



## Department for Environment, Food and Rural Affairs

### Measuring environmental change – draft indicators framework for the 25 Year Environment Plan

#### Consultation

#### Submission from CIBSE

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## THE CHARTERED INSTITUTION OF BUILDING SERVICES ENGINEERS (CIBSE)

The Chartered Institution of Building Services Engineers, CIBSE, is the professional engineering institution that exists to ‘support the Science, Art and Practice of building services engineering, by providing our members and the public with first class information’

CIBSE members are engineers who design, install, operate, maintain and refurbish life safety and energy using systems installed in buildings. CIBSE members include specialists in fire safety systems and fire engineering. Others, who are belong to the Society of Façade Engineering, a Division of CIBSE, specialise in the design and installation of cladding systems.

CIBSE is unusual amongst built environment professional bodies because it embraces design professionals and also installers and manufacturers and those who operate and maintain engineering systems in buildings, with an interest throughout the life cycle of buildings.

CIBSE has over 20,000 members, with around 75% operating in the UK and many of the remainder in the Gulf, Hong Kong and Australasia. CIBSE is the sixth largest professional engineering Institution, and along with the Institution of Structural Engineers is the largest dedicated to engineering in the built environment. Our members have international experience and knowledge of life safety requirements in many other jurisdictions. We also have members working in London Underground, with considerable experience in the regulations governing sub-surface stations, which are heavily influenced by the requirements introduced following the Kings Cross fire in 1987.

CIBSE publishes Guidance and Codes providing best practice advice and internationally recognised as authoritative. The CIBSE Knowledge Portal makes our Guidance available online to all CIBSE members, and is the leading systematic engineering resource for the building services sector. It is used regularly by our members to access the latest guidance material for the profession. Currently we have users in over 170 countries, demonstrating the world leading position of UK engineering expertise in this field.

### CONSULTATION QUESTIONS

We are publishing the draft indicators framework to set out our initial proposals to enable wider discussions with stakeholders about how to improve it. We are particularly interested your views on:

- 1. Whether the proposed framework describes the environment in a meaningful way;***
- 2. Potential gaps in the headline indicators and / or system indicators and how to fill those gaps;***
- 3. Whether the overall number of headline and system indicators is appropriate. Are there too many, too few?***
- 4. The approach to bundling information in the indicators. Is it better to combine multiple data sources within summary indices or to be more selective about which data to present and assess?***

- 5. Data that you possess which is relevant to the framework and could be shared to update any of the proposed indicators;*
- 6. How you might use the framework and which aspects of it you see as being particularly important; and*
- 7. The balance and scalability between local and national levels.*

## CONSULTATION RESPONSE

We would note that the effect of monitoring will rely on suitable resources, cross-departmental reach, and strong enforcement power, much of these are subject to the Environment Bill; we have detailed our recommendations on this in response to last year's consultation and will be submitting further information to the Parliamentary enquiry by the end of this month.

### PRINCIPLES

We very much welcome the principle of establishing an environmental monitoring framework, alongside requirements to report annually on changes and actions taken, and to review the framework according to new knowledge and techniques. This is an essential basis of environmental policy, or indeed any policy.

We also support the principle that monitoring should cover:

- The outcome, i.e. the state of the environment
- The pressures e.g. air polluting emissions
- The benefits to people.

We also welcome the intention that monitoring and reporting should include **assessing the effectiveness of actions taken**; we would like more information on this, including plans for it to be used by other departments who will be responsible for some of the actions e.g. the incorporation of trees or green infrastructure could result from actions by MHCLG, not just DEFRA. For the avoidance of doubt, we would also stress that **monitoring of outcomes should lead to changes in policy if required**. As highlighted by the National Audit Office's assessment of the current plans, "performance information should be at the heart of government's decision-making"<sup>1</sup>. Too often, policies that were well-intended but found to be ineffective remain in place, without improvement, often with a tacit implication that there is no need to try to comply as enforcement is poor, as with energy certification of buildings. At other times policies are abandoned altogether instead of being assessed and gradually improved based on lessons learnt (e.g. the Green Deal).

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<sup>1</sup> <https://www.nao.org.uk/wp-content/uploads/2019/01/Environmental-metrics-governments-approach-to-monitoring-the-state-of-the-natural-environment.pdf>

In particular, and as highlighted in our response to other consultations<sup>2</sup>, we urge more monitoring and analysis of the effectiveness of policies to encourage:

- energy efficiency improvements to existing buildings
- transport and urban planning policies which aim to reduce congestion and air pollution and to encourage active travel (e.g. cycling, walking).

This has also been highlighted by other bodies<sup>3</sup>, and is crucial to inform built environment decisions that will affect the UK's ability to meet its health, air pollution and carbon emissions objectives in the long-term.

## UK-WIDE COLLABORATION

We understand the indicator framework is currently linked to the 25 Year Environment Plan and therefore applies to England (and UK interests internationally). The current draft merely states that “this document does not pre-empt discussions with the Devolved Administrations on areas where common frameworks will need to be retained in the future.” We believe this is much too weak and vague a statement, and should be replaced by a **commitment to actively seek collaboration, consensus and consistency across the UK**. Different regimes in the devolved administrations will place an unreasonable burden on businesses.

As highlighted in our previous response to the White Paper on Environmental Principles and Governance, CIBSE strongly believes that environmental governance should be developed at the UK level. Since environmental issues do not follow borders, effective environmental guardianship requires collaboration across those borders, and this in turn offers opportunities for economies of scale, efficiency of compliance, data sharing, better use of resources etc. A UK-wide environmental arrangement should provide the minimum common ground, with each nation free to implement more extensive monitoring should they wish to, subject to reasonable assessments of proportionality.

We of course fully respect the devolution agreements and would stress this must be a collaborative consensus building effort, rather than being seen as led by Westminster for the other UK nations to adopt, as also pointed out previously by the Environmental Audit Committee<sup>4</sup>. We strongly recommend the devolved administrations should be approached as soon as possible to input into the framework and discuss possible monitoring arrangements. The Climate Change Act provides a successful example of what can be achieved by negotiation and collaboration.

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<sup>2</sup> see for example CIBSE response to DEFRA's draft Clean Air Strategy, August 2018  
<https://www.cibse.org/getmedia/f1cc6373-b8b2-431c-872d-13f441246594/Draft-Clean-Air-Strategy-Consultation-CIBSE-Response.pdf.aspx>

<sup>3</sup> NICE guideline, *Air pollution: outdoor air quality and health*, June 2017

<sup>4</sup> EAC, *The Government's 25 Year Plan for the Environment*, Eighth Report of Session 2017–19, 24<sup>th</sup> July 2018

## FROM NATIONAL TO LOCAL MONITORING

We understand the metrics are currently intended to be reported at the national level. While this is useful for headline summaries and overall trend, it may be of little use to assess the impact of environmental factors (e.g. areas at risk of environmental damage; health outcomes in densely populated areas). The **data needs to be available with spatial resolution**, both for the public and for decision-makers to take action.

Furthermore, a significant part of environmental policy in the UK is effected through the **planning system** e.g. tree planting and green infrastructure proposals, site allocation leading to transport impacts, air quality and carbon emissions from development etc. This is very often poorly monitored, if at all.

We therefore strongly recommend that better monitoring of planning policies be required from local authorities, with suitable resources provided to them to do so. In addition to ensuring better effectiveness of local policy, this should also in turn help identify where the accumulation of local changes may have led to nationally observed effects, and what actions at local level may be required. Similarly, a number of actions influencing air quality originate from BEIS (e.g. support to biomass heating). We understand DEFRA and DfT currently have a joint air quality monitoring unit. This should be extended, including **collaboration with MHCLG and BEIS to ensure the impact of policies is monitored, and policies adjusted if required**.

Another very important aspect of environmental monitoring relates to energy and carbon policies at the level of **individual organisations and buildings**. This is currently very ineffective. We have commented expansively on this matter in numerous consultations and do not cover it in detail here<sup>5</sup>, but we would strongly recommend that DEFRA collaborate with BEIS and MHCLG on this matter to ensure a stronger and better enforced system of energy and carbon reporting. One example (among many) is the national register of Display Energy Certificates, which is very much an under-used resource as it only covers public buildings and its publicly available data is often of poor quality, not regularly updated and not easily accessed; improving it should be a relatively low cost measure which would help raise public awareness, act as a driver for building occupiers or owners, and help policy-makers, industry and academia to analyse data and inform energy and carbon saving strategies. As an aside on this matter we would also note that the building occupied by DEFRA on 2 Marsham Street is E-rated (on a scale of A:best to G:worse); this strongly indicates opportunities for significant energy, carbon and cost savings; we would recommend this be looked into to demonstrate a positive public example and better use of public funds.

## BEYOND THE 25 YEAR ENVIRONMENT PLAN

While we understand the specific context of this proposed framework, we would highlight other gaps in environmental monitoring (some already existing and others likely to emerge on or after the UK's exit from the EU), as noted for example in the National Audit Office in their

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<sup>5</sup> see for example our recent response to the parliamentary enquiry on energy efficiency

2015 report, and repeated in their recent January 2019 report on DEFRA's current plans<sup>1</sup>. In particular, we urge the UK to put in place more comprehensive monitoring and reporting on **all** the UN Sustainable Development Goals, not just the 64% currently covered, and with more regular (i.e. annual) updates.

## INDICATORS

We agree that accompanying the set of 65 indicators with a reduced set of “headline indicators” can help with summaries and public messages. However, we would urge **public reporting on the full set of indicators** as well, in an easily accessible manner and in a suitable format for interested stakeholders to use (e.g. reported on in a consistent manner, downloadable as a spreadsheet etc). See paragraph 9 of the NAO's assessment of DEFRA's current plans<sup>1</sup> for further development of this argument.

Reporting of data alone is of limited value except to a small number of specialists, unless data sets are presented alongside targets. Furthermore, a number of objectives in the 25 YEP are loosely defined without quantitative targets, and this needs addressing as soon as possible (see for example the NAO's assessment<sup>1</sup> that “a significant portion of the goals and targets in the 25-Year Environment Plan are currently too vague to allow government to measure and monitor performance effectively (we assess that less than one-quarter of the 44 targets are entirely specific, measurable and time-bound)”, §3.10). We would also urge that data is compared not just to the government's objectives (which may vary over time and take account of various constraints), but to **recognised scientific advice from environmental and public health bodies**. In particular, air quality data should be reported against recommendations from the World Health Organizations, not only against the government's objectives, which fall well short of the WHO guidelines. For example, Goal 3 of the UN Sustainable Development Goals relates to human health and wellbeing, and the UN body which addresses health is the World Health Organisation. There is no rational argument for not using the WHO air quality guidance for monitoring and reporting and to inform emerging policy under the 25 Year Environment Plan.

### Air quality

We note that **NOx levels** are included as a system indicator (S1) but not a headline indicator. This is difficult to understand, given regular exceedance of the UK's targets, the impacts on health, and the levels of public interest on this matter. We would urge re-consideration.

We would also note there are rising concerns among health professionals about the effects of ultra-fine particles (below 2.5 micron). We would recommend a programme of targeted monitoring in a small number of locations across the country, to start building an understanding of exposure and sources, and be ready to take action if needed as guidelines on exposure levels emerge.

As noted in our overall comments, we would also expect **local air quality monitoring and reporting; this should be at least of the same extent and quality as currently driven by legislation originated in the EU**. We would also recommend reviewing some of the procedures as, while useful to assess ambient pollution levels, they can be of limited use for health professionals to assess exposure and likely health effects, and for built environment professionals to take action such as building design and ventilation decisions; to put it simply, much monitoring is carried out at high levels, rather than at the level of pavements and building air inlets. We understand this may be beyond the scope of this DEFRA programme but would urge DEFRA collaboration with MHCLG on this.

### Quality and quantity of water

Indicators H3 (Water tests meeting good status) and H4 (Condition of bathing waters): We would expect **water quality monitoring and reporting at least of the same extent and quality as currently**, including those driven by legislation originated in the EU (we appreciate the UK currently reports beyond the minimum required by the EU on this).

We would also note there are rising concerns among professionals about the possible health and environmental effects of **nanoparticles in water, often originating from plastic waste**<sup>6</sup>. We would recommend a programme of targeted monitoring in a small number of locations across the country to start building an understanding of exposure and start assessing possible prevention and remediation measures. This would also be one way to measure the effectiveness of actions under the 25 YEP to reduce waste, particularly plastic waste.

We understand there is growing concern about **water availability in the south east**; it is unclear to us whether this would be covered by the proposed indicator H5 (Waters achieving sustainable abstraction criteria), and at the required spatial resolution. In addition to government taking account of the National Infrastructure Commission's recommendations, such as considering compulsory metering and reducing water leakage rate<sup>7</sup>, we would recommend considering a programme of monitoring of water availability to inform long-term decisions such as the location of future areas of growth, and whether these truly can be sustained in the long term.

### Landscapes and waterscapes

We note indicator H13 (Enhancement of green/blue infrastructure) is currently in need of development; we agree it needs to take account of the accessibility of **green infrastructure**, and its capacity to help with **climate change adaptation**; to be specific, we recommend the indicator should include an assessment of the capacity to contribute to flood risk prevention and the reduction of urban heat island effects, among others.

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<sup>6</sup> *Review of the Risks Posed to Drinking Water by Man-Made Nanoparticles*, final report by the Food and Environment Research Agency (Fera) for the Drinking Water Inspectorate, 2011

<sup>7</sup> NIC, *Preparing for a Drier Future*, April 2018 <https://www.nic.org.uk/wp-content/uploads/NIC-Preparing-for-a-Drier-Future-26-April-2018.pdf>

### **People enjoying and caring for the natural environment**

We welcome indicator H16 (health and wellbeing benefits) to recognise the importance of nature to physical and mental health, even if we note it is still very much in development. We would note there is a current lack of guidance generally to public bodies about how to take account of health and wellbeing impacts in decision making, for example :

- through the use of health impact assessments in the planning process: these are rarely used and could help encourage and reward good long-term built environment decisions which do not risk placing a long-term burden on the nation's health and its healthcare system
- through the use of the Social Value Act in public procurement: we understand this is not widely used, with a lack of clarity on how to assess and reward "social value".

We think work on this proposed indicator should be part of a wider piece by government to **take better account of health and wellbeing effects in public decision-making, and make current legislation and policy more effective and valuable.**

### **Resource efficiency and waste**

We welcome the introduction of an indicator on **raw material consumption**, as a progression from the mere focus on recycling rates towards reducing consumption in the first place. We would recommend this should include reporting by sector (including construction).

In addition, we would also recommend reporting on:

- **quantities of waste sent to landfill** (with reporting by sector, including construction); we are aware the statistics for this can currently be found from the ONS so this may not be much additional work, but would help build a comprehensive and widely available picture; and
- **landfill space availability**, as this would help monitoring the effectiveness of actions to reduce consumption, reduce waste and improve recycling; it could also help mobilise public attention on the urgency of the matter by highlighting the impact of consumer decisions. Bar a report from the Local Government Association in 2010 warning that landfill space may run out in 2018, we are not aware of recent and comprehensive updates on the matter<sup>8</sup>.

**END**

Please do not hesitate to contact us for more information on this response.

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<sup>8</sup> <https://www.green-growth.org.uk/article/uk-hit-landfill-limit-2018>