



**Archimedean Screw
Hydropower scheme at
Guyzance Meander**

Note to EA on flow regime and CSMG

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Purpose of this document

This document responds to a query raised by the EA as to whether the project, when assessing a suitable flow regime, has considered the 2014 JNCC Common Standards Monitoring Guidance for Rivers (http://jncc.defra.gov.uk/pdf/CSM_rivers_jan_14.pdf), hereafter “CSMG”, specifically the guidance at Table 3 of that document on a default percentage restriction on abstractions depending on river size and type.

Flow regime and CSMG

The proposed operating regime in this project has been arrived at with regard to EA guidance which has been found suitable in all other projects in which Mann Power has been engaged, including those projects which affect SSSIs, without a further restriction imposed by CSMG. Further restrictions which exceed those normally imposed would significantly impact the scheme's ability to viably operate, and therefore its economic viability. Such further restrictions would therefore be expected to rest upon some evidence that more detriment is anticipated than would be tolerated under the EA's guidance to which we have designed.

The EA is invited to confirm whether the imposition of the CSMG default limits at this site would achieve a better environmental outcome than the current proposal:

- Our current proposal is for Q75 HOF plus 50% proportional take. (In practice, no abstraction below Q70 due to choice of system.)
- Our current proposal is very conservatively within compliance with the EA's own guidance Table C, which would allow for Q95 HOF and 100% take.
- If the scheme were to comply instead with the EA's own default guidance Table A, allowing a 35% proportional take on top of a Q95 HOF, and then ALSO to apply the CSMG default limits for the Coquet, it would provide a **less protective regime at all flows below Q68** than what is being proposed. This is shown in the graph below.

In other words, the proposed regime delivers a better level of protection in the more critical lower flow conditions than what would be allowed under either the CSMG guidance or the EA's own typical precautionary position. Our proposed regime is based not on abstract values but on **known impacts** on water levels at the site, derived from monitoring and detailed topographical survey which we have undertaken, and in light of ecological assessment of this specific reach.

If net impact of this non-consumptive abstraction is to be considered at the element scale, here affecting $\leq 2\%$ of the length of the SSSI waterbody, and given EA guidance that WFD Good Ecological Status should be the minimum acceptable target in a non-N2K SSSI, unless flow targets have been agreed, then it seems that EA WR licensing has flexibility in determining whether CSMG should take precedence regardless of its benefits at a site.

The EA is invited to confirm whether the imposition of the CSMG default limits at this site, achieving less protection of the environment in low river conditions, would achieve a better environmental outcome than the current proposal.

