

APPENDIX 3

Table 1: Further Technical Responses to Environment Agency comments on the Overarching Environmental Appraisal

N.B. This document provides further specific technical information to complement, rather than duplicate, the responses that have already been provided in the Statement of Community Involvement. As a result, it does NOT cover all points raised during the comments stage. Please see SCI for responses to those points not listed here.

Comment from Environment Agency	DIO Response & Suggested Actions
<p>Water infrastructure</p> <p>Our main issue at this stage is that there is still further assessment required to establish whether there would be sufficient water supply and wastewater capacity available to serve the proposed developments.</p> <p>We note in the OEA and supporting Appendices that further assessment is to be done regarding this, however, we wish to point out it is essential this assessment is completed prior to any planning application being submitted to Wiltshire Council.</p> <p>OEA Section 9.5.2 - Discharge of foul sewer effluent</p> <p>We have previously asked the Army Basing consultants to calculate if the increased discharge volume of foul sewer effluent that results from the Army Re-basing can be accommodated within the existing permit(s). It should not be assumed it can without having undertaken this assessment. Further information is therefore needed to substantiate this claim.</p>	<p>Please see also the separate responses from DIO regarding utilities.</p> <p>Regarding water supply, Wessex Water has confirmed that it is able to supply the uplift in water demand for housing (both civilian and SFA) within existing abstraction licences across Salisbury Plain, subject to the ongoing supply from Veolia at Ludgershall continuing. Developments behind the wire will be supplied by MOD's network of groundwater abstractions, which are currently exempt from licensing, but are included in EA's past and ongoing review of water resources. The garrisons proposals include new buildings and major refurbishments incorporating water conservation measures to meet BREEAM/ DREAM standards. Further explanation regarding water resources is addressed in later sections.</p> <p>Regarding waste water, insufficient information was available at the time of preparing the OEA to assess whether the increase in discharges to sewer could be accommodated. Wessex Water has confirmed that sewerage from the proposed SFA at Bulford and Larkhill can be supported within existing discharge consents to the River Avon at Ratfyn Sewage Treatment Works. Further information is awaited from Veolia for the proposed developments at Ludgershall and Tidworth, and this will be considered in support of individual planning applications.</p> <p>A feasibility study to address the identified shortfall in sewage treatment capacity/ discharge consents from Larkhill garrison has now been completed; a similar assessment for waste water infrastructure has been commissioned for Upavon. These will also be developed further in support of individual planning applications.</p> <p>Regarding distribution infrastructure, an acknowledged limitation of the OEA (Section 2.7.2) is that the location of new utilities infrastructure was not known when it was prepared in April 2014. It is confirmed that all necessary further utility studies will be carried out prior to planning</p>

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	<p>applications being submitted, and DIO will continue liaising with water companies, the Environment Agency and Wiltshire Council regarding waste water and water supply capacity. Initial indications are that significant environmental effects are unlikely as a result of the emerging proposals, but DIO will keep this under review and carry out any necessary EIAs should the early indications change.</p>
<p>Section 9.4.4 – Hydrology</p> <p>Model Calibration - The model meets acceptance criteria around the Salisbury Plain area and so results from it should be acceptable in terms of their relative accuracy. It is also the best tool available to assess the impacts and not a “crude estimating tool” as highlighted in part of this report.</p> <p>Whilst it is recognised that the “army re-basing” is only likely to have a small additional impact on the Nine Mile river and ponds, above the existing impact, the impacts of the existing abstractions do have a SIGNIFICANT impact on low flows in the Nine Mile and potentially on pond levels. Any additional abstraction is likely to exacerbate this. The Wessex Basin Model is the best tool available to make this assessment as it is more complex than illustrated in the OEA.</p> <p>The Army Basing water consultant should conclude what the existing impacts are on the rivers and ponds using the tool and reach some conclusion regarding the overall impacts not just the additional impact presented by the abstraction. As the MOD abstractions have not been considered under the Review of Consents or Habitats Directive and no mitigation has been put in place for impacts that result for it, the need for future mitigation should be considered as part of the report.</p> <p>The OEA and any subsequent EIA should not be relying on Wessex Waters sustainability reductions to mitigate for MOD abstraction impacts on the Bourne (as is alluded to in the</p>	<p>Feedback on groundwater modelling appears to indicate that the HRA and water chapters have not defined DIO’s approach as clearly as would have been liked. DIO will ensure that its approach, and the results of modeling, will be clarified in the final HRA and further studies. The detailed technical responses below respond to the technical points made by the EA.</p> <p>The reference to “crude estimating tool” in the OEA is taken from the supporting appendix report authored by AMEC, who also developed the regional groundwater model for the Environment Agency. It is accepted that the model is the best tool available, although the resolution of the model is not ideal for assessing impacts on local features (e.g. ponds) or the ephemeral reaches of winterbournes.</p> <p>The groundwater modelling undertaken to inform the OEA took account of all current and proposed future abstractions. Section 9.4.4 of the OEA highlights the impact of these baseline abstractions. However, in line with EIA procedure, it would be methodologically incorrect for the OEA to assess / comment upon anything other than the potential environmental effects of moving from a baseline scenario to an army rebasing scenario. DIO is satisfied that the OEA delivers this assessment correctly, and that the <i>additional</i> impact of Army rebasing on the water environment is negligible, relative to the existing impact of baseline abstractions and discharges.</p> <p>It is acknowledged that the existing MOD abstractions, in tandem with other existing abstractions (e.g. water company and private licenses) and other factors, affect low flows in the Nine-Mile river. A different approach is required to meet the requirements of the Habitats Regulations, and in-combination effects have been assessed in the preliminary report to inform HRA (OEA chapter 18). This will be reviewed and any uncertainties in the modelling will be addressed in the final HRA report (see below). It should be noted that MOD abstractions were included in the Review of Consents. Further information is given in the response to 9.5.2 below.</p> <p>DIO has been and will continue to work closely with the Environment</p>

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<p>report). If necessary, the Wessex Basin Model should be re-run with Wessex Waters proposed sustainability reductions included and the remaining impacts of the MOD abstractions assessed. It is likely that as Wessex Waters abstractions reduce, the proportionate impact of the MOD abstractions will increase (however the overall impact on flows and levels will go down).</p> <p>Chapter 18 - Preliminary Report to inform a Habitats Regulations Assessment, highlights the need for further modelling/ assessment work to be carried out. In particular, Section 18.6.1(River Avon SAC - Water Resources) acknowledges there is an unresolved question about the sustainability of the existing licences: "... there is an in combination effect which should be addressed, although the solution should focus on the existing licences ... since ABP makes a negligible contribution. It is not possible to say at this stage whether an adverse effect on the integrity of the River Avon SAC is resulting from the existing licenses in combination."</p>	<p>Agency (EA) and Natural England (NE) to address their specific issues ahead of planning applications being made. It is possible that environmental monitoring, including pump tests and further site specific assessments are required. In this regard, DIO proposes to re-run the regional groundwater model with Wessex Water sustainability reductions in place to reassess the impact of MOD abstractions alone. Mitigation measures will then be developed as required.</p> <p>DIO plans to address the existing water resource issues at MOD sites through water efficiency improvements and significant leakage reduction. Reductions have already been achieved at Larkhill and Bulford by introducing various water saving measures, and DIO is now undertaking an assessment study into new water supply infrastructure at Larkhill and Bulford which will reduce leakage significantly from the current high rates at each site. The increases in water requirement at Larkhill and Bulford garrisons for Army basing are expected to more than be accommodated by the decrease in water requirement that should result from fixing existing leakage. Reducing net abstraction should also act to reduce any effects on the River Avon SAC. The proposed timeline is to complete this work by the end of 2017.</p> <p>DIO recognizes the importance of the Nine-Mile river and has management measures in place to benefit the river and its associated habitats and species. A specific habitat management plan for the Nine-Mile river is under development.</p>
<p>OEA Section 9.4.5 - Water dependent conservation sites: Our comments provided above are also relevant to this section. Increasing abstraction will increase the amount of time the groundwater table is below pond base level, therefore exacerbating the existing situation. This is significant as the ponds are largely fed by groundwater. This assessment should be made using the tools available (interpretation of the Wessex Basin Model output). Some form of mitigation where required should then be proposed.</p>	<p>An assessment of the ponds has been made using the Wessex Basin Model (pages 9-27 of the OEA.) AMEC states: "Using the model as a crude estimating tool (which lacks local site complexity and hydrology at the pond scale), the impact of abstractions on the prolonged wetness of new bearing ponds is limited and the suitability (according to the model) is determined more by climate (i.e. regional recharge)."</p> <p>DIO proposes to develop a programme of monitoring with EA and NE for the ponds ahead of planning applications being submitted. Appropriate mitigation measures can then be agreed and taken forward.</p>
<p>OEA Section 9.5.2 - Uplift in water supply demand Whilst Wessex Water and Veolia's abstraction have been assessed under the Review of Consents up to their full licence condition, the MOD abstractions have not. The impact of</p>	<p>The Environment Agency has undertaken the Review of existing Consents. Although MOD abstractions are not currently subject to licensing, they were included in this review (Bourne and Nine Mile rivers Low Flow Investigation 2001 and Restoring Sustainable Abstractions project-Environmental Report, May 2005). More recently, MOD has</p>

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these abstractions should be assessed.	worked closely with the EA and in consultation with Natural England to provide more accurate abstraction data for inclusion in the updated groundwater model, undertaken this year. DIO also commissioned additional model runs for the OEA and HRA and further work will be undertaken as outlined above.

Table 2: Further Technical Responses to Natural England comments on the Overarching Environmental Appraisal.

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<p>General mitigation measures</p> <p>We note that a suite of general mitigation measures is listed in section 7.6.2. These include “Within garrison sites seek opportunities to maximise on site green space for recreational use which also maximises value for wildlife;” At this stage we would welcome a comprehensive wildlife management plan for the land controlled by DIO in these settlements more generally, as there may be significant opportunities to enhance biodiversity on their estate through for example, changes to the management regime of Public Open Space. We also suggest the specific mitigation measures include consideration of specific invertebrates for which the local area is important (e.g. planting and managing blackthorn for Brown Hairstreak).</p>	<p>DIO proposes to develop an overall biodiversity mitigation and enhancement strategy for Army Basing on Salisbury Plain, which will then inform subsequent planning applications. It is recommended that the details of this are agreed with Wiltshire Council and relevant conservation bodies through some form of voluntary undertaking. We will also look into opportunities for wider improvements at garrison sites with relevant Industry Partners.</p>
<p>In section 18.7.2 regarding the mitigation tracker, we reiterate previous advice that any measures classified as mitigation must be clearly over-and-above the MoD’s existing duties to ‘enhance’ under the Wildlife and Countryside Act.</p>	<p>Regarding the duty of enhancement, s28G of the WCA states that the Authority’s duty is <i>“in exercising its functions, to take reasonable steps, consistent with the proper exercise of the Authority’s functions, to further the conservation and enhancement of the...features by reason of which the site is of special scientific interest.”</i></p> <p>As such the MOD’s ‘existing duties to enhance’ are strictly limited by the likelihood that any enhancements above and beyond agreed conservation objectives would unreasonably compromise the proper exercise of its core functions, by constraining current military training; or by constraining future flexibility to reconfigure or optimise use of the estate to meet changing Defence requirements.</p>

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<p>Biodiversity compensation</p> <p>Natural England concurs with the general principle that, after avoiding and mitigating, residual biodiversity impacts should be compensated for, and note that the intent is to use the DEFRA biodiversity offsetting metric to establish the level of compensation required. If this approach is to be adopted, we advise that the following points are considered.</p> <p>1. The DEFRA metric covers a wider suite of habitats than just priority habitats. For example, it includes arable land and woodland. However, the OEA only makes reference to using it for loss of calcareous grassland. If you propose to apply the metric in a manner which differs from the published method, this should be supported by reasoning. We note that the mitigation in the OEA includes reference to replacing any woodland lost with an equivalent area (e.g. page 7-157). Whether “an equivalent area” is appropriate could be ascertained by use of the offsetting metric.</p> <p>2. Any compensation measures will need to show that they are additional to what would have happened in their absence. For example:</p> <p>a. Any requirements for mitigation or compensation for impacts on protected sites or protected species will need to be considered separately from and in addition to any compensation provided in the form of a biodiversity offset.</p> <p>b. Compensation on land within the SAC might be construed as not being additional, but merely fulfilling a duty that the DIO have in any</p>	<p>The requirements for compensatory habitat provision are identified using the impact assessment methodology set out in the OEA. Only habitat loss impacts identified as being ‘significant’ (due to a combination of the scale of the impact and the relative value of the habitat being affected) are identified as requiring compensation. For those habitat loss impacts that were not judged as ‘significant’ (due to the small scale of the impact and/or the lower relative value of the habitat being affected) no compensation was identified as being necessary.</p> <p>While the Defra biodiversity offsetting calculator does provide values (and therefore the ability to devise an appropriate scale of compensatory provision) for all habitats it does not carry with it any assumption that all losses of all habitats mentioned in the calculator must be compensated for. Which habitats to compensate for remains a judgment to be made in each impact assessment. The approach taken in the OEA is therefore in line with the Biodiversity Offsetting tool.</p> <p>The full details of compensation will be reviewed through the proposed biodiversity mitigation and enhancement strategy for Army basing, once the results of further Phase 2 surveys are known. This will include consideration of a wide range of habitat types, including woodland and arable land. Compensation measures will then be developed for each planning application.</p> <p>DIO is not clear what is meant by the first sentence of this comment; however the examples are noted and understood. Please see the comments above regarding MOD’s duty to enhance.</p>

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<p>event to manage the SAC appropriately.</p> <p>3. The metric does not factor in impacts on priority species. This will need to be considered as an additional matter.</p>	<p>This will be taken into account when devising the final mitigation/compensation provision for the planning applications.</p>
<p>Recreational impacts on Stone Curlew</p> <p>Whilst contributions to the stone curlew mitigation strategy will be welcomed, the strategy does not consider housing within walking distance of the SPA. In this context we advise that the HRA should consider whether increased population in such close proximity to the SPA is likely to require additional measures to mitigate potential impacts on stone curlew.</p>	<p>DIO will ensure that the issue of SFA proximity to the SPA/SAC is fully addressed in the final Habitats Regulations Assessment for Salisbury Plain, which considers the in-combination effects of the Wiltshire Core Strategy.</p> <p>DIO proposes to deliver additional measures beyond the WC stone curlew mitigation strategy, including provision of additional recreational greenspace close to/within SFA sites and development of walking/ cycle routes to encourage use away from sensitive parts of the training area, provision of updating of the MOD Stone Curlew management plan, continuing adaptive management and exploring measures to positively influence recreational access on SPTA (in particular dog walkers).</p>
<p>Training infrastructure</p> <p>We recognise that there are many details still to be agreed regarding the plans for the CME, IBSR and ETR, including the proposed crossing of the Nine Mile River. It is therefore not possible to fully assess potential impacts at this stage. However whilst there are proposals to manage damage to chalk grassland, the potential impacts of training on the Nine Mile River winterbourne (which is a feature of the Salisbury Plain SSSI) do not seem to have been considered, and it is not clear whether the effect of the existing training or any proposed changes to training has been assessed on this feature.</p>	<p>The SSSI reach of the Nine-Mile river is within the Bulford Danger Area and as such is rarely used for Armoured Manoeuvre training. However, the potential environmental effects associated with changes to training from Army basing will be further assessed, as required, for the individual planning applications.</p>
<p>Designations</p> <p>The masterplan and OEA documents should acknowledge that the Nine Mile River winterbourne is a notified feature of the Salisbury Plain SSSI as is the Great Crested Newt, also a European Protected Species. Whilst the Nine Mile River winterbourne is a notified feature of Salisbury Plain SSSI it is also the intention of Natural England to notify as SSSI the winterbourne and perennial length of the Nine Mile</p>	<p>Natural England's comments are noted and accepted. Appropriate references will be included in subsequent planning applications.</p>

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<p>River downstream of Salisbury Plain SSSI, and we consider the river and its associated riparian habitat here to be of national importance. This river is a tributary of the River Avon and its flow supports the River Avon System SSSI and River Avon SAC.</p>	
<p>Proposed Nine Mile River crossing</p> <p>Habitats</p> <p>Marshy grassland, whilst not particularly botanically diverse, is generally uncommon. In this case the habitat is hydrologically linked with the river habitat and subject to unconstrained seasonal flooding. If considered in isolation, a low-moderate value could be attributed to it, however here it is integral to the natural functioning of the river and we therefore disagree with the assessment of low value. Similarly whilst wet broadleaved and mixed plantation woodland is not of great value considered in isolation, the woodland adjacent to the river provides supporting river habitat to the Nine Mile River and would be targeted for restoration following notification of the river.</p> <p>There does not appear to be an assessment of the broadleaved semi-natural woodland, yet part of this habitat is included in the area for the proposed crossing (map under section 5). Where habitats such as calcareous grassland and scrub form part of the riparian corridor and are therefore integral to the river habitat they should be assessed in tandem.</p> <p>Natural England considers the Nine Mile River to be of national (high) value and, as mentioned above, intends to notify the river and its supporting riparian habitat as a SSSI for its winterbourne and chalk river habitat. In particular, as shown by the flooded photographs the river is relatively unconstrained. In addition it is a tributary of the River Avon SAC and the upstream section of the river (including winterbourne and bourne habitats) is a notified feature of Salisbury Plain SSSI.</p> <p>We are concerned that the proposed route of the Nine Mile River crossing is through the marshy grassland and area of area of <i>Carex acutiformis</i> swamp. Whilst this may be the easiest in terms of construction, it is not the least damaging to the mosaic of habitats here and we advise that further assessment is required to include the impact on the natural hydrology and flooding pattern of the area. This</p>	<p>Natural England's comments are noted and accepted. The route of the crossing has not been finalised, and the comments will be taken fully into account in determining the final route and form of the crossing. A full assessment of impacts will be undertaken including the potential for pollution and the risk of this affecting the River Avon downstream. Survey and monitoring may be required to set-up baseline and conditions during operation.</p> <p>Mitigation/ compensation measures developed for the planning application will take due account of the various habitats in the context of their connection with the river (rather than in isolation).</p>

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<p>will help to identify the best all-round solution.</p> <p>Construction/operational impacts</p> <p>Loss of small areas of habitat have been assessed as very low or negligible value, however Natural England is of the opinion that these habitats should be assessed as part of the rivers riparian biotope mosaic. This may lead to re-evaluation as higher than low, very low or negligible. Short and long term impacts on the local morphology, hydrology and flooding pattern of the site need to be assessed, including the potential for increased siltation from run-off. In addition, if considering a ford as a crossing option, how the crossing would be restricted/limited in width, particularly in wet weather, should be addressed.</p> <p>In-combination impacts</p> <p>As mentioned previously it is not clear whether the proposed (or existing) levels of training are likely to impact on the winterbourne feature of the Nine Mile River. Ideally the weighting given to vehicles should be sufficient to protect the Nine Mile River and its ponds as well as the chalk grassland, and considers the time of year when the aquatic habitat and Great Crested Newt populations would be sensitive to vehicle movements. The winterbourne habitat needs to be included in the framework for protecting the chalk grassland and its effectiveness should be monitored. The impact of adding another crossing on the river in addition to existing crossings/bridges should also be considered.</p>	<p>DIO is unclear what is meant by ‘in-combination’ impacts, as the Nine-Mile River is not an SAC feature. Possible impacts on the River Avon downstream have been assessed in the draft HRA chapter and will be explored further in finalising this document.</p> <p>As stated above, the SSSI reach of the ephemeral Nine-Mile river is within the Bulford Danger Area and as such is rarely used for Armoured Manoeuvre training. However, the potential environmental effects associated with changes to training from Army basing will be further assessed, as required, for individual developments. For the avoidance of doubt, the proposed crossing is on the perennial stretch of the river at Bulford Garrison, which is currently not notified as a SSSI. DIO has and continues to undertake positive management for the winterbourne stretch of the river, as evidenced by its inclusion in the Super Unit Management Plans, published in 2011.</p> <p>Regarding the crossing, the OEA considered, as far as details allowed, the effects of the proposed crossing on the environment, compared to baseline conditions which would, by definition, include the effect of existing crossings. This will be developed further when the route has been finalised and will include impacts on flow.</p>

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<p>Water Quality</p> <p>The water quality of the Nine Mile River is presently high and we advise that potential impacts on water quality need further assessment. The proposed crossing lies less than 2km upstream of the confluence with the River Avon SAC and there is therefore the potential that any pollution incident could directly impact on the SAC, as well as on ground water. Aquatic invertebrates are also sensitive to pollution incidences.</p>	<p>Natural England's comments are noted and accepted. As stated above, a full assessment of impacts will be undertaken including the potential for pollution and the risk of this affecting the River Avon downstream. Survey and monitoring may be required to set-up baseline and conditions during operation.</p>
<p>Water resources</p> <p>We have concerns about the argument that because the effects of abstraction are already having a significant adverse impact on integrity of the Avon, the contribution of the rebasing proposals are negligible. Whilst the uplift due to the rebasing may be insignificant compared to the existing MoD impact, it does represent an increase in abstraction. Whether or not the MoD considers it to be significant, the total abstraction planned is likely to have a significant effect on the integrity of the SAC and needs to be considered in that light.</p>	<p>Please see DIO's detailed response to the Environment Agency's comments on water resources issue above.</p>
<p>Additional comments on water resources</p> <p>Where the report refers to surface water abstraction not being critical as additional abstraction is possible for 30-50% of the time, there is no reference to any flow conditions which may result in limitations on this additional abstraction.</p> <p>Regarding the current impact of abstraction and surface water flow, the AMEC report indicates that modelling also shows impacts on the Wylfe and Till, which are both part of the River Avon SAC. We therefore question how the residual impact can be minor or negligible. For a Habitats Regulations Assessment it is the impact of the actual abstraction planned which needs to be considered, not purely the proposal for 'uplift' in abstraction.</p>	<p>The correct wording is "not quite so critical." The information was provided by the Environment Agency. Details of flow conditions were not provided.</p> <p>Although not the primary focus of the modeling exercise, the groundwater model for the OEA demonstrated that the uplift in abstraction from Army basing will have a negligible effect on the rivers Wylfe and Till. As explained above, the methodological approach of the OEA is to look at ABP-related changes only, although the HRA has a wider remit. If there are existing impacts these will be considered separately from Army Rebasing, unless there is any indication that there may be an in-combination impact.</p> <p>Please see comments above regarding plans to improve water efficiency. DIO will continue to work with the Environment Agency and Natural England to address their concerns ahead of planning applications being made.</p>

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<p>Table 9.4: reference is made to Salisbury Plain with the Nine Mile River as unfavourable recovering. While this may be the case for Salisbury Plain, the winterbourne feature has not been assessed to date.</p> <p>9.4.4: the report states that the degree to which the ponds interact with groundwater is not fully understood. We advise that further assessment is necessary as the impact on ponds is inconclusive.</p> <p>9.4.8: the water quality data is rather out of date, ideally this would be updated.</p> <p>9.5.3 Soil Impact Assessment: – The Military training infrastructure section refers to there being no impact from operations due to the stone tracks with relation in the Nine Mile River crossing. It should be noted that the stone will need to be of suitable geology/inert in order not to impact on the chemistry of the groundwater.</p> <p>Table 9.19: The impact of water supply is recorded as negligible, however this is when comparing to the existing level of impact. The modelling shows that the actual abstraction impact may be significant – i.e. the existing level of abstraction may have a significant impact (the quantity the MoD plan to abstract).</p> <p>9.9.2: The Environment Agency has stated the need to address leakage and reduce it to below 30%. Natural England supports this, however it should also be borne in mind that this may result in increased impacts of abstraction on the Avon, Bourne and Nine Mile River and in particular the winterbourne and newt ponds which needs to be assessed.</p>	<p>This is noted. DIO awaits conservation objectives for this new feature, and the results of the Integrated Site Assessment. However, in the absence of this information we will review the JNCC Common Standards Monitoring Guidance which was updated in Jan 2014.</p> <p>This is acknowledged and accepted.</p> <p>The water quality data is as published on the Environment Agency web site and DIO therefore believes it should be considered reasonably current; additional water quality data was requested from the Environment Agency but, owing to the volume of data required, could not be supplied in time to be used in the OEA. DIO will assess baseline water quality for the purposes of the proposed crossing, and proposes to develop an ongoing monitoring programme for the river.</p> <p>This is noted.</p> <p>Please see DIO's previous response on this issue.</p> <p>This is noted. DIO's intention is to minimise leakage through network modernisation (including at Bulford), and it is recognised that reducing leakage, in conjunction with the uplift in troop numbers, could in theory have an impact the aquifer and protected ponds, although DIO maintains that eliminating leakage and improving water efficiency is fundamentally the right thing to do.</p>

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	<p>The linkage between leakage and groundwater recharge is a complex and long-term issue with many uncertainties which will take time to understand. DIO will work with Natural England and the Environment Agency to agree appropriate long-term measures to monitor and manage the aquifer and protected ponds/ species. This may include pump testing, pond level and groundwater monitoring and habitat management.</p>
<p>Appendix 9A</p> <p>We have noticed a significant error that has implications for the conclusions made in the OEA. The report refers to the environmental flow indicator (EFI) for the River Avon at Q95 being <15% below natural under the Water Framework Directive (WFD) (the existing method), but this is incorrect – under WFD the Environment Agency and Natural England agreed EFI for the River Avon at Q95 to protect the SAC was <10% below natural. (The EFI targets agreed and used for the RoC were <Qn50 – 10% below natural and >Qn50% - 15% below natural). The report notes that flow screening tools are not designed for the ephemeral reaches. Therefore any conclusions based on the output for the winterbourne section of the Nine Mile River and ponds, and the winterbourne section of the Bourne, need to be treated with caution. On the one hand the report states that the model is not sensitive enough to assess impacts on ponds drying and therefore it is difficult to conclude no impact, yet it also concludes that abstractions mean that the ponds dry for greater than 10 days one year in four, and that natural climatic variations have as much or greater influence than abstraction on the levels in the pond. Natural England therefore advises that due to the model uncertainties the conclusions need to be interpreted with caution and potential impacts need further investigation before being ruled out. We advise that results should also be related to impacts on Great Crested Newts.</p> <p>The impact appears skewed for the Nine Mile River, i.e. there is a greater impact on flows when the river is naturally flowing, however it is the protection of flows across the whole flow cycle that is important. In addition the impacts on groundwater drawdown can affect vegetation and also the area that will support the winterbourne habitat. The length of time the winterbourne is dry/flowing is</p>	<p>The modelling consultants, AMEC, have advised that the correct WFD Flow Compliance screening tool was used for a water body with a moderate ASB (abstraction sensitivity band) i.e. <15%.</p> <p>DIO's understanding is that the more stringent <10% value is associated with the new JNCC method. At the time of writing the OEA, we understood that the impact of the new JNCC method on existing Review of Consents work was being assessed by the Environment Agency. Therefore discussions regarding the use of a <10% value were on-going between the Environment Agency and Natural England. Nonetheless, Appendix 9A provides comment on the impact of using a <10% or <15% value.</p> <p>It is noted that there is uncertainty in applying the model to assessing impacts to the ponds / Nine Mile River. However, at present (and as acknowledged by the Environment Agency) it is the best available tool with which to assess the impacts.</p> <p>As discussed above, DIO will work with Natural England and the Environment Agency to agree appropriate monitoring measures in order to understand groundwater / surface water interaction at the ponds / Nine Mile River and ultimately inform Wessex Basin Model refinement.</p>

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<p>important but also the depth that the groundwater falls to should be considered. Whilst the report states that flows do not quickly recover, once they fail due to groundwater recession they are unlikely to recharge within a 10 or 20 day period and the impacts of this will need to be considered.</p>	
<p>Appendix 9B</p> <p>We advise that the targets used should be those that are the most stringent, whether they are WFD or JNCC. Proposals leading to deterioration to any surface or groundwater bodies, including the Nine Mile River (which we consider is of national importance as indicated by our intention to notify as SSSI) is of concern.</p>	<p>For a WFD assessment we would consider it most appropriate to use the WFD criteria (for future water resource and water quality assessments different criteria could be used). Appendix 9A of the OEA provides comment on the impact of using a <10% or <15% value.</p> <p>The WFD Assessment will need to be updated for the planning applications once the more detailed water resource and water quality impacts modelling and investigation is completed. As part of this process, the appropriateness of alternative targets will be examined.</p>

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N.B. This document provides further specific technical information to complement, rather than duplicate, the responses that have already been provided in the Statement of Community Involvement. As a result, it does NOT cover all points raised during the comments stage. Please see SCI for responses to those points not listed here.

Comment from Wiltshire Council	DIO Response & Suggested Actions
<p><u>Ecology Issues</u></p> <p>An extensive desk study has been undertaken supplemented by a large amount of phase 1 habitat survey work during Jan - April 2014. It has not been possible to fully consider the contents under current time pressures. There may need to be adjustments made in the way that some features have been valued. For example two large areas of calcareous grassland at Perham Down and Larkhill are assessed as being of medium (county) importance and low (district) importance respectively but it is not clear why they are valued differently. Also the relative importance attached to badgers over great crested newts is surprising</p>	<p>This is noted, and these comments will be taken forward and incorporated into detailed plans for individual sites.</p> <p>The approach taken to valuation of parcels of land both in their own right and for the value they present to great crested newts was discussed between Wiltshire Council and the OEA ecological consultants.</p>

Comment from Wiltshire Council	DIO Response & Suggested Actions
<p>and the county value assigned to bats in the garrisons may be rather high, and would be better considered when surveys are complete.</p> <p>While it is noted that all designated sites including European protected sites (SAC and SPA), SSSIs and County Wildlife Sites (CWS) have been avoided by the preferred site selection for SFA, some surveys of preferred options have identified calcareous grassland and broadleaved woodland which is of county importance. These sites would be eligible for designation as CWSs and should therefore be assessed against the criteria in the Wildlife Sites Handbook for Wiltshire. A robust and consistent approach to valuing ecological features is essential to ensure that the impact assessment is as accurate as possible and mitigation is proportionate.</p> <p>The study of existing site ecology is acceptable for the purposes of supporting the Masterplan. It provides a competent high level evaluation of features within each area e.g. Bulford, Imber etc. and it is likely that all the main issues of concern have been identified. It appears there are no species or habitats directly impacted by the works that would prevent the recommended options being pursued and the study will be helpful in agreeing where further survey and assessment work should be targeted to support forthcoming planning applications.</p> <p>It is too early for Wiltshire Council to fully endorse the section covering the impact assessment as survey work is incomplete, queries exist with the evaluation of some features and the details of development are not yet available. Details are given regarding the approach to mitigation for each site and these include reference to offsetting the loss of calcareous grassland using the Defra metric which would be welcomed. The metric can of course, and should, be applied to arable, scrub and woodland habitats.</p>	<p>Whether or not the parcels of land in question would meet criteria for designation as County Wildlife Sites is not considered particularly germane to the conclusions of the OEA in terms of impact and resulting effect, provided that the relative value of the parcel of land has been correctly identified (i.e. of County value)</p> <p>This is noted.</p> <p>A high level of detail is not appropriate for a Masterplan/OEA – the more detailed impact assessments will follow for individual developments. Owing to seasonal constraints, Phase 2 surveys were not available to inform the OEA but are now largely completed. Please refer to response to Natural England regarding biodiversity offsetting and production of a biodiversity mitigation strategy.</p>
<p><u>HRA Issues</u></p> <p>Wiltshire Council is pleased to see that the Masterplan is accompanied by a strategic level Habitats Regulations Assessment (HRA) which sets out how the army basing programme (ABP) as a whole is likely to affect Natura 2000 sites, particularly Salisbury Plain SAC / SPA and the River Avon SAC; this will provide a useful context when it comes to carry out project level HRA's of the individual planning applications, however it is not the end of the HRA process.</p> <p>The HRA report identifies 'likely significant effects' upon the protected sites as a result of the proposals including habitat loss and disturbance of breeding bird populations on Salisbury Plain, and impacts of abstraction / discharge on the</p>	<p>The OEA included an assessment (Ch 18) to inform HRA; the Masterplan-level HRA itself will be finalised in due course and will incorporate consultation comments. This will be used to support individual project-level HRAs as required, in support of planning applications.</p>

Comment from Wiltshire Council	DIO Response & Suggested Actions
<p>River Avon. The HRA suggests that it should be possible for the ABP to be delivered without having an adverse effect upon the designated sites but acknowledges that further work is required to further assess the extent of these impacts and ensure that any sufficient mitigation / compensation measures can be secured. While a degree of uncertainty is often unavoidable in a strategic level HRA, this is generally made acceptable where there a further HRA will be undertaken 'down the line' when further details are available i.e. at the planning application stage, and where caveats have been inserted into the strategic plan to demonstrate how any residual risks will be dealt with at later stages.</p> <p>The Masterplan document itself does not currently acknowledge any potential constraints to development associated with the HRA or the need for further information and mitigation / compensation measures to support the HRA process through to the planning application stage. It is therefore advised that the Masterplan includes a strong statement acknowledging these constraints and providing a clear commitment to address the unresolved HRA issues (particularly those identified in Section 18.7 of the HRA and summarised below) prior to an application being made in September 2014.</p>	<p>This statement has now been included in the final Masterplan.</p>
<p>With regards to individual Natural 2000 sites, the main unresolved issues are as follows:</p> <p><u>River Avon SAC</u></p> <p>The HRA is clear that the existing abstraction at Bulford garrison is having a significant effect upon the River Bourne / Nine Mile River, although it is not clear whether this is causing the river to be in unfavourable condition. It will therefore be difficult to demonstrate that the ABP would not exacerbate this situation or make it more difficult for this section of the river to achieve favourable condition in the future. The HRA suggests that the contribution of ABP would be 'negligible', however there do not appear to be any figures to clarify how negligible has been defined. Given the current negative effects which abstraction is having, any additional abstraction is unlikely to be acceptable.</p> <p>Significant sustainability reductions within the garrison e.g. through reduced leakage, may help to mitigate any necessary additional demands for water from the ABP, however no information on such measures is currently available to be confident that the additional water demand can be accommodated. It is also worth noting that this programme cannot rely on sustainability reductions previously agreed through the Review of Consents which are required to make Wessex Water's abstractions acceptable, or prior MOD commitments for water</p>	<p>Please see above responses made to the Environment Agency/ Natural England on these issues. These issues will be considered in the final (strategic) HRA, with appropriate mitigation being agreed with relevant authorities.</p>

Comment from Wiltshire Council	DIO Response & Suggested Actions
<p>reduction such as those in its Sustainable Development Strategy. Further detailed modelling work and information on proposed sustainability reductions will be required to demonstrate that the any development at Bulford can be consented in line with the requirements of a HRA at the application stage, as agreed with Natural England, the Environment Agency and Wiltshire Council.</p> <p>With regards to the discharge of foul sewer effluent, the OEA / HRA does not appear to include any evidence to demonstrate that the additional foul sewer effluent generated by the ABP could be accommodated within the headroom of existing permits, if not it will be necessary to assess the potential effects of additional phosphate loading associated with the ABP. The capacity of the STWs within the garrisons need to be confirmed and agreed with the Environment Agency and Wiltshire Council prior to submission of the first applications.</p> <p><u>Salisbury Plain SPA</u></p> <p>The HRA acknowledges that there is potential for in-combination effects between the Wiltshire Core Strategy and the ABP as a result of increased recreational activity on Salisbury Plain causing disturbance to designated populations of ground nesting birds. While most of the disturbance will be associated with WCS, a significant proportion (30%) will be additional, due to the ABP. While there is an existing mitigation strategy in place to address WCS development, this will need to be reviewed to ensure that it can accommodate the volume, extent and proximity of SFA currently proposed under the ABP, which is in excess of that originally anticipated when the mitigation strategy was developed, therefore it is expected that additional measures are likely to be provided to address these impacts.</p> <p>Other impacts such as loss of foraging habitat and disturbance are also outside the scope of the existing mitigation strategy (which only addresses recreational activity), and will require bespoke mitigation / compensation measures. Any mitigation measures should be delivered as part of the overall ABP, as agreed with Natural England and the Council prior to submission of the first application which could impact on the SPA.</p> <p><u>Salisbury Plain SAC</u></p> <p>There is likely to be a loss of calcareous grassland habitats within Salisbury Plain SAC which is as yet unknown, but will require restoration / replacement. It will be necessary to be clear that such habitat restoration / creation works are in addition to any existing work proposed by MOD under its statutory duties as a public landholder and that it is proportionate to any impacts related to ABP; as has been</p>	<p>Please the response above to Natural England on this issue. Disturbance issues will be considered in the final (strategic) HRA, and any appropriate mitigation will be agreed with relevant authorities.</p> <p>As discussed above, DIO proposes to develop an overall</p>

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<p>discussed, a 'mitigation tracker' is required to provide clarity on this issue. The scope of the impacts will be dependent upon the final sitting and design of certain features, which should be avoided as far as possible through sensitive decision making informed by up to date botanical surveys. Both the mitigation tracker and botanical surveys should be completed prior to the first application which could impact on the Salisbury Plain SAC, in consultation with Natural England and Wiltshire Council.</p> <p>The OEA identifies an approach to mitigation for recreational impacts arising from ABP on Salisbury Plain SPA based on making contributions towards the strategy which is already in place for development arising from the Wiltshire Core Strategy. Wiltshire Council will work with the MOD and its consultants prior to drawing up planning applications to resolve this, but clearly since the ABP brings additional development to the area, Wiltshire Council would wish to see additional measures secured over and above those currently being delivered by its strategy.</p>	<p>biodiversity mitigation and enhancement strategy for Army Basing on Salisbury Plain, which will then inform subsequent planning applications.</p> <p>Noted. DIO believes that this related to the SPA rather than the SAC.</p>