

Date: 13th February 2013
Our ref:
You ref:



Geoff Hughes,
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Dear Geoff,

Agreement between Natural England and the Environment Agency to Produce a Nutrient Management Plan for the River Wye SAC.

Please find enclosed a signed copy of the statement of intent between Natural England and the Environment Agency to produce a nutrient management plan for the River Wye SAC. We have made a few minor changes to the wording since you received the email draft, but these changes do affect the intention or substance of the statement.

We look forward to continuing our close working on this issue and look forward to seeing the outcome of the Nutrient Management Plan and how we take subsequent actions forward.

If you do have any further queries then please do not hesitate to contact either of us.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "RO", with a horizontal line underneath.

Roger Owen
Area Manager
Natural England
Tel: 07811448956

A handwritten signature in blue ink, consisting of several overlapping loops and lines.

David Throup
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Agreement between Natural England and the Environment Agency to Produce a Nutrient Management Plan for the River Wye SAC.

1. Purpose and relevance of this agreement

1.1 This agreement is a formal commitment between Natural England and Environment Agency to develop and deliver a Nutrient Management Plan for the River Wye SAC in England. The Plan will embody measures which will ensure the favourable conservation status of the SAC in respect of phosphate levels as soon as possible and at the latest by 2027 taking in to account the existing river phosphate levels and existing water discharge permits.

1.2 The plan will also seek to identify actions that would enable additional development (beyond existing consents) to proceed during the period 2013 to 2031 of the type and amount, and in the locations specified in or pursuant to the emerging Herefordshire Core Strategy and other relevant development plans

1.3 The Nutrient Management Plan will be relevant to a range of partners including local planning authorities and the water company, who may have regard to the plan and the commitment to deliver its actions, when considering the potential effects of new development upon the SAC under the provisions of the Habitats Regulations

2. Background

2.1 The River Wye SAC currently includes sections where the water quality exceeds phosphate level targets defined in Natural England's favourable condition tables. As a consequence Natural England's view is that this exceedance prevents sections of the river from meeting the SAC conservation objectives

2.2. The River Wye SAC was subject to a review of consents (RoC) by the Environment Agency in 2010

2.3 In July 2011 Environment Agency and Natural England agreed a joint approach entitled 'Advising on Growth and Water Quality in Natura 2000 sites and SSSIs' (see Annex 1). This paper is relevant to the current situation on the River Wye SAC and sets out the basis upon which a nutrient management plan is now required.

3. Condition status of the river

3.1. The current and likely future condition of the water quality of the river in respect to phosphate, without interventions identified within a Nutrient Management Plan, as assessed against its conservation objectives, is as follows:

1. The River Lugg section of the SAC is currently exceeding the phosphate target prescribed in the site's favourable condition tables and is considered by Natural England to be failing its conservation objectives, and not therefore making a full contribution towards achieving favourable conservation status of each of the qualifying features of the SAC

2. A further section in the SAC (part of the river Wye, between Hay and the Lugg confluence) is currently meeting the phosphate target and is meeting conservation objectives. However, it is likely that wastewater discharge from future planned development (falling within the affirmed existing water discharge permits (under RoC)) would eventually result in failure of the phosphate target and to the stretch

failing its conservation objectives and not therefore continuing to make a full contribution towards achieving favourable conservation status of each of the qualifying features.

3. The final section of the SAC, in the upper parts of the Wye, is meeting its conservation objectives and is considered not to be at risk from the current permitted discharges.

4. Aims of the Nutrient Management Plan

4.1. The longer term aims of the Nutrient Management Plan (NMP) are concerned with obligations under Article 6(1) and 6(2) of the Habitats Directive. However the plan is also required to facilitate the delivery of new development in the meantime. Thus the Nutrient management plan

- will establish the necessary conservation measures which correspond to the ecological requirements of the site in relation to phosphate, as required under the provisions of Article 6(1) of the Habitats Directive. The level of phosphate within the river corresponds to the ecological requirement of the SAC as set out below:
 - The ecological requirements are informed by the conservation objectives for the European site.
 - The conservation objectives for the site include the requirement to *'ensure the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features'*.
 - The favourable condition table specifies a phosphate target for the SAC features against which favourable conservation status is assessed
- will deliver appropriate steps to avoid deterioration of natural habitats within the SAC, as required under the provisions of Article 6(2).
- and will facilitate the delivery of new development which will fall under the assessment provisions of Article 6(3).

4.2 The Aims of the NMP are therefore to control and reduce phosphorus and in doing so to facilitate the delivery of new development. The plan will identify and deliver the management actions required to achieve these aims such that:

(i) Sections of the River Wye SAC where the phosphate levels currently exceed the favourable condition target (River Lugg) will be subject to measures to reduce phosphate levels to those which are defined as favourable for the site. The design and timing of these measures will be **such as to ensure that, taking these measures into account, new development within existing water discharge permits can occur without any significant adverse effect** on the integrity of these sections of the SAC, and without compromising the achievement of the reductions in phosphate levels required as soon as possible and at the latest by 2027.

(ii) Sections currently meeting the favourable condition phosphate target will be subject to measures to ensure that future inputs of phosphate will not **at any time lead to any adverse effect on the integrity of the SAC** as a consequence of currently available capacity at the permitted discharges being utilised by new development.

(iii) The plan will attempt to identify further actions which will facilitate further development within the catchment that is in line with the policies within the emerging core strategy and other strategic planning documents within the catchments of the SAC

4.3 The first two aims will be delivered before 2027, while the third may continue beyond that time

5. Requirements of the plan in order to meet these aims

5.1 In order for the NMP to fulfil the requirements of the Habitats Directive and the above aims it will have to meet the following criteria

(i) The sum total of the results of the actions will ensure the site reaches favourable conservation status across its entire length with regard to levels of phosphate as soon as possible and at the latest by 2027, and will ensure that the sections currently meeting favourable conservation status but at risk remain in favourable conservation status.

(ii) The types of measures available to be taken forward as actions within the plan are set out in section 7.

(iii) The precise combination and allocation of these measures will be assessed as part of the plan; including consideration of where these may need to be focused, who / which sector would be responsible for taking these forward, and timescales for implementation.

(iv) It will recommend arrangements needed to ensure that these actions are delivered and monitored over the next 15 years.

(v) This plan will not be a fixed report, rather it is anticipated to be a live document, regularly reviewed, updated and amended as progression is made / changes occur within the catchment.

(vi) The successful implementation of the plan will require co-ordination of actions, regular review and updating. A programme board will be established to do this and as a minimum will include the Environment Agency, Natural England, Countryside Council for Wales (Natural Resources Wales), Herefordshire Council and Dwr Cymru-Welsh water. There may also be other partners involved as the plan proceeds.

(vii) Environment Agency and Natural England have overall responsibility for the plan. However, the plan will be a partnership document between the main parties concerned. Where necessary, Environment Agency and Natural England will seek commitment from others to deliver actions in the plan that fall to them.

6. Time scale for delivery

6.1. We are adopting 2027 as the latest date by which the aims of the NMP will be achieved, as the water bodies that make up the River Wye SAC are subject to the requirements of the Water Framework Directive and will need to meet good ecological status by this date at the latest. However it is recognised that measures will need to be delivered in a phased manner

to ensure that appropriate steps to avoid adverse effects to the integrity of the site from new development are delivered in the meantime.

7. Confidence in effectiveness of the plan in meeting its objectives by 2027 at the latest

7.1 Natural England and the Environment Agency have confidence that the implementation of the nutrient management plan will deliver favourable conservation status of the failing and at risk stretches of the rivers Wye and Lugg at the latest by 2027. This confidence is based both on the tools and mechanisms which are currently and likely to be available and the capacity to make further significant reductions in phosphate.

7.2 We accept that delivering objectives over such a long time frame entails risks. However, we believe that over such a period, risks in one area may be managed by new opportunities in other areas. It is important to note there is a commitment of UK government to the delivery of favourable conservation status of SACs and good ecological status of our wetlands when considering the underlying risks and opportunities. This commitment is underpinned by regulatory tools which are available should the preferred voluntary mechanisms have been shown not to be effective.

7.3 Recent developments in water treatment technology have meant that best available technology limits are in the process of being reviewed downwards (EA Reference). One of the consequences of this is that waste water treatment works (WWTW) are now able to further reduce P loads to rivers. Current thinking is that discharges limits could be reduced to 0.5 mg/l between 2015-2020 or down to as little as 0.1 mg/l and are eligible for funding via the price review period that covers 2020-2025. This scale of reduction would make a significant impact on P levels within the two potentially failing sections of the SAC. The timing of these technological improvements and funding opportunities provided by water company price review process fits within the target date for meeting the NMP targets. Once these technologies are operational their impact is almost instantaneous in terms of P reduction.


7.4 The parts of the River Lugg catchment that are considered at highest risk are subject to inclusion within a Catchment Sensitive Farming initiative. This voluntary initiative (supported by the NFU and CLA) targets action around agricultural activities which impact on water quality. This project has been working in the catchment for 7 years. Actions have resulted in many capital and revenue schemes and projects aimed at reducing agricultural impact on the river. While effects of actions with this approach are not as instantaneous as investment in new treatment plants, initial national research show a reduction in total P levels (from all sources in the river) of up to 5% in the catchments covered with significantly higher levels projected from forward modelling (**Catchment Sensitive Farming** ECSFDI Phase 1 & 2 Full Evaluation Report 2012)


7.5 In addition to the above two major sources of P there are a series of other sources such as urban run-off, private treatment plants, combined sewer overflows, misconnections etc which are currently not being systematically tackled. The NMP will identify all other significant sources of P in the catchment and set in place actions which will tackle the most significant of these. Experience elsewhere suggests that other sources may be significant in tackling the P level in the rivers (May et al 2011). Modelling work and monitoring in the NMP

will allow the impacts of these contributions to be better assessed. There are several approaches that can be made to tackle these including education and enforcement which have proven to be effective elsewhere

8. Commitment to plan delivery

The NMP is necessary to inform and support the emerging Herefordshire Core Strategy and Natural England and the Environment Agency commit to producing a Nutrient Management Plan as described above within 6 months of the signing of this statement,.

Signed, 
Role AREA MANAGER
Date 13/1/2013
on behalf of Natural England

Signed 
Role ENVIRONMENT MANAGER - HEREFORDSHIRE & WOOLBARSITRE
Dated 15/2/13
, on behalf of Environment Agency

Reference

May, L., Place, C., O'Malley, M. and Spears, B (2011) The impact of phosphorus inputs from small discharges on designated freshwater sites. CEH final report to Natural England and the Broads Authority

Annex 1 Advising on Growth and Water Quality in Natura 2000 sites and SSSIs: A Joint Environment Agency / Natural England Approach.

Advising on Growth and Water Quality in Natura 2000 sites and SSSIs: A Joint Environment Agency / Natural England Approach

1. Introduction

In 2010, the Environment Agency completed a review of all existing permits likely to impact on Natura 2000 sites¹. Through this Review of Consents, permits were affirmed, modified or revoked as required to ensure that they would not have an adverse effect on the integrity of any Natura 2000 site. This set a new baseline for what the Environment Agency considered to be an acceptable impact of permitted activities on Natura 2000 sites.

The impact on non-permitted activities was outside the scope of the Review of Consents and in some sites there remain other outstanding water quality issues. A number of these sites are also subject to potential development pressures.

Local Authorities and developers are now asking the Environment Agency and Natural England to advise on the implications of planned growth and development on water quality at these sites. Our overarching obligation is to ensure compliance with the Habitats and Birds Directives, but we must also consider four important factors:

- . How both organisations should work together when providing advice to third parties
- . Sites where there are outstanding water quality issues post-Review of Consents
- . The appropriate water quality target for the site
- . How to consider the impacts of planned growth in the context of a longer-term strategy to improve water quality.

This paper describes the principles on which both the Environment Agency and Natural England will provide advice to local authorities and developers. The principles are explored in more detail in Annex I attached. The aim of these principles is to maintain or achieve the level of protection required for Natura 2000 sites in light of growth, and to achieve water quality targets in the longer term. The principles would apply also in the case of development proposals affecting SSSIs. **The emphasis of this approach is on local decision making in the context of the nationally-agreed principles described below.**

1. Principles for providing advice on growth

. **Ways of working**

Both organisations are committed to giving clear, cohesive and complementary advice to local authorities and developers. We will facilitate delivery of strategic plans for growth, without compromising the level of protection afforded to Natura 2000 sites and SSSIs, by developing mutually supportive relationships with Local Authorities. We will manage the impact of growth on water quality by seeking jointly agreed solutions, exploring innovation and involving others as appropriate.

‡ Special Areas of Conservation designated under the Habitats Directive and Special Protection Areas designated under the Wild Birds Directive.

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Identifying sites with outstanding water quality issues post-Review of Consents

The impact of non-permitted activities (e.g. agriculture) on Natura 2000 sites was outside the scope of the Review of Consents. Some sites will continue to fail water quality targets until diffuse agricultural pollution and the impact of un-sewered populations are addressed.

Notwithstanding, several sites are subject to additional development pressures and the Environment Agency and Natural England must provide advice on its implications. This will be more straightforward if both organisations proactively identify those sites where, post Review of Consents, there are outstanding WQ issues and future development pressures **and** agree site requirements before being asked to advise on growth impacts. This work has been initiated through the “Single Voice” Programme.

A management plan should be developed for these sites, which sets out the actions that will be required to achieve conservation objectives in the longer term (see section 3 below). The plan represents a joint commitment to action and will provide the context in which advice on the impacts of growth should be determined.

Efforts will need to focus as a priority on those sites where water quality will be compromised by planned growth.

Sites where planned growth would not result in deterioration in existing receiving water quality through an increase in nutrient concentration and which would not materially affect the potential for achievement of conservation objectives within a reasonable timescale would not be a priority for attention in relation to new developments at this time.

Sites where planned growth would result in deterioration in existing water quality through an increase in nutrient concentration would be considered a priority, unless there is agreement, based on clear evidence, that the impact of the resulting discharge would be trivial.

We will not object to growth at these sites if a suitable management plan is in place which will improve water quality and facilitate achievement of the conservation objective within a reasonable timescale (see section (3) below).

Agreeing the appropriate water quality target

In the absence of statutory standards for phosphorus in rivers, the Environment Agency, Natural England and Countryside Council for Wales developed phosphorus thresholds for the purpose of the Review of Consents. These thresholds are now included in conservation objectives for Natura 2000 sites. (NB: in some cases – notably for oligotrophic rivers – Natural England has included more stringent phosphorus targets in conservation objectives due to concerns about the level of protection afforded by the original thresholds). In many cases, these thresholds are more stringent than phosphorus standards subsequently derived under the Water Framework Directive.

The UK conservation agencies have recently conducted a review of targets used in conservation objectives for SAC/SSSI river habitat. The environment agencies requested that changes to conservation agency guidance be considered within the UKTAG review of nutrient standards. We are now aiming to use the UKTAG review to agree a common evidence base and a common decision-making framework for target setting that will apply across all regulatory

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drivers. UKTAG will finalise its proposals by October 2011, with stakeholder review during January to March 2012.

Until we have agreement on generic targets/standards, we need to work pragmatically to find some form of agreement on the target for individual sites, bearing in mind that favourable condition will be assessed against the existing conservation objectives for the site. Pending the outputs of the UKTAG work, the Environment Agency has agreed to recognise nutrient targets in conservation objectives as "guideline standards" (which set the longer-term management objectives for nature conservation), in cases where it is felt they cannot be recognised as standards for real-time regulation in the short-term.

1. Providing advice on planning applications to third parties

Multiple small developments within a catchment may give rise to significant cumulative impacts. Our advice on the potential impact of an individual development must be considered in the context of all planned development in the catchment, and should be informed by strategic growth plans for the area, and discussion with the local authority. The advice we provide to local authorities and developers should ensure that growth and development does not compromise the achievement of conservation objectives for the Natura 2000 site. Both organisations are committed to providing clear, cohesive and complementary advice. This will be based on the following principles:

. Any application that would not result in deterioration in existing water quality through an increase in nutrient concentration, and does not materially affect the potential for achievement of conservation objectives within a reasonable timescale will not be considered to have an adverse effect on site integrity. In this case, we would not object to the application on water quality grounds.

. Any application that would result in deterioration in existing water quality through an increase in nutrient concentration will be considered to have an adverse effect on site integrity, unless there is agreement, based on clear evidence, that the impact of the resulting discharge is trivial.

In this case, we will not object to the application if a suitable management plan is in place which will improve water quality and aims to achieve the conservation objective within a reasonable timescale, and the proposed development will not compromise deliverability of that plan.

The judgement on whether an application will result in deterioration in existing water quality will be based on an assessment of the impact of the development on receiving waters, drawing on assessments made during the Review of Consents. For example, if a conclusion on the impact of a permit was straightforward, non-contentious and no evidence has subsequently arisen which would affect that conclusion, then it is reasonable to assume that growth which can be accommodated within the current limits of the permit will have no adverse effect. This would apply where there is confidence that utilisation of permit headroom would not result in deterioration of existing water quality though increased nutrient load/concentration in the receiving water body.

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However if the weight of evidence e.g. reinterpretation of, or more accurate data on flow or permit headroom) suggests that the basis for the conclusion has changed, then the impact of growth – even where it can be accommodated within current permit limits – will be subject to additional consideration. This could include an assessment of nutrient concentrations pre- and post-growth and a judgement on the significance of any differences.

Where nutrient concentrations in receiving waters already exceed conservation objectives, it is likely that further growth, even where it can be accommodated within current permit limits, will require a nutrient management plan to be in place.

NB: Growth which cannot be accommodated within current permit limits would require a new permit, the impact of which would be considered through the appropriate assessment process.

1. Developing a management plan

Where a management plan is agreed as necessary, both organisations will commit resources to its development **and** implementation. This includes developing the evidence base necessary to drive future investment to meet more stringent water quality targets. Plans must be robust and credible. They must address the most significant sources of pollution, even where solutions are more difficult, e.g. diffuse pollution. This will allow us to discuss with government any additional measures and mechanisms which will be needed in order to achieve conservation objectives.

Existing plans (e.g. diffuse water pollution action plans for SSSIs and river basin management plans) should be used as the starting point; if the scope, scale and degree of action in any existing plan is insufficient to achieve the agreed water quality target within a reasonable timescale then additional action should be identified. This could include new measures to address inputs from agriculture and un-sewered sources, and potentially, additional improvements to water industry discharges through future Price Reviews. Through these plans, the Environment Agency, Natural England and others will be able to act on nutrient loads in the catchment sufficiently to ensure that growth will not compromise achievement of conservation objectives in the longer term.

All actions must have a clear timetable for implementation. It may be appropriate to link delivery to river basin planning cycles within the Water Framework Directive, but local circumstances (e.g. LDF end points, willingness of local organisations to deliver actions) will dictate a timetable which is appropriate for that site.

The scope and content of a nutrient management plan should be appropriate to the severity and spatial scale of the water quality failure and the complexity of the solution. For example, if a non-compliance is small and localised, then a formal agreement between the Environment Agency and Natural England over a specific new measure, possibly through an exchange of letters, may be all that is required.

NB: If a planning application is received during development of the management plan, the fact that the plan is not yet finalised should not in itself be a reason to object to the application. Rather, the size, location and planned timing of the proposed development should be considered in the context of what is currently known about the site (including the significance of

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the development in relation to other sources of pollution), together with the risk of allowing the development to proceed pending finalisation of the plan.

1. Next steps

We will use this approach to advise local authorities and developers until agreements arising from the UKTAG review are agreed for implementation in 2012.

We will review developing management plans, specifically in relation to the types of action that can be used and feasibility of delivery (including costs) so that good practice can be shared, and to ensure consistent generic approaches and messages (e.g. in relation to diffuse pollution).

1. Contacts for further information

Nicky Cunningham (Environment Agency)

Rob Cooke (Natural England)

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Annex 1 for “Advising on Growth and Water Quality for Natura 2000 sites and SSSIs: A Joint Environment Agency / Natural England Approach”

Handling applications for additional nutrient loads to water-related sites designated for their wildlife – guidance for joint decision-making by Natural England and the Environment Agency

1. Purpose

To provide clarification to staff on appropriate decision-making related to planning and permit applications involving additional nutrient loads to designated aquatic sites, including SSSIs, SACs, SPAs and Ramsar sites. This document does not aim to be prescriptive, but is rather aimed at empowering staff to make locally relevant decisions in accordance with a set of high-level, shared principles. The aim is to foster local dialogue between staff and generate a shared understanding of the problem and its resolution, thereby avoiding unnecessary disagreements.

2. Background

Regional casework on this issue, driven by development pressure, has focussed attention on differences in approach between Natural England and the Environment Agency. Public disagreements on judgements and appropriate courses of action can create a lack of confidence in decision-making processes within affected stakeholders, including water companies, local authorities, developers and individuals. Some causes of disagreement stem from the use of decisions or decision-making devices from the Review of Consents (ROC) process in the handling of new applications, and in residual disagreement between NE and EA over some of these decisions.

We need a way forward that: 1) draws a line under ROC decisions respecting any differing organisational views; 2) makes judgements about new applications solely based on their impact, in combination with other activities and consistent with designated site legislation; and 3) encourages long-term planning and innovative thinking to drive environmental improvements and, where possible, more sustainable solutions in the management of nutrient loads; and 4) creates confidence with stakeholders.

3. Environmental targets

The immediate need for guidance takes place against a background of on-going difficulties in agreeing appropriate nutrient targets for designated sites, at a generic level and a site level and particularly for rivers. Whilst the targets used by the EA for decision-making on some sites are as defined in conservation objectives, in other cases they are not. Lack of agreement on appropriate targets will lead to different interpretations of site condition and appropriate management to meet a site's objectives.

In the absence of statutory standards for phosphorus in rivers, the Environment Agency, Natural England and Countryside Council for Wales developed phosphorus thresholds for the purpose of the Review of Consents. These thresholds are now included in conservation objectives for Natura 2000 sites. (NB: in some cases – notably for oligotrophic rivers – Natural England has included more stringent phosphorus targets in conservation objectives due to concerns about the level of protection afforded by the original thresholds). In many cases, these thresholds are

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more stringent than statutory phosphorus standards subsequently derived under the Water Framework Directive.

The UK conservation agencies have recently conducted a review of targets used in conservation objectives for SAC/SSSI river habitat. This JNCC Common Standards Review will, once adopted, alter generic targets and therefore some local targets, but it also provides an opportunity to reach an evidence-based understanding between Natural England and Environment Agency over riverine nutrient targets, in a way that might pave the way for similar understanding for other habitats.

UKTAG is also reviewing nutrient standards, across all regulatory drivers, from March 2011. Proposed new standards will be approved in October 2011, with stakeholder review during January to March 2012. The Environment Agency and Natural England will be working together within this UKTAG review to agree a common evidence base and a common decision-making framework for target setting, taking into consideration JNCC Common Standards for Natura 2000 sites. New standards resulting from the UKTAG work will be agreed in May 2012.

It is unlikely that generic nutrient targets for designated sites will align exactly with generic nutrient standards for HES or GES in future, either numerically or in their application (compliance assessment, relationships to management action). However, there is agreement at both EC-level and UK-level that, in cases where the objectives of the Habitats/Birds Directives and WFD differ in the stringency of protection afforded to a water body, the most stringent objective shall apply. The purpose of this paper is to make clear that, where there is difficulty in implementing more stringent objectives in the short term there should be the joint aim to achieve these over the longer term.

Until we have agreement on generic targets/standards, we need to work pragmatically to find an interim approach for agreeing the target for individual sites, bearing in mind that favourable condition will be assessed against the existing conservation objectives for the site. Pending the outputs of the UKTAG work, the Environment Agency has agreed to recognise targets in conservation objectives as “guideline standards” (which set the longer-term management objectives for nature conservation) in cases where it is felt they cannot be recognised as standards for real-time regulation in the short-term.

4. Guiding principles for local decision-making

The following principles should be used for handling applications which will result in increased nutrient loads to a designated site, ***in cases where the site is already failing its nutrient target(s)***. For these principles to operate, Natural England and the Environment Agency need to have some form of agreement about the nutrient target(s) applicable to the site, as laid down by the site’s conservation objectives. This may need to take the form of an interim local agreement pending the reviews of guidance on conservation objectives for SSSI/SAC rivers and WFD standards. Where there is disagreement over existing targets for water quality, a constructive approach is, as outlined in Section 3 above, for Natural England and the Environment Agency to recognise a distinction between mandatory standards (used by the Environment Agency for short term regulatory purposes) and guideline targets (which set the longer term management objectives for nature conservation). The aim should be to meet over time the more stringent guideline targets identified in conservation objectives, through an agreed management plan (and responses to development proposals might be framed around this). Environment Agency staff may need to take a long-term view in this, treating targets in conservation objectives as

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² Ref NE paper *Review of Consents Stage 3 conclusions, the ‘in-combination’ test and triviality*. Helen Wake (2004).

values to aim to achieve as soon as practicable (akin to ‘guideline’ standards in the EC Freshwater Fish Directive).

The principles below are applicable not only to freshwaters but also estuaries and coastal waters. Although there are currently no nutrient targets in conservation objectives for estuarine and coastal sites, nitrogen standards have been established under the Water Framework Directive. For the purposes of both the Habitats and Water Framework

Directives, the assessment of eutrophication in these sites involves a weight-of-evidence approach looking at biological and if relevant other impacts, as well as nutrients:

4.1 Any application that would not result in deterioration in existing water quality through an increase in nutrient concentrations, **and** does not materially affect the potential for achievement of conservation objectives within a reasonable timescale (to be agreed locally) will not be considered to have an adverse effect on integrity. In this case, neither organisation would object to the application on water quality grounds.

4.2 Any application that would result in deterioration in existing receiving water quality through an increase in nutrient concentrations will be considered to have an adverse effect on integrity in combination with other sources unless there is agreement that based on sound evidence that the impact of the resulting discharge (alone or in combination) is trivial.

Where it cannot be ascertained that deterioration will be trivial, an application should **only** be permitted in cases where a suitable management plan is in place to improve water quality and which aims to achieve the conservation objective within a reasonable timescale. In these cases EA and Natural England will not object to the application on water quality grounds.

4.3 A 'suitable' plan is one where it is agreed that there is sufficient certainty that an adverse effect on integrity to an international site, or damage to a SSSI through additional loadings from proposed building development, will be avoided by implementing the plan (taking into account reasonable timescales for nutrient reduction). Existing plans (e.g. diffuse water pollution action plans for SSSIs, catchment-scale plans prepared for Water Framework Directive) should be used as the starting point. If the scope, scale and degree of action in any existing plan is insufficient to achieve the agreed water quality target within a reasonable timescale then additional action should be identified, together with a timetable for implementation. This could include new measures to address inputs from agriculture and un-sewered sources, and potentially, additional improvements to water industry discharges through future Price Reviews. Where a management plan is agreed as necessary, both organisations will commit resources to its development **and** implementation. This includes developing the evidence base necessary to drive future investment to meet more stringent water quality targets.

4.4 'Reasonable timescale' means a timescale commensurate with the scale of the task of achieving compliance with the nutrient target. For some sites, the task will be relatively simple and should be undertaken quickly. For other sites, the enrichment problem will be

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more complex and expensive to resolve, and will require a longer-term plan. This timescale should be agreed with the Environment Agency and is purposefully undefined by this guidance, to allow latitude in decision making at a local level. In doing so it is accepted by both Natural England and the Environment Agency that some regional differences in approach may result. However, plan timescales must ensure that the objectives of the Habitats Directive are met as soon as practicable and support a conclusion of no adverse effect on integrity.

4.5 The main principles to consider in a management plan are:

. The intention of the management plan is to achieve compliance with nutrient targets over the long term. It should therefore be based on a shared view of the environmental outcomes sought over the longer term

. There should be a firm commitment to resources (and timescale for plan production) by Natural England and the Environment Agency

. The plan should aim to cover large and small point sources, inputs from agriculture and the unsewered population, so that compliance with nutrient targets is achieved through a suite of measures from all sources. The plan should also outline where **new** measures to address inputs from point sources, agriculture and unsewered sources will be necessary to achieve nutrient targets. The degree of action required on all sources should be based on the magnitude of their impact and the effectiveness and costs of control, in line with principles developed for river basin planning.

. In order to drive innovation and achieve improved environmental outcomes, the plan should consider alternative forms of treatment beyond the definition of Best Available Technology used in the Review of Consents. It should be noted that treatment technology is now in use in the US that consistently achieves effluent TP concentrations of 0.1 mg/l, and sometimes as low as 0.01mg/l. In more complex and expensive situations, a long-term perspective should, where necessary, involve full re-consideration of existing waste treatment facilities and processes and the potential for using innovative and progressive design, based firmly on environmental sustainability principles. Where available evidence demonstrates the need for such treatment technology, potential improvements should be considered for inclusion in the Price Review 'AMP' process, and in long term strategic plans for water treatment by planning authorities, water companies and developers.

. The potential for more efficient, innovative and environmentally sustainable infrastructure should be encouraged as a long term solution, aiming, for example to reduce the use of metal dosing for phosphorus removal from sewage effluent over the longer term.

. The approach to new development proposals must be Habitats Regulations compliant and ensure the duties under the CROW Act of both organisations are

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complied with. In instances where it is not possible to envisage restoring the water quality of the site to achieve the nutrient target even in the long-term, any new applications must still follow standard CROW or Habitats Regulations assessment procedures. Where an application may affect a Natura 2000 site, alternative solutions must be evaluated before considering whether there may be a case for Over-riding Public Interest together with compensatory measures (Regulation 62(1), Habitats Regulations 2010). Alternative solutions could involve selecting an alternative site for development.

4.6 Nutrient targets within conservation objectives are likely to become more stringent for some riverine sites as a result of the current review of UK (JNCC) guidance on SSSI/SAC rivers. In instances where a river/reach is currently considered Unfavourable Recovering in respect of nutrient status, this status should not be amended as a result of any future tightening of nutrient targets, provided that the management plans include a commitment by the Environment Agency to make necessary modifications which take account of any additional load reduction required.

5. Applying the principles

The principles above should be helpful in developing an agreed line in response to new development proposals. Planning applications will arise that imply an increase in nutrient load to a site that is failing its nutrient target but where the increase in nutrient load is within the terms of an existing permit (see Appendix A.3 below). Where the proposed development lies within permit limits in this way, it may be difficult for the Environment Agency to object to a proposal, but it should be possible to agree a joint view on environmental concerns and hence reflect both organisations' support for the need for a management plan in response to such applications, where there is a risk to the longer term site objectives.

For example it may be unclear what levels of headroom were left in permits affecting the site following the ROC, and what effect erosion of this headroom (see Appendix A.1) would have (eg if new development takes up some of the headroom) on receiving water nutrient concentrations.

The judgement on whether an application will result in deterioration in existing water quality will be based on an assessment of the impact of the development on receiving waters, drawing on assessments made during the Review of Consents. For example, if a conclusion on the impact of a permit was straightforward, non-contentious and no evidence has subsequently arisen which would affect that conclusion, then it may be reasonable to assume that growth which can be accommodated within the current limits of the permit will have no adverse effect. This would apply where there is confidence that utilisation of permit limits would not result in deterioration of existing water quality through increased nutrient load/concentration in the receiving water body.

However if new evidence (e.g. reinterpretation of , or more accurate data on flow or permit headroom) suggests that the basis for the conclusion has changed, then the impact of growth – even where it can be accommodated within current permit limits – will be subject to additional consideration. This could include an assessment of nutrient concentrations pre- and post-growth and a judgement on the significance of any differences. This will provide an indication of the likely increase in nutrient concentrations in the site that may occur before future management measures can act to bring the site into compliance with its nutrient targets, and will inform judgements about the definition of suitable management plans.

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Any such evaluations, and the subsequent definition of management plans, should be undertaken as a matter of urgency to avoid conflict during the handling of reactive casework. Until such work is undertaken, there is a continued risk of disagreement between Natural England and Environment Agency in instances where planning applications are judged to raise nutrient concentrations in a site which is failing its nutrient targets (conservation objectives) but where the proposed increase lies within the headroom of an existing permit. In cases where the evaluation is not undertaken prior to the receipt of planning casework, it will have to be undertaken within the timeframe of that casework. Further explanation of key issues affecting the local application of these principles is given in Appendix A.

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Appendix A - Issues affecting the application of joint principles

A1. The issue of 'headroom'

Headroom relates to unused components of a permit that allow for variation in the efficacy of treatment or provide scope for additional capacity at a treatment works. The term is also sometimes used to describe the difference between existing concentrations in a receiving water and that water's environmental target – this difference implies additional scope to increase loads to a site without breach of target (although an evaluation still needs to be made of the likelihood of deterioration in environmental quality from existing conditions). This is better described as potential 'environmental capacity' - the term headroom is best reserved for discussions of permits.

Headroom in a permit can be generated through a difference between current and permitted effluent **quality**, or a difference between current and permitted effluent **flow rate**. Although the Review of Consents was carried out based on maximum permitted limits, in some cases there was a lack of reliable information on existing effluent flows. As a result, there may be remaining uncertainty in the capacity of flow rates under existing permits to accommodate increased flows without leading to an increase in receiving water concentration. The evaluation under section 5 above is intended to address this uncertainty. Recent improvements in the Environment Agency's capacity to determine flow rates (see A2 below) will assist that evaluation.

A2. Improvements in effluent Dry Weather Flow calculations

The Dry Weather Flow (DWF) of an effluent is the flow specified in permit conditions. This flow, together with the required water quality target and dilution rates in the river is used to calculate permit conditions for effluent quality. A recent EA initiative has applied a new method for determining and monitoring DWFs. All STWs larger than 250 population equivalents (PE) should now have a robust flow monitoring device. Existing DWFs have been recalculated using the new formula and new data from these devices, and works where the permitted DWF is lower than the revised DWF have been identified for revision. For these works, permit limits for effluent quality have been adjusted downwards to ensure that the revised permit implies no additional impact compared to the old permit, i.e. the permitted load remains the same. This exercise has been distinct from any Environment Agency analyses to determine permit conditions (for effluent concentration) consistent with avoiding environmental deterioration and restoring environmental quality (e.g. the ROC process).

A3. Decisions made under the ROC

Within the ROC process, the Environment Agency adopted a specific approach to identifying 'proportional' reductions in nutrient loads from permitted sources where there were multiple sources of nutrients (e.g. from diffuse pollution and other sources) to the site. This approach was a pragmatic means of allocating a reasonable contribution from existing permit holders to the overall load reductions required, taking into account possible load reductions from other sources (agriculture, small point sources etc.). A percentage of the total 'allowable' load (i.e. that implied by the nutrient target for the site) was allocated to permitted discharges based on percentage contributions to existing nutrient concentrations in the site, with the aim of reducing permitted loads to a level complying with that load allocation. Since this calculation was based on fully permitted loads and not actual loads, the revised permit conditions may include headroom. This headroom falls into two categories.

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1. Headroom that a water company needs to avoid a high risk of breaching permit conditions due to normal variability in performance of a works. This is a safety margin that water companies seek to maintain and does not imply spare capacity.
2. Headroom that could accommodate increased flows to the works, i.e. "spare capacity". This will be the case where water companies have applied for a higher DWF limit than is currently required, in order to accommodate planned growth in the sewerage catchment.

Because of some of the limitations in the data that were available at the time to inform decisions under RoC, it is this latter type of headroom that may cause difficulties in judging the impacts of future developments. If the permitted effluent load is reduced by an amount that is less than that which allows the site to meet its environment target (conservation objectives) this would imply that there is no scope for future increases in nutrient load from permitted sources, and therefore there should be no headroom in the permit for future increases in nutrient loads.

Unless there is a shared understanding of the consequence of utilising this headroom, there may be disagreement locally between Environment Agency and Natural England on the impact of proposed development. Planning applications will arise that imply an increase in nutrient load to a site that is failing its nutrient target, but where the increase in nutrient load is within the terms of an existing permit limit that has been revised or affirmed under the ROC. Disagreement can be avoided, however, by applying the principles in this paper and anticipating this by working jointly with Environment Agency locally to define the management plan and potential future loading scenarios as in section 5 a