



Evolving the ecology category in CEEQUAL and BREEAM Infrastructure

This factsheet provides a general background on the CEEQUAL and BREEAM Infrastructure (pilot), its key stakeholders and how it specifically relates to Ecology and, where relevant, landscape. It includes an overview of Ecology in BREEAM including background on recent development work to evolve this category including development and implementation of BREEAM UK's Strategic Ecology Framework (SEF).

Ecology in BREEAM

Ecology is one of a series of key categories included across the BREEAM family of schemes and CEEQUAL, which relate to master planning, infrastructure and buildings. The Ecology category encourages project teams to identify ecologically valuable features and opportunities to protect and enhance habitats, and to mitigate unavoidable impacts. It also seeks to improve long term biodiversity management practices and strategies for assessed sites and associated areas.

Responding to developments in Ecological Best Practice

Developments in recent years of best practice for evaluating, protecting and enhancing ecological features were recognised. In addition, evolving policy areas such as natural capital, and ecosystem services led BRE's BREEAM team have worked with a wide range of stakeholders to understand how to move forward development of the Ecology category. This has included the UK Green Building Council, professional bodies including the Chartered Institute of Ecology and Environmental Management (CIEEM) and the Landscape Institute; and a range of consultants, developers, designers, constructors, managers and policy makers.

The output – A Strategic Ecology Framework for BREEAM UK

The overall objective was to identify a consistent strategic framework for evaluating ecology related issues across the BREEAM family of schemes and CEEQUAL. The output was the BREEAM UK Strategic Ecology Framework published in 2016 to enable those working in the built environment to better understand the basis of BREEAM evaluations, and to take account of this in their future planning. The SEF is available at www.BREEAM.com/sef

Evolving CEEQUAL and BREEAM Infrastructure Ecology category: your opportunity to help shape the content

We are in the process of applying the SEF to the update / development of the *CEEQUAL and BREEAM Infrastructure (pilot) scheme*. An advisory group made of up Ecologists and Landscape Architects has been inputting into the application process. We are seeking and encouraging input from a wide range of stakeholders who are involved in planning, delivering or maintaining Ecology related aspects on existing buildings. The updated Ecology section for CEEQUAL and BREEAM Infrastructure (pilot) will be available for public consultation from September 2017 onwards available on www.breeam.com/sef.



Scheme Name - CEEQUAL (in operation) - BREEAM Infrastructure – Pilot (in operation)	Scheme maturity Less than 20 years (CEEQUAL) 0 years (BREEAM Infrastructure)	Sector Infrastructure (civil engineering)	Next projected update 2017 (Go live 2018 - combined scheme)	Current development/operational status Live scheme in operation Scheme in development (combined scheme update)
		Lifecycle Stage New Construction and Refurbishment	Geographical Coverage International	
Scheme focus / scope e.g. typical developments types etc. <i>(Key = Project type: Project subtype, Project sub type etc.)</i>				
<p>This is an all-encompassing scheme for civil engineering works, which applies across a wide range of projects. These vary in type, scale and complexity.</p> <ul style="list-style-type: none"> - Types of project include: Aviation: Runway, Associated assets; Energy: Renewables-biomass, solar, tidal, wind, Refineries, Power stations-coal, gas, nuclear, oil, Transmission and distribution-pylons; Data and communication: Cables-broadband, telecoms; Marine and coastal: Flood defence, harbours/ports, offshore platform, offshore windfarm, sea defence, outfall; Structures: Bridge/viaduct, platform, retaining wall, tunnel; Transport: Rail, road, tram; Water: Water distribution-potable, non-potable, combined, water treatment works Public realm including landscaping. - Scales of project include: National infrastructure projects (e.g. large, high impact projects) through to minor upgrade works (e.g. maintenance of existing assets). 				
Key stakeholders				
Clients / specifiers	Occupiers / users	Delivery team	Management and Maintenance	Indication of those impacted by the development
-Transport authorities/organisations -Water companies -Energy companies -Private companies/ consortia -Local government - Central government	-General public -Asset operators/users	-Structural engineers (architects) -Civil engineers -Contractors -Cost consultants -Specialist consultants e.g. ecologists, heritage specialists, life cycle	-Owner/operator -Local authority -Private companies/consortia -Contractors/sub-contractors to the above	-General public (dependent on asset type) -Local species (biodiversity) -Asset operators/operators



Ecology specific features / consideration to scheme application				
Relevance of Ecology / Landscape to scheme	Scope to influence Ecology/Landscape	Risks to Ecology	Opportunities for Ecology	Barriers to Ecology
<p>Very relevant</p> <p>Variable: The scale and type of project will dictate applicability of the criteria and how Ecology is impacted.</p> <p>Whilst the majority of infrastructure projects go through a rigorous statutory process (i.e. environmental impact assessment (EIA); Hybrid Bills, etc.), smaller projects will not. However, there is still scope to drive better outcomes.</p> <p>Infrastructure assets can be linear and /or non-linear. To their nature, linear assets may cross through a range of ecological areas/landscapes. This might provide greater risk to biodiversity but can also provide greater opportunity to make positive change (see later columns).</p>	<p>Very High to medium</p> <p>Variable: Depends on the size of the project and the planning requirements.</p> <p>Infrastructure assets must be located to meet their intended function and are tied to the system within which they operate (e.g. flood defences and reservoirs will often be located rurally and interact with the natural environment, whereas transport systems will often be located in an urban environment).</p> <p>Typically infrastructure assets have an impact beyond their project (site) boundaries, e.g. a new road will impact other road networks within the area, some projects will extract cooling water from their surrounding location.</p>	<ul style="list-style-type: none"> -Lack of knowledge in the sector (people and methodologies) - Inadequate planning for short and long term (construction and operation) -Scale of projects can result in large impacts on Ecology (land use, vehicle emissions, noise, vibration etc.). - Large scale infrastructure sometimes want to focus efforts in one concerted area away from operational asset. - Long term nature of many projects - Restrictions on asset location for some projects <p>Examples:</p> <ol style="list-style-type: none"> 1. Potential to affect birds for tall assets e.g. wind turbines or aviation projects. 2. Potential to impact aquatic biodiversity when in or close to water 3. Potential to cut off wildlife corridors along linear projects 	<ul style="list-style-type: none"> - Low maintenance interventions feasible -Enhancement (immediate site and surroundings) -Offsite ecological enhancement (compensation) -Align with the statutory system and go beyond this -Some projects are in the public eye and therefore are under higher scrutiny <p>Examples:</p> <ol style="list-style-type: none"> 1. Potential to create wildlife corridors along linear projects 2. Potential to enhance aquatic biodiversity for water treatment /freshwater /marine projects 3. Scale of project can allow huge opportunity for enhancement 	<ul style="list-style-type: none"> -Often not seen as a high priority -Perception of a high level of regulatory control, and therefore reluctance to go beyond these requirements. -Costs of mitigation/enhancement measures -No clear responsible person to manage impact on biodiversity throughout design, construction and operation of the asset. -Time taken to implement measures -Ensuring the measures implemented are managed during operation, as it might not always be the asset owner's responsibility. -Communication and collaboration between different entities and stakeholders -Fragmented decision making -Tight budgets