

Q1 - Do you agree with our proposed aim for environmental incentives?

NHBC accept that due to factors such as population growth, economic development and climate change, there is pressure on water resources across England and Wales. NHBC are supportive of measures to build more sustainable homes which benefit both the environment and occupants, and which contribute towards tackling these issues, however it should be recognised that these measures should form part of a wider strategy of greater water resilience.

Q2 - Do you have any comments on the characteristics of good environmental incentives?

NHBC recognise the value of environmental incentives to encourage housing developers and contractors to consider designing schemes which achieve performance standards in excess of the minimum Building Regulation requirements.

It would be beneficial to consider how the design and performance of new dwellings can be communicated to the occupants. It is vital to ensure that whilst suitable measures are in place to contribute towards water efficiency and water resilience, that the products and designs used, achieve the desired function without compromising on performance.

The environmental incentives centre around developers and new developments. It would be beneficial to consider what incentives could be considered for occupants of existing dwellings, as the potential benefits of applying this to new developments is significantly smaller than if environmental incentives can be applied to the existing housing stock.

Consideration could also be given to providing environmental incentives to non-domestic premises. Wales already apply a regulatory requirement through Part G2A of Schedule 1 of the Building Regulations 2010 for water efficiency of other buildings (dwellings are covered under requirement G2) except for healthcare buildings. By restricting the environmental provisions to new dwellings only, it is limiting the scope and volume of buildings and reducing the opportunity to make the greatest impact.

Q3 - Do you have any comments on the extent to which any environmental incentives could or should be adapted for implementation in Wales?

NHBC believe it would be beneficial to consider alignment of environmental incentives between England and Wales. NHBC acknowledge that Wales are already one step ahead of England in relation to mandatory SUDS provisions on all new developments since 2019. Wales also apply a regulatory requirement through Part G2A of Schedule 1 to the Building Regulations 2010 for water efficiency of other buildings (dwellings are covered under requirement G2) except for healthcare buildings.

Q4 - Do you have any comments on the case studies outlined?

No response proposed.

Q5 - Do you have any comments on our proposed standardised incentive tiers?

NHBC are supportive of the proposed tiered system and recognise the value of environmental incentives to encourage housing developers and contractors to consider designing schemes which achieve performance standards in excess of the minimum Building Regulation requirements.

The environmental incentives centre on developers and new developments. It would be beneficial to consider what incentives could be applied to the occupants of existing dwellings, as the potential benefits of applying this to new developments is significantly smaller than the existing housing stock. Consideration could also be given to widening the scope of buildings to those other than dwellings, to improve the opportunity to improve water efficiency and reduce the likelihood of Combined Sewer Overflows (CSOs) activation and river pollution, as well as localised flooding.

When considering rainwater harvesting incentives, it would be beneficial to consider the suitability of certain systems to ensure they have a positive impact and contribution to the environment and occupants. For example, small roof areas of some new dwellings limit the applicability of single dwelling rainwater harvesting units to areas where high rainfall occurs. If an incorrectly sized rainwater harvesting system is installed, it could become dependent upon a mains water supply and negate any potential savings.

There should be an appreciation that encouraging systems like rainwater or recycled greywater for WC flushing and other functions, including irrigation and other external uses, instead of mains water can lead to more flexibility in the selection of appliances and fittings. However, it makes plumbing systems more complex and requires occupants to have a greater awareness as to how these systems function and operate.

The Environment Agency produced a report in August 2010 called the “*energy and carbon implications of rainwater harvesting and greywater recycling*”. The report was produced in partnership with the Energy Saving Trust and NHBC Foundation and reported the findings of a study into the energy and carbon implications of rainwater harvesting and greywater recycling systems. The study quantified the lifetime carbon footprints of these systems, consisting of embodied carbon and the carbon emitted from operation use, along with the contribution of these systems to reducing carbon emissions associated with mains water demand and foul water volumes. It would be beneficial to consider whether the environmental incentives proposed in the Ofwat consultation, have unintended consequences in relation to the drive towards carbon neutrality. The key messages from the report included –

- Buildings using harvested rainwater or treated greywater typically increase greenhouse gas emissions compared to using mains water.
- With one exception, the operational energy and carbon intensities of the system studied were higher than for mains water.
- There is scope to improve the efficiency and design of systems to reduce their carbon footprints.

Q6 - Do you have any comments on our proposal for a common methodology / technical standards to assess water efficiency?

NHBC are supportive of measures which promote a common methodology and consistent standards to assess water efficiency. NHBC recognise the benefits which could be brought through mandatory water efficiency labelling and how this can be used to inform decision making, however it would be beneficial to not dismiss the option of utilising the water efficiency calculator as an alternative to the fittings approach.

The water efficiency calculator was launched in May 2009, and linked the Code for Sustainable Homes (CSH) to Part G of the Building Regulations in England and Wales. The calculation approach provides flexibility in the design which allows choices to be made based on the preferences and in some cases personal needs of the occupant. It is important to consider occupants behaviour and needs, for example, trading off the installation of a bath will allow provision of a higher standard of shower. Using rainwater or recycled greywater for WC flushing and other functions, including irrigation and other external uses, instead of mains water can lead to more flexibility in the selection of appliances and fittings. It is also noted that the fittings approach does not take into account external water usage.

The WRc case study demonstrated an issue with the performance of the fittings installed. It is not apparent that this is as a result of utilising a water efficiency calculation methodology and that moving solely to a fittings approach will eradicate performance issues post completion. NHBC believe that the move to mandatory water efficiency product labelling will contribute to increased awareness and improved performance. If this is also coupled with greater knowledge and competence within the construction industry, it will lead to more positive outcomes on site.

Q7 - Do you have any comments on the details of our proposal for companies to offer bespoke incentives?

Bespoke incentives could be beneficial in areas of water stress and allow the option for further environmental enhancements, however bespoke incentives should be evidenced based to demonstrate that any requirements would have a benefit to the occupants, the environment and be achievable.

Bespoke incentives could play an important role and contribute towards innovation, particularly in areas of higher water demand. However, innovative products will need to be suitably tested, proven and in accordance with the requirements outlined within Regulations 4 (1) to (3) of The Water Supply (Water Fittings) Regulations 1999, which ensures that water fittings meet minimum British and European standards.

If the proposal to consider a reputation incentive is taken forward, it would be beneficial to consider how bespoke incentives would fit within the reputation incentives framework.

Further consideration could be given to offering environmental incentives which could be retrofitted to existing dwellings and commercial premises, in a bid to improve water resilience.

When considering new innovative products as part of bespoke incentives to help drive the sustainability agenda, it would be beneficial to consider engaging with warranty providers of new homes to discuss innovative products, to ensure there is alignment between water authority needs and warranty providers requirements.

Q8 - Do you have any comments on the potential for reputational incentives?

NHBC recognise that reputational incentives could be utilised as a driver to encourage more sustainable development, through the promotion of best practice. It would be beneficial to ensure reputational incentives are voluntary and recognise good practice and are not part of minimum performance standards. Any mandatory requirements should be set within relevant legislation.

If the proposal to consider a reputation incentive is taken forward, it would be beneficial to consider how bespoke incentives would fit within the reputation incentives framework.

The use of a reputation tier can contribute towards informing occupants of the expectations of their homes. It would be beneficial to consider providing information within the Home User Guide (HUG), which will inform the occupants of key information on the water resilience measures incorporated into the design of their home. This will assist with managing expectations on performance and may have a positive impact on the behaviours of occupants towards their use of water.

Q9 - We seek views on how the process for agreeing and paying environmental incentives might best be organised in practice, and whether this is consistent with existing developer services processes.

No response proposed.

Q10 - Do you have any comments on how high levels of compliance with the incentive technical standards might best be achieved?

NHBC appreciate that having good design will not guarantee compliance post completion. It is imperative that there is a collaborative approach between designer, supplier, and installer to ensure the system is compliant at completion.

NHBC agree with the consultation proposal to assess post completion whether a building is achieving the necessary targets. It would be beneficial to consider sampling a ratio of properties on a development to seek assurance that the installation meets the environmental incentive target.

It may be beneficial to consider how fixtures can be tamperproof, to ensure they are not easily adjusted or removed by the occupants and how information can be communicated to the occupants on how their home is designed and the benefits it will provide to them and the environment.

Engagement, support, competence, and communication with all stakeholders will be key to contributing towards compliance.

Q11 - Do you have views on whether environmental incentives are best funded as an environmental component of the infrastructure charge or as a separate charge?

No response proposed.

Q12 - Do you have any comments on our proposal for guidance issued under the charging rules and how they are developed and maintained?

No response proposed.

Q13 - Do you have any comments on our approach for managing interactions with the regulatory framework?

No response proposed.