

Bird & Bird

Sustainable Procurement & Contracting Toolkit

March 2026



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01

Introduction

Who is this Toolkit for?



As part of the Association of Directors of Environment, Economy, Planning & Transport (“ADEPT”) Live Labs 2: Decarbonising Local Roads in the UK programme, this toolkit has been developed by Liverpool City Council (“LCC”) and its partners to support contracting authorities (including public bodies and local authorities), utility providers, and purchasing organisations (together referred to as “Buyers”), with their climate and sustainability goals concerning highway assets, specifically the greenhouse gas-intensive highways infrastructure sector (“Toolkit”).

Suppliers can also use this Toolkit to support their engagement with Buyers, including what they should expect from Buyers and how they could leverage the different stages of a procurement. Furthermore, suppliers could use the principles discussed in this Toolkit by applying them to their own supply chains.

This Toolkit is designed to be a comprehensive yet “accessible” resource for all stakeholders – from highly experienced procurement specialists and subject matter experts, to apprentices working in the highways sector for the first time.

What this Toolkit does

Achieving the Delivery of Innovative Sustainability Solutions

Facing climate challenges, the UK public sector has a crucial role in reducing greenhouse gases (“GHG”) and driving the transition to a sustainable, low-GHG economy. Public procurement serves as a significant lever for change, and this Toolkit supports the enactment of the following changes.

Embedding GHG Reduction in Procurement

By embedding GHG reduction goals throughout a procurement, Buyers can fulfil policy commitments and catalyse innovation and sustainable practices across their supply chains. This Toolkit has been developed to help Buyers integrate clear, measurable environmental objectives into every stage of a procurement — from initial planning and market engagement through to contract management, modifications, and expiry.

Translating Ambitions into Actionable Measures

This Toolkit aims to support Buyers translate high-level environmental and sustainability ambitions into actionable, enforceable measures. It provides guidance on embedding

quantifiable GHG reduction targets, aligning with local and national net-zero strategies, and employing monitoring tools to ensure transparency and accountability throughout a procurement. By doing so, it ensures that sustainability is not an afterthought but a core component of procurement decisions.

Encouraging Market Innovation and Sustainable Practices

Embedding GHG reduction goals in procurement encourages the market to develop and adopt low-GHG technologies and methods. This approach results in cost-effective, greener public services, and creates a ripple effect throughout the supply chain, supporting small and medium enterprises (“SMEs”) and larger suppliers alike in their transition to sustainable and low-GHG practices.

Embedding into BAU Practices

This Toolkit is designed to integrate climate and GHG reduction considerations into all aspects of contracting for these critical services. It is applicable to all stages of a procurement, covering pre procurement, live procurement stages, and post procurement, including contract management. An aim of this Toolkit is to support Buyers in embedding innovation and low-GHG technology into “business as usual” (“BAU”) practices.

Setting Quantifiable GHG Reduction Targets

A key component of this Toolkit is to encourage Buyers to define clear, quantifiable GHG reduction targets, such as a [X]% reduction in GHG over a contract’s term, aligned with local and national net zero objectives and industry standards. Measurable targets allow for benchmarking and accountability, transforming vague sustainability ambitions into actionable, verifiable outcomes. This is essential for public sector transparency and compliance with government policy.

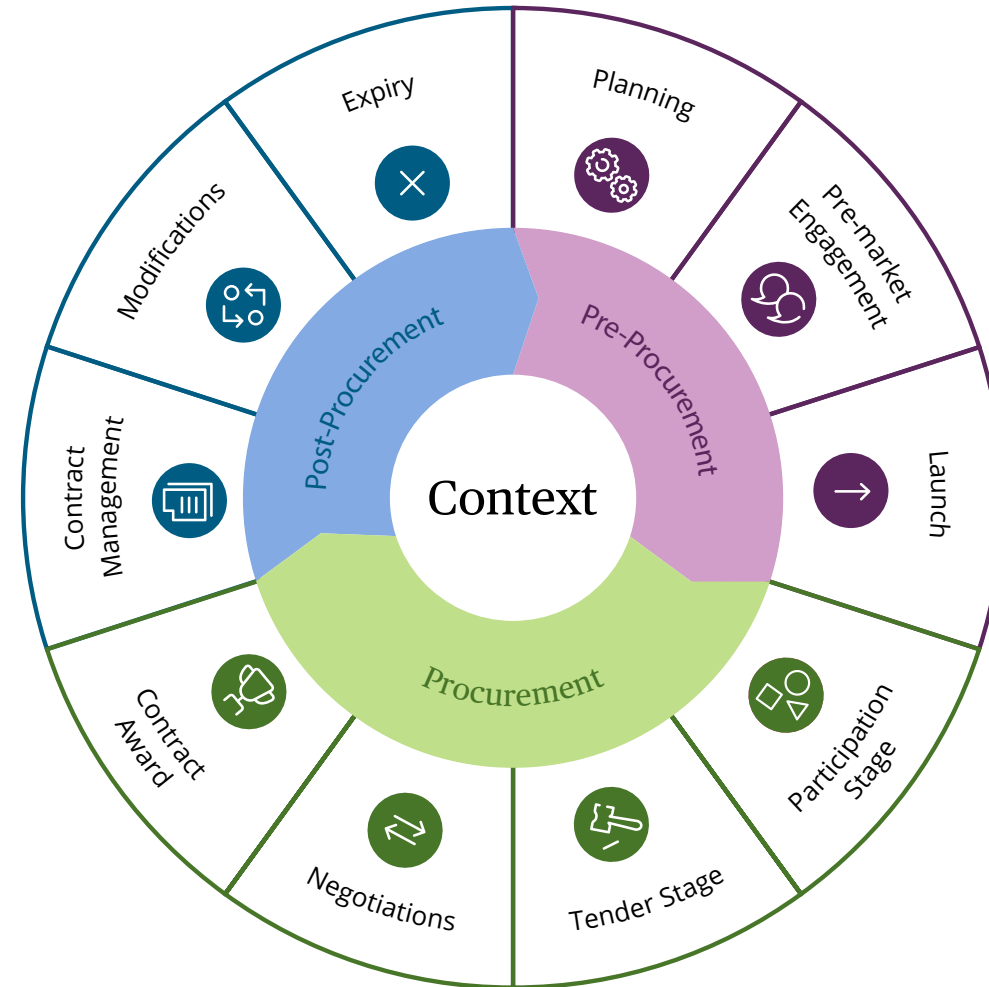


How to use this Toolkit

This Toolkit has been designed to be applicable to all stages of the procurement lifecycle, and highlights the major themes for sustainable procurement. The adjacent procurement lifecycle set out to the right is the navigation tool for this Toolkit. The Toolkit has been designed to be as accessible, practical, and user friendly as possible. It has been designed for users to navigate to the stage of the procurement lifecycle that is of interest. It has not specifically been designed to be read in a chronological manner, although should readers feel inclined to do so then they, of course, may do. The stages include a variety of guidance, precedents and tools that Buyers can pick and choose from, in accordance with their specific project, the market, and their maturity as a Buyer in this subject matter.

Please click on the stage in the adjacent procurement lifecycle on the right to navigate to the relevant resources. Please note that each stage has a return home button, which will return you to this page.

To return to the previous page viewed, please use the hourglass icon, or, alternatively, the "Alt + Left Arrow" keys will achieve the same.





Legal Considerations and Applicability

This Toolkit aims to provide practical advice to Buyers who are subject to public procurement law. As of 24 February 2025, UK procurements are subject to the Procurement Act 2023 (“PA23”) regime which governs in-scope procurements launched from that date.

However, all procurements launched prior to, and all contracts (as well as frameworks and dynamic purchasing systems (“DPS”)) in force before 24 February 2025 remain governed by the legislation in force at that time, which includes, for example, the UK legislation deriving from the transposition of EU procurement Directives, such as the Public Contracts Regulations 2015, Utilities Contracts Regulations 2016, and Concessions Contracts Regulations 2016, together referred to as the (“EU-derived Regime”).

As dictated in the regulations applicable to the PA23-transitional arrangements, the EU-derived Regime remains in force for existing contracts and unfinished procurements, and as such, this Toolkit references both the PA23 and the EU-derived Regime.

Although this Toolkit is focused on the highways infrastructure sector, *many of its principles and initiatives are transferable to other sectors.*





02

Context & Background

ADEPT Live Labs 2

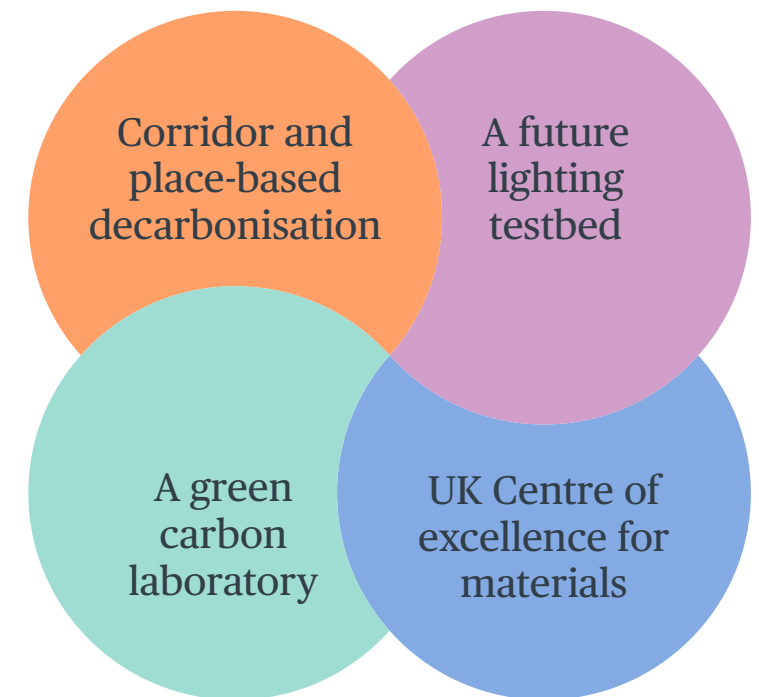


Live Labs 2 is a three-year, £30 million, UK-wide programme funded by the Department for Transport (“**DfT**”) and managed by ADEPT. Live Labs 2 runs until March 2026, with a five-year subsequent, extended monitoring and evaluation period. Seven projects, grouped by four interconnected themes, are being led by local authorities working alongside commercial and academic partners.

Transport is responsible for over a quarter of GHG emissions in the UK. To date, decarbonisation of transport in the UK has focussed mostly on electric vehicles, active travel and changing public behaviour rather than the planning and design of transport infrastructure or local roads assets. However, the UK’s local roads infrastructure and maintenance make a significant and ongoing contribution to GHG emissions, climate change impacts and future resilience. ADEPT has developed Live Labs 2 to support the transition to net zero carbon local roads.¹

Embedding innovation and low-GHG technology into BAU practices for Buyers is difficult, risky, and can be overwhelming for many of them within the traditional highways and transportation sectors. Live Labs 2 is designed to accept that risk is a core principle and recognises that success is not guaranteed. Collaboration, sharing information and learning, and a willingness to innovate are embedded into the programme which, as was found with Live Labs 1, often leads to behavioural and culture change.


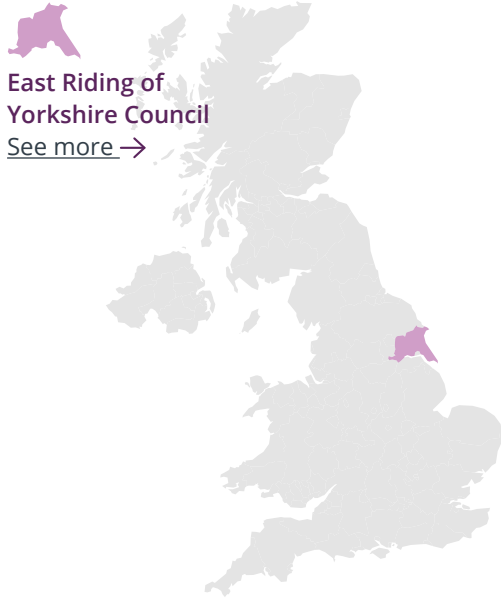
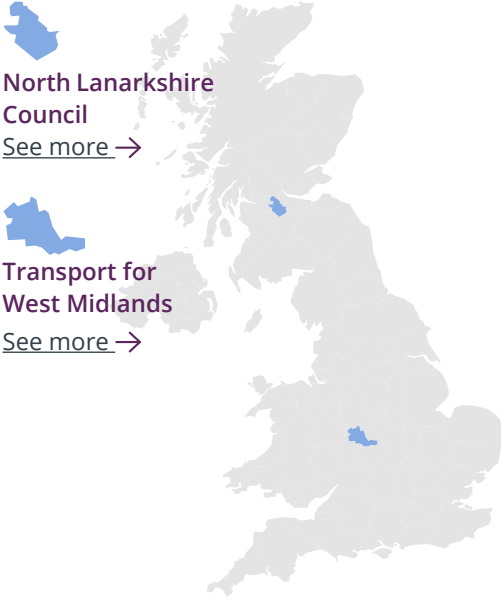

Live Labs 2 will trial innovative decarbonisation proposals from local highways authority-led public-private joint ventures, with a particular focus on the decarbonisation of Scope 2 and 3 emissions in the construction, operations, maintenance, and decommissioning phases of the local roads’ lifecycle. The four interconnected themes are:²



1. <https://www.adeptnet.org.uk/livelabs2> > accessed 16 February 2026
 2. [Live Labs 2 — themes and projects](#) | ADEPT > accessed 16 February 2026

The Live Labs 2 projects working across the four interconnected themes are:



<p>Corridor and place-based decarbonisation</p> <p>A suite of corridor and place-based decarbonisation interventions covering urban through to rural applications, trialling, testing and showcasing applications within the circular economy and localism agendas.</p>	<p>A future lighting testbed</p> <p>A systems-based examination of the future of lighting for local roads to determine what assets are needed for future networks and how they can be further decarbonised across their lifecycle.</p>	<p>A UK centre of excellence for materials</p> <p>Providing a centralised hub for research and innovation for the decarbonisation of local road materials, developing a knowledge bank, real-life conditions testing and sharing and learning insights.</p>	<p>A green carbon laboratory</p> <p>Examining the role that the non-operational highways “green” asset can play in providing a source of materials and fuels to decarbonise highway operations.</p>
 <p>Liverpool City Council See more →</p> <p>Wessex Partnership See more →</p> <p>Devon County Council See more →</p>	 <p>East Riding of Yorkshire Council See more →</p>	 <p>North Lanarkshire Council See more →</p> <p>Transport for West Midlands See more →</p>	 <p>South Gloucestershire Council and West Sussex County Council See more →</p>

Liverpool City Council and Live Labs 2



Across the country, Buyers are designing and developing initiatives to *tackle climate change, reduce GHG emissions, and fortify resilience programmes*, with the aim of meeting local and national net zero targets.

In line with these targets, LCC is implementing a comprehensive approach to reducing GHG emissions across all sectors, including the GHG-intensive highways infrastructure sector. The ambition is for Liverpool to be a net-zero carbon city by 2030.

A crucial component of LCC's strategy is its involvement in Live Labs 2. LCC's Live Labs 2 "Ecosystem of Low Carbon Decision Making" project will target the challenge of decarbonising highways delivery and the road asset in complex city contexts, demonstrating benefits to the local economy and people.

The project will realise an "Ecosystem of Low Carbon Decision Making", a scalable and transferable systems mapping and optioneering approach at city-level to introduce innovations offering the greatest impacts within individual schemes/projects. The core objective is to iteratively trial the decarbonisation of all the activities undertaken in local highways repairs, improvements and ongoing maintenance using trial neighbourhoods.

The "Ecosystem of Low Carbon Decision Making" is not a static concept, but a dynamic and evolving suite of approaches which is structured to capture the most impactful emerging technologies and processes, and embedding these into BAU once proven.

The "Ecosystem of Low Carbon Decision Making" spans:

- design;
- public spaces;
- materials and process technology;
- recycling infrastructure; and
- legal, contractual and procurement processes.

Each is critical to supporting the successful implementation and adoption of decarbonisation initiatives nationwide.

In order to directly support a circular economy, LCC will bring together a diverse collection of integrated elements to form a complete decarbonised system, in which the longer-term maintenance and renewal horizons must be considered, not just carbon embedded during manufacture, transport and installation.

This Toolkit forms part of the legal, contractual and procurement processes element of the "Ecosystem".

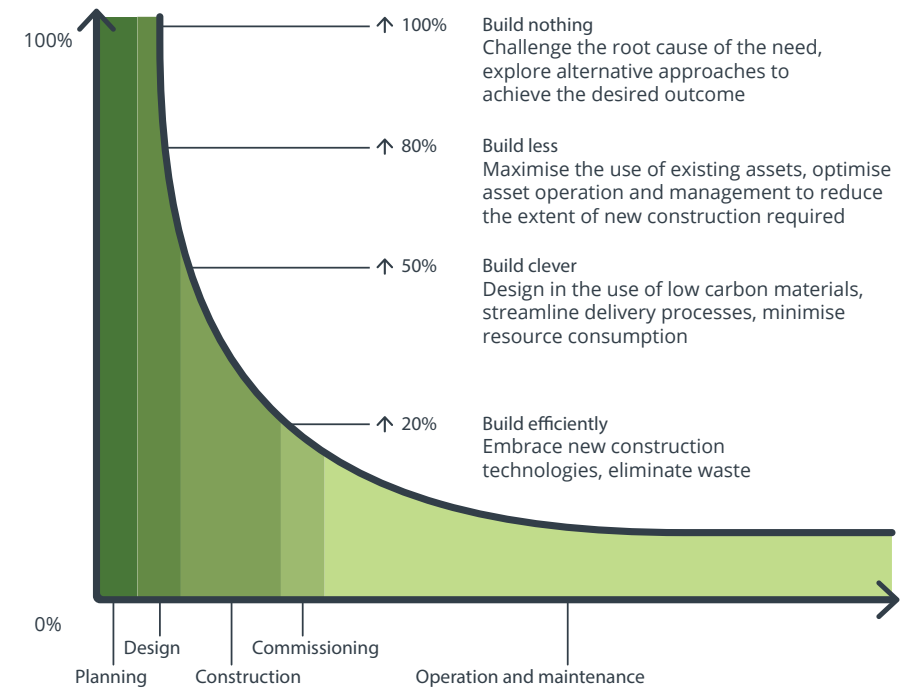
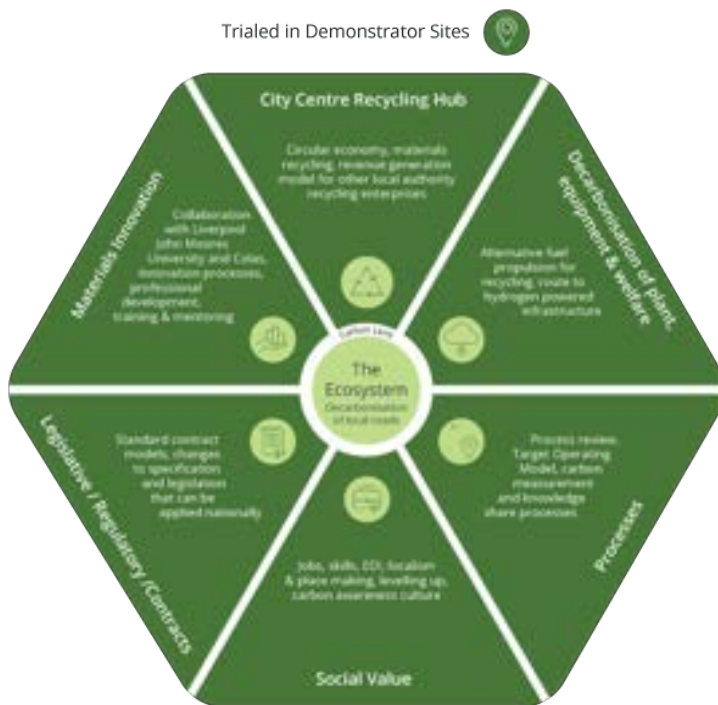


[Click on the thumbnail to watch the full video](#)

To ensure that LCC realises *the practice of change*, it will apply Pell Frischmann's Carbon Hierarchy Lens Toolkit & Options Configurator.¹

Together, LCC's approach, this Toolkit, and the Carbon Hierarchy Lens encourage early involvement in a project's lifecycle to maximise the opportunity and potential impact of doing something different or less. See page 92 for further information.

1. Developed by Pell Frischmann.





Liverpool Net Zero Carbon 2030

In 2019, LCC declared that planet Earth is facing a climate change emergency. Subsequently, LCC published its “Liverpool Net Zero Carbon 2030” plan (the “**Plan**”) which details how Liverpool can become a net zero city by 2030 and support the creation of a fairer, greener, and brighter low carbon future for the people of Liverpool.

[Liverpool Net Zero Carbon 2030](#)

Sustainable Development Goals

The United Nations (“**UN**”) has set 17 sustainability goals for 2030, including sustainable cities and communities, building resilient infrastructure and climate action. Through the Live Labs 2, LCC is helping to drive these goals forwards.

[Take Action for the Sustainable Development Goals - United Nations Sustainable Development](#)



The Challenge

The challenge is making GHG reduction core to all initiatives carried out by LCC. This is vital from the very first identification of the need for successful delivery of the requirements of a particular contract. Therefore, the Toolkit covers all stages of the procurement lifecycle, including leveraging current contracts and options to potentially integrate GHG reduction initiatives into existing contracts.



Understanding Scope 1, 2 and 3 Emissions

In the context of GHG reduction, it is essential to understand the three main scopes of GHG emissions and how they relate to procurement decisions. These scopes help to identify and manage the sources of emissions across the entire value chain based on their point of origin.

Scope 1

These are direct emissions from sources that are owned or controlled by an organisation, for example, emissions from company vehicles or on-site fuel combustion.

Scope 2

These emissions are indirect and result from the purchase of energy from a third-party supplier. They are categorised into two reporting methods:

- Location-based emissions: Calculated using regional grid emission factors, reflecting the average emissions intensity of the grid.
- Market-based emissions: Determined by the specific energy contracts or supplier data, allowing for differentiation based on renewable energy procurement or energy efficiency measures.

Scope 3

These are all other indirect emissions that occur throughout the value chain, both upstream and downstream. Key categories include:

Upstream Activities:

- Purchased Goods and Services
- Capital Goods
- Fuel- and Energy-Related Activities (not included in Scope 1 or Scope 2)
- Upstream Transportation and Distribution
- Waste Generated in Operations
- Business Travel
- Employee Commuting
- Upstream Leased Assets

Downstream Activities:

- Downstream Transportation and Distribution
- Processing of Sold Products
- Use of Sold Products
- End-of-Life Treatment of Sold Products
- Downstream Leased Assets
- Franchises
- Investments

Understanding Scope 2 and 3 Emissions

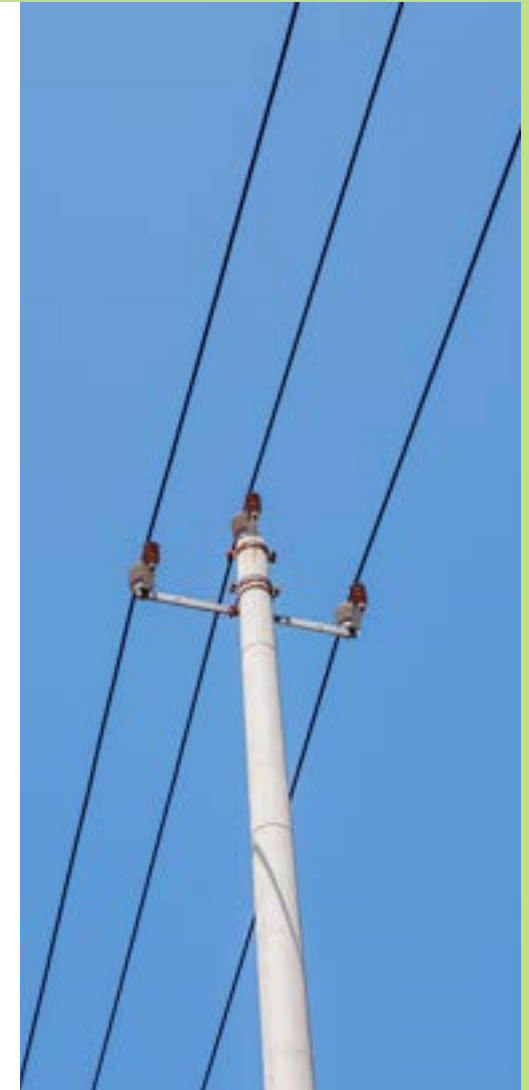
When focusing on Scope 2 and Scope 3 emissions, *Buyers should incorporate specific sustainability criteria* into procurements and their ongoing management through to contract expiry, for example:

For Scope 2 Emissions

- Require suppliers to provide detailed, market-based energy data, enabling the differentiation between conventional and renewable energy sources.
- Embed requirements in contracts that favour low-GHG energy procurement and support renewable energy initiatives.
- Use both location-based and market-based emission calculations to assess the true GHG intensity of purchased energy.

For Scope 3 Emissions

- Evaluate the full lifecycle environmental impact of goods and services, from production through to end-of-life treatment.
- Engage with suppliers to promote circular economy principles and practices such as the use of recycled materials, efficient transportation methods, and waste re-use and minimisation strategies.
- Encourage suppliers to propose innovative solutions that reduce emissions in key areas such as capital goods, transportation, and product use. This may include incentivising low-GHG logistics or demanding eco-design practices.
- Develop and contractualise robust KPIs and reporting frameworks to monitor and verify reductions in Scope 3 emissions, ensuring that procurement decisions lead to tangible environmental benefits.





03

Major themes

KPIs are relevant at all stages of the procurement lifecycle



Planning

A Buyer should utilise the planning stage to consider what it wants to achieve through KPIs and how this could be translated into the contract. To ensure success, KPIs should:

- be clearly written with no ambiguity;
- be achievable;
- be effectively contract managed;
- have clear, effective and tailored processes for measurement; and
- have a clear review and assessment mechanism.

For example, a Buyer could consider establishing KPIs such as a [X]% reduction in GHG emissions or improvements in energy efficiency. These targets should align with national sustainability goals and industry standards like PAS 2080.

Launch

The KPIs related to sustainability should be included in the draft contract that is shared with suppliers at the outset of the procurement. A Buyer could also consider highlighting key KPIs in relevant procurement documents.

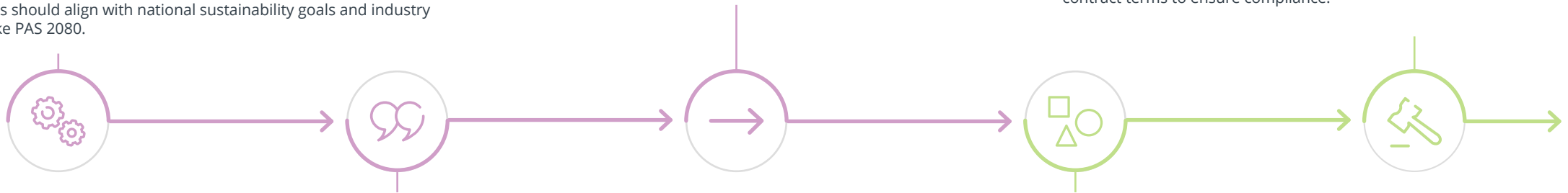
To support this, a Buyer could ensure that sustainability KPIs, such as targeted reductions in GHG emissions, are clearly embedded in the draft contract, and referenced explicitly in the Tender Notice, emphasising their importance, and linking them to national sustainability targets and frameworks.

Tender Stage

To ensure that the successful supplier can deliver the KPIs related to sustainability, delivery of the relevant KPIs needs to be tested in the tender questions.

Tender questions should require suppliers to detail their approach to:

- measuring and achieving sustainability targets, including the use of digital monitoring tools, reporting frameworks, and any third-party verification processes; and
- providing a commitment against the stated KPIs, backed by robust contract terms to ensure compliance.



Pre-Market Engagement

To implement effective KPIs which are attractive to the market, do not form an obstacle to bidding, and effectively support the project and Buyer's objectives, a Buyer could test its thinking (including example draft KPIs) with the market through pre-market engagement.

Including draft sustainability KPIs, such as targets for GHG reduction and energy efficiency, in pre-market engagement materials can help secure feedback on the feasibility and attractiveness of proposed KPIs, and understand the extent to which they may present a barrier to participation from one or more potential suppliers.

Participation Stage

It may be appropriate to include conditions of participation that test suppliers' experience of delivering similar KPIs to those that a Buyer is seeking to include in the contract. This will help ensure that, to participate in further stages of the procurement, selected suppliers can demonstrate their experience of delivering similar goals to a Buyer's objectives.

Suppliers should be asked to provide case studies that demonstrate how they achieved quantifiable sustainability outcomes in past projects. This will help ensure that the selected suppliers have the necessary expertise to deliver on a Buyer's sustainability KPIs.

KPIs are relevant at all stages of the procurement lifecycle



Contract Award

At the end of the procurement, the contract will be finalised and executed, and the successful supplier will be contractually obligated to satisfy the relevant KPIs. Therefore, it is essential that any KPI commitments that were mandatory or formed part of the successful supplier's bid are included in the executed contract.

The final contract should include robust enforcement clauses, such as performance incentives or penalties, to ensure compliance with sustainability KPIs. This will help safeguard a Buyer's sustainability objectives throughout the contract term.

Modifications

As part of contract management, it is often the case that some KPIs may require modification. For example, to react to unforeseen circumstances, to seek to continuously improve and provide more stretching KPIs, and/or to adapt to new innovations. KPIs can form an important part of the procurement, therefore any modifications require careful consideration on a case-by-case basis.

Any modifications to sustainability KPIs should follow a formal change management process. This process should include stakeholder consultations, impact assessments, and documented approvals to ensure that the revised targets remain aligned with long-term sustainability goals and are compliant with the applicable legal framework.



Negotiations

KPIs will likely be of interest to suppliers during the negotiation phase. Ideally, the first draft of those that were provided during the launch of the procurement will have been acceptable to the market. However, it is possible that suppliers will wish to negotiate those during any negotiation stages, especially as they will have a better understanding of a Buyer's goals and overall required solution.

During negotiations, any revisions to sustainability KPIs should be scrutinised to ensure they remain ambitious, measurable, and achievable. Agreed changes should be incorporated into the final bid and resulting contract to maintain alignment with a Buyer's sustainability objectives.

Contract Management

A key weakness of public sector contracting is ensuring sustainability commitments are met. Effective contract management to ensure operational contract terms/KPIs are monitored, enforced and reported upon is key to ensuring that those terms are delivered during the contract term and a Buyer achieves its objectives from the contract.

A Buyer may choose to implement digital dashboards to monitor sustainability KPIs and schedule regular performance reviews to ensure ongoing compliance. Third-party audits or independent verification can also enhance accountability.

Expiry

KPIs related to sustainability deliverables should be included in an exit plan and aligned with a transition strategy to ensure that the required deliverables are achieved prior to the end of the contract and, if applicable, the relevant goals can continue in the re-procured contract. The success of the delivery of the KPIs and any lessons learnt should form a consideration in the pre-procurement phase for the re-procurement.

At expiry, a Buyer should (i) conduct a comprehensive evaluation of all sustainability KPIs; (ii) integrate these findings into the exit plan; and (iii) use the results to set benchmarks for future contracts. This will ensure continuity of sustainability efforts and inform re-procurement strategies.

The scope is relevant at all stages of the procurement lifecycle



Planning

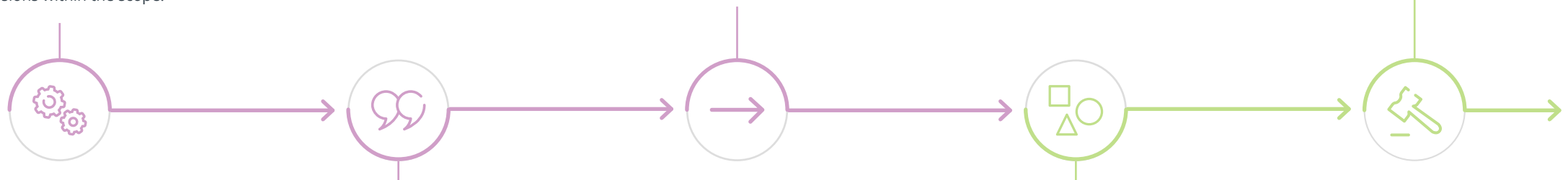
A Buyer could utilise the planning stage to consider what the scope needs to achieve, including how sustainability goals can be incorporated. During planning, a Buyer could clearly define quantifiable sustainability targets within the scope, such as a specific percentage decrease in GHG emissions, alongside broader sustainability goals. As part of this, a Buyer may want to involve specialist support to help define the scope, drawing from reflections on the strengths and weaknesses of any current contract, and from best practice in line with market standards. For example, specialist support could be engaged to help a Buyer clearly define quantifiable sustainability targets such as percentage decreases in GHG emissions within the scope.

Launch

The draft scope should be shared with suppliers at the outset of the procurement. A Buyer could also consider highlighting key elements of the scope in relevant procurement documents. To emphasise the importance of key services under the scope, a Buyer could consider including a reference in the Tender Notice. In the launch documents, a Buyer could seek to clearly articulate how the scope includes defined sustainability targets, such as specified reductions in GHG emissions or energy consumption metrics. Highlighting these key sustainability elements in the Tender Notice helps to signal their strategic importance to all suppliers.

Tender Stage

To ensure that the successful supplier can deliver the key elements of the scope that are related to sustainability, delivery of the elements of the scope needs to be effectively tested in the tender questions. Suppliers should be required to outline their methodologies for achieving and tracking sustainability targets within the project.



Pre-Market Engagement

During pre-market engagement, a Buyer should actively solicit feedback on proposed sustainability measures and benchmarks. This includes asking potential suppliers whether the scope's environmental requirements present barriers or constraints on adoption or the ability to bid.

This will support the implementation of an effective scope which is attractive to the market, does not form an obstacle to bidding, and effectively supports the goals of the procurement, the contract, and ultimately the success of the project.

Participation Stage

Conditions of participation offer the opportunity to a Buyer to ask questions that test the suppliers' experience of delivering similar services to those covered by the scope. This will support the implementation of an effective scope which is attractive to the market, does not form an obstacle to bidding, and effectively supports the goals of the procurement, the contract, and ultimately the success of the project.

Conditions of participation should specifically require suppliers to demonstrate their experience in delivering projects with comparable sustainability outcomes. For example, a Buyer could ask for comparable case studies where measurable reductions in GHG emissions were achieved.

The scope is relevant at all stages of the procurement lifecycle



Contract Award

At the end of the procurement, the contract will be finalised and executed, and the successful supplier will be contractually obligated to deliver the scope. Therefore, it is essential that any commitments that were mandatory or formed part of the successful supplier's tender are included in the final scope which should be incorporated into the contract.

At contract award, a Buyer should ensure that the final scope includes clearly defined GHG reduction commitments and sustainability deliverables. These should be tied to specific performance measures to ensure compliance and to encourage continuous improvement throughout the contract term.

Modifications

As part of contract management, it is often the case that the scope may require modification. For example, to react to unforeseen circumstances, to seek to continuously improve the service delivery, or to adapt to new innovations. The scope forms an important part of the procurement, therefore any modifications require careful consideration on a case-by-case basis. The scope may also provide the context to support the legal basis of modifying a contract.

Where modifications are required, a Buyer could review all sustainability elements, including GHG reduction targets, to ensure they remain ambitious and relevant. When modifying a contract, a Buyer should follow a formal change management process that includes stakeholder consultation, impact assessments, and documented approvals to ensure compliance with the applicable legal framework.



Negotiations

Subject to the type of procurement and its design, the scope will likely be of interest to suppliers during the negotiation phase. Ideally, the first draft of the scope, provided during the launch of the procurement, will have been acceptable to the market. However, it is possible that suppliers will wish to negotiate or discuss areas in more detail during any negotiation stages, especially as they will have a better understanding of a Buyer's goals and overall required solution.

During negotiations, a Buyer could ensure that discussions explicitly cover GHG reduction targets and any wider sustainability deliverables. Any agreed changes should be formally documented and incorporated into the final scope, ensuring that they remain measurable and enforceable during the contract term.

Contract Management

A key weakness of public sector contracting is ensuring sustainability commitments are met. Effective contract management to ensure that the delivery of the scope is monitored, enforced and reported upon is key to ensuring that the relevant commitments are delivered during the term of the contract and that a Buyer achieves its objectives from the contract.

To support this, a Buyer could implement systems to monitor GHG reduction performance, schedule regular performance reviews, track GHG reduction performance continuously, and consider third-party audits to verify that sustainability commitments are being met throughout the contract term.

Expiry

Elements of the scope related to sustainability deliverables should be included in an exit plan and aligned with a transition strategy to ensure that the required deliverables are achieved prior to the end of the contract and, if applicable, the relevant goals can continue in the re-procured contract. The success of the delivery of the scope and any lessons learnt would form a consideration in the pre-procurement phase for the re-procurement.

Prior to expiry, a Buyer should conduct an evaluation of the GHG reduction outcomes achieved under the scope, document lessons learnt (including successes and areas for improvement), and ensure that these insights are incorporated into exit plans and future procurement strategies to sustain long-term GHG reduction efforts.

Contractual terms are relevant at all stages of the procurement lifecycle



Planning

A Buyer should consider which mechanisms and terms they would like to include in the contract early on and allow these to inform the procurement.

During planning, a Buyer could also identify and define measurable GHG reduction targets and sustainability requirements. For example, including specific KPIs such as a targeted [X]% reduction in GHG emissions or energy use, ensuring that the contractual framework supports these environmental objectives.

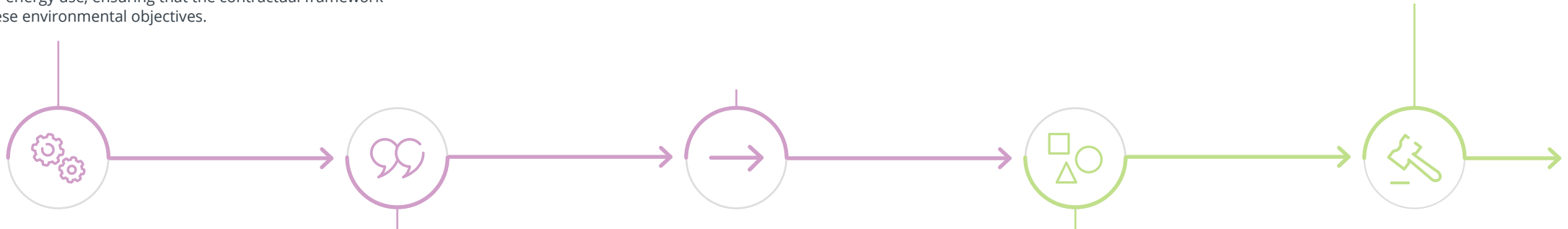
Launch

If possible, a Buyer could ensure that the draft contract clearly details sustainability commitments and GHG reduction targets. To achieve this, a Buyer could highlight key clauses, for example, those related to energy efficiency improvements or GHG emissions reductions, in all procurement documents and the published notice, to reinforce their importance.

Tender Stage

Tender questions could require suppliers to (i) outline their specific methods for achieving and monitoring GHG reduction; and (ii) confirm their commitment to achieving and validating the stated outcomes.

This might include the use of monitoring tools, third-party verification of GHG emissions data, or innovative construction techniques that lower GHG emissions, and support meeting the contractual terms.



Pre-Market Engagement

Pre-market engagement is an effective means for a Buyer to test its thinking about contractual terms, and help ensure it is not proposing terms that are unachievable or unattractive to the market. When discussing with suppliers, a Buyer should take feedback on board and consider whether any contractual terms or the general approach could be refined.

During pre-market engagement, a Buyer could explicitly seek feedback on proposed sustainability and GHG reduction clauses and ask the market whether the environmental provisions present barriers or constraints to adoption or the ability to bid.

Participation Stage

To ensure that the best possible suppliers are selected, conditions of participation should be drafted with the potential contract terms in mind. This means that when the contract is awarded, the successful supplier will have previously demonstrated its capability to perform the contract terms in a way which a Buyer has determined as important.

Conditions of participation should also probe suppliers' experience of delivering sustainability outcomes, such as successfully achieving GHG reduction targets. For example, requiring suppliers to provide case studies that demonstrate their ability to implement and monitor low-GHG technologies or processes.

Contractual terms are relevant at all stages of the procurement lifecycle



Contract Award

At the end of the procurement, the contract will be finalised and executed, and the chosen supplier will be contractually obligated to satisfy the relevant operational contractual terms. Therefore, it is essential that any commitments for contractual terms that were mandatory or formed part of the successful supplier's tender are included in the executed contract.

A Buyer should ensure that the final, executed contract includes:

- clear and enforceable sustainability and GHG reduction clauses; and
- specific performance metrics, reporting requirements, and associated mechanisms to drive continuous improvement in environmental performance.

Modifications

As part of contract management, it is often the case that some contractual terms may require modification (e.g., to react to unforeseen circumstances or new innovations). Contractual terms form an important part of the procurement, therefore any modifications require careful consideration on a case-by-case basis.

When modifications are required, a Buyer could specifically review and, if necessary, adjust GHG reduction targets and sustainability provisions to reflect new technologies or changing conditions. When modifying a contract, a Buyer should follow a formal change management process that includes stakeholder consultation, impact assessments, and documented approvals to ensure compliance with the applicable legal framework.



Negotiations

Ideally, the first draft of the contract that was provided during the launch of the procurement will have been acceptable to the market. However, it is possible that suppliers will wish to negotiate the contract during any negotiation stages, especially as they will have a better understanding of a Buyer's goals and overall required solution.

During negotiations, focus should also be placed on refining sustainability provisions, and ensuring that GHG reduction targets remain ambitious yet achievable. Any modifications to environmental clauses must be formally documented and incorporated into the final contract to ensure accountability.

Contract Management

A key weakness of public sector contracting is ensuring contractual terms are adhered to. Ensuring the delivery of the contract terms are monitored, enforced and reported upon is key to ensuring that the relevant commitments are delivered during the contract term, and that the contract's objectives are achieved.

To support this, a Buyer could implement systems to monitor GHG reduction performance, schedule regular performance reviews, track GHG reduction performance continuously, and consider third-party audits to verify that sustainability commitments are being met.

Expiry

Contractual terms related to sustainability deliverables should be included in an exit plan and aligned with a transition strategy to ensure that the required deliverables are achieved prior to the end of the contract and, if applicable, the relevant goals can continue in the re-procured contract. The success of the contract and any lessons learnt should form a consideration in the pre-procurement phase for the re-procurement.

At contract expiry, a Buyer should: (i) conduct a thorough evaluation of all sustainability and GHG reduction outcomes; (ii) ensure that the exit plan documents key performance data and lessons learnt; and (iii) leverage these insights to inform the transition strategy for the re-procured contract to maintain continuity of environmental performance.

Sustainability considerations are relevant to all stages of the procurement process when setting up Frameworks



Planning

A Buyer should utilise the planning stage to consider the sustainability goals to be delivered throughout the duration of the framework and at an individual call-off level. During planning, a Buyer could:

- define specific, quantifiable sustainability and GHG reduction targets, which are scaled to individual call-offs and rolled-up to the framework for reporting. This could include a defined [X]% reduction in GHG emissions over the contract term, aligned with national targets and industry standards; and
- consider integrating digital tools and lifecycle assessment methodologies to forecast and measure the potential environmental impact of the framework and its call-offs.

Launch

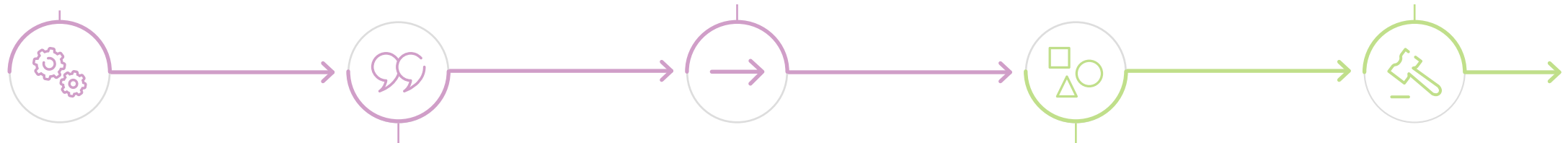
The procurement documents shared with suppliers at the outset of the procurement for both the framework itself and an individual call-off level (including the scope and draft contract) should detail the sustainability requirements clearly and set out how these relate to the delivery of the relevant services under the contract.

These documents should explicitly incorporate detailed sustainability requirements, including clear GHG reduction targets, renewable energy benchmarks, and energy efficiency measures. These elements should feature prominently in the tender documents and the published notice, reinforcing their role as core performance metrics throughout the contract.

Tender Stage

When competing to be appointed to the framework itself and participating in procurements at a call-off level, suppliers could be tested on how they can deliver the relevant sustainability deliverables under the contract.

Suppliers could be required to detail their strategies for achieving sustainability and GHG reduction targets. This could include descriptions of technologies, processes, and monitoring systems they will deploy, along with clear performance metrics and third-party verification mechanisms to substantiate their proposals. Care should be taken to ensure any commitments made at the framework level are also committed and scaled proportionately at the individual call-off level.



Pre-Market Engagement

Pre-market engagement should be used to understand how receptive the market is to the proposed approach to the procurement of the framework and delivery of the sustainability goals at a framework and call-off contract level.

During pre-market engagement, a Buyer could explicitly query potential suppliers about their capacity to deliver GHG reduction and other sustainability measures. This feedback could be used to refine both the technical specifications and performance benchmarks, ensuring that the framework supports low-GHG solutions and meets environmental performance criteria.

Participation Stage

Conditions of participation are an opportunity to test suppliers' experience of delivering similar sustainability requirements to those that a Buyer is seeking to include in the framework and call-off contracts. There will only be a participation stage during the procurement for the framework itself, not at an individual call-off level.

Conditions of participation should also focus on a supplier's proven experience with delivering GHG reduction and other sustainability outcomes. A Buyer could request detailed case studies and performance data that verify the suppliers' ability to meet specified low-GHG targets and implement sustainable innovations on projects of similar scale to those envisaged by the framework.

Sustainability considerations are relevant to all stages of the procurement process when setting up Frameworks



Contract Award

At the end of the procurement, the contract (framework or call-off contract) will be finalised and executed, and the successful supplier will be contractually obligated to deliver the sustainability obligations incorporated into the contract. Therefore, it is essential that any commitments that were mandatory or formed part of the successful supplier's bid are included in the final scope/contract terms.

A Buyer could ensure that the final framework, and subsequent call-offs, include explicit, measurable sustainability and GHG reduction commitments, along with clearly defined performance metrics and reporting requirements. These measures should be legally binding and linked to robust enforcement mechanisms.

Modifications

As part of contract management, it is often the case that an agreement (framework or call-off) may require modification. For example, to react to unforeseen circumstances, to seek to continuously improve the service delivery, or to adapt to new innovations. Modifications require careful consideration on a case-by-case basis.

When modifications become necessary, a Buyer could review and adjust any sustainability provisions, including GHG reduction targets, to ensure they remain ambitious, relevant, and achievable. A Buyer should follow a formal change management process that includes stakeholder consultation, impact assessments, and documented approvals to ensure compliance with the applicable legal framework.



Negotiations

If there is a negotiation stage during the procurement for the framework or at a call-off level, a Buyer will need to consider what areas are open to negotiation. Sustainability requirements will likely be of particular interest to suppliers during a negotiation in the context of the scope, KPIs and contractual terms.

During negotiations, a Buyer could give special attention to refining any sustainability and GHG reduction clauses. A Buyer should ensure that all agreed modifications, such as adjustments to GHG reduction targets, reporting requirements, or incentive mechanisms, are formally documented and incorporated into the final contract, maintaining alignment with a Buyer's long-term environmental objectives.

Contract Management

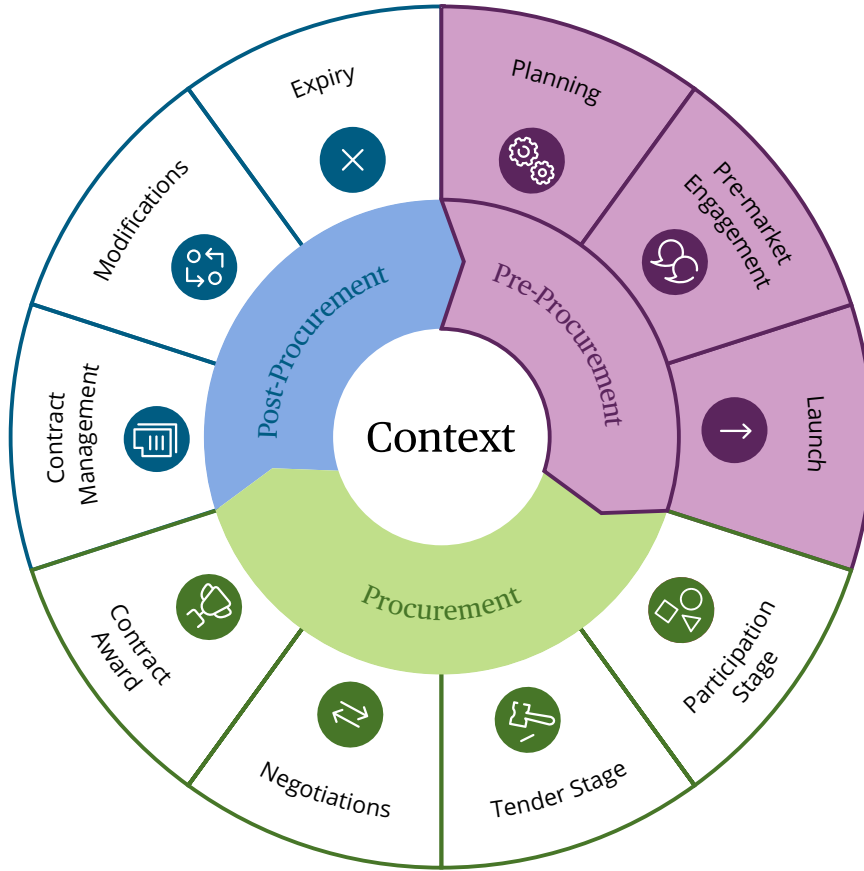
A key weakness of public sector contracting is ensuring sustainability commitments are met. Effective contract management to ensure that the delivery of the sustainability goals is monitored, enforced and reported on at both a framework and call-off level will be important to ensure that the relevant commitments are delivered.

To support this, a Buyer could implement systems to monitor GHG reduction performance, schedule regular performance reviews, track GHG reduction performance continuously, and consider third-party audits to verify that sustainability commitments are being met throughout the contract term.

Expiry

At the expiry of a call-off contract or the framework, elements of the relevant contract documents (e.g. scope, KPIs, contract terms) related to sustainability deliverables should be included in an exit plan and aligned with a transition strategy to ensure that the required deliverables are achieved prior to the end of the contract and, if applicable, the relevant goals can continue in the re-procured contract. The success of the delivery of the sustainability goals and any lessons learnt should form a consideration in the pre-procurement phase for the re-procurement or future call-off contracts.

In advance of expiry of the framework, a Buyer should conduct a comprehensive evaluation of sustainability performance, including an assessment of GHG reduction outcomes. A Buyer should ensure that the exit plan documents all key performance data and lessons learnt, and that this information is integrated into the transition strategy and used to set benchmarks for future procurements.



04 The Pre-Procurement Phase

What to think about when Launching a Procurement

To ensure that sustainability targets are achieved during the lifetime of the contract, it is crucial to identify those goals at an early stage of the procurement and integrate as much detail as possible in the procurement documentation.

Involving all stakeholders (e.g., technical, commercial (including finance and insurers), legal and administrative) in the planning stage allows Buyers the opportunity to review the relative advantages and disadvantages of the existing contract (if applicable) before considering a procurement strategy that takes into account: (i) procurement design; (ii) contract design; and (iii) contract management.

Taking a holistic and engaged view of all of these elements at the earliest opportunity will allow for better integration of sustainability targets, a clearer opportunity being presented to market, and a marked increase in the quality and detail of bids received.





Planning

The Planning stage marks the critical first step in the pre-procurement process, where Buyers establish the foundation of their procurement strategy. Along with the wider technical and value for money considerations, it is at this stage where the incorporation of any sustainability objectives must be considered. To support this, Buyers should consider whether KPIs, innovative procurement methods, and bespoke evaluation criteria can help drive the entire procurement from the outset.

Practically, this could involve defining clear GHG reduction and sustainability objectives, and ensuring that these goals align with broader governmental targets such as net-zero commitments and industry standards. This proactive approach not only informs subsequent stages, but also ensures that sustainability is embedded from the outset, setting the tone for transparent, accountable, and environmentally responsible procurement decisions.

During the Planning stage, Buyers should also consider the extent to which dashboards and lifecycle analysis tools could be employed to both forecast potential GHG savings and to set evidence-based targets. To enable a precise alignment between procurement strategies and sustainability outcomes, **Buyers may also wish to consider:**

01

Embedding GHG reduction as a strategic priority from the outset.

02

Setting clear GHG targets as part of the planned objectives, including alignment with national policies. This may include Buyers defining measurable reduction targets (e.g., [X]% reduction in embodied and operational carbon).

03

Developing a sustainable procurement strategy as part of the overall competition plan. This would seek to integrate GHG reduction into the overall procurement objectives and risk management approach, and will involve engaging cross-functional teams (e.g., procurement professionals, sustainability experts, engineers, and legal advisers) to ensure comprehensive planning.

04

Conducting a lifecycle carbon assessment to identify baseline emissions across design, materials, construction, operation, and maintenance. This would require the deployment of tools such as whole-life carbon costing to quantify potential savings. Please see page 92 for an example of such a tool.

05

Establishing governance and funding the project at design level. For example, establishing oversight structures (e.g., a sustainability steering group).

06

Reviewing the Cabinet Office's public supplier Debarment List which includes all suppliers debarred from participation on a mandatory basis, and all suppliers debarred from participation on a discretionary basis.



Policy Objectives

In parallel with social value themes, Buyers could consider the application of explicit GHG reduction targets, to ensure that *environmental outcomes are measurable and aligned with their and national Net Zero objectives.*

For contracts awarded under the PA23, the [National Procurement Policy Statement](#) applies to many Buyers. Particularly relevant to highways projects and sustainability initiatives include policies which aim to:

1. make Britain a clean energy superpower, accelerating net zero, promoting the use of green technologies and ensuring suppliers mitigate environmental risk appropriately, and are committed to high environmental standards; and
2. deliver social value by addressing skill gaps, enhancing training and development opportunities, and directing investment towards small business and social enterprises as a means of removing barriers to entry prejudicing young and under-represented groups.

Buyers should also be aware that, as at the publication of this Toolkit, the government is planning an update to the [Sourcing Playbook](#) to introduce a new public interest test for Buyers to assess whether better value for money could be driven from in-house teams.





Stakeholders

One of the main barriers to adoption of GHG reduction strategies is pushback from stakeholders, particularly where there are competing interests. Ensuring all relevant stakeholders are included at the outset of these planning discussions will help to secure the success of the development and implementation of the objectives of the procurement and contract.

Buyers could adopt a stakeholder map and communication matrix to ensure buy-in across their stakeholders. This could include:

- identifying all relevant stakeholders, both internal and external;
- assessing stakeholder influence and interest using tools like Mendelow's Matrix;
- developing a stakeholder engagement plan tailored to stakeholder preferences; and
- establishing clear, transparent communication channels with stakeholders.

Market Analysis

Conducting thorough market analysis prior to launching a procurement will help to achieve a better designed process. Sustainability is a highly politically driven area and is subject to fast moving technological change, meaning that a position established during a procurement could be drastically different when the same (or similar) contract is being re-procured. Conducting market analysis and research is crucial, as it can help Buyers understand current and developing innovations, market maturity, and best practices. For example, novel ways of adopting innovative solutions and integrating emerging technologies can enable Buyers to improve their ways of working and achieve better outcomes.

Market analysis and research should assess the availability and viability of low-GHG technologies and solutions, including a review of GHG emissions data, to ensure that the procurement is informed by current and potential future GHG reductions.

Care should be taken to understand the wider social impact of proposed GHG reduction measures on the potential supply market. This can have a disproportionate impact on SMEs and, as such, can have a negative impact on other social value measures if not considered fully at the planning and market analysis stages.



Governance

Buyers' internal policies and governance processes should be factored into the design of the procurement and should be considered at the outset of the planning phase to ensure efficient planning and running of the procurement and management of the contract.

Drafting business case documents is a crucial step in the procurement and governance process for Buyers. These documents are repeatedly referred back to during a procurement, making it crucial to:

- clearly set out GHG reduction aims and objectives; and
- practically plan how objectives will be achieved through the procurement, in the contract terms, and during the life and management of the contract.

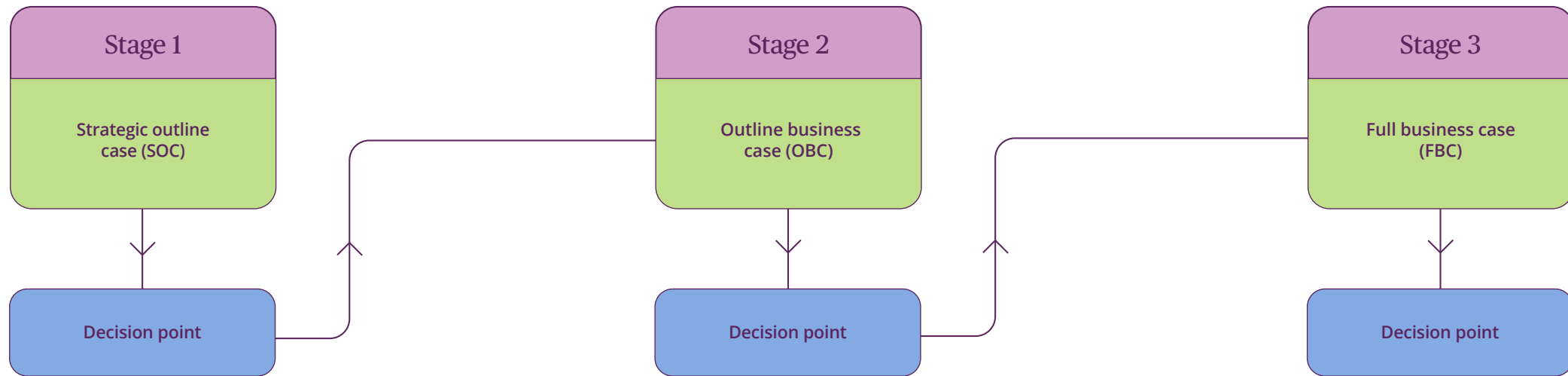
Buyers could consider appointing a dedicated individual who is responsible for championing the above, and ensuring they are incorporated as a "golden thread" throughout the procurement documentation. This approach ensures that key stakeholders are aware of such considerations from the outset. Furthermore, the business case should include a quantified analysis of expected GHG reduction using lifecycle analysis tools.

The Five-Case Model

The five-case model provides a business case development framework (please see [HM Treasury's Business case guidance for projects and programmes](#)), which, when applied correctly, covers the widely varied features of any spending proposal.

- The separate constituents of the five-case model should not be viewed in isolation; they are inextricably linked.
- They should be developed collectively in an iterative process.
- When a change is made to one case, the others should be reviewed, and the content updated as required.





The purpose of the SOC is to establish a high-level qualitative case for change and is the first formal stage in developing the scheme/project's business case. It seeks approval to proceed to more detailed planning before significant resources are committed. The SOC provides:

- the strategic context and the case for change;
- the project's objectives and benefits;
- a long-list of options appraised using the Options Framework (for service scope, service solution, service delivery, implementation, funding), and
- identification of a preferred way forward and a short-list of options to be appraised in detail at the OBC stage (in order to identify the preferred option).

Building on the SOC, the OBC integrates details from developed commercial strategies and insights gained from pre-market engagement. Buyers should provide detail on the proposed procurement approach, including stages, and how suppliers will be evaluated. This proposal should be supported by a Buyers' rationale and evidence base.

Buyers should incorporate preliminary GHG assessments and market feedback on market maturity, adoption, and measurement of low-GHG solutions into the OBC. Doing so can help ensure sustainability objectives are realistic and achievable within the context of current market capabilities.

The FBC builds on both the SBC and the OBC.

It serves to demonstrate how Buyers have tested the market and arrived at the outcome at the end of the procurement. With regards to GHG reduction, the FBC should set out how its anticipated delivery has been tested through the procurement and how these will be achieved throughout the term of the contract.

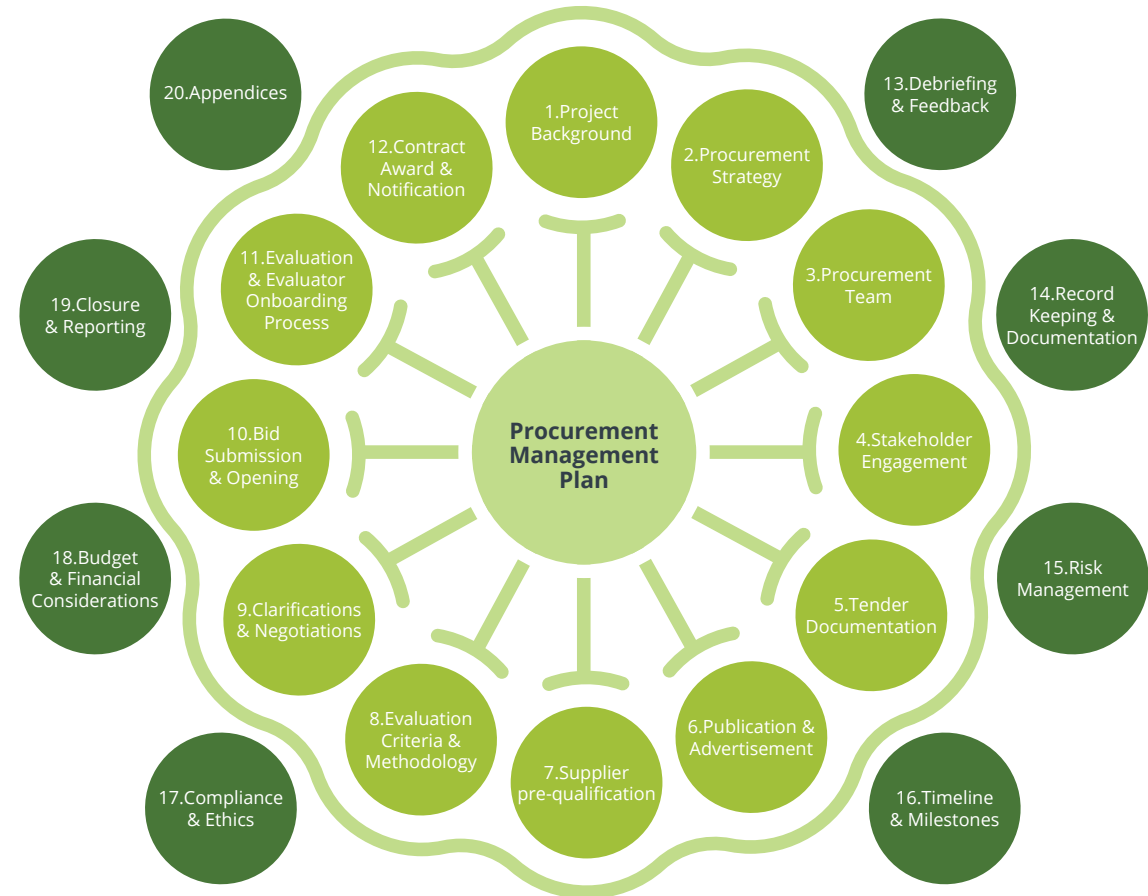
The FBC should provide detailed GHG reduction projections and specify the methodologies for ongoing measurement, verification, and reporting of GHG-related performance throughout the contract term.



Procurement Management Plan

As good practice for any large-scale procurement, Buyers should consider preparing a Procurement Management Plan that anticipates the key elements of running a successful procurement. This is not specific to GHG reduction, but rather, it can help set out the procurement's objectives and how these will be managed throughout the procurement.

The Procurement Management Plan sits inside the wider structure of a project, and can inform either a standalone project or a wider programme. In essence, it can become the key procurement tool within a project setting, and, depending on the complexity of the procurement, typically includes the following key information:





Procurement Management Plan

01

Project Background: Provide an overview of the project and the rationale underpinning the procurement, emphasising its alignment with a Buyer’s sustainability and GHG reduction targets. Describe external factors such as regulatory drivers, climate policies, and stakeholder environmental expectations within the context of the procurement/project.

02

Procurement Strategy: Outline the chosen procurement approach and justify it, noting any alternative options considered. Explain how this strategy will drive low-GHG outcomes through innovative solutions and long-term environmental benefits. This could include considering whether the requirements could reasonably be supplied under more than one contract, and whether such contracts could appropriately be awarded by reference to lots.

03

Procurement Team: Identify key individuals and roles, including sustainability and GHG reduction specialists, who will form part of the core procurement team. Clearly define responsibilities and reporting lines to ensure that environmental objectives are integrated and monitored throughout the contract’s term.

04

Stakeholder Engagement: List internal and external stakeholders, including those focussed on sustainability. Detail engagement and communication strategies that ensure stakeholder input on environmental objectives and support for innovative, low-GHG procurement solutions.

05

Tender Documentation: Describe the required procurement documents (e.g., invitation to tender, contractual documents, scope/specifications, evaluation criteria, etc.), ensuring they include clear sustainability requirements and measurable GHG reduction targets. Provide a timeline for document development and approval.

06

Publication & Advertisement: Explain how and where the procurement notices (e.g., Preliminary Market Engagement Notice, Planned Procurement Notice, Tender Notice, etc.) will be published, ensuring compliance with legal advertising requirements. Highlight the sustainability focus and GHG reduction objectives to attract suppliers with robust green credentials.

07

Supplier Prequalification (Tender Stage): Detail the prequalification process, criteria, and deadlines, with consideration of assessing suppliers’ capabilities in delivering sustainable and low-GHG solutions. Explain how prequalified suppliers will be invited to participate in the Tender Stage of the procurement.

08

Evaluation Criteria & Methodology: Develop transparent evaluation criteria, including technical, financial, qualitative, and sustainability factors, with specific reference to GHG reduction performance. Describe the evaluation methodology (e.g., weighting, scoring systems) used to assess suppliers’ responses.

09

Clarifications & Negotiations: Outline procedures, timelines and responsibilities for addressing supplier questions and providing clarifications, and undertaking solution focussed negotiations/ dialogue/discussions.

10

Bid Submission & Opening: Provide clear instructions for suppliers on how to prepare and submit their responses. For example, the date, time, and portal location of bid submissions and the bid opening process.



Procurement Management Plan

11

Evaluation & Evaluator Onboarding Process:

Detail the process for evaluating bids, including the composition of the evaluation committee and their roles (including the process of onboarding, training, assessing and addressing conflicts of interest, and identifying suitably qualified and experienced personnel).

12

Contract Award & Notification:

Establish procedures (including governance requirements) for awarding the contract, including contract negotiation if required, and notification of successful and unsuccessful suppliers.

13

Debriefing & Feedback: Establish a plan for providing feedback and debriefing to suppliers (both successful and unsuccessful). This should include a mechanism for efficiently handling appeals or disputes, if applicable.

14

Record Keeping and Documentation: Establish protocols for maintaining comprehensive records of the procurement, including all communications, decisions, and evaluations. This supports Buyers' obligations under s.98 of the PA23.

15

Risk Management: Establish a risk register that is maintained throughout the whole procurement. Detail how potential risks will be identified and managed, and include strategies for mitigating them during the procurement.

16

Timeline & Milestones: Create a detailed project timeline with key milestones and deadlines. This should also include dependencies and critical paths within the procurement. This should include any details on procedures to amend the timeline, should delays occur. E.g., including escalation and communication protocols, which support the effective management of stakeholders (including incumbents).

17

Compliance & Ethics: Implement procedures and processes to ensure the procurement adheres to ethical standards, anti-corruption measures, and procurement legislation/policy/guidance.

18

Budget & Financial Considerations: Estimate the budget required for the project, with clear delineations separating the costs for: running (i) the procurement and (ii) the contract.

19

Closure & Reporting: Establish procedures for closing out the procurement once the contract is awarded. Such procedures should include reporting on sustainability and GHG reduction targets throughout the contract term. Furthermore, it could, if applicable, include reporting requirements to stakeholders and authorities.

20

Appendices: Include supporting documents, templates, or forms, such as bid evaluation templates and conflicts of interest declarations.



Innovation

Buyers should not only consider what sustainability goals they want to achieve, but the method by which achievement of those goals can be delivered and any alternative innovative methods that could be used.

Similarly, Buyers should consider how the procurement can be used to test whether suppliers can deliver the sustainability goals and what procurement stages might be appropriate for the particular requirement. Therefore, Buyers should consider if the use of innovative procurement methods or stages would be appropriate and could benefit the process.

For example, Buyers could consider:

- ✓ Incorporating stages that allow for the iterative development of solutions.
- ✓ Parallel negotiation of the contract during the procurement.
- ✓ Innovation partnerships, where public and private sector organisations leverage R&D spend and facilities to jointly develop common solutions.
- ✓ Allowing the submission of variant bids.
- ✓ Site visits during the procurement.
- ✓ Creative arrangements regarding the ownership and use of IP whereby Buyers can generate long-term value and income from innovative solutions.
- ✓ Specifying contractual options available, and using an incentive-based approach to risk taking and R&D that rewards innovative suppliers.

Buyers should consider the incorporation of innovations that directly reduce GHG emissions. For example, by integrating low-carbon materials, advanced digital GHG tracking tools, or renewable energy solutions into the procurement during the pre-procurement phase. Please see pages 88, 89, and 91 for practical examples of innovative projects in practice.





Scope

The scope sets out a Buyer’s requirements for the contract (goods/works/services) that suppliers bid and deliver against. To ensure a Buyer’s requirements are factored in and communicated clearly to the market, it is critical that a well-drafted scope emerges from pre-procurement discussions, which retains flexibility to evolve during the process and informs the drafting of procurement and contractual documents.

Incorporating sustainability goals, metrics and deliverables in early drafts of the scope will allow suppliers to include these in their bids and ensure the successful supplier delivers against these during the term of the contract.

Key points to consider in the planning phase to achieve a well-drafted scope:

Pre-Market Engagement

- 01 Buyers should use pre-market engagement to better understand from suppliers how the desired outcomes can be delivered, remain open to alternative suggestions, and stay involved throughout the development of the scope.
- 02 Determine knowns vs unknowns early in the process and document them as part of the scope. Where there are unknowns, consider this as part of your overall procurement design.
- 03 Bear in mind the risk of incumbent advantage and where possible seek to mitigate this (without disadvantaging the incumbent supplier). For example, ensuring the scope is focussed on outcomes rather than the use of specific products that are proprietary to the incumbent supplier.

Procurement Process

- 04 Consider requiring suppliers to provide services implied by the scope, in addition to specified requirements, with sufficient detail to avoid the need for contract modifications throughout the term of the contract.
- 05 Address any ambiguity and inconsistencies to facilitate clarity and understanding. Ensure there is adequate cross-referencing with the contract, procurement questions, and evaluation criteria for coherence across the procurement documents.

Technical Buy-in

- 06 Ensure key stakeholders and technical experts with knowledge of the operational delivery are involved from the outset and stay engaged throughout the development of the scope.
- 07 Break down the scope into logical modules or towers and establish clear links between services, charges, and service levels.

Contract Planning & Management

- 08 Consider incorporating the intended resourcing plan for the full term (including exit) of the contract to ensure a match with supplier expectations and to avoid unanticipated change control requirements during the contract’s term.
- 09 Include exit and termination requirements in the scope for exit planning. This should include the handover of any GHG measurements made during a contract’s term to ensure ongoing baselining for recurring contracts.
- 10 Ensure risk assessment, management, and allocation is clearly documented at the outset. Take a pragmatic approach to avoid unnecessary risk pricing or onerous contractual terms.

The scope should detail specific GHG reduction deliverables, such as *targets for reducing embodied and operational carbon*, and include provisions for ongoing GHG reporting and validation.



KPIs & Contract Terms

Buyers could use the planning stage to consider what they want to achieve through the contract terms and KPIs and how this can be translated into the contract. Considering this at the outset of the planning stage will help to ensure the successful delivery of Buyers' sustainability and GHG reduction goals.

To ensure success, KPIs should:



Be clearly written with no ambiguity as to responsibilities or targets.



Have a clear mechanism for review and assessment of compliance.



Have sufficient contract management support to measure and monitor compliance.



Be clearly aligned to assessment measures during the procurement to ensure a "level playing field", and considered as part of any overarching service level agreement. This is particularly important where KPIs are linked to service credits, liability, warranties or guarantees.



Have clear, effective and tailored processes for measurement.



Be clearly linked to the service descriptions, pricing and cost structures.



Be achievable.

In addition to KPIs, Buyers should incorporate GHG-specific KPIs (e.g., [X]% reduction in GHG emissions, energy efficiency metrics, etc.) that are aligned with recognised standards. This will ensure that GHG reduction performance is clearly measurable and enforceable.



Routes to Contract Award

The PA23 now only includes three forms of procurement procedures with only two competitive procedures, compared to the more prescriptive, five competitive procedures under the EU Derived Regime.

Under the PA23, a Buyer may award a public contract to the supplier that submits the most advantageous tender (“**MAT**”) in a competitive tendering procedure, replacing the most economically advantageous tender (“**MEAT**”) criteria under the EU-derived Regime.

Frameworks can be awarded via the Open Procedure and the Competitive Flexible Procedure, and contracts awarded under a Dynamic Market can be awarded via the Competitive Flexible Procedure.

Whichever procedure is chosen, the procedure and its structure must be proportionate having regard to the nature, complexity and cost of the contract.

Open Procedure

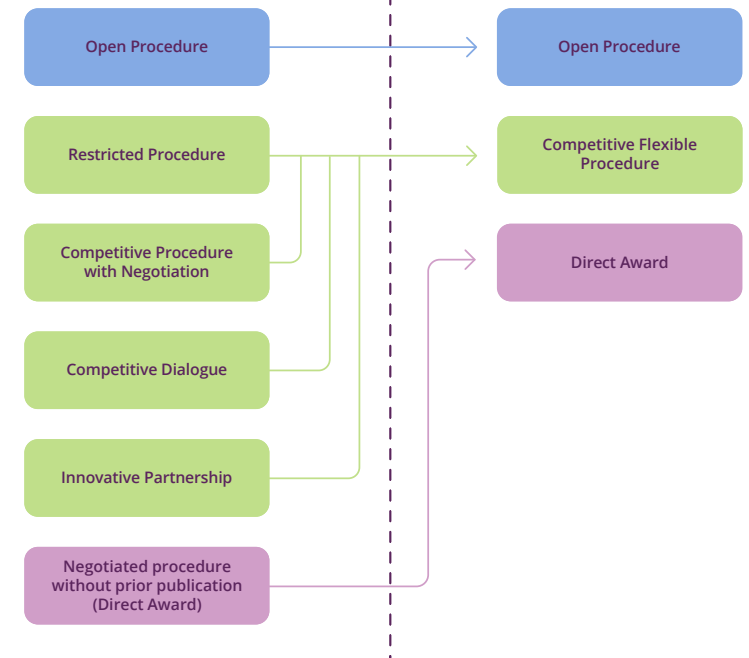
A single stage procedure whereby any interested party can submit a bid and a Buyer will decide whom to award the contract to on the basis of that bid. The open procedure is typically used for straightforward procurements.

Competitive Flexible Procedure

Buyers are afforded the freedom to design their own bespoke processes under the Competitive Flexible Procedure. The Competitive Flexible Procedure consolidates the various multi-stage procedures under the EU-derived Regime (e.g., Restrictive, Competitive Procedure with Negotiation, Competitive Dialogue Procedure, Innovation Partnership). The multiple stages of the Competitive Flexible Procedure can include the shortlisting/down-selection of suppliers through the various stages of the process. The details of each procurement will be found in the relevant procurement documents published by a Buyer rather than in the legislation. As a result, the importance of the procurement documents has increased, and suppliers will be required to comprehensively study them to ensure that they fully understand the specific process.

The Competitive Flexible Procedure provides the greatest scope to support sustainable procurement as it allows for greater interaction between Buyers and suppliers (e.g., through negotiation, dialogue, demonstrations, site visits, etc.). However, Buyers will need to consider whether a Competitive Flexible Procedure is proportionate having regard to the nature, complexity and cost of the contract.

EU-derived Regime:



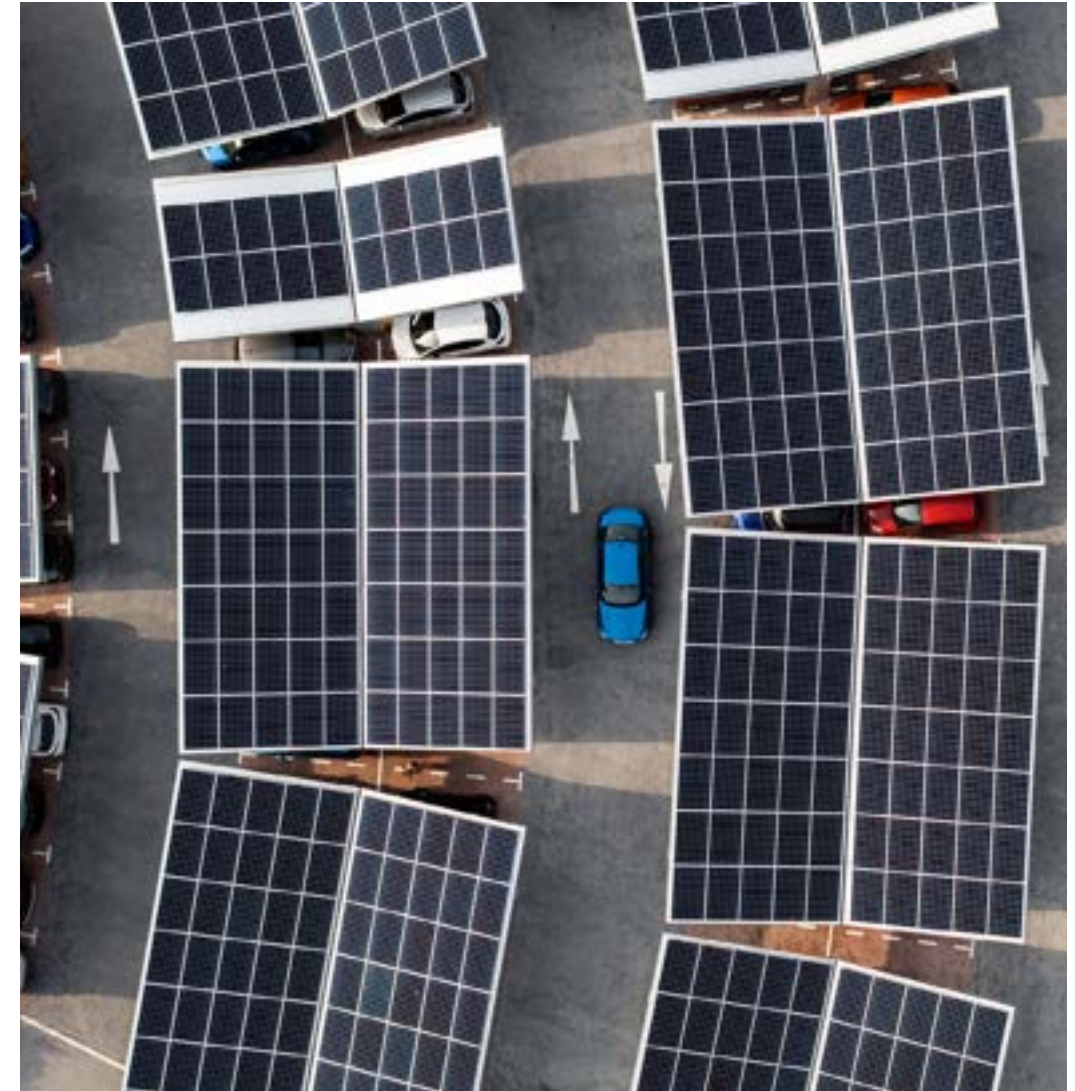


Frameworks

Frameworks are a useful way for Buyers to maintain a menu of suppliers who can provide for a range of requirements. Buyers can then choose (in accordance with the framework's terms) to individually contract with a particular supplier for specific requirements, as needed, under a "call-off contract".

During the planning phase, Buyers will need to consider how the sustainability and GHG reduction deliverables should operate at both a framework and call-off level, during the procurements, and within the contracts. In particular, there should be mechanisms to ensure that any commitments anticipated at the framework level are supported by deliverables that "roll-up" through any call-off contracts awarded through the framework.

Frameworks should include provisions for periodic review and adjustment of GHG reduction targets, ensuring that evolving technologies and practices can be incorporated into call-off contracts as they become available.





Dynamic Markets

The concept of a “dynamic market” under the PA23 replaces the concept of a Dynamic Purchasing System (“DPS”) under the EU-derived Regime.

A dynamic market is intended to function similarly but with greater flexibility, although it is arguable whether this is the case in reality (e.g., the inability to use a dynamic market for below-threshold contracts).

A “dynamic market” is not a “public contract” for the purposes of the PA23, it is an arrangement that provides Buyers a list of qualified suppliers (i.e., suppliers who have met the “conditions for membership” of the dynamic market) that are eligible to participate in future procurements. Therefore, being a member of a dynamic market does not guarantee any work or the award of any contract; it serves as a form of “pre-authorisation,” allowing suppliers to participate in future tenders within that dynamic market.

Like a DPS, the number of members cannot be limited, and the dynamic market must remain open to new suppliers to join at any time. A Buyer must not modify the conditions for membership of a dynamic market during its term.

Subsequently, Buyers procure goods, works, or services through a dynamic market under the PA23’s competitive flexible procedure to award individual contracts. A contract cannot be awarded under a dynamic market using the open procedure or as a direct award.

When establishing a dynamic market, Buyers must:

- accept applications for membership at any time;
- consider applications within a reasonable period of time;
- admit suppliers to the dynamic market (as long as they are not excluded suppliers and they meet the conditions for membership) as soon as reasonably practicable;
- consider whether to admit suppliers that are excludable suppliers and that meet the conditions for membership; and
- inform suppliers of the outcome of their applications, and the reasons for the decision, as soon as reasonably practicable.

Therefore, whilst attractive in certain situations (e.g., for goods or services with high price volatility, or where it may be desirable to have a regular influx of new market participants), establishing and maintaining a dynamic market should be considered against the administrative burden involved in constantly reviewing, accepting or rejecting, and notifying new market participants.

Buyers may charge fees to suppliers on a dynamic market (e.g., fees that represent a fixed percentage of the estimated value of the contract awarded to the supplier under the dynamic market).



Pre-Market Engagement

Pre-market engagement is one of the keys to the success of a business-critical procurement. By engaging early and allowing sufficient time to finalise processes and documentation, Buyers can run an attractive and competitive procurement and become the “client of choice”.

Pre-market engagement raises awareness of an upcoming procurement and provides an opportunity to test assumptions, approaches, the overall attractiveness of the opportunity, and to identify barriers to suppliers bidding. This engagement can include discussions regarding:

- the form of the contract and the commercial structure;
- the technical approach/requirements; and
- the procurement process.

A well-executed pre-market engagement can streamline the procurement itself and improve the quality of suppliers’ responses. Its importance cannot be overstated, as it allows Buyers to better understand the market and prepares the market for the procurement of a contract.

Requiring the market to bid on the basis of unachievable targets or asking suppliers to sign up to terms that they cannot comply with will mean that the desired outcomes will not be achieved. In this context, pre-market engagement assists a Buyer in understanding whether its GHG reduction or other sustainability aims are achievable, and how successful outcomes can be realised in practice.

Specifically, pre-market engagement could include discussions on:

- GHG reduction strategies;
- the feasibility of low-GHG technologies;
- the integration of GHG performance metrics into procurement outcomes;
- the lessons learnt from existing comparable contracts; and
- the supervision of GHG performance metrics throughout the contract’s term.

Pre-market engagement should consider maturity, extent of adoption, capability and capacity to validate projected outcomes, and the impact of GHG reduction measures on wider social value outcomes on the supplier and subcontractor market.





Administrative Requirements for Pre-Market Engagement

Pre-market engagement was allowed for under the EU-derived Regime and is actively encouraged under the PA23. Feedback received can be used in the planning and conduct of a procurement, provided that it does not have the effect of putting suppliers participating in the pre-market engagement at an unfair advantage. In practice, this means:

- any engagement should be conducted in an open and transparent way, whilst maintaining any commercial confidentiality;
- any engagement should be proportionate to the scale of the project. This is because participation can be time consuming and costly for participants, which could disproportionately affect SMEs;
- any information that has been provided to those involved in the pre-market engagement must be provided to any participants in the procurement, regardless of whether they participated in pre-market engagement; and
- Buyers should keep records of any discussions so that relevant information can be shared with all suppliers engaging with the procurement.

Buyers should ensure that key GHG performance data, goals, objectives, measurement criteria, and any relevant baseline is recorded during pre-market engagement and is made available to all suppliers in a manner that promotes transparency while maintaining confidentiality.

For procurements governed by the EU-derived Regime, there were no formal notice requirements for initiating pre-market engagement (although informing the market through a Prior Information Notice was common practice).

For procurements governed by the PA23, Buyers should generally publish a Preliminary Market Engagement Notice, or explain in the Tender Notice why it did not publish such a notice. The specific notice requirements will depend on the procurement, so legal advice should be sought on a case-by-case basis.

From a logistical perspective, Buyers should ensure that key individuals (for the procurement, the contract, and the organisation) are involved in the pre-market engagement to demonstrate to the market that it is an “intelligent client”. It is therefore advisable that those who understand the sustainability objectives are present in any pre-market engagement activities. Individuals should be fully prepared and have relevant materials to share with the market.



Types of Pre-Market Engagement

Pre-market engagement can be as formal or informal as Buyers prefer.

Different types of pre-market engagement could be carried out, including but not limited to the following:



Buyers may consider developing a pre-market engagement information pack which could include:

- an introduction to the Buyer;
- an introduction to the opportunity;
- the proposed procurement process;
- draft documents, including an indicative scope;
- an explanation of how the pre-market engagement process will be approached by the Buyer and the aims and objectives of the exercise;
- pre-market engagement guidance and rules;
- pre-market engagement questionnaire to provide feedback to the Buyer (see page 44); and
- A dedicated section outlining the Buyer's GHG reduction targets. This could include examples of low-GHG innovations, and questions related to GHG performance, adoption, validation and constraints.



Pre-Market Engagement Questionnaire

Buyers could incorporate sustainability related questions within a pre-market engagement questionnaire. For example:

- **GHG Reduction Targets:** *"We are committed to reducing our GHG footprint by [X]%. Based on our proposed scope, what barriers or constraints do you foresee in our ability to achieve or exceed this target throughout the term of the contract?"*
- **Innovation in Design and Construction:** *"Which innovative design or construction methods have you successfully implemented in previous projects that resulted in significant GHG savings throughout the term of the contract, and what barriers or constraints exist within our proposed procurement scope/contracting approach that could prevent adoption?"*
- **Supply Chain Collaboration:** *"What barriers or constraints are there within our scope or contracting approach that may limit your ability to ensure that your entire supply chain aligns with the project's sustainability and GHG reduction objectives?"*
- **Measurement and Reporting:** *"Based on our proposed scope and approach, what barriers or constraints do you foresee in our ability to report on GHG emissions and reductions during both construction and operational phases, and what KPIs would you recommend we consider to ensure we meet our targets?"*
- **Sustainability KPIs Integration:** *"What barriers or constraints are there within our approach to KPIs that may limit your ability to integrate these into your contract management processes?"*
- **Circular Economy (Waste Minimisation and Resource Efficiency):** *"What strategies for supporting the circular economy (including minimising waste, increasing resource efficiency, and ensuring maximum recycling or reuse of materials) have you successfully implemented in previous projects that resulted in significant GHG savings throughout the term of the contract, and what barriers or constraints are there within our proposed procurement scope/contracting approach that could prevent adoption?"*
- **Addressing Scope 3 Emissions:** *"What barriers or constraints are there within our scope that may limit your ability to tackle Scope 3 emissions (indirect emissions from the supply chain)?"*
- **Procurement Procedure:** *"How could we design and conduct the procurement to support the development of a sustainable solution? Where possible, please provide examples (both positive and negative) of your experience of procurement procedures seeking to support the development of sustainable solutions."*



Pre-Market Engagement Questionnaire

- **Training and Support:** *"Are there any forms of training or support that your organisation may require from us to effectively implement and manage the proposed sustainability measures proposed in the scope through the term of the contract?"*
- **Community and Stakeholder Engagement:** *"What barriers or constraints are there within our scope or approach that may limit your ability to work with local communities and stakeholders to ensure that the sustainability and GHG reduction goals of this project align with broader regional sustainability and environmental objectives?"*
- **Technological Limitations:** *"Are there any current technological limitations or supply chain challenges that could impede the implementation of low-GHG solutions based on our proposed scope or approach?"*
- **Data Integrity and Verification:** *"What barriers or constraints are there within our scope or approach that may limit your ability to ensure the accuracy and integrity of GHG performance data?"*
- **Workflow Integration:** *"What barriers or constraints are there within our scope or approach that may limit your ability to integrate new GHG monitoring technologies into your established project workflows?"*
- **Collaboration with the Buyer:** *"What additional support or collaboration would you require from our team to overcome barriers and ensure the successful achievement of our GHG reduction objectives?"*





Areas to Explore Through Pre-Market Engagement

Pre-market engagement should explicitly address how the proposed solutions will contribute to measurable GHG reduction, *ensuring that sustainability objectives are not only aspirational but verifiable.*

KPIs and Contract Terms

- To implement effective contract terms and KPIs that are attractive to the market, do not hinder bidding, and support Buyers' goals, Buyers should test their ideas—including example draft KPIs—through pre-market engagement.
- The PA23 requires that Buyers set and publish at least three KPIs for contracts estimated over £5 million (with the assessment of the three KPIs that are considered, at the time, the most material to performance of the contract obligations being published). KPIs are to be assessed at least annually (with the results published), making it critical to use pre-market engagement to understand the market's position on proposed KPIs.
- The enhanced transparency requirement to publish KPIs is likely to increase supplier scrutiny during the procurement (especially in relation to achievability), meaning Buyers should carefully consider their KPI requirements during the planning stage of each procurement.

Innovative Solutions

- Pre-market engagement is an excellent way to understand the forefront of sustainability solutions the market can offer, meaning significant developments can be integrated into long-term contracts. Buyers should consider asking suppliers about innovative solutions they have successfully implemented in previous projects which resulted in significant GHG savings through the contract's term.
- Buyers should also enquire about any barriers or constraints within the scope or approach that might prevent these solutions from being adopted for the current contract. This would support Buyers to identify where the scope or approach could be a barrier to adopting novel solutions or could be adapted to better achieve the desired outcomes.



Areas to Explore Through Pre-Market Engagement

Innovative Procurement

- The “competitive flexible procedure” under the PA23 has replaced the prescriptive multi-stage processes under the EU-derived Regime and allows Buyers greater freedom to design procedures that suit their needs.
- Whilst liberating to some degree, Buyers still have to contend with increasingly competitive international markets, where the best organisations have a wealth of opportunities to choose from. As such, it is crucial that Buyers position themselves as a “client of choice” that suppliers can rely on to deliver an attractive procurement, and a contract that is fair, transparent, delivers value for money, and maximises public benefit.
- Becoming the “client of choice” is highly dependant on developing active and engaged communication with suppliers. Pre-market engagement is a great way of gauging the market’s appetite for participating in a procurement.
- During pre-market engagement, Buyers could consider appropriate innovative techniques such as streamlined stages, parallel contract negotiations, or multiple negotiations rounds, and seek supplier feedback and support for these approaches.

Scope

To implement an effective scope which is:

- attractive to the market;
- does not form an obstacle to bidding; and
- effectively supports the goals that Buyers are seeking to achieve, Buyers should test their thinking with the market through pre market engagement.

Frameworks

With regards to frameworks, Buyers should consider:

- how the market will react to the sustainability criteria in procurement documentation at framework and call-off contract level;
- how considerations related to KPIs/contract terms, scope, innovative procurement and innovative solutions apply to pre-market engagement for the procurement of a framework; and
- how GHG reduction objectives will be integrated to ensure the framework meets wider social impact targets without inadvertently creating a barrier to supplier participation.



Prior Involvement

Both the PA23 and the EU-derived Regime require Buyers to ensure that conflicts of interest do not put a supplier at an unfair advantage (or disadvantage) in relation to a procurement.

The EU-derived Regime specifically requires Buyers implement measures to prevent a distortion of competition resulting from a supplier's (or its advisers) prior involvement with a Buyer (usually in the context of the preparation of pre-market engagement and/or procurement materials for a specific project).

Under the PA23, the definition of prior involvement with a Buyer is broadened to capture any person who influences a decision made by or on behalf of a Buyer in relation to the procurement. This could potentially involve members of a Buyer's staff (and/or external advisers) directly or indirectly involved in a procurement, as well as a Minister of the Crown. In practice, this may require Buyers to scrutinise a wider array of prior (and existing) involvements to determine which potential (as well as actual) conflicts of interest need to be kept under review.

As such, Buyers should remain mindful that establishing, monitoring, and reviewing conflicts of interest stemming from prior involvement may be more time consuming than under the EU-derived Regime. Resultingly, it may be appropriate for Buyers to update relevant elements of procurement documents to account for the wider scope of prior involvement.





Publishing Notices

Buyers will generally be required to publish notices on the Central Digital Platform (otherwise known as “Find a Tender Service” or “FTS”) when running procurements. Under the PA23, Buyers must publish considerably more notices than under the EU-derived Regime, meaning Buyers should detail a step-by-step plan dedicated to publishing requirements.

Including sustainability-related requirements within the published notices is crucial to demonstrating that procurement questions, contract clauses, KPIs, etc., are “related to the subject-matter of the contract”. Where applicable, notices should clearly articulate GHG reduction, sustainability requirements, and award criteria (e.g., [X]% reductions in GHG emissions) and outline how these targets will be monitored and enforced throughout the contract’s term.

Additionally, if Buyers require the development of innovative solutions throughout the contract term, the value of this should be considered and factored into the contract value stated in any published notices.





The below is a non-exhaustive list of principal notices required under the PA23:



Pre-procurement Notices

- **Pipeline Notices** – are required to be published by Buyers (subject to limited exceptions) who spend more than £100 million on relevant contracts in the financial year. Pipeline notices are published with information on potential future contracts and dynamic markets for contracts over £2 million if a UK4 Tender Notice or UK5 Transparency Notice will be published in the 18 months starting 1 April.
- **Planned Procurement Notices** – may be published voluntarily and allows Buyers to alert the market of an imminent opportunity. If published between 40 days and one year before a linked UK4 Tender Notice, contracting authorities may reduce the tendering period to 10 days.
- **Preliminary Market Engagement Notices** – if pre-market engagement is being conducted in relation to an opportunity, a Buyer is required to publish information regarding the location, date and time of events. If not conducting pre-market engagement, a Buyer must provide reasons for not doing so in the Tender Notice.
- **Tender Notices** – mandatory for launching a competitive procedure for a covered procurement, including when calling off a dynamic market (subject to certain exemptions) or establishing a framework (but not for call-off awards under frameworks).

Award Notices

- **Transparency Notices** – a mandatory notice to be published before a Buyer makes a direct award, including where the Buyer is switching from an unsuccessful competitive tendering procedure to a direct award.
- **Contract Award Notices** – a mandatory notice to be published after a Buyer has made an award decision (and issued assessment summaries to tenderers) and before a public contract is signed. It triggers the standstill period of at least 8 working days (if one applies).
- **Contract Details Notices** – published after a contract has been signed for covered procurements and regulated below-threshold contracts. For covered procurements, these must be published within 30 days of signature (or 120 days for light-touch contracts). For contracts over £5 million (subject to exemptions), the contract document (redacted as necessary) must be attached within 90 days (or 180 days for light-touch contracts).
- **Procurement Termination Notices** - must be published if a procurement is cancelled without awarding a contract. It must be published as soon as reasonably practicable after a Buyer makes the decision.



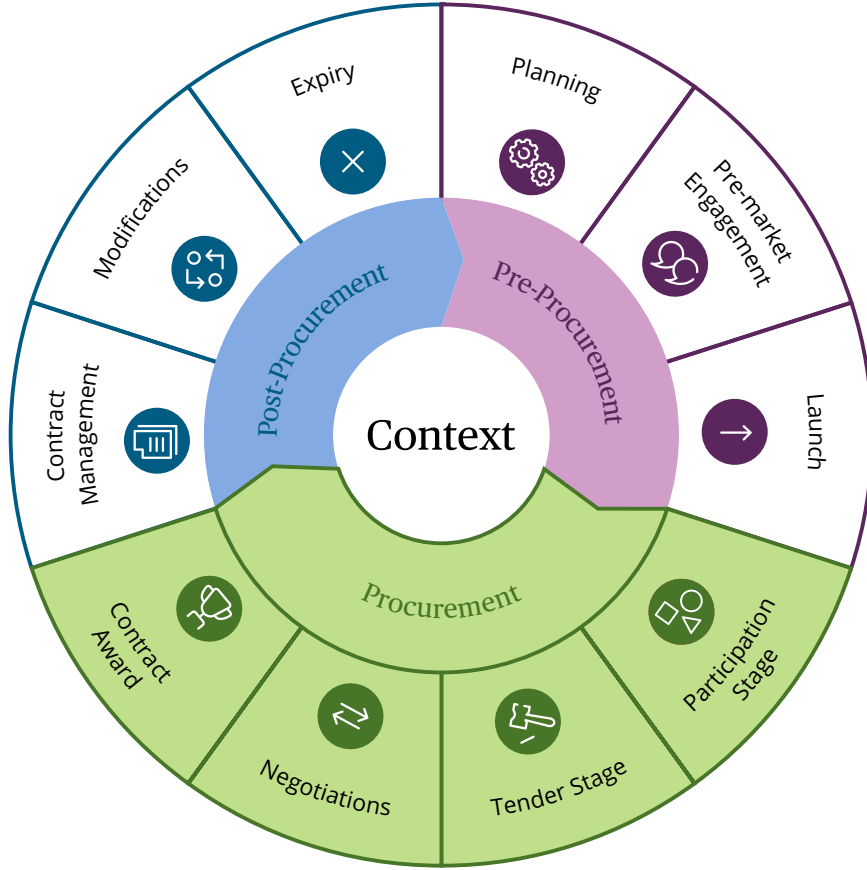
Contract Management Notices

- **Contract Performance Notices** – for contracts exceeding £5 million, a Buyer must set at least three KPIs and, on an annual basis, publish its assessment of the three KPIs which it regards, at the time the Contract Performance Notice is published, as most material to performance of the contract obligations.
- **Contract Change Notices** – must be published before a Buyer modifies a public contract or convertible contract (see s.74 of the PA23), except in certain circumstances. For contracts with an estimated value of more than £5 million (or after the modification would result in an estimated value of more than £5 million), Buyers must publish a copy of the contract as modified or the modification.
- **Payment Compliance Notices** – must be published twice a year and detail a Buyer’s performance against its obligation to pay invoices within the 30 day period, in the relevant reporting period.
- **Contract Termination Notices** – must be published before the end of the period of 30 days beginning with the day the contract is terminated. The notice must be used even for those contracts that expire at the end of the contract term.

Dynamic Market Notices

- **Dynamic Market Intention Notice** – must be published before establishing a dynamic market. This provides a similar purpose to the Tender Notice and will include similar information tailored to the specific requirements of a dynamic market.
- **Dynamic Market Establishment Notice** – must be published as soon as reasonably practicable after the dynamic market has been established.
- **Dynamic Market Modification Notice** – where the terms of a dynamic market are modified, a Dynamic Market Modification Notice must be published as soon as reasonably practicable. The notice must state the details of the modification, for example details relating to a supplier being admitted or removed from the market.
- **Dynamic Market Cessation Notice** – must be published as soon as reasonably practicable after a dynamic market has ceased to operate.





05 The Procurement Phase



Launching the Procurement

A procurement will generally be launched by the publication of a Tender Notice and relevant procurement documents. The specific documents and their content will depend on the procurement stages that a Buyer is following. This section addresses some of the main documents.

When launching a procurement, ensure that all published documents explicitly include sustainability and GHG reduction objectives, referencing industry standards and aligning with local and national Net Zero strategies from the outset.

Publication Requirements

Notices must be published on the Central Digital Platform (otherwise known as “Find a Tender” or “FTS”), which replaced the previous OJEU system used under the EU directives.

Please refer to pages 50-51 for a list of relevant notices to publish under the PA23.

Sustainability in Notices

When publishing notices, Buyers should consider including:

- clear references to sustainability objectives and GHG reduction targets;
- details of any KPIs (e.g., sustainability, environmental or circular economy) that suppliers will be required to report on;
- requirements for environmental management systems or certifications at qualification stage;
- how sustainability criteria will be weighted in the award process; and
- alignment with relevant Net Zero strategies and industry standards.

Including this information in notices from the outset ensures transparency, attracts suppliers with appropriate capabilities, and demonstrates commitment to sustainable procurement objectives.



The Scope

The “**scope**” can be referred to in various ways e.g., specification, statement of work, requirements, terms of reference, etc. For ease, we refer to “**scope**” throughout this Toolkit.

The draft scope should be published with the procurement documents when the procurement is launched. The scope is a critical document that explains to suppliers what a Buyer requires for service delivery.

The detail of the scope will develop throughout the planning phase, including following pre-market engagement. It may also develop during the procurement. For example, through having a stage for inviting and addressing suppliers’ comments on the scope, or during negotiations, or through responding to clarifications. The final scope will ultimately form a key part of the contract and, therefore, it is essential that any changes made are incorporated. The content of the scope will depend on the relevant requirements and any sustainability objectives that a Buyer wishes the supplier to deliver should be articulated within it.

It is also important to note that government-funded arms-length bodies are typically required to be PAS 2080 (Carbon Management in Infrastructure and Built Environment) certified. This has *wider implications on infrastructure projects generally*, as their supply chain will need to demonstrate compliance, and this is now a common adoption standard for infrastructure projects more widely.





The Scope

Tips for drafting the scope:

- The drafting must be clear and unambiguous to avoid disputes during the contract term.
- Consider using specific, measurable, achievable, relevant and time-bound (“**SMART**”) criteria when drafting requirements.
- Ensure it is outcome-focussed with clear deliverables and allocated responsibilities.
- Consider how the deliverables can be monitored and managed through the life of the contract using contract performance mechanisms e.g., KPIs, performance measures, incentives.
- Properly define terminology (e.g., capitalised defined terms, technical terms) and use consistently to avoid confusion.
- Do not view the scope as an isolated document. Align the terminology used in the scope with the contract and procurement documents. Inconsistency can cause lack of clarity and confusion both during the procurement and the contract term.
- Consider potential future needs that could arise during the contract term and ensure these are clearly identified and provided for in a flexible manner.
- Think about what information suppliers might need in order to understand the current service and ensure that information is provided within the scope or in supporting documents.
- Consider, and signpost, the elements of the deliverables that are essential to service delivery and those that are additional “nice to haves”. This will help suppliers to better understand what a Buyer needs and how to prepare a good response.
- Include specific GHG reduction deliverables in the scope, such as target [X]% reductions in embodied and operational carbon, and detail the methodologies and monitoring mechanisms that will be used throughout the contract.
- Include provisions for periodic review and adjustment as technologies evolve.
- Consider the interaction between the scope, contract, other schedules, performance metrics and pricing.
- Break down the scope into logical modules or towers and establish a clear link between services, charges, and service levels.
- Consider a Buyer’s capability, capacity and availability of internal resources to manage any dependencies throughout the term of the contract, making it clear to suppliers where any handoffs or ownership changes must be taken into account.
- Include termination assistance requirements in the scope for exit planning.
- The scope should also incorporate the outputs, learnings and any information gleaned from any previous contract/project to ensure continuous improvement. In the context of GHG reduction, this may include the incumbent exit provisions being adopted and controlled as a baseline for any future GHG reduction initiatives through the new contract.



The Contract

There are a number of example contract terms that are related to sustainability objectives that could be helpful. For example:

- NEC Contracts have option X29 on Climate Change.
- The Chancery Lane Project has a number of example contractual terms to suit various contracts e.g.,
 - [Supply: Renewable Energy Requirements](#)
 - [The ‘Green Supplier’ Contract — A Standardised Contractual Pricing Model](#)
 - [The Net Zero Standard for Suppliers](#)
 - [Securing Net Zero in Planning Development Projects](#)
 - [Sustainability Key Performance Indicators in Construction Works Task Orders](#)

Procurement Policy Notes (“PPNs”) are issued by the UK Cabinet Office and serve to guide in-scope organisations (the specific PPN will define what “in-scope organisations” are for that PPN) on how to procure good, works and services. PPNs cover a wide variety of topics including social value, open book contracting, modern slavery, and GHG reduction. Even though Buyers may not be strictly within the scope of relevant PPNs, Buyers could consider integrating PPN action points into procurement and contractual documentation.

Please note that when calling off from a framework or DPS/ Dynamic Market there may be limitations to what changes/ adaptations can be made to the call-off contract template. Therefore, Buyers should carefully consider whether the use

of a framework or DPS/Dynamic Market is suitable for their requirements, including sustainability objectives.

The following PPNs are of specific relevance to GHG reduction:

- [PPN 01/24](#) (relevant to the EU-derived Regime, for the PA23 please see PPN 016 below), introduced a standard form [Carbon Reduction Schedule](#) which contains standard terms and conditions that are intended to be considered alongside broader sustainability obligations and can be included in government contracts where proportionate and relevant to the subject matter. The schedule includes a framework to monitor and assess a supplier’s decarbonisation performance.
- [PPN 016](#): updated PPN 01/24 to reflect new PA23 terminology and applies to procurements commenced on or after 24 February 2025. Therefore, PPN 01/24 continues to be relevant for procurements commenced before 24 February 2025, including call-off contracts awarded via

frameworks or DPSs established under the EU-derived Regime.

Buyers will generally be required to share the draft contract with suppliers during the procurement. To ensure that the contract achieves a Buyer’s sustainability objectives, drafting the contract should begin at an early stage of the pre-procurement phase. Individuals with knowledge and understanding of how GHG related objectives can be practically delivered should provide support throughout the procurement and contract term.

It is also important to ensure that contract managers with day-to-day responsibility for the contract are included in drafting discussions. This allows them to feed into the development of key performance monitoring and other contract management mechanisms.

The contract terms need to facilitate the successful delivery of the sustainability and GHG reduction objectives, effectively “bringing to life” those objectives. To help achieve this, Buyers should consider:

- what needs to be delivered to achieve the objectives;
- where responsibilities and liabilities should lie and how the market might respond to that allocation of risk;
- how suppliers can be incentivised through the contract to fulfil deliverables and what might be the most appropriate approach i.e., “carrot vs stick”;
- what monitoring and governance processes are required to ensure supplier compliance;
- how to embed clear, measurable sustainability and GHG reduction targets into the contract, including performance thresholds, periodic reporting requirements, and incentive mechanisms (e.g., bonuses for exceeding targets or service credits for underperformance) based on industry benchmarks; and
- ensuring that responsibilities, liabilities, and risk allocation explicitly address GHG-related performance outcomes.



Reporting, Changes & Innovation

Reporting obligations for sustainability and GHG reduction deliverables should be clearly detailed within the contract. Reporting should include quantifiable GHG reduction metrics (e.g., GHG emissions per unit of output), with reports submitted at agreed intervals and verified by an independent third party to ensure transparency and accuracy. Please see page 56 for more detail on relevant PPNs.

Alternatively under the PA23, these could be based on [PPN 016](#). For procurements commenced under the previous regime, [PPN 01/24](#) remains applicable. Alternatively, Buyers may develop bespoke reporting requirements specific to the deliverables.

Buyers may also wish to consider how the deliverables may change during the contract term and how such change could be facilitated by the contract. For example, value engineering is a method by which a project's elements are reviewed to reduce costs and maximise the functionality of those elements. This can result in the evaluation of different design approaches and the identification of alternative materials. The use of value engineering can be contractualised by allowing suppliers to submit proposals to a Buyer which could, for example, reduce the environmental impact of the works.

Contracts should actively encourage the exploration and adoption of innovative GHG reduction strategies and solutions. This may include the use of low-carbon construction materials, integration of renewable energy systems, and the deployment of digital monitoring tools to continuously track and optimise GHG performance.

For example, suppliers could be obliged to investigate and propose innovative materials and solutions, or generally be required to support a Buyer's sustainability and GHG reduction objectives. Specific drafting that is clearly related to a Buyer's sustainability and GHG reduction objectives for a particular contract could encourage the delivery of this as opposed to broader and more general obligations.

An example of a value engineering clause is:

“The Supplier shall investigate and propose value engineering or carbon reduction measures during the term of the contract. Such proposals may include the use of innovative materials and solutions which, if instructed, will reduce the environmental impact of the works in support of the Buyer’s “Net Zero” targets and/or to reduce the cost to the Buyer of executing, maintaining or operating the works.

The Buyer shall review any such proposals and may instruct the Supplier to implement these by way of variations to the agreed specification.”



KPIs

KPIs are used to measure a supplier's performance during the contract/project's term. If properly considered during the pre-procurement and procurement phases of a project, KPIs can form a key role in the success of implementing sustainability goals.

KPIs can take many forms. For example, they could include specific GHG performance indicators such as targeted reductions in GHG emissions, improvements in energy efficiency, or reductions in embodied carbon. Where relevant, Buyers could include KPIs relating to circular economy (e.g., Circular Material Use Rate).

More broadly, Buyers can use KPIs to establish baseline measurements to track progress over the contract term and consider incorporating incentives for surpassing these targets.

For contracts governed by the PA23 with an estimated value of more than £5m, Buyers are subject to enhanced monitoring and reporting obligations, and must set and publish at least three KPIs for that contract. Please see "Contract Management Notices" on page 51 for more detail on publication requirements.

This means that Buyers must:

- assess performance against the KPIs; and
- publish certain information in relation to that assessment in a Contract Performance Notice. Where more than three KPIs are set, all KPIs must be published.

The specific drafting of the KPIs will depend on many factors. For example, pre-market engagement or engagement during the procurement may provide a Buyer an indication of what is attractive to the market and achievable for these purposes and those considerations should be incorporated into the contract drafting. Having a "one-size-fits-all" approach across all contracts is unlikely to be appropriate given market differences and the evolving landscape in this area.





Participation Stage

Participation Stage in a Procurement

All procurements, whether using the open or competitive flexible procedure, include participation requirements. If applicable, during the Participation Stage, Buyers set conditions of participation that suppliers must satisfy to have an opportunity to be awarded the contract (e.g., testing suppliers' legal and financial capacity, or technical ability to perform the contract).

Conditions of participation are generally referred to as “backwards” looking and focus on the suppliers themselves (i.e., are suppliers capable of delivering the contract based on previous, relevant work). Under the PA23, conditions of participation must be proportionate to the procurement and must be applied fairly to ensure same treatment. For example, criteria should not disproportionately disadvantage SMEs nor advantage the incumbent supplier.

Incorporating Sustainability Requirements

Since the Participation Stage sets suppliers' minimum requirements, it is vital it includes sustainability criteria, else Buyers risk progressing suppliers that cannot meet GHG reduction objectives at later stages of the procurement or cannot perform the contract.

Frameworks and Conditions of Participation

It is critical to carefully design conditions of participation during the procurement of a framework as these will support a Buyer's assessment of whether a framework is appropriate to call-off for its requirements. Before calling off a framework, Buyers should understand what the conditions were when the framework was procured, and whether additional conditions can be added to the procurement of a call-off contract.

For example, if permitted under the framework terms, a Buyer could consider incorporating specific GHG-reduction

measures that could apply to a contract.

Customising Conditions of Participation

The conditions should align with a Buyer's specific goals and include questions that test suppliers' experience in delivering comparable KPIs or scope elements on similar contract terms. This ensures a Buyer selects suppliers with proven experience in achieving similar goals. Project specific conditions (including with respect to innovation and sustainability), can be weighted to support a process to shortlist suppliers, making the procurement more efficient (e.g., the top four scoring suppliers will be invited to the next stage of the procurement).

Balancing Rigidity and Innovation

Because overly limiting experience requirements can discourage innovative proposals, Buyers must balance narrowing the supplier pool without stifling innovative solutions.



Additional Response Guidance & Questions to Consider

To help guide suppliers on the specific areas of concern they should address in their response, *Buyers should consider incorporating additional response guidance to provide specific detail about what the response should cover, for example:*

01

"Please specify the [X]% reductions in GHG emissions or energy consumption and describe how these figures were verified."

02

"Detail the tools, technologies, and methodologies you used to measure, monitor, and manage GHG emissions throughout the project's lifecycle."

03

"Describe the processes and quality assurance measures you implemented to verify the GHG reduction results in your case study. Include any third-party audits, certifications, or independent verification reports you obtained."

04

"Describe how you addressed both embodied and operational carbon in the project to deliver significant measurable carbon savings."

05

"Describe what innovative construction methods or materials you employed to reduce GHG emissions. Provide specific examples, including the impact on overall GHG reduction and how you validated these results."

06

"Explain how you incorporated life cycle GHG assessments into your project. Include a description of the assessment process and an example of how this influenced decision-making."

07

"Please state the GHG reduction targets that were set for the project, and describe how you monitored progress against these targets over the project's duration. Please support your response with documented outcomes."

08

"Describe any challenges you encountered in achieving the GHG reduction objectives and describe the strategies or solutions you implemented to overcome these barriers."

Clear evaluation criteria is key to a successful Participation Stage. The evaluation criteria should be tested against the questions to ensure that a meaningful evaluation can take place. The criteria must be included in the documents provided to suppliers to ensure transparency and to secure good quality responses.



Tender Stage



Award Criteria Questions

To ensure the successful supplier can deliver the sustainability objectives, the Buyer should test delivery through award questions aligned with the award criteria and scoring methodology. In turn, the delivery of the relevant KPIs, operational contract terms, and scope requirements should be assessed via these questions.

Including Award Criteria Questions

For example, award criteria questions can ask suppliers to (i) provide detailed plans for reducing GHG emissions throughout the project lifecycle; and (ii) describe the tools, methodologies, and verification processes they will employ to achieve and report on GHG reduction targets.

Developing Questions

Buyers should develop questions in collaboration with relevant technical personnel who understand how evaluation will be conducted and can leverage their knowledge to inform the drafting process. As against the “backwards-looking” conditions of participation, award criteria questions should be “forward-looking”, i.e., about the solution to be delivered, rather than the supplier (except in limited circumstances).

Frameworks

For frameworks, suppliers should be evaluated on how they can deliver the applicable sustainability deliverables under the relevant contract during both the procurement for a framework and at a call-off level. At the framework level, deliverables might be more general, with more specific sustainability deliverables tested at an individual call-off level.



Guidance & Templates

Example Guidance Notes

There are a number of template participation criteria/questionnaires that include sustainability related questions and guidance notes. For example:

- [PA23: Procurement Specific Questionnaire](#)
- [The Common Assessment Standard — Question Set](#)
- [PPN 03/24: Standard Selection Questionnaire](#)
- [PPN 06/21 and the associated guidance](#)
- [How to Write a Specification— Procurement Essentials — CCS](#)
- [Chancery Lane Project example questions for understanding a contractor's position on climate change/decarbonisation plans](#)

Example Sustainability Conditions of Participation and Criteria

PPN 006 applies to all central government departments, their executive agencies and non-departmental public bodies (“in-scope organisations”) procuring public contracts for goods and/or services and/or works with an estimated contract value above £5 million per year under the PA23 (please see the PPN for the specific rules). PPN 006 requires in-scope organisations to include, as a condition of participation, a requirement for bidding suppliers to provide a Carbon Reduction Plan confirming the supplier’s commitment to achieving net zero by 2050 in the UK, and setting out the environmental management measures that they have in place and which will be in effect and utilised during the performance of the contract.

Please see PPN 06/21 for procurements commenced before 24 February 2025, including call-off contracts awarded via frameworks or DPSs established under the EU-derived Regime.

Further, a Buyer could ask specific questions to ascertain the suppliers’ experience of delivering similar sustainability objectives to what is required under the contract. For example, a Buyer may:

- develop conditions of participation that specifically ask suppliers to detail their experience with achieving measurable GHG reduction outcomes;

- specify the number of case studies of a similar size, scale and nature over the last [X] years that demonstrate successful implementation of GHG management initiatives; and
- require the provision of case studies to allow a Buyer to evaluate whether suppliers have the requisite experience and resources to deliver the aims it requires.

 **Example:**

“Please provide a case study of a past project within the last [X] years, similar in size, scale, and nature to this tender where you *successfully implemented GHG management and reduction initiatives*. Include details on the GHG reduction targets, methodologies applied, and the quantifiable outcomes achieved.”



Approach to Designing Questions

The questions could be approached in a number of ways, including specified requirements or open questions:

Specified Requirements

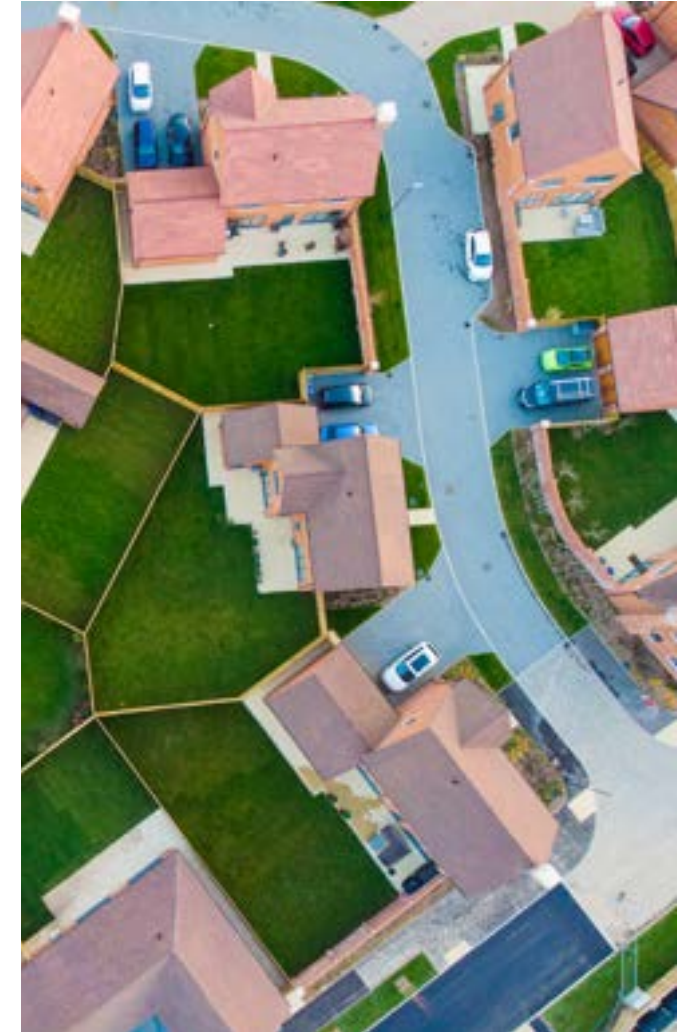
A pro-forma method statement asks suppliers to state how they will provide the sustainability and GHG reduction benefits set out in the award criteria. This requires suppliers to address each of the requirements and can be evaluated using a structured scoring methodology. The benefit of specified requirements is that a Buyer can ensure a consistency of response in the tender return. This makes evaluation easier, ensures suppliers deliver to a minimum requirement, and helps to easily translate the outcomes into the contract.

Open Questions

Open questions provide suppliers with an outline of a Buyer's objectives and offers an opportunity to develop an approach that leverages their expertise to address a specific project and set of criteria.

Example

Whilst not specific to GHG reduction, [PPN 06/20](#) (for procurements started before 24 February 2025), and [PPN 002](#) (for those started on or after this date), provide guidance as to how Buyers can take account of social value in the award process of their contracts. [PPN 06/20](#) and [PPN 002](#) provide model questions. Please see page 2 of [Procurement Policy Note 002: The Social Value Model](#) for the model social value question and page 12 for the outcome "4. Sustainable Procurement practices: reducing carbon footprints, minimising waste, and promoting the use of clean energy and green technologies".





General Tips for Award Questions

Providing Clear Guidance

When utilising open questions, there should be clear guidance on what a Buyer expects suppliers to include in their responses, and clarity on how these will be scored and evaluated. This may include a requirement for discrete and separate evaluation criteria at the question level.

For example, higher marks may be awarded for: (i) clarity and scale of commitment; (ii) commitments to incorporate innovative methods leading to enhanced GHG reduction targets; and/or (iii) clarity of ongoing monitoring and validation to ensure commitments are delivered and verified.

Buyers should ensure:

- questions are clearly written, and drafted specifically for a particular contract with reference to the sustainability and GHG reduction goals a Buyer wants to achieve as part of that contract;
- the scoring methodology, which will be used to assess suppliers' answers to the relevant question, is well drafted and tested against the question;
- questions are relevant, proportionate and ensure same treatment. For example, the questions should not be drafted to favour or disadvantage a particular supplier. Consider whether the questions can be designed in a manner to remove or reduce any particular barriers that SMEs may face to participate in the procurement; and
- questions are targeted, transparent and clearly aligned to the scope and evaluation criteria.

As much as possible, suppliers could be encouraged to propose innovative solutions in their responses to the procurement questions so that a Buyer can consider alternative delivery methods to achieve its chosen sustainability and GHG reduction goals.





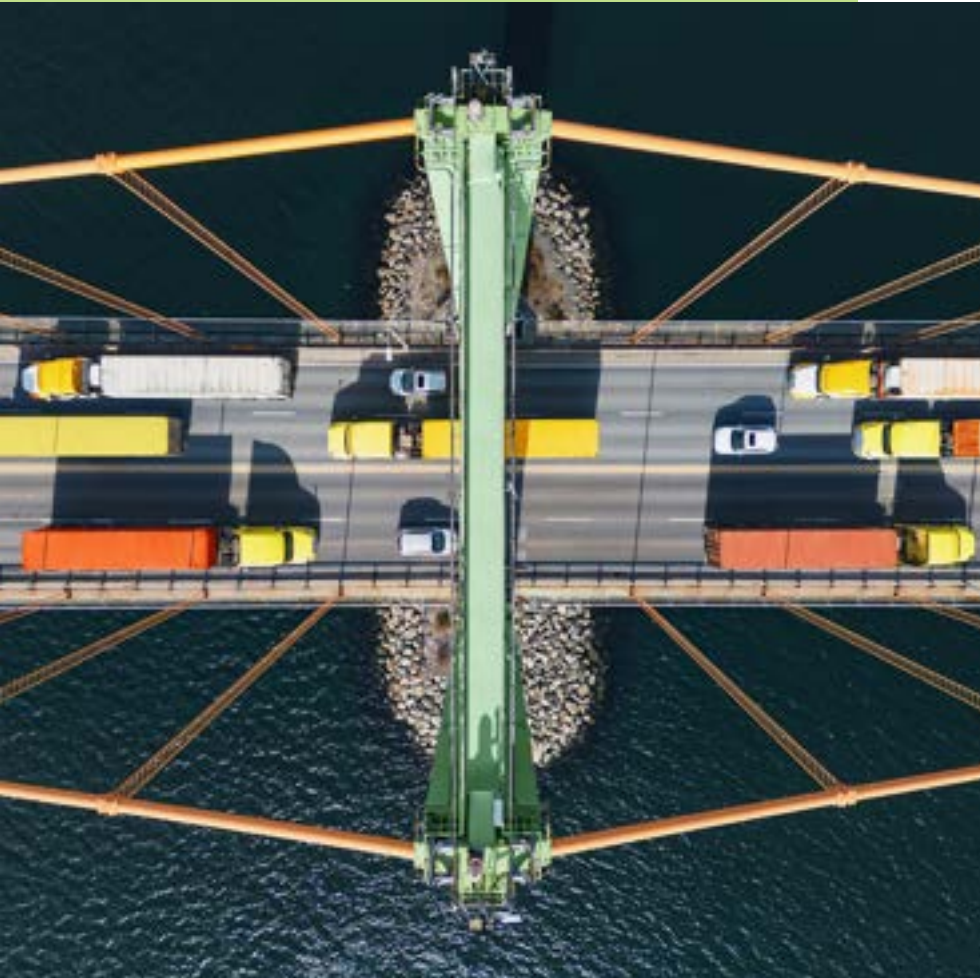
Example Questions

To help guide suppliers on the specific areas of concern they should address in their response, Buyers should incorporate response guidance to provide specific detail regarding what the response should cover. For example:

- “describe the measures and technologies you intend to use to meet the target, and explain how these will achieve the stated objectives;”
- “explain how your proposal incorporates low-carbon construction methods and materials. Detail the techniques you will use to quantify the expected GHG reductions throughout the project’s lifecycle;”
- “describe the tools or data analytics platforms you intend to implement to monitor GHG performance in real-time, and how these systems will support proactive management and transparent reporting;”
- “outline your approach to conducting lifecycle GHG assessments, including how this analysis will influence decision-making and drive continuous improvement in GHG reduction performance;”
- “explain how you will engage and manage your supply chain to ensure all subcontractors contribute to the project’s GHG reduction goals, including any processes and contractual requirements you will establish;”
- “describe the risks you foresee in delivering the required GHG reduction outcomes, and the contingency measures you intend to implement to address underperformance in your sustainability targets; and”
- “what mechanisms will you use to verify and validate the GHG reduction outcomes throughout the contract term? Refer specifically to any third-party audits, certifications, or independent verification processes you will employ, and provide a detailed timeline of interventions to show progress over the contract term.”

“Please describe your proposed strategy to *achieve a targeted [X]% reduction in GHG emissions* throughout both the construction and operational phases.”





Approach to Designing Questions

Below are included some suggestions to stimulate conversation around approaches to addressing questions:

- *“Explain how your approach will remain flexible and adapt to evolving industry standards and regulatory changes, and remain open to introducing new low-GHG technologies throughout the contract term.”*
- *“Detail how your proposal addresses both embodied carbon (from materials and processes) and operational carbon (from the asset’s use), specifying measures that effectively reduce both.”*
- *“Outline how you will manage and report on indirect (Scope 3) emissions related to the project, including your approach to ensuring comprehensive GHG management across all elements.”*
- *“Describe your project team’s structure for delivering and monitoring GHG reduction outcomes, highlighting the roles dedicated to sustainability and how their input will be integrated throughout the contract’s term.”*
- *“Explain how you will use value engineering or similar methodologies to identify alternative materials and processes that can further reduce the project’s GHG emissions.”*
- *“Illustrate how you will collaborate with local communities and key stakeholders to ensure GHG reduction targets are met and continuously improved, detailing any proposed engagement or feedback mechanisms.”*
- *“Outline the systems you will establish to ensure GHG reduction measures remain effective and are improved upon over the contract’s term, including the review and continuous improvement processes you will implement.”*

These examples are provided as prompts for Buyers to consider when drafting procurement specific questions, but will require development, with clear signposting to a Buyer’s specific requirements within the scope, to ensure they are fully aligned with a Buyer’s scope and its wider procurement documentation.



Award Criteria & Scoring

Award Criteria

Depending on whether the procurement is governed by the EU-derived Regime or the PA23, Buyers are required to award contracts on the basis of the most economically advantageous tender (“**MEAT**”) (EU-derived Regime) or the most advantageous tender (“**MAT**”) (PA23). For more detail, please see regulation 67 of the PCR 2015 and s.19 and 23 of the PA23, respectively. Both MEAT and MAT permit other considerations (e.g., social value and GHG reduction) than just price, as long as it is, among other things, related to the subject matter of the contract.

Integrating Sustainability and GHG Reduction

Sustainability, including GHG reduction, the circular economy, and wider social value considerations, should be integrated into the award criteria to ensure continuity of the “golden thread” of the procurement. Award criteria could include quantitative GHG reduction metrics, ensuring that proposals are evaluated not only on cost-effectiveness but also on their potential to deliver specified reductions in GHG emissions.

Developing a Scoring Matrix for Low-GHG Solutions

A scoring matrix could be developed that rewards innovative low-GHG solutions. To ensure meaningful responses to sustainability-related questions, it is advisable to evaluate these aspects on a qualitative basis, allowing all suppliers to explain what and how they would deliver under the contract.

Qualitative Evaluation of Sustainability Responses

This approach assists Buyers in assessing whether suppliers’ proposals achieve the required outcomes. The weighting of these questions in the overall award criteria will depend on such factors as (i) the circumstances of the procurement; (ii) any internal and external policy requirements; (iii) statutory obligations; (iv) the subject matter of the contract; and (v) the importance to the delivery of the contract. However, for these aspects to be capable of being critical differentiators in the award decision, Buyers need to ensure the weightings(s) are not insignificant and that suppliers are aware of their importance. This, in turn, indicates to the suppliers the appropriate time and effort to devote to responding to these questions.

Expertise and Training for Evaluators

Evaluators should have the correct technical expertise to assess the questions (i.e., they are suitably qualified and experienced personnel). They should be provided with training to ensure they have the requisite understanding and knowledge to conduct evaluations for project-specific questions in a fair and compliant manner.

Upskilling Evaluators on Sustainability Methods

Evaluators may require upskilling to ensure they are capable of evaluating responses that require an up-to-date understanding of sustainability and GHG reduction methods. For example, an understanding of current and future developments in environmentally friendly materials relevant to the particular works.



Areas of Particular Interest

KPIs and Contractual Terms

Award criteria questions should test whether suppliers will be able to perform the KPIs and key contractual requirements in relation to sustainability.

Where KPIs are set by a Buyer during the procurement, these should be directly confirmed and committed to by suppliers to ensure that there is same treatment. Where the procurement results in negotiated KPIs during the procurement itself, care must be taken that any difference in KPIs that are to be contractualised do not result in unequal treatment across different suppliers (e.g., communicating the updated KPIs to suppliers at the same time is critical to avoiding this).

Innovation

Suppliers could be encouraged to propose innovative solutions regarding sustainability in their responses. The quality of these solutions should be tested during the Tender Stage. Not only will this feed innovative sustainability practices into the eventual contract, but innovative solutions may be more economical (supporting value for money and continuous improvement). This will also likely impact the pricing response. Care must be taken to design a pricing mechanism within the procurement documentation that allows for different methodologies to be evaluated without favouring a particular approach.

Scope

To ensure that the sustainability goals and deliverables listed in the scope can be delivered by the successful supplier, the delivery of these elements should be tested at Tender Stage.

Frameworks

When procuring a framework, Buyers should also consider how award criteria will be applied at a call-off level. Giving thought to that at the outset and ensuring that the framework documentation makes clear that sustainability related award criteria can be applied at a call-off level will help to reduce any ambiguity at a call-off level. During a call-off contract procurement, the same considerations regarding drafting sustainability related procurement questions apply, and ensuring there is meaningful weighting applied will be relevant.



Negotiations – The Approach



Depending on the procurement route selected (please see page 38), there may be one or more negotiation rounds. This will form a key part of the procurement, as it can help clarify a Buyer's expectations and requirements, align suppliers' understanding with those expectations and requirements, improve bids, and, ultimately, shape the contract and service delivery.

During negotiations, a Buyer could consider (i) allocating dedicated sessions to discuss GHG reduction targets, monitoring mechanisms, and the allocation of risk related to environmental performance; and (ii) ensuring that any proposed innovative GHG reduction measures are clearly evaluated and that their implementation details are agreed upon.

It is incumbent on Buyers to:

- plan how the negotiations should be structured and broken down into separate topics/workstreams; and
- consider the governance process for approving negotiation strategies and ensure those with delegated authority to make decisions are present during negotiation sessions; and
- make it clear to suppliers which areas will be subject to negotiation, and which will not, and make this clear throughout the procurement, ideally as early as possible.

Logistics

- Ensure there is adequate preparation time between sessions, which can help improve the quality and effectiveness of those sessions.
- Ensure the sessions are organised at times where the relevant individuals who need to be present are available.
- Make sure those who will be involved in the negotiations are well-aware in advance of the dates and their responsibilities during the negotiations. Negotiators should be sufficiently onboarded, trained, and briefed ahead of the sessions.
- Send out agendas in advance of the sessions detailing the workstreams/topics to be discussed.
- Consider the logistics for the day e.g. location, security requirements, catering, etc.



Negotiations – Avoiding Common Pitfalls

Avoiding Common Pitfalls

- **Lack of continuity of key individuals:** It is crucial that key individuals with the requisite knowledge are involved in the negotiations and remain throughout, to ensure both continuity and consistency of message. This may also mitigate any future allegations of unequal treatment. Consideration of availability should be given at an early stage when scheduling negotiation timetables. This extends to ensuring that there is an equal opportunity for suppliers to interact with key Buyer personnel during negotiations.
- **Lack of training:** Individuals involved in negotiations should have adequate training and the requisite skill set and knowledge base to conduct the negotiations. Training needs or upskilling should be considered in advance of the negotiation stages, ideally during the planning or the pre-procurement phases.
- **Lack of time:** The ultimate goal of negotiation stages is to refine suppliers' bids so that a Buyer can be sure it is procuring the best solution at the best value. It is important that adequate time is given for negotiation stages to ensure this goal can be achieved and to maximise the benefits.
- **Failure to prepare:** Preparation for negotiation sessions is key. All individuals should have enough time to prepare for the sessions so that the time available can be used optimally. This also involves them having a clear understanding of a Buyer's negotiation strategy and any non-negotiable areas.
- **Focusing too heavily on price:** Whilst delivering value for money is a key objective under the PA23 (and more generally for procurement), low prices should not be the only consideration. This may especially be the case for sustainability deliverables where Buyers should consider discussing alternative solutions, pricing mechanisms, and delivery methods if those align with its long-term sustainability objectives and priorities.



Parallel Contract Negotiations

Negotiating contractual terms in parallel to the procurement can maintain a Buyer's leverage (as a result of negotiating with all competing suppliers), and reduce the risk of substantive and protracted negotiations with the successful supplier at the end of the procurement. In turn, this may provide a Buyer with confidence that the contract will be acceptable to the ultimately identified successful supplier.

Even if not required to by policy, Buyers could seek to include the Carbon Reduction Schedule (see PPN 01/24 (EU-derived Regime) or PPN 006 (PA23)) which seek to formalise performance threshold details, monitoring intervals, and incentive mechanisms to reward targets being met or exceeded.

Negotiating the contract in parallel can help ensure provisions related to sustainable deliverables are achievable, measurable and monitorable – facilitating the conditions for the contract/project to be delivered successfully.

An example process could look like this:





Negotiating the scope, KPIs and contract terms

Alongside pricing, it is likely that suppliers will take particular interest in the *scope and KPIs/other operational contract provisions* during the negotiation phase.

Ideally, the first draft of the scope, KPIs, and other contract provisions that were provided during the launch of the procurement will have been acceptable to the market. However, it is possible that suppliers will wish to negotiate those during any negotiation stages, especially as they will, at this stage, have a better understanding of a Buyer's goals and overall required solutions.

As well as encouraging suppliers to participate in a procurement in the first place, including a negotiation stage can mean that suppliers are better able to propose innovative proposals to differentiate themselves from competing suppliers.

Buyers should:



Be open to innovative proposals, and consider how these might benefit their sustainability goals.



See this stage as an opportunity to help suppliers to produce the best quality bids at the next stage of the procurement.



Avoid "cherry picking" solutions from different suppliers' bids, and maintain confidentiality between suppliers and negotiators as well as between bid and BAU teams.



Ensure same treatment such that final bids are submitted on an equal basis.





Relevant Award Stage Guidance Notes

PPNs and supporting guidance are used to communicate new policies to be applied to public procurement activities for “in-scope organisations” and to support practical implementation. All PPNs must be considered and incorporated by “in-scope” Buyers in the design and administration of their procurement activities. However, Buyers not in-scope can also consider the guidance. The following have specific relevance to the implementation of Carbon Reduction activities:

PA23:

01

PPN 002: Taking account of social value in the award of contracts. This PPN updates the Social Value Model for central government, and takes account of the National Procurement Policy Statement (NPPS) (see further detail on page 28). Please also see PPN 003: The Public Services (Social Value) Act 2012.

02

PPN 006: Taking account of Carbon Reduction Plans in the procurement of major government contracts. This PPN sets out how to take account of suppliers’ Net Zero Carbon Reduction Plans in the procurement of major central government contracts.

03

PPN 016: Carbon Reduction Contract Schedule. Cabinet Office has developed a standard carbon reduction contract schedule which contains standard terms and conditions that are intended to be considered alongside broader sustainability obligations.

04

PPN 011: The Commercial Playbooks. The Cabinet Office produces Commercial Playbooks, and accompanying guidance notes. This PPN updates all four of the playbooks, including the Construction Playbook, to take into account the terminology of the PA23. The updates specifically incorporate the assessment, procurement and management of sustainability within projects and programmes. The Playbooks aim to systematically change how government, and the public sector more widely, approaches risk, sustainability and innovation across portfolios of projects and programmes, with the goal of creating productive, profitable, sustainable and resilient sectors.

05

PPN 022: Procuring steel in government contracts. This PPN clarifies the scope of reporting requirements on steel origin data, and is explicitly linked to the UK government social value priorities, including decarbonisation in major infrastructure and building projects.



Relevant Award Stage Guidance Notes

Whilst the EU-derived Regime has been replaced by the PA23 regime, contracts, frameworks, DPSs, and procurements started before the 24 February 2025 will continue to adhere to the EU-derived Regime.

In many cases, the PPNs relevant to the EU-derived Regime have been superseded by updated PPNs relevant to the PA23, without altering the substantive policy points. However, the previous PPNs remain relevant for procurements within scope of the EU-derived Regime. For example:

- PPN 06/20 has been replaced by PPN 002 – Social Value Model.
- PPN 06/21 has been replaced by PPN 006 – Carbon Reduction Plans
- PPN 04/23 has been replaced by PPN 010 – Procuring steel in Government Contracts.

EU-derived Regime:

06

PPN 06/20: Taking account of social value in the award of central government contracts. This PPN incorporates a model to deliver social value through commercial activities. It provides a detailed set of tools that are a useful reference point in the development of the assessment of wider social value objectives through procurement. For example, the PPN suggests the following as examples of what good delivery objectives look like:

“Activities that:

- *Deliver additional environmental benefits in the performance of the contract including working towards net zero greenhouse gas emissions.*
- *Influence staff, suppliers, customers and communities through the delivery of the contract to support environmental protection and improvement.”*

Please also see PPN 10/12: The Public Services (Social Value) Act 2012.

07

PPN 06/21: Taking account of Carbon Reduction Plans in the procurement of major government contracts. This PPN sets out how to take account of suppliers’ Net Zero Carbon Reduction Plans in the procurement of major central government contracts.

09

PPN 01/24: Carbon Reduction Contract Schedule. Cabinet Office has developed a standard carbon reduction contract schedule which contains standard terms and conditions that are intended to be considered alongside broader sustainability obligations.

08

PPN 04/23: Procuring steel in government contracts. This PPN clarifies the scope of reporting requirements on steel origin data, and is explicitly linked to the UK government social value priorities, including decarbonisation in major infrastructure and building projects.



Evaluators should be given adequate training and have enough time to prepare for and conduct their evaluation. Those with suitable expertise in the relevant sustainability area should be appointed as evaluators for those questions. *Evaluators must be trained to assess both the qualitative and quantitative aspects of GHG reduction proposals.*

Evaluation

The Evaluation Golden Thread

Best practice is to make the evaluators' job as simple as possible by showing a clear link between the:

- scope (including clear signposting in other related documents to relevant elements of the scope);
- question and response guidance;
- evaluation criteria;
- weightings; and
- suppliers' responses.

Where possible, to support robust scoring justification and the basis of feedback to suppliers, evaluators should signpost, both in their individual notes and in subsequent moderation notes, where they have drawn their evaluation opinions from.

For example, if relevant to the published question and evaluation criteria, this should include detail regarding the evaluation of any specific quantifiable elements of the response, such as:

- GHG performance metrics, such as reductions in GHG emissions, improvements in energy efficiency; and
- compliance with industry standards.

Doing so will support robust scoring justifications and subsequently support the basis of feedback to suppliers.





Contract Award

Finalising and Executing the Contract

Upon completion of the procurement, Buyers should finalise and execute the contract (which will compel the successful supplier to deliver its proposed solution and tendered promises), in accordance with any organisational, governance, and statutory requirements (e.g., the standstill period).

Including Bid Commitments

Buyers should ensure that all commitments from the successful supplier's bid are included in the final scope or contract and includes: any innovative solutions, KPIs, and contract provisions discussed and negotiated during the procurement, including those in the successful supplier's offer at final tender.

Minimal Negotiation

If the process has been well-run, there should be minimal negotiation at this stage, making contract finalisation relatively simple. If final negotiations or outstanding issues exist, a Buyer should bear in mind its sustainability goals, ensuring these are fully articulated, deliverable, and measurable in the final contract.

Embedding Sustainability and GHG Reduction Commitments

At contract award, Buyers should embed all sustainability and GHG reduction commitments clearly and unambiguously in the final contract. This includes: (i) detailed performance measures and KPIs; (ii) regular reporting obligations; and (iii) mechanisms for independent verification of GHG reduction outcomes.

Handover to Contract Managers

Provide a clear handover to contract managers to ensure the contract is utilised as intended. Any handover should include a briefing on specific sustainability targets and monitoring processes, ensuring continued focus on GHG reduction throughout the term of the contract.





06 The Post-Procurement Phase



Contract Management

Effective contract management is key to the success of a contract, including the delivery of sustainability objectives. There should be sufficient resource to manage the contract and ideally, *individuals responsible for contract management should have been involved in the pre-procurement and procurement phases so that they are aware of the relevant contract terms and mechanisms.*

Buyers should ensure that contract management systems include platforms for monitoring of GHG reduction KPIs. Regular sustainability review meetings with internal contract managers and the supplier should be implemented. If relevant, third-party auditors could be consulted to address any emerging issues, validate results, and drive continuous improvement.

Top tips for effective contract management:

- ✓ Implement systems to contemporaneously and accurately measure and monitor relevant KPIs and address issues promptly.
- ✓ Where crucial to the contract, identify and contractualise the lead individual(s) on the supplier's side who will be responsible for implementing and maintaining the contract's sustainability and GHG reduction activities during the contract term.
- ✓ Hold regular meetings and maintain communication channels between contract managers and key supplier personnel to sustain the relationship and resolve issues efficiently.
- ✓ Use contract management tools to keep (i) accurate and organised documentation; (ii) ensure data availability to stakeholders; and (iii) establish contingency plans for processes to ensure ongoing knowledge management and succession planning.
- ✓ Provide clear and detailed handovers when contract management personnel change.
- ✓ Conduct regular upskilling and lessons learnt sessions during long-term contracts to address issues. Capture these insights for improvement in future procurements and enhance contract performance across multiple lifecycles.
- ✓ Develop a process for handling contract changes, amendments, and variations. Document and communicate any changes, ensuring compliance with notification requirements under the PA23 and/or the EU-derived Regime (e.g., cancellation, KPIs, modifications, termination, performance criteria, etc.,).
- ✓ Establish a systematic process for contract closure, exit, and transition. Verify all deliverables are met and payments settled. Ensure any replacement contract incorporates learnings from earlier cycles at the initial planning stage.



Monitoring & Reporting

Monitoring and reporting are a key tool to ensuring that the supplier complies with its obligations, thereby securing the successful delivery of a Buyer’s sustainability goals.

In addition to periodic reports, it is recommended that data be verified through third-party audits. Reports should include quantifiable GHG reduction metrics, such as reductions in GHG emissions per unit of output, and be integrated into a dashboard that enables proactive decision-making and timely interventions.

In addition to contract monitoring, whenever monitoring any social impact, sustainability or GHG reduction interventions, there is also a need to monitor the outcomes themselves to ensure there is a positive benefit, including the overall project impact. For example, this may include consideration of the following alongside the GHG reduction data itself:

- deadweight — assesses the amount of outcome that would have happened even without the specific interventions;
- displacement — assesses whether the outcomes of a project displace other outcomes;
- attribution — assesses how much of the observed outcome can be attributed to the project itself versus other contributing factors; and
- drop-off — considers how the effects of the intervention diminish over time.

There may be specific monitoring and reporting obligations that are stated in the contract. If the Carbon Reduction Schedule (e.g., [PPN 016](#) or [PPN 01/24](#)) is incorporated into the contract, then specific monitoring and reporting requirements will be included. For example, paragraph 10 of PPN 016 which states:

“The Supplier shall:

- *re-assess the GHG Emissions every Contract Year; and*
- *provide the Authority with a written report of the results of each assessment within [X] months of the completion under Paragraph 7 of this Schedule [X] using Table 1: Emissions Report below and every following [X] months. The Authority, acting reasonably, may make adjustments to the content or frequency of Emissions Reports as required.”*

For contracts governed by the PA23 with an estimated value of more than £5m, there are enhanced monitoring and reporting obligations. Buyers must publish a description of the three KPIs which a Buyer regards, at the time the Contract Details Notice is published, as most material to performance of the contract obligations. Subsequently, a Buyer must annually assess the performance of a contract’s KPIs and publish the performance assessment (via a Contract Performance Notice) of the three KPIs, which a Buyer regards, at the time the Contract Performance Notice is published, as most material to performance of the contract obligations, The details of these obligations are further described on page 58.

Where there is a breach of a contract (e.g., through poor performance), and this results in partial or full termination, damages, or a settlement agreement, certain information must be published (e.g., in a Contract Performance Notice or Procurement Termination Notices). In addition, there are obligations to monitor debarment lists for live contracts and frameworks to ensure appropriate action is taken. Suppliers on frameworks should also be actively monitored to assess whether exclusion grounds apply at call-off.



Can the existing contract achieve sustainability objectives?

Challenges in Achieving Sustainability Objectives

During a contract's lifespan, a Buyer may encounter difficulties in delivering sustainability objectives, possibly as a result of the contract lacking the necessary mechanisms to facilitate these goals. If so, a Buyer should evaluate whether the contract relates to general sustainability aims and whether the supplier can undertake activities that promote these objectives.

Setting Clear Sustainability Targets

It is essential that Buyers establish SMART sustainability targets, including specific GHG reduction metrics, to benchmark supplier performance and guide the procurement from the outset. Guidance on appropriate metrics and reporting frameworks can be found in [PPN 016](#) (for contracts under PA23) or [PPN 01/24](#) (for contracts under the EU-derived Regime). If targets are not met, a predefined escalation process should be triggered, which might involve a review meeting, additional support measures, or contractual adjustments.

Carbon Reduction Schedules

Government guidance ([PPN 016](#) for contracts under the PA23 and [PPN 01/24](#) for contracts under the EU-derived Regime) provides an optional standard carbon reduction contract schedule that can be included in contracts. This supports the policy to take into account Carbon Reduction Plans in the procurement of major government contracts ([PPN 006](#) for contracts under the PA23 and [PPN 06/21](#) for contracts under the EU-derived Regime). These PPNs apply to all central government departments, their executive agencies and non-departmental public bodies.

However, Buyers not within scope (e.g., local authorities) may have aligned their procurement and contracting approach with these PPNs, and, therefore, their contracts may reflect similar environmental management or GHG reduction measures that the supplier is expected to fulfill.

Supplier Compliance and GHG Neutral Goals

Sometimes, a supplier may comply with the contract terms but may still be underachieving with respect to a Buyer's GHG neutral supply chain goals. Here, a Buyer could seek to collaborate with the supplier, in accordance with procurement law, to adjust how the contract is performed to meet these goals.

Contracts without GHG Reduction or Sustainability Provisions

In cases where the contract does not include GHG reduction or sustainability provisions, a Buyer could consider other ways to encourage the supplier to contribute to GHG reduction or sustainability goals. For example, if it was previously disproportionate to include such goals, a Buyer could investigate whether circumstances have changed sufficiently to encourage changes. Engaging with the supplier can reveal if GHG reduction measures are being (successfully) implemented on other projects.

Although there may be no contractual basis compelling the supplier to act, such engagement may help a Buyer determine if the contract can be modified (see [Modifications](#) section of this Toolkit) or interpreted differently to achieve sustainability objectives.



Interpreting an existing contract to encourage the supplier to be more sustainable

As a result of the Public Services (Social Value) Act 2012 (see also [PPN 003](#) and [PPN 10/12](#)), Buyers, when procuring services, are obligated to consider (i) how what is proposed to be procured might improve the economic, social and environmental well-being of the relevant area, and (ii) how, in conducting the process of procurement, it might act with a view to securing that improvement. Therefore, since 31 January 2013, social value should have at least been “considered”.

More recently, [PPN 06/20](#) (EU-derived Regime) and [PPN 002 \(PA23\)](#) have required in-scope Buyers (e.g., central government) to include social value as a discrete percentage of the award criteria. Although wider public sector Buyers (e.g., local authorities) are not within scope, many refer to it as guidance and incorporate similar requirements in their procurements.

Although social value principally relates to positive community impact(s), sustainability could fall within this bracket, and, therefore, it may be possible to interpret the contract in a way that aligns with sustainability goals. This is supported by PPN 06/20, which includes as one of the social value themes “Fighting climate

change”, and PPN 002, which includes an outcome of “Sustainable procurement practices: reducing carbon footprints, minimising waste, and promoting the use of clean energy and green technologies.”

The below is an example of a generic social value clause:

“The Supplier shall support the Buyer in implementing its social value ambitions, including the Buyer’s delivery of a cleaner, greener environment. The Supplier will undertake its activities in consideration of its potential social value impact, targeted to the local community, and demonstrate how it supports social value within the working area and vicinity.”

This clause, for example, could be interpreted in a way that could encompass sustainability or GHG reduction initiatives to meet a Buyer’s social value ambitions. Buyers may also look to encourage suppliers to suggest sustainability or GHG reduction initiatives in response to this clause.





Sustainability in Practice – Working with Suppliers?

Engaging the Supplier

If necessary, initiating discussions with the supplier on how activities could be modified to align with GHG reduction goals while still adhering to the original contract terms is a critical first step. To reduce ambiguity, Buyers should document any agreed interpretations or informal changes in writing, taking into account modification obligations (please see pages 83-84). Buyers should establish a formal sustainability review process to periodically assess whether the contract's implementation aligns with environmental objectives and to document any supplier initiatives that support GHG reduction goals.

Understanding Supplier Priorities

One way to encourage suppliers to engage with GHG neutral objectives is to discuss corporate priorities and commercial constraints facing suppliers. Doing so can provide Buyers with information, including how they may leverage suppliers' priorities to obtain value for money (e.g., whether the supplier has a corporate sustainability initiative that could benefit the contract), and support the development of a collaborative working environment with suppliers to help achieve a Buyer's GHG reduction objectives.

Frameworks and Call-Off Contracts

For contracts called off from a framework, Buyers need to consider the framework documents and the rules for calling off contracts to determine what award criteria or contract terms can be utilised to support the achievement of GHG reduction goals. Ideally, these considerations will have been taken into account when the procurement of the framework originally occurred.

Dynamic Markets

For contracts awarded through a dynamic market under the PA23, Buyers have greater flexibility to modify sustainability requirements during the dynamic market's lifespan. As dynamic markets allow for scope adjustment over time, Buyers can continually review the Dynamic Market Notice and competition documents to determine what sustainability measures can be introduced or enhanced. This flexibility enables Buyers to respond to evolving GHG reduction targets, supplier innovations, market capabilities, and sustainability standards.



Consider whether the contract can be modified

If it is not possible to interpret the existing contract in a way that incorporates GHG reduction goals, it may be possible to modify the contract instead. Even if there are suitable GHG reduction deliverables within the contract, it may be necessary to make contractual modifications during its term. From an operational perspective, it may be possible to modify a contract by following the variation or contract change procedure that is set out in the contract.

From a legal perspective, contracts within scope of the EU-derived Regime and the PA23 can only be modified if a statutory “safe harbour” applies. For the avoidance of doubt, contracts procured within scope of the EU-derived Regime will continue to be regulated by the EU-derived Regime. In all instances (even where it is considered to be permitted by the contract), legal advice should be sought on a case-by-case basis to determine whether a Buyer has grounds to modify the contract in the way it wishes to do so to accommodate its sustainability objectives.

When considering modifications that may impact sustainability, or could impact the deliverability of GHG reduction deliverables, Buyers should identify specific clauses related to GHG reduction and sustainability performance. Any modifications should include SMART targets, reporting requirements, and provisions for periodic review to ensure that GHG reduction initiatives remain on track.

GHG reduction deliverables

“The Supplier will work to achieve the carbon reduction targets specified in this contract. The Supplier will report to the Buyer on its performance against the GHG reduction targets at the intervals specified within this contract, together with supporting evidence. This will be evaluated by the contract managers in accordance with the provisions set out in schedule [X] (Key Performance Indicators).”





Safe Harbours in Procurement Law

Although there are nuances between the EU-derived Regime and the PA23, the “new” grounds under the PA23 are colour coded **green**. Please note that some grounds will be more relevant to Buyers in the highway infrastructure sector. For example, it is highly unlikely that modification grounds as a result of being a defence authority contract will be relevant to decarbonising local roads.

Non-substantial

Below threshold

Provided for in the contract

Urgency and the protection of life, etc

Unforeseeable circumstances

Materialisation of a known risk

Additional goods, services or works

Transfer on corporate restructuring

Defence authority contracts

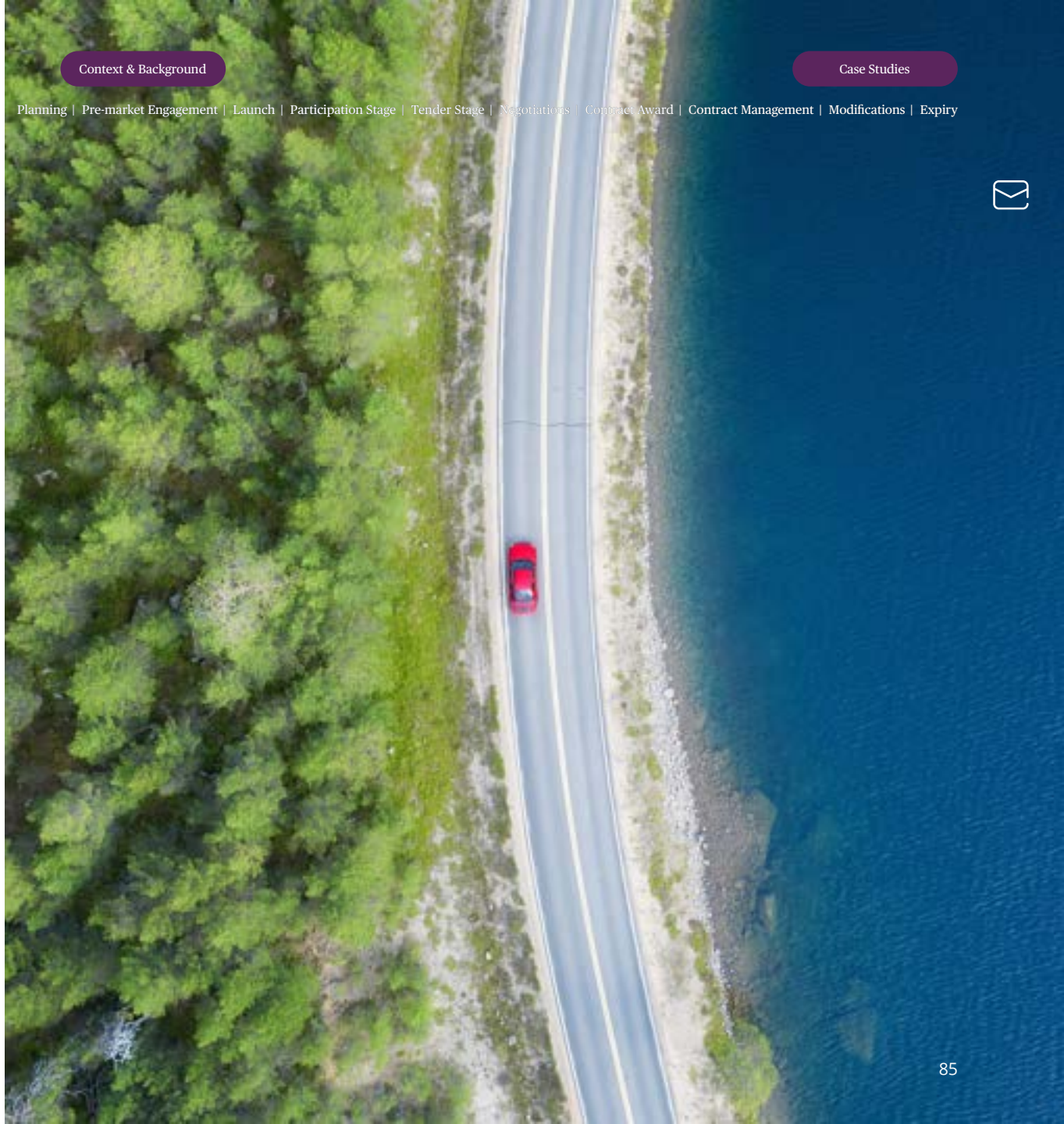
Sustainable Contract Management and Practical Initiatives

Ideally, contractual provisions would be in place to ensure suppliers deliver sustainability goals. However, if such provisions are not included in the contract (and it is not possible to modify the contract), Buyers should consider approaching suppliers to gauge their willingness to implement GHG reduction initiatives going forward.

Suppliers may be willing to engage with Buyers to work towards implementing GHG reduction initiatives. Working collaboratively, Buyers and suppliers could design and introduce a phased GHG reduction plan that provides a clear roadmap to help suppliers achieve GHG reduction and sustainability objectives.

As part of this, Buyers should consider establishing performance-based incentives or collaborative sustainability action plans with suppliers. If agreed, it is critical to document any initiatives in writing, even if they are not formally incorporated into the contract. Doing so, will help ensure all agreed changes can be referenced in future performance reviews or re-procurements.

If it is not possible to make any amendments to the contract or the supplier's work practices, then the contract will have to remain as is. In this case, Buyers should consider the [Pre-Procurement](#) and [Procurement](#) sections of this Toolkit for guidance on how to ensure GHG reduction initiatives are incorporated into the re-procurement of the contract or any further procurements.





Contract Expiry

Upon expiry of the contract, Buyers should ensure that the sustainability deliverables are included in any exit and transition plan to ensure that the incumbent supplier delivers what is required before the contract ends. Furthermore, if applicable, the relevant goals can continue in the re-procured contract.

It will also be important to consider any lessons learnt from an operational and contract management perspective with regards to the delivery of the sustainability objectives, so they can be considered in any re-procurement of the services. For example, the success of the delivery of any KPIs or other operational contract term, or whether the incumbent provider delivered innovative solutions and whether those could be used under the new contract.

At contract expiry, ensure that exit and transition plans include detailed sustainability performance data, particularly GHG reduction achievements, and that these metrics are used to establish benchmarks for future contracts. This approach will help maintain momentum toward long-term environmental goals, inform re-procurement strategies, and be implemented in separate procurements currently in the planning or pre-procurement phases.



07

Case Studies

Catalysed by the structure and funding provided by the ADEPT's Live Labs over the past three years, Liverpool City Council ("LCC") has worked with a broad range of partners, including local authorities, universities, international contractors, supply chain partners, and other external advisers to procure the design and development of innovative schemes that promote sustainability initiatives, improve road safety, and reduce the GHG impact of highways-related projects.





Cold-Mix Asphalt Innovation - Liverpool John Moores University

In collaboration with Liverpool John Moores University (“LJMU”) research team, LCC developed a fast-curing cold-mix asphalt binder that uses a modified asphalt emulsion binder and an environmentally friendly binding filler. The research team optimised the production of fresh asphalt, produced more efficiently from an emissions and energy consumption perspective, by combining industrial by-products, recycled asphalt, and reclaimed rubber. When used together, this lower-emission asphalt combined with the cold-mix asphalt binder results in significantly more sustainable mixtures and, if deployed at scale, has the capacity to demonstrate a meaningful contribution to GHG reduction targets and to support the circular economy.

Critical to the success of this scheme was the collaboration between LCC, LJMU, and various other industry partners, all of which were involved at an early stage in the process. This case study is an example of the effective use of the planning

stage of the pre-procurement phase (please see page 27). Careful consideration of the most effective route to market to facilitate LCC’s strategic priority of supporting GHG reduction initiatives, allowed for a collaborative development of the scope and contract, which facilitated the successful delivery of the research and development of an innovative solution and the dissemination of knowledge to the wider sector.

Nevertheless, LCC acknowledges the complexity of contracting for the purposes of research and development and took lessons from this experience. In particular, the commercial and contractual issues that may arise between an authority and an academic institute for the purposes of research. For example, it was key to agree appropriate intellectual property provisions and to overcome the differences between financial years and academic terms and the impact these may have on payment milestones. A key lesson was to further make use of the planning phase by ensuring that key stakeholders are identified at an early stage (see page 29).





Enhanced Pedestrian Crossings & Smart Speed Signage

Following a review from LCC's specialist panel (composed of academic and industry experts), who were tasked with reviewing solutions that had the potential to become Live Labs initiatives, LCC successfully deployed an innovative road safety solution: an LED enhanced zebra crossing facility. This enhanced zebra crossing facility was designed in collaboration with Live Labs partners, setting a new benchmark in illuminated pedestrian crossing and smart speed signage.

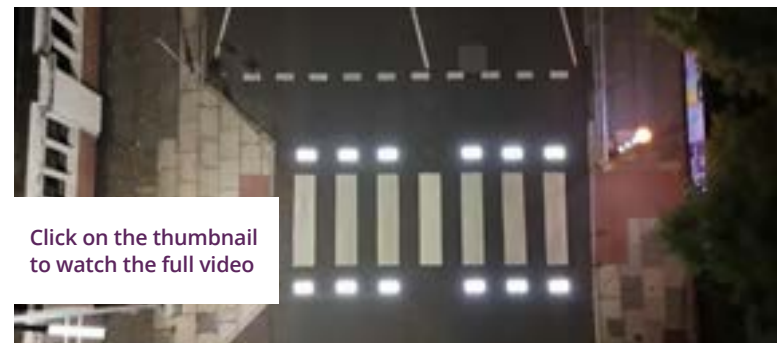
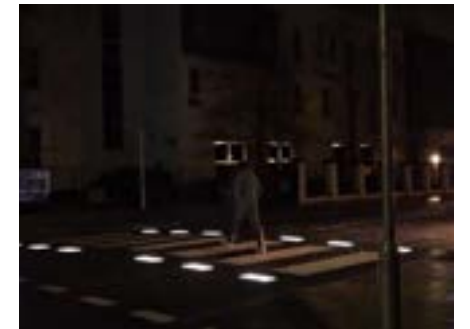
LCC commissioned a turn-key solution for the installation of illuminated panels and thermal imaging cameras on Belvedere Road to detect approaching pedestrians and automatically trigger panel illumination to warn oncoming motorists.

Meanwhile on Booker Avenue, speed limit signs were installed to receive data from sensor cameras on both sides of the road, which light up when a vehicle exceeds the speed limit as it approaches the school entrance.

For a turn-key solution with a number of parties, it is vital that the scope and contract support the efficient and effective delivery of the project's objectives (see pages 36 – 37). In

particular, that the roles and responsibilities are clear for each party, including identified points of contact (and, if appropriate, a single point of contact for a Buyer).

Therefore, it is critical to (i) spend time planning contractual obligations, deliverables, and rights; (ii) consider whether standard terms and conditions are appropriate for turn-key innovations or more bespoke arrangements (and ensuring these retain flexibility to be updated if required); and (iii) consider how the contract will be practically managed throughout its life.



[Click on the thumbnail to watch the full video](#)





Active Travel Scheme - Kiacrete Innovation, Catherine Street

As part of the Catherine Street Active Travel scheme, LCC implemented Kiacrete, a permeable paving solution suited for cycling infrastructure, installed for the first time in the UK on a public highway outside of a test environment.

Kiacrete was utilised through the use of a subcontractor to the prime contractor. The existing contract provided the flexibility to introduce this innovative solution to the scope of the scheme. This is an example of the considerations set out at pages 56 - 57, 83 - 84 and 91 - 93. In particular the benefit of providing sufficient flexibility to accommodate future innovations, including in the contract and scope to integrate new proposals (or updates to existing proposals).

Moreover, this is a good example of a Buyer taking a calculated risk when choosing to incorporate a product never tested outside of a controlled environment. In practice, LCC demonstrated that with careful planning and implementation of

appropriate risk mitigation and allocation, contracting authorities can, to the best extent possible, ensure the successful implementation of innovative solutions. A practical example of this was to appropriately plan for the potential need to remove the solution in the case of failure and where such liabilities may sit.



[Click on the thumbnail to watch the full video](#)



Low Carbon Surfacing Work on Princess Drive

Currently entering its monitoring and evaluation phase at the time of writing, the Princess Drive scheme is an example of an innovative surfacing product being deployed at scale to dramatically reduce GHG emissions in the lifecycle of a road. At Princess Drive, the LCC team, in collaboration with external consultants (who supported the drafting of the technical scope), laid 13,000sqm of 40mm Milepave™, a BBA/HAPAS approved asphalt grouted surface which combines the benefits of microasphalt, slurry sealing and conventional surfacing techniques, to overlay the existing concrete carriageway.

This is an example of recognising the need for, and subsequently procuring the requisite specialism for a complex, innovative, and highly technical scope, as set out on pages 19, 36 and 54-55.

By using fewer resources (lower bitumen content and less aggregate), lower mixing temperatures, and less energy, Milepave™ achieves a surfacing product that is (i) 40% lighter in carbon; (ii) more durable, resilient, and more flexible to withstanding underlying movement; and (iii) sealed so as to be impervious to water ingress.

LCC chose Milepave™ as the material that offered the greatest GHG savings from the options presented, by using the Pell Frischmann's Carbon Hierarchy Lens Toolkit & Options Configurator (see page 92).

Procured following a mini-competition via a call-off to LCC's Highways Planned Works Framework, LCC entered into three contracts with four suppliers under the NEC Option C contract, with each supplier made responsible to investigate and propose innovative materials and solutions to support LCC's Net Zero ambitions. As part of the call-off, each supplier was made responsible for undertaking a whole life cycle assessment for both cost and GHG emissions benefits.

This is an example of the considerations relating to KPIs set out at pages 17-18 and 37. LCC set and monitored KPIs that could be referenced throughout the lifecycle of the scheme. From this experience, LCC will ensure that future contracts measure the delivery and performance of solutions in both KPIs and social value impact terms.



Pell Frischmann's Carbon Hierarchy Lens Toolkit & Options Configurator:

Accelerating Data Driven, Low Carbon Decision Making for Liverpool Live Labs 2

As a core innovation partner driving Live Labs 2, Pell Frischmann ("PF") has been working collaboratively with LCC to develop the Carbon Hierarchy Lens ("CHL") Toolkit and the PF Options Configurator, a pioneering, whole life carbon optioneering solution designed specifically to address the challenges faced by local authorities in the highways sector.

A New Standard for Early Stage, Whole Life Decision Making

The CHL Toolkit provides a structured framework that assesses a scheme's necessity, timing, purpose, carbon footprint and whole life cost at the earliest stage, before design progresses. It introduces two additional pre design phases, enabling LCC to test whether a scheme is truly needed, whether alternative interventions could deliver the same outcomes with fewer GHG emissions, and how to make design choices that align with local, regional, and national policy requirements and objectives.

Integrated within this framework, the PF Options Configurator is a bespoke optioneering engine developed specifically for LCC. It combines:

- an intuitive user interface for quick scenario comparisons;
- a powerful option engine that evaluates carbon, cost, asset life and wider social impacts; and
- a robust database of materials, carbon factors, maintenance cycles and forecast models.

The tool is aligned with PAS 2080:2023, LCC's Highway Asset Management Plan, and The Manual of Contract Documents for Highway Works ("MCHW") standards, ensuring decisions support LCC's actual carbon reduction trajectory and operational priorities.





Developed for Local Authority Realities

The PF Options Configurator was developed through close collaboration with LCC, Colas, LJMU, Bird & Bird, and other Live Labs 2 partners. This ensured the tool addressed real operational constraints: fragmented data, inconsistent baselines, variable supplier carbon factors and resource limited engineering teams. Monthly technical meetings and quarterly partner reviews enabled continuous refinement:

- early “show and tell” sessions;
- user trials with highways, asset and sustainability teams;
- AI supported code development to enhance speed and consistency; and
- training packages including How To guides and formal sessions for LCC staff.

Delivering Real Carbon & Cost Savings Across Liverpool

The CHL Toolkit and PF Options Configurator have now been applied across multiple highways schemes, enabling LCC to compare traditional materials with innovative low carbon alternatives. A flagship example is the **Princess Drive scheme**, as set out on page 91 of the Toolkit, where LCC trialled lower carbon pavement solutions using Milepave™, Ultipave and Ultifoam. These materials were optioneered through the PF Options Configurator to test their performance, cost profile, and whole life carbon impact. The trials on Princess Drive (May–June 2025) are forecast to achieve 8–25% carbon reductions compared with the

conventional Hot Rolled Asphalt previously used on the corridor, demonstrating the tool’s ability to direct meaningful, measurable carbon savings while maintaining asset performance.

Further applications, such as cold applied MMA road markings and LuminoKrom® photoluminescent surfacing across various sites within Liverpool, achieved reductions of 89% and 46% respectively, proving the tool’s ability to guide material choices that deliver immediate, measurable carbon savings.

Why This Matters for Procurement

Driven by data, aligned with policy, and built for transparency, the PF Options Configurator provides the procurement ecosystem with:

- a consistent methodology for evaluating carbon and cost (as demonstrated by LCC throughout Live Labs 2), which could be deployed during the planning stage of a procurement or project, as described on page 27;
- evidence-based justification for procuring low carbon materials, which can support the development of actionable KPIs that can be negotiated with suppliers, and included in the contract, as described on pages 37 and 58;
- clear audit trails for option selection and value for money assessment, which can, among other things, support Buyers’ obligations under s.98 of the PA23 as described on page 34;
- visibility of whole life impacts, rather than merely considering upfront costs; and

- scalability across a broader highways programme, which means the PF Options Configurator can be applied to capital works, maintenance programmes and future investment cycles.

LCC is now integrating the CHL approach even earlier in its pipeline so that CHL driven optioneering becomes standard practice across all new schemes. Over time, earlier integration of these innovation tools can help local authorities in the highways sector engage suppliers early to agree tangible, meaningful, and achievable carbon-reduction measures, help to positively impact policy objectives, and, crucially, accelerate the reduction of carbon-related emissions in highways-related infrastructure projects.



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