

HAYES COMMUNITY DEVELOPMENT FORUM

WRITTEN REPRESENTATION

HIGHWAYS ENGLAND'S RESPONSE

PLANNING ACT 2008 (AS AMENDED) SECTION 88 AND THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010 (AS AMENDED) APPLICATION BY HIGHWAYS ENGLAND FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE PROPOSED M4 JUNCTIONS 3 TO 12 SMART MOTORWAY

- 1.1 *For "Deadline IV": Write up of oral submission on Thursday 19th November 2015 by Robin Brown on behalf of the Hayes Community Development Forum*
- 1.2 *Respondent: Robin Brown: local resident 20 years, a planner supporting community activities in and around Hayes, Middlesex, through the Hayes Community Development Forum. Forum: acts as a networking opportunity for local groups throughout southern part of Hillingdon Borough to come together to discuss issues and progress projects. Some 400 organisations on a wider email contact list are invited to respond to significant issues.*
- 1.3 *Submission: Based on my near 20 years of experience of community involvement in Hayes, I believe the following to be a reasonably accurate sounding of local opinion on the scheme: namely, a widespread belief that there is a high degree of inevitability that this scheme will go ahead, so that the Forum should focus on securing mitigations for those impacts – principally noise, air quality, visual & water – that locals perceive as arising from the scheme during construction and operation.*

Highways England Comment

- 1.3.1 Highways England does not subscribe to the view that there is a high degree of inevitability that the M4 Junctions 3 to 12 Smart Motorway scheme (the "Scheme") will go ahead. The Examination process provides an opportunity for Highways England to demonstrate its case and allows for due scrutiny of that case.
- 1.3.2 Highways England has provided comments below against the specific points raised by the Hayes Community Development Forum in relation to securing mitigation for Scheme impacts.
- 1.4 *Traffic Impacts: That is to say that local people are not concerned about potential traffic impacts – echoing LB Hillingdon's reference to Junction 3 and the Hayes Bypass/A312 already near, at or above capacity for long periods of the day, and the potential knock on adverse effects on the local road network as traffic cascades from the strategic highway network. The view is that traffic rises to fill road space provided.*

Highways England Comment

- 1.4.1 Highways England does not agree that traffic would "cascade" from the strategic road network onto the local road network, nor does Highways England agree that the traffic "rises to fill road space provided". Highways England's modelling and

assessment does not support these propositions, and no data has been provided to the Examination which supports the view expressed.

1.4.2 Highways England has developed a traffic model to provide forecasts of the traffic flows that would use the Scheme and the surrounding road network. The resulting forecasts are contained within Tables A-14 to A-17 inclusive of the Traffic Forecasting Report (submitted as Appendix 1 to the ‘Comments on Relevant Representations’ provided at Deadline I (REP1-003)). In contrast with the sections west of the M25, the forecast increases in traffic flows at Scheme opening between the M25 and the end of the Scheme at junction 3 are less than 10% and beyond junction 3 towards junction 2, less than 3%. These figures reflect the constrained road space available within the London area.

1.5 *Mitigations: The Forum is greatly encouraged by the point – the “additional question” - made by the Panel, and indeed by the response made by Highways England, at the Tuesday 17th November session at the end of ‘Preliminary Matters’; and during the Wednesday 18th session on ‘Noise & Vibration Question D6 on enhanced noise mitigation strategy’ when the Panel cited the NPSNN’s para 3.4: “... deliver developments in accordance with Government policy and in an environmentally sensitive way, including considering opportunities to deliver environmental benefits”.*

Highways England Comment

1.5.1 At the end of Preliminary Matters at the Issue Specific Hearing on 17 November 2015, the Examining Authority asked Highways England to consider how the Scheme complied with the requirement at paragraph 3.2 of the National Policy Statement for National Networks (“NN NPS”), which requires Applicants to “provide evidence that they have considered reasonable opportunities to deliver environmental and social benefits as part of schemes.” At section 7 of Appendix A to Highways England’s summary of the representations made at the Issue Specific Hearing into the Environment, Highways England detailed all enhancement measures provided as part of the Scheme, in compliance with paragraph 3.2 of the NN NPS.

1.5.2 Further, the enhanced noise mitigation study undertaken as part of the application, assesses reasonable opportunities to deliver environmental benefits. The enhanced noise mitigation study has arisen from paragraph 12.4.112 of the Environmental Statement (“ES”) (Application Document Reference 6-1, APP-152), where it was stated that there is the potential to improve further the noise climate within the Scheme corridor. The qualitative appraisal of an enhanced noise mitigation study to achieve this potential improvement is provided in Appendix 12.5 of the ES (Application Document Reference 6-3, APP-351).

1.5.3 Highways England confirms that the Hayes area was included within the work to provide a quantitative assessment of the enhanced noise mitigation study. The quantitative assessment was based on a detailed cost/benefit analysis, the outcome of which determined whether additional barriers (or replacement barriers) are to be provided to specific areas along the Scheme. The results of the assessment are provided with the submission at Deadline V.

1.5.4 The confirmed barrier provision in the Hayes area is detailed within Appendix E of the Enhanced Noise Mitigation Study Report (Ref 514451-MUH-00-ZZ-RP-EN-400158), Sheet 15 is relevant to this area.

- 1.5.5 The results of the enhanced noise mitigation study proposes to provide a new 1131m long, 3.5m high noise barrier at Hayes in addition to the 1.8m high noise barrier already proposed within the Scheme's original noise mitigation strategy. The provision of this mitigation will provide further noise decreases to properties in Hayes, in addition to the negligible to minor noise decreases on Scheme opening (without enhanced mitigation) presented on Sheet 15 of Drawing 12.4 of the ES (Application Document Reference 6-2, APP-268).
- 1.6 *The implementation of Design Manual for Roads & Bridges is not enough. But the enhancement of a 1960s Motorway with its back garden type closed boarded fencing to a standard equivalent to contemporary motorway is at the heart of the mitigations sought locally.*

Highways England Comment

- 1.6.1 Highways England confirms that any new or replacement noise barriers will meet the required standards for motorway noise barriers. The locations for these new or replacement noise barriers have been determined by the outputs from the enhanced noise mitigation study quantitative assessment.
- 1.6.2 Where any fencing is required to be installed as part of the Scheme, which does not constitute noise attenuation fencing, requirement 10 of the Development Consent Order ("DCO") requires Highways England to install suitable types of fencing, as identified within the 300 Series of Volume 1 Specification for Highways Works ("SHW"), within the Manual of Contract Documents for Highway Works ("MCHW") (http://www.standardsforhighways.co.uk/ha/standards/mchw/vol1/pdfs/series_03_00.pdf), or as amended. Design details are provided in the drawings contained in Series H of Volume 3 Highway Construction Details ("HCD") within the MCHW (http://www.standardsforhighways.co.uk/mchw/vol3/section1/h_series.pdf).
- 1.6.3 It should be noted that the standard highways boundary fence is a timber post and four rail, as specified within clause 306.2 of the SHW, which states in regard to permanent fencing that:
- Timber fencing for motorways shall be wooden post and rail fence with four rails type SPR 13/4 complying with BS 1722 : Part 7, to dimensions shown on HCD Drawing Number H3.*
- 1.6.4 As such, any fencing to be installed as part of the Scheme will be in line with Highways England's latest standards.
- 1.7 *Noise: There is the 'action point' raised by the Panel at the end of 'Noise Question D9' that all should assist Highways England in its ongoing work on enhanced noise strategy on reviewing noise barrier proposals by 26th November. The work programme voiced by Mr Alf Maneylaws is quite clear and welcomed, but having reviewed the relevant plan (submitted by HE for the 8th October Deadline Section 1-8 Appendix F to Section 4, 12-2 for Hayes, Cranford) the Forum asks that the following should be rectified:*
- 1.8 *The proposed noise barriers only extend from St Dunstan's Subway in Cranford Park in a westerly direction, but do not extend eastwards. Here, to the east, the rise of the through carriageways to fly over Junction 3, coupled with the slip roads, all at a higher height than Cranford Park and the housing at Roseville Road, facilitate a wide dispersion of noise. The*

existing fencing here functions only to demark the highway boundary. This boundary fencing, and the open railing to the flyover, do not effectively attenuate noise.

Highways England Comment

- 1.8.1 Highways England notes the points raised regarding the areas to the east of St Dunstan's Subway.
- 1.8.2 Highways England has carried out a detailed site survey of the areas to the north and south of the motorway between Fuller Way Subway and junction 3, the results of which have been fed into the development of the enhanced noise mitigation study. It is noted that the site survey found that the existing noise barrier along Cranford Park boundary (as assumed in the noise assessment reported in the ES) is not a noise barrier. Furthermore, there is also an existing brick wall to some parts of the boundary of Cranford Park, which was not taken account of in the noise assessment.
- 1.8.3 Highways England will provide a new 2m high noise barrier at this location under its commitment that any existing barriers included as acoustic barriers in the noise assessment, and which turn out not to be acoustic barriers, will be replaced with acoustic barriers. With this barrier in place, the noise reductions with the Scheme in operation will be an improvement on those shown in Sheet 15 of Drawing 12.4 of the ES (Application Document Reference 6-2, APP-265, APP-266, APP-267, and APP-268).
- 1.8.4 As confirmed in the response to paragraph 1.5 above, the results of the enhanced noise mitigation study are provided with the submission at Deadline V. However, it is noted that the results propose that no additional barrier will be provided to the east of St. Dunstan's Subway. This is because, in addition to the fact that the noise level is forecast to reduce due to the implementation of the Scheme (and the additional barrier provision detailed in paragraph 1.8.3 above), there are no permanent residences in this area to gain any benefit. As the principal benefits of noise barriers relate to long term health issues (e.g. sleep disturbance) and are not applicable to effects of short term visitors, provision of additional noise barriers in this area is not considered to be justified or a good use of taxpayer's money.
- 1.8.5 The noise mitigation strategy for this area will therefore remain as shown on the Noise Mitigation Details drawings (Sheet 15 of Drawing 12.2 (Application Document Reference 6-2, APP-260)) provided in the Application submission.
- 1.9 *The proposed noise barriers do not include the northern tip of Harlington Village at St Peter's Subway. Here also the existing fencing here functions only to demark the highway boundary and do not effectively attenuate noise.*

Highways England Comment

- 1.9.1 Highways England confirms that the northern tip of Harlington Village at St Peter's Subway was included for assessment within the enhanced noise mitigation study.
- 1.9.2 The results of the enhanced noise mitigation study propose to provide a new 323m long, 2.5m high noise barrier at St. Paul's Close, Harlington, as detailed on Sheet 15 of Appendix E to the Enhanced Noise Mitigation Study Report. The

provision of this mitigation will provide further noise decreases to properties in Harlington, in addition to the negligible to minor noise decreases on Scheme opening (without enhanced mitigation) presented on Sheet 15 of Drawing 12.4 of the ES (Application Document Reference 6-2, APP-268).

- 1.10 *The Forum does recognise that both these locations are Conservation Areas and, therefore a balance has to be struck between barrier design/height and visual impact.*

Highways England Comment

- 1.10.1 Highways England confirms that the outcomes from the enhanced noise mitigation study have been assessed in terms of visual impacts and, as Hayes Community Development Forum rightly notes, a balance has to be struck.

- 1.11 *Noise barriers should be in place before substantial construction work starts, especially if there is night time working, to protect Cranford housing which stretches along the north side of the M4 from Roseville Road west to Harlington High Street overbridge, and the northern tip of Harlington Village.*

Highways England Comment

- 1.11.1 The timing of installation for any new or replacement permanent barriers will be dependent on the contractor's schedule of works and methods of working. It may not be possible to install permanent noise barriers before the main construction works commence.

- 1.11.2 However, as set out in the Construction Environmental Management Plan ("CEMP"), the contractor will be entering into Section 61 Agreements with local authorities and will maintain on-going liaison with local authorities and affected local residents, to effectively manage and minimise construction noise levels throughout the duration of the works. Further, requirement 21 of the Draft DCO provides that no part of the authorised development is to be carried out until a written scheme for noise management during construction has been approved by the Secretary of State in consultation with the relevant planning authorities.

- 1.12 *The verbal assurance that low noise surfacing will cover all the scheme is welcomed. Relevant plans, including their keys, should confirm this.*

Highways England Comment

- 1.12.1 Paragraph 12.2.49 of the ES (Application Document Reference 6-1, APP-152) confirms that the complete extent of the Scheme will be provided with low noise surfacing. This is secured in Requirement 5 within Schedule 2 of the DCO (REP3-005).

- 1.13 *Air Quality: That this locality is a hotspot of exceedance is well known and the adverse health impacts are steadily being known in range and in depth. Here there is the opportunity to abate noise, air pollution and visual impacts with more innovative approach than presently evident. Transport for London since circa 2012 has been planting street trees and creating 'plant towers' and green walls as part of the Mayor's Clean Air Fund programme funded by the Department for Transport with the intention to trial the capturing of harmful pollutants (<https://tfl.gov.uk/travel-information/improvements-and-projects/clean-air-fund> - go to the*

Green Infrastructure Research Report). There are commercially available noise barriers that can be quickly covered with climbing. When trees were planted at Sam Phelps Park, north side of St Peter's Subway, some 15 years ago, the arboriculturist for Trees for Cities observed that the existing (originally light coloured barked) trees had the blackest bark that he had ever seen. Such planting can help trap pollutants (reference here to some interesting discussion at <https://theconversation.com/do-trees-really-help-clear-the-air-in-our-cities-48202>). Given that LB Hillingdon control land along parts of the motorway, the Forum encourages offsite planting in agreement with local stakeholders, as well as planted noise barriers where possible. The Forum does recognise that there is a 275K volt underground cable running along the northern side of the M4 most of the way between Junctions 3 & 4.

Highways England Comment

- 1.13.1 Hayes Community Development Forum's representation suggests that vegetation provides some protection to residents from atmospheric pollution.
- 1.13.2 Highways England considers that air quality mitigation is not required as no significant effects on air quality are predicted to be associated with the Scheme.
- 1.13.3 However, it is recognised that the effects of vegetation on local air quality is an area of on-going research which suggests that with the use of some vegetation types (i.e. plants with small leaves or with a high density of hairs), concentrations of particulate matter may be reduced. The Green Infrastructure Research report (page 2, paragraph 2) notes that "*urban greening strategies designed to reduce particulates can be used as a supplementary approach to emissions reductions policies, but should be viewed in the context of their wider benefits*". Vegetation, and in particular plants with small leaves or with a high density of hairs, could therefore be utilised as a potential measure to enhance air quality for particulates, as part of any wider planting improvements planned.
- 1.13.4 However, it should be noted that the effects of vegetation on nitrogen dioxide, the principal pollutant gas emitted by vehicles, are less well established. As nitrogen dioxide is generally the pollutant with higher concentrations along highways routes, vegetation may have less utility, compared to urban centres where particulate concentrations may be higher. For example the highest predicted annual average concentration of PM₁₀ with the Scheme was 26.3 µg/m³ against an annual average air quality objective value of 40 µg/m³. Consequently, no such mitigation is required to mitigate the effects of the Scheme.
- 1.13.5 In terms of noise barrier design, as stated above in the response to paragraph 1.5, a quantitative assessment of the enhanced noise mitigation study and the supporting assessment of visual effects has been provided to the Examination at Deadline V. The study identifies locations along the Scheme where additional noise fencing may be appropriate, which may include extending barriers to new locations where they do not presently exist or to increase the height of existing barriers. Consideration has also been given to the appropriate use of materials for certain locations. The visual effects of the proposed barriers on adjacent receptors has also been assessed.
- 1.13.6 Highways England's preference for noise barriers is to use timber barriers which in terms of their colour, finish and weathering are considered to be appropriate to a vegetated urban setting and which have also been tried and tested on the motorway network in terms of their durability, effectiveness and low

maintenance. Highways England considers that timber barriers associated with existing and/or proposed road side vegetation form relatively unobtrusive elements in the landscape.

1.13.7 In response to the offsite planting recommendation by Hayes Community Development Forum, Highways England acknowledges that obtaining agreement with local stakeholders for offsite planting would require Section 253 (Highways Act 1980) Agreements to be drawn up. Highways England has outlined the following views to be considered before adopting this approach for the Scheme:

1. Section 253 (“s253”) of the Highways Act 1980 is a power conferred upon highway authorities (including Highways England) and is permissive in nature. That is to say, it enables an agreement to be entered into and to have effect. It does not compel a highway authority to do anything in particular, although the agreement itself can have effect to confer obligations. It could be used where a highway authority wished to enter into an agreement with a landowner, without depriving the landowner of the land in its ownership, but wished to secure planting on, or use of, the land in question "either permanently or during such period as may be specified in the agreement" (s253(1)). The effect of the s253 Agreement (see subsection (4)) is to be a local land charge, which would run with the land, binding it as specified in the agreement. A s253 Agreement may be used in circumstances other than in relation to Highways Act 1980 schemes or where the Acquisition of Land Act 1981 applies. As such, it could be used in the context of a scheme under the Planning Act 2008 - nothing precludes such an application.
2. Highways England is subject to environmental duties under its licence, which in relation to mitigation entail that it should, "Consider the cumulative environmental impact of its activities across its network and identify holistic approaches to mitigate such impacts and improve environmental performance" (Para 5.23). The provisions of Paragraph 25 in Part 2 of Schedule 4 to the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 require it to report "measures envisaged in order to avoid, reduce, and if possible, remedy significant adverse effects." As such, in the context of the Scheme, Highways England has undertaken an assessment of the environmental effects of the Scheme. This is reported in the ES, which accompanied the application for development consent in 2015.
3. Highways England has identified landscape and visual mitigation in each case, which is secured within the M4 corridor or, where not already in the highway corridor, would be within land subject to compulsory acquisition under the terms of the Application within the Order limits, as outlined in Table 8.2 of the ES (Application Document Reference 6-1, APP-148).
4. An agreement under s253 Highways Act 1980 would be applicable to the Scheme in two main circumstances:
 - a) first, where land is subject to compulsory acquisition, but the owner does not wish to part with ownership of that land and Highways England agreed with the owner that the land could be retained subject to a s253 Agreement. No such circumstances have been identified in the context of this Scheme; and/or

- b) where land outside the Order limits (and hence outside the land subject to an application for powers of compulsory acquisition) is identified in order to mitigate significant effects of the Scheme. In this case, the environmental impact assessment ("EIA") of the Scheme identified no such effects and none have been identified by Highways England subsequently. As such, it is not necessary to enter into s253 agreements in relation to any land.
5. As the Scheme is subject to examination, the assessment of its effects is subject to review by the Examining Authority. The Examining Authority will have regard to the submissions of statutory consultees and other interested parties, which may allege that planting or controls on the use of land is required to mitigate the effects of the Scheme. In such circumstances, it would be open to the Examining Authority to recommend to the Secretary of State that a finding be made that significant environmental effects were experienced by additional receptors, and so additional mitigation was required. In such a circumstance an agreement under s253 would provide on means of securing such additional mitigation. However, a number of important and relevant considerations must be applied to such a finding, including:
- a) the Examining Authority would need to find that the EIA of the Scheme was incorrect, relying upon the methodology that it contains, which is that prescribed by Highways England's Design Manual for Roads and Bridges, Volume 10, Section 4 (Volume 10, October 1994, as amended as at May 2014). In doing this, the Examining Authority would need to apply (or be satisfied that others had applied) the same rigour to assessment as that undertaken for the EIA for the Scheme since the expert evidence before the Examining Authority is that no such effects are experienced. The expert evidence is supported by site visits and the application of a detailed methodology.
- b) in imposing a requirement that stated the need for additional, offsite mitigation, the Examining Authority would need to be content that the finding complied with Circular 11/95, which governs the imposition of planning conditions and is an important and relevant consideration in relation to the Scheme. The circular makes plain that *"it would be ultra vires, however, to require works which the developer has no power to carry out, or which would need the consent or authorisation of a third party..."* Thus, requiring the completion of an agreement under s253 would not be acceptable, but the circular goes on to state that *"it may be possible to achieve a similar result by a condition worded in a negative form, prohibiting development until a specified action has been taken."* However, in making such a finding, the likelihood of such a requirement being fulfilled is an important and relevant consideration, since if the completion of such an agreement would not be a reasonable prospect, bearing in mind that the owner of relevant land may seek a ransom payment from the public purse, the Examining Authority would need to find that to jeopardise the delivery of the Scheme in this way would be proportionate;

- c) Highways England has powers of compulsory acquisition that it can exercise by a compulsory purchase order under the Highways Act 1980 if acquisition or control of land is not possible by agreement. As such, compulsory acquisition is available to Highways England if an agreement cannot be secured. However, this has two effects: first, it would cause delay, and secondly it means that any acquisition of land or conclusion of a s253 Agreement takes place under the shadow of compulsion - it is not thereafter truly voluntary; and
 - d) the ExA would also have to bear in mind that fulfilling a requirement to obtain a s253 Agreement may effectively be a compulsory acquisition of land or akin to such acquisition (i.e. under the shadow of compulsion), since the imposition of a restriction on its use (because planting was in place) would deprive its owner of its hitherto unrestricted use. This has a number of implications:
 - i. the compulsion inherent in the finding would not have been the subject of consultation in accordance with the Planning Act 2008;
 - ii. it would be necessary to make a finding that there was a compelling case in the public interest for the acquisition of the land (or imposition of a s253 Agreement) since that would be the last resort in delivering the mitigation;
 - iii. that would mean finding that the EIA of the Scheme was not correct, there were additional significant effects hitherto unreported; that the effects were so severe that they required mitigation in order to enable the Scheme to proceed; that the mitigation was appropriate and the land upon which it would have to be provided was the correct land, there being no alternatives; and that the private rights of the land owner (whoever that might be) were outweighed by the need to provide the mitigation (the case for the Scheme otherwise being made out already) because there would be a compelling case in the public interest in respect of the mitigation; and
 - iv. since the mitigation in question would unlock the delivery of the Scheme in the public interest, the payment of public money to a third party was justified in line with the obligations of Highways England in delivering "value for money".
6. As will be noted from the above, there are a great number of considerations which must be in mind in identifying a s253 Agreement as a solution in this context. Indeed, it would not be appropriate (even assuming it is a possibility or appropriate) to conclude that a s253 Agreement is a given solution to a given environmental effect. However, most importantly of all, in this context the evidence does not point to any requirement for additional offsite screening or planting necessary to secure delivery of the Scheme in the public interest. As such, there is no need for a s253 Agreement or the implicit interference with the rights of private parties in land that one would entail.

- 1.14 *Water: The Forum shares the disappointment of Buckinghamshire County Council, Wednesday 18th session, that sustainable drainage with swales, reed beds and ponds have not so far been pursued by agreement with adjoining landowners. Cranford Park and the River Crane are used as educational resources connecting children with nature and water quality is monitored (through the Zoological Society of London and Friends of River Crane). In November 2014 monitoring had found only one of the expected six species of invertebrate so rating this as an early warning of issues. Any existing and proposed discharges of surface water into the local watercourses is an issue for the Forum which asks that sustainable drainage measures be adopted to ensure that water quality is protected and improved.*

Highways England Comment

- 1.14.1 Highways England confirms that some sustainable urban drainage system (“SUDS”) measures are incorporated into the drainage strategy for the Scheme for example comprising soakaways, oversized pipes and chambers that will function to provide attenuation and a degree of treatment to highway runoff, particularly at emergency refuge areas (“ERAs”). These components have been selected from the wide variety of components/approaches available on the basis of site specific constraints and rank at number 4 (of 7) in the SUDS hierarchy that is set out in Policy 5.13 of the London Plan. A key constraint within the Order limits is space. As the drainage strategy seeks to include all drainage components within the Order limits, above ground SUDS measures requiring significant land-take, such as swales, reed beds and ponds, are not feasible within the Order limits.
- 1.14.2 Land areas, beyond the Order limits, have been offered to provide over ground SUDS measures by Buckinghamshire County Council. However, at present, Highways England does not have powers over the offered land, nor has the land been assessed as part of the Scheme's EIA. Moreover, there are no agreements in place with local authorities in respect of the land, no s253 Agreement or acquisition by private treaty which would enable the land to be used outside the Scheme. Further, the use of such land for above ground SUDS drainage solutions outside the confines of both the Scheme, and land under Highways England's control, creates maintenance issues, which would be an additional burden on the public purse.
- 1.14.3 The proposed drainage solution for the Scheme achieves compliance with the standards for drainage set out in the Design Manual for Roads and Bridges (Volume 4, Section 2, Part 3, HD33/06 Surface and Sub-surface Drainage Systems for Highways), which provides the design standard applicable to roads in England, including the M4. The drainage solution, described within the Drainage Strategy Report (Application Document Reference 7-5, APP 123) incorporates below ground SUDs features that can be delivered within the Order limits without unnecessary land take. Highways England therefore concludes that it is not necessary or feasible to use the lands offered by Buckinghamshire County Council to accommodate sustainable drainage with swales, reed beds and ponds.
- 1.14.4 Highways England confirms that measures to protect against pollution of the water environment, including the River Crane, will be implemented during the construction phase of the Scheme. These measures are described in Chapter 14 the Outline Construction Environmental Management Plan (“CEMP”) (Appendix 4.2A of the ES) (Application Document Reference 6-3, APP-293) and will be secured under Requirement 8, Schedule 2 of the Draft DCO (Application

Document Reference 3-1, APP-026). During the operation of the Scheme the drainage design will safeguard and make some contribution to the improvement of the quality of surface water runoff from the Scheme, for example, where drainage passes through oil interceptors and where runoff is subject to attenuation storage, which would encourage the settlement of suspended solids, prior to discharge into the water environment.

- 1.14.5 On the basis of information provided, Highways England is unable to comment on the findings of the invertebrate surveys undertaken by Hayes Community Development Forum in November 2014. However, with the measures proposed to protect and safeguard the water quality of the River Crane (above), the effect of the Scheme upon the aquatic invertebrate community is considered to be neutral.