In January 2018, the Government released its 25 Year Environmental Plan with the goal of shaping a new generation to leave the environment in a better state than we found it. Through this plan, the concept of environmental net gain (ENG) has become a discussion point. In December 2018, Defra published a consultation paper to discuss the implementation of a mandatory ‘biodiversity net gain’ (BNG) in future developments; and in the Spring Statement 2019, the Chancellor of the Exchequer confirmed that BNG in future developments will be mandated as a part of next Environmental Bill. Both documents also discussed the next steps to more broadly mandate ENG into future developments.

This article looks at ENG in practice using two technical topics as examples and also discusses potential challenges in implementing ENG more broadly.

Using an established method as an example for quantifying a net gain, BNG assessments use various metrics, such as the Defra metric or local authority specific, to quantify the biodiversity value pre- and post-development. As a part of these assessments, additional mitigation measures can then be implemented into a development to ensure it provides a BNG. Alternatively, the developer can pay a fee to offset the net loss as part of a Section 106 agreement.

So how can environmental practitioners bring in other technical topics, such as air quality and flood risk/drainage into this ENG ‘scoring system’?

**ENG in Air Quality Assessments**

In London, there has been a shift in policy via the draft New London Plan (dNLP) to drive ENG in air quality, encouraging the move from Air Quality Neutral (AQN) assessments to Air Quality Positive (AQP) assessments. For an AQN assessment, the development must meet relevant emission benchmarks as detailed in the AQN Guidance. Where the development cannot meet the emission benchmarks, additional mitigation may be required on- or off-site, to mitigate any negative air quality impacts. The dNLP Policy ‘SI1- Improving Air Quality’ stipulates that developments in areas such as Opportunity Areas or those large enough to require an EIA are to propose methods to achieve AQP, and at least be AQN. However, the dNLP is yet to be adopted and currently, there is no detailed approach or guidance to show how developments are to quantify or achieve AQP. AQP assessments are not yet practiced widely.

Whilst there are methods available to provide an air quality net gain for a development (e.g. using low or zero-emission heating and energy; providing ‘car-lite’ developments fewer car parking; or provision of walking/cycling infrastructure), there is no existing method of quantifying these ‘gains’ nor any benchmarks to compare to.

**ENG in flood risk**

In the assessment of flood risk, an ENG could be seen as improving the resilience of developments to risks of flooding. Sustainable drainage systems (SuDS) such as permeable surfaces, storage tanks and ponds reduce the risk of surface water flooding by reducing peak flows and storm volumes and also improve water quality.
Implementation of SuDS are encouraged through the National Planning Policy Framework (NPPF). However, to ensure a long-lasting ENG to the development is provided, ongoing maintenance for SuDS must be mandated. The use of SuDS is interlinked with BNG as the infrastructure provides opportunities for ecological habitat creation; providing an example for how two environmental topics can provide an ENG simultaneously.

Potential Challenges
However, there are many challenges associated with providing an ENG for a development across more than one technical topic. For example, an air quality net gain may not exactly align with a BNG. Using ‘living walls’ that incorporate grasses and flowers to purify the external air would not be considered a natural BNG as it would utilise ornamental and non-native species. It could be considered that these ‘units’ counteract each other and therefore neither contribute towards an ENG?

Quantifying the ENG delivery in developments needs to be in line with newly established national targets applicable for various development types. Once the assessor knows what the ‘environmental unit’ would be, it can then be understood how many units are required for the development to meet the targets. Assessments should be a robust, holistic assessment of environmental net gain of a site, rather than emphasis on one aspect. This approach would require a cross-collaboration across technical areas and development expertise to ensure a total ENG is achieved.

In summary, an ENG across different technical topics within a development can certainly be achieved (e.g. use of SuDS and BNG).

Policy is changing to reflect the move into large developments providing an ENG, but further guidance, benchmarks and mechanisms to achieve a net gain in topics needs to be published for environmental assessments to be able to accurately quantify the number of ‘units’ required to deliver an ENG.

Madeleine Truman, Ramboll, April 2019.

2 Air Quality Consultants and Environ, April 2014, Air Quality Neutral Planning Support Update: GLA 80371