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NetZero in the Construction Industry: Part 2

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Introduction

- This is not a webinar about:
 - COP 26;
 - Politician's promises; or
 - Green technologies and advances needed to achieve Net Zero.
- This is a webinar about some of the changes you might see as a result of the sustained move towards carbon and resource neutrality to:
 - Procurement; and
 - Your construction contract.

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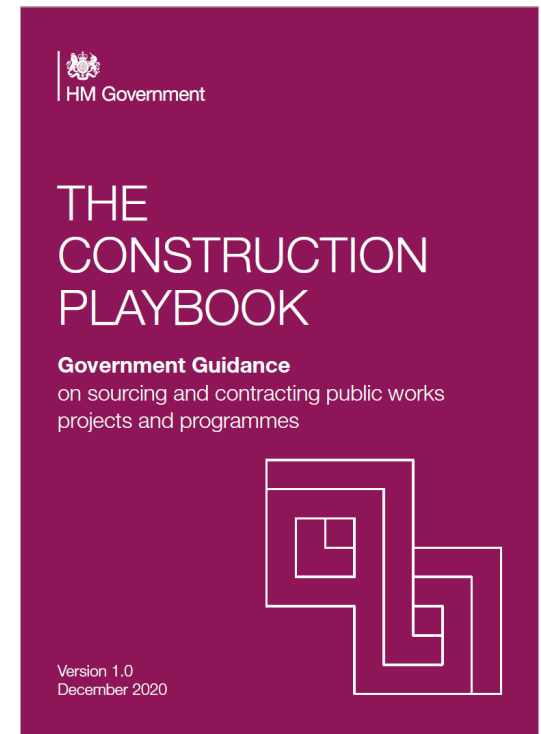
Procurement



The Construction Playbook

Build Back Greener (p5)

“All contracting authorities should set out strategies and plans for achieving net zero GHG emissions by or ahead of 2050 for their entire estate/infrastructure portfolio. These should be aligned under an overarching sustainability framework, and systems and processes should be in place to ensure their projects and programmes deliver on the targets set. Recognising the design life of public works, contracting authorities should adopt the use of whole life carbon assessments (e.g. PAS2080) to understand and minimise the GHG emissions footprint of projects and programmes throughout their lifecycle.”

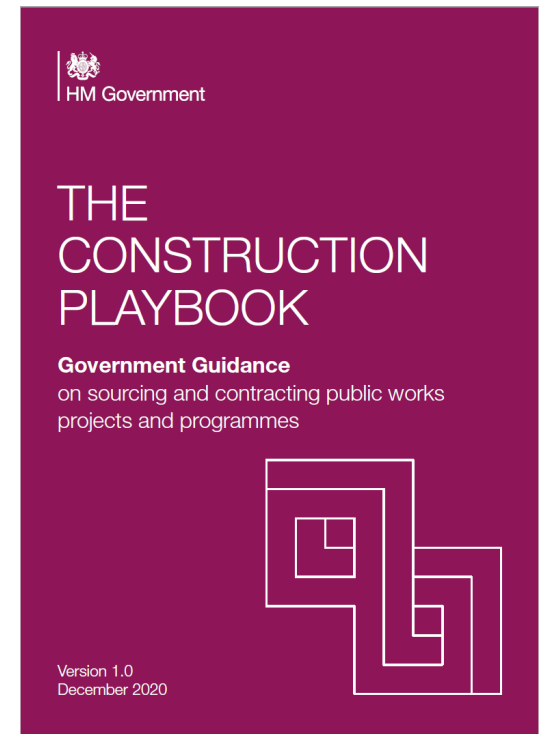


The Construction Playbook

Modern Methods of Construction (p 20, 21)

“We need to change the way we procure construction to support investment in MMC and skills. Adopting longer term contracting is one way of achieving this, but however we contract across our portfolios of public works, we need to actively consider how we can maximise the use of MMC...”

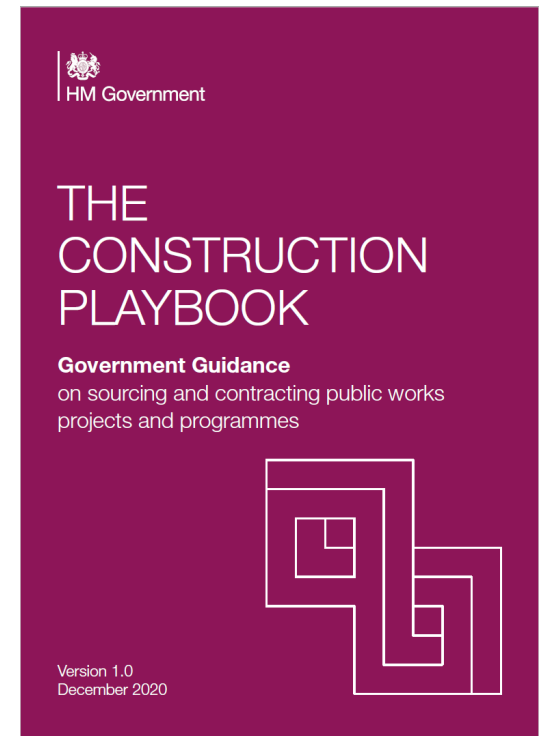
We will look to procure construction projects based on product platforms comprising of standardised and interoperable components and assemblies, the requirements for which will be part of a digital component catalogue...”



The Construction Playbook

Effective contracting (p 38)

“Contracting authorities should work with in-house specialist or contracted advisers to establish the most appropriate commercial approach and procurement strategy that optimises long-term value and involves all team members early enough for them to contribute to this value. We then need to select an appropriate form of contract to suit the type and complexity of works, intended outcomes, delivery model...”



The Construction Playbook, Figure 4

Roles and responsibilities across the 14 key policies

	Key policy areas													
Functions	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Commercial	O	O	O	J-O	K	O	K	J-O	K	J-O	J-O	J-O	J-O	O
Finance	U	U	U	U	A	A	A	J-O	U	U	K	K	J-O	K
Programme and operations including Project Delivery, Digital, Property, HR	K	U	K	J-O	O	K	K	U	J-O	K	J-O	J-O	U	U
Policy	A	A	K	K	K	U	O	U	K	U	U	U	A	A
Legal	Legal need awareness of the legal obligations throughout the project or programme lifecycle													
Other functions including Audit, Comms, Security	Other functions will depend on individual projects													

- **July 2021:** The then UK construction minister Ann-Marie Trevelyan listed three government actions to ensure contractors commit to reducing carbon contributions:
 - **Carbon exclusion measure:** or warning that companies without net-zero plans, or not committed to net-zero by 2050, will be barred from bidding for public sector work. The policy will apply to contracts above £5m.
 - **National Procurement Policy statement:** public sector buyers must consider how their procurement can tackle climate change and reduce waste.
 - **Government evaluation process:** A requirement for central government departments to “*expressly evaluate environmental, social and economic benefits*” during the procurement process.

UK: Procurement Policy Note (PPN) 06/21

- **September 2021:** PPN 06/21 came into force (30th Sept);
- Applies to the procurement of good and services with an anticipated contract value averaging over £5 million (excluding VAT) per annum under Public Contracts Regulations 2015;
- The selection criteria must take account of a bidding company's Carbon Reduction Plan (CRP) as set out in a 'Template Carbon Reduction Plan'; and
- The CRP should be published on a website and provided within 30 days to anyone whom requests it.

Sustainability Disclosure Requirements (SDRs)

- *Greening Finance: A Roadmap to Sustainable Investing*
- Treasury initiative, announced July 2021;
- Corporate, asset manager & owner and Investment product disclosure;
- Metrics/targets:
 - *“asset managers/owners and investment products will be required to substantiate ESG claims they make in a way that is comparable between products and is accessible to clients and consumers.”*

Potential contract clauses



Potential contract issues

- Pre-tender: benchmarking a contractor's carbon footprint.
- Requirement to use sustainable working practices on site to reduce the energy used in construction.
- Commitments to adhere to sustainability policies and/or sustainable action plans.
- Warranties regarding existing and historic compliance with environmental legislation and/or sustainability guidelines.
- Back-to-back obligations with subcontractors and suppliers.

Best Endeavours: key points

- Not an absolute obligation.
- Nor is it: *“the next best thing to an absolute obligation or a guarantee”*.
- Contractor is entitled not to go beyond the realms of what would be reasonable.
- May require expenditure.
- Obligor may have some regard for its own commercial interests.
- Does not therefore include actions which would:
 - Lead to its financial ruin, undermine its commercial standing or goodwill; or
 - Have no likelihood of being successful.

Potential contract issues

- Agreement to submit to independent audits.
- Reporting obligations.
- Monitoring a contractor's compliance with agreed forecast assessment of emissions.
- Embed (net zero) targets into contracts – performance related liquidated damages.
- Pen/gain type incentives for achieving specific sustainability targets.
- Right to suspend or terminate for non-compliance with those plans?

Potential contract issues: carbon budget

- Carbon (footprint budget).
- Project based, not national or global.
- Buildings are currently responsible for 39% of global energy-related carbon emissions: 28% from operational carbon, and 11% from embodied carbon.
- A target budget perhaps with an adjustment clause.
- Incentives to reduce the carbon budget.

Potential contract issues: carbon budget

- All part of the process of ensuring that all parties consider what steps to take to reduce the carbon footprint of the project.
- Just for greenhouse gas emissions?
- Need for clarity: should there be a distinction between production- and consumption-based accounting. And what is the unit of assessment?
- Materials: cement and steel.
- Need to move away from carbon off-setting.
- It is not just about being carbon neutral but resource neutral as well.

Building Regulations

- October 2019 and January 2021 consultation-stage guidance for Approved Document L (conservation of fuel and power) - new and existing dwellings/buildings.
- Approved Document Z proposal: www.partz.uk – a proposal to amend existing building regulations to consider the mandatory reporting of carbon emissions in the built environment, along with limiting embodied carbon emissions on projects.
- Legislation to introduce a “contractual carbon budget”.
- Reporting and monitoring of progress

Biodiversity

- Environment bill introduces two elements:
- The biodiversity gain:
 - A mandatory provision by which a development will need to achieve a 10 per cent biodiversity net gain in order to proceed.
 - The impact of a project on biodiversity will often continue after the practical completion stage of construction, and therefore this projected impact can be considered as part of the 10 per cent net gain, though this will need to be secured in some way and maintained for 30 years.
 - Long-term management and maintenance issues, who will be responsible for them, how they will occur, and how they will be secured.

Biodiversity

- The conservation covenant:
 - Voluntary but legally binding written agreements between the landowner and a “responsible body”.
 - To conserve the natural or heritage features of the land (possibly including long-term proposals to comply with the biodiversity net gain requirements).
 - Will bind successors in title.

- **Chancery Lane Project: Climate Contract Playbook**
A series of clauses that could be used in a variety of commercial situations, not just construction.

<https://chancerylaneproject.org/>

Potential contract issues: Chancery Lane Project

- [Luna's clause]: a clause that incentivises building contractors to propose 'Green Modifications' to the project works.
- [Estelle's clause]: a clause that aims to ensure the Contractor or Service Provider is kept accountable to implement the Best Industry Practice throughout construction, and implements practices towards achieving the Green Objectives upon completion, and allow a Developer to terminate the contract if standard of care is not met.
- [Edgar's clause]: a clause that requires the appointee to utilise the available open space in an environmentally efficient manner.

Potential contract issues: Chancery Lane Project

- [Tristan's clause]: introduces a formal 'Carbon Budget' alongside the traditional Financial Budget for construction projects to incentivise industry participants to reduce GHG Emissions across the project lifecycle through the selection of more sustainable materials and construction processes.
- [Francis' clause]: imposes contractual obligations in respect of the usage of materials and waste management to ensure consequential GHGs are minimised.

Dispute resolution: Greener Litigation Pledge

- Fenwick Elliott are a signatory to the Greener Litigation Pledge:
- Corresponding electronically, where possible and limiting the printing of hard copy bundles and other documents wherever possible including promoting the use of electronic bundles for court hearings where possible;
- Walking, cycling or using public transport for journeys to court wherever feasible and appropriate;
- Consider witnesses giving evidence by video-link where appropriate;
- Consider whether an in-person hearing is appropriate or whether an alternative approach, telephone or by video-link, would be suitable;
- Use suppliers and service providers who are committed to reducing their carbon footprint wherever possible and appropriate.

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Contracts



“The Template Project Documents to be used in any Direct Award Procedure or Competitive Award Procedure are listed in Schedule 5 to the Framework Alliance Agreement and include all standard requirements...in each Project Brief in respect of Sustainability, Operation of the completed Project and engagement with Stakeholders and with Users of the Project.”

“Sustainability - measures intended to reduce carbon emissions, to reduce use of energy and or natural and manmade resources, to improve waste management, to improve employment and training opportunities, and otherwise to protect or improve the condition of the Environment or the well-being of people;”

FIDIC: GCC 4.18

Protection of the Environment

Protection of the Environment:

- Expressly incorporates the requirements for the Contractor to comply with the applicable law, environmental impact assessment, and Employer's Requirements;
- Includes the separate requirements to:
 - *“protect the environment (both on and off site)”*; and
 - *“limit damage and nuisance to people and property from pollution”*.

FIDIC: GCC 4.18

Protection of the Environment

- Green Book, Yellow Book and Red Book requires:

“all necessary measures [to protect the environment (both on and off site)]”;

- Silver Book and Gold Book only requires:

“reasonable steps [to protect the environment (both on and off site)]”.

- Green Book, Yellow Book and Red Book requires the Contractor:

“[to limit damage and nuisance to people and property from pollution, noise and other results of the Contractor’s] operations and/or activities”.

- The Silver Book and Gold Book only requires the Contractor:

“[to limit damage and nuisance to people and property from pollution, noise and other result of the Contractor’s] operations” (i.e. not activities).

FIDIC: Climate Change Charter

- (Forthcoming) Climate Change Charter.
- A focal point for sharing and promoting best practice around net zero and climate change.
- FIDIC President, Tony Barry, 19 October 2021:
“Our approach must address emissions throughout the whole lifecycle of a facility”
- This will include changes to the FIDIC contract conditions, perhaps through the adoption of the Charter.
- Watch this space.

JCT Guidance Note (2011): *“Building a sustainable future together”*

- A good starting point for how parties can introduce appropriate sustainability drafting into their construction contracts.
- JCT contracts are likely to be amended beyond this Guidance Note to include even stricter obligations for controlling and managing emissions as governments and regulators set new limits.

JCT Framework Agreement 2016 (FA 2016)

- **Clause 5.1.5:** “Framework Objective”

“improvements in environmental performance and sustainability and reductions in environmental impact”

- **Clause 16:** “Sustainable development and environmental considerations”

General provisions requiring the parties to the agreement to ‘explore ways’ in which:

“the environmental performance and sustainability” of instructed works or services might be improved and the “environmental impact reduced.”

JCT Framework Agreement 2016 (FA 2016)

- Parties may agree how such reduction of the environmental impact is measured and by whom.
- If an employer required a project to be “net zero” then how this should be measured should be clearly set out in the contract documents together with any project specific requirements.
- JCT Guidance note:

“such a provision would be supported by setting out specific requirements in the form of measurable targets e.g. the level of waste reduction, and tying those requirements to performance indicators...”

- .1 reductions in waste;
- .2 reductions in energy consumption;
- .3 reductions in mains water consumption;
- .4 reductions in CO₂ emissions;
- .5 reductions in materials from non-renewable sources;
- .6 reductions in commercial vehicle movements;
- .7 maintenance or optimisation of biodiversity;
- .8 maintenance or optimisation of ecologically valuable habitat; and
- .9 improvements in whole life performance.

JCT Framework Agreement 2016 (FA 2016)

- **Clause 10.2.5: “The Provider’s Supply Chain”**

Requires the Provider to consult with and/or involve members of its Supply Chain when:

“assessing and improving upon environmental performance and sustainability and reducing environmental impact”

JCT - Constructing Excellence Contract

- **Clause 12.2:** “Sustainable development and environmental considerations”
 - Supplementary Conditions – which apply if not deleted in the Contract Particulars
 - Encourages the Supplier to suggest improvements in environmental performance; and
 - Requires the Supplier to provide to the Purchaser all information that he reasonably requests regarding the environmental impact of the supply and use of materials and good which the Supplier selects
- Again we see: reporting & the golden thread of information

JCT Framework Agreement 2016 (FA 2016) & JCT - Constructing Excellence Contract

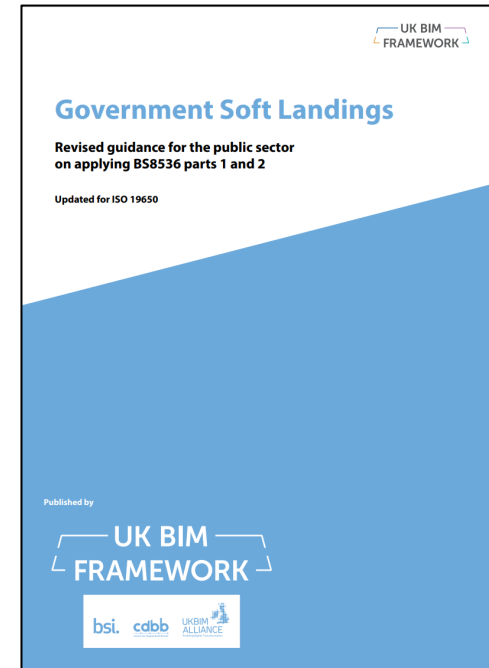
- Contain provisions to review the sustainability of a project through performance indicators and monitoring.
- These provisions could be given greater importance by making sustainability targets or carbon emissions conditional requirements for practical completion.

Government Soft Landings

- Potential amendments in the UK are likely to align the contract with the UK Government Soft Landings approach to completion & performance reviews post-completion (for up to 3-years).

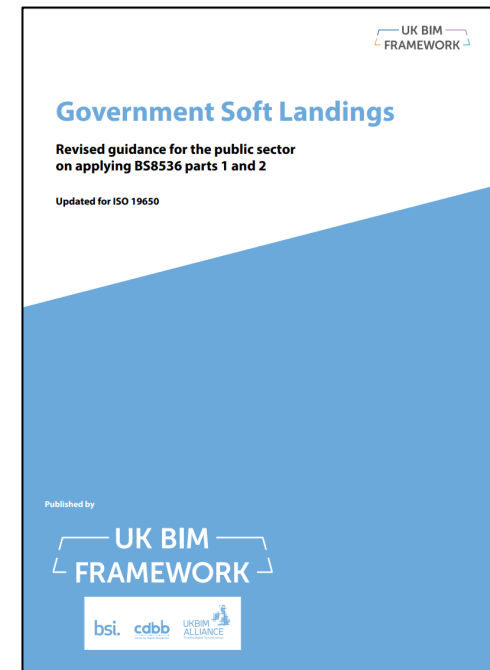
- “Soft landings”:

process for the graduated handover of a new or refurbished facility/facility, where a defined period of aftercare by the design and construction team is an owner’s requirement that is planned and developed from the outset of the project



Government Soft Landings

- The scope and principles of the GSL includes a smooth transition from construction into handover and close out and then into facility operation, plus (s1.2):
 - A clear business case for a project alongside articulation of security needs for both the project and the ongoing operation of the facility (BS 8536-1 clause 4.1 a) and b))
 - That clear, measurable targets are set for facility performance outcomes to align with the business case (BS 8536-1 clause 4.1 d))
 - The targets to be reviewed at information exchanges throughout the project (BS 8536-1 clause 4.1 d))
 - That there is a defined period of aftercare, supported by the delivery team(s) (BS 8536-1 clause 4.1 e))
 - That post-occupancy evaluation (POE) and other performance reviews are undertaken in conjunction with the delivery team(s) (BS 8536-1 clause 4.1 f))
 - A smooth transition of data and information contained in the project information model to that required for facility operation in the form of the asset information model (BS 8536-1 clause 4.1 g))



Government Soft Landings

- GSL requires the definition of target performance outcomes at the outset of the project (Part 4).
- **Environmental performance outcomes:** targets to be regularly reviewed and evaluated according to the project's information exchange programme. The handover and aftercare activities should be used to continue evaluation of performance, assuring targets are achieved (Part 4).

Table 4: Environmental performance targets

Environmental Performance Targets	
1	<p>Annual energy use – consumption, including both regulated and unregulated consumption (kWh per annum per m2 GIFA)</p> <p>GSL requires the use of a recognised annual energy assessment and reporting methodology. This should include energy measurement and an advisory report to suggest improvements. Targets should use a range that is recognised as achievable while encouraging upper levels of attainment.</p> <p>See also BS 8536-1 Annex B.2.</p> <p>Reference documents:</p> <p>CIBSE's Energy Assessment and Reporting Method for the evaluation of energy consumption in use (TM22). This document also supports optimisation of performance against these targets.</p> <p>CIBSE's Building Log Book (TM31) provides useful guidance on how to record how a facility is used. This information is essential to assess expected performance against actual performance.</p> <p>Also:</p> <ul style="list-style-type: none"> • CIBSE Guide A Environmental Design • CIBSE TM 39 Building Energy Metering • CIBSE TM 46 Enerov Benchmarks
2	<p>Operational carbon dioxide emissions (tonnes per annum CO2e)</p> <p>GSL requires the use of a recognised annual energy assessment and reporting methodology. This should include calculation of carbon dioxide emissions and an advisory report to suggest improvements.</p> <p>This is calculated from the total energy use using the methodology required for the Display Energy Certificate.</p> <p>See also BS 8536-1 Annex B.2.</p> <p>Reference documents</p> <p>CIBSE's Engineers Operational Ratings and Display Energy Certificates (TM47:2009).</p>
3	<p>Annual water consumption (litres per annum per m2 GIFA or per occupant)</p> <p>GSL recommends that this evaluation might typically include measurement of water consumption and an advisory report to suggest ways of reducing water consumption.</p> <p>See also BS 8536-1 Annex B.3.</p>
4	<p>Waste (tonnes per annum per m2 GIFA).</p> <p>Set targets and operational waste management strategy based upon past projects. This evaluation might typically include measurement of waste and an advisory report to suggest ways of reducing waste.</p> <p>See also BS 8536-1 Annex B.4.</p>

Chancery Lane Project's Climate Contract Playbook: JCT

- **Mary's clause**
proposes amendments to the JCT Design and Build Contract to make energy efficiency part of Practical Completion.
- Inserts a new general obligation at clause 2.1 for the Contractor to at all times when carrying out obligations under the contract to “*seek to [promote] the Environmental Requirements*”.
 - Here, “promote” could be changed for the more onerous “comply”; whether or not that is acceptable to the Contractor will likely depend on the contents of the Environmental Requirements.
 - *Environmental Requirements* is a new definition: “(a) the protection of the environment (including the prevention of atmospheric and other pollution and the protection of wildlife and wildlife habitats); (b) sustainable construction and development; and (c) energy efficiency, in particular by using all reasonable endeavours to fulfil the environmental and sustainability objectives listed in Annex [A].”

Chancery Lane Project's Climate Contract Playbook: JCT

- The design obligations include a requirement for the Contractor when designing the works and in selecting good, materials, plant and equipment for the works to do so to “promote” (or otherwise) the Environmental Requirements.
- As with all design obligations this is subject to the standard of reasonable skill and care detailed in the contract; and

Chancery Lane Project's Climate Contract Playbook: JCT

- **New Clause: EPC Obligation**
 - When assessing whether practical completion of a section or the works has been achieved, the Employer's Agent is not to issue a certificate until the "EPC Obligation" has been met or an alternative agreement reached with the Employer.
 - If the EPC Obligation cannot be met then the Contractor is required to undertake remedial works, including retrofitting, to achieve the EPC Obligations or improve the energy performance of the works provided that such remedial works (which are at the Contractor's cost) do not exceed a percentage (initially proposed at 10%) of the Contract Sum.

Chancery Lane Project's Climate Contract Playbook: JCT

- **New Clause: EPC Obligation**

- EPC Obligation:

“the specific obligation imposed in the Employer’s Requirements requiring the Contractor to achieve an EPC “A” rating in respect of [certain parts of] the Works [as identified therein].”

Chancery Lane Project's Climate Contract Playbook

- Possible further “incentives”, JCT or other standard forms.
- The Contractor having to recycle materials already on site in order to reach waste performance targets.
- The design and life of the building having to meet certain emission requirements.
- The potential new conditions and obligations raise the possibility of a green termination or green liquidated damages clause, which could be triggered where a Contractor fails to meet the required environmental standards.

Conclusions

Future contractual obligations:

- Measurement
- Monitoring
- Management
- Mitigation
- Predicting
- **Reporting**
- **Consequences if targets are not met**

Conclusions

- JCT Guidance Note, JCT provisions & the Chancery Lane Project are all a great starting point.
- Still some way to go & the devil will be in the detail for successful project outcomes and achieving environmental targets.
- Expect to see increased reporting obligations and requirements for providing information & data (the golden thread).
- Remember: whilst today's focus was on procurement and contractual obligations, it also takes people, changing mindsets/ways of working, collaboration, innovation and technology to tackle the environmental issues we are facing.

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Thank you!
Questions?

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