

| COMMERCIAL & PROCUREMENT DIRECTORATE | | | | CAPITAL WORKS ESTIMATE RELEASE FORM | | | | | | | | Ref. CE 300 V1.0 | | | | | |
|---|--|---|----------------------------|-------------------------------------|---|--|---------------------|--|------------------|---------------|------------|------------------|------------|------------|------------|------------|--|
| COMMERCIAL SERVICES DIVISION - COST ESTIMATING TEAM | | | | | | Date of This Estimate Release: | | | 06 December 2022 | | | | | | | | |
| Are multiple options considered for this scheme? | | No | No. of Options: | 1 | MP Number: | MP-0209 | | Date of Previous Estimate: | | 17 March 2020 | | | | | | | |
| Scheme Details | | | | | Planned PCF Stage Dates For Basis of Estimate | | | | | | | | | | | | |
| Project Name | | A1 in Northumberland - Morpeth to Ellingham (M2E) | | Emerging Preferred Option Name: | | Morpeth to Ellingham (M2E) | | Stage | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Project Manager | | | | Pre-PCF PIN | | 551459 | | Start Date | 29/12/2014 | 30/12/2015 | 01/09/2016 | 17/09/2017 | 08/07/2020 | 23/01/2021 | 02/07/2023 | 02/06/2026 | |
| Type of Estimate | | Developing | | Options Phase PIN | | 551459 | | Finish Date | 29/12/2015 | 16/09/2016 | 01/09/2017 | 02/07/2020 | 07/02/2023 | 01/07/2023 | 01/06/2026 | 01/09/2027 | |
| Estimate Identification Number: | | EIN 1398 | | Developments Phase PIN | | 551459 | | Completion of Handover to Operations & O&T: | | | | | | | | 02/06/2026 | |
| Estimate Review & Approval Signatures | | | | | | | | | | | | | | | | | |
| Range Estimate Values at Estimate Base Date (£) | | | | Range Estimate Distribution | | | | Original production and Peer Review actions by | | | | | | | | | |
| | | MINIMUM (P2,5) | MOST-LIKELY (Mode - P44,3) | MAXIMUM (P97,5) | P-value | Estimated Out-turn (£M) <i>Excl. Portfolio Risk</i> | Portfolio Risk (£M) | Estimator | | | | | | | | | |
| | | | | | | | | Name: Sign: Date: 06/12/2022 | | | | | | | | | |
| BASE ESTIMATE (Apr-22) | | 401,328,147 | 404,899,509 | 413,655,788 | P10 | £ 421.00 | £ 4.55 | Confirmation that all technical, arithmetical, transfer, file storage and distribution checks have been successfully completed. | | | | | | | | | |
| PROJECT RISK ADJUSTMENT: | | 17,103,024 | 19,003,360 | 24,704,368 | P20 | £ 432.17 | £ 6.04 | Peer Reviewer (Estimator) | | | | | | | | | |
| Contractor/Delivery Partner Risk | | 9,893,644 | 10,992,938 | 14,290,819 | P30 | £ 441.38 | £ 7.27 | Name: Sign: Date: 06/12/2022 | | | | | | | | | |
| Employer Risk | | 7,209,380 | 8,010,422 | 10,413,549 | P40 | £ 449.93 | £ 8.40 | Confirmation that the estimate has been produced in accordance with the MP Cost Estimation Manual and any other relevant guidance. | | | | | | | | | |
| UNCERTAINTY ALLOWANCE: | | - | 10,212,130 | 29,645,470 | P50 | £ 458.46 | £ 9.32 | Estimating Manager | | | | | | | | | |
| INFLATION ADJUSTMENT: | | - | - | - | P60 | £ 467.28 | £ 10.11 | Name: Sign: Date: 06/12/2022 | | | | | | | | | |
| RANGE ESTIMATE OUT-TURN <i>(Excl. Portfolio Risk)</i> | | £ 408,219,041 | £ 453,548,340 | £ 521,566,895 | P70 | £ 476.75 | £ 10.95 | Confirmation estimates reflects information provided, understands content of estimate/cost plan and will be reported consistently (SGAR's, IDC, Other Governance). | | | | | | | | | |
| PORTFOLIO RISK: | | £ 2,847,293 | £ 8,887,144 | £ 14,944,830 | P80 | £ 487.68 | £ 11.93 | Project Manager | | | | | | | | | |
| TOTAL OUTTURN <i>(Incl. Portfolio Risk)</i> | | £ 411,066,334 | £ 462,435,484 | £ 536,511,725 | P90 | £ 502.16 | £ 13.22 | Name: Sign: Date: 06/12/2022 | | | | | | | | | |
| | | | | | PMean | £ 459.99 | £ 9.46 | Confirmation for estimate release. | | | | | | | | | |
| | | | | | | | | Head of Cost Planning | | | | | | | | | |
| | | | | | | | | Name: Sign: Date: 06/12/2022 | | | | | | | | | |
| Portfolio Risk values shown above are at outturn (i.e. they are inclusive of inflation) | | | | | | | | | | | | | | | | | |
| Estimate Comments | | | | | | | | | | | | | | | | | |
| Estimate Purpose: - This range estimate has been produced as a Developing cost estimate using DIP's (Delivery Integration Partner) Anticipated Final Cost to complete construction to inform Interim SGAR & DT discussions. - The estimate uses DIP's April '22 forecast and September 2022 Cost Assurance report which as advised is based on DF3 drawings (18th August 2021). | | | | | | | | | | | | | | | | | |
| Caveats on use of this range estimate: - It is to be noted that with the termination of DIP scheme contract in June 2022, there is no delivery partner on this scheme and this estimate range includes a lot of uncertainties on design. - The information provided by project to produce this range estimate has not been technically and commercially assured in-line with RDP requirements. Whilst a cost assurance report was provided to estimating team, there is significant gap in the information provided for assurance. - This is a range estimate and should not be used for setting or re-setting or informing any contractual budgets / ToCs in accordance with RDP framework. - A full revised estimate should be produced once a delivery partner is allocated to this scheme and the revised estimate should be used for any governance / management of delivery of this project. - This Estimate does not consider NRVAT that may be applicable to Development Costs. | | | | | | | | | | | | | | | | | |
| Design, scope and estimate basis: The most likely point of the range estimate is produced using below high-level scope: a. The Scheme comprises two sections known as Part A: Morpeth to Felton (approx. 12.75km) and Part B: Alnwick to Ellingham (approx. 7.9km). b. upgrading the route to dual carriageway standard, including three new junctions at Highlaws, Fenrother and West Moor, with bridges over the A1 and the provision of access tracks. c. old section of the A1 carriageway will be de-trunked (meaning that this section of road will be owned and maintained by Northumberland County Council (NCC) and become a local road. | | | | | | | | | | | | | | | | | |
| - Forecast direct works cost build of c£169m has not been fully assured. Several cost headings show red or amber assurance due to lack of rate or quantity information provided or available to assure. Significant cost drivers like pavement which show green assurance rating have associated caveats attached to these, e.g., not based on an assured technical solution and there is discrepancy in quantities. - From the Indirect works forecast costs build of c£66.6m only construction management and Temporary Traffic Management items have been assured, remaining indirect works costs still require review and assurance. - Although uncertainty of up to £3.5m has been added to forecast development phase allowance, it is not based on any details of how the remaining development phase of the project will be completed in absence of a delivery partner and any transition arrangements for design liability transfer. - The Schedule of Other Costs (SUs, Commercial / Technical Assurance, etc) excluding NRVAT, has been based on a PRISM output and Project Controls assessment for historical costs to date. - Construction fee is based on the fee agreed as part of the scheme contract. Whilst this provide some allowance for contractor fee, it may not be correct for the project and needs to be assessed based on the supplier that will deliver the construction phase. - DIP forecast has utilised BCS General Civil Engineering Cost Index profile to inform the inflation allowance in the estimate, assuming start of main works May '22 with a completion of March '23. To maintain consistency with the other National Highways estimates the base inflation allowance provided by DIP has been adjusted by adding uncertainty in line with the Executive Finance Committee (EFC) approved RIS2 inflation profile; i.e the difference between the DIP's forecast inflation and EFC approved inflation has been included in estimate uncertainty. - Inflation scenario testing on this estimate utilising an inflation profile based on IOPI to August 2022 and forecast based on CPI + 200 basis points has been carried out. This provides a range of Min=£440m, Most Likely=£493m and Max=£569m. For the min and max the forecast inflation has been varied by + and - 200 basis points around the most likely inflation profile. - In absence of the plausible range of quantities and rates provided by the DIP, the direct works forecast costs have been ranged by -5% and +10% in the Min and Max costs, respectively. | | | | | | | | | | | | | | | | | |
| Risk and Efficiencies: - Contractor risk allowances have been based on the latest risk budget information provided by the DIP to the project team. This is in the form of an Xactium risk register; however, CET were not made aware of any independent assessment of the Contractor risk allowance. - The project team have provided a copy Xactium Employer risk register. The Employer risk allowance reconciles with the value provided in the Schedule of Other Costs. - The DIP's forecast submission includes c.£35.5m of efficiencies however, as these not been fully validated, they have not been included in the estimate. | | | | | | | | | | | | | | | | | |
| NRVAT: - No re-assessment of the NRVAT hybrid rate has been undertaken as part of this cost estimate, therefore previous hybrid rate of 62% NRVAT has been applied to the most likely point. | | | | | | | | | | | | | | | | | |

Planning and Schedule Basis:

- This most likely estimate is based on a schedule, which has a Start of Works (SoW) in July 2023 with a construction duration of 35 months.
- The CET have applied a range of -6 months and +6 months to the Min and Max construction duration respectively.
- The Prelims costs have been ranged based on the Min and Max construction duration ranges.

Strategic Assumptions:

- The project team have confirmed that there are no Strategic Assumptions to be included within this cost estimate.

Share Position:

- The CET have not been provided any assessment of Pain/Gain, therefore no assessment of Pain/Gain is included in this cost estimate.

The estimate does not consider the following emerging changes at portfolio level:

- Impact of Brexit
- Persistently high inflation in short to medium term (e.g., fuel, steel, concrete, and labour costs)
- Cost of carbon reduction measures
- Impact of biodiversity net-gain requirements
- Impact of removal of red-diesel rebate and introduction of Health and Social Care Levy / NI impact
- Non-recovery of VAT for PCF Stage 3-5 costs (if any)
- Ukraine War etc. - impact on supply of materials.

Summary for Budgetary Purposes (Excl. Portfolio Risk)

| | Historic Costs | Stage 0 & 1 Budget | Stage 2 Budget | Stage 3 Budget | Stage 4 Budget | Stage 5 Budget | Stage 6-7 Budget | LandsTotal | Totals |
|----------------------------|----------------|--------------------|----------------|----------------|----------------|----------------|------------------|------------|-----------|
| MINIMUM (P2.5) | £60,485M | | | | | £8,614M | £329,547M | £9,573M | £408,219M |
| MOST-LIKELY (Mode - P44.3) | £60,485M | | | | | £13,011M | £369,416M | £10,637M | £453,548M |
| MAXIMUM (P97.5) | £60,485M | | | | | £19,300M | £428,486M | £13,296M | £521,567M |

Estimate Evolution through PCF stages

| | | | | | | | | | |
|---------------------------|-------------|-------------|-------------|-------------|--|--|--|--|--|
| PCF Stage | PCF Stage 1 | PCF Stage 2 | PCF Stage 3 | PCF Stage 3 | | | | | |
| Estimate Release Date | 26/08/2016 | 16/03/2017 | 16/08/2018 | 17/03/2020 | | | | | |
| Start of Stage 6 Date | 06/12/2019 | 09/08/2020 | 11/09/2020 | 22/11/2021 | | | | | |
| Stage 6 Duration (months) | 30 | 20 | 31 | 32 | | | | | |
| Minimum (P2.5) £m | £251,54M | £180,81M | £221,16M | £245,65M | | | | | |
| Most-Likely £m | £325,51M | £282,14M | £330,67M | £398,95M | | | | | |
| Maximum (P97.5) £m | £436,48M | £491,78M | £502,79M | £619,52M | | | | | |