FARMING

Biodiversity Net Gain: What's it all about?

In this bumper article, land agent and surveyor expert **Hugh Townsend** outlines his key takeaway points from the proposals set out in the Government's Biodiversity Net Gain consultation

DEFRA have launched a Biodiversity Net Gain (BNG) consultation, open until April this year. Whilst the proposals remain subject to approval, they explain how the Government might implement and monitor the 10% net gain of biodiversity, which is set to become a requirement for planning permission in England by late 2023.

Some local authorities have already started to impose this requirement. The Government intends to allow planning authorities to set higher percentage requirements should they wish.

Key takeaways from this consultation are (all information subject to consultation):

- Developers will have an obligation to provide 10% biodiversity net gain from (estimated) November 2023;
- Number of units produced depends on habitat distinctiveness, condition, strategic significance, impact of the development, time to reach desired level, difficulty of establishment, risk and proximity of development site to offset site;
- Offset land will be subject to conservation covenants with a 30-year minimum;
- Payments from BNG may be 'stacked' with other environmental benefits/outcomes on the same land e.g. selling carbon sequestered by planted woodland and soil, ELMS payments and nitrate and phosphate offsets;
- Defra estimate Biodiversity Units could be worth £20,000/unit on average nationally;
- Habitat "banks": Work on improving habitats may begin before any covenant is agreed. This can include new works and works already carried out from January 2020. The landowner may withdraw the land and decide to use it for a different purpose if units are not sold.

SUPPLY, DEMAND AND ESTIMATED PRICE

Defra's "Biodiversity Net Gain: Market Analysis Study" predicts a requirement for 6,200 off-site Biodiversity Units annually, with an estimated national average unit price of £20,000, reaching £25,000 in planning authorities in areas at risk of scarcity. This suggests a biodiversity market value of £135 million annually. It is expected uptake will be sufficient to meet this demand, however if not, the Government will support the market with statutory Biodiversity Units. These are intended as a last resort and may not be used unless it is shown that no units are available on the open market. Our estimates suggest most land can reasonably produce 0.6-3 Biodiversity Units/acre depending on the distance from the purchaser site.

The first option for developers should be to produce on-site gains. When this is not possible then off-site biodiversity gains should be delivered, first from within the local area and finally from outside it if suitable local sites are not found. Any landowner may create and sell units subject to meeting policy requirements, selling those units to any developer in England. Whilst this provides an extensive area of potential purchasers, further distance from the development site means fewer units produced. Defra intend that large offsetting projects may supply BNG to multiple developments.

ESTIMATED EXAMPLES

There is currently no minimum area for Offset land. Using Defra's estimated unit price provides the following examples. The many variables and multipliers involved make it impossible to give exact figures without knowing the developer's site, but these very rough estimates indicate what may be achieved. The figures do not include any costing for the works needed.

Example 1: Two acres of lowland improved grass in moderate condition is converted to wildflower meadow with a small pond. See table 1.

Assuming the two acres is not in a local area of strategic significance, there is no delay in starting creation/enhancement and the enhancements are maintained in good condition. In this example the site is in the same local planning authority (LPA) as the development.

At £20,000/unit this would result in a lump sum of £120,000 or £2,000/acre per annum for 30 years.

Proximity to the development site is crucial. If the offset site were outside the development's LPA but within a neighbouring one the lump sum would be £73,800 or £1,230/acre per annum for 30 years. If the offset site is outside the development's LPA and not in a neighbouring one, this figure becomes a lump sum of £20,200 or £336.67/acre per annum for 30 years.

Example 2: Ten acres of lowland improved grassland in moderate condition is converted to lowland meadow. See table 2.

This example is pertinent to a farmer seeking additional revenue from 10 acres of less productive land. Assuming the 10 acres is not in a local area of strategic significance, there is no delay in starting creation/enhancement. The site is within the same LPA. The enhancements are maintained in good condition.

At £20,000/unit this would result in a lump sum of £635,600 or £2,118.67/acre per annum for 30 years. If the offset site is outside the development's LPA but within a neighbouring one this figure becomes a lump sum of £395,600 or £1,318.67/acre per annum for 30 years.

If the offset site is outside the developer's LPA and not in a neighbouring one this figure becomes a lump sum of £155,800 or £519.33/acre per annum for 30 years.

Example 3: Ten acres of heathland – mixed scrub has its condition improved from poor to good. See table 3.

Assuming the 10 acres is not in a local area of strategic significance, there is no delay in starting creation/enhancement and the site is within the same LPA of the development.

At £20,000/unit this would result in a lump sum of £453,400 or £1,511.33/acre per annum for 30 years.

If the offset site is outside the development's LPA but within a neighbouring one this figure becomes a lump sum of £259,000 or £863.33/acre per annum for 30 years.

If the offset site is outside the development's LPA and not in a neighbouring one this figure becomes a lump sum of £64,800 or £216/acre per annum for 30 years.

Land with a low baseline will generate more units. However, this must

> **According to the Government's newly launched Biodiversity Net Gain (BNG) consultation, payments from BNG may be stacked with other environmental benefits on the same land** Dominic Murphy/Plantlife

TABLE 1

Baseline Units (prior to works) - Existing lowland improved grassland - Moderate	3.24
Expected Units (post-establishment) - Lowland meadow - Good - Pond (priority habitat) - Good	9.24
BNG - Change in Units (3 units/acre)	+ 6
Total one-off payment @£20,000/unit (£60,000/acre)	£120,000
Payment/acre per annum for 30 years	£2,000

TABLE 2

Baseline Units (prior to works) - Existing Improved grassland	16.19
Expected Units - Lowland meadow	47.97
BNG - change in Units (3.178 units/acre)	+ 31.78
Total one-off payment @£20,000/unit (£63,560/acre)	£635,600
Payment/acre per annum for 30 years	£2,118.67

TABLE 3

Baseline Units (prior to works) - Heathland - Mixed Scrub - Poor	16.19
Expected units - Heathland - Mixed Scrub - Good	38.86
BNG (change in Units) (2.267 units/acre)	+ 22.67
Total one-off payment @£20,000/unit (£45,340/ac)	£453,400
Payment/acre per annum for 30 years	£1,511.33

be weighed up against the loss of agricultural production and the costs of creation/enhancement. Therefore, for the landowner finding the right developer at the right location is vital.

Note that a developer building houses on 10 acres of improved grassland is likely to only need around 9 units, with less for sites with a lower baseline biodiversity, e.g. arable or urban land.

THE TYPES OF WORKS NEEDED TO IMPROVE HABITATS

Modified Grassland to Lowland meadow

Before work begins, we would survey the existing vegetation, hydrology and site conditions to inform suitability for meadow establishment. A soil test would establish levels of nutrients and acidity (pH). This will inform what plant species are appropriate for the site conditions. An ideal site would be free of weeds and vigorous grasses with a low pH.

It may be necessary to remove turf if the area is too fertile. This may require planning permission. A knowledge of nutrients is required to determine the correct depth for soil removal. If not removing the turf, then break the grassland up with strip/harrowing. The species mix once selected should ideally be drilled in early autumn.

During the first year you must control weeds and reduce competition from grasses, it is important to keep the soil pH and fertility low as aggressive grasses will outcompete the wildflowers and species of biological interest.

To maintain the meadow initially, hay cutting and collecting or grazing to keep the sward short is needed. Spot treat any weeds. Grass should be kept short until April/May in a summer-flowering meadow, removing cuttings.

Care will be needed to check the level of species established, their flowering potential, together with the sward height and vegetation cover to successfully establish the meadow.

Pond creation

A pond should be fed by clean water on land that has no nutrients applied. Ideally dig the pond close to others in the area and connect them with grass strips, scrub or hedges allowing wildlife to move across the landscape. If adjacent to species-rich grassland, woodland, heathland or wetlands there will be increased chance of wildlife biodiversity. You may need planning permission to create a pond or an environmental permit if the pond is in an area that could cause flooding, and a waste transfer note if you're removing spoil. If the land is in a SSSI you need consent before you begin.

Ponds may be dug in all soil types but may not retain water unless groundwater levels are close to the surface, trial pits can be dug in the area so you can see how they fill up and hold water.

Check the catchment area if using surface water as pollution is the most common cause of problems in ponds and lakes. Do not use streams, ditches and drains as a water source because they can carry polluted water and silt, which significantly reduce the quality and lifespan of ponds.

If possible, create several small ponds of different shapes, sizes and depths rather than a single large pond. This increases the variety of habitats, which in turn supports more wildlife.

To increase wildlife, create long, irregular shaped edges and shallow, undulating banks and try to vary the depth of the pond.

Small ponds of 200-500m 2 may be dug in one day with a 15-tonne machine. Strip the topsoil and use the subsoil to create different depths and a varied shoreline. Create shallow areas (less than 10cm deep) around the edges. Slopes should be no more than 1:5 (12 degrees) and preferably less than 1:20 (3 degrees). Create mounds and hollows around the pond providing niches for different species to colonise.

Spread the remaining subsoil away from the site, not uphill of the pond as it will wash into the water. This is a good opportunity to create beetle banks from the spoil.

The pond should fill, and bare banks and edges develop naturally. Indicators of success would be populations of amphibians, invertebrates and freshwater plants.

Improving Heathland Scrub

This could involve carrying out hydrological restoration measures, reversing drainage by damming ditches or blocking drains. Using heather seed or cuttings to increase colonisation, cutting or grazing heathland vegetation at set times. The management of thistles, bramble, willowherb, and other undesirable species.

STACKING OF PAYMENTS

Defra intend that land managers may use land within an Environmental Land Management scheme such as Local Nature Recovery to be part of a Biodiversity Net Gain agreement. We are starting to see how 'environmental services' are able to interlink and complement each other. We know tradable commodities such as carbon sequestered through woodland planting or peatland restoration, (and soil) may also be sold whilst fulfilling part of an agri-environmental scheme. The same parcel of land may be used for both increasing biodiversity and offsetting nitrates for example, as long as there are distinct outcomes and benefits.

HABITAT 'BANKING'

A key update is the intention to allow 'habitat banking' whereby Biodiversity Units are created and held before a sale is agreed with a developer. This significantly helps supply as it allows landowners to begin producing BNG now, despite the 10% net gain obligation not coming into force until November 2023. This will be retroactive, meaning habitat that was enhanced or created from 30th January 2020 will be eligible for BNG agreements. This provides confidence that work can begin on a habitat without inadvertently raising the biodiversity baseline and lowering the overall gain once completed.

Importantly, if one is considering 'banking' units for when they might be sold, the land does not have to be secured by the 30-year minimum period until a sale of units is agreed. If a developer is not found or the landowner changes their mind and does not wish to commit their land in this way, they may do so. Once units are sold a legally binding agreement will be put in place. This will happen when the developer creates their biodiversity plan before planning is approved.

Interestingly, the way in which units are calculated rewards habitat improvement that's already started and nearing completion by the time units are sold. A multiplier is applied based on time to completion. If a project has begun, it is nearer to completion and more units will be produced as the risk factor is reduced. This will have significantly more of an impact on highly distinctive, difficult to establish habitats as these have a high-risk multiplier.

MANAGEMENT, MONITORING AND ENFORCEMENT

To be accepted as part of a Biodiversity Net Gain agreement, the Offset land must be subject to a conservation covenant or planning obligation. Natural England are putting together a format for data collection when managing and monitoring the habitats, standardising reporting on progress. The biodiversity outcomes are secured by these conditions and could result in enforcement action by the planning authority should there be a failure to deliver. Whether this would mean fines, prosecution or other, is yet to be established. Currently agreements will have a 30-year minimum timeframe although the Government is encouraging longer terms. This 30-year minimum term is set for agreements starting within the first three years of the policy until 2026, after which the term will be reassessed. Any future increases in the minimum term would not be applied retrospectively to existing biodiversity covenants.

THE BIODIVERSITY GAIN OFFSET LAND REGISTER AND AGREEING SALES

When a landowner 'banks' credits they must be placed on an official, yet to be produced, biodiversity gain site register. This will ensure all units are legitimate gains and will help avoid double-counting. There will be a fee for the registration process and financial penalties for any false information. This will not be a trading platform as such, and developers and providers are encouraged to use brokers to sell their units. Using brokers with the right agricultural skillset will be especially important to ensure there is sufficient compensation for the loss of taking land out or lessening agricultural production and to cover enhancement costs. There is no requirement for payments to be either in stages or as a lump sum.

STATUTORY BIODIVERSITY CREDITS

To ensure developers can secure units, the Government will sell statutory biodiversity credits as a last resort. This will support the early development of the market but not undermine it as they will be intentionally uncompetitive and expensive and will be phased out as soon as possible. The developer must show they cannot do works to improve biodiversity on the development site or purchase any units from the open market.

Hugh Townsend, FRICS, FAAV, FCIArb. is the land agent/surveyor expert of the WMN Farming supplement and he may be contacted on 01392 823935 or htownsend@townsendcharteredsurveyors.co.uk.