Summary Tool

2025

National Sustainable Procurement in Infrastructure Guideline

For use by the Australian Government, States and Territories

How to use the Summary Tool

This Summary Tool is intended to provide users with a high level, best practice view of the National Sustainable Procurement in Infrastructure Guideline (Technical Guidance). It considers the varying maturity levels and capability across jurisdictions, and current jurisdictional practice.

The Summary Tool should be read alongside the Technical Guidance, which provides more detailed analysis, implementation advice, and project examples for each lifecycle stage. Each row of the Lifecycle stage in the Summary Tool corresponds to each chapter in the Technical Guidance.

Jurisdictions can use this Summary Tool to evaluate the feasibility of implementing the recommended procurement and contracting approaches at any stage of the procurement lifecycle. For projects already in delivery, they can look for opportunities to adopt these approaches. For future projects, jurisdictions should use the Summary Tool and Technical Guidance from early stages to maximise carbon emission reductions, build maturity, and ensure sustainable carbon management and continual improvement*.

*Note: Information on jurisdiction policies is current as at July 2025. Updates will be made when the Summary Tool is revised

Lifecycle Stage	Role in Decarbonising Infrastructure	Considerations in adopting the Option	Current jurisdictional practice and capability	Options to implement	Recommended procurement and contracting approaches
Needs Confirmation: Transport Agencies and Delivery Authorities Requirements between Transport Agency and Delivery Authority or Division.	The Transport Agency, acting as the Asset Owner, establishes the necessary requirements. These requirements, which the Delivery Authority is responsible for implementing, encompass legislative and policy mandates, as well as organisational standards. This stage lays the foundation for the Asset Owner's overarching intentions and requirements, which will guide the entire project lifecycle. Essential information for developing various options is provided. This information includes details about the asset, other project-related data, procurement frameworks, and methodologies.	Not all Australian jurisdictions have established legislative targets or carbon management requirements. Some agencies may not have standards or mandated targets for infrastructure projects. Some jurisdictions have nascent project level emission reduction targets. Some jurisdictions may have a limited range of technical options available to reduce emissions in some locations. Delivery Authority teams need the capability to translate these requirements into tangible decarbonisation interventions in delivery.	There is no common set of requirements across jurisdictions between Transport Agencies and Delivery Authorities for decarbonisation – other than alignment in this Guideline. While most jurisdictions have high level carbon reduction targets, their consistent application across projects can be challenging. Some jurisdictions have translated emission reduction targets to the project level, and some jurisdictions have built-in mechanisms through program-wide initiatives. The ability of jurisdictions to reduce emissions early in planning and development varies due to different levels of maturity. Transport for NSW is implementing a procurement standard for its infrastructure projects.	**Refer to Guidance for Implementation 1 in the Technical Guidance for more information.** Clause 6 of PAS2080 outlines several principles that need to be implemented: it requires asset owners/managers to assess projects for net zero carbon support, identify and strategise net zero projects, evaluate carbon impacts, explore land use changes, define study boundaries, assess and compare carbon impacts, set baselines and targets, consider low-carbon alternatives, and maximise existing asset use, ITMM Measurement Guidance provides additional guidance on setting baselines and targets. Develop Standards to be complied with across infrastructure projects. Embed decarbonisation into engineering practices and technical requirements that will influence relevant stages of project development and procurement. TfNSW 'Valuing Sustainable Outcomes' technical guidance (under development) to assist with early value-based decision making against strategic objectives and overarching polices.	Transport Agencies should establish uniform requirements for reducing carbon emissions in infrastructure, and clearly communicate these to the Delivery Authority. These requirements should align with legislative and policy requirements to achieve emission reduction targets during the development and delivery stages. **(requires foundational maturity)**. Delivery Authorities should translate high-level state targets for net zero emissions into specific emission reduction targets for their portfolio and individual projects where possible **(requires established maturity)**. Targets should be reviewed on an ongoing basis, including at significant industry milestones, for example when significant advancements in emission reduction technologies or practices are achieved **(requires established maturity)**.

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Needs Analysis and Strategic Business Case A needs analysis and a strategic business case are developed and completed at this stage.	The early stages of the lifecycle have significant potential to influence carbon outcomes. Incorporate uniform procurement requirements that aim to reduce emissions. This can be achieved through optimising strategic design by integrating these requirements into decision-making and options assessment processes. Align whole-life carbon estimates with whole-life cost assessments to inform decision making and increase consistency in baseline assumptions. For projects early in the pipeline, identify opportunities to prioritise decarbonisation in investment decision making and in the design/delivery stages. For example, many projects in development today will not be delivered until the 2030s or 2040s. This may incorporate mode, design alternatives, and emerging technologies that will reduce materials' embodied emissions.	The technical challenges may require jurisdictional capability uplift. Investment may be needed in portfolio systems and processes, which could include integration of carbon and cost management. For example, understanding the potential marginal cost of abatement for any initiative, whether it's at the portfolio, project, item (specifications), or resource (Plant, Labour, Materials, Fuels) level. The jurisdiction needs the ability to evaluate the strategic business case, considering complexities like carbon assessment on retained infrastructure. Parametric modelling or equivalent could be required to forecast resource level information at this stage. It is difficult to plan and implement strategies that consider emerging technologies. These technologies offer significant opportunities for reducing emissions, especially for major emitters in the construction industry such as concrete, steel and asphalt production. The strategic considerations include the future introduction of alternative fuels, alternative energy sources, carbon capture and reuse technologies, and upgrades to existing plants when they reach the end of their operational life.	Jurisdictions have agreed to use the National Carbon Values (or higher) for valuing carbon in business cases for all projects exceeding $100M, following Guidance from Infrastructure Australia, ITMM and Australian Transport Assessment Plan. TfNSW has developed an integrated Engineering, Cost & Carbon Library which defines both baseline cost and baseline carbon for items (around 800) and resources (around 4000). This enables automation of baseline carbon with cost estimation and forecasting early in the lifecycle. In the preliminary evaluation phase, Qld TMR assesses options and identifies potential strategies for the project to achieve infrastructure sustainability outcomes – see Qld TMR Form C7521	**Refer to Guidance for Implementation 2 in the Technical Guidance for more information.** Implement PAS2080, RICS WLCA 2nd Edition, ICMS3. ITMM Measurement Guidance. TfNSW Engineering, Cost & Carbon Library. Where possible, establish the marginal cost of abatement for initiatives, be that portfolio, project, items (specifications), resources (Plant, Labour, Materials, Fuels). Consider the Modern Methods of Construction (MMC Framework) in the planning and development.	Jurisdictions should begin incorporating carbon abatement principles into their strategic design and subsequent business cases **(requires foundational to maturing maturity)**. While this stage presents the greatest technical challenges, its successful execution can significantly contribute to carbon abatement **(requires maturing to established maturity)**.

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Investment Decision and Final Business Case A Concept Design and Final Business Case are developed and completed at this stage.	Influence decision making towards options that prioritise whole of life carbon reduction with tangible outcomes. Include whole-life carbon in any Multi Criteria Assessment (MCA) and value management exercises. Identify decarbonisation assumptions and requirements, and incorporate them into project concept designs. Engage with the market early to clearly communicate that carbon reduction is a high priority for the delivery organisation. The delivery and procurement strategy should prioritise delivery models that encourage innovation and share risk and reward for decarbonisation. Conduct a Cost Benefit Analysis (CBA), including the application of the National Carbon Values (NCVs) in accordance with ITMM policy and guidance from Infrastructure Australia's Valuing emissions for economic analysis. Consider Early Contractor Involvement & Early Supply Chain Involvement.	It is technically difficult to evaluate multiple options with low design resolution, such as new options, augmented Retained Infrastructure options, and whole-life asset management considerations in the analysis. Decarbonisation assumptions and requirements should be incorporated into the project concept designs, preferably linked to cost milestones. Jurisdictions should incorporate accountability for decarbonisation into their procurement governance.Not all projects complete early market engagement activities such as Market Interaction Processes (MIPs) or industry strategic alliances. This is particularly true for smaller, construct-only projects.The timing of early market engagement may not align well with other project factors and schedules that contribute to decarbonisation outcomes. As Delivery Authorities are unlikely to specify a single member of the supply chain at this stage, supplier specific Environmental Product Declarations can used as a reference for plausible levels of decarbonisation. Early Contractor Involvement & Early Supply Chain Involvement can only be applied to suitable projects.	Concept design is generally undertaken by jurisdictions. Some jurisdictions are considering carbon reduction, however it is not consistently considered across all projects. Jurisdictions will align their business case decisions with whole of government strategies and procurement protocols. TfNSW is developing a guide on integrating carbon and cost management in infrastructure. This will ensure a consistent carbon baseline for all cost milestones, allowing for carbon considerations in options assessment, even with low design resolution. It will also enable the determination of any potential marginal cost of carbon abatement. TfNSW has begun rolling out a procurement standard across its infrastructure projects. QLD TMR Form C7522 – Infrastructure Sustainability Business Case Requirements Addendum.	**Refer to Guidance for Implementation 3 -6 in the Technical Guidance for more information.** Implement principles set out in Clause 7 and 8 of PAS2080. Implement RICS WLCA 2nd Edition. Engineering Carbon Cost Management Library. Plan for market capacity challenges. Incorporate supply chain considerations. Incorporate asset management programming into decision making. TfNSW 'Carbon & Cost Management in Infrastructure' technical guidance. Utilise Modern Methods of Construction (MMC Framework) in the planning stage of the development. Should align with the carbon measurement approach set out in the ITMM Measurement Guidance.	Emission reduction considerations are incorporated into all Options Reports and Concept Designs **(maturing to established maturity)**. Decarbonisation forms part of the Delivery and Procurement Strategy, in accordance with the approved project outcomes **(maturing to established maturity)**. Early Market Engagement should prioritise decarbonisation. This approach will increase value chain members' understanding of governments' priority of adopting low carbon materials and design techniques. **(foundational maturity)**.

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Construction Procurement: Readiness for Market Procurement, contractual, and technical documentation is compiled to help realise benefits.	Technical requirements inserted into readiness for market documents: 1. Emission reduction targets and other targets such as recycled content; 2. Contractor Documentation Schedule (reporting requirements); and 3. Project plan requirements (Sustainability Management Plan and Carbon Sub Plan requirements). As part of the Request for Tender or Expression of Interest returnable schedules, incorporate Sustainability Innovation Options and Carbon Intensity Options. This can optimise market results by capitalising on the competitive tension and allowing for increased bids.	Jurisdictions should have systems and processes in place to establish and implement baselines and associated emission reduction targets. This could also include capped carbon intensity. Refer to the ITMM Measurement Guidance for baseline and target setting guidance. Funding for incentivisation or to cover costs associated with requirements may be capped or unavailable. A well-informed and strategic approach is required to implement Carbon Intensity Options. Robust baseline data aligned to existing commercial structures is also necessary.	NSW has begun rolling out a procurement standard across its major infrastructure projects with emission reduction targets, project plan requirements, reporting requirements, and innovation at RFT. NSW is developing the Valuing Sustainable Outcomes technical guidance. This will: explore a consistent value definition framework using a capitals approach; develop a broad set of monetised values; and provide guidance on the Most Economically Advantageous Tenderer. In Victoria, decarbonisation is being legislated through the Environment Effects Act for some large projects, with specific performance requirements included relating to emissions reduction. The Victorian Infrastructure Delivery Authority (VIDA) has consistent targets for upfront carbon emissions reductions applied to all projects over $50M, aligned to climate legislation. The majority of VIDA projects incentivise emissions reduction. In the case of level crossing and road projects, supplementary schedules allow for proposals with cost of abatement which are assessed against internal carbon values to determine VfM. These can be incorporated into the contract value. Through continual improvements to its infrastructure design and construction standards, specifications and guidelines, the Queensland Department of Transport and Main Roads is undertaking program-wide initiatives to reduce carbon into its contracts and asset management activities, which reduces upfront carbon during construction, carbon generated during maintenance phase, and user (vehicle) emissions. These improvements also offer significant advantage to a broader application, as many local authorities and Government Owned Corporations also use these standards and specifications.	**Refer to Guidance for Implementation 7 -8 in the Technical Guidance for more information.** Implement principles set out in Clause 7 and 8 of PAS2080. ITMM Measurement Guidance TfNSW Engineering Cost & Carbon Library. TfNSW Carbon & Cost Management in Infrastructure technical guidance. Use a Submission Evaluation Guide (or equivalent), including sustainability, as a mandatory non-price criterion. Standardise project documents.	It is recommended that jurisdictions continue work to embed project level emission reduction targets, project plan requirements, and reporting requirements **(foundational to established maturity)**. Jurisdictions include further elements in their returnable schedules such as innovation options **(established maturity)**.

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Construction Procurement: Tender evaluation Issuing and evaluating the tender to select a preferred contractor. The key output typically includes a Tender Evaluation Report and recommendation.	Assess tender based on increased bids and past performance, including using economic values as part of assessment. Incorporate applicable options for decarbonisation in the deed.	Some jurisdictions do not have a mandate or established governance system for the use of economic values in tender assessment. There may be completing priorities in the non-price criteria.	While all Australian jurisdictions have a Submission Evaluation Guide (or equivalent), the weighting given to sustainability varies. Sustainability is often part of the non-price criteria, which will usually include multiple criteria to implement different government priorities There is a need for national consistency on the use of economic values in tender assessment, through the Most Advantageous Tender (MAT) or Most Economically Advantageous Tender (MEAT).	**Refer to Guidance for Implementation 9 in the Technical Guidance for more information.** Transport for NSW is currently developing the Valuing Sustainable Outcomes Technical Guidance as part of the Sustainable Infrastructure Program. It will provide a consistent uniform values and monetisation framework, best practices, and guidance on the Most Advantageous Tender (MAT). It will be released following industry consultation.	Sustainability should be assessed in tender evaluations. **(foundational maturity)**.
Contract Administration Monitor commitments, incentivisation regimes, and decarbonisation bids; incorporate decarbonisation reporting and future tender assessments.	Monitor commitments in the deed through regular reporting and the Sustainability Management Plan. Monitor any incentivisation regimes. Monitor assurance reporting and auditing of decarbonisation returnable bids such as Environmental Product Declarations. Incorporate decarbonisation into Contractor Performance Reporting, and record performance throughout the project for use in future tender assessments.	Augmenting Contractor Performance Reporting systems to include decarbonisation may have financial implications. This is an emerging area, and project teams, commercial and contract managers may need enhance their capabilities to effectively monitor and enforce commitments in the deed. Embracing digitisation will help with more streamlined reporting, although this will require investment in technology.	NSW has begun rolling out a procurement standard and is working on streamlining reporting through the Sustainable Infrastructure Program. During delivery, Victorian Infrastructure Delivery Authority (VIDA) projects may submit proposals that include the cost of abatement. These costs are assessed against internal carbon values to determine value for money (VfM) and may be adopted as variations. Major Road Projects Victoria hold Sustainability Review Committees on a monthly or bi-monthly basis to review progress with project leaders.	**Refer to Guidance for Implementation 10 in the Technical Guidance for more information.** Implement principles set out in Clause 9 of PAS2080. Implement principles in chapter 6 of RICS2 WLCA. ITMM Measurement Guidance. TfNSW Carbon & Cost Management in Infrastructure technical guidance. Standardise project documents – chapter 6 of the UK Construction Playbook. Knowledge-based articles and platforms such as Victoria's ecologiQ and the MRPV Sustainability Knowledge Hub Industry forums and knowledge sharing.	Jurisdictions begin work on updating contractor performance reporting and capability uplift with project teams, commercial and contract managers **(requires established maturity to execute well)**.

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Asset Handover The project is constructed, and assessments are made for handing over the new asset to the asset owners.	Evaluations should be made between estimated carbon and actual carbon. The results aid in decision-making for asset management and future projects, promoting ongoing improvement. Data capture and management should align with international standards. Resource level information is passed into the asset management system with appropriate detail to inform network level monitoring.	There might be extra costs in comparing initial carbon estimates and actual as-built carbon. Jurisdictions may need to update existing asset systems to include carbon: outdated systems could make detailed carbon concurrence infeasible.	NSW is defining a Common Data Model for Infrastructure aligned to ICMS3, RICS 2nd Edition, Uniclass, various standard methods of measurement, and standard resources. This aims to get consistency with the data model to enable automation and drive efficiencies for industry partners.	**Refer to Guidance for Implementation 11 in the Technical Guidance for more information.** NSW Common Data Model for Infrastructure with ESG dimensions.	Jurisdictions should gradually work towards a standardised data model down to resource level **(foundational maturity to established maturity)**.
Operations Key outputs include lessons learned, and measuring performance and benefits achieved. This stage also involves tracking longer-term benefits at the project and program levels.	Granular carbon intensity thresholds or baselines form part of procurement requirements at a resource level. Returnable Schedule for suppliers to bid lower carbon alternatives. Tender assessment considers kgCO2e/unit where possible.	Need to have an assured approach to carbon intensity at a resource level. Need to have a standardised unit structure against engineering standards and specifications.	NSW has developed the Engineering Cost & Carbon Library for consistency and assurance. This considers the operations supply chain. Jurisdictions will use a range of existing and emerging tools.	**Refer to Guidance for Implementation 11 in the Technical Guidance for more information.** TfNSW Engineering Cost & Carbon Library.	Jurisdictions could consider adapting and mapping the TfNSW Engineering Cost & Carbon Library to the Austroads specifications and Australian Standards where applicable.
End-of-Life This involves setting requirements for managing whole-life carbon, including clear guidelines for material reuse, efficient demolition practices, and adopting low-carbon solutions, ensuring decarbonisation efforts are embedded in all stages of infrastructure projects	As part of consistency in whole-life considerations, utilise a consistent structure for whole-life cost and carbon that considers end of life.	Could require reconfiguration of existing cost structures which could have cost implications for jurisdictions.	NSW is defining a Common Data Model for Infrastructure aligned to ICMS3, RICS 2nd Edition, Uniclass, various standard methods of measurement, and standard resources. This model considers end of life.	**Refer to Guidance for Implementation 12 in the Technical Guidance for more information.** Implement principles in 5.6 and 6.2.4 of RICS WLCA. Implement ICMS3.	Jurisdictions should gradually work towards a standardised data model that considers whole of life **(foundational maturity to established maturity)**.