

Comments by Professor J G Shepherd CBE FRS on “An Assessment of Evidence Supporting a Programme of Wetland Restoration Projects in the New Forest Site of Special Scientific Interest: Assurance Report” by Dr Tim Hill (Natural England)

24 October 2016

This “Assurance Report” is **Dr Hill’s summary and interpretation of three independent reviews** of the “Assessment of the Evidence...” by Thomas et al 2016 (on which I have commented separately). For the reasons summarized below **the review process used was seriously inadequate, and the reviews (and this summary thereof) provide very little “Assurance” that the evidence is adequate and reliable.**

In particular this material does NOT support the exaggerated and unjustified claim made by his subordinate, Marc Turner, in NE’s latest letter of support (dated 21 October 2016) that “Evidence collected to date proves that completed wetland restorations are beneficial in delivering positive hydrological and biodiversity outcomes.”

- 1) **It is immediately clear that the reviewers were asked inappropriate and misleading questions...**
 - a) Asking whether “the approaches being used are consistent with the ... principles set out in the published report ... (Mainstone et al., 2016)” is irrelevant. **This merely asks whether the methods are consistent with current recommendations, and this has no bearing on whether the methods themselves are supported by adequate evidence.**
 - b) Asking whether the “conclusion that ...restorations ... are delivering beneficial ... outcomes” is “consistent with the available evidence” is a very weak test, especially as the evidence base is extremely thin. **The question could and should have asked whether the conclusion that the “restorations ... are delivering beneficial ... outcomes is supported by adequate and convincing evidence”**
- 2) The description of “The Assessment” is revealing: the first 5 of the 7 key components listed on page 5 are irrelevant to determining whether the evidence is reliable, and the 7th highlights a crucial deficiency i.e. **“The assessment further identifies a lack of monitoring and evaluation as a key evidence gap”**
- 3) Dr Hill then says **“The Assessment is not ...A systematic evidence review of wetland restoration in the New Forest.”** even though that is what it purports to be (according to its title), and that is what was (and still is) needed.
- 4) The quotations selectively quoted by Dr Hill are not representative, and even so inspire extremely little confidence. For example, he quotes the reviewers
 - a) “there is a good selection of anecdotal information for the restoration being successful; whilst **anecdotal evidence would not usually be considered as a good scientific basis for determining river restoration success or failure...**”
 - b) “the available evidence suggests that the works have been successful” without noting that **this comment relates only to the hydro-geomorphology (not to biological features)**
 - c) the favourable comments (on vegetation only, on p8) relate only to the Fletchers Thorns site, which is possibly the only recent project where beneficial effects are clear
 - d) the comment that “restoration activities being undertaken ... offer real prospects for positive outcomes” is telling. This highlights that over 140 projects have been undertaken, over two

decades, yet the evidence for success is so weak that the reviewers' most positive comment is that they "offer real prospects for positive outcomes".

- 5) He does not quote a number of adverse comments by the reviewers, including
 - a) "In the absence of a long-term pre and post restoration monitoring programme, as is typical of restoration activities worldwide (Jahnig et al., 2011), the evidence of success is constrained"
 - b) "the CSM (Common Standards Monitoring) process does not have sufficient resolution or focus to identify some of the key changes resulting from habitat management in the New Forest."
 - c) "there is a lack of well-documented and critically assessed monitoring data for the New Forest restoration projects"
 - d) "the claims made by 'the Assessment' for the success of wetland restoration management are equally modest and conservative, though this is understandable because of the somewhat limited range of documented evidence for restoration outcomes"
- 6) Dr Hill's first conclusion (on p 9) that "the restoration approaches being used in the New Forest are entirely consistent with best practice" is irrelevant to whether or not they actually work
- 7) His remark that "I am also confident that the restoration works are, or will prove to be, beneficial in delivering positive hydrological and biodiversity outcomes" is not supported by the material presented by Thomas et al 2016 or by the reviewers, and represents simply his own judgement.
- 8) Finally however he makes one comment that is supported by the (lack of) evidence, i.e.
"Gathering good quality evidence that properly characterises both successes and any failures **is essential in evaluating and adapting our approaches** to these sorts of large-scale and long-term restoration works." It is reassuring to hear that after all this time (and money) spent on all these projects NE is at last "working to develop a strategic monitoring plan for the New Forest restorations" ! **It is a scandal that such systematic monitoring has not formed part of the restoration programme throughout its life.**