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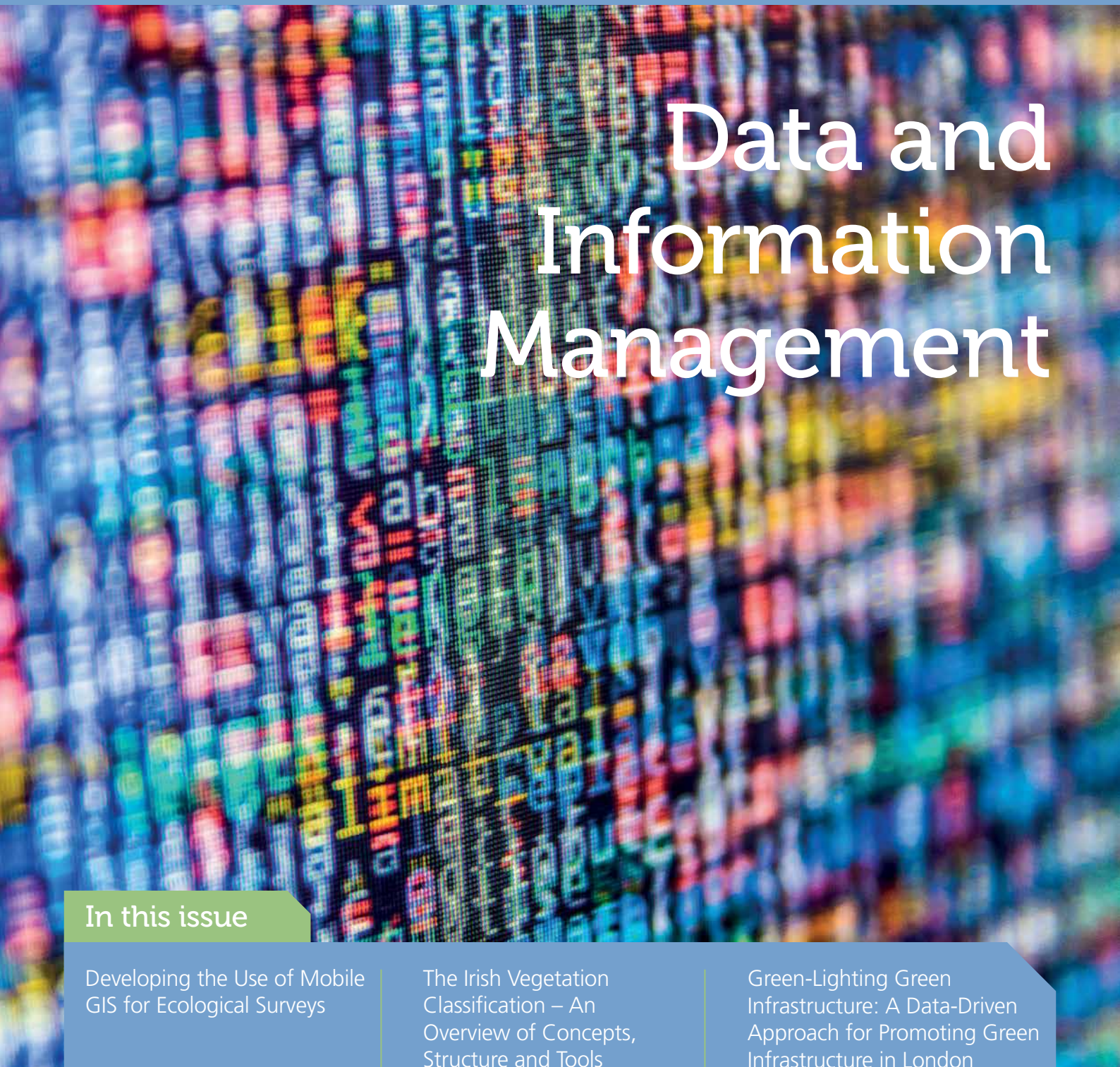

Data and Information Management

In this issue

Ecology in BREEAM, CEEQUAL and HQM – Updating and Expanding the Approach

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Alan Yates – BREEAM, CEEQUAL and HQM Technical Director, BRE – says: *"The design, construction and management of the built environment inevitably has a profound impact on biodiversity and local ecosystems. The benefits of achieving ecologically sound outcomes can be broad in terms of society and economics as well as environmentally. Ecology has formed a key part of the BREEAM family of schemes from its early days playing a major part in promoting ecological protection and enhancement. But ecological practice and regulatory systems evolve over time and I am very grateful to the many ecologists and other stakeholders who have helped us to update our requirements and processes ensuring that these are meaningful, practical and supportive."*

The BREEAM family of assessment schemes has been driving improved sustainability in the built environment for the last 28 years. Developed by BRE, BREEAM is the world's most widely used environmental assessment method for master-planning, design, construction, operation and refurbishment in the buildings and infrastructure sectors.

BREEAM® delivered by bre CEEQUAL delivered by bre HOME QUALITY MARK delivered by bre

Ecology has been one of BREEAM's key assessment categories since 1993, encouraging project teams to identify and protect ecologically valuable features, enhance habitats and mitigate unavoidable impacts – and to improve the long-term biodiversity management practices of assessed sites and associated areas.

Time for a change

BREEAM's approach to ecology assessment had not significantly changed since 1998.

Feedback from clients, ecologists and BREEAM assessors has increasingly flagged up the limitations of BREEAM's previous approach to ecology – and the need to bring this in line with current best practice and address changes in related policy issues.

Alan Yates says: *"Stakeholder engagement and feedback from users over the years had indicated the need for a change. Working closely with relevant stakeholders has been an integral part of the BREEAM family's development and growth as it approaches the end of its third decade."*

The BREEAM team at BRE has worked closely with a wide range of stakeholders to review its approach to ecology. These included the UK Green Building Council, professional bodies such as CIEEM and the Landscape Institute, together with a range of consultants, developers, designers, constructors, landscape contractors, managers and policy-makers.

Max Wade – CIEEM's technical representative on BREEAM's Ecology Advisory Group – observes that *"in the 25 years since ecology became part of the BREEAM process we have learnt a great deal and gained invaluable experience on which to base our recommendations"* and that *"the fresh approach now being taken by BREEAM is a chance to apply and build on all that knowledge, and to broaden the impact of ecology in BREEAM working with other specialists"*.

A fresh approach

Consultation and engagement are key to development of the ecology section. BRE, therefore, set up advisory groups covering strategic approach, technical aspects and practical application. These included a range of ecologists, landscape architects, contractors, facilities managers, contractors and policy specialists. Members of these groups have been invaluable in feeding into the development of BREEAM's overarching Strategic Ecology Framework (SEF) published in 2016. This sets out the strategy for assessing ecology in the BREEAM family of schemes. The SEF is now in the process of being implemented into the certification schemes.

Information about the SEF is available at: www.breeam.com/discover/resources/strategy/

As a result, the methodologies and criteria used across the UK schemes are being updated to align with what ecologists currently do and the future direction of policy and practice. Some of the 'fresh' additions moving forward are highlighted below.

Method for calculating the change in ecological value

Following a review of BREEAM's plant species-based methodology for calculating

ecological value, recent advances in understanding, measurement, calculation and data quality and after input/advice from a range of sources including ecologists, BREEAM has adopted a new methodology aligned closely to the 'Defra metric'. This builds on the work of Defra and Natural England, focusing on the calculation of Biodiversity Units. This approach supports current and up and coming Government policy on environmental protection and enhancing biodiversity.

Alan Yates says: *"BREEAM has always tried to avoid duplication of systems or process. With the 'Defra metric' being increasingly adopted by public and private sector bodies, BREEAM's alignment with this method makes perfect sense."*

Promoting collaboration and information sharing to support a successful outcome

A key point of feedback from BREEAM's Strategic Ecology Framework Advisory Group (set up to advise on the implementation of SEF into BREEAM, CEEQUAL and HQM) was the importance of collaborative working throughout the lifecycle to realise ecological benefits. An example of this was the relationship between landscape architects and ecologists.

The Advisory Group recognised the crucial role many non-ecologist stakeholders, including landscape architects, play in achieving beneficial outcomes that support both ecology, well-being and value.

Max says: *"Most of the projects we work on involve landscaping of some sort. This can range from the large-scale planting of trees, shrubs, ornamental beds and grassed areas, to green roofs and small, inner city features – but almost all represent potential ecology gain."*

Maintaining rigour while encouraging application of BREEAM

To take full advantage of this ecologists need to talk to the landscape architects – who are key to visualising a project's outcome and the expectations of the client – from day one. It is important that ecologists understand their landscaping plans and they understand the ecologist's role, so that the project's landscaping and habitat management can be successfully combined. The ecologist's contribution is in assessing ecological value and potential, identifying what should be conserved and improved. To this the landscape architect brings their practical implementation skills – working together is a plus all round!

Alternative ecology routes – an issue raised in feedback from BREEAM users – concerned the need for input from a professional ecologist on every project. With some projects, perhaps small urban developments or refurbishments for example, the ecology-related risks and opportunities issues may be very limited.

To address this, a new a route to ecology assessment – Route 1 – has been introduced for those projects in which professional expertise is not required. Route 2, for all other projects, will continue to need professional input and remains an option in all cases.

In Route 1 assessments, a designated team member with ecological knowledge will be responsible for ecology issues, supported by detailed BREEAM guidance developed for this purpose, and input from local experts.

Guidance Notes 34 and 36 (www.breeam.com/discover/resources/technical/) provide more information about these routes.

Ecology and its wider sustainability benefits

Recognising the wider benefits of ecology in the built environment was a key issue for the advisory groups. In line with BREEAM's overarching holistic focus, going forward schemes will include criteria which encourage alignment and integration with wider sustainability activities in the project or existing development.

Ecology benefits can relate to areas including heritage and local character, noise mitigation, air quality measures, flood risk management, climate change mitigation, green infrastructure, and community and end user involvement.

It is this ability to create a link between ecological solutions and wider benefits that has the potential to maximise the value of BREEAM's ecology criteria moving forward.

David West, Associate Ecologist at WYG, joined BREEAM's Strategic Ecology Framework Advisory Group to help improve the assessment methodology. He says: *"I think the changes made to the schemes bring more consistency to the assessment process and will make it easier to highlight where high-performing BREEAM projects have gone 'above and beyond'. I also hope that it will promote greater collaboration between disciplines, communication and early engagement to improve the likelihood of successful ecological outcomes."*

Max says: *"Having been largely nature conservation and biodiversity driven in the past, BREEAM is now better able to make use of ecologically sensitive solutions to enhance many other aspects of a project site. This also brings opportunities for ecologists and landscape professionals to work with other specialists such as – drainage engineers, air quality and human health and well-being experts."*

To date the new approach has been incorporated within the BREEAM UK Non-Domestic New Construction 2018 and Home Quality Mark (HQM ONE) schemes launched over the course of 2018. A range of resources are available on the BREEAM website (www.breeam.com/engage/research-and-development/) to support ecologists in carrying out assessments under these schemes.

Alan Yates says: *"We will be moving on to consider how to incorporate some of this thinking into our other schemes including the international ones."*

About the Authors

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