Development of a Sustainability Reporting Framework for Co-Located, Cross-Sector Organisations *Future Observatory Cultural Policy Fellowship Report*

AUTHOR South Ken ZEN+

FUTURE OBSERVATORY

This report is authored by the Exhibition Road Cultural Group and 3ADAPT, as part of the South Ken ZEN+ programme. This report is commissioned, funded and coordinated by Future Observatory at the Design Museum, in partnership with the Arts and Humanities Research Council (AHRC); and supported by the Department for Culture, Media and Sport (DCMS) via UK Research and Innovation (UKRI). This research was developed and produced according to UKRI's initial hypotheses and output requests. Any primary research, subsequent findings or recommendations do not represent DCMS views or policy and are produced according to academic ethics, quality assurance and independence.

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SOUTH KEN ZEN+

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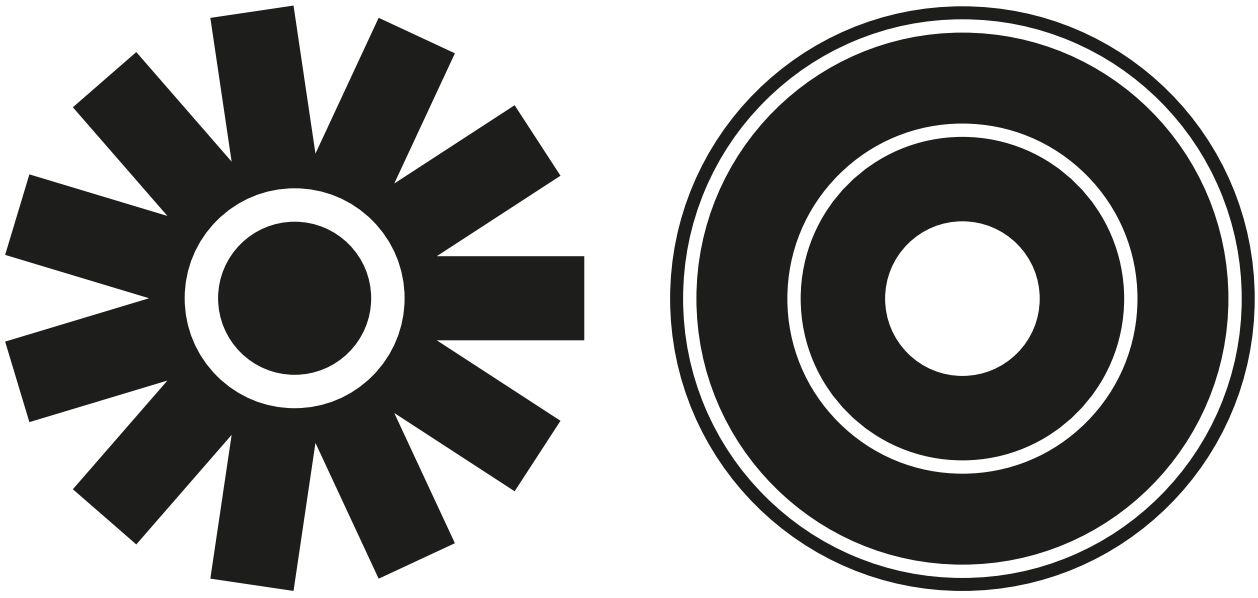
Abstract



The Exhibition Road Cultural Group (ERCG) is made up of 22 member organisations located within South Kensington, bringing together leading cultural and educational organisations to promote innovation and learning within the home of science, arts, and inspiration. Working together the ERCG are dedicated towards addressing the problems that are beyond the scope of the individual organisations, tapping into new and different resources and funding pots, and creating efficiencies through partnership. This collective endeavour is the South Kensington Zero Emissions Nature Positive (South Ken ZEN+) Neighbourhood.

With the parallel aims of becoming an exemplar zero emissions (ZE) and nature positive (N+) neighbourhood, South Ken ZEN+ is an ambitious programme. A programme that offers the ERCG a way to accelerate their current sustainability development, and to go much further and faster – together. It combines the ideas of over 60 specialists working together across the ERCG Members and contains clear plans and priorities for the next three years, and beyond.

An overarching gap, identified by the ERCG, is the lack of a shared reporting framework and baseline to support comparison between the individual organisations and drive the direction of the South Kensington ZEN+ initiative. This research project focuses on the development of the ZEN+ reporting framework to consolidate and simplify the sustainability reporting for members of ERCG.

This research aims to develop and test a sustainability reporting framework to help organizations of varying sizes, maturities, and sectors progress towards sustainability goals. The framework will be developed within the context of the South Ken ZEN+ initiative and will be tested through phased interviews and workshops with ERCG members. The framework aims to support context-specific learning, aggregate performance, accommodate data at different levels of quality, and increase efficiency by reducing resource duplication and reporting time.

This research will also support DCMS areas of research interest, with a focus on the ‘Climate Change’ area – specifically supporting the following research questions:

- → Assess and explain the impact of AHT sectors on climate change and contribution to net zero objectives. What works to mitigate the sectors' impact to climate change and achieve these objectives?
- → How can standard methodologies on measuring greenhouse gas emissions be applied to AHT sectors?
- → What kinds of new sustainability techniques and measures need to be developed specifically for AHT sectors?

This research focuses on the case study of the cross-sectoral ERCG; however, it is observed that there are significant generalisations which the DCMS can take away into consideration towards the AHT sectors. Furthermore, due to the scale (22 organisations) and diversity of the ERCG, there are further scalable elements of the reporting framework which will support the DCMS areas of research interest.

FIGURE 1 (P.4) SOUTH KENSINGTON. CREDIT: EXHIBITION ROAD CULTURAL GROUP

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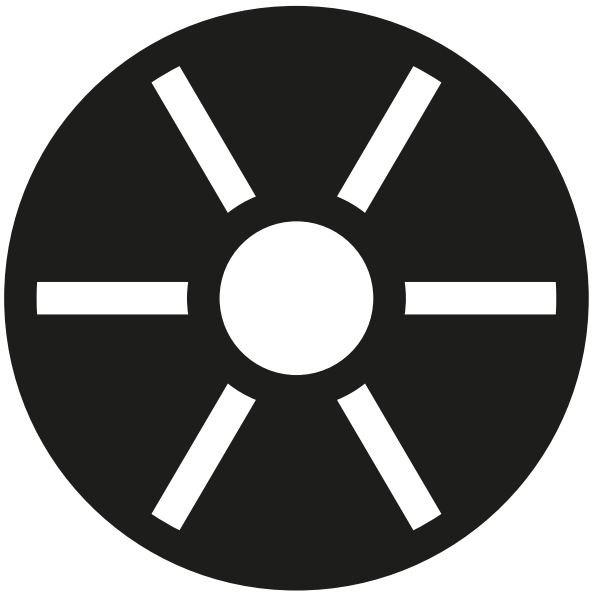
Overview / Briefing



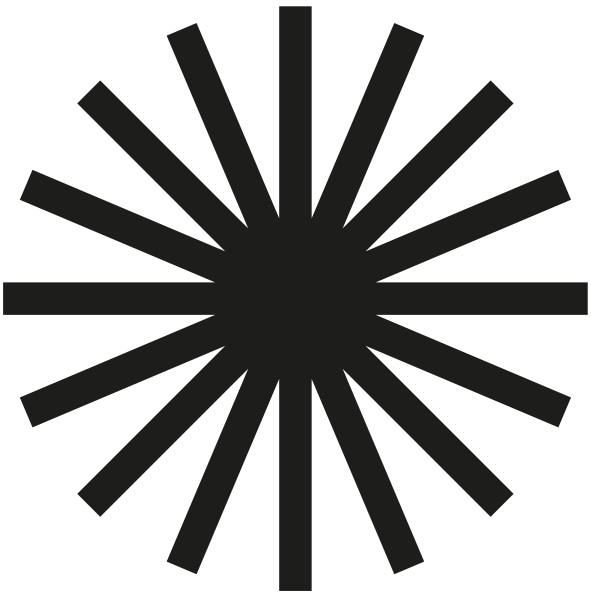


FIGURE 2 VIEW OF THE LIDO CAFÉ, HYDE PARK. CREDIT: THE ROYAL PARKS

The Exhibition Road Cultural Group (ERCG) is made up of 22 member organisations located within South Kensington, bringing together leading cultural and educational organisations to promote innovation and learning within the home of science, arts, and inspiration. Members include the Natural History Museum, the Science Museum Group, the V&A Museum, the Design Museum, the Royal Albert Hall, Imperial College London, the Royal College of Art, the Royal College of Music, the Royal Geographical Society, The Royal Parks, amongst others including local authorities, and religious centres. Working together the ERCG are dedicated towards addressing the problems that are beyond the scope of the individual organisations.

In 2022, the South Ken ZEN+ initiative was formulated with input from over 60 stakeholders and representatives from across the ERCG, with the parallel aims of becoming an exemplar zero emissions (ZE) and nature positive (N+) neighbourhood. An overarching gap, identified by the ERCG as part of the initial phases of the South Ken ZEN+ initiative is the lack of a shared reporting framework and baseline to support comparison between the individual organisations, drive the direction of the initiative and monitor progress towards the goals the neighbourhood have set.

This research identifies the need for a reporting framework and the structure of a framework to support the transition to net zero practice,

based on key findings from workshops, interviews, and reviews, as well as detailing the requirements of such a framework. The framework has been designed to provide collective action and cross-organisational learning, address gaps in existing mandatory reporting requirements which often only cover a small proportion of an organisation's scope 3 emissions (excluding emissions associated with purchases for example) and promote a structured but flexible approach to reporting which can accommodate those with a low level of reporting maturity in the first instance.

The research also consulted stakeholders to inform the development of a detailed reporting framework with considerations for goals, scope, boundary, data variability, data availability and sharing, and alignment with other reporting requirements.

The implications of the research on areas of interest, current policy, and evidence gaps relate to the arts, heritage and tourism (AHT) sectors' impact on climate change and their contributions to net-zero objectives. The study identifies a need for a reporting framework to collect and report data, as well as track progress against shared sustainability goals, recognising best practice and encouraging both creative competition and collaboration.

The research also highlights the challenges faced by the AHT sectors, including reducing emissions within the constraints of heritage assets, common approaches to offsets, and visitor behaviour. There is a lack of comprehensive policy directed at influencing sector-specific sustainable practices across the AHT sectors, and evidence gaps regarding the environmental impact of the sector, which are necessary to inform sectoral policy and drive and incentivise the sectors' transition to net-zero emissions.

With further support and funding, the intention is that the proposed framework will be trialed and tested across ERCG membership over the next financial year, with longer term plans to scale up reporting aspects more broadly across other cultural / educational clusters with shared characteristics to South Kensington and potentially more broadly across the AHT sectors. This would support the initial application and learning and potentially the development of the systems, processes and support required to scale this for the sector.

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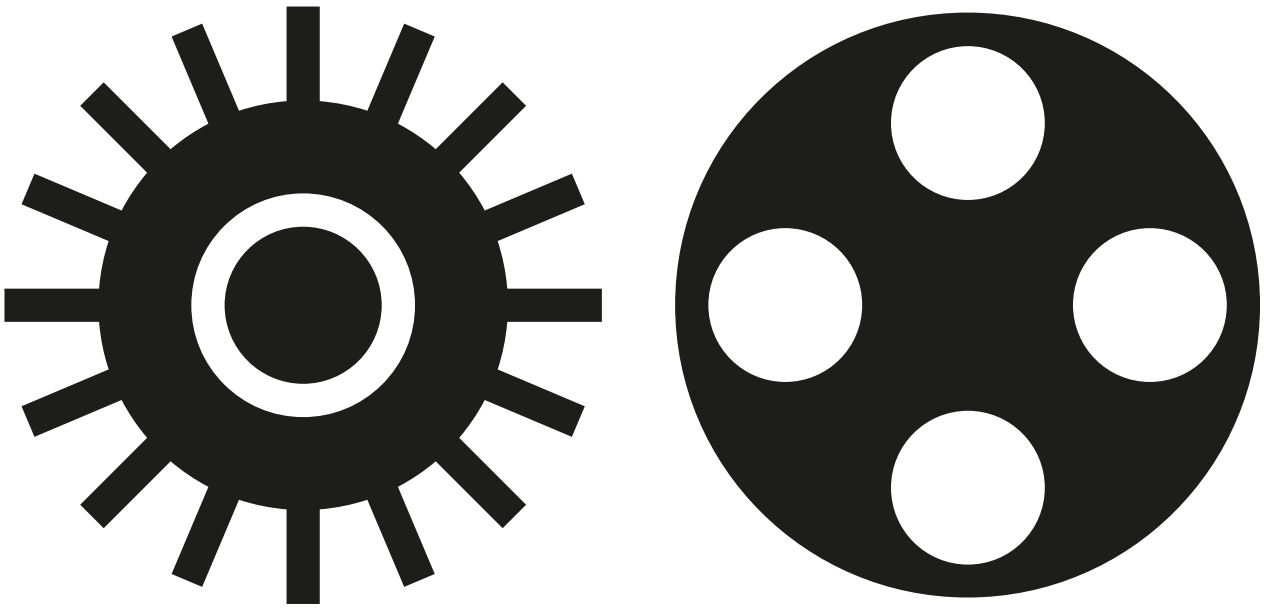
Executive Summary



The Exhibition Road Cultural Group (ERCG) is made up of 22 member organisations located within South Kensington, bringing together leading cultural and educational organisations to promote innovation and learning within the home of science, arts, and inspiration. Working together the ERCG are dedicated towards addressing the problems that are beyond the scope of the individual organisations.

With the parallel aims of becoming an exemplar zero emissions (ZE) and nature positive (N+) neighbourhood, South Ken ZEN+ is an ambitious programme. An overarching gap, identified by the ERCG, is the lack of a shared reporting framework and baseline to support comparison between the individual organisations and drive the direction of the initiative. This research project focuses on the development of the ZEN+ reporting framework to consolidate and simplify the sustainability reporting. This will focus towards progressing four themes:

→ *Net Zero*: The reduction of greenhouse gases (GHG's) produced by human activity, by reducing emissions and delivering methods of absorbing carbon dioxide from the atmosphere.
→ *Nature Positive*: The halting and reversal of the degradation of nature to support the recovery of biodiversity, species and ecosystems.
→ *Circular Economies*: The conservation of all resources through responsible production, consumption, reuse and recovery of products and services to minimise the impacts on and improve the regeneration of natural systems.
→ *Sustainable Travel*: The use of low/zero emissions forms of responsible public and private transportation to reduce GHG emissions.

4.1 BACKGROUND

Starting in March 2022, Phase 0 embodied the conception phase South Kensington ZEN+ initiative. The output of the phase included a situational analysis detailing the maturity of sustainability across the ERCG and the areas of opportunity and constraint for the South Kensington ZEN+, and the final prioritised plan for the South Kensington ZEN+ detailing the ambitions of the neighbourhood and the proposal for four collaborative projects.

Phase one of South Kensington ZEN+ will be delivered between 2023-2026 and has proposed the following collaborative projects to deliver against the ambitions:

→ *The ZEN+ Toolkit*: sharing knowledge to help us all accelerate action.
→ *The ZEN+ Procurement Charter*: shaping a sustainable supply chain together.
→ *The ZEN+ Centre of Excellence*: harnessing our intellectual capital to find better solutions.
→ *The ZEN+ Neighbourhood Vision*: transforming the South Kensington experience for everyone.

This research aims to meet these ambitions by developing a sustainability reporting framework, through a ZEN+ Toolkit, to increase understanding on each theme, and to support the baselining and monitoring of progress against South Ken ZEN+ ambitions.

4.2 RESEARCH AIM AND OBJECTIVES

This research aims to develop and test a sustainability reporting framework to help organisations of varying sizes, maturities, and sectors progress towards sustainability goals. The framework will be developed within the context of the South Ken ZEN+ initiative and will be tested through phased interviews and workshops with ERCG members. The framework aims to support context-specific learning, aggregate performance, accommodate data at different levels of quality, and increase efficiency by reducing resource duplication and reporting time.

This responds to requirements emerging from Phase 0 of the ERCG programme, which identified the need for a Toolkit incorporating a Reporting Framework to establish a shared baseline and allow organisations to feed in their contributions to the ZEN+ programme. It also responds to gaps in existing reporting frameworks and accommodates the latest best practice thinking.

4.3 RESEARCH METHODOLOGY

The methodology involved a longitudinal study involving a mixed method approach including literature review, interviews, surveys, and workshops with participation from a selection of the ERCG members to support the development of a prototype reporting framework structure and architecture. A timeline of the process is shown below.

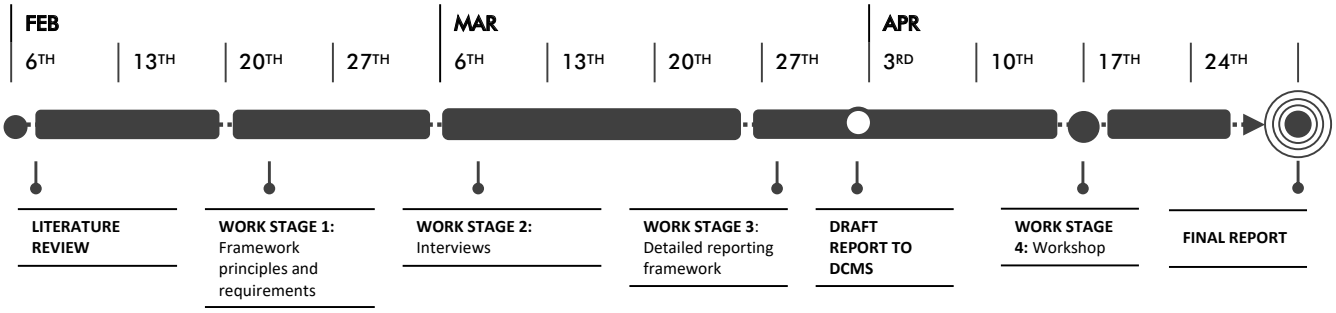


FIGURE 3 TIMELINE OF THE RESEARCH PROJECT

FIGURE 4 EXHIBITION ROAD. CREDIT EXHIBITION ROAD CULTURAL GROUP

The literature review involved three key aspects; (1) a review of the 22 Exhibition Road Cultural Group (ERCG) Members' public sustainability related information including strategies, targets and reporting; (2) a review of their external reporting requirements; and (3) best practice sustainability reporting guidance.

In parallel to this, a subset of 16 organisations were actively involved in the initial phase of the South Ken ZEN+ Initiative. This involved contributions from over 60 stakeholders including sustainability professionals, organisational leadership, estates and operational managers, and academics and experts in the particular themes of the programme. During Phase 0 of the project the key themes for the framework emerged from an initial workshop, a review of each member's public sustainability strategies, targets and reporting and follow-up round of interviews with ERCG members. Through a series of structured and facilitated workshops for each theme (3 for each theme and 12 in total), along with monthly steering group meetings which included representation from the working group chairs, an emerging requirement was for a toolkit to support reporting and the sharing of best practice.

9 of the ERCG members including 3 Museums/ Galleries, 2 Local Authorities, a Recreation/ Heritage organisation and a Higher Education organisation, a Religious Centre and a Society/ Institution were then selected to be involved in the research associated with the development and testing of the reporting framework and architecture. These organisations

were selected to represent organisations of a range of sizes and sectors, who could commit to the time requirements of the research programme.

At this stage it was important to clarify the principles and requirements of the reporting framework. Interviews were conducted with each participating organisation to discuss and review this and to explore their approach to fulfilling their reporting obligations. This allowed the framework principles and requirements to be formalised, with a detailed design of the reporting framework developed.

Based upon the findings of the literature review, the outcomes from the first phase of interviews and the emerging requirements, a reporting framework was developed with the aim of testing the framework's structure and architecture through a workshop session. This included definition of the data architecture, specifying the data inputs, processing methodology and outputs.

Finally, a workshop was held with 8 of the 9 participating organisations to test the detailed structure of the reporting framework. This was done through a semi-structured session using the platform Mentimeter, along with facilitated dialogue. This approach enabled the opportunity for them to provide feedback on the proposed elements of the framework and indicate what quality of data they may be able to provide with respect to each element of the proposed reporting framework. This feedback was then integrated within the framework architecture as included at the end of this report.

4.4 KEY FINDINGS

4.4.1 THE NEED FOR A REPORTING FRAMEWORK

Through the workshops, interviews and desktop reviews, the following were identified as key findings that have informed the development of a voluntary reporting framework:

- → *Collective action may increase the scale and pace of change*: Many of those in the group recognised that their control over their largest emissions areas such as purchases may be limited but together, they can influence shared suppliers to a greater extent. Organisations within shared geographies, sectors and heritage assets face common issues which may be better considered as a collective. Reducing energy associated with heritage assets, electrification, and grid capacity issues, etc. These are all issues which neighbourhood level action or joined up approaches could be beneficial.
- → *Reporting was identified as a means to inform cross organisational improvements*: Participants identified the potential of group learning if information and performance across those reporting can be shared appropriately in a transparent manner.
- → *There is willingness to act and report even when not mandated*: Those without sustainability reporting requirements are willing and keen to participate in voluntary sustainability programmes when they are cocreated, such as the South Ken ZEN+ initiative.

→ *Gaps in existing mandatory reporting requirements*: Many of the existing sustainability reporting requirements do not cover organisational emissions holistically as per recognised GHG reporting standards such as the GHG protocol. This is with particular respect to scope 3 emissions, which in many cases represent the majority of emissions as identified through the desktop study of those who had reported more holistically.
→ *Mandatory reporting for organisations is duplicated*: Some of the ERCG members had to provide sustainability reporting in different structures for different reporting requirements which can be time-consuming. Additionally, many of those required to report against several requirements were not clear on the rationale or benefit of reporting to such requirements.
→ *A common but voluntary approach to reporting and action would be desirable*: Reporting on particular issues, such as visitor travel, where emissions are often large, but organisations have a small opportunity to influence, is challenging. A standardised and agreed approach to this would reduce the risk to an individual organisation and would be considered beneficial by those organisations.
→ *A structured but flexible approach is necessary*: Interviews and workshops identified the range of reporting maturities across the sample and the need for any reporting framework to accommodate such information.

4.4.2 DETAILED REPORTING FRAMEWORK

As per the methodology, a reporting framework was developed to respond to the above needs and in line with best practice guidance. Throughout the interviews, all agreed in principle with all elements of framework architecture. Furthermore, it was concluded that biodiversity reporting guidance is currently too complex to be considered within this scope, so zero emissions, sustainable travel and circular economies were prioritised with the framework.

The key areas of consideration in developing a sustainability reporting framework are listed, as follows.

→ *Goals*: the overarching goals for reporting participants should form the foundation of the reporting framework and the intention and relevance of reporting. Participating organisations who currently report against DCMS requirements (Greening Government Commitments – GGC's) are unaware of intention and the resulting decisions that are made or influenced as a result.
→ *Scope*: the scope of activities reported should be relevant to the reporting participants, but also inclusive of all the participants.
→ *Boundary*: the boundary of the reporting activities should be clearly defined. The case study demonstrated the complexity of this within a wide range of institution types.
→ *Data Variability*: the level of data variability required will depend on the data quality and availability of the reporting participants as well

FIGURE 5 SOUTH KENSINGTON STATION. CREDIT: EXHIBITION ROAD CULTURAL GROUP

as the provision of data from external suppliers. A tiered approach accommodated data variability and allowed an understanding of the accuracy of the assessment.

→ *Data Sharing*: Some of the input data to the framework would be considered by some as sensitive or confidential even if the outputs are not sensitive i.e., spend (£) on products maybe confidential but reporting associated emissions (tCO2e) is not considered confidential. Thus, the tier of data provided may have confidentiality implications.

→ *Alignment with Other Reporting Requirements*: Organisations may receive sustainability reporting requests from external bodies, so this needs to be considered. Approximately half of the ERCG members are subject to at least one of four external reporting requirements.

The proposed reporting framework responded where appropriate to these considerations in a final iteration and is proposed for trialing and testing over the course of the next financial year across the ERCG membership. This is proposed as a follow-on area of research to document the success of the application of the framework to establish a baseline, in the context of the South Ken ZEN+ initiative and to explore opportunities for further scaling-up of the reporting aspects more broadly across the AHT sectors as well as other sectors.

4.5 IMPLICATIONS ON AREAS OF INTEREST, CURRENT POLICY, AND EVIDENCE GAPS

4.5.1 AREAS OF INTEREST

4.5.1.1 Assess and explain the impact of AHT sectors on climate change and contribution to net zero objectives. What works to mitigate the sectors' impact on climate change and achieve these objectives?

Whilst there are a range of mandatory reporting standards that are used by organisations that are required to in the AHT sectors, there is a noticeable scarcity of accessible and structured data to assess the AHT sectors' impact on climate change and their contributions to net-zero objectives. Some voluntary movements are emerging internationally such as the Galleries Climate Coalition (GCC) (GGC, 2023), which includes templates for reporting. However, the ability to accept different data qualities does not yet exist and how the data can be used in a peer-to-peer manner across different organisations is unclear. The ability to access structured data and associated analysis that could enable peer-to-peer learning and improvement also does not yet exist. This case study demonstrates a potentially scalable and generalisable reporting framework to address this as well as track progress against shared sustainability goals, recognising best practice and encouraging both creative competition and collaboration.

4.5.1.2 How can standard methodologies to measuring greenhouse gas emissions be applied to AHT sectors?

This research demonstrates the development of a reporting framework through combining recognised best practice with input from a diverse

range of stakeholders. Representatives from participating organisations had significant differences with respect to their turnover, number of staff, sector and reporting maturity. It has explicitly taken the emerging needs from these organisations as the requirements for its development, testing the framework throughout its development through interviews and workshops. Whilst the application of the reporting framework to collect and report data for an annual period has not yet been tested (the intention is to do this over the next 12 months), integrating input from such a diverse range of organisations in its development increases the likely generalisability and scalability across diverse sectors, including AHT. Whilst testing across the ERCG will provide insight into its generalisability, further testing and research with a broader and more diverse group of organisations, external to the South Ken ZEN+ initiative would be beneficial and could represent a follow on phase of work. Other clusters of organisations with shared history and geography could be invited to participate in a broader second phase of trialing the testing of the reporting framework.

4.5.1.3 What kinds of new sustainability techniques and measures need to be developed specifically for AHT sectors?

This research has highlighted some distinct challenges faced by the AHT sectors which could benefit from new techniques and measures to be developed. These include:

- → *Reducing the emissions within the constraints of heritage assets*. There are challenges of improving the efficiency of heritage assets which can include large buildings, with listed fabric, uninsulated fabric and large expanses of single glazing. This can lead to significant heating demands which are hard to reduce and, in some cases, hard to electrify and install heat pumps. In some instances, electrical capacity is also challenging for such improvements meaning that external upgrades are required to support their decarbonisation.
- → *Common approaches to offsets*: Within the sector and partially due to the challenges highlighted above, there is the understanding that offsets or the removal of carbon emissions might be required to achieve their net zero targets. However, there is no common approach to this and there is nervousness across the sector. It was expressed through the work that the development of a joined up, robust approach that could be adopted would be beneficial and reduce individual organisations' risk in what is a contentious area.
- → *Visitor behaviour*: Visitor behaviour and journeys exhibit considerable intricacy, as do the data collection processes and the allocation of visitor emissions across institutions visited. Among the participating organisations, none currently report on visitor impacts in the context of sustainability, warranting consideration of specific new techniques. This involves defining the boundaries of visitor journeys, accounting for visitor activities, and allocating visitor impacts. Whilst there are strong arguments for excluding visitor travel emissions, due to lack of control, there are things that organisations could do to reduce them, such as

offering discounts and lower pricing depending on travel mode as well as making active and public forms of travel more accessible i.e. through provision of cycle storage, showers, etc. Additionally, targeting more local and regional markets rather than international tourism could reduce emissions, although the financial implications to the institutions and the wider economic implications would also have to be assessed.

4.5.2 Wider Implications on Policy and Evidence Gaps

There is an opportunity to develop stronger policy directed at influencing sector-specific sustainable practices across the AHT sectors. The department's formal sustainability goals encompass meeting Greening Government Commitments, ensuring the estate, activities, and policies support climate change mitigation, resilience, and adaptation, working with Arm's Length Bodies (ALBs) to reduce fossil fuel emissions, and researching the environmental impact of sectors, identifying mechanisms for sustainability and net-zero transition. However, there remains a gap in evidence regarding the environmental impact of the sector, which an appropriate reporting framework could help identify the most material aspects and enable peer to peer learning as well as inform sectoral policy and to drive and incentivise the sectors' transition to more sustainable resource consumption and net-zero emissions.

4.6 FURTHER RESEARCH

4.6.1 PROPOSED NEXT STEPS (INCLUDING TIMESCALES)

It is proposed that the draft reporting framework is progressed as part of the South Kensington ZEN+ initiative. This will consist of rolling out the reporting framework as per the "implementation and training of the reporting framework" proposed further research in the next section. This will culminate in the first South Ken ZEN+ annual sustainability report as per the chart, below.

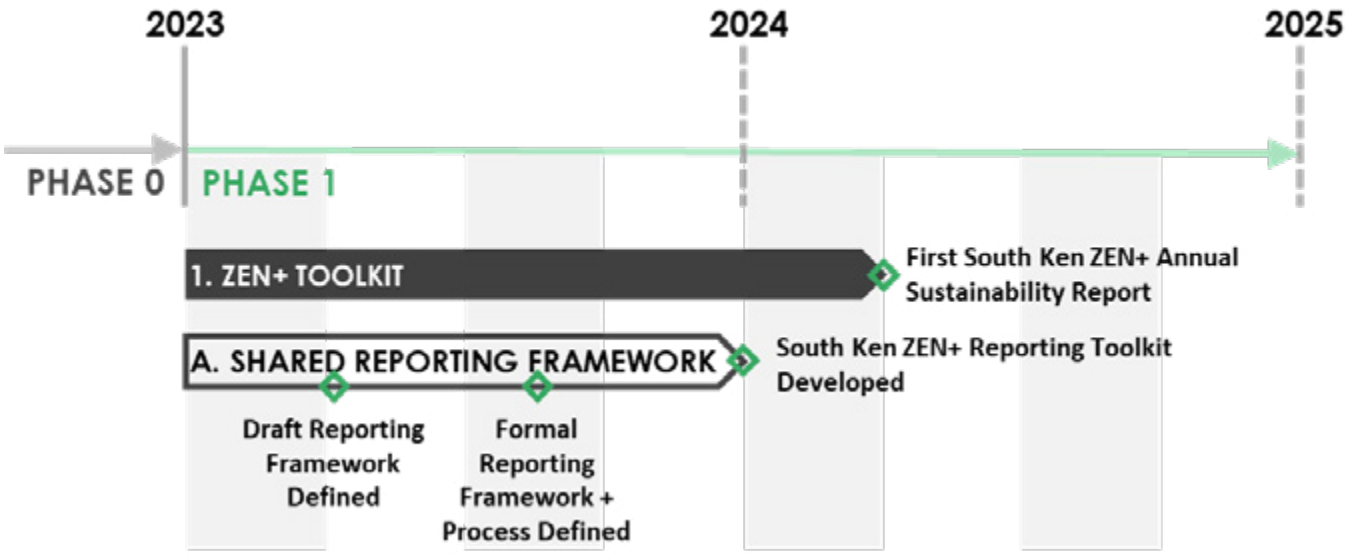


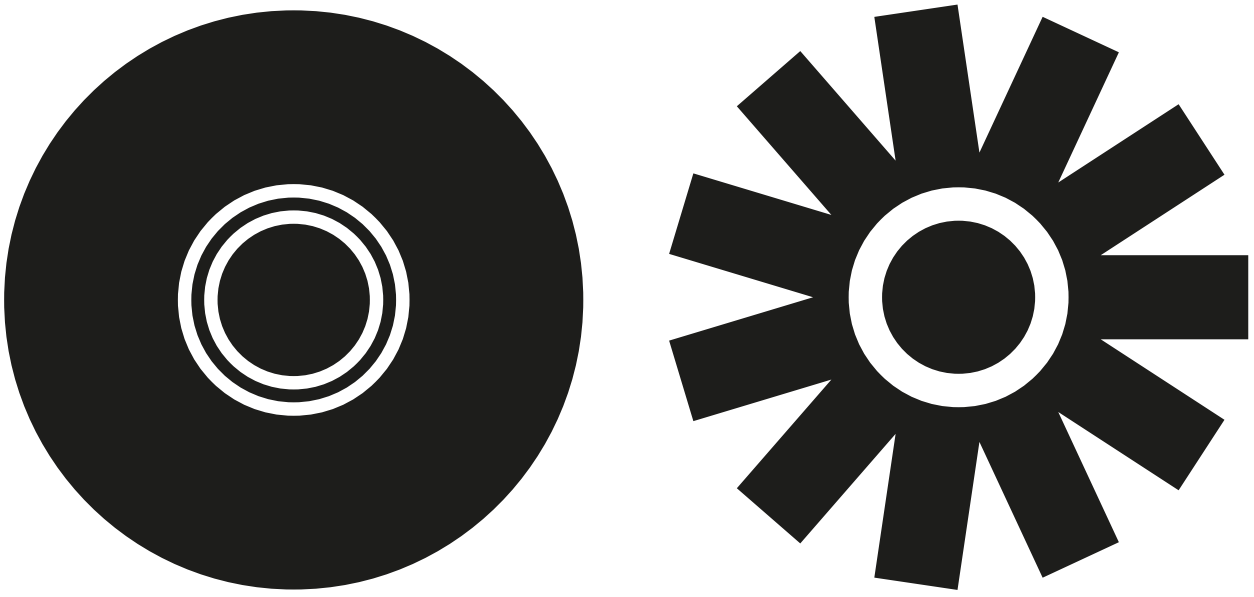
FIGURE 6 PROPOSED NEXT STEPS FOR TESTING THE IMPLEMENTATION OF THE REPORTING FRAMEWORK

4.6.2 FURTHER QUESTIONS AND RESEARCH AREAS (REFLECTION ON AREAS OF INTEREST)

While the research proposes methods and provides insight to address the sustainability ARIs, it has not yet fully contributed to the evidence base necessary for answering these questions. Further questions and research areas should consider the following.

1. *Implementation and Training of the Reporting Framework*: It is recommended that the draft reporting framework is applied to the ERCG to assess its applicability within the bounds of the South Ken ZEN+ initiative as well as the processes and training that might be required to support the implementation of the reporting framework. Moreover, it is recommended to invite other organization clusters, particularly those sharing a common history and geographical affinity, to participate in an expanded follow-on phase. This phase aims to further trial the reporting framework, extending its reach and refining its performance through diverse usage within the bounds of the wider AHT sector and thus testing and iteratively developing its generalisability.
2. *In-depth Investigation into AHT Sector's Distinct Sustainability Measure Limitations*: It is recommended that further investigation is conducted into strategies for emission reduction within the constraints of heritage assets, a standardized stance on offset approaches, as well as methodologies to quantify, account for, and influence visitor behaviours.
3. *Examination of the Environmental Impact Across the Sector*: It is recommended that a thorough study is conducted to understand the environmental impact across the sector. This study will establish a baseline that will inform policy decisions within the sector and accelerate the industry's progression towards net-zero emissions.

5
Background and Introduction



The requirement for a sustainability reporting framework for co-located cross-sector organisations has a risen because of the coalition of the Exhibition Road Cultural Group (ERCG) and its ambition to deliver a Zero Emission and Nature Positive (ZEN+) neighbourhood within South Kensington. This requirement of a sustainability reporting framework which allows for comparison across organisations, sectors and sustainability maturity is ubiquitous to similar neighbourhoods, local authorities and sectoral departments alike. The following section outlines the background of this research and introduces its relevance to the DCMS.

5.1 THE ERCG

The Exhibition Road Cultural Group (ERCG) is a partnership of the leading cultural and educational institutions in South Kensington – the home of science, arts and inspiration in London – consisting of 22 organisations, as listed in the appendix. Created from the legacy of the Great Exhibition of 1851, this is the world's first planned cultural quarter. These organisations are united by not only a shared history and geography but also a mission: to promote learning and innovation in the arts and science for the purpose of changing the world.

Generating and sharing knowledge and inspiring the engineers, designers, scientists, musicians, and artists of the future is still at the heart of what the area does today. Together, over a year, the ERCG welcomes over 20 million visitors (pre-pandemic), employs over 10,000 people and hosts over 20,000 higher education students; with a global reach of over 130 countries around the world.

5.2 SOUTH KENSINGTON ZEN+

At the start of 2022, the board of the ERCG initiated the conceptualization of a partnership across the members which would aim to drive and accelerate the transition to sustainable practices. By December 2022 the South Kensington ZEN+ was defined and signed off by the ERCG board. The purpose of the South Ken ZEN+ is to work towards the goals of Zero Emissions and Nature Positive (+) at a faster pace and larger scale than would be possible by the individual organisations working in isolation. The initiative aims to do this through:

1. *Collective Understanding*: Sharing knowledge, research, and training to accelerate progress.
2. *Collective Action*: Developing joint plans to create substantial neighbourhood impact.
3. *Collective Voice*: Co-creating transformative policies and projects, using our shared profile and reach to trailblaze and inspire.

Such collective effort will be focused towards progressing four themes:

→ *Net Zero*: The reduction of greenhouse gases produced by human activity, by reducing emissions and delivering methods of absorbing carbon dioxide from the atmosphere to address climate change.

FIGURE 7 SOUTH KENSINGTON STATION. CREDIT: EXHIBITION ROAD CULTURAL GROUP

→ *Nature Positive*: The halting and reversal of the degradation of nature to support the recovery of biodiversity, species and ecosystems.
→ *Circular Economies*: The conservation of all resources through responsible production, consumption, reuse and recovery of products and services to minimise the impacts on and improve the regeneration of the natural systems.
→ *Sustainable Travel*: The use of low/zero emissions forms of responsible public and private transportation to reduce GHG emissions.

Whilst ERCG Members are individually at various stages of progress against these themes, they have agreed the following ambitions for the neighbourhood:

→ Become a net-zero neighbourhood before 2040.
→ Reduce emissions from our operations by [50%] by 2030.
→ Increase urban green space by [20%] by 2030.
→ Create a significant net gain in biodiversity and ecological connectivity.
→ Reduce waste and recycle at least [75%] of our business waste by 2030.
→ Increase sustainable and active travel for staff, students, residents and 20m+ visitors.
→ Make transport for [all] our deliveries and services net zero by 2040.

Note: figures denoted with a "[]" are subject to change having established a baseline of sustainability performance across the ERCG.

This section further outlines the engagement conducted during the concept phase of South Kensington ZEN+ (phase 0) and the programme adopted by the ERCG to support delivery of the South Kensington ZEN+ in 2023-2026.

5.2.1 PHASE 0

With reference to the timeline below, phase 0 represented the conception phase of the South Kensington ZEN+ initiative. This phase consisted of charettes, plenaries and several working group workshops convening over 60 senior leaders and experts across the ERCG member organisations. The output of the phase included a situational analysis detailing the maturity of sustainability across the ERCG and the areas of opportunity and constraint for the South Kensington ZEN+, and the final prioritized plan for the South Kensington ZEN+ detailing the ambitions of the neighbourhood and the proposal for four collaborative projects. The prioritized plan for the South Kensington ZEN+ was signed off by the ERCG Board in December 2022.

5.2.2 PHASE 1 PROGRAMME

The South Kensington ZEN+ has been structured to deliver against its ambitions through collaborative projects in a phased approach. Phase 1 will be delivered between 2023-2026 and has proposed the following collaborative projects.

1 *The ZEN+ Toolkit: sharing knowledge to help us all accelerate action* – Providing the means to level-up understanding, skills, and activities across our organisations; share best practice; and support efficiency by avoiding duplication of effort.

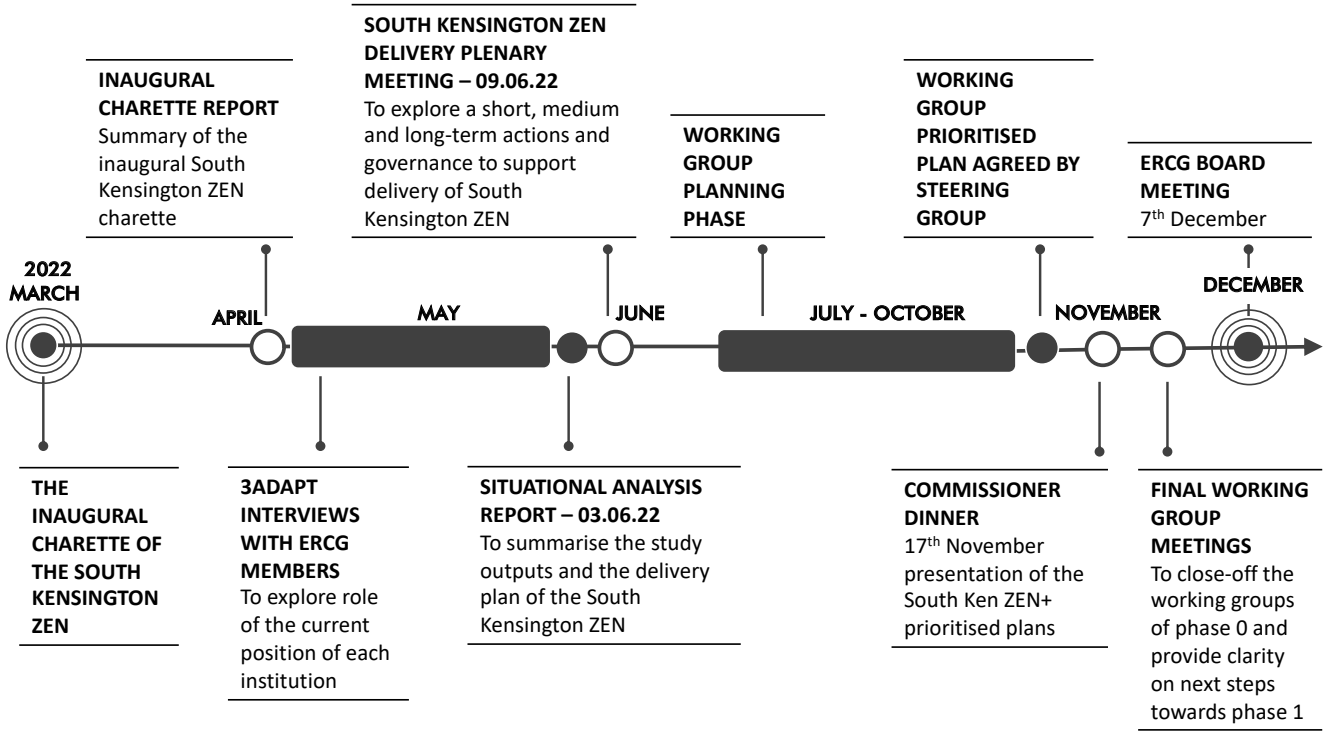


FIGURE 8 THE DEVELOPMENT OF THE SOUTH KEN ZEN+ INITIATIVE

2 *The ZEN+ Procurement Charter: shaping a sustainable supply chain together* – Reducing emissions in our supply chain by using collective buying power to help our suppliers adopt best-in-class sustainability principles. Developing a sustainable procurement principles that will drive change aligned to our ZEN+ goals.
3 *The ZEN+ Centre of Excellence: harnessing our intellectual capital to find better solutions* – Deploying rigorous real-world research to inform and shape the South Ken ZEN+ programmes.
4 *The ZEN+ Neighbourhood Vision: transforming the South Kensington experience for everyone* – Transforming our public realm and private spaces to benefit everyone who visits, works, studies and lives here. Making South Ken 'fit for the future' and a visible statement of our intent to be an exemplar zero emissions / nature positive neighbourhood. A genuinely collaborative endeavour, creating a vision that is shared by the local community, councils, and institutions.

5.2.3 THE ZEN+ TOOLKIT – THE SOUTH KENSINGTON ZEN+ REPORTING FRAMEWORK

In response to the varying levels of ability and development on each theme, a ZEN+ Toolkit has emerged as a cross theme project to 'level-up' understanding and action. This will provide a shared baselining and reporting framework, meaning that comparison and aggregation of performance across ERCG Members and their contribution to the Neighbourhood can be undertaken. As well as this, the ZEN+ Toolkit will provide guidance on thematic issues as well as case studies and pilot initiatives. The Toolkit will be accompanied with training for appropriate staff from across the ERCG to maximise adoption.

It was identified that, despite the presence of growing requirements and frameworks to report sustainability performance by singular organisations, there is a gap in cross-sector and cross-maturity frameworks which allow for multiple organisational reports to be compared and aggregated.

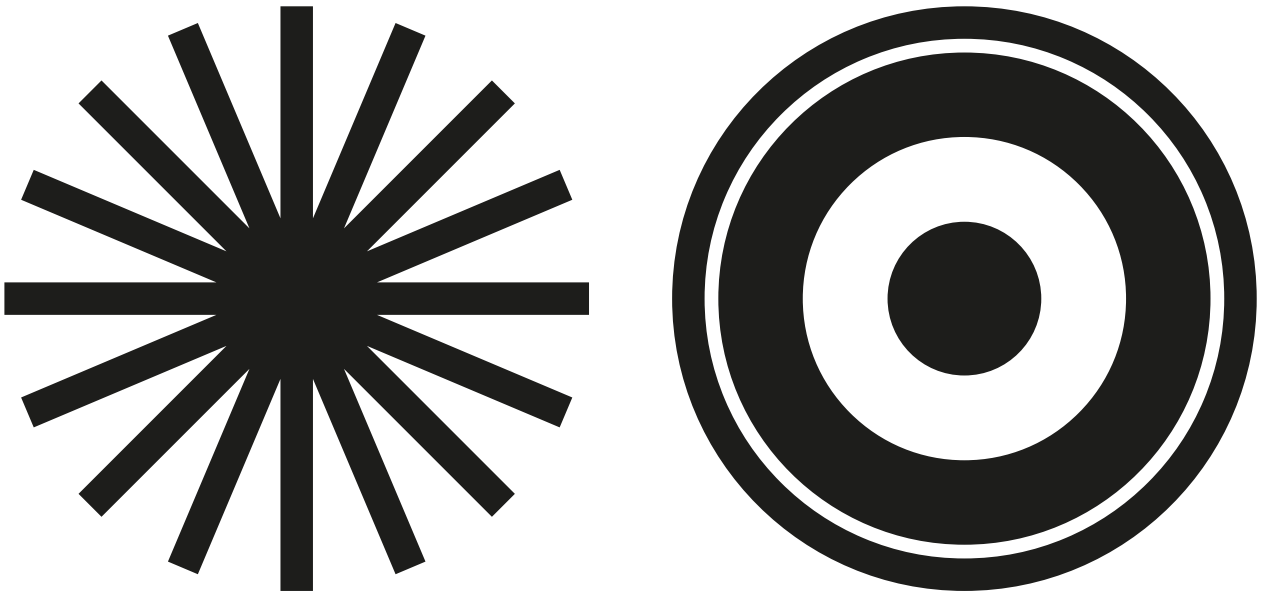
This research aims to develop and test a sustainability reporting framework to help organizations of varying sizes, maturities, and sectors progress towards sustainability goals. The framework will be developed within the context of the South Ken ZEN+ initiative and will be tested through phased interviews and workshops with ERCG members. The framework aims to support context-specific learning, aggregate performance, accommodate data at different levels of quality, and increase efficiency by reducing resource duplication and reporting time.

This responds to requirements emerging from Phase 0 of the ERCG programme which identified the need for a Toolkit incorporating a Reporting Framework to establish a shared baseline and allow organisations to feed in their contributions to the ZEN+ programme. It also responds to gaps in existing reporting frameworks and accommodates the latest best practice thinking.

This research will also aim to support DCMS areas of research interest, with a focus on the 'Climate Change' area – specifically supporting the following research questions:

- → Assess and explain the impact of AHT sectors on climate change and contribution to net zero objectives. What works to mitigate the sectors' impact to climate change and achieve these objectives?
- → How can standard methodologies on measuring greenhouse gas emissions be applied to AHT sectors?
- → What kinds of new sustainability techniques and measures need to be developed specifically for AHT sectors?

6
Literature Review



A review of literature was a key component to this research to identify the current state of the cross-sectoral ERCG members (4.2.1 ERCG Situational Analysis), to rationalize the current reporting requirements (4.2.2 Sustainability Reporting Requirements) and to identify best practice guidance and methodology for reporting against sustainability performance (4.2.3 Sustainability Reporting Best Practice). This section outlines the literature reviewed, referenced throughout this report.

6.1 ERCG SITUATIONAL ANALYSIS

During April and May 2022, a rapid desktop study of and interviews with the members of the ERCG were conducted to develop an understanding of the current maturity across the 21 organisations (this membership has since grown to 22) regarding each theme of the South Ken ZEN+ vision. This provided an initial evaluation and appraisal of the ERCG members sustainability initiatives, ambitions and strategies against best practice. The desktop study reviewed the publicly available strategies and plans, reports, policy documents and external communications (i.e., blog posts) for evidence of criteria against each theme. The criteria are listed within appendix, categorised into reporting, targets and strategies. For each member organisation, a coverage rating was applied between 'Excellent' (very high coverage across reporting, targets and strategies for the given theme) and 'None' (no coverage across reporting, targets and strategies for the given theme). It should be caveated that the information analysed was limited by the requirement to be publicly published.

6.1.1 STRATEGY COVERAGE

With regards to the radial diagram below, it can be observed that the majority of the ERCG members do not publish any documentation or reference to strategies and plans that may cover each of the themes – as highlighted by the inner ring. However, it is observed that there are displays of excellent publicly communicated strategies and plans across all themes – as highlighted by the outer circle.

6.1.2 REPORTING COVERAGE

With reference to the radial diagram, shown below, similar observations may be made to the strategy coverage. It is observed that the majority of the ERCG members do not publish any documentation or reference to reports of initiatives that may cover these themes – as highlighted by the inner ring. Contrary to the strategy coverage, it is observed that there were fewer displays of excellent publicly communicated reports; with only three of the five themes having occupancy within the excellent rating – as highlighted by the outer ring.

6.1.3 TARGETS

The diagram shown below demonstrates the number of ERCG members who have committed to targets in relation to the themes. Across all themes, the majority of the ERCG members have not made public targets; furthermore, the targets made are not consistent in their constitution and commitment dates. As an example, within 'Zero Emissions', seven

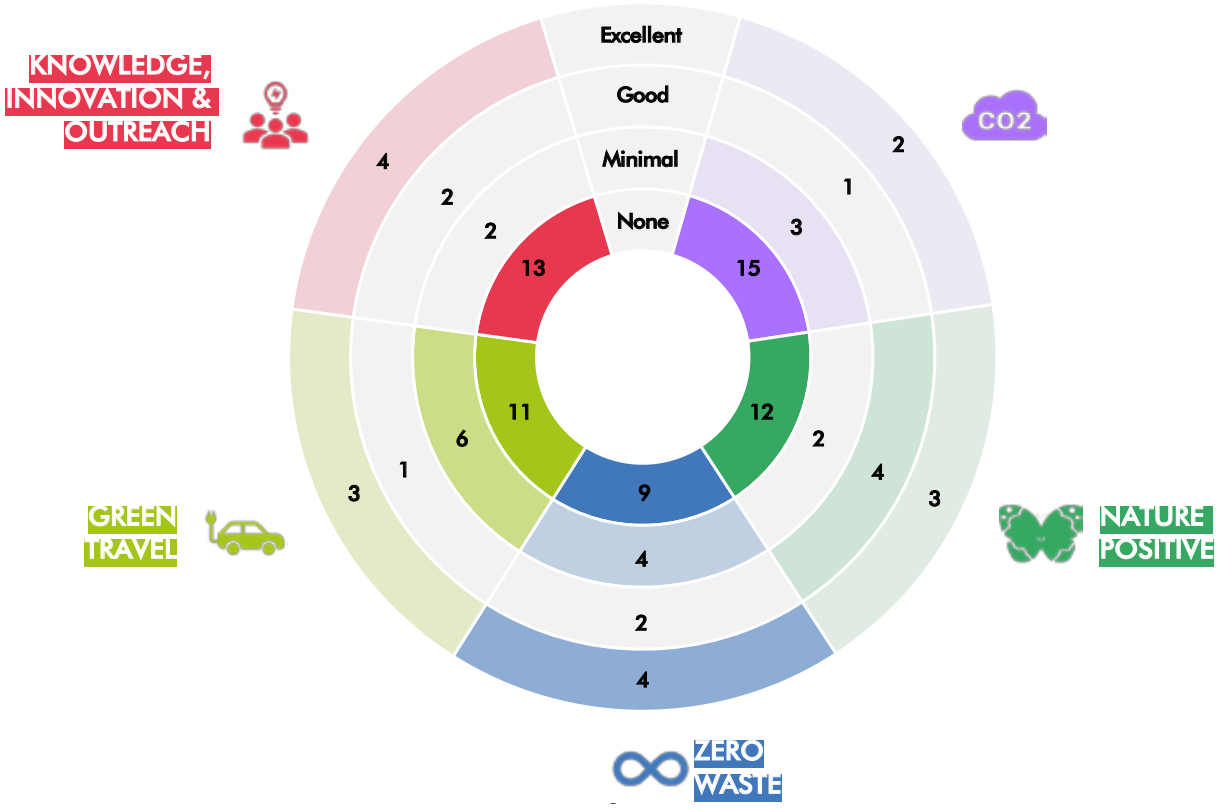


FIGURE 9 SUSTAINABILITY STRATEGY COVERAGE FOR ERCG MEMBERS BASED UPON A REVIEW OF PUBLICLY AVAILABLE INFORMATION

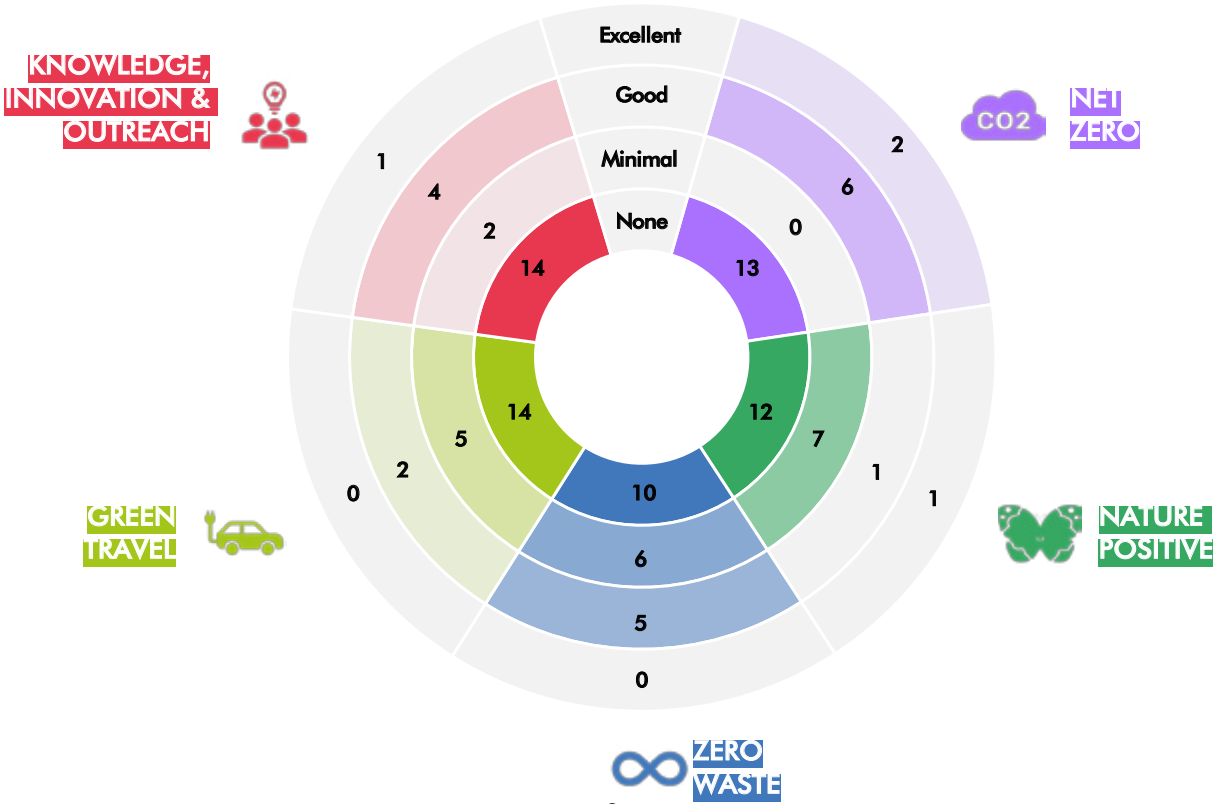


FIGURE 10 SUSTAINABILITY REPORTING COVERAGE FOR ERCG MEMBERS BASED UPON A REVIEW OF PUBLICLY AVAILABLE INFORMATION

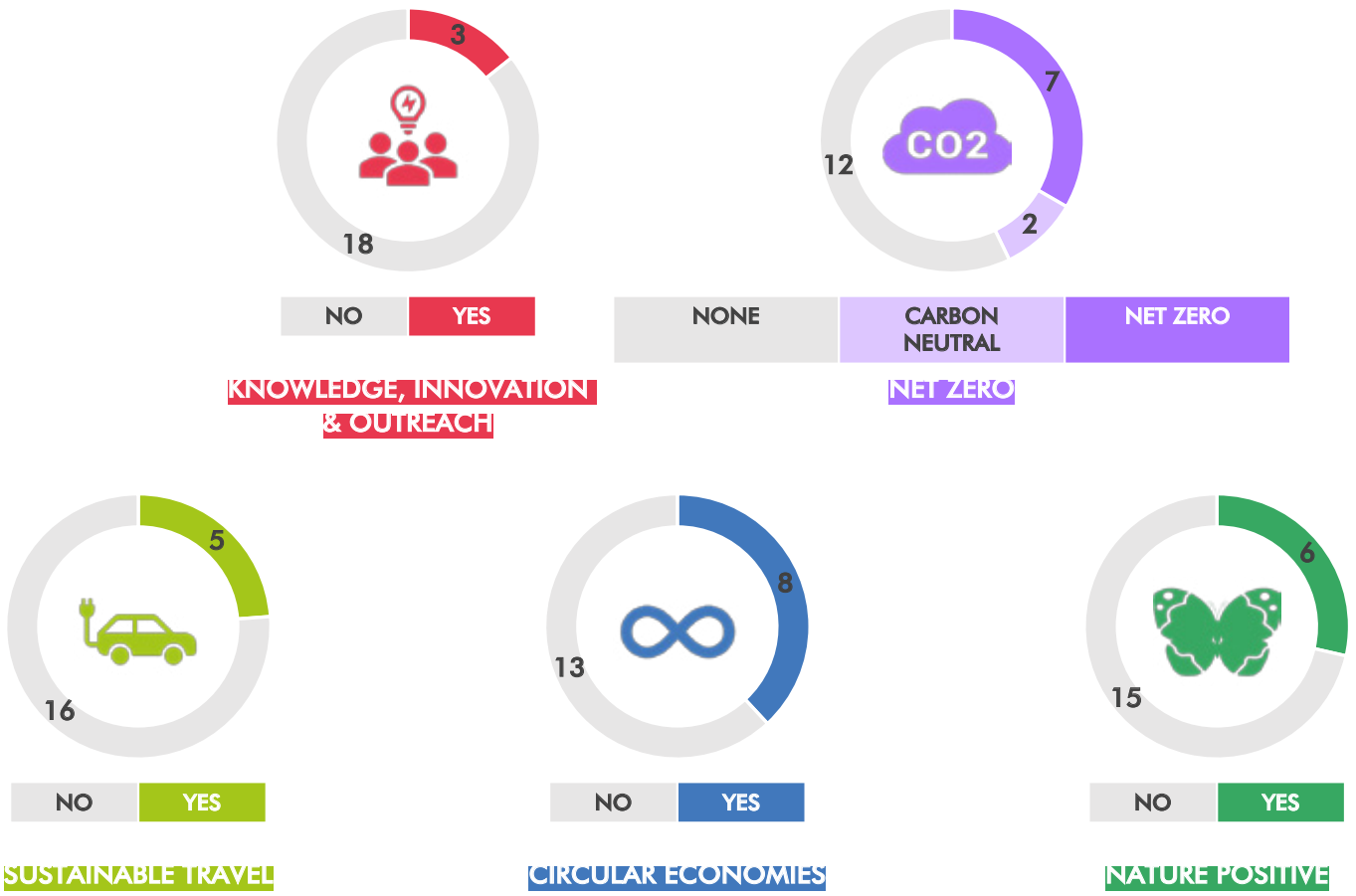


FIGURE 11 ERCG MEMBERS WHO HAD SET TARGETS IN RELATION TO EACH THEME

members have committed to a net zero target, whilst two other members have committed to becoming carbon neutral, two types of commitment that have similar aims but different outcomes. Additionally, these commitments span from 2030-2050. Similarly, within 'Nature Positive', 'Sustainable Travel', 'Circular Economies' and 'Knowledge, Innovation & Outreach', the commitments are not standardisable.

6.1.4 SUMMARY AND KEY TAKEAWAYS

The key findings of the situational analysis are summarized below. These set the context for the development of the South Kensington ZEN+ initiative, but also demonstrate the underlying requirement to establish a shared reporting framework, and the diversity of maturity across the ERCG.

→ *There is a Lack of Consistent Reporting and Baselining* – The need for a consistent approach for reporting progress across all themes was identified and repeatedly mentioned during all sessions of the interviews. Embedding this where appropriate will allow for standardised reporting and quantification where possible. This will support individual performance to be reviewed, compared, and aggregated at the group-level. It will also support shared learning.
→ *There is a Lack of Tangible and Aligned Targets and Commitments* – There is the opportunity to standardise the targets across the ERCG members. This would drive consistency and support the alignment of initiatives and scaling of benefits.

6.2 SUSTAINABILITY REPORTING REQUIREMENTS

Across the UK, and the ERCG, organisations are subject to reporting requirements for sustainability performance as requested by government and sectoral bodies. The reporting requirements across the ERCG are highlighted, as per the table below, include the Greening Government Commitments (GGC), Annual Reports and Accounts (ARA), Streamlined Energy and Carbon Reporting (SECR), and the Higher Education Statistics Agency (HESA). A review of the reporting requirements was undertaken to document the data inputs requested by the reporting body, the level of data quality and periods of reporting and how they align. The following sections outline each reporting requirement, as well as providing a comparison between them.

TABLE 1 SUSTAINABILITY REPORTING REQUIREMENTS

Institution	Sector	GGC	ARA	SECR	HESA
Goethe-Institut	Education	-	-	-	-
Imperial College	Education	-	-	Yes	Yes
Ismaili Council UK	Religious Centre	-	-	-	-
Natural History Museum	Museum/Gallery	Yes	Yes	-	-
Royal Albert Hall	Venue	-	-	Yes	-
Royal Borough of Kensington & Chelsea	Local Authority	-	-	Yes	-
Royal College of Art	Education	-	-	Yes	Yes
Royal College of Music	Education	-	-	Yes	Yes
Royal Geographical Society	Society/Institution	-	-	-	-
Royal Society of Sculptors	Society/Institution	-	-	-	-
Science Museum	Museum/Gallery	Yes	Yes	-	-
Serpentine Gallery	Museum/Gallery	-	-	-	-
South Kensington Estates	Property Management	-	-	-	-
The Royal Parks	Recreation/Heritage	-	-	Yes	-
V&A	Museum/Gallery	Yes	Yes	-	-
Westminster City Council	Local Authority	-	-	Yes	-
Design Museum	Museum/Gallery	-	-	-	-
Royal Commission 1851	Society/Institution	-	-	-	-
Institut Francais	Education	-	-	-	-
Kensington Palace	Recreation/Heritage	-	-	-	-
Japan House London	Recreation/Heritage	-	-	-	-
Cromwell Place	Museum/Gallery	-	-	-	-

6.2.1 GREENING GOVERNMENT COMMITMENTS (GGC)

The Greening Government Commitments (GGCs) outline the measures that UK government departments and their partners will implement between 2021 and 2025 to decrease their environmental impact. These commitments apply to the central government departments and their affiliated organizations, including Executive Agencies (EAs), Non-Ministerial Departments (NMDs), and executive Non-Departmental Public Bodies (NDPBs), unless exempted. Quarterly and annual reporting is completed, allowing Defra to assess overall government performance against the framework and to summarise this in an annual report.

6.2.2 ANNUAL REPORTS AND ACCOUNTS (ARA)

The HM Treasury requires central government bodies falling within the scope of the GGCs and producing annual reports and accounts per

HM Treasury's Government Financial Reporting Manual to provide transparency on their sustainability performance. This framework applies to all such bodies and conforms to the public sector financial year of 1 April to 31 March. While most of the sustainability reporting aligns with the GGCs, some may align with other regulations, legislation, or guidance.

6.2.3 STREAMLINED ENERGY AND CARBON REPORTING (SECR)

The Streamlined Energy and Carbon Reporting (SECR) framework is a UK government initiative that requires certain companies to report on their energy use, greenhouse gas emissions, and energy efficiency measures in their annual reports. The aim is to simplify and streamline reporting requirements, while also encouraging companies to reduce their carbon emissions and improve energy efficiency. SECR applies to quoted companies, large unquoted companies, and limited liability partnerships (LLPs) that meet certain criteria, such as exceeding a certain threshold of energy consumption or having at least 250 employees. The reporting requirements aim to supply greater transparency on a company's energy performance and encourage them to reduce their environmental impact.

6.2.4 HIGHER EDUCATION STATISTICS AGENCY (HESA)

HESA is responsible for gathering, verifying, and distributing information about higher education in the UK to Statutory Customers including the Department of Education, Business, Energy and Industrial Strategy, and UK Research and Innovation. It is mandatory for higher education providers to submit data to regulatory bodies regarding their operations, and HESA works closely with them to ensure accurate data collection, analysis, and quality assurance. The reporting period covered by HESA extends from August 1st of one year to July 31st of the following year.

6.2.5 REPORTING REQUIREMENTS COMPARISON

With reference to the table below, it is observed that there are similarities across the reporting requirements. For instance, they all request reporting aligned with the South Kensington ZEN+ themes of zero emissions, circular economies and sustainable travel (but not Nature Positive); they all report annually; and, they all report against financial years. However, it is also observed that there are significant differences in the level of data being reported, and the support provided in the form of a prescribed proforma.

TABLE 2 OVERVIEW OF REPORTING REQUIREMENTS IN THE UK

Reporting Requirement	GGC		HM Treasury	SECR	HESA
Who?	UK Government Partners and Affiliated Partners		UK Government Partners and Affiliated Partners	Large unquoted companies, and limited liability partnerships that meet certain criteria	Higher Education Providers
South Ken ZEN+ Theme	Zero emissions	Scope 1, 2 & 3	Scope 1, 2 & 3 (only business travel)	Scope 1, 2 & 3 (only business travel for large unquoted)	Scope 1, 2 & 3 (no business travel)
	Nature positive	-	-	-	-
	Circular economies	Landfill/EfR, Recycle & Reuse	Landfill/EfR, Recycle & Reuse	-	Landfill/EfR, Recycle & Reuse
	Sustainable travel	Business & Fleet	Business & Fleet	Business & Fleet	Fleet
Level of data	Both inputs (i.e., kWh, tonnes etc.) and outputs (tCO2e)		Outputs (emissions) - gas and energy consumption in kWh	Outputs (tCO2e) and inputs (kWh) used in calculations	Inputs (i.e., kWh, tonnes etc.)
Reporting frequency	Quarterly and annually		Annually	Annually	Annually
Reporting period	Financial Year		Financial Year	Financial Year	Academic Year
Prescribed proforma?	Yes		-	Template given but not mandatory	Yes

Table 10 within the appendix provides further detail of the differences in the information requested against the GHG protocol categories. The differences in input data within each GHG protocol category suggests differences in the approach to processing the data (for instance the method of calculating the carbon emissions) but also highlights the differences in operational activity being reported on across all scopes. Several organizations have gone above and beyond their mandatory reporting requirements. One such example is the Royal College of Music, which conducts a thorough evaluation of its scope 3 emissions, encompassing factors such as procurement, staff commuting, and student commuting.

6.3 SUSTAINABILITY REPORTING BEST PRACTICE

To support development of the South Kensington ZEN+ reporting framework a review into best practice guidance and methodology for reporting against sustainability performance was conducted for each South Kensington ZEN+ theme. The following sections outline best practice guidance and methodology for organisational reporting against each theme.

6.3.1 NET ZERO

Net Zero represents the reduction of greenhouse gases produced by human activity, through the reduction of emissions and delivering methods of absorbing carbon dioxide from the atmosphere to address climate change. Reporting of carbon emissions is fast becoming ubiquitous across all sectors, globally. The most prominent approach to reporting is the Green House Gas (GHG) Protocol – which guides the reporting requirements outlined in section 4.2.4. The GHG protocol sets both a corporate standard, and a countries and cities standard. Beyond the GHG Protocol, the ISO 14064:2018 (Greenhouse Gases) is a widely accepted standard which specifies principles and requirements at the organization level for the quantification and reporting of greenhouse gas (GHG) emissions and removals.

6.3.2 NATURE POSITIVE

Nature Positive represents the halting and reversal of the degradation of nature to support the recovery of biodiversity, species, and ecosystems. There are currently no widely accepted standards or frameworks for the reporting of organisational performance against this theme. While some accessible tools exist, for example the biodiversity accounting tool (Natural England, 2021), most are highly scientific and inaccessible without training and expense (Lammerant et al, 2021). An example of this at an organisational level is the University of Oxford's use of the ReCiPe method to develop a path to net gain based on their activity data (Bull et al., 2022). Standards and reporting for Nature Positive is ongoing with the likes of the Taskforce on Nature-related Financial Disclosures (2023) and the Science Based Targets Network (2023) are currently developing a more accessible reporting framework.

6.3.3 CIRCULAR ECONOMIES

Circular economies represent the conservation of all resources through responsible production, consumption, reuse and recovery of products and services to minimise the impacts on and improve the regeneration of the natural systems. Although the International Organisation for Standardisation (ISO) 14001:2015 for Environmental Management Systems includes circular economies as a broad topic, there are currently few standardized reporting frameworks available. However, some principles for reporting on circular economies do exist, such as those outlined in the BS 8001:2017 standard published by the British Standards Institution in 2017. An ISO (2023) is in development to standardise the field of circular economies, including the development of frameworks, guidance, supporting tools and requirements for implementation of activities.

FIGURE 12 VICTORIA AND ALBERT MUSEUM. CREDIT: EXHIBITION ROAD CULTURAL GROUP

FIGURE 13 ALGAE MEADOW PART OF THE SOUTH KEN GREEN TRAIL. CREDIT: LUKE O'DONOVAN

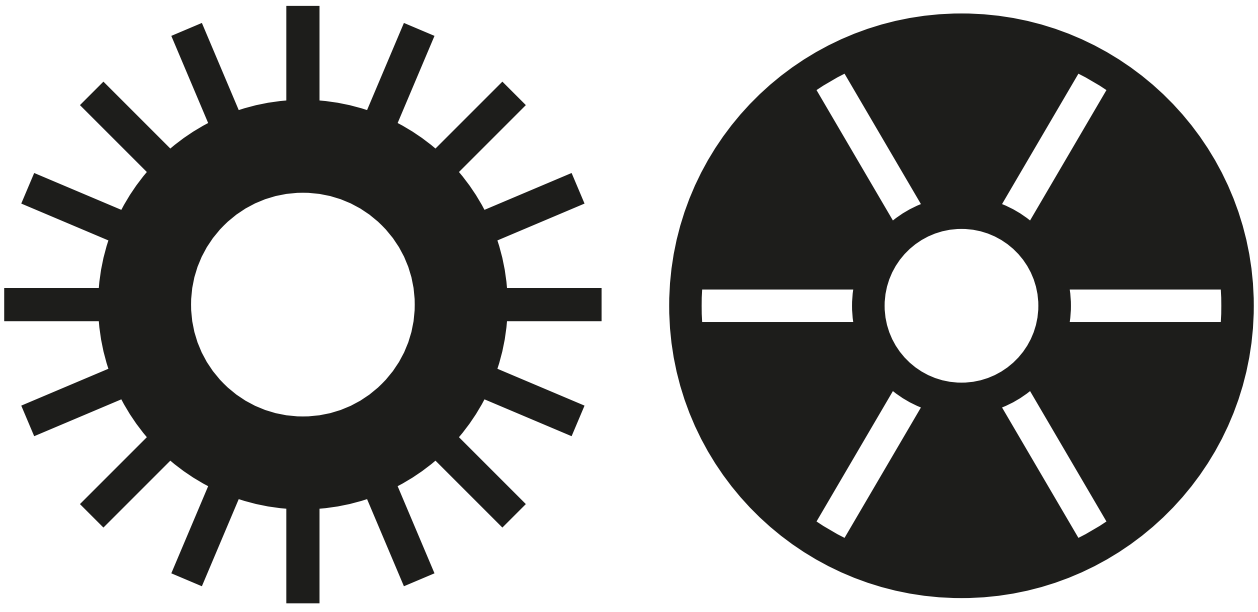
Most frameworks require some reporting on waste, whether that is through associated emissions (tCO2e), volume/mass of waste (m3/t) and/or destination (reused/recycled etc.). However, both the Ellen MacArthur Foundation (2021) and Business in the Community Network (BITC, 2022) find this to be unproductive as it fails to capture the full scope of efforts made higher up in the waste hierarchy. These sources suggest metrics relating to virgin plastic use or the quantity of raw materials used offer more informative insights into circular economy initiatives. The European Commission (2020) is also addressing this and has published a 'Circular Economy Action Plan' to provide guidance.

6.3.4 SUSTAINABLE TRAVEL

Sustainable Travel represents the use of low/zero emissions forms of responsible public and private transportation to reduce GHG emissions. Similar to circular economies, there is no specific reporting framework, but aspects may be covered under ISO 14000 for Environmental Management. The information requested by organisations is often on the emissions associated with sustainable travel, specifically business travel or employee commuting (as listed in the GHG protocol). There is very little guidance for reporting on how organisations may access sustainable travel.

In addition, the Climate Change Commission (2020) highlights that there are transport policies that hinder the achievement of this goal. For example, the business case for cycle lanes is deemed challenging because traffic flow is prioritized, as it is seen to deliver economic benefits. This means factors such as carbon reduction and clean air are not given adequate value in the decision-making process (Climate Change Commission, 2020).

7
Methodology



The research has taken a case study approach to allow for an in-depth exploration of the multi-faceted development of a cross-sectoral organisational sustainability reporting framework which allows for inputs of varying data quality. The methodology utilised interviews, surveys, and workshops with participation of a selection of the ERCG members to support validation of the reporting framework's development – as per the diagram, below. This section outlines the ERCG members who participated, as well as details of each work stage.

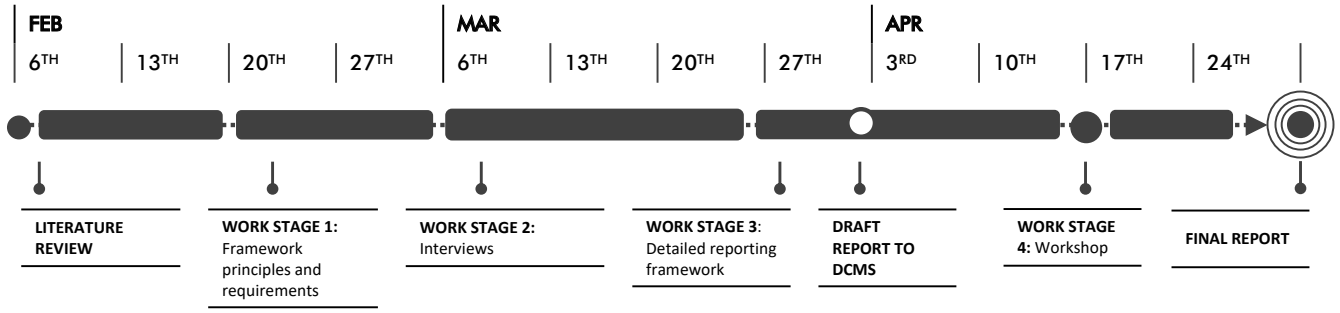


FIGURE 14 TIMELINE OF THE RESEARCH PROJECT

7.1 RESEARCH PARTICIPANTS

The participants of the ERCG members are listed below. The participants were selected to enable observations across a diverse group of the members, with regards to the organization type, size and sustainability maturity, to ensure that the framework considers a wide range of organizational characteristics.

7.2 WORK STAGE 1: FRAMEWORK PRINCIPLES AND REQUIREMENTS

Following the literature review, it was important to clarify the principles and requirements of the reporting framework. Firstly, the use cases for the reporting framework were produced. This included definition of the:

→ *Use Cases* – the objectives to be achieved through the reporting framework.
→ *Reporting Principles* – the working principles which the reporting framework will adopt.
→ *Boundary* – the boundary which the reporting framework will report upon (i.e., financial, operational, geographical).
→ *Reporting Approach* – the approach to the reporting architecture (i.e., data quality tiers and data collection approach).
→ *Materiality of Impacts* – the extent to which the activities of the ERCG members deliver an external impact against the themes of the South Kensington ZEN+.

TABLE 3 RESEARCH PARTICIPANTS

INSTITUTION	SECTOR	DESCRIPTION
Royal College of Music	Education	Offers undergraduate and postgraduate degree programs in classical and popular music, as well as courses in music education, composition, conducting, and performance. The college is known for its world-class faculty and numerous ensembles, and its facilities include a concert hall, recording studios, and a museum of musical instruments serving under 1000 students.
Royal Borough of Kensington & Chelsea	Local Authority	The authority supplying the public administration of one of the most densely populated administrative regions, covering an area of approximately 12 square kilometers and a population of ~160,000 people. It is known for its retail, museums, and cultural attractions
Westminster City Council	Local Authority	The authority providing the public administration for one the most populous boroughs in London, with a population of around 255,000 people. It is home to many famous landmarks, including Buckingham Palace, the Houses of Parliament, and the London Eye.
Natural History Museum	Museum/Gallery	A world-renowned museum, home to more than 80 million specimens and attracts ~5 million visitors each year. It is also a centre for scientific research, with scientists working on a wide range of topics.
Science Museum	Museum/ Gallery	A museum dedicated to the history of science, technology, engineering and mathematics (STEM). It attracts ~5 million visitors across 5 sites in the UK a year.
V&A	Museum/ Gallery	The world's largest museum of applied arts, decorative arts and design; attracting ~4 million visitors annually.
The Royal Parks	Recreation/ Heritage	Provides the management of a series of 8 public parks in London, owned by British monarchy: including Hyde Park. They cover almost 2000 hectares of land and attract ~77 million visitors a year.
Ismaili Centre	Religious Centre	One of six Ismaili Centres worldwide. Religious, social, and cultural meeting place for the Ismaili Muslim community.
Royal Commission 1851	Society/ Institution	Established in 1850 to organise the Great Exhibition of 1851, the commission manage a significant estate within the South Kensington area. Other activities include the provision of ~£4million of postgraduate scholarships annually.

7.3 WORK STAGE 2: INTERVIEWS – VALIDATION OF FRAMEWORK PRINCIPLES AND REQUIREMENTS

An interview with each participating organisation was held individually over a three-week period. The interviews presented the framework principles and requirements defined within work package 1 for review and feedback. The interviews also provided an opportunity to explore the approach of each organization in fulfilling their reporting requirements (as per section 4.2.2.).

7.4 WORK STAGE 3: DETAILED REPORTING FRAMEWORK

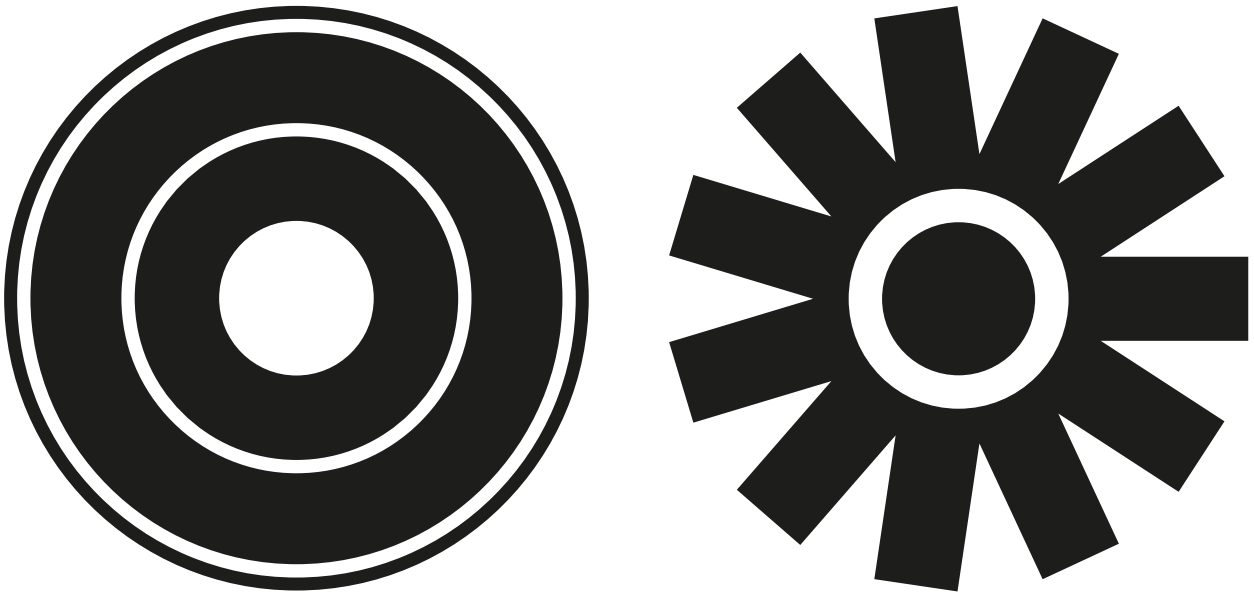
Following the formalization of the framework principles and requirements through work stage 1 and 2, a detailed design of the reporting framework was developed. This included definition of the data architecture:

→ *Data Inputs* – the measured and normalized data requested from each organization across a tiered data quality system (i.e., proxy data, typical data sources, and ideal data sources).
→ *Data Processing Methodology* – the method of processing the data inputs to output reported data against the ambitions of the South Kensington ZEN+.
→ *Data Outputs* – the meaningful and comparable data reported against the ambitions of the South Kensington ZEN+.

7.5 WORK STAGE 4: WORKSHOP – DETAILED REPORTING FRAMEWORK

During this work stage, a data quality survey was conducted, requesting the participant organisations to detail the data quality of their existing sustainability reporting against the detailed design of the reporting framework. The survey allowed observation of the current data maturity within each organisation and provided feedback on the suitability of the requested data inputs within the tiered framework.

8
Results and Discussion



In this section, the results from each work package are outlined, as well as a discussion on the learnings towards and implications of the AHT sectors and the DCMS areas of research interest. Results and discussion are outlined for each work stage as follows.

8.1 WORK STAGE 1: FRAMEWORK PRINCIPLES AND REQUIREMENTS

The principles and requirements for the framework were defined as follows.

8.1.1 USE CASES

The objectives to be achieved through the reporting framework are:

→ *Compare and Learn*: To allow for comparison of sustainability performance between ERCG members.
→ *Baseline*: To output a baseline for the South Ken ZEN+ initiative.
→ *Learn*: To support context specific learning.
→ *Streamline*: To reduce duplication and time across reporting requirements.

8.1.2 REPORTING PRINCIPLES

The working principles which the reporting framework will adopt are aligned to the GHG Protocol to support wider alignment with reporting requirements (as per section 4.2.2). The principles are:

→ *Relevance* – Ensure that each ERCG member's impacts are appropriately reflected across the reporting framework and serve the decision-making needs of the users.
→ *Completeness* – Account for and report on all sources of impact and activities within the chosen boundary. Disclose and justify any specific exclusions.
→ *Consistency* – Use consistent methodologies to allow for meaningful comparisons of impact over time. Transparently document any changes to the data, boundary, methods, or any other relevant factors in the time series.
→ *Transparency* – Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data used.
→ *Accuracy* – Ensure that the quantification of impact is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

8.1.3 BOUNDARY

The boundary which the reporting framework will report upon has considered guidance as per the SECR and Climate Disclosure Standards Board (2022) which outlines consideration of the boundary with regards to financial control, operational control, and equity share. Due to the unique

nature of the South Kensington ZEN+ reporting framework and its aim to aggregate organizational reporting of co-locational institutions, the geographical boundary was also considered. It was determined that the boundary of the reporting framework would include:

→ *Financial Control* – report on all sources of environmental impact over which the organization has direct financial control over a financial and operating policy.
→ *Operational Control* – report on all sources of environmental impact from operations over which the organization or its subsidiaries has the full authority to introduce and implement its operating policies.
→ *Equity Share* – report on all sources of environmental impact from operations according to their share of equity in operations of which it has influence over operational policies.
→ *Geographical* – report on all sources of environmental impact from operations over which the organization has control beyond the South Kensington area.

The geographical boundary is a particularly unique consideration to the South Kensington ZEN+ reporting framework due to the nature of its co-locational initiative. Out of the 22 ERCG members, only 5 of the organization do not have operations which extend outside of the South Kensington neighborhood. It was proposed that the reporting framework would request reporting on all operations beyond the South Kensington neighbourhood to reduce the requirement to segregate data by individual sites. This further aligns with the external reporting requirements (as per section 4.2.2) which do not request site-specific reporting.

8.1.4 REPORTING APPROACH

The high-level approach to the reporting architecture takes into consideration the method to data collection and processing and the implications on varied data quality. As per the GHG Protocol, it is proposed that the reporting framework will take a centralized approach to data collection and processing. With reference to the diagram below, the framework will request the reporting organization to submit input data. The framework will then centralise the processing methodology and reporting of outputs to ensure consistency across the aggregation of the ERCG.

As per the situational analysis (see section 4.2.1) the data quality across the ERCG members is assumed to be disparate. As such, it was proposed that a three-tier data quality approach for collecting input data would ensure full reporting is accessible across the group. The tier approach is divided, as below, with increased data quality. Where organisations cannot provide Tier 2 or Tier 3 data, a proxy figure will be used based on the normalizing data (for example average emissions per m2 of floor space). This will likely be an exaggerated estimate hence providing an incentive for organisations to increase their data accuracy.

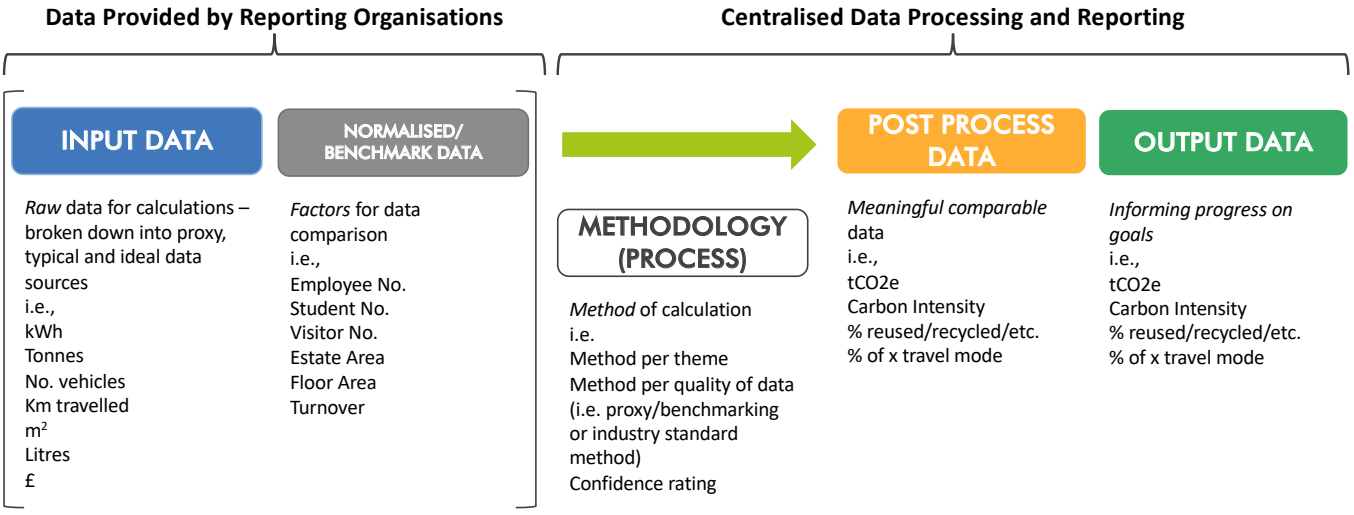


FIGURE 15 OVERVIEW OF THE REPORTING FRAMEWORK DATA FLOW

EMISSIONS CATEGORY	TIER 1 – PROXY/ BENCHMARK SOURCE	TIER 2 – TYPICAL DATA SOURCE	TIER 3 – IDEAL DATA SOURCE
ELECTRICITY AND GAS EMISSIONS	Industry benchmarks per m2	Building level utility bills	Sub-metered BMS data

INCREASING ACCURACY

FIGURE 16 EXAMPLE OF THE TIER APPROACH.

8.1.5 MATERIALITY OF IMPACTS

The extent to whch the activities of the ERCG members have an external impact has been mapped against the themes of the South Kensington ZEN+. The ERCG organisations were mapped against proxies for each theme, as per the table and graph below. To determine the upper and lower boundaries for each level of impact, data for visitor numbers, turnover and land ownership were collated where possible for each organisation. The graph below highlights the concentration of medium and high impact across Zero Emissions, Circular Economies and Sustainable Travel: with a lower degree of impact across Nature Positive.

TABLE 4 OVERVIEW OF THE PROXIES APPLIED WITHIN THE MATERIALITY FOR EACH THEME.

LEVEL OF IMPACT	ZERO EMISSIONS Revenue (£)	NATURE POSITIVE Land owned (hectares)	CIRCULAR ECONOMIES Revenue (£)	SUSTAINABLE TRAVEL
LOW	<5,000,000	<1	<5,000,000	Employee commute only
MEDUIM	5,000,000 – 10,000,000	1-10	5,000,000 – 10,000,000	Visitor and student – <500,000
HIGH	>10,000,000	>10	>10,000,000	Visitor and student commute - >500,000

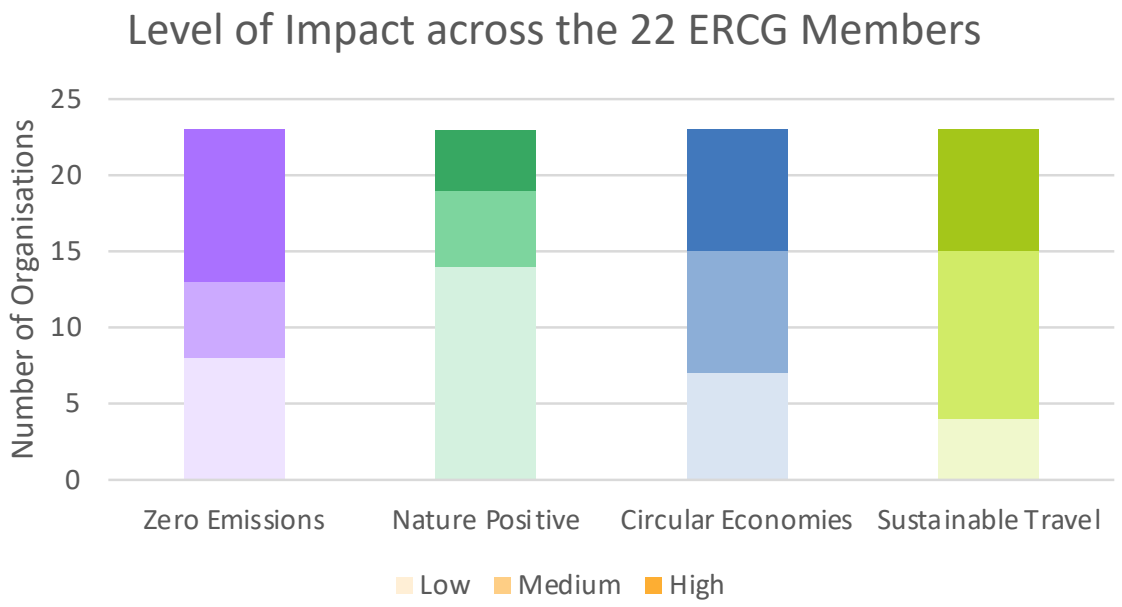


FIGURE 17 CHART DEMONSTRATING THE MATERIALITY OF THE ERCG ACROSS EACH THEME

It should be noted that this mapping serves as a high-level indication and is subject to inaccuracy. For instance, the use of a land-based proxy for Nature Positive does not consider the significant impacts of organizational procurement and supply chain on the likes of biodiversity (Bull et al., 2022). However, each organisation interviewed agreed with this method and their impact on each theme, so we had no evidence to suggest this was inaccurate as a proxy.

8.2 WORK STAGE 2: INTERVIEWS – VALIDATION OF FRAMEWORK PRINCIPLES AND REQUIREMENTS

The reporting principles and requirements, as per section 8.1, were presented and discussed with the participating organisations. There was agreement in principle across all elements of the principles and

requirements. The boundary and reporting on Nature Positive garnered the most discussion. Regarding the boundary, there was caution over the specific activities of inclusion (i.e., the inclusion of leased assets in which direct operational control is not apparent). The specificity of the boundary with regards to organizational activities will be defined further within detailed reporting framework.

Regarding Nature Positive, it was highlighted that there were gaps in reporting against the theme within the external reporting requirements and the current best practice (see 6.2.5 and 6.3.2). Fundamentally, each participating organisation concluded that biodiversity reporting is currently too complex to consider within the scope, but all recognised the significance of this theme and were keen to explore further outside of the reporting framework. Therefore, zero emissions, sustainable travel and circular economies will underpin the framework.

Further discussion regarding the approach of each organization in fulfilling their reporting requirements highlighted constraints, as listed below. Considerations to address these constraints are taken within the detailed reporting framework.

→ *Differing Reporting Timelines* – it was highlighted that reporting timelines (particularly between GGC and ARA) are not aligned.
→ *Differing Reporting Inputs* – across all external reporting requirements the inputs differ, causing duplication and extensive data processing when submitting data against multiple external reporting requirements.
→ *Lack of Reporting Purpose* – it was highlighted that the reporting organisations were, in the most part, uncertain of the purpose for reporting against the particular external reporting requirements and how the data was influencing wider sustainability strategy.

8.3 WORK STAGE 3: DETAILED REPORTING FRAMEWORK

The reporting framework developed is detailed within this section for each of the South Kensington ZEN+ themes: Zero Emissions, Circular Economies and Sustainable Travel. The reporting framework was developed with respect to the themes goals to ensure relevance to the initiative's decision-making.

The activities for each section were chosen based on current frameworks (GHG Protocol) and best practice where available and adopted to best suit this framework.

8.3.1 ZERO EMISSIONS FRAMEWORK

Goals

The table below outlines the zero emissions framework with respect to the goals, as follows.

→ Become a net-zero neighbourhood before 2040.
→ Reduce emissions from our operations by [50%] by 2030.

Baseline Year

All activities in the zero emissions program, with the exception of carbon offsets, will use 2023 as the baseline year to ensure equal opportunity for organisations to collect data. Carbon offsets does not require a baseline year.

Output Data

The reported data for all activities excluding carbon offsets, will be a carbon emissions and intensity ratio (units being tCO2e and tCO2e / £ revenue, respectively) and the operational carbon emission reduction, measured by percentage. The rationale for this is that it will measure reduction of carbon emissions over time and normalise carbon emissions relative to size of organization.

The reported data for carbon offsets will be net carbon emissions (tCO2e) and intensity ratio (tCO2e emissions / tCO2e of removals). The rationale for this is that it measures carbon balance over time and normalises carbon emissions relative to carbon removals.

TABLE 5 OVERVIEW OF THE TIERED REPORTING FRAMEWORK FOR ZERO EMISSIONS, WITH EXAMPLE INPUT DATA

ACTIVITY REPORTED	INPUT DATA			POST-PROCESS DATA
	PROXY DATA SOURCE – TIER 1	TYPICAL DATA SOURCE – TIER 2	IDEAL DATA SOURCE – TIER 3	
FUEL COMBUSTION (1)	Fuel consumption, £	Metered utility bills, kWh consumption	Fuel consumption, litres or tonnes	tCO2e
OWNED TRANSPORT (1)	Fuel consumption, £	Distance travelled, km	Fuel consumption, litres	tCO2e
PURCHASED ELECTRICITY AND HEAT/COOL (2)	Fuel consumption, £	Metered utility bills, kWh consumption	Sub-metered utility bills, kWh consumption	tCO2e
PURCHASED GOODS AND SERVICES (3)	Total spend (analysed with average benchmarks), £	Annual spend by category (e.g SIC code), £	Supplier specific emissions data per product, tCO2e	tCO2e
CAPITAL GOODS (3)	Cost of construction/on capital projects, £	Construction projects - Embodied CO2 estimates (informed by approach), tCO2e	Construction projects - Detailed LCA per project, tCO2e	tCO2e
FUEL- AND ENERGY-RELATED ACTIVITIES (3)	-	Fuel consumption, kWh	-	tCO2e
WASTE DISPOSAL (3)	Estimated waste, tonnes	Waste, tonnes, per stream	Site-specific emissions data from waste management companies	tCO2e
BUSINESS TRAVEL (3)	Cost of travel by staff, km	Distance travelled by staff, per mode, km	Distance travelled by staff, per mode and per class, km	tCO2e
VISITOR TRAVEL (3)	No. of visitors	Distance travelled, per mode, km	Distance travelled, per mode and per class, km	tCO2e
EMPLOYEE COMMUTING (3)	Distance travelled, km	Distance travelled, per mode, km	Distance travelled, per mode and per class, km	tCO2e
CARBON OFFSETS PURCHASED	Offsets purchased, £	Certified removals offsets purchased and accounted for purchased, £	Certified removals offsets purchased and accounted for, tCO2e	Offsets purchased, tCO2e

8.3.2 CIRCULAR ECONOMIES FRAMEWORK

Goals

The table below outlines the circular economies framework with respect to the goals, as follows.

→ Reduce waste and recycle at least [75%] of our business waste by 2030.

Baseline Year

All activities, excluding 'waste directed to/diverted from disposal', in the circular economies program will use 2023 as the baseline year to ensure equal opportunity for organisations to collect data.

TABLE 6 OVERVIEW OF THE TIERED REPORTING FRAMEWORK FOR CIRCULAR ECONOMIES, WITH EXAMPLE INPUT DATA

ACTIVITY REPORTED	INPUT DATA			POST-PROCESS DATA	OUTPUT DATA		
	PROXY DATA SOURCE – TIER 1	TYPICAL DATA SOURCE – TIER 2	IDEAL DATA SOURCE – TIER 3		REPORTED DATA	RATIONALE	BASELINE YEAR
WASTE GENERATED	Waste benchmarks and assumptions	Total waste tonnes	Waste, tonnes, per waste type	Waste, tonnes, per waste type Waste, tCO2e, per waste type	Reduce waste - % change of waste generated year-on-year, per good type	Measures reduction of waste produced overtime	2023
MATERIAL CONSUMED	Purchase of goods, £, per good type	-	Purchase of goods, tonnes, per good type	Purchase of goods, tonnes, per good type	Reduce waste - % change of goods consumed (purchased) year on year, per good type	Measures the efficiency of material use as a proportion of the material consumed	2023
WASTE DIRECTED TO/DIVERTED FROM DISPOSAL	-	Waste, tonnes, per stream	-	Waste, tonnes per stream Waste, tCO2e, per stream	Recycle at least [75%] of our business waste by 2030 - % proportion of waste per destination % GHG savings through use of recycled material input	Measures the organisational circularity of material post-use	N/A

8.3.3 SUSTAINABLE TRAVEL FRAMEWORK

Goals

The table below outlines the sustainable travel framework with respect to the goals, as follows.

→ Increase sustainable and active travel for staff, students, residents and 20m+ visitors.
→ Make transport for [all] our deliveries and services net zero by 2040.

TABLE 7 OVERVIEW OF THE TIERED REPORTING FRAMEWORK FOR SUSTAINABLE TRAVEL, WITH EXAMPLE INPUT DATA

ACTIVITY REPORTED	INPUT DATA			POST-PROCESS DATA	OUTPUT DATA		
	PROXY DATA SOURCE – TIER 1	TYPICAL DATA SOURCE – TIER 2	IDEAL DATA SOURCE – TIER 3		REPORTED DATA	RATIONALE	BASELINE YEAR
Travel distance	-	Distance travelled by staff, per mode	Distance travelled by students and visitors, per mode	Distance travelled to the institution per mode	Increase sustainable travel - % proportion of travel to the institution per mode	Measures change in proportion of travel modes (increasing active and public transport modes).	2023
Internal deliveries and transportation services	Refer to Zero Emissions reporting for scope 1, emissions produced by company vehicles + distance travelled			Emissions from company vehicles, tCO2e	Make transport for deliveries and service net zero - overall emissions from and carbon intensity of company vehicles	Measures the change in emissions from company vehicles	N/A
External deliveries and transportation services (upstream and downstream)	-	No. of suppliers No. of suppliers with net zero service No. of suppliers with net zero targets	No. of suppliers No. of suppliers with net zero service/ targets Distance travelled per supplier	Distance travelled by delivery and transportation suppliers that are net zero or are targeted to be net zero	Make transport for deliveries and service net zero - % proportion of transportation suppliers with net zero services/ targets	Measures the change in net zero deliveries and transportation services	N/A

8.4 WORK STAGE 4: WORKSHOP – DETAILED REPORTING FRAMEWORK

The following section outlines the output of the workshop aimed to review and gain feedback on the detailed reporting framework from the ERCG member participants. During the workshop the participants were presented with each activity reported and their corresponding input and output data and asked to provide input on the following.

1 Activity reported relevant to you?
2 Does the output data sufficiently monitor against the goals?
3 Which tier of input data do you currently belong to?

The following sections outline the response to these questions.

8.4.1 ZERO EMISSIONS WORKSHOP DISCUSSION

With reference to the graph below, a summary of the key discussion points follows – further detailed within the appendix.

→ *Sub-tenants / lodger units* – it was highlighted that there are challenges in the data gathering and apportioning for those who are tenants within another's building units.
→ *Data Confidentiality* – with regards to purchased good and services, it was highlighted that there may be challenges regarding the sharing of purchasing data. Some organisations would prefer to provide the "post processed" carbon data.
→ *Efficacy of Visitor Travel Reporting* – it was highlighted that there is significant complexity in the visitor behaviour and journeys and the apportionment of visitor emissions across the institutions visited, as well as data collection.
→ *Fugitive emissions*: Comments were made regarding potential inclusion of fugitive emissions; however, this can be quite difficult to acquire and peaky.
→ *Offsets* – understanding this will be necessary to reach net zero targets, but no organisation had started this process. Could be an opportunity to approach this as a neighbourhood.

The following graph represents the number of organisations from the workshop who said they would be able to provide data to different quality levels.

With respect to the specific aspects the following discussion were received with received with respect to the different activity categories.

→ *On-site Fuel Combustion (Scope 1)* Some are lodger units with no or little availability of data. Recreation/heritage organisation some data in litres.
→ *Owned Transport (Scope 1)*: Museum/gallery has data but questions its robustness. Local authority can provide emissions but unsure of input data.

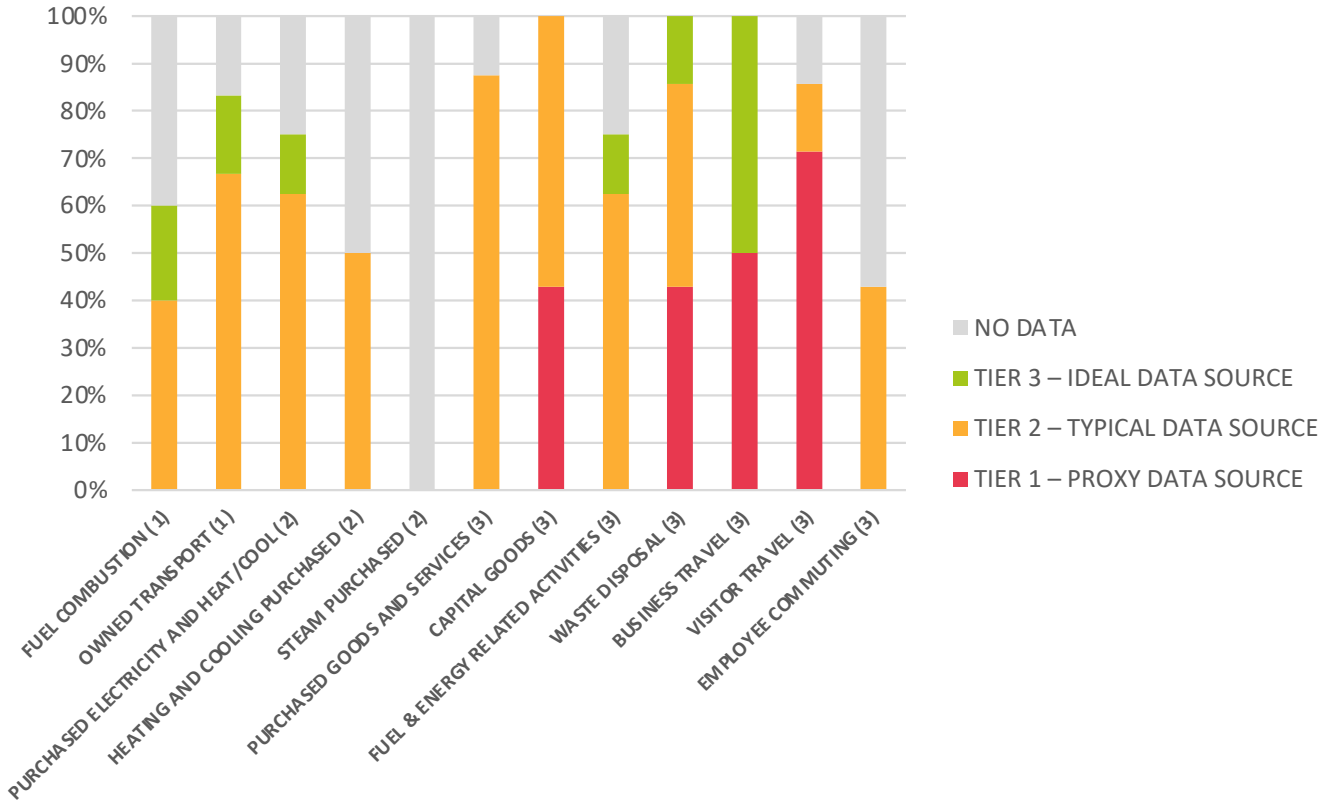


FIGURE 18 ZERO EMISSIONS DATA QUALITY FOR WORKSHOP PARTICIPANTS FOR EACH CATEGORY

- → *Purchased Electricity and Heat/Cooling (Scope 2)*: Data quality was mixed for one museum/gallery who were aiming for sub-metered, but this is not widespread. Lodger units don't know/not relevant.
- → *Steam Purchased (Scope 2)*: Not relevant to all but it was noted that this might be relevant to wider ERCG members.
- → *Purchased Goods and Services (Scope 3)*: All but one had tier 2 data but there was potential reluctance to sharing data for confidentiality purposes. Some expressed desire to just share post-processed data for this.
- → *Capital Goods (Scope 3)*: Some respondees had data in all tiers with respect to capital goods (dependent on project). Some currently report but do this separately out of scope.
- → *Fuel & energy related activities (Scope 3)*:
- → *Waste disposal (Scope 3)*: Some dialogue regarding a lack of trust with respect to site-specific data.
- → *Business travel (Scope 3)*: Some organisations had a mixed quality with data at different tiers with the ambition to be tier 3 for all. Some have a travel booking system which provides reporting, but staff are not mandated to use.
- → *Employee commuting (Scope 3)*: Polarised data quality with either those having done employee travel survey or those who haven't.
- → *Visitor Travel (Scope 3 / Out of Scope)*: General agreement that visitor travel data was challenging to acquire and process with broad

agreement that a standardised approach across the neighbourhood would be beneficial.

8.4.2 CIRCULAR ECONOMIES WORKSHOP DISCUSSION

With reference to the table below, a summary of the key discussion points follows – further detailed within the appendix.

→ *Efficacy of Visitor Waste* – it was highlighted that there is significant complexity in the visitor behaviour and journeys and the apportionment of visitor emissions across the institutions visited, as well as data collection.
→ *Limited Material Consumption Data* – it was agreed that due to the limited availability of material consumption data, the reported activity of material consumed would be removed.
→ *Dependency on External Services/Contractor* – it was highlighted that, though all the participants were able to provide data within at least one of the tiers, the quality of the data is dependent on the waste contractor for which the data quality and availability varies.

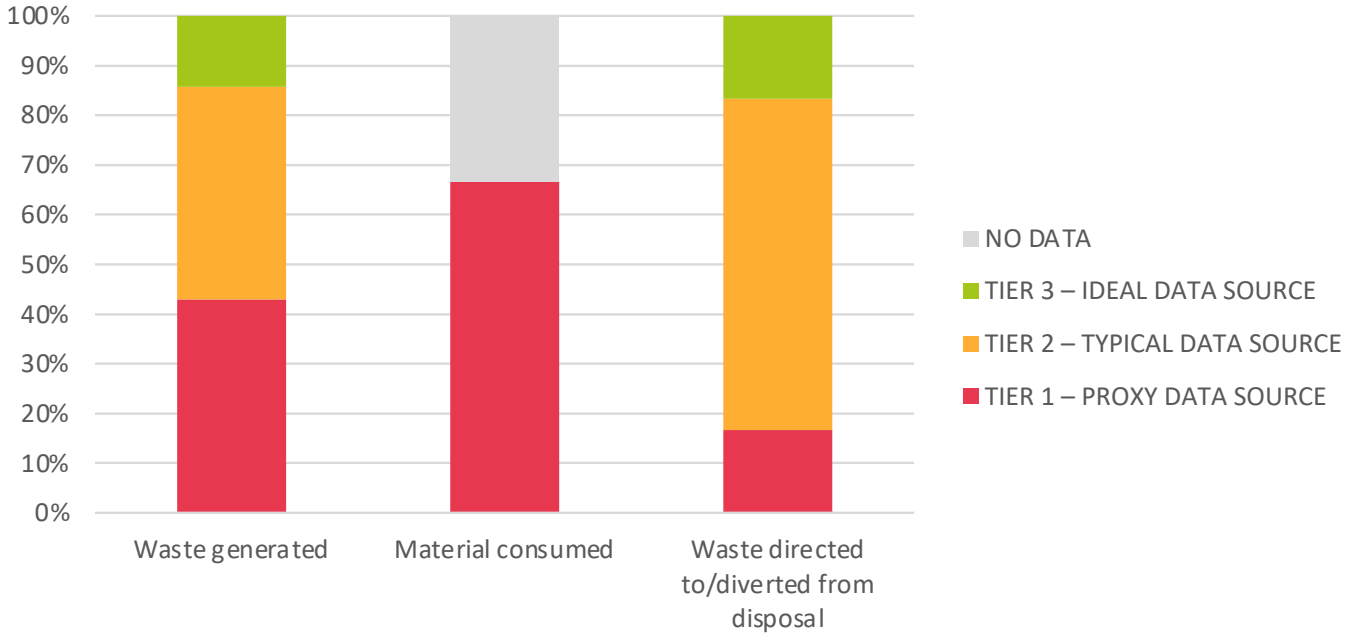


FIGURE 19 CIRCULAR ECONOMIES DATA QUALITY BASED UPON THE RESPONSES OF WORKSHOP PARTICIPANTS

With respect to the specific aspects the following discussion were received with received with respect to the different activity categories.

→ *Waste Generated*: Recreation/Heritage and Local Authority organisations expressed that the responsibility and apportionment of

public waste is a challenge with some organisations potentially would show significant poorly segregated waste.

→ *Material consumed*: Some commented that this is not generally measured but is for specific exhibitions / capital projects. There was general agreement that further guidance would be beneficial here. Reference was made to the learnings from the Design Museums Waste Age Impact Analysis Exhibition. Many buy goods in quantity not weight which is problematic for easy analysis. The category was considered data-intensive and removed from final reporting framework for this scope.

→ *Waste Directed to/diverted from disposal*: A variety of responses highlighted that the waste data is highly dependent on the waste contractor's capability to report.

8.4.3 SUSTAINABLE TRAVEL WORKSHOP DISCUSSION

With reference to the graph below, a summary of the key discussion points follows – further detailed within the appendix.

→ *Efficacy of Visitor/Student Travel Reporting* – it was highlighted that there is significant complexity in the visitor behaviour and journeys and the apportionment of visitor emissions across the institutions visited, as well as data collection.

→ *Dependency on External Services/Contractor* – it was highlighted that, reporting on the travel impacts of external services/contractors would be a significant challenge and require extensive engagement – it was agreed that this would be removed from the reporting framework and explored at a neighbourhood level.

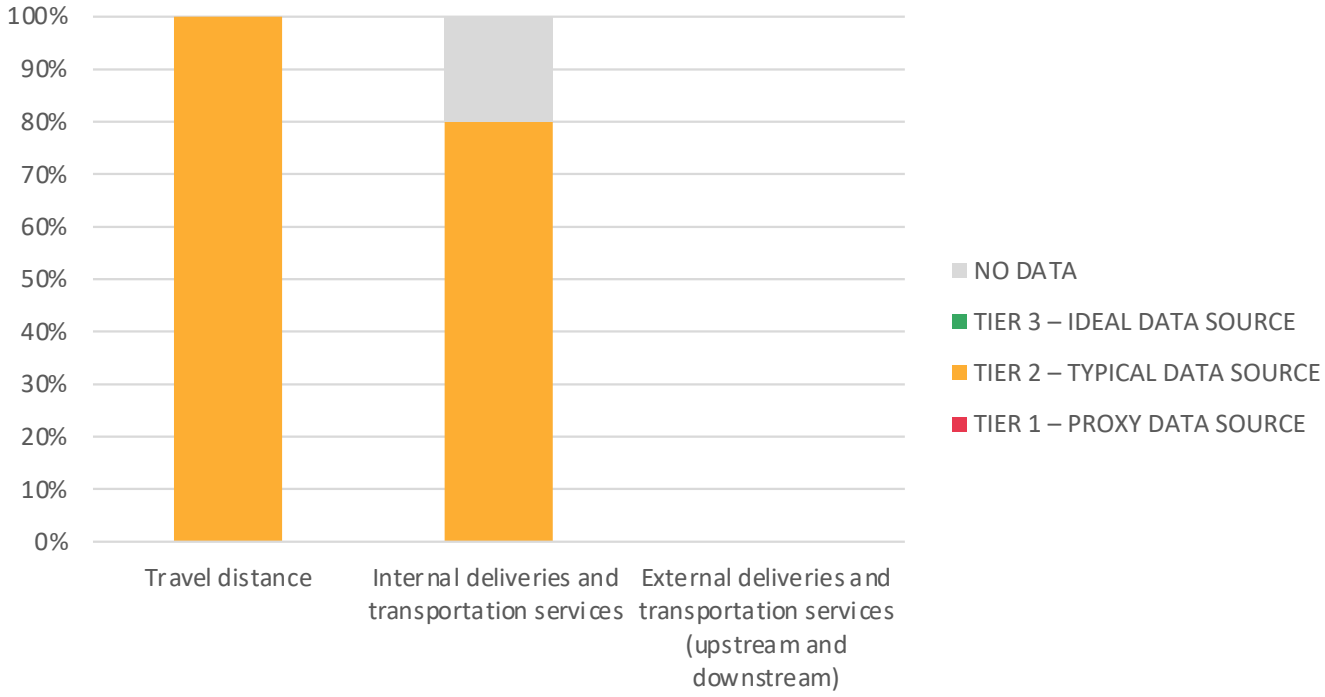


FIGURE 20 SUSTAINABLE TRAVEL DATA QUALITY BASED UPON THE RESPONSES OF WORKSHOP PARTICIPANTS

With respect to the specific aspects the following discussion were received with received with respect to the different activity categories.

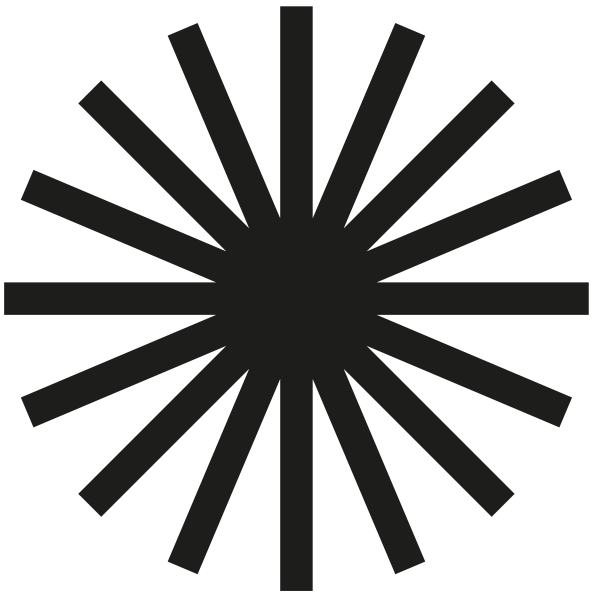
→ *Travel Distance*: Monitoring travel beyond employee commuting (i.e., students and visitors) is challenging and was proposed to be considered at a neighbourhood level.
→ *Internal deliveries and transportation services*: Dialogue was related to reporting for scope 1, emissions produced by company vehicles + distance travelled, but other suggestions included requesting information from couriers and delivery services procured through others.
→ *External deliveries and transportation services (upstream and downstream)*: Reporting supplier performance is challenging and require extensive engagement removed from the reporting framework at this stage.

8.4.4 SUMMARY OF KEY DISCUSSION POINTS

Feedback from the detailed reporting framework showed there is huge variety in the availability of accessible data for each organisation, with some having ideal data for some inputs and no data for others. This shows that for the framework to be applicable to everyone, and generalisable to other cultural areas, it must involve a tiered approach to gain the maximum engagement. There were some areas where collecting data is difficult for every organisation and it therefore was agreed these categories should be omitted until data collection is easier/more accessible. The range of data also highlights the lack of policy currently available for organisations. Furthermore, there was a general understanding of the difficulty of collecting visitor surveys. Although one museum/gallery conducted exit surveys, there was little information on the wider visitor travel patterns in South Kensington or how to approach collecting this. However, all members agree on the significance of measuring this aspect and propose that a neighbourhood-based approach may be the most effective way to address it. Collaboratively addressing this issue could potentially carry more weight in advocating for action from transport companies like TfL.

Collecting data on scope 3 emissions from external suppliers has proven to be challenging for all organisations. As it is likely many organisations would share the same suppliers, this also provides an opportunity for collaboration, and for learning across members. For instance, one organisation has a waste supplier that provides detailed information regarding their waste streams, whereas other organisations lack any reliable data into their waste. Collaborating here has the potential to reduce operating costs across South Kensington, as well as supporting other goals such as reducing congestion.

9
Conclusion and AOI



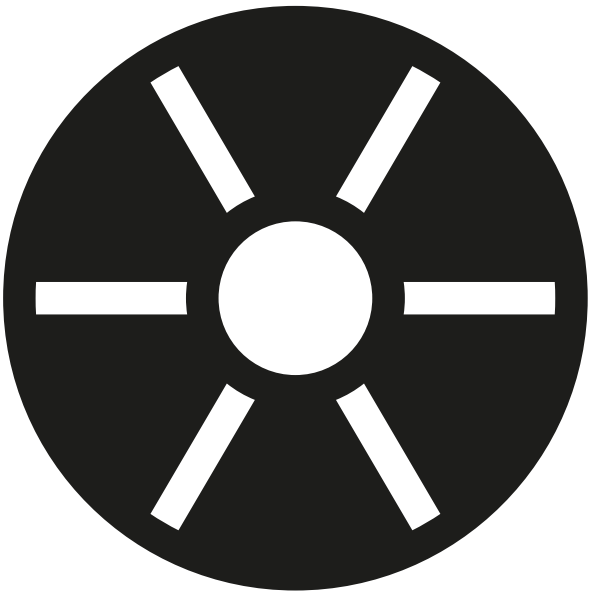


FIGURE 21 CAPTION TO GO HERE

The following section explores the case study and the implications of the observations on the AHT sector, DCMS' areas of interest and policy evidence.

9.1 REPORTING FRAMEWORK DEVELOPMENT – KEY CONSIDERATIONS

DCMS currently only request for sustainability reporting against the organisations that it funds in line with the Greening Government Commitments. There is no reporting or baselining conducted across the wider AHT sector by DCMS or its partners. As such, this case study demonstrates how DCMS might approach the development of a sustainability reporting framework and, in particular, the key considerations that should be taken.

The key areas of considerations in developing a sustainability reporting framework are listed, as follows.

- *Goals* – the overarching goals the reporting participants are aiming to achieve should be set out to not only form the foundation of the reporting framework but to also set out the intention and relevance of reporting clearly to its participants. It was noted that the participating organisations who currently report against DCMS reporting requirements (Greening Government Commitments) are unaware of intention of this reporting and the resulting decisions that are made or influenced as a result.

2 *Scope* – the scope of activities reported should be relevant to the reporting participants, but also inclusive of all the participants. The case study demonstrated that, though the majority of the participants confirmed relevance of the proposed reporting activities, not all activities were relevant to all participants.
3 *Boundary* – the boundary of the reporting activities should be clearly defined. The case study demonstrated the complexity of defining boundaries within a wide range of institution types, particularly with regards to activities carried out by visitors and customers.
4 *Data Variability* – the level of data variability required will depend on the data quality and availability of the reporting participants as well as the provision of data from external suppliers (i.e., waste tonnes provided by waste contractors). The case study demonstrated the variability in data availability and quality across a diverse range of organisations. It was concluded that a tiered approach allowed for the data variability to be accommodated without hindering the ability to report, whilst also providing a pathway for institutions to develop more mature reporting capabilities.
5 *Approaches to Data Unavailability* – in some cases, the organisation highlighted uncertainty in the provision of any data sources (tier 1-3). Suitable approaches for those with no data is not currently clear and it is recommended that this could be something that emerges through the application of the developed framework which could then be adopted initial for those across the AHT sector.
6 *Data Sharing* – the data reported is often confidential in nature, though not necessarily reported out in a confidential unit (i.e., spend on products and services maybe confidential but reported as resulting carbon emissions which is not considered confidential). The case study demonstrated participants concerns regarding the submission of potentially confidential data; data processing and handling should be well structured and transparent. Appropriate data sharing is important to enable learning, but current approaches do not facilitate or incentivise this.
7 *Alignment with Other Reporting Requirements* – organisations may be subject to request for sustainability reporting by other bodies and the impact on the reporting organisations time and effort to support the growing number of requirements should be considered. The case study demonstrated that approximately half of the ERCG members are subject to at least one of four external reporting requirements and currently the data requested for reporting varies even when the assumed intent of requesting the information is the same. The reporting requirements were aligned with where possible to reduce duplication in effort and time for reporting organisation who are often under resourced.

9.2 SCALABILITY AND GENERALISABILITY TO AHT SECTORS

The tiered reporting approach has exhibited both scalability and generalizability, as demonstrated by the positive feedback across diverse participating organisations. This adaptable method empowers organizations at distinct stages of maturity and reflects its applicability

towards the arts, heritage, and tourism sectors to submit differing levels of data, which can then be transformed into meaningful and comparable units.

Moreover, the inclusion of holistic reporting activities in the approach increases coverage across diverse organizational types. As organizations within these sectors possess distinct operating models, the holistic reporting approach allows each entity to report on relevant activities in a manner that accurately reflects their unique context and operations.

9.3 IMPLICATIONS ON AREAS OF INTEREST

9.3.1 HOW CAN STANDARD METHODOLOGIES ON MEASURING GREENHOUSE GAS EMISSIONS BE APPLIED TO AHT SECTORS?

Whilst there are a range of mandatory reporting standards that are used by organisations that are required to in the AHT sectors, there is a noticeable scarcity of accessible and structured data to assess the AHT sectors' impact on climate change and their contributions to net-zero objectives. Some voluntary movements are emerging internationally such as the Galleries Climate Coalition (GCC) (GGC, 2023), which includes templates for reporting. However, the ability to accept different data qualities does not yet exist and how the data can be used in a peer-to-peer manner across different organisations is unclear. The ability to access structured data and associated analysis that could enable peer-to-peer learning and improvement also does not yet exist. This case study demonstrates a potentially scalable and generalisable reporting framework to address this as well as track progress against shared sustainability goals, recognising best practice and encouraging both creative competition and collaboration.

9.3.2 WHAT KINDS OF NEW SUSTAINABILITY TECHNIQUES AND MEASURES NEED TO BE DEVELOPED SPECIFICALLY FOR AHT SECTORS?

This study illustrates the creation of a reporting framework by melding recognized best practices with insights from a broad spectrum of stakeholders. These participating organizations showcased significant disparities in terms of turnover, staff count, sector, and reporting maturity. The emerging needs from these diverse organizations have been explicitly considered as the foundation for the framework's development, with ongoing testing carried out through interviews and workshops during its evolution.

Although the application of the reporting framework for annual data collection and reporting is yet to be tested (with a plan to commence this over the forthcoming 12 months), the incorporation of diverse organizations' input bolsters its anticipated generalizability and scalability across varied sectors, including AHT. Testing within the ERCG will offer valuable insight into its generalizability. However, additional testing and research with a wider and more diverse set of organizations, beyond the South Ken ZEN+ initiative, would prove beneficial.

It is proposed to invite other clusters of organizations, those with common historical and geographical ties, to partake in an expanded second phase

of the reporting framework's trials. This broader participation will further enhance the testing and potential refinement of the framework.

9.3.3 ASSESS AND EXPLAIN THE IMPACT OF AHT SECTORS ON CLIMATE CHANGE AND CONTRIBUTION TO NET ZERO OBJECTIVES. WHAT WORKS TO MITIGATE THE SECTORS' IMPACT TO CLIMATE CHANGE AND ACHIEVE THESE OBJECTIVES?

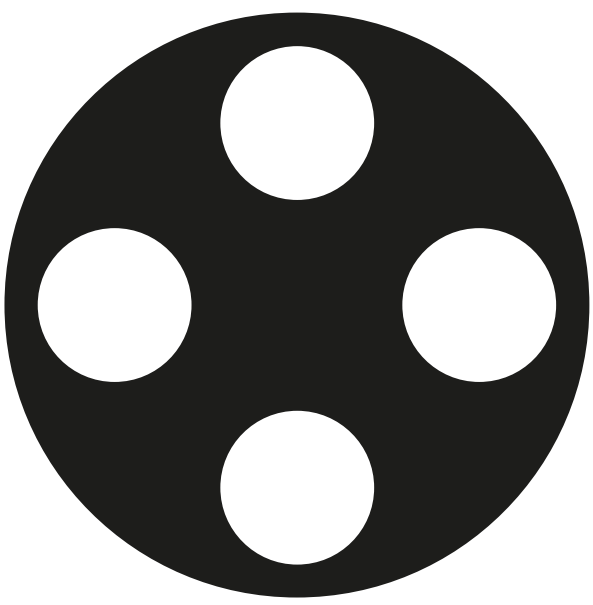
This study underscores specific hurdles encountered by the AHT sectors, suggesting the need for innovative techniques and strategies. These include:

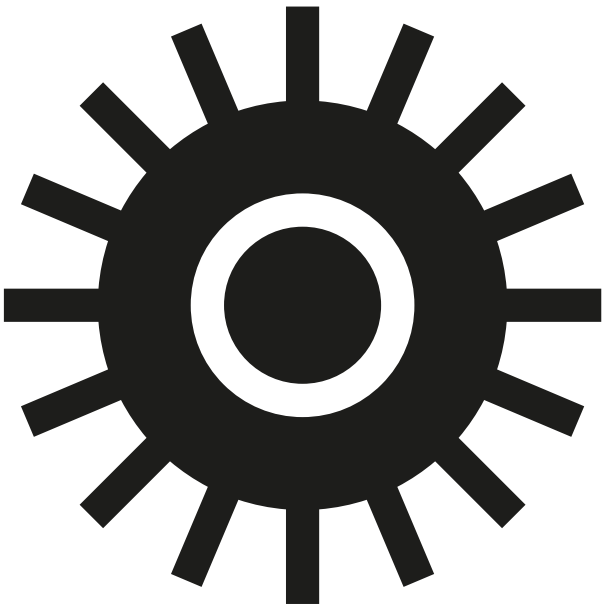
- → Emission Reduction within Heritage Assets: Heritage assets, often comprising large structures with listed fabric, uninsulated fabric, and extensive single glazing, present particular challenges. These features can lead to substantial heating requirements, which are difficult to minimize and, in some cases, tough to electrify or equip with heat pumps. Electrical capacity can also pose challenges for such enhancements, necessitating external upgrades to aid their decarbonization process.
- → Unified Offset Approaches: Within the sector, and partially due to the aforementioned challenges, there's a common understanding that carbon emission offsets or removals may be necessary to meet net-zero targets. However, there lacks a unified approach, leading to apprehension across the sector. It has been voiced that a consolidated, robust approach would be beneficial, minimizing individual organizations' risk in this contentious area.
- → Visitor Behaviour: The complexity of visitor behaviour, journey patterns, allocation of visitor emissions across visited institutions, and data collection processes are significant considerations. Currently, none of the participating organizations report on visitor impacts within a sustainability context, prompting the need for novel techniques. These include outlining visitor journey boundaries, accounting for visitor activities, and allocating visitor impacts. Although there are compelling reasons to exclude visitor travel emissions due to lack of control, organizations could introduce measures to reduce them. For instance, offering discounts or lower pricing, improving accessibility of active and public transportation modes (e.g., cycle storage, showers), and focusing more on local and regional markets rather than international tourism. Nevertheless, the financial repercussions on the institutions and broader economic implications would also require evaluation.

9.3.4 WIDER IMPLICATIONS ON POLICY AND EVIDENCE GAPS

The department's established sustainability goals include fulfilling Greening Government Commitments, guaranteeing that the estate, activities, and policies contribute to climate change mitigation, resilience, and adaptation, collaborating with Arm's Length Bodies (ALBs) to curb fossil fuel emissions, and examining the environmental impact of sectors to pinpoint mechanisms for sustainability and a transition to net-zero emissions. However, an evidence gap persists regarding the sector's environmental impact. This information is crucial for shaping sector-specific policies and for motivating and encouraging the sectors' shift towards net-zero emissions.

10
Further Questions & Research Areas





The following section outlines the further questions and research areas proposed to develop upon this paper.

10.1.1 PROPOSED NEXT STEPS (INCLUDING TIMESCALES)

It is proposed that the draft reporting framework is progressed as part of the South Kensington ZEN+ initiative. This will consist of rolling out the reporting framework as per the "implementation and training of the reporting framework" proposed further research in section 4.6.2. This will culminate in the first South Ken ZEN+ annual sustainability report as per the chart, below.

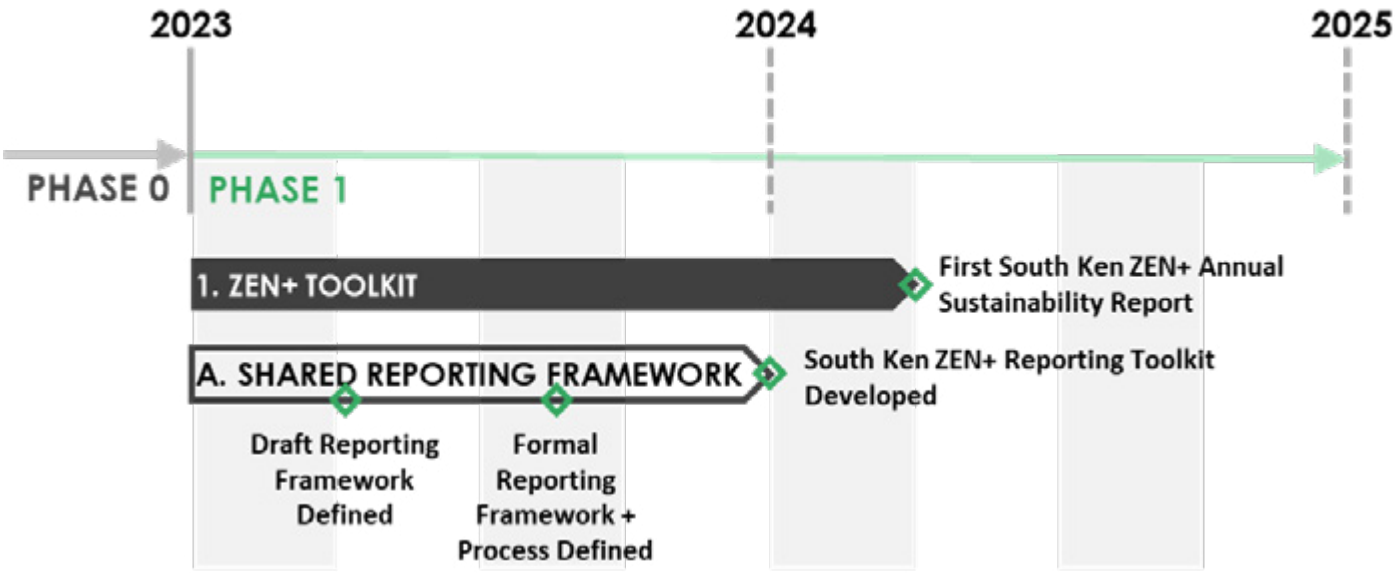


FIGURE 22 PROPOSED NEXT STEPS FOR TESTING THE IMPLEMENTATION OF THE REPORTING FRAMEWORK

10.1.2 FURTHER QUESTIONS AND RESEARCH AREAS (REFLECTION ON AREAS OF INTEREST)

While this study offers strategies and valuable insights to address the sustainability ARIs, it has yet to fully enrich the evidence base required to answer these questions. Additional inquiries and research areas should consider the following:

→ *Implementation and Training of the Reporting Framework*: It is suggested that the initial reporting framework is employed within the ERCG to evaluate its suitability within the confines of the South Ken ZEN+ initiative. Furthermore, we propose to invite other clusters of organizations, especially those with shared historical and geographical ties, to join a broader second phase. This phase is intended to further test the reporting framework, broadening its application, and fine-tuning its effectiveness within the wider AHT sector.

→ *In-depth Investigation into AHT Sector's Distinct Sustainability Measure Limitations*: It is recommended to carry out additional research into strategies for reducing emissions within the limits of heritage assets, establishing a uniform approach to offsets, and developing methods to measure, record, and influence visitor behaviours.
→ *Examination of the Environmental Impact Across the Sector*: It is suggested to conduct an exhaustive study to comprehend the environmental impact throughout the industry. This investigation will set a benchmark that will guide policy decisions within the sector and expedite the industry's shift towards net-zero emissions.

11
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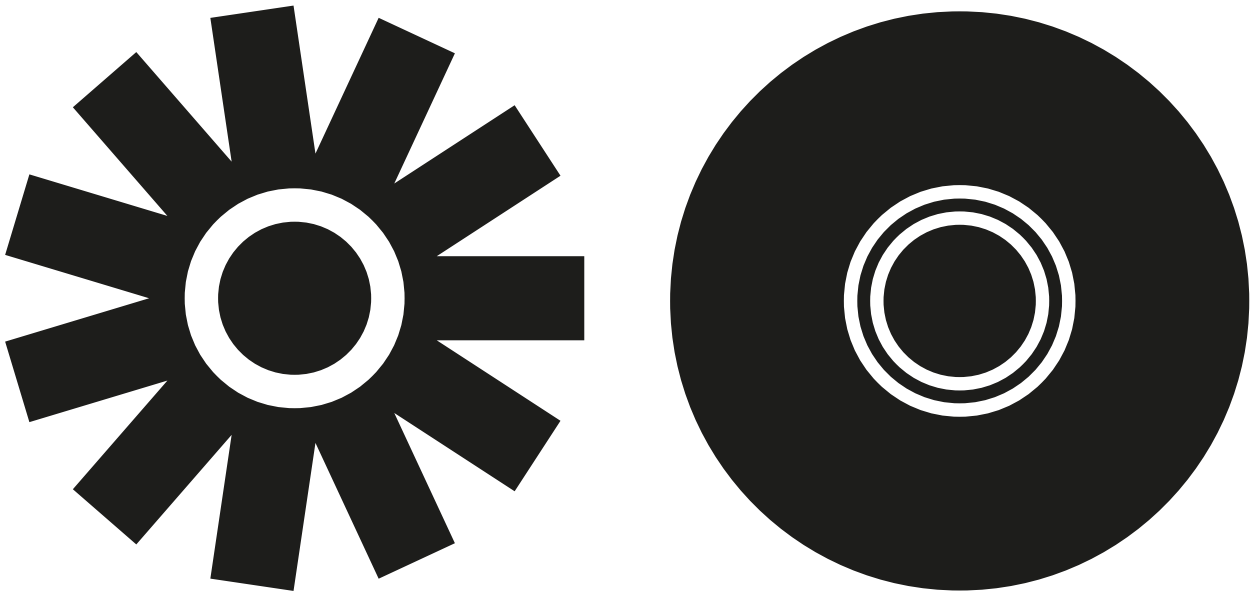

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12
Appendix

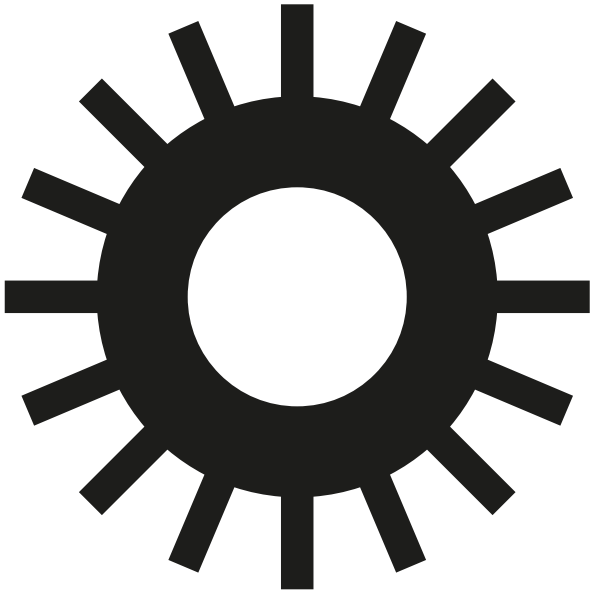

TABLE 9 ERCG MEMBERS

SECTOR	INSTITUTION
Education	Goethe-Institut
	Imperial College
	Institut Francais
	Royal College of Art
	Royal College of Music
Local Authority	Royal Borough of Kensington & Chelsea
	Westminster City Council
Museum/Gallery	Cromwell Place
	Design Museum
	Natural History Museum
	Science Museum
	Serpentine Gallery
	V&A
Property Management	South Kensington Estates
Recreation/Heritage	Japan House London
	Kensington Palace
	The Royal Parks
Religious Centre	Ismaili Council UK
Society/Institution	Royal Commission 1851
	Royal Geographical Society
	Royal Society of Sculptors
Venue	Royal Albert Hall

TABLE 10 OVERVIEW OF REPORTING REQUIREMENTS AGAINST THE GHG PROTOCOL SCOPES AND ACTIVITIES

	GHG PROTOCOL	GGC	HM TREASURY	HESA	SECR
SCOPE 1	Fuel combustion	✓	✓	✓	✓
	Owned transport	✓	✓	✓	✓
	Process and fugitive emissions		✓		
SCOPE 2	Purchased electricity and heat/cool	✓	✓	✓	✓
SCOPE 3 (UPSTREAM)	Purchased goods & services			✓	✓
	Capital goods			✓	
	Fuel & energy related activities				✓
	Transportation and distribution				✓
	Waste generated in operations	✓	✓	✓	✓
	Business travel	✓	✓	✓	✓
	Employee commuting		✓	✓	✓
	Leased assets				✓
SCOPE 3 (DOWNSTREAM)	Transportation and distribution				✓
	Processing of sold products				✓
	Use of sold products				✓
	End-of-life treatment of sold products				✓
	Leased assets				✓
	Franchises				✓
	Investments				
SCOPE 1, 2 & 3	Total scope 1, 2 & 3				✓

LEGEND:

✓ MANDATORY REPORTING

✓ OPTIONAL REPORTING

BLANK – NOT REPORTED.

TABLE 12 OVERVIEW OF FEEDBACK COLLATED DURING THE WORKSHOP FOR ZERO EMISSIONS.

ACTIVITY REPORTED	INPUT DATA (Numbers denote number of participants who could provide data at specified levels)				COMMENTS
	TIER 1 – PROXY DATA SOURCE	TIER 2 – TYPICAL DATA SOURCE	TIER 3 – IDEAL DATA SOURCE	NO DATA	
Fuel combustion (1)	-	2	1	2	Some are lodger units – little availability for data. Recreation/heritage organisation some data in litres.
Owned transport (1)	-	4	1	1	Museum/gallery has data but questions its robustness. Local authority can provide emissions but unsure of input data.
Purchased electricity and heat/ cool (2)	-	5	1	2	Museum/gallery aiming for sub-metered – already have some. Lodger units don't know/not relevant.
Purchased goods and services (3)	-	7	-	1	Issue over sharing data – some prefer just sharing post-processed data for this.
Capital goods (3)	3	4	-	-	Museum/gallery- some in all tiers – depends on project. Local authority – currently report but do this separately out of scope.
Fuel & energy related activities (3)	-	5	1	2	Thought wasn't important to measure as small impact. Local authority – important to measure due to leaking district heating system.
Waste disposal (3)	3	3	1	-	Recreation/heritage – doesn't trust the site-specific data they have so can only do tier 1 accurately
Business travel (3)	3	-	3	-	Museum/gallery – between tiers, ambition to be tier 3 for all. Have transport (reporting system?) But not mandated to use. Put tier 1 but higher tier for some sites
Visitor travel (3)	5	1	-	1	Visitor travel data challenging - suggestions to explore as neighbourhood
Employee commuting (3)	-	3	-	4	-
Carbon offsets purchased	-	-	-	-	Wider challenge regarding the efficacy of reporting carbon offsets purchased due to the transparency behind the certification schemes and the complexity of the offsetting markets – suggestions of approaching offsets as a neighbourhood.

TABLE 12 OVERVIEW OF FEEDBACK COLLATED DURING THE WORKSHOP FOR CIRCULAR ECONOMIES

ACTIVITY REPORTED	INPUT DATA QUALITY (Numbers denote number of participants who could provide data at specified levels)				COMMENTS
	TIER 1 – PROXY DATA SOURCE	TIER 2 – TYPICAL DATA SOURCE	TIER 3 – IDEAL DATA SOURCE	NO DATA	
Waste generated	3	3	1	-	Recreation/Heritage/Local Authority – responsibility and apportionment of public waste is a challenge.
Material consumed	4	-	-	2	Museum/gallery – not generally measured but is for specific exhibitions. Want further guidance. Recreation/heritage – buy goods in quantity not weight. Category deemed data-intensive, removed from final reporting framework for this scope
Waste directed to/diverted from disposal	1	4	1		It was highlighted that the waste data is highly dependent on the waste contractor's capability to report.

TABLE 13 OVERVIEW OF FEEDBACK COLLATED DURING THE WORKSHOP FOR SUSTAINABLE TRAVEL

ACTIVITY REPORTED	INPUT DATA QUALITY (Numbers denote number of participants who could provide data at specified levels)				
	TIER 1 – PROXY DATA SOURCE	TIER 2 – TYPICAL DATA SOURCE	TIER 3 – IDEAL DATA SOURCE	NO DATA	COMMENTS
Travel distance	-	7	-	-	Monitoring travel beyond employee commuting (i.e., students and visitors) is challenging and was proposed to be considered at a neighbourhood level.
Internal deliveries and transportation services	-	4	-	1	-
External deliveries and transportation services (upstream and downstream)	-	-	-	-	Reporting supplier performance is challenging and require extensive engagement removed from the reporting framework at this stage.

FUTURE
OBSERVATORY