



Destiny Bridge and the New Kingsway

(formerly known as the Cross Tay Link Road Project)

Making Early Contractor Involvement a Success

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Presentation Overview

- Council Priorities
- Perth Transport Futures Project
- Procurement and Contract Aims
- 'Optimal' ECI Contract
 - Overview
 - Main & secondary options
 - Boiler plate Z-clauses
 - Changes to core clauses
 - Changes to X22: ECI clauses
 - Open-book accounting
- In Practice
- Lessons Learned
- Outcomes



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Perth & Kinross Council Priorities

- Tackling poverty
- Developing a resilient, stronger and greener local economy
- Protecting and caring for our most vulnerable people
- Tackling climate change and supporting sustainable places
- Enabling our children and young people to achieve their full potential
- Supporting and promoting physical and mental wellbeing
- Working in partnership with communities



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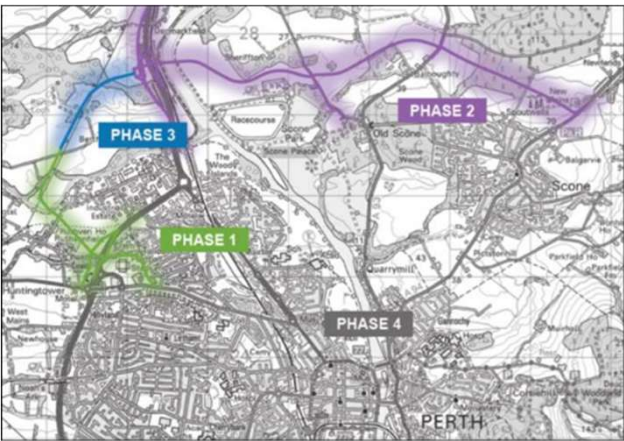
Perth Transport Futures Project

Strategic Rationale

- Perth – major strategic hub
- Delivery of sustainable growth in the Tay Cities region
- Support Perth’s expansion - Local Development Plan
- Perth AQMA - high priority given current climate crisis
- Ambitious City Plan - smooth the transition to greener travel

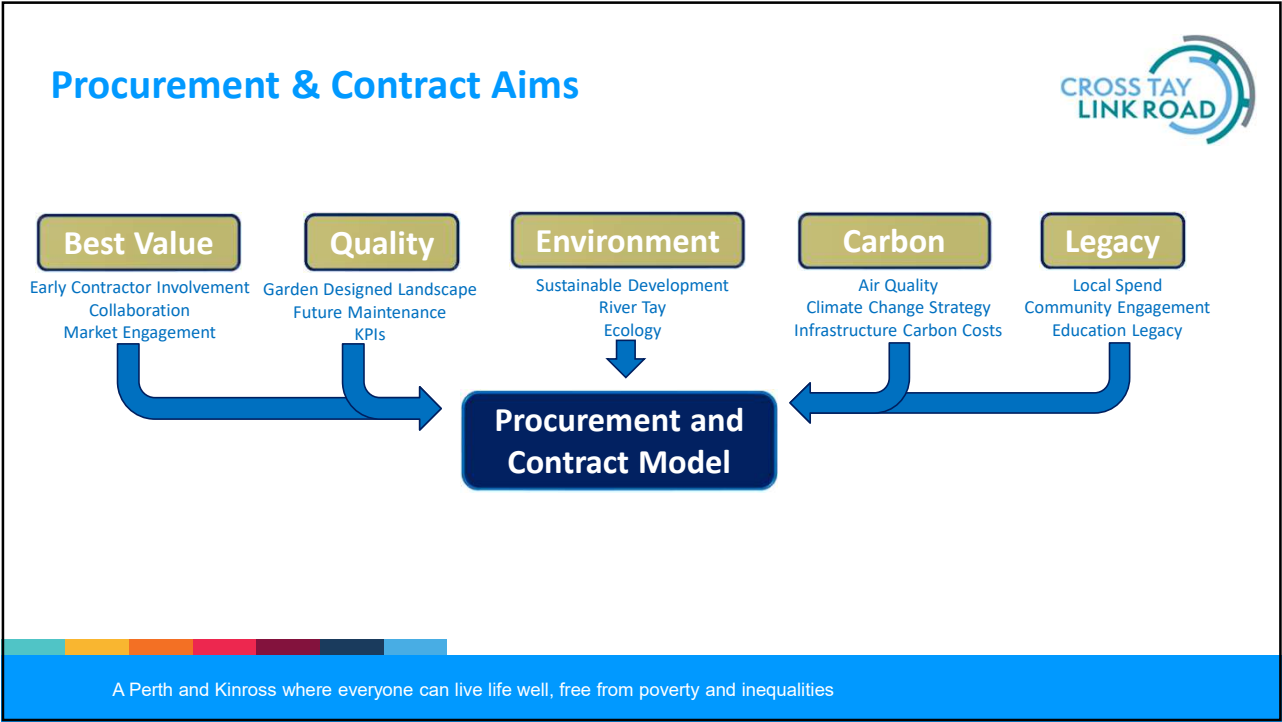
Integrated Series of Measures

- Phase 1 – A9/A85 Junction Improvement/Link Road (May 2019)
- Phase 2 – Cross Tay Link Road (March 2025)
- Phase 3 – Bertha Park connection (under construction)
- Phase 4 – City Centre improvements

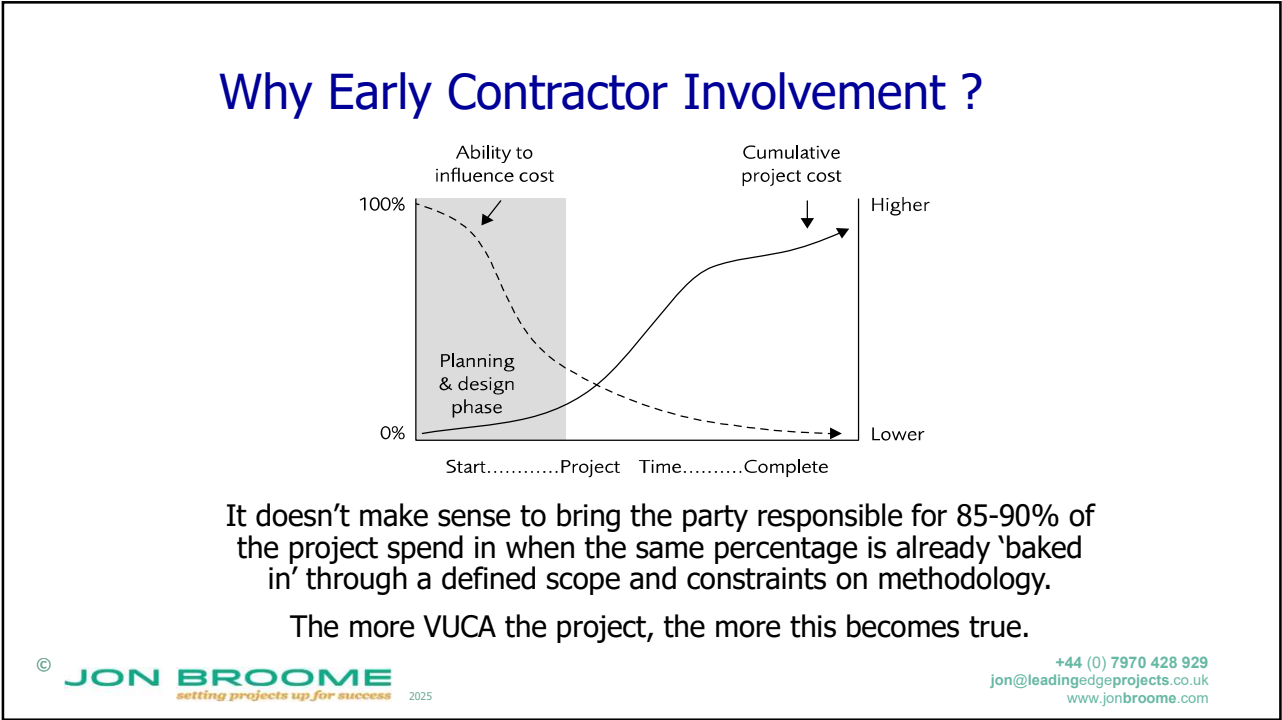


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ECI Architypes if using NEC

No.	Headline Type	Comment &/or explanation
1	PSSC then ECC option C	For advice & simple deliverables. Could be a term service with ECI services called off as task order under CE process
2	PSC & ?EC Short Contract or TSC?, then ECC ?option C?	Allows SI to be done b4 main contract, so 60.1(12) applies to main contract date.
3	ECC option C, target contract with activity schedules, and X22	Allows physical work, inc SI, to be done in Stage 1 under one contract.
4	ECC option E, cost reimbursable contract, and X22	Gain only around higher level 'Budget' which includes identified <i>Client</i> costs & risk allowances for compensation events
5	ECC option A with X22	Why not (apart from "not designed") ?
6	'Optimal' Contractor Involvement: ECC option C with amended X22	Prices 'fixed' on entering contract. Contract de-risked and designed in Stage 1. 1. Increase in <i>Contractor</i> risk allocation between Stage 1 / 2.

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Type 3: 'Classic' Early *Contractor* Involvement under **one** contract as per NEC4 ECC option C with X22

Stage One

- On cost plus basis
- Best used where
 - *Contractor* leads design
 - Doing some physical works e.g. site investigation, enabling works etc.
- *Contractor* prices up its design-to-date and target Prices agreed

Break or notice to proceed

Stage Two

- On target cost basis, with Stage One costs included into target.
- Normally for detailed design & construction

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Why **not** Early Contractor Involvement ?

The Generic disadvantage
(apart from 'Type 6 : Optimal CI')
is loss of competitive pressure to agree
the target Prices / Budget.

You therefore need to really
nail
how this is done
as a contractual obligation

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Pros and Cons of Type 3: ECC option C with X22

Pros

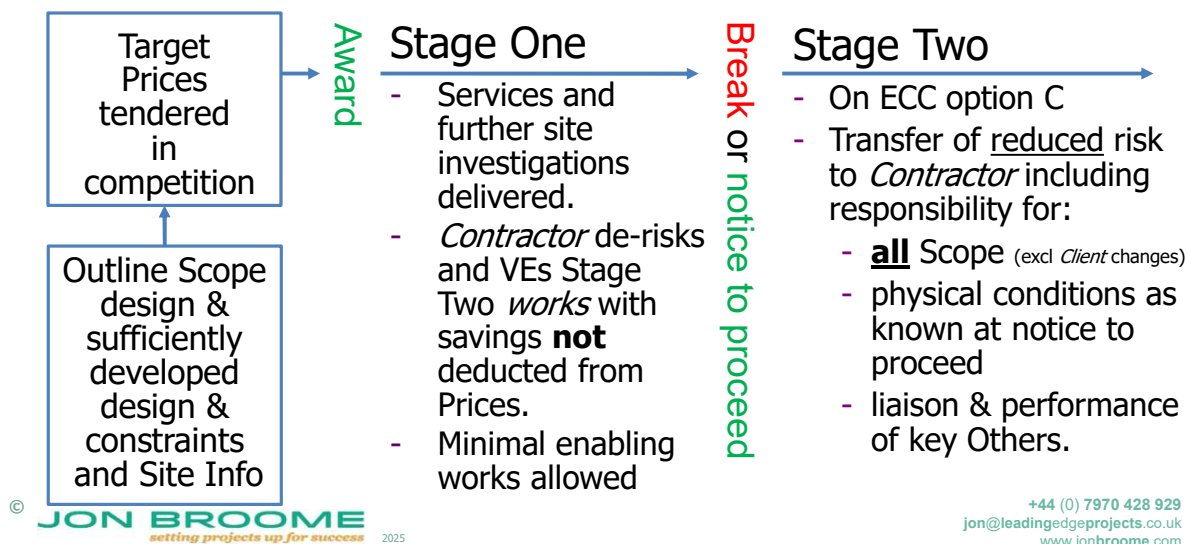
- + Well understood and used, standard NEC clauses that have evolved with use.
- + Complex design, site investigation and more substantial enabling works can be done under one contract.
- + Arguably easier transition to Stage Two (detailed design & construction) than having to sign another contract.

Cons

- x Nature of large ECI contracts means will always need some 'bespoking' of clauses i.e. amendments as with other ECI types
- x 'Breaking' / terminating a contract is more problematic than not having to sign a new-one
- x *Contractor* has more bargaining power than under Types 1 & 2
- x *Contractor* more likely keep opportunities in its back pocket till Stage Two instructed (but a problem with any single sourcing)

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Type 6 : '**Optimal**' Early *Contractor* Involvement with tendered Price under NEC4 ECC Option C with **amended** X22



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Pros and Cons of Type 6 : 'Optimal' ECI

Pros :

- + compared with other Types, at tender, gives
 - + most Price competition at tender
 - + most Price certainty at end of Stage One prior to notice to proceed (but not necessarily 'budget' certainty – see Type 4)

Cons :

- ✗ Scope, including constraints, need to be sufficiently developed for Contractors to tender
- ✗ most amendments needed to X22 of all Types
- ✗ tendering Contractors need re-assurance that it's OK !

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So, what did we do ?

General observation :

- ❖ Clients don't give contract drafters a good brief.
- ❖ Drafters don't do a good diagnosis to understand the brief.
- ❖ Clients don't review and question what is drafted.

P&KC did !

And went further, consulting with & re-assuring potential bidders on the developing brief and the drafts.

Main and secondary options

C : target contract with activity schedules

W2 : Adjudication in UK	X15 : <i>Contractor's</i> design
X1 : Price adjustment for inflation	X16 : Retention
X2 : Changes in law	X18 : Limitation of liability
X4 : Ultimate PCG	X20 : Key Performance Indicators
X5 : Sectional Completion	X22 : Early <i>Contractor</i> Involvement
X7 : Delay damages	Y(UK)1 : Project Bank Account
X8 : Undertakings to <i>Client</i> & Others	Y(UK)2 : HG, C & R Act 1996
X10 : Information modelling	Z : <i>Additional conditions of contract</i>
X11 : Termination by <i>Client</i>	

So what changes did we make ?

- ❖ Worked with P&KC internal lawyer to agree clauses that protect P&KC if it went wrong.
- ❖ For non-operational 'boiler plate' clauses
 - placed in a section 100 of Z-clause, so did not clutter up the 'doing' clauses.
 - put 'single use' defined terms at start of relevant section.
 - NEC'ified the language.
 - took out ambiguities.

Key changes to the core clauses

- ❖ New EW reason: "unplanned disruption or negative publicity to the *Client* or Others."
- ❖ Clause 21.1 replaced with "The *Contractor* develops and completes the design of all the works that is in the Scope and is necessary or desirable to achieve Completion."
- ❖ "The *Contractor* obtains all required approvals ... from Network Rail, Transport Scotland and the *Client's* TAA prior to its submission of its design for acceptance by the *PM* ... "
- ❖ "The *Contractor* is responsible for every aspect of managing Network Rail possessions" with Network Rail charges being a Defined Cost.
- ❖ Up to 5% reduction in PWDD if no new Accepted Programme for three months & then paid.
- ❖ Any pain / over-run split as incurred.
- ❖ No CE for a change to any *Contractor's* Scope (not just design) to comply with *Client's*.
- ❖ No CE if Network Rail or Transport Scotland do not do what they should do.
- ❖ No warranty for information provided except as stated in *conditions of contract* i.e. CEs
- ❖ Retention halved at end of first *defects correction period*, not Completion.

Changes to unamended X22: ECI as of January 2019

- ❖ No Pricing Information
- ❖ Clear statement of contractual obligations for Stage One vs. Stage Two.
- ❖ Clear statement of the difference between (forecast) Prices and Completion Date for Stage One versus Stage Two.
- ❖ Progressive submission and acceptance, but bundled together as 'final submission' for acceptance prior to notice to proceed.
- ❖ Expansion of reasons to not accept a submission and of what has to be included in the final submission.
- ❖ If notice to proceed not given, express statement of termination procedure and amount due, plus requirements for novation.

Changes for optimal ECI

- ❖ "For the avoidance of doubt ..." effect of any changes in Stage One on Stage Two Prices assessed as a compensation event.
- ❖ To do any Stage Two physical works in Stage One, *Contractor* has to submit a proposal and reasons for not accepting it are stated.
- ❖ Once notice to proceed given
 - *Contractor* takes responsibility for **ALL** Scope, excluding *Client* changes and
 - reference date for physical condition compensation event changed to date of *Contractor's* final Stage Two submission.

Getting open-book accounting right

- ❖ Use the ECI phase to nail how this is administrated.
- ❖ Get everybody on the same page early on.
- ❖ Assure that Defined Cost is at 'open market or competitively tendered rates with deductions for all discounts, rebates and taxes deducted' as per c. 52.1
 - agree early on non-tendered rates for People, *Contractor-owned* Equipment etc.
 - audit *Contractor* processes upfront.
- ❖ Agree how Disallowed Cost is administrated.

(I now) Add 'clarifications' in the SoCC to reduce the
 GREY AREAS that commonly cause discussion.

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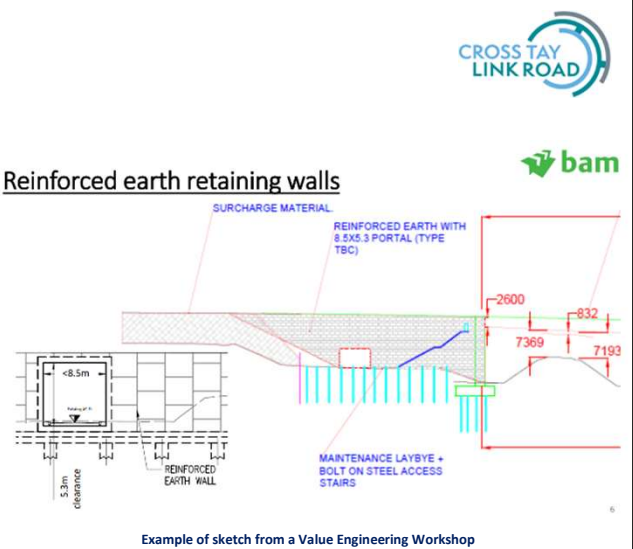
And there's more ...

- ❖ We put in place a NEC4 Term Services Short Contract for **landscaping** : maintaining, minor improvements as well as correcting Defects.
- ❖ Meant that *defects date* for landscaping only in ECC contract was 0 days from Completion.
- ❖ TSSC *starting date* was date of Completion of the landscaping works under the ECC contract.
- ❖ Term was 3 years for Trunk Road Area & 5 years for Local Roads.
- ❖ Included an inflation clause.

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In Practice – Value Engineering

- ECI period ensured Contractor had time to implement value engineering (VE) proposals
- Fixed target at tender ensured high degree for motivation for developing VE proposals
- Various Workshops held involving Contractor, Client, Detailed Designer and Client’s Designer
- Total of 18 VE proposals implemented (saving of approximately £5m to the project overall)
- Majority of VE also had corresponding carbon savings
- Savings shared through Option C pain / gain mechanism – target set at tender does not move



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In Practice – Collaboration

- Project Charter – jointly produced and sets expected behaviors
- Early NEC workshop – ensured thorough contract understanding
- Team ‘Insights’ session
- Mental / Physical wellness sessions
- Open plan office shared with Client and Contractor
- Fika ‘one team’ project updates



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In Practice – Stage One and Two Flexibility



- Earthworks brought forward to commence in Stage One
- Brought forward from Sep 2022 to May 2022
- Maximised first earthworks season
- Savings to project thought to be approximately £5m when compared with original programme



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In Practice – Stage One used for risk management

- Complex Railway Interface
- Complex Temporary Works Design
- Archaeological Investigation – Multivallate Fort
- Ecological risk management (Bats, Pine Martins, Ancient Woodland etc.)
- A9 trunk road interface



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Lessons Learned



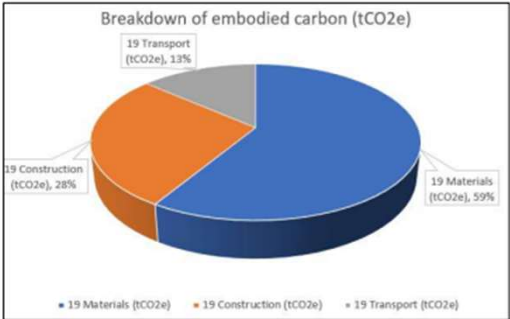
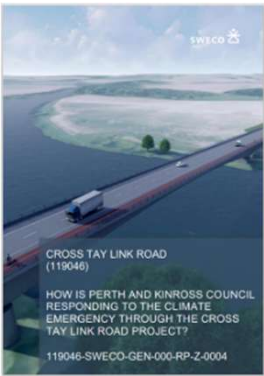
- KPIs for the contract were too complex – difficult to measure and monitor
- One team approach not always followed - some strategies progressed by the Contractor independently rather than including the whole ‘project team’
- Understanding of ‘fixed’ target price at tender – not everyone in contractor team fully aware of this during Stage One
- Scope was complex with different aspects applicable to Stage One and Two – better signposting within documents is required
- Earthworks brought forward – put significant pressure on other risks and works packages
- Quality management during Option C contract – contractor has full control over design and construction and client team has limited levers with regards to quality issues
- Compatibility between X1 Inflation and X2 Change in Law – concerns over double recovery (e.g. changes in employment law increasing costs and inflation)

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Outcomes - Carbon Management



- Carbon saving of 38,141tCO2e compared to the agreed baseline
- Cases studies – PAS 2080, Scottish Government
- ‘Carbon Champion’ status awarded to project team from ICE



Embodied carbon savings 38,141tCO₂e, representing 45% from the agreed baseline

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Outcomes - Quality and the Environment



- Landscaping design given priority / separate maintenance contract included landscape defects
- 80%/20% Quality/Price Procurement split ensured focus on quality from early stages
- KPIs provided a financial incentive to ensure quality
- Early planting / established early
- Project delivering high quality changes within a sensitive landscape
- 12km of new active travel routes
- Aspirations have become a reality



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Outcomes – Within Budget and On Programme



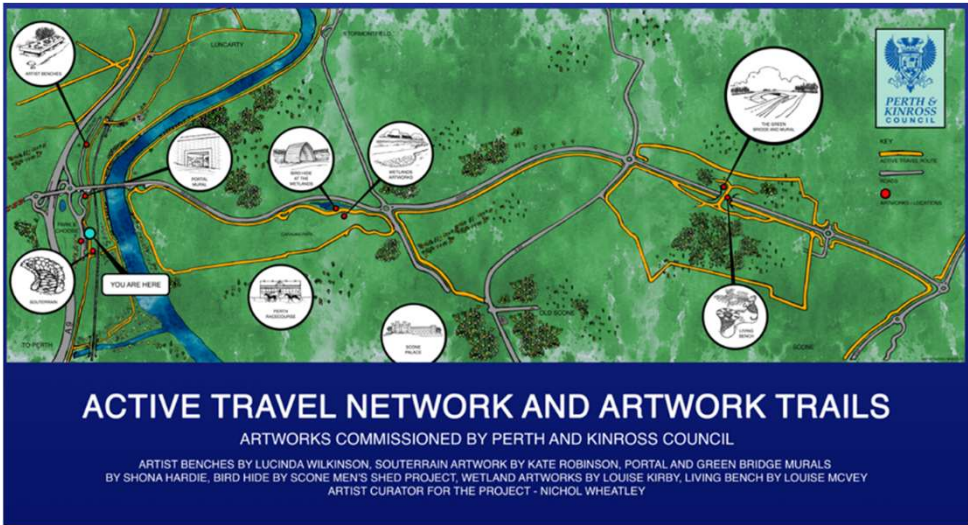
- Contract Completion Date did not move throughout the contract
- With some minor post construction costs still to be finalised the project is currently estimated to be 5% under the overall project budget allocation
- The contract Final Account was agreed within one month of completion
- The final gain shared was £850,000



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Outcomes – Active Travel & Artwork



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Outcomes - Legacy

- Community Open days
- Community Artwork
- Archaeology Outreach
- Souterrain removal and rebuilding
- Rewilding Denmarkfield
- Education – Promoting STEM
- School Bridge Challenge
- Assisting Community Projects
- Charity Projects
- Charity donations



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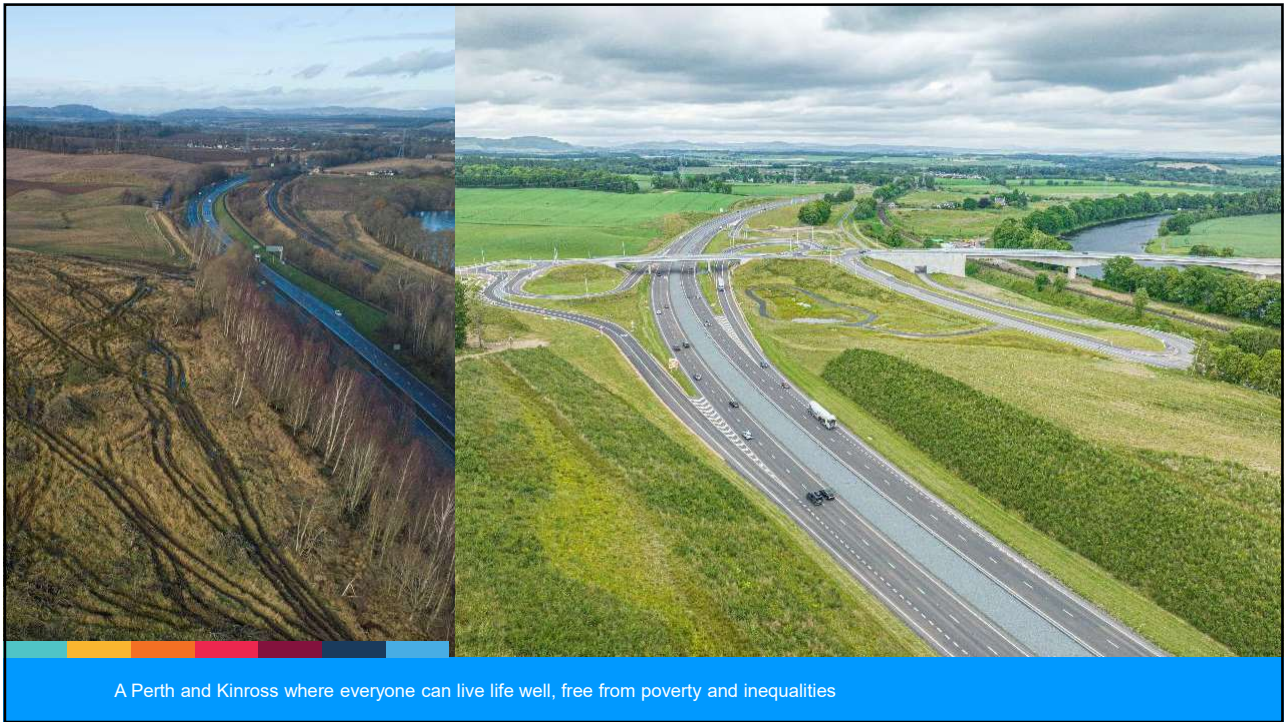
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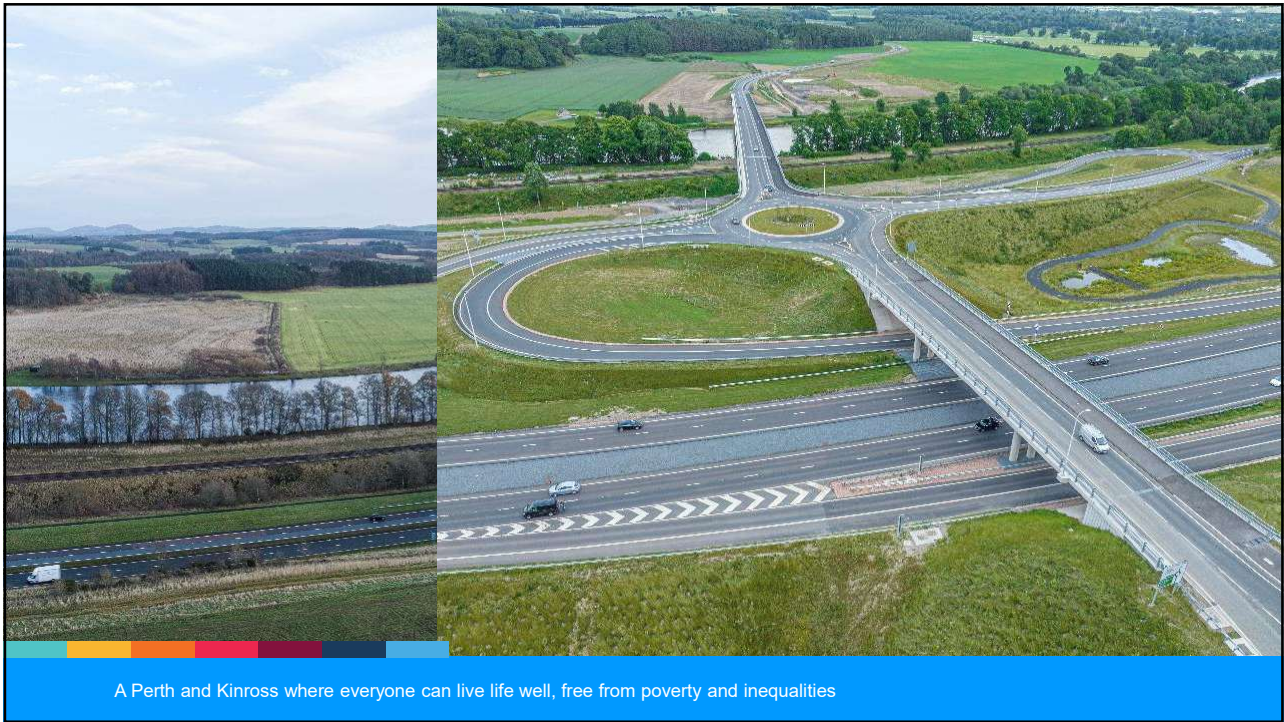


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Questions?





Project Excellence and Innovation



Client of the Year



WINNER:
TRANSPORT PROJECT OF THE
YEAR



YOU HAVE MADE THE SHORTLIST
CONGRATULATIONS!



CONGRATULATIONS
ON BEING SHORTLISTED

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