

# Methods, Glossary and Evaluation Resources: evidence briefing

This note explains the scope and methodology used to develop the series of health and natural environment evidence briefings. A glossary is provided for key terms. The document provides additional resources and information relating to undertaking research, appraisals and evaluation.

## Evidence briefing scope

### Scope

The briefings focus on the 'natural environment', this relates to and encompasses all spaces or landscapes which feature natural elements. For this work, natural environments could be public or private, urban or rural, and range from 'managed' and built places with natural elements (such as parks and gardens, urban woods or incidental spaces such as road verges, street trees and other forms of 'Green Infrastructure') to predominantly managed rural natural environments (such as farmland) and the more 'wild' spaces which are predominantly natural but which may or may not be managed, designed or effected by humans in some way (for instance urban nature reserves, native woodlands, and mountain landscapes).

There is no definitive definition and typology of natural environments and a variety of different terms are used. Greenspace Scotland (Figure 1. From [Demonstrating the links: action research on greenspaces](#)) adapted the typology used in the Scottish planning system to provide a commonly recognised set of terms.

There are a variety of 'natural environment' terms used throughout the notes this is because

we used the specific terminology from each primary study was when describing that particular study.

People can and do engage with 'nature' and the natural environment in many different contexts, from around the home, in gardens, parks and other public spaces, in health care or educational settings, and in nature reserves, country parks and open access areas. These evidence briefings do not consider the barriers and facilitators of the accessing and use of natural environments by people, nor do they focus on the myriad of reasons why people use the natural environments. For more information on patterns of use see Natural England's [Monitor of Engagement with Natural Environments](#) publications.

Evidence relating to people of all ages was considered. Evidence of relevance to the UK context was prioritised.

The reviews did not consider other co-benefits of natural environments such as urban heat islands, air quality, biodiversity, or flooding alleviation. See Forest Research's [Benefits of Green Infrastructure](#) report or UK Parliament POST note on [Green Infrastructure](#) for research on these topics.

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PAN65 Category	Description
Public parks & gardens	Areas of land normally enclosed, designed, constructed, managed and maintained as a public park or garden.
Private gardens or grounds	Areas of land normally enclosed and associated with a house or institution and reserved for private use.
Amenity greenspace	Landscaped areas providing visual amenity or separating different buildings or land uses for environmental, visual or safety reasons e.g. road verges or greenspaces in business parks, and used for a variety of informal or social activities such as sun bathing, picnics or kick-about.
Play space for children & teenagers	Areas providing safe and accessible opportunities for children's play, usually linked to housing areas.
Sports areas	Large and generally flat areas of grassland or specially designed surfaces, used primarily for designated sports i.e. playing fields, golf courses, tennis courts, bowling greens; areas which are generally bookable.
Green corridors	Routes including canals, river corridors and old railway lines, linking different areas within a town or city as part of a designated and managed network and used for walking, cycling or horse riding, or linking towns and cities to their surrounding countryside or country parks. These may link greenspaces together.
Natural & semi-natural greenspaces	Areas of undeveloped or previously developed land with residual natural habitats or which have been planted or colonised by vegetation and wildlife, including woodland and wetland areas.
Other functional greenspaces	Allotments, churchyards and cemeteries.
Civic space	Squares, streets and waterfront promenades, predominantly of hard landscaping that provide a focus for pedestrian activity and make connections for people and for wildlife, where trees and planting are included.

**Figure 1** Open space typology greenspace scotland

## Evidence briefing methodology

### Methods

An informal iterative literature review methodology was used to produce the evidence briefings. Peer reviewed literature, in particular

systematic reviews and meta-analyses, and more recent studies (e.g. from the past 10 years) were prioritised. Both quantitative and qualitative literature was sought and used.

Individual studies were included where reviews were absent and to illustrate the points made in

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each section (i.e. the bullet points). Bullet points are illustrative and are not representative of the entirety of evidence. The implications sections were developed from the included literature. The choice of methodology was informed by the time and resource available.

The findings are reported using accessible non-technical language, with minimal academic jargon and statistical terminology.

Each note was formally peer reviewed by external subject expert academics, practitioners and representatives of service delivery bodies including Public Health England. The briefings were also reviewed and commented upon by members of Natural England's Learning in the Natural Environment and Outdoors for All Strategic Research Groups.

### Limitations of the methodology

The evidence summaries are intended to give a short, accessible overview of the scope of the literature and its strengths and weaknesses. The methods were not systematic nor was there any attempt to be formally comprehensive (i.e. to review *all* literature on each topic). In particular, the assessments of the *extent* of evidence for each section were not informed by an exhaustive review of the literature.

The assessments of the 'quality' of the evidence (i.e. whether the evidence is reliable and robust) relating to each topic is informal; published quality appraisal or risk of bias tools were not used. The individual studies referenced in each of the bullet points were selected to *illustrate* the trend of the findings.

In order to ensure the notes are as accessible as possible, specific detail on the methodology and results (such as the magnitude of effect, results of regressions etc.) has been omitted.

### Glossary

A glossary of some of the key terms used in the evidence briefings is provided below.

Typically, the specific language of the originating paper has been used to describe the nature and type of the exposure (e.g. natural environment, greener living environment, greenspace etc.) therefore a variety of terms are used throughout the notes.

For more public health terms see the [glossary](#) provided by NICE, for research terminology see the guide produced by [Colorado University](#) or by [Research Connections](#).

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<b>Affect</b>	Mood or emotion.
<b>Association</b>	A research term where two or more factors (e.g. the frequency of visiting a park and mental health state) appear to be related in statistical tests. Association is necessary for a causal relationship to exist however associations <i>do not prove</i> that a causal relationship does exist.
<b>Attitudinal outcomes</b>	This term typically relates to values, beliefs, and norms.
<b>Behavioural outcomes</b>	This term typically relates to the things we do, and can relate to expression of beliefs.
<b>Bias</b>	A research term used to describe whether there is any systematic error in the methods or outcomes. There are lots of forms of bias and bias can be found in the planning, data collection, analysis, and publication phases of research.

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<b>Biodiversity</b>	Biodiversity is the variety of all life on Earth. It includes all species of animals and plants – everything that is alive on our planet.
<b>Bluespace</b>	Places with an aquatic element, whether the ocean, a lake, river, pond or puddle.
<b>Body Mass Index</b>	Body Mass Index, or BMI, is used as a screening tool for <i>overweight</i> or obesity status.
<b>Causality</b>	A research term used to describe the relationship between cause and effect.
<b>Confounders</b>	A research term used to describe factors (other than the primary ones being investigated) that might influence the relationship you are interested in. Often confounders will be included in statistical tests to 'control' for their influence.
<b>Connection to nature</b>	One of a set of constructs which refer to an individual's subjective sense of their relationship with the natural world.
<b>Cross-sectional</b>	Data collected about individuals at only one point in time.
<b>Developmental outcomes</b>	This term typically relates to how a person progresses (e.g. from childhood to adulthood) and can relate to a number of processes (e.g. cognitive, behavioural or physiological).
<b>Educational outcomes</b>	This term typically relates to the process and outcomes of formal learning such as that done in a school or college and can be used for both adults and children.
<b>Emotional outcomes</b>	This term typically relates to feelings and moods.
<b>Greener living environments</b>	Neighbourhoods (urban or rural) which have a greater amount (in comparison to another neighbourhood) of greenspaces and natural features.
<b>Green infrastructure</b>	Green infrastructure is a network of multi-functional green space, both new and existing, both rural and urban, which supports the natural and ecological processes and is integral to the health and quality of life of sustainable communities.
<b>Greenspace</b>	Places with natural features (i.e. plants), urban or rural.
<b>Health</b>	The World Health Organisation defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.
<b>Learning outcomes</b>	This term is used to relate to the range of outcomes that can arise from the process of learning, in whatever context (formal or informal).
<b>Longitudinal</b>	A research term relating to data collected about individuals at more than one point in time (usually more often than before and after an intervention).
<b>Obesity</b>	A category of weight status used to describe somebody who is very overweight, with a lot of body fat.

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<b>Overweight</b>	A category of weight status higher than what is considered as 'healthy weight' for a given height.
<b>Physiological health</b>	Physiological health refers to physical health status and function, as opposed to mental health, quality of life etc.
<b>Quality Adjusted Life Year (QALY)</b>	A QALY is a measure of disease burden and reflects the quality and the quantity of a life. It is often used as an indicator of the effectiveness of an intervention.
<b>Reliability</b>	A research term used to describe the repeatability and consistency of research outcomes, it is also used to describe whether the research has been carried out in an appropriate (to the phenomenon of interest) manner. It can be used to relate to the consistency and dependability of a survey question or set of questions to gather data.
<b>Robustness</b>	A research term used to describe the 'strength' of the evidence or study.
<b>Social outcomes</b>	This term typically relates to processes and states such as social interaction or cohesion.
<b>Validity</b>	A research term used to describe whether a test or study actually measures what it aims to measure.

## Research, appraisals and evaluation resources

Effective data gathering helps us identify and demonstrate the impacts of interventions. Several organisations have developed reliable and robust guidance to help both professional researchers and academics, but also less experienced evaluators, assess the process and outcomes of interventions.



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Following such methodologies will support the production of good quality reliable evidence that

will help us better understand the links but also inform future policy, delivery and practice. There are a number of resources which are suitable for different research questions, research topics (e.g. health, education, behavioural), or for the knowledge and capacity of the research team:

- Public Health England provides [introductory guidance to evaluating health interventions](#) and further guidance on [Standard Evaluation Frameworks](#).
- The [Educational Endowment Foundation](#) guidance takes the reader from the basics of evaluation theory to designing, undertaking and writing up an evaluation. There is also guidance on more advanced approaches such as [Random Control Trials](#).
- The Government's [Magenta Book](#) provides advice on evaluation while the [Green Book](#) provides guidance on how to appraise policy, programme or project proposals.



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- Heritage Lottery Fund's **evaluation good practice guidance** provides some background information on carrying out evaluations and producing an evaluation report.
- The **Charities Evaluation Service** provides a wealth of useful resources and guidance.
- The Medical Research Council has produced a set of guidance documents on **Complex Interventions, process evaluations** (where you seek to understand how the intervention was delivered), and **evaluability assessments** (where you take a systematic approach to deciding whether and how to evaluate programmes and policies).
- The New Economic Foundation provides a toolkit on **evaluating community projects**.
- Realist approaches seek to understand what works, in what circumstances and for whom. The **Better Evaluation** website provides background information on the approach and further resources.



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In addition to guidance on the process of evaluation, there are now several projects which seek to collectively decide upon a set of standardised and consistent outcome measures that can be used across different interventions. Use of a consistent set of measures will allow us

to compare the outcomes of different programmes, in different settings or populations.

- A good example, focusing on health impacts of community growing programmes but applicable to other types of activities, has been developed by a consortium of organisations including Groundwork and Sustain. The document '**Which tool to use? A guide for evaluating health and wellbeing outcomes for community growing programmes**' discusses a number of common and reliable sets of measures.

### Further information

Natural England evidence publications can be downloaded from the publications and products catalogue:

<http://publications.naturalengland.org.uk/>.

For information on Natural England evidence publications contact the Natural England Enquiry Service on 0845 600 3078 or e-mail [enquiries@naturalengland.org.uk](mailto:enquiries@naturalengland.org.uk).

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