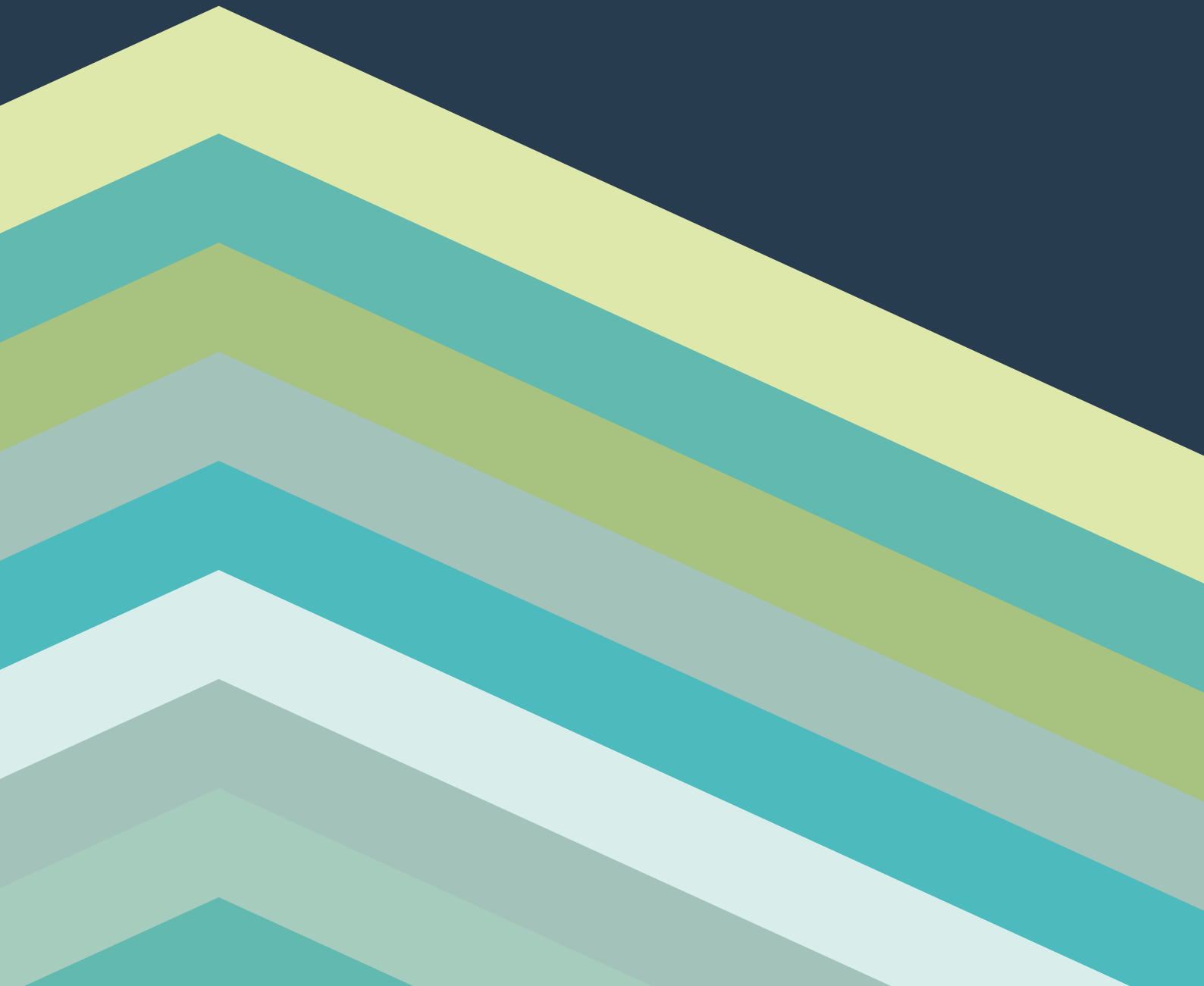


CLIMATE EMERGENCY RESPONSE GROUP

**Committing to delivery:
Certainty and leadership for a
just transition to a net zero,
climate resilient future for Scotland.**

**Briefing Paper:
Net Zero Test**

August 2023



Introduce a Net Zero Test to inform all policy and investment decisions.

SUMMARY of CERG's proposal

The Scottish Government should set out a mandatory 'Net Zero Test' (an iterative process of screening and assessment commensurate with influence and impact on greenhouse gas emissions) to inform all policy and investment decisions. The Programme for Government should make clear the government's commitment to introduce a consistent carbon assessment process for all capital projects and programmes from 2024, with clear accountability procedures and ultimate authority resting with the Cabinet. The screening process would flag related processes for assessing climate risk and just transition opportunities.

As early priorities for 23/24, we recommend the Net Zero Test is applied to the re-prioritisation of the Infrastructure Investment Pipeline and to procurement requirements for major capital projects; and the new Climate Change Plan and Scottish Budget 24/25 are transparent in terms of evidencing the link between policy, investment, and climate targets. Ministers should state when and how the assessment process is applied and scrutinised.

Introduction

This paper is one of a set of four briefing papers published by the [Climate Emergency Response Group](#) (CERG). These papers set out detailed proposals for immediate action on four priority issues which could deliver a significant step-change in the Scottish Government's response to the climate emergency. These priority issues are:

1. Introduce a **Net Zero Test** to inform all policy and investment decisions.
2. **Enable local authorities to unlock the finance needed** to drive action on climate change mitigation and adaptation.
3. Introduce **fiscal levers as part of a coherent strategy to reduce car reliance** and improve places for people.
4. Create the right environment for **commercial building sector commitment to a large-scale retrofit and heat decarbonisation pilot in every Scottish city.**

CERG believes meaningful, measurable action against these four proposals this year is essential to a) meet the 2030 climate targets and b) give businesses, investors and citizens the clarity they need. All proposals are within the powers of the Scottish Government and strongly align with the Scottish Government's wider commitments and priorities.

While each briefing paper stands alone as a single proposal, there are strong overlaps and common themes across CERG's four proposals, including:

- The need for **policy certainty and an enabling environment** that provides the confidence and clarity needed for investors, businesses and citizens to act;
- A focus on **finance** - aligning all public investment with the transition, securing private finance, and delivering financing mechanisms that ensure the upfront costs of the transition are affordable to all;
- Opportunities **for private sector and public engagement** to enable a just transition.

A report containing summaries of all CERG's 2023 proposals is available [here](#).

Structure of the briefing paper

The theme for this briefing paper was selected by CERG members through a scoping and prioritisation exercise based on [CERG's assessment of progress in 2022](#) and the group's understanding of the current policy and political context.

The proposal was developed and ground-tested through an iterative and inclusive process which included further research, stakeholder workshops, expert interviews, discussion with Scottish Government officials and document analysis.

Each briefing paper sets out a clear rationale for why action is required this year and what could be achieved, recommendations for immediate action and how these recommendations should be reflected in the 2023-24 Programme for Government, budget, and other forthcoming Scottish Government announcements. Consideration is given to the resource needs to deliver the recommendations.

Next Steps

CERG members look forward to the opportunity to have an open discussion with Ministers and Scottish Government officials about the recommendations set out in this briefing paper.

The group offers its collective knowledge and experience to the Scottish Government to explore how to turn these proposals into measurable changes that have an impact on investment, capacity and policy delivery and ultimately deliver the net zero, climate resilient economy and society that Scotland needs.



Context and rationale for the proposal

Decisions are taken every day by the public sector which can either support our response to the climate emergency, delay progress, or at worst lock us into high carbon, high risk ways of living and working. With only seven years left in this decade of action on climate, responsible officials and ministers need to:

- build in processes that require net zero considerations to be considered early in all /across project/policy development;
- understand the whole-life carbon impact of policies and projects being proposed;
- understand/ensure compatibility of programmes and spending with Scotland's net zero targets and associated emission reduction trajectory set out in the CCP.

Many organisations, including the UK CCC¹ and the Institute for Government², have called for a 'net zero test'³ to ensure that policies, programmes and budget plans are compatible with delivering net zero emissions. As part of a project exploring approaches to improving emissions assessments of Scottish spending decisions the Fraser of Allander Institute also recommended that the Scottish Government:

'Introduces a Net Zero Test. This will act as a filtering process to ensure that all spending with major emissions implications undergoes a quantitative carbon assessment.'

Requiring a net zero test for policy and investment decisions to support alignment between policy and investment decisions and net-zero ambitions was one of four actions we proposed in our [report](#) in 2022 on unlocking Scotland's response to the Climate Emergency .

In November 2022, following on from the Joint Budget Review (JBR), the Scottish Government made a welcome commitment⁴ to develop and implement a Scottish Government wide Net Zero assessment as part of their response to the JBR:

'...the development of a Scottish Government wide Net Zero Assessment to establish a dedicated carbon assessment process during early policy development stages that will provide increased depth and detail on the climate impact of individual policies and their associated budget allocations.'

In an update⁵ to the Scottish Parliament on implementation of the commitments made in the JBR the Scottish Government set out a proposal to produce a revised climate impact taxonomy approach to the budget and undertake further work on a net zero assessment:

'We are considering options for delivery of a net zero assessment which will be suitable for Scottish Government's policy making process and expect to run a pilot by the end of Quarter 4 of 2023. This will be used as a basis for further development leading to a full roll out of the Net Zero Assessment across Scottish Government in the future.'

¹ [2022 Progress Report to Parliament - Climate Change Committee \(theccc.org.uk\)](https://www.theccc.org.uk/2022/02/22/2022-Progress-Report-to-Parliament-Climate-Change-Committee/)

² [Passing the net zero test | The Institute for Government](https://www.instituteforgovernment.org.uk/publications/net-zero-agenda)

³ [What should a net zero policy test look like? \(endsreport.com\);](https://www.instituteforgovernment.org.uk/publications/net-zero-agenda)
[https://www.instituteforgovernment.org.uk/publications/net-zero-agenda; Passing the net zero test | The Institute for Government](https://www.instituteforgovernment.org.uk/publications/net-zero-agenda)

⁴ [Cabinet Secretary for Net Zero Energy and Transport \(parliament.scot\)](https://www.parliament.scot/cabinet-secretary-for-net-zero-energy-and-transport)

⁵ [Deputy First Minister and Cabinet Secretary for Finance \(parliament.scot\)](https://www.parliament.scot/deputy-first-minister-and-cabinet-secretary-for-finance)



Given tight fiscal constraints, and time running out to meet the 2030 climate targets, CERG believes it is essential that this assessment process is developed and implemented quickly to maximise opportunities to align public funding and policy decisions with supporting the delivery of net zero.

The development of a net zero test/assessment presents a number of opportunities. These include:

Developing a consistent approach to carbon assessment

- Building on a myriad of different greenhouse gas emission assessment approaches and guidance already in use by the Scottish Government and learning from net zero assessment/test approaches that have been adopted in other jurisdictions (e.g. New Zealand, France) to derive a consistent and comparable approach. Existing approaches used by Scottish Government include:
 - Carbon assessment guidance for City Region and Growth Deals⁶ - a ready and tested method for infrastructure projects and can easily be adapted for other applications such as planning and procurement.
 - Appraisal approaches used by Transport Scotland (Scottish Transport Appraisal Guidance (STAG)/Policy Assessment Framework/LA114.⁷ The general requirements of GG103 (Introduction and general requirements for sustainable development and design) are applied, but the Scottish Government should publish a National Assessment Annex⁸ with the Net Zero Test at its heart.
 - A voluntary Net Zero Public Buildings Standard (SFT).⁹
- Aligning with the UK Treasury Green Book guidance that states that all business cases must quantify the whole-life carbon emissions and include the cost of carbon in the economic analysis.
- Supporting adoption and integration of existing standards (e.g. PAS 2080 guidance on cutting carbon emissions in buildings and infrastructure construction, operation and use) which are increasingly used by the public and private sector.¹⁰

Informing policy decisions

- Supporting commitments that the next Climate Change Plan will adopt a more quantitative account of how policies/proposals contribute to the sectoral emission envelopes.
- Forming part of an effective governance framework to support the implementation of the CCP, ensuring that the CCP remains a 'live' consideration in policy and spend decisions on an ongoing basis and updating emission profiles as new monitoring and assessment information becomes available for projects and policies that are developed and implemented.
- Supporting the application of National Planning Framework 4 and associated climate policy priorities including the need for quantitative assessment information as appropriate.¹¹

⁶ <https://www.gov.scot/publications/scottish-city-region-growth-deals-carbon-management-guidance-projects-programmes/>

⁷ Described in more detail in Annex A.

⁸ England and Northern Ireland have published a National Assessment Annex for GG103, but not Scotland.

⁹ [net-zero-public-sector-buildings-standard-full-document-suite \(scottishfuturetrust.org.uk\)](https://www.scottishfuturetrust.org.uk/net-zero-public-sector-buildings-standard-full-document-suite)

¹⁰ International standard for managing carbon emissions in buildings and infrastructure construction, operation and use [Revised PAS 2080:2023 | BSI \(bsigroup.com\)](https://www.bsigroup.com/Revised-PAS-2080:2023). [Scotland's City Region & Growth Deal Guidance states that PAS 2080 should be applied for all infrastructure projects.](https://www.gov.scot/publications/scottish-city-region-growth-deals-carbon-management-guidance-projects-programmes/)

¹¹ <https://www.gov.scot/publications/chief-planner-letter-transitional-arrangements-for-national-planning-framework-4/>



- Supporting the government's commitment to ensure public sector spending delivers wider benefits including a net zero transition.
- Providing a mechanism to integrate, deliver, and realise net zero prioritisation commitments included in the Transport Scotland National Transport Strategy /Sustainable Transport Hierarchy and NPF4 implementation guidance.
- Contributing to addressing concerns raised by Audit Scotland that the Scottish Government needs to improve their climate governance through systematic processes that help integrate and manage key climate risks.¹²

Informing spending decisions

- Supporting implementation of the Scottish Government commitment to further develop the infrastructure investment plan carbon assessment approach for the next Infrastructure Investment Plan¹³ and the recently announced reset/prioritisation of the capital spending project pipeline¹⁴.
- Providing evidence of the 'value for money' of climate policies and programmes - supporting more efficient and time-saving decisions and helping to speed delivery and avoid costs of retrofit or stranded high carbon assets.

Flagging climate risks and just transition opportunities

- Highlighting/signposting projects and programmes that would benefit from further/separate consideration in terms of:
 - Future-proofing for climate impacts with the potential for the screening process to flag up significant issues that may require separate and specific consideration in other processes linked to adaptation and resilience.
 - Securing a just transition with the potential for the screening process to flag up significant issues that may require separate and specific consideration in other processes linked to delivery of the Just Transition Sector Plans.

Many climate solutions result in benefits for biodiversity, health, well-being and jobs. Consistent guidance will lead to more efficient and effective decision-making which will earn the trust and support of the private sector and general public. Experience of building carbon considerations into procurement through Scottish City Region and Growth Deal proposals have already identified examples of cost and carbon savings.¹⁵

While noting opportunities to build PAS2080 into procurement to support net zero compatible infrastructure, separate processes are needed to ensure wider public procurement is aligned to net zero¹⁶. Applying a net zero test early on to inform policy development and business case development will also help inform decisions ahead of reaching the procurement stage.

¹² [How the Scottish Government is set up to deliver climate change goals | Audit Scotland \(audit-scotland.gov.uk\)](https://www.audit-scotland.gov.uk/news/2023/08/how-the-scottish-government-is-set-up-to-deliver-climate-change-goals)

¹³ [Annex C: Carbon Assessment of the Infrastructure Investment Plan - A National Mission with Local Impact: Infrastructure Investment Plan for Scotland 2021-22 to 2025-26 - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/annex-c-carbon-assessment-of-the-infrastructure-investment-plan-2021-22-to-2025-26/pages/annex-c-carbon-assessment-of-the-infrastructure-investment-plan-2021-22-to-2025-26.aspx)

¹⁴ [Scotland's Fiscal Outlook: The Scottish Government's Medium-Term Financial Strategy \(www.gov.scot\)](https://www.gov.scot/publications/scotland-fiscal-outlook-the-scottish-governments-medium-term-financial-strategy/pages/scotland-fiscal-outlook-the-scottish-governments-medium-term-financial-strategy.aspx)

¹⁵ <https://sustainableprocurementtools.scot/index.cfm/case-studies1/the-cross-tay-link-road-reducing-embodied-carbon-through-construction-project-design/>

¹⁶ See CERG report, [Delivering on Scotland's Response to the Climate Emergency, 2021](#) for CERG proposal on mobilising public expenditure to address the climate emergency



Existing Barriers to Delivery

- Lack of a common, coherent carbon assessment process across the public sector leading to confusion, unnecessary duplication of effort and inconsistencies in application of approaches.
- Lack of capacity, expertise, and ready access to data required to undertake carbon assessments.
- Existing governance mechanisms do not provide sufficient oversight or scrutiny.¹⁷
- Perceptions that a net zero test/assessment risks becoming a bureaucratic tick-box exercise rather than a mechanism that can be applied in a proportionate manner to inform effective decision making.
- Concern application could be too narrowly focused on large capital projects and exclude policy and programme assessments.
- Challenges associated with applying, and aggregating, project-by-project emissions assessments to derive an assessment of compatibility with net zero/climate emission envelopes (reflecting, for example, differences in methodologies).
- Challenges around the robustness and comparability of methods.

CERG recommendations to the Scottish Government on developing a net zero test

Currently no single, consistent, coherent and transparent approach is applied to assessing the compatibility of project/programme/policy and spending decisions made by the Scottish Government (or their agencies/wider public sector in Scotland) with net zero. However, a number of existing frameworks, processes, methodologies and standards exist that can support consideration of greenhouse gas emissions to inform project, policy, programme and investment decisions. These include:

- i) Approaches developed and applied by the UK Government/Scottish Government e.g. Treasury Green Book, City Region & Growth Deal Carbon guidance, Infrastructure Investment Plan taxonomy.
- ii) Approaches and standards developed and/or applied by government agencies and local authorities in Scotland e.g. budget tagging.
- iii) Approaches, tools, standards and guidance developed by standards bodies, industry, professional bodies and NGOs e.g. PAS2080, WWF fiscal net zero test¹⁸ (budget tagging/emissions modelling).
- iv) Approaches developed and applied in other jurisdictions e.g. the Climate Implications of Policy Assessment Requirements of the New Zealand Department of the Prime Minister and Cabinet.¹⁹

These existing frameworks, methodologies and standards provide a strong foundation to establish/develop a government-wide approach that can be applied consistently, proportionately and coherently to inform project, policy, programme and spending decisions and support their alignment with net zero. Annex A summarises some key aspects of existing mechanisms net zero assessments/tests.

Key elements/core criteria

A co-ordinated Net Zero assessment needs to respond to the criteria set out in Table 1.

¹⁷ <https://fraserofallander.org/the-scottish-government-needs-a-rethink-to-meet-net-zero-ambitions/>

¹⁸ <https://www.wwf.org.uk/learn/net-zero-test>

¹⁹ [CO \(20\) 3: Climate Implications of Policy Assessment Requirements | Department of the Prime Minister and Cabinet \(DPMC\)](#)

Table 1: Net zero assessment – key elements

Issue	Context	Proposed response
<i>Iterative approach</i>	<i>Existing approaches comprise a mixture of those designed to inform identification and selection of options (including appraisal of need) e.g. City Region & Growth Deals, STAG, PAS2080 and those applied post-decision (e.g. Infrastructure Investment Plan/Budget taxonomy and Carbon Assessment of the Scottish Budget).</i>	Application early in process to inform decision making (ex-ante) accompanied by monitoring/reporting during and after implementation.
<i>Consistency</i>	<i>Different approaches are currently used in differing parts/agencies of the Scottish Government (e.g. Transport Scotland, Enterprise Agencies) and inconsistencies exist in the extent to which standard processes (e.g. application of HM Treasury Green Book methodology) are applied.²⁰</i>	Work towards a standard approach that is applied consistently across government (and over time to the wider public sector). This would relate to screening, metrics, scope, timeframes, baselines benchmarks.
<i>Proportionality</i>	<i>Processes and depth of analysis undertaken as part of current approaches vary considerably. Some significant programmes are subject to a simple qualitative assessment (e.g. Infrastructure Investment Plan) and the application of more detailed quantitative assessments is not necessarily linked to likely emissions impact/potential for significant emission reductions.</i>	<p>All policy, project and programmes (including investment) should be subject to a screening approach requiring consideration of compatibility with net zero.</p> <p>Further analysis should be tiered to prioritise effort/detail towards those with the most significant implications/influence for net zero.</p> <p>The latter should include quantitative assessments of GHG emissions.</p> <p>Emissions implications of major programmes (infrastructure, budget etc) should be related to CCP emissions envelopes.</p>
<i>Transparency (and data)</i>	<i>Much of the information used to produce assessments isn't currently shared/made publicly available. This runs the risk of duplication of effort (e.g. in identifying data), inconsistencies in the application and use of data (e.g. baseline emissions) and hinders external scrutiny.</i>	Publish assessment decisions (screening) and quantitative analysis of GHG emissions (results including approaches). Develop/maintain database/register of relevant benchmarks.

²⁰ [Scottish Government Needs A Rethink To Meet Net Zero Ambitions | FAI \(fraserofallander.org\)](https://www.fraserofallander.org/)



Issue	Context	Proposed response
	<i>Transparency in approach could help support learning across public sector.</i>	
Boundaries/scope	<p><i>Current approaches differ in the scope of emissions that are determined (e.g. terrestrial emissions, whole life emissions, consumption emissions).</i></p> <p><i>Some approaches specify the timeframe that emissions should be considered/calculated over, while others don't (e.g Green Book proposes a 10 year assumption for a typical non-infrastructure intervention, for infrastructure PAS2080 suggests using the whole life of the outcome rather than the asset).</i></p> <p><i>Some approaches make provision for linking to UK Carbon Budgets or Scotland's CCP emission envelope (e.g. LA114, Treasury Green Book).</i></p> <p><i>Some approaches produce quantitative assessments using spend as a proxy (using a variety of categorization approaches) e.g. Scottish Government carbon assessment of the budget, WWF budget modelling).</i></p> <p><i>Some approaches require the social cost of carbon to be calculated/factored into economic appraisal approaches (e.g. Treasury Green Book).</i></p>	<p>Projects/policy/investment should be subject to a whole life GHG emissions assessment.</p> <p>Emissions implications of major capital programmes should be related to CCP emission envelopes and 2030, 2040 and 2045 targets.</p> <p>A more nuanced taxonomy, or budget tagging, approach should be applied to the budget that highlights compatibility with net zero targets/climate change plan emission envelopes (and associated policies and proposals). Over time a more quantitative budget assessment that links to net zero targets/emission envelopes should be developed.</p>
Roll out/wider leverage	<p><i>The commercial environment is increasingly familiar with some approaches/standards and these can be readily integrated into procurement (e.g. PAS2080).</i></p> <p><i>There are examples of approaches that have been used as part of procurement exercises to incentivise approaches to innovation (e.g. Growth Deals – Tay bridge).</i></p>	<p>Embed net zero considerations into procurement (with opportunities to specify standards e.g. PAS2080 as appropriate).</p>
Scrutiny and governance	<p><i>Information produced as part of assessments can be used to support decision making (e.g. UK Treasury requirement for greenhouse gas emissions to be incorporated alongside spending bids as part of spending review</i></p>	<p>Opportunities for outputs to inform decision making, prioritization and support good governance and scrutiny – including:</p>



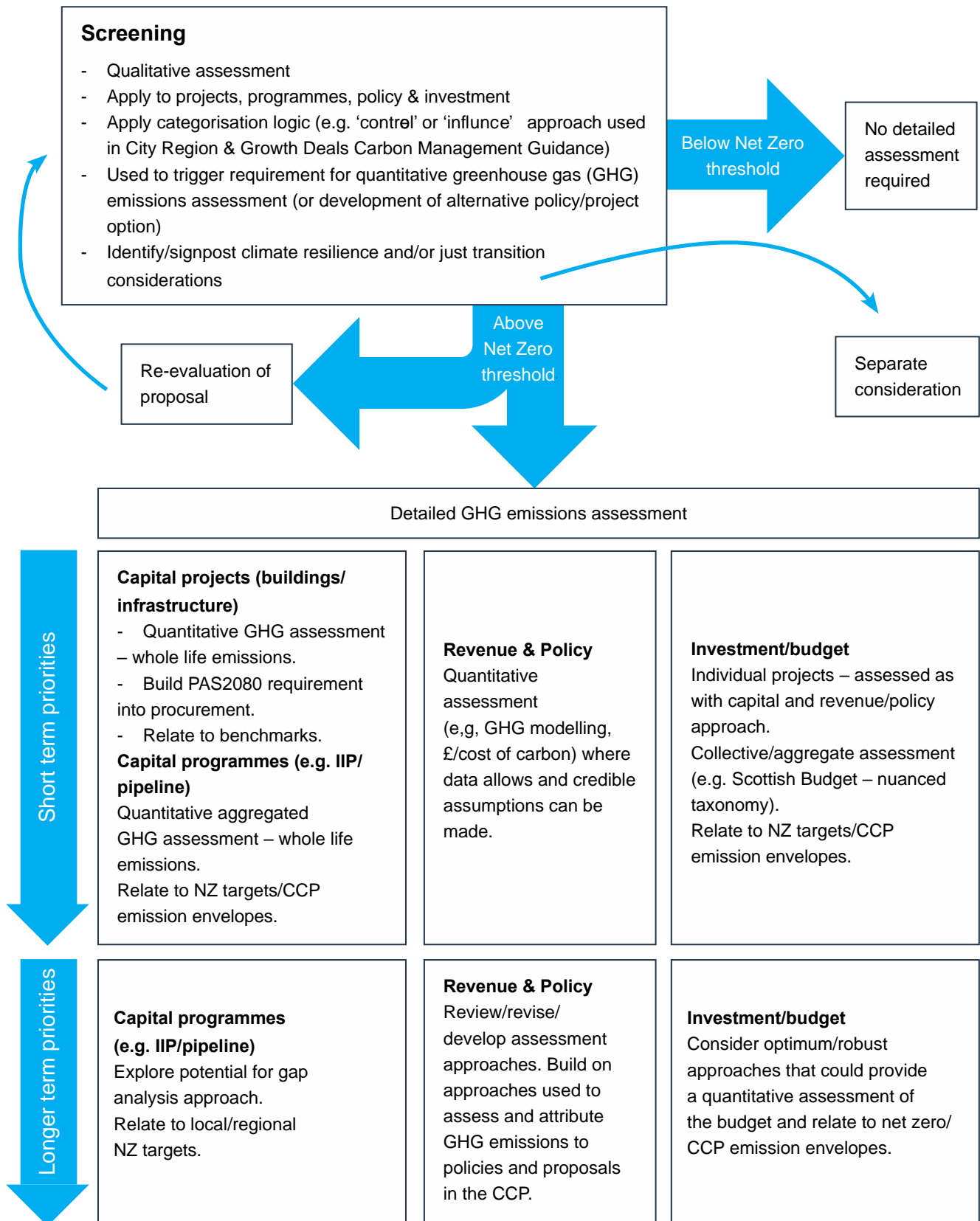
Issue	Context	Proposed response
	<p><i>2021, New Zealand government requirement for greenhouse gas emissions analysis to be presented alongside policy proposals that go to Cabinet and meet certain criteria).</i></p>	<p>establishing and scrutinizing value for money on any climate related policy; and identifying non-climate related policies that may not be in sync with targets.</p> <p>(e.g. internal SG processes Global Climate Emergency Board/Cabinet Sub- Committee on the Climate Emergency, Climate Change Plan governance), Audit Scotland, Scottish Parliament, CCC).</p>

Core elements of a net zero test/assessment framework should include:

- Screening
- Detailed analysis:
 - Quantitative greenhouse gas emissions analysis
 - Relating greenhouse gas emissions analysis to relevant project benchmarks and CCP envelopes/net zero goals
- Guidance and governance

Figure 1 below summarises CERG’s recommended approach to screening and detailed assessment.

Figure 1: Summary of proposed net zero assessment process and priorities



Note: The above diagram refers to a net zero threshold: Annex B in the full proposal includes several examples of how a threshold or criteria are set to determine the requirement for a more quantitative and detailed assessment.



Specific recommendations for each of the core elements for the Net Zero Test.

Screening

A screening approach (qualitative) applied as part of an iterative process in policy and investment development and decision making to support prioritisation of resource. In simple terms, the initial screening stage asks the question: “Is the carbon emission impact of this policy or programme over the appraisal period likely to be positive or negative? Will it be good or bad for the global atmosphere?” The answer has a bearing on the tiered quantitative assessment that follows, e.g. if projects are obviously the ‘wrong side’ of the net zero trajectory they stand out and can be examined further to see if they can be improved and/or reconsidered. The screening process would:

- Require consideration of all potential sources of emissions through application of a ‘control’/‘influence’ or equivalent categorisation framework²¹ in order to understand the anticipated nature of the emission sources associated with the project (e.g. embodied, operational, induced).
- Identify those projects, policies or investments with emissions likely to be above a specific threshold/meet specific criteria²² that should be subject to a quantitative greenhouse gas emissions assessment.
- Signpost projects/programmes/investment that should be subject to separate resilience/risk assessment process (and those with particularly significant just transition implications/opportunities). Adaptation Scotland developed a toolkit for assessing climate risk which was deployed for Glasgow City Region’s City Deal²³, and many international development banks²⁴ have a mandatory climate risk / proofing assessment in place.

Detailed assessment

- **Capital projects and programmes (buildings and infrastructure):**
 - Apply existing mechanisms and approaches to inform the development of capital projects and determine whole-life greenhouse gas emissions (e.g. following Scottish City Region and Growth Deals Carbon Management Guidance, PAS2080).
 - Relate assessments to relevant published benchmarks.
 - Embed requirement to follow PAS2080 into procurement of capital projects/infrastructure.
 - Create aggregate assessments as appropriate (e.g. for the Infrastructure Investment Plan/Pipeline).
 - Relate programme greenhouse gas emission assessments to net zero targets/ emission envelopes set out in the climate change plan.²⁵
 - Over the longer term:

²¹ This framework is incorporated into the City Region and Growth Deals Carbon management Guidance.

²² Annex A summarises how a variety of existing assessment approaches apply a threshold, or criteria, approach to determine the requirement for a more quantitative and detailed assessment.

²³ <https://climatereadyclide.org.uk/report-economic-financial-risk-glasgow/>

²⁴ Example from Asian Development Bank <https://www.adb.org/sites/default/files/publication/621021/sdwp-69-climate-risk-climate-proofing-projects.pdf>

²⁵ Elements of this may be indicative given the boundaries of emissions assessments may not all align precisely those used to determine the net zero targets/CCP emission envelopes and an aggregate assessment would not reflect the implications of project interactions on emissions.



- Explore the potential application of a gap analysis approach (e.g. to infrastructure investment plans)²⁶
- Relate project, programme assessments to local and regional net zero targets.
- **Revenue projects/policy assessments:**
 - Identify and apply most appropriate approach to determine GHG emissions associated with revenue and policy decisions, noting available options to produce quantitative detail include those linked to:
 - Emissions modelling of policies
 - The application of cost information to derive emissions estimates²⁷
 - Linking energy use to greenhouse gas emissions.
 - Ultimately a consistent, comparable approach that enables aggregation and can provide an assessment of compatibility with net zero targets/climate change plan emissions envelopes is required.
- **Major investment/fiscal programmes (e.g. budget):**
 - Individual projects – assessed as capital and revenue/policy approaches outlined.
 - Collective/aggregate assessment – develop a more nuanced and detailed taxonomy to relate to/demonstrate compatibility with climate change plan emission envelopes /net zero targets.²⁸
 - Over the longer term identify and apply robust approaches that could provide a quantitative assessment of investment/fiscal programmes and relate this to net zero/CCP emission envelopes in a way that reflects the potential climate impact of the spend.²⁹

For revenue and policy decisions further work is required to confirm the most appropriate assessment mechanism in different circumstances noting the potential that:

- It may be possible to draw on any work underway as part of the CCP development that requires quantitative emissions to be attributed to policies and proposals.
- Quantifiable assessment of revenue projects may not always be possible.

Guidance and governance

Approaches to ensure transparency and effective reporting and monitoring should encompass:

²⁶ Gap analysis provides a mechanism to compare current/planned interventions with those required to achieve a specific reduction target. Further info: [Greenhouse Gas Emissions and Infrastructure Investment Decisions \(climatexchange.org.uk\)](https://www.climatexchange.org.uk)

²⁷ Drawing on the Treasury Green Book Requirements the Scottish City Region & Growth Deals Carbon Management Guidance highlights that ‘whenever cost can be estimated, so can carbon to a similar degree of accuracy.’

²⁸ We recognise the challenges of producing a meaningful aggregate assessment from individual assessments that are derived using different methodological approaches (with different emissions boundaries).

²⁹ WWF have developed an emissions modelling tool that can be applied to determine the emissions associated with fiscal events that draws on economic impact multipliers (for different types of economic policy), cost information and emission intensity factors.

[WWF-UK Net Zero Test Autumn Budget Long Report - 2 February 2022.pdf](#)

- Publication of decisions (screening);
- Publishing GHG analysis (methodologies, results and assumptions);
- Building up a database of appropriate benchmarks to support consistent application.

Effective and robust application of a net zero test will also need to be accompanied by:

- The ability to access guidance, expertise and support in undertaking assessments.
- Mechanisms and capacity that ensures consistency and common standards in the application and presentation of assessments through review and assessment (quality assurance).

Overseeing both of the above functions will require clear ownership of a net zero test within the Scottish Government and associated capacity and expertise. This could possibly sit with the Exchequer, Office of Chief Economic Advisor (OCEA) or elsewhere under the DG Net Zero.

The net zero test process and outcomes (both qualitative and quantitative assessment findings) are well placed to support existing Scottish Government climate governance mechanisms (e.g. GCE Board, Climate Risk Registers, DG Net Zero, Cabinet Sub-Committee on the Climate Emergency).

Table 2: Governance of a net zero test

	Net zero test process	Individual project/policy assessments	Programme assessments (aggregation)	Major cross-Directorate programme assessments (e.g. IIP, budget)
Central SG unit/team	Advice and quality assurance ³⁰ Support monitoring & reporting			
Deputy Directors	Capacity and expertise	Inform design/development of project/policy (and associated prioritisation)	Inform design/development of programmes (and associated prioritisation)	
Director General Net Zero/ GCE Board			Prioritisation/compatibility with net zero targets/CCP emission envelopes Inform performance monitoring and climate risk register/assurance	Prioritisation/compatibility with net zero targets/CCP emission envelopes. Inform performance monitoring and climate risk register/assurance
Directors General, (Executive				Prioritisation/compatibility with net zero targets &

³⁰ This could link to any existing quality assurance frameworks that support business case development, and regulatory/policy impact assessment in the Scottish Government. We note the role that the Regulatory Policy Committee plays in scrutiny of UK government regulatory proposals.



Team), Cabinet Sub-C'ttee on the Climate Emergency				CCP emission envelopes. Implications for wider corporate performance & risks for cross-government programmes.
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The outputs would also support external scrutiny of net zero delivery (e.g. Climate Change Committee, Audit Scotland, Scottish Parliament – including both the Net Zero, Energy and Transport Committee and the Public Audit Committee). In order to mainstream consideration of carbon impacts, governance should be linked to the Scottish Public Finance Manual governance structure for major investments and projects.

Recommendations on embedding the Net Zero Test into the Scottish Government’s policy and investment decisions

Short term priorities

The measures set out below will help ensure value for money public expenditure to reduce emissions, improve resilience to climate impacts, and capture the economic benefits of the net zero economy. CERG would expect to see the Net Zero Test inform the multi-year spending envelopes for capital which will be published alongside the 2024-25 Scottish Budget, with a full and transparent process in place and results published for the Comprehensive Spending Review and Infrastructure Investment Plan ear-marked for 2026-27³¹.

Assessment approach

- Adopt a qualitative screening assessment for all project, policy and investment decisions that requires consideration of both ‘control’ and ‘influence’ (or ‘behaviour’) dimensions as a trigger for identifying where quantitative assessment is required.
- Swiftly adopt/apply a requirement for all capital projects and programmes to be subject to a quantitative GHG assessment process (e.g. PAS2080) unless ruled out through the screening process.
- Embed a requirement into procurement requiring that capital building/infrastructure projects follow PAS2080.
- Apply a net zero test approach to inform the re-prioritisation of capital programmes (e.g. Infrastructure Investment Pipeline).
- Apply the best available approaches to determine robust quantitative emission estimates from policy and revenue decisions, recognising that a variety of approaches may be required.
- Introduce a more nuanced and detailed taxonomy approach in a way that reflects the potential climate impact of the spend, rather than predicting climate impact based on the broad category the spend falls within. This will demonstrate alignment of fiscal programmes with net zero targets and climate change plan emission envelopes.

³¹ [Scotland's Fiscal Outlook: The Scottish Government's Medium-Term Financial Strategy \(www.gov.scot\)](https://www.gov.scot/publications/fiscal-outlook-2023-25/pages/10-introduction-to-the-fiscal-outlook-2023-25.aspx)

Governance

- Integrate the qualitative (screening) and quantitative assessment findings into existing climate governance approaches (e.g. Global Climate Emergency Board, Climate Risk Registers, Director General Net Zero, Cabinet Sub-Committee on the Climate Emergency).
- Integrate the screening and assessment process into the Scottish Public Finance Manual as appropriate (eg risk assessment, gateway reviews).³²
- Establish a dedicated team/unit in the Scottish Government with the capability and capacity to provide advice and training on the application of the test process and a quality assurance function.
- Ensure that assessment approaches and findings are publicly available to support transparency and accountability.
- Link to Scottish Government efforts to improve prioritisation processes and support effective decision-making (eg Open Government Action Plan, response to the Finance and Public Administration Committee inquiry report on effective Scottish Government decision-making).

Longer term priorities

Capital programmes (e.g. IIP/infrastructure pipeline)

- Explore potential to develop and apply a gap analysis approach to enable a comparison of the emissions associated with proposed /planned interventions with the level of emissions required to achieve a specific reduction target.
- Relate the emissions associated with capital investment in a particular area to local and regional emissions targets.

Revenue & Policy

- Explore and refine optimum approaches to determining robust quantitative emission estimates across policy and revenue decisions that can be aggregated and relate emissions to Scotland's net zero targets/CCP emission envelopes.

Investment/budget

- Identify optimum/robust approaches that can provide a meaningful quantitative assessment of the Scottish Budget and relate this robustly to Scotland's net zero targets/CCP emission envelopes.

³² [Scottish Public Finance Manual - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/scottish-public-finance-manual/pages/introduction/)

ABOUT CERG

CERG is a group of Scottish public, private and third-sector leaders who work together to inform and influence the Scottish Government's response to the climate emergency.

Collectively, the group has considerable expertise across sectors and a first-hand understanding of the practical steps that must be taken for Scotland to deliver on its vision for a net zero, climate resilient future.

CERG focuses on identifying solutions and actions that can be taken now to overcome the well-documented challenges of the transition to net zero and enable delivery to flow. Since 2019, CERG has published a series of reports setting out practical, immediate actions that can, and must, be taken now to avert the worst impacts of the climate crisis. The group also publishes annual assessments of the Scottish Government's progress to delivering on CERG's recommendations.

Annex A: Examples of existing carbon/greenhouse gas assessment approaches applied at a project, policy, programme or investment level.

Example	Applicability (Project/Policy /Programme/ Spend)	Screening mechanism	Qualitative/quantitative	Relate to net zero budget/emission envelopes	Supports cost effective approach	Detail
Treasury Green Book	Policy, project, programme	Yes – exemption requires demonstration of negligible carbon impact	Quantitative (whole-life GHG emissions). Energy use and GHG emissions also linked to carbon budget (i) emission changes over each budget period (ii) emission savings – annual projections).	Yes – sets out approach to carbon budget accounting and reporting over the period to 2037 (sixth carbon budget), broken down by sector (and traded-non-traded sectors). Project, policy and programme appraisal process requires this information. More details set out in supplementary guidance	Includes social cost/ carbon emissions impact cost (£ of carbon - BEIS values). Criteria: Cost-effectiveness should be reported if the carbon savings from the policy meet either of the two following criteria: <ul style="list-style-type: none"> • if the policy lifetime is less than 20 years and the stream of CO₂e savings exceeds 0.1 MtCO₂e on average per year; or • if the policy lifetime is more than 20 years 	Cost and carbon determined at all stages (i.e. from strategic to full business case) wherever this can be determined. Any cost information allows emissions to be estimated using social cost of carbon figures that BEIS determine/update). Carbon cost feeds into economic case material. For policies that have a significant impact on GHG emissions, and for policies which are specifically targeting GHG emissions, proposes further best practice on what detail is reported.

Example	Applicability (Project/ Policy /Programme/ Spend)	Screening mechanism	Qualitative/ quantitative	Relate to net zero budget/emission envelopes	Supports cost effective approach	Detail
					and the stream of CO ₂ e savings exceeds 2.0 MtCO ₂ e over the policy’s lifetime and exceeds an average per year of 0.05 MtCO ₂ e	Focus is on project by-project analysis rather than a bigger collective assessment that relates to carbon budgets/net zero targets. ³³
City Region & Growth Deals	Proj/programme	Yes. Project carbon categorisation (control and influence). benchmarked by the likelihood of a project to accord with Scotland’s Climate Change Plan.	Quantitative (whole-life GHG emissions). - Embodied carbon - Predicted operational carbon over project period - Predicted whole life carbon over appraisal period - Predicted annual average	Categorisation (control and influence) linked to likelihood of the project aligning with the CCP (qualitative assessment)	Assigns economic value using £ of carbon (BEIS).	Aims to inform and influence decisions early on/development stage. Revenue: approach depends on quantifiability of carbon impact: – qualitative: description, - quantitative: green book (in the latter use same best practice guidelines – PAS 2080/RICS to inform approach)

³³ [passing-net-zero-test.pdf \(instituteforgovernment.org.uk\)](https://www.instituteforgovernment.org.uk/sites/default/files/2023-08/passing-net-zero-test.pdf)

Example	Applicability (Project/ Policy /Programme/ Spend)	Screening mechanism	Qualitative/ quantitative	Relate to net zero budget/emission envelopes	Supports cost effective approach	Detail
			operational carbon over appraisal period - Actual embodied carbon and actual operational carbon.			
Scottish Transport Appraisal Guidance (STAG)	Projects		Stage 1 = qualitative Stage 2 = more in depth – qualitative and quantitative (whole life GHG emissions) Construction + operational + secondary/ induced	Not explicitly	No	Not limited to GHG emissions. Broader set of criteria. Comprises 2 elements: Guidance (best practice in appraisal) Technical database (guidance and reporting structure). Used to inform Strategic Business Case for investment (through a four stage process - Business planning: strategic outline plan - Scoping: strategic business case - Planning: outline business case

Example	Applicability (Project/ Policy /Programme/ Spend)	Screening mechanism	Qualitative/ quantitative	Relate to net zero budget/emission envelopes	Supports cost effective approach	Detail
						- Procurement: full business case
STAG – Policy Assessment Framework ³⁴	Policy	N/A	Qualitative	Not explicitly	No	<p>Used as part of the STAG process, both in the Initial Appraisal and in the Detailed Appraisal Initial assessment = qualitative assessment of each of option’s potential to realise the Transport Planning Objectives/meet STAG criteria.</p> <p>Detailed Appraisal: PAF is used when focusing on the Policy Integration aspect of the STAG criteria. The PAF should draw upon any available quantitative data.</p> <p>PAF scoring system uses a similar seven point scale to that already used within the STAG process.</p>

³⁴ [stag-policy-assessment-framework-guidance-note.pdf \(transport.gov.scot\)](https://transport.gov.scot/stag-policy-assessment-framework-guidance-note.pdf)

Example	Applicability (Project/ Policy /Programme/ Spend)	Screening mechanism	Qualitative/ quantitative	Relate to net zero budget/emission envelopes	Supports cost effective approach	Detail
LA114 (Transport)		Scoping to inform decision on detailed assessment (detailed assessment required above specific impact thresholds).	Significant direct and indirect emissions associated with construction & operation of the proposed project on climate emissions (e.g. building and maintaining the asset and vehicle emissions associated with operation of it).	<p>Yes relates project emissions to sector emissions as per UK or devolved carbon budgets (i.e. CCP emission envelopes).</p> <p>Requires reporting of</p> <ul style="list-style-type: none"> - Estimated total carbon over carbon budget (tC O₂e) ('Do something' Scenario) - Net CO₂ project GHG emissions (tCO₂e) (Do something - Do minimum) <p>(split by both construction and operation for both)</p> <ul style="list-style-type: none"> - Relate to carbon budget 	No	<p>Follows principles of PAS2080</p> <p>Scoping</p> <p>(The assessment of projects on climate shall only report significant effects where increases in GHG emissions will have a material impact on the ability of Government to meet its carbon reduction targets.)</p> <p>Bench marking of project performance shall be undertaken by comparing GHG emissions to other highway projects.</p>
PAS2080	Infrastructure/buildings (project/programmes)	N/A	Quantitative. Whole-life GHG emissions		Yes	Methodological approach. Aligns with Green Book whole life

Example	Applicability (Project/Policy /Programme/ Spend)	Screening mechanism	Qualitative/quantitative	Relate to net zero budget/emission envelopes	Supports cost effective approach	Detail
						<p>carbon emissions impact assessment requirement. Requires application of benchmark and baseline.</p> <p>Absence of baseline/ sector budget advocates applying project cost information to determine GHG</p>
Environmental Impact Assessment (EIA)	Project/Programme	Yes but comes very late in process	Quantitative	No	No	EIA process deployed at late stage so not able to influence early decisions. Best practice EIA carbon significance guidance (IEMA 2022) points to PAS 2080. Considers a broad range of environmental factors rather than climate focus.
Strategic Environmental Assessment (SEA)	Plan, programme, strategy	Yes. Pre-screening/screening approach.	Quantitative or qualitative	No	No	Considers a broad range of environmental factors. Climate emissions are not necessarily comprehensively reflected in a single

Example	Applicability (Project/ Policy /Programme/ Spend)	Screening mechanism	Qualitative/ quantitative	Relate to net zero budget/emission envelopes	Supports cost effective approach	Detail
						specific area of the assessment process. Often provide a qualitative, rather than quantitative, assessment.
Taxonomy (IIP, Scottish Budget)	Programme/spend	N/A	Qualitative	Only in narrative	No	IIP 2021/2-2025/6 commits to development of a more sophisticated approach.
Carbon Budget Assessment - consumption	Spend	N/A	Quantitative Consumption emissions	No	No	GHG emissions determined from £ info and input-output classification by sector codes.
WWF – budget tagging	Budget/Spending Review		Qualitative assessment (5 categories of impact).	Limited	N/A	Applied to spending and taxation plans. Uses a scale to assess impact. Covers 6 environmental variables (including GHG climate). The assessment considers: the impacts which occur as a direct result of spending; the indirect impacts and the induced impact.

Example	Applicability (Project/ Policy /Programme/ Spend)	Screening mechanism	Qualitative/ quantitative	Relate to net zero budget/emission envelopes	Supports cost effective approach	Detail
						<p>Establishes an absolute value of environmental positive and negative spending and taxation decisions.</p> <p>Provides a value of mitigation positive and negative spending decisions, expressed as a proportion of estimated requirements from the CCC’s sixth Carbon Budget.</p>
WWF – emissions estimate tool	Budget/spending review	N/A	Quantitative	Yes – sets outputs in context of CCC Net Zero Pathway.	N/A	<p>Estimates impact of policy decisions in budgets and spending reviews on GHG emissions. Can be aggregated and used to compare emissions impact e.g. of a budget with net zero pathway.</p> <p>In the first step, the Tool estimates the economic impact of the policy based on economic multipliers established</p>

Example	Applicability (Project/ Policy /Programme/ Spend)	Screening mechanism	Qualitative/ quantitative	Relate to net zero budget/emission envelopes	Supports cost effective approach	Detail
						<p>in the literature using five policy archetypes/</p> <p>In the second step, sector-specific or economy-wide emissions factors translate the economic impact into an estimate of the impact on emissions.</p>
Net Zero Public Buildings Standard	Capital projects	N/A	Requires quantitative info to support design and verification approaches.	No	Not explicitly	<p>Owned by the Scottish Government. Developed by Scottish Futures Trust, Zero Waste Scotland and NHS National Services Scotland.</p> <p>Voluntary standard.</p> <p>Applies to new public buildings + major refurbishment of buildings.</p> <p>Relates to construction, operation and whole-life emissions.</p>

Example	Applicability (Project/ Policy /Programme/ Spend)	Screening mechanism	Qualitative/ quantitative	Relate to net zero budget/emission envelopes	Supports cost effective approach	Detail
						<p>Requires that by 2045, projects that adopt the Standard will achieve zero embodied emissions during construction and subsequently the whole life of projects, including operational energy.</p> <p>Covers application, design, delivery and performance aspects.</p> <p>Requires collection and sharing of data in open, interoperable and transparent formats.</p>

Annex B: Application of threshold or criteria approaches in informing assessment requirements

Several approaches specify specific thresholds or criteria as the basis of triggering a requirement for either a detailed assessment or review of the project. Examples include:

Treasury Green Book appraisal

Where it can be qualitatively demonstrated that the impact of a project on greenhouse gas emissions will be negligible quantification of emissions is not required.

Scottish City Region & Growth Deal Carbon Management Guidance for Projects and Programmes

Utilises a categorisation system that requires consideration of both the controllable carbon emission impact of a project (control) and the influence a project will have on emissions beyond its control boundary (influence).

The approach is qualitative and includes five categories of carbon control and three categories of carbon influence:

Control:

Category 1: Whole life carbon negative - the project directly results in less atmospheric carbon.

Category 2: Whole life carbon net zero - the project has no measurable effect on atmospheric carbon.

Category 3: Capital carbon increase then operationally net zero - the project will release carbon at the construction stage but will then stop emitting carbon in accordance with relevant net zero targets.

Category 4: Capital and operational carbon increase - the project will release carbon at the construction stage then continue to emit carbon, e.g. by burning fossil fuels for heating.

Category 5: Operational carbon increase - no construction is planned but the project will result in an increase in operational carbon emissions.

Influence:

Category A: Carbon emissions reduction - the project leads to wider carbon savings through reduced use of fossil fuels.

Category B: Negligible effect on wider carbon emissions - the project has no measurable effect on wider carbon emissions.

Category C: Carbon emissions increase - the project leads to a wider carbon increase through increased use of fossil fuels.

An assessment of opportunities to improve the categorisation and align with Scotland's Climate Change Plan is required for those projects that fall in any of control category 4, control category 5 or influence category C.

New Zealand Climate Impact of Policy Assessment

In New Zealand central government agencies are required to undertake and report on a greenhouse gas (GHG) emissions analysis for all policy proposals that go to Cabinet and meet the following criteria

- an objective of the policy proposal is to decrease GHG emissions.
- the impact on GHG emissions is likely to be equal or above 0.5 million tonnes carbon dioxide equivalent (CO₂e) within the first ten years of the proposal period (representing an annual average of 50,000 tonnes)
- for forestry-related proposals, the impact on GHG emissions is likely to be equal or above 3 million tonnes of CO₂e within the first 30 years of the proposal period (representing an annual average of 100,000 tonnes).