



Our ref: AE/2022/127507/06-L01 & Interested Party Ref: 20033155
Your ref: TR010060

Date: 10 May 2023

Deadline 5 Submission - Submitted via portal

APPLICATION BY NATIONAL HIGHWAYS FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE A12 CHELMSFORD TO A120 WIDENING

1.1 Following the biodiversity discussion at Issue Specific Hearing 3 (ISH3) on Environmental Matters, we wish to provide a further update in respect of our position regarding the proposed main river crossings, including the use of culverts. We would also like to comment on the Applicants response to Q2.18.5 within document 9.41 Applicant's Responses to ExQ2 - Rev 2 (REP4-055).

1.2 Further discussion with the Applicant on the issue of the proposed main river crossings took place on 5 May 2023. This was the first meeting on this topic since 2 February 2023. As part of this discussion, the Applicant re-stated that they do not believe that the additional crossings will affect the passage of fish and eels or introduce further barriers to water voles and otters due to the mitigation measures proposed.

1.3 We cannot agree with this position. The proposals include the introduction of two new culverts for the new sections of highway, one 60 metres long on Domsey Brook, and one 46 metres long on Rivenhall Brook. In each case the culverts associated with the current A12 will remain in place. A further existing crossing of Domsey Brook and a crossing of the Roman river, which we know through observation cause problems for ecology, are being extended based on the existing designs. It is also proposed to extend the current bridge crossing of the river Brain, replicating the existing design, which we know adversely affects flows in summer with consequences for fish and eels (the Applicant has now agreed to consider design options for improving the River Brain crossing). We cannot accept that the Applicant has demonstrated that these works will not introduce further barriers to species movement on these watercourses.

1.4 The Applicant also detailed some of the proposed mitigation measures, including the provision of natural substrate to aid fish and eel passage, and ledges for mammals. While we do not disagree with the specific design of these measures,

it is our view that they are wholly inadequate in serving to mitigate the effects of the proposals on these main rivers.

1.5 While it may be the case that some mammals will utilise long culverts, evidence from studies (including Grogan, A., Philcox, C. & Macdonald, D. 2001. Nature conservation and roads: Advice in relation to otters. Wildlife Conservation Research Unit, Oxford, as cited by the Cardiff University otter project 2012 referred to in our written representation REP2-054) has shown that river crossings designed as clear span bridges result in fewer mammal deaths as they provide much more natural and varied options for a range of mammals. It is our expert opinion that the proposed crossings will cause unnecessary and avoidable environmental damage, and the Applicant has failed to demonstrate conclusively otherwise.

1.6 A copy of the Environment Agency's culverting policy and associated guidance has been provided along with this submission. As highlighted at ISH3, the policy represents a long-established position in place for over 20 years. The current version was published in 2019. The policy emphasizes that culverts can have significant adverse effects on the ecology of a watercourse, which is a key reason why they should be avoided and only used where it can be shown that there are no alternative crossing options, and where there will be no adverse impacts on habitats or species. The Environment Agency are working with partners including the Essex and Suffolk Rivers Trust, and the Essex Wildlife Trust to actively remove barriers to species movement from main rivers, and these proposals represent a significant backwards step in that respect.

1.7 The draft National Policy Statement for National Networks (NNNPS) (March 2023) includes the requirement to apply the mitigation hierarchy, defined at paragraph 4.21 as the principle that environmental harm resulting from a development should as a first option be avoided, then adequately mitigated, or, as a last resort, compensated for. This is further detailed in paragraph 5.43 and 5.51. We note that the Applicants Deadline 4 Submission - 9.48 Appendix G: Draft National Networks National Policy Statement Accordance Table - Rev 1 (REP4-062) states that this approach has been complied with. It is our view that the Applicant has not demonstrated that this approach has been followed in respect of the design of the proposed main river crossings. The use of culverts should be viewed as the least favoured option, as they do not avoid environmental harm.

1.8 We also note that in respect of paragraphs 5.46-47, 5.51 and 5.63 of the draft NNNPS the Applicant has sought to highlight the biodiversity gains of the proposals by referring to "an overall net gain of ... 157% for rivers". However, that figure in respect of 'rivers' has been slightly misquoted. The figure of 157% relates collectively to rivers and streams. As stated in the Biodiversity Net Gain Report (Ref: APP-138. Doc 6.3 Environmental Statement - Appendix 9.14) the 'rivers and streams' habitat type was separated into rivers and ditches. The report shows a net gain of 293.29% for ditches, and a very small gain only of 0.36% in respect of river habitat. While we contend that this assessment does not capture the impacts on the wider river ecosystems resulting from the loss in connectivity caused by the proposed main river crossings, we thought it appropriate to highlight the correct figures in relation to river habitats.

1.9 In our Written Representation (REP2-054) we highlighted that if fish passage is adversely affected, the proposals risk catchment scale deterioration in the Water Environment (Water Framework Directive) Regulations 2017 (WER) (formerly the Water Framework Directive (WFD)). We do not currently agree that the Applicant's WFD compliance assessment (APP-159) has demonstrated that this will not be the case. When making a decision, the draft NNNPS at paragraph 5.257 states that the Secretary of State (SoS) should "give additional weight to impacts where a project would have adverse effects on the achievement of the environmental objectives established under the Water Framework Regulations."

1.10 European eel, water vole and otter are all protected species affected by the proposed crossings. The Applicant has highlighted to us that Natural England are not currently objecting on the basis of impacts to protected species. It is our understanding that the comments from Natural England in respect of these proposals arise from standing advice which is not site specific. We are liaising with Natural England to highlight our concerns regarding the potential severance of species populations across the catchments.

1.11 In their response to ExQ2 (REP4-055), the Applicant has outlined some specific points for the Environment Agency to respond to. These include asking which evidence we rely upon to establish that the proposed culverts give rise to conspicuously harmful effects. We would re-iterate that it is the responsibility of the Applicant to accurately assess and show that there will be no adverse effects on ecology, including protected species, as a result of the proposals. It should also be shown that there will be no deterioration in respect of the Water Framework Directive. Our culverting policy states that "Applicants will be expected to demonstrate why culverting is both necessary and the only reasonable and practicable alternative", and that "Applicants should provide appropriate assessments to demonstrate that culverting will not ... result in an unacceptable impact on the habitat(s) and species present." We've previously detailed, and outlined above, why we do not believe that this has been adequately demonstrated.

1.12 The Applicant has also asked whether the Environment Agency is claiming that the SoS has a legal duty to consider alternatives and has cited case-law relating to the consideration of alternative sites. We are not suggesting that the SoS consider alternative routes but are advising on the significant adverse effects that can result from the use of culverts compared to potentially less damaging alternative designs such as clear span bridges. Our position is that amendments to the scheme could be made to reduce the amount of harm that will be caused to the environment. This is a material consideration for the SoS when making a decision. The policy requirement for the consideration of alternative designs is contained within the draft NNNPS, notably at paragraphs 5.43 and 5.51 (mitigation hierarchy).

1.13 With regard to the alternative designs that should have been assessed, we've repeatedly stated throughout our pre-application engagement with the Applicant that main river crossings should be as wide and light as possible, retaining a natural channel and natural bank margins. We have highlighted the problems caused by the existing crossings and emphasised the importance of not replicating those designs. In accordance with the aforementioned mitigation hierarchy, we would have

expected to have been involved in a consideration of alternative design options for the main river crossings during the pre-application stage.

1.14 The Applicant has sought to disapply the Environmental Permitting (England and Wales) Regulations 2016 which provides that the culverting which the Applicant is promoting requires flood risk activity permits (FRAPs). We have indicated that due to our concerns over the nature of the Applicant's proposals we are not prepared to consent to such disapplication and so require the Applicant to submit applications for flood risk activity permits separately for the culverting. (S150 Planning Act 2008 provides that no disapplication may take place in these circumstances unless the Environment Agency consents to it). We will consider the applications for FRAPs when received and may consider it appropriate to refuse the applications on the basis that the culverting is environmentally damaging. Paragraph 5 of Part 1 of Schedule 25 to the EPR provides that we must exercise our functions in permitting FRAPs for the purposes of (a) managing flood risk (b) managing impacts on land drainage (c) environmental protection. In determining applications for FRAPs we must also secure compliance with the Water Framework Directive.

1.15 We would be happy to discuss this issue further should the Examining Authority deem it necessary.