19 / A184 TESTO'S JUNCTION IMPROVEMENT

The A19 / A184 (Testo's Junction Improvement) Development Consent Order 201[]

APPLICANT'S NOTE ON CUMULATIVE EFFECTS ASSESSMENT

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Author:	A19 Project Team, Highways England & Jacobs

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HIGHWAYS ENGLAND

A19/A184 TESTO'S JUNCTION IMPROVEMENT SCHEME

NOTE ON CUMULATIVE EFFECTS ASSESSMENT

1 Executive Summary

- 1.1 This note sets out the approach which Highways England (**the Applicant**) considers ought to be taken when considering the cumulative effects of a scheme and how such cumulative effects should be mitigated.
- 1.2 This note also sets out how the Applicant has approached cumulative assessment for the A19/A184 Testo's Junction Improvement Scheme (**the Scheme**), taking into account other potential schemes in the area, including Downhill Lane Junction (**DLJ**).
- 1.3 In summary, the Applicant considers that it has satisfied the legal and policy requirements with regards to cumulative effects assessment and that suitable mitigation has been proposed for the Scheme which takes into account the potential cumulative effects which might arise as a result of other schemes, including DLJ.
- 1.4 Notwithstanding the above, and as requested by the Examining Authority (**ExA**) during Issue Specific Hearings (**ISH**) 2 and 3, this note:
- 1.4.1 reports on some further desktop sensitivity analysis carried out by the Applicant into the cumulative effects of both the Scheme and DLJ using the construction compound to the south west of Testo's roundabout; and
 - 1.4.2 sets out in further detail how the Applicant has complied with the Water Framework Directive (**WFD**) in relation to cumulative impact considerations in the River Don catchment.

2 Legal and Policy Background

The EIA Directive and Infrastructure Planning (Environmental Impact Assessment) Regulations 2009

- 2.1 The EIA Directive (Directive 85/337/EEC) as amended by Directives 97/11/EC, 2003/35/EC and 2009/31/EC (codified by Directive 2011/92/EU)¹ requires projects which are likely to have significant effects on the environment by virtue *inter alia* of their nature, size or location to be subject to an assessment of their environmental effects (Article 2(1)). The Scheme falls within this category of projects.
- 2.2 Annex IV to the EIA Directive provides that an Environmental Statement (**ES**) must include a description of the likely significant effects of the proposed project on the environment and notes

¹ Further amendments have been made by Directive 2014/52/EU, but these are not applicable to this Scheme – see further footnote 2 of this note.

that this description should cover, amongst other things, the cumulative effects of the project and other potential development.

2.3 The EIA Directive is implemented in the UK by regulations. The regulations that apply to the Scheme are the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (**the EIA Regulations**)².

2.4 As set out in paragraph 14 of Schedule 3 to the EIA Regulations, the characteristics of a development must be considered having regard, in particular, to the cumulation with other development.

2.5 An ES is defined in Regulation 2 of the EIA Regulations as meaning a statement:

“(a) that includes such of the information referred to in Part 1 of Schedule 4 as is reasonably required to assess the environmental effects of the development and of any associated development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile;...”

2.6 As set out in Part 1 of Schedule 4 to the EIA Regulations (paragraph 20), an ES must include:

“a description of the likely significant effects of the development on the environment, which should cover the direct effects and any...cumulative...effects of the development...” and “a description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment”.

2.7 Combining the above provisions, an ES must therefore include such information about cumulative effects as is reasonably required to assess the environmental effects of a scheme, and that the applicant can reasonably be required to compile, having regard to current knowledge and methods of assessment at the time the assessments are undertaken.

2.8 It is apparent from judicial decisions that the extent of the assessment of cumulative effects is a question of fact and judgment undertaken on a case-by-case basis³.

National Networks National Policy Statement

2.9 The need to consider cumulative effects is also set out in the National Networks National Policy Statement (**NN NPS**), which states (in section 4.3 under “General principles of assessment”):

“In considering any proposed development, and in particular, when weighing its adverse impacts against its benefits, the Examining Authority and the Secretary of State should take into account:

...

² Please see the Applicant’s legal submissions on the applicability of the 2009 EIA Regulations (**document reference TR010020/APP/7.10**) for an explanation of why the Infrastructure Planning (EIA) Regulations 2009 (as opposed to the Infrastructure Planning (EIA) Regulations 2017), apply to the Scheme.

³ See *R(on the application of Larkfleet Ltd) v South Kesteven District Council*, [2015] EWCA Civ 997 and [2014] EWHC 3760 (Admin), CO/17593/2013. See also *Brown v Carlisle City Council* [2010] EWCA Civ 523 and *Bowen-West v Secretary of State for Communities and Local Government* [2012] EWCA Civ 321.

- *its potential adverse impacts, including any longer-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.”*
- 2.10 Section 4.16 of the NN NPS provides that when considering significant cumulative effects, an ES should provide information on how the effects of the proposal would combine and interact with the effects of other development. Section 4.17 goes on to state that the ExA should consider how significant cumulative effects and the interrelationship between effects might as a whole affect the environment, even though they may be acceptable when considered on an individual basis with mitigation measures in place.
- 2.11 Although (to the Applicant’s knowledge) no general statements of principle are made in the NN NPS about the *standard* of mitigation measures required in any particular case, the NN NPS does support the Applicant’s view that any mitigation required should be appropriate, proportionate and reasonable – see, for instance, paragraphs 5.198 and 5.215.

PINS Guidance – Advice Note 17

- 2.12 The Applicant has taken PINS’ four stage approach to cumulative effects assessment (as set out in Advice Note 17 on cumulative effects assessment) into account when carrying out assessments for the Scheme. Paragraph 3.4.11 of Advice Note 17 provides that applicants are expected to include the mitigation necessary to address impacts associated with their proposed project.

3 Approach to Cumulative Effects Assessment

- 3.1 As set out in Chapter 15 of the ES for the Scheme (**TR010020/6.1**), cumulative effects can be either:
- 3.1.1 ‘additive’, e.g. one source of pollution can add to another source of pollution to create a higher concentration of pollutant than would otherwise occur, or an area of habitat could suffer loss of land from one development and then further loss of land from another development; or
 - 3.1.2 ‘synergistic’, where a receptor may experience different types of effect from two different developments to produce a combined significant effect; for instance a habitat may be affected by loss of land from one development and pollution or noise from another, resulting in a combined significant effect.
- 3.2 Any cumulative impacts identified in the ES were defined as ‘construction’ or ‘operational’ effects, ‘short-term’ or ‘long-term’ (based on whether they would still be felt 15 or more years after construction) and ‘beneficial’ or ‘adverse’. The Design Manual for Roads and Bridges (**DMRB**) sets out a specific methodology for the assessment of the significance of cumulative effects, ranging from “severe” down to “not significant” (see Table 15-2 of the ES).
- 3.3 Further detail on the cumulative effects assessment methodology is set out in Chapter 15 of the ES.
- 3.4 Appendix 15.4 to the ES presents the cumulative effects of the Scheme with all the shortlisted developments identified in proximity to the Scheme. There were 11 in total, including IAMP

and DLJ. As set out in that Appendix, the cumulative effects assessment for each of the following topics was either “minor” or “not significant”: air quality; cultural heritage; landscape and visual effects; ecology and nature conservation; geology and soils; materials; noise and vibration; people and communities; and road drainage and the water environment.

- 3.5 Taking the above into account, the Applicant considers that it undertook all reasonable steps in relation to its approach to cumulative assessment as documented in the ES, and included sufficient information on potential nearby projects as was reasonably available to it at the time, in accordance with the requirements of the EIA Regulations.

4 Approach to Mitigation of Cumulative Effects

- 4.1 On the subject of cumulative effects mitigation, the Applicant would make two observations:
- 4.1.1 it would not be appropriate, proportionate and reasonable for the Scheme to be responsible for mitigating the effects of projects for which applications for consent have not already been made, and where that mitigation ought properly to be brought forward as part of those applications, if and when they are lodged.
- 4.1.2 it is, however, relevant to consider the extent to which the mitigation proposed for the Scheme takes account of potential cumulative effects, and the extent to which it will either contribute to the mitigation of any significant effects which may arise cumulatively with other schemes, or would otherwise be compatible with any mitigation which may be required to be brought forward by those schemes.
- 4.2 The mitigation proposed for the Scheme has been identified following an assessment of the potential effects of the proposed development, including taking into account information reasonably available about the potential cumulative effects with other proposed projects in the area. The Applicant’s submission is that the mitigation proposed for the Scheme is therefore appropriate, proportionate and reasonable having regard to that information.
- 4.3 As set out in Chapter 15 of the ES, most of the potential cumulative effects between the Scheme and other projects, including DLJ, would be minimised by good design and the application of good construction practices including: application of construction site pollution controls (see Chapter 14 of the ES ‘Road Drainage and the Water Environment’); dust emission controls (see Chapter 6 of the ES ‘Air Quality’); and noise mitigation (see chapter 12 of the ES ‘Noise and Vibration’). In addition, development of waste and traffic management plans would be undertaken in consultation with the local authorities in order to reduce the cumulative effects from construction traffic movements and off-site waste disposal.
- 4.4 The transport model used for both the Scheme and for the draft DLJ ES includes both schemes. Therefore, those elements of the draft DLJ ES which rely on the transport modelling (operational air quality; operational noise; pollution from routine run-off and spillage risk and driver stress) have allowed for the Scheme within the baseline assessment for DLJ. The cumulative effects for the relevant chapters as set out in the Scheme ES will therefore form the basis of the proposed mitigation for DLJ. To the extent that the DLJ ES does not include the Scheme in its baseline assessment, any additional effects will be cumulative with the Scheme and appropriate mitigation will need to be considered by the DLJ scheme.

- 4.5 The mitigation proposed for the Scheme would not preclude or prevent any further mitigation being brought forward by subsequent projects, including DLJ, if the environmental assessment for those schemes considered it necessary to mitigate the impact for that scheme.

5 Joint use of the Construction Compound

- 5.1 As identified by the Applicant at ISH3, the use of the construction compound by DLJ will be assessed as part of that scheme's application. Any existing adverse effects of the Scheme also using the compound at the same time as DLJ will therefore be assessed by DLJ as part of its cumulative effects assessment, and mitigated as necessary.
- 5.2 The Applicant considers that this approach complies with the requirements of the EIA Regulations, for the reasons given above. Nevertheless, as requested by the ExA during ISH3, the Applicant has carried out some further desktop sensitivity analysis in relation to the joint use of the construction compound to the south west of Testo's roundabout by the Scheme and the DLJ scheme; the results of this analysis are set out below.

Air Quality

- 5.3 Paragraphs 6.7.3 and 6.8.1 of the ES outline that there would be no significant effects on air quality resulting from the construction of the Scheme as a result of either emissions or dust. Control measures to be implemented on the Scheme are contained within Appendix G of the Construction Environmental Management Plan (**CEMP**) (**document reference TR010020/APP/7.2**).
- 5.4 It is proposed that during construction of the DLJ scheme the Testo's compound would primarily be used for a small number of additional employees, the activities of which would predominately be for project management, supervisory and engineering staff. These are unlikely to be dust generating activities.
- 5.5 It is not likely that the proposed use of the Testo's compound by DLJ contractors would give rise to any significant effects in relation to air quality.
- 5.6 There would be some additional potential Heavy Duty Vehicle (**HDV**) movements, in excess of those included in the Scheme assessment. Given the smaller scale of activity anticipated for DLJ, for example no embankment construction and the fact that soil storage areas will be located adjacent to the DLJ works, and a shorter construction period, it is anticipated that the additional vehicle movements would not cause any significant increases in fugitive dust emissions.
- 5.7 The mitigation measures proposed in Appendix G of the CEMP would continue to be used for the duration of the compounds use. As discussed during ISH2, it is proposed that the construction programmes for the Scheme and DLJ would run concurrently; therefore it is deemed that the mitigation proposed and contained within the CEMP to control fugitive dust emissions in relation to the Scheme would be sufficient to cover the additional activities anticipated in respect of DLJ.

Landscape and Visual

- 5.8 Chapter 8 of the ES identifies a temporary adverse effect on receptors close to the location of the site compound (e.g. West Pastures Travellers Site). Mitigation in the form of phasing soil storage is proposed to minimise disruption during the construction period. This is secured through the REAC and the CEMP. The REAC references the provision of bunds to mitigate visual impact secured through Requirement 4. Storage of spoil and 'phasing' will be secured in the Soil Management Plan (CEMP Appendix K) and general nuisance management in CEMP Appendix G.
- 5.9 The compound would be lit 24/7 for the duration of the Scheme's construction programme. As identified in ISH2, the DLJ construction programme would run concurrently, therefore there would be no requirement for additional time to be added to the Scheme programme by the addition of use of the compound for DLJ.
- 5.10 As a result, it is not anticipated that the combined use of the compound for the Scheme and DLJ would give rise to any additional landscape or visual effects above those identified in Chapter 8 of the ES. This is due to the fact that the compound would not require additional lighting, or additional land take to accommodate its use for DLJ.

Noise and Vibration

- 5.11 Paragraphs 12.7.22-12.7.23 of the Addendum to the ES (**ESA**) (**document reference TR010020/APP/6.11**), including Table 12-8, outline the impacts identified through the assessment of construction noise. Table 12-7 of the ESA and Appendix 12.5 of the ES set out the construction information on which the assessment was based.
- 5.12 Mitigation for construction related noise is described in paragraphs 12.8.1 to 12.8.5 of the ESA and the assessment of the significance of impact is given in paragraphs 12.10.1 to 12.10.3 of the ESA. Table 4 of the CEMP sets out 'Disturbance to sensitive receptors due to Construction Phase Noise and Vibration' as an environmental risk.
- 5.13 The CEMP identified the best practice measures that would be undertaken to control noise emissions resulting from the construction phase on sensitive receptors.
- 5.14 As outlined, it is proposed that the use of the compound for DLJ would be related to project management, engineering teams and supervisory activities. It is anticipated that a small number of additional employees would result in a slight increase in vehicle movements but that this would not add any additional significant noise effects.
- 5.15 As noted above, there may be a small number of additional HDV movements as a result of the combined use of the Testo's compound, however it should be emphasised that the DLJ scheme will use other temporary land (i.e. not associated with the Testo's application) for the storage of plant and materials to deliver the DLJ works. Therefore, while there may be a marginal increase in noise impacts for sensitive receptors close to the Scheme, it is not anticipated that these would be significant additional impacts above those outlined within Chapter 12 of the ES and are therefore mitigated within the current proposals for the Scheme and no further mitigation is necessary.

Cultural Heritage

- 5.16 There is no additional land take required for the use of the construction compound to accommodate the use by DLJ, as a result there would be no additional effects to those outlined in Chapter 7 of the ES.

Ecology

- 5.17 There is no additional land take required for the use of the construction compound to accommodate the use by the DLJ scheme, as a result there would be no significant additional effects to those outlined in Chapter 9 of the ES.

Geology and Soils

- 5.18 There is no change to the footprint of the construction compound to facilitate its use by the DLJ scheme, therefore there would be no significant additional effects to those outlined in Chapter 10 of the ES. No temporary land has been included in the Scheme for DLJ.

Materials

- 5.19 There is no change to the footprint of the construction compound to facilitate its use by the DLJ scheme, therefore there would be no significant additional effects to those outlined in Chapter 11 of the ES.

People and Communities

- 5.20 There is no change to the footprint of the construction compound to facilitate its use by the DLJ scheme, therefore there would be no significant additional effects to those outlined in Chapter 13 of the ES. The small number of potential additional vehicles are unlikely to give rise to significant effects on road users from combined use of the compound.

6 Water Framework Directive – Road Drainage and the Water Environment

- 6.1 As also discussed during ISH3, the Applicant sets out below how the objectives set out in the WFD have been complied with in respect of the Scheme, and why the embedded mitigation proposed for road drainage is proportionate and reasonable.
- 6.2 The NN NPS states that the Secretary of State should be satisfied that a proposal has had regard to the River Basin Management Plans and the requirements of the WFD (including Article 4.7) and its daughter directives, including those on priority substances and groundwater (Section 5.226). It continues that the specific objectives for particular river basins are set out in River Basin Management Plans and, in terms of WFD compliance, the overall aim of projects should be for no deterioration of ecological status in watercourses, ensuring that Article 4.7 of the WFD Regulations does not need to be applied.
- 6.3 Chapter 14 of the ES outlines the information relating to operational water quality effects of the Scheme. The Scheme will result in an increase of impermeable area, but a reduction in the number of outfalls (from 3 to 2) and also the introduction of an attenuation pond, which will help control runoff to the greenfield runoff rate. The proposed drainage system also has the ability to isolate the drainage system from the River Don.

- 6.4 A Highways Agency Water Risk Assessment Tool (HAWRAT) assessment has been undertaken for the Scheme. The HAWRAT Methodology is described in the DMRB Volume 11 Environmental Assessment Section 3 Environmental Assessment Techniques Part 10 HD45/09 Road Drainage and the Water Environment (hereafter referred to as **HD45/09**). Chapter 5 of HD45/09 provides a general explanation of the procedures for assessing impacts to surface waters from the effects of routine runoff and it sets the context for the assessment, which is principally driven by the need to ensure that potential ecological impacts assessment is undertaken and that appropriate mitigation measures are identified and implemented.
- 6.5 Section 5.6 of HD45/09 states in regards to the HAWRAT that:
- “ the methodology behind it has been derived from a collaborative research programme undertaken by the Highways Agency (HA, now Highways England (HE)) and Environment Agency (EA) which investigated the effects of routine road runoff on receiving waters and their ecology...*
- ...The thresholds have been developed with the EA and are consistent with the requirements of the Water Framework Directive (WFD). The EA [has] approved the method of assessment used by HAWRAT and have agreed that the outputs from the tool can be used in the Environmental Impact Assessment (EIA).”*
- 6.6 It should be noted that the impact of future traffic loads from the Scheme, DLJ and IAMP have been considered cumulatively by use of traffic data in the HAWRAT assessment that represent all three developments going ahead, along with other local highway changes. As a result, the outputs of HAWRAT presented in the ES do take into account additional developments.
- 6.7 Table 14-9 in the ES presents the results of the HAWRAT assessment of the proposed drainage system for the Scheme and shows a PASS for both sediment bound pollutants and dissolved pollutants. This confirms that the Scheme, even without mitigation, would meet the Environmental Quality Standards values required by the WFD and is therefore compliant with both the WFD and the NN NPS. Accordingly, the proposed inclusion of embedded mitigation in the form of an attenuation pond and restricted runoff takes the Scheme beyond the minimum required by the NN NPS and WFD.
- 6.8 Based on information outlined in the Preliminary Environmental Information Report (**PEIR**) for the DLJ scheme, DLJ would also make use of attenuation ponds and would restrict runoff to greenfield rates, thus employing the same drainage design principles as the Scheme. The anticipated effects on water quality, based on information in the DLJ PEIR is either neutral or providing betterment. A full assessment of the cumulative effects of the Scheme and DLJ would be undertaken once the HAWRAT assessment for DLJ is completed and further information on the drainage design is completed.
- 6.9 Based on the fact that the design principles for DLJ are in alignment with those of the Scheme in the use of attenuation ponds and the restriction of runoff to greenfield rates, it is concluded that based on current information it is unlikely that there would be any additional adverse effects on water quality resulting from the DLJ scheme.