Date: 06 March 2025
Our ref: 502092
Your ref: Strategic HRA AA for nutrient mitigation generated by retrofitting Council Housing with Water control flow devices

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Harriet Turner
Ashford Borough Council

BY EMAIL ONLY

Dear Harriet,

Consultation: Strategic HRA AA for nutrient mitigation generated by retrofitting Council Housing with Water control flow devices

Thank you for your consultation request on the proposed strategic nutrient mitigation proposal, which was received by Natural England on the 4th February 2025. Please find below our comments to the submitted Appropriate Assessment.

Natural England welcome and support your authorities' strategic approach to the creation of nutrient mitigation in the region. Having assessed the proposed scheme, we are satisfied in principle that the scheme can be used to generate permanent nutrient mitigation. This is on the basis that;

- the properties subject to water use reduction measures are connected to a Wastewater Treatment Works (WwTW) that operates with a Total Nitrogen (TN) and/or Total Phosphorous permit (TP) limit(s);
- robust evidence is used to calculate the estimated water reduction rate;
- your authority is satisfied that any relevant measures are deliverable, and that their monitoring and enforcement schedule is sufficient that your authority can ensure, with certainty, that the mitigation measures will remain effective in perpetuity, or for the lifetime of any given development as appropriate;
- sufficient mitigation is available for new permissions granted using this Appropriate Assessment, and;
- the principles of mitigation contained in our advice of 16th March 2022 are demonstrated.

With regard to the generation of temporary mitigation (pre-2030 mitigation), Natural England have provided detailed advice (Annex A) which should be considered in your authorities' appropriate assessment, when assessing the effectiveness of the temporary mitigation measure.
Additional advice on retrofit water use reduction measures can be found within Annex B.

A key component of the Appropriate Assessment is the close monitoring of permissions and the rate of delivery of the retrofitting measures (by utilising the nutrient credit ledger). Permissions should not be granted using the strategy unless your authority is fully satisfied that the provision of the requisite retrofitting measures are assured.

We look forward to seeing how the strategy is progressing through regular submission of monitoring reports to us as outlined in your Appropriate Assessment.

Yours sincerely,

Thomas Scott-Heagerty
Senior Officer – Sussex & Kent Area Team

Annex A – Detailed Advice for Consideration

Pre-2030 Mitigation Generated by Retrofitting

As set out in Natural England's initial nutrient neutrality advice[1], the relationship between water use and Total Nitrogen (TN) and/or Total Phosphorous (TP) load discharged in WwTW effluent is more complex when the receiving WwTW does not operate with a TN/TP permit limit. Without a permit limit, many factors can influence the final TN/TP effluent concentration. Therefore, in this scenario, it is difficult to determine whether retrofit water saving measures will result in reductions in nutrients at the WwTW.

Whilst the 'Nitrogen at source' methodology has evidenced that the drinking water has an average TN concentration of approximately 5mg/l TN. This TN concentration is lower than the combined sewage effluent TN concentration (estimated to be approximately 27mg/l TN in WwTW effluent). By introducing water efficiency measures at existing properties, there is a risk that the WwTW influent TN concentration could increase, which in turn could result in the WwTW effluent concentration increasing (and potentially not leading to an overall TN load reduction).
Your Authority should consider this risk within your appropriate assessment and be satisfied that the proposed retrofit water efficiency measures will operate in a way that will ensure the mitigation will be effective for the pre-2030 period. You may wish to seek advice of the WwTW(s) operator to understand whether the measures are likely to increase the influent concentration received at the WwTW.

WwTWs Operating with Permit Headroom

Water efficiency measures are most effective when the existing properties to which the measures are being applied, and the new developments for which the mitigation is being provided, both connect to the same WwTW. Water efficiency measures can be used when the properties subject to them connect to a different WwTW to the new development, but it is important to consider the variables which can affect the level of confidence in their effectiveness. The effectiveness of water efficiency measures will increase where WwTW are operating at close to capacity with little permit headroom, which may not be the case for all works. Your Authority should ensure it is satisfied that the WwTW serving the properties to which water efficiency measures are proposed are operating in a way that will ensure the mitigation will be effective.

Time Lag – 'Nitrogen at Source' Methodology

Whilst the 'nitrogen at source' methodology may result in an initial reduction in TN load (subject to above considerations), over the long-term there may not be an overall reduction once the 20-40 year evidenced time-lag (time taken for groundwater (at abstraction locations) to travel to Stodmarsh) is fully taken into account.
Your Authority should consider this time lag when determining whether the 'nitrogen at source' methodology will result in overall (short and long-term) TN load reductions reaching Stodmarsh.

[1] stodmarsh-nutrient-neutral-methodology-november-2020.pdf

Annex B - Additional General Considerations for Retrofit Water Efficiency Measures

Implementation of Retrofit Water Efficiency Measures as Mitigation

Natural England advise that any water saving mitigation schemes should be supported by relevant data and evidence, this data and evidence will need to be sufficiently robust to demonstrate that measures will be as effective as proposed.

Natural England advise that your authority will need to be satisfied that any relevant measures are deliverable, and that their monitoring and enforcement schedule is sufficient that your authority can ensure, with certainty, that the mitigation measures will remain effective in perpetuity, or for the lifetime of any given development as appropriate.

Natural England are aware that flow restrictor devices have been fitted in an Affinity Water trial area and found to save 64 litres per household per day. Similarly, Crawley Borough Council have undertaken a pilot scheme which has evidence average water savings of 30.5 litres per person per day. When undertaking a similar scheme, robust evidence should be obtained to support the estimated water reduction rate reflective of your catchment. Be advised that the precautionary principle should be applied, and clearly demonstrated, when calculating this water reduction rate per dwelling or per individual.

Retrofit water saving measures should only be used to dwellings built prior to 2010 when Buildings Regulations water efficiency standards were introduced.

Furthermore, retrofit water saving measures should be used to dwellings that already benefit from significant water efficiency measures (i.e. already has a flow restrictor or greywater recycling system installed).

Water saving proposals should not combine the benefits of flow restrictors and water efficient fixtures and fittings, as doing so would significantly greatly overestimate the water savings. Proposals should therefore only count the benefits of one of these measures (if both proposed, then only reductions from flow restrictors should be considered).

Monitoring of Retrofit Water Efficiency Measures

Monitoring and enforcement of retrofit water saving measures will be key to ensuring your authority can have sufficient practical certainty to consider mitigation measures at appropriate assessment. We note that monitoring water meters of the retrofitted dwellings can further demonstrate the effectiveness of the water saving measures, providing your authority with additional certainty that the measures are operating as estimated. Robust monitoring also allows your authority to take remedial actions if the estimated water savings are not being achieved. We advise that a precautionary buffer, between retrofits implemented and growth being offset, should be applied to ensure that sufficient mitigation always remains available.

As discussed, if retrofit water efficiency measures are to be used as long-term mitigation, your authority will need certainty that these measures will remain effective in perpetuity. A robust monitoring and enforcement schedule will need to be demonstrated and appropriately secured to ensure this mitigation remains effective in perpetuity.

We would suggest that any such scheme will need to be appropriately rolled out, with an appropriate method of tracking/recording the created mitigation. Securing mitigation against individual planning applications will require appropriate record keeping ensuring there is no double counting/over prescription of the mitigation. We would therefore again recommend a precautionary buffer of credits is kept as a reserve, in case measures are monitored to be less effective, or accidental over prescription of credits.