



Biodiversity Net Gain case study
Four Oaks Primary School,
Sutton Coldfield, Birmingham

Introduction

The following case study is one in a series showcasing practical examples of how Biodiversity Net Gain (BNG) has been successfully delivered in real-world planning applications.

This example illustrates the creative and effective integration of BNG principles, aligning with the objectives outlined in Chapter 3: Practical Implementation of BNG on Site from the Sport England Biodiversity Net Gain Guidance. By focusing on utilising fringe spaces and site boundaries and incorporating measures such as a green roof and suds into the scheme, this project uses highly innovative solutions that balance biodiversity enhancements with site functionality.



Four Oaks Junior and Infant School, Sutton Coldfield, Birmingham

Introduction

The redevelopment of Four Oaks Primary School in Sutton Coldfield involved the demolition of existing buildings and the construction of a new two-storey school building. Key components of the project included the relocation of existing playing fields, the addition of new car and cycle parking, and the provision of new landscaping and amenity areas.



Initial Assessment
Nicolsons Site Plan showing existing site BNG baseline

BNG baseline

The baseline habitat survey for Four Oaks Primary School, shown below, shows the pre-development site condition. The site contained modified grassland, mostly used as amenity space, which was in poor condition. There were also 49 individual trees,

including species like Sycamore, Oak, and Horse Chestnut. Most of these trees were in moderate condition, with two in good condition and two in poor condition. Four lines of trees along the site's boundaries were also mapped. Three of these lines were in moderate condition, while one was in poor condition.



Landscape proposals and BNG Delivery

The proposed landscape design for Four Oaks Primary School focuses on integrating the new school building into the site while enhancing existing landscape features and creating diverse, functional outdoor spaces. A key element of the design is the creation of new grass sports pitches on the eastern part of the site. These pitches are designed to support a wide range of sporting activities, ensuring that the school retains its sporting function.

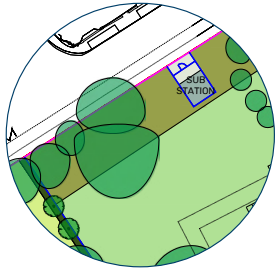
From a Biodiversity Net Gain (BNG) and landscape perspective, the design also places a strong emphasis on ecological enhancement. A large number of existing trees were retained, and new tree planting has been incorporated throughout the site to increase canopy cover and support biodiversity. Hedges have been introduced along the site's boundaries, with native shrub mixes planted in the perimeter and fringe areas. These interventions align with the objective of delivering BNG in areas that are not suitable for sports use, such as fringe spaces and site boundaries.

In addition, flowering lawn mix has been introduced at key areas, such as the site entrances, further supporting biodiversity. The attenuation basin not only improves the site's drainage, taking water from the adjacent pitch drainage runs, but also creates a valuable habitat area, contributing to the site's ecological richness. Native trees and shrubs have also been planted around the car parking areas, creating green corridors and enhancing the visual appeal of these non-recreational spaces.

Smaller scale physical activity areas, such as a trim trail, have been included alongside habitat areas to provide BNG alongside physical activity areas. An off-setting payment (-0.4 habitat units) was also required for BNG on this site to satisfy the biodiversity metric trading rules.

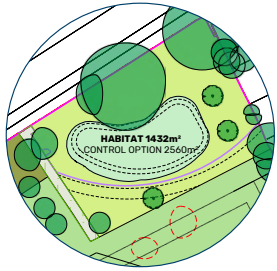


Image produced by Nicholsons



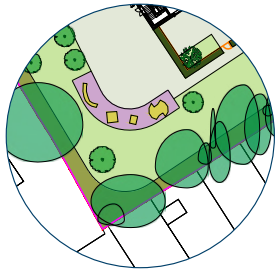
01 Utilisation of Fringe Spaces

The landscape proposals ensure effective use of fringe spaces unsuitable for sports pitches, utilising them for Biodiversity Net Gain delivery through features such as meadows, tree planting, native shrubs, and an attenuation pond, along with some smaller scale physical activity equipment.



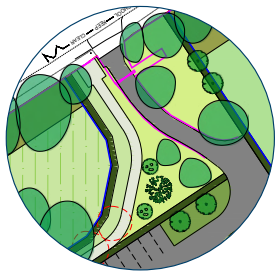
02 Sustainable Drainage for Natural Turf Pitches

The attenuation basin supports pitch drainage, reduces flood risks, and contributes to Biodiversity Net Gain by creating valuable habitat.



03 Site Boundaries

The landscape proposals enhance site boundaries with native shrub and tree planting, improving biodiversity and habitat connectivity.



04 Use of Non-Recreational Site Areas

The entrance areas are utilised for Biodiversity Net Gain delivery with meadow planting, hedges around car parking areas, tree planting, and enhancements to social spaces.



05 Proposed Structures

The new building includes a green roof, enhancing biodiversity and contributing to the site's ecological value.



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User guide

As with all guidance, you should always appoint an appropriate professional team with relevant expertise to take your project forwards.

Document accessibility

This document has been designed for comfortable reading at A4 and on a laptop screen but can also be printed at A3 for large print versions. The pdf is accessible and has been tested to work with text readers.

Acknowledgements

Sport England wishes to thank LUC for contributing to this document and to those who gave us permission to use this as a case study.

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March 2026