FURTHER SUBMISSIONS BY THE ADMINISTRATOR OF THE CFMEU

ON THE RE-INTRODUCTION OF A CODE OF PRACTICE AND INDEPENDENT REGULATOR

Material referred to in these submissions is subject to the non-publication and confidentiality order made 21 August 2026, as varied 26 August 2026.

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A. INTRODUCTION

1. Counsel Assisting's case for a code of practice and a regulator rests upon a figure. The Best Practice Industry Conditions (**BPIC)** are said to have cost Queensland as much as $19.9 billion, and Counsel Assisting submits that a "well-designed code that prohibits unproductive work practices represents a potential panacea to the wastage and inefficiencies embedded by" BPIC.[1] In August the Administrator answered that case upon the Queensland Productivity Commission's (**QPC**) published report,[2] and said that the modelling behind the figure could not be tested because it had not been produced.[3]

2. The modelling has now been produced, though not in full. On 14 August 2026 the QPC answered Notice 26618 with both versions of its model,[4] the data behind them other than the code used for the weather analysis and the supplementary data drawn from the Victorian University Regional Model, and a written explanation of what it had done and what it had not (**QPC material**).[5] The QPC cautioned that, the model being unprotected, it "cannot ensure that a user will be able to interpret or run the model correctly or derive consistent values".[6] The Administrator provided that material to Mr Gerard de Valence, a construction economist of thirty years' standing, who has operated the model and examined the data.[7] His report of 21 September 2026 is filed with these submissions (**de Valence Report**), and he is available for cross-examination on 9 October 2026.

3. What the QPC produced is not a measurement of what BPIC cost. The QPC never worked out what the projects it modelled would have cost without BPIC. It measured

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1 Counsel Assisting's Further Submissions dated 3 July 2026 at [6]–[7] and [25] (**Further Submissions**); Counsel Assisting's opening submissions dated 14 April 2026 (JMC-1) at [4].

2 The QPC's published report is Queensland Productivity Commission, *Opportunities to Improve Productivity of the Construction Industry: Final Report* (October 2025) (**QPC Final Report**).

3 Submissions by the Administrator of the CFMEU on the re-introduction of a code of practice and independent regulator dated 14 August 2026 at [13], [64]–[65] and [102] (**August Submissions**).

4 The two workbooks produced are "BPICs model used in QPC construction inquiry – main version" (**Main Version**) and "BPICs model used in QPC construction inquiry – wage impacts removed" (**Wage Impacts Removed Version**).

5 Letter from the Queensland Productivity Commission to the Commissioner dated 14 August 2026, with Attachment A (Explanation of materials provided in response to Notice 26618) and Attachment B (List of materials provided) (**QPC Letter**). As to what was not produced, see the QPC Letter at p 1.

6 QPC Letter, Attachment A at p 4 [4].

7 Non-Publication and Confidentiality Order dated 26 August 2026, order 2(a), replacing the order dated 21 August 2026; curriculum vitae of Gerard de Valence (2026), provided with his report.

BPIC against award conditions and an industry median instead. The QPC has told the Commission that it made no explicit estimate of what the agreements covering these projects would otherwise have contained.[8]

4. Nor did the QPC measure the past. It projected what BPIC might cost if it ran for six years to June 2030 upon the express assumption that the State never suspended it.[9] In fact, the State suspended BPIC on 14 November 2024.[10] The $19.9 billion is the top of the range that projection produces, reached by moving the cost assumptions adversely together. The delay assumption which produces it is annotated in the QPC's own workbook "assume worst case scenario".[11] And $9,278 million of the $19.9 billion is money the model records, in the same amount, as a benefit to construction workers.

5. The evidence before this Commission about individual projects does not supply what the modelling lacks. The figures advanced as the cost of BPIC are a price a contractor put upon BPIC while bidding for work, an estimate a consultant built from those prices, or a claim a contractor advanced afterwards against the party which had agreed to pay it. Where the Department of Transport and Main Roads' (**DTMR, or the Department**) own records exist they are measured against a different base: its contemporaneous estimate of the proposed Transport BPIC rates put them up to 11 per cent above what tier 1 civil contractors were then paying, where the premium the model assumes is 30 to 50 per cent above an all of industry median. And upon the Centenary Bridge, the escalation of $23 million was attributed by the Department's independent consultant to delay in awarding the contract.[12]

6. Finally, there is no evidence before this Commission about what BPIC delivered. BPIC set apprentice rates and ratios, training requirements, heat and weather procedures, and participation targets for First Nations people, women and mature age workers. The QPC valued only two of those matters, safety and reduced working hours, and made no attempt to value the apprentice, training or participation requirements. To call money wasted is to say that nothing was got for it, and that has not been shown.

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8 QPC Letter, Attachment A at [12(a)]; QPC Final Report, Appendix C at pp 405–406.

9 QPC Final Report at p 111.

10 QPC Final Report, Appendix C at p 404.

11 Main Version, 'Project delays - community' worksheet at row 7.

12 Day 47 at p 4299 LL 3–20 (Ms Yeates); JJR-1, Annexure JR-1, Fission Pty Ltd letter dated 30 November 2022, bundle p 226. The bases of comparison are addressed in Part C2.

7. Even if the Commissioner were to accept the figure in full and at its highest, the code would not answer it. The model contains no code. What it projects has not happened: the State suspended BPIC in the first of the years modelled. The instrument reaches the government which imposed these conditions only through its own procurement; it reaches a minority of the components said to generate the cost and cannot be shown to reach the largest of them; it cannot alter the enterprise agreements in which those conditions now sit; and it is not what the QPC recommended.

8. Three matters in the August Submissions are affected by the QPC material. Paragraph [103] put the wage comparison conditionally, upon the footing that the premium may have been measured against the award; the model measures it against an industry median, and Part C2 states the point as it now stands. Paragraph [104], as to the share of labour adopted, is not pressed. Paragraph [108] described the QPC's reasoning upon the residential market as running from higher project costs to fewer dwellings to higher rents; the model does not work that way, for the reasons in Part C4, and the paragraph is corrected accordingly. The observation that the housing figures do not move when the wage assumption is altered is unaffected, and is now explained. The Administrator otherwise maintains its August submissions, which should be read with these further submissions.

B. WHAT THE RECOMMENDATION MUST REST UPON

B1. What Counsel Assisting asks, and what it must show

9. Counsel Assisting asks the Commissioner to recommend a code of practice in the form of the draft Implementation Guidelines to the Queensland Code of Practice for the Building and Construction Industry annexed to the Further Submissions (**Draft Guidelines**), and a new body to enforce it.[13] It does not ask the Commissioner to find that BPIC cost any particular sum. It submits that the Commissioner may be satisfied that a code "represents an *opportunity* to improve productivity and efficiency", and that "even if the Commissioner were to find that a code of practice and properly resourced regulator represented no more than an opportunity to improve productivity and efficiencies in an industry as expansive as the Queensland construction industry", then "given the significant volume of taxpayer funded construction work forecast to be

[13] Further Submissions at [12], [67] and [76]–[78].

undertaken over the next four years", "that potential alone should move the Commissioner to recommend the re-introduction of the proposed measures".[14]

10. An opportunity is an opportunity to do something, and the something must be identified before the potential can be weighed. What Counsel Assisting says is within reach is the cost of BPIC: it advances the QPC's modelling as "particularly compelling support" for its case, and it rests the sufficiency of potential alone upon the volume of work to come.[15] Two things must therefore be shown rather than assumed. The first is that the cost is of the order advanced. The second is that this instrument would reach it. If the figure will not bear the weight, the size of the forward program measures the Commissioner's exposure and not the benefit of the instrument; and if no clause of the Draft Guidelines has been costed, the potential is unquantified at both ends. What is proposed is an instrument regulating lawful bargaining across an estimated $119 billion of government funded construction work over the next four years, carrying consequences which Counsel Assisting's own witness accepted may be measured in hundreds of millions or billions of dollars.[16] The Administrator relies upon what was said as to the approach to satisfaction at paragraphs [14] to [16] of the August Submissions.

11. Paragraph 11 of the Commissions of Inquiry Order (No. 2) 2025 requires the Commission to have regard to the QPC's inquiry so that there is no duplication of its economic focus. That is a direction against duplication, not a direction to adopt the QPC's economic conclusions, and Counsel Assisting accepts that parties were free to adduce evidence contrary to the QPC's report.[17]

B2. What the QPC modelled

12. A cost benefit analysis compares two worlds: the world with the policy and the world without it. To say that BPIC added to the cost of a project is therefore to say what the project cost with BPIC and what the same project would have cost without it. The second never happened and must be estimated, and the exercise turns upon how that

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14 Further Submissions at [26] and [28]; see also [12(a)], [27] and [29].
15 Further Submissions at [6] and [28].
16 Further Submissions at [13]; Day 31 at p 3017; August Submissions at [16] and [110].
17 Further Submissions at fn 10.

estimate is made.[18] Because the analysis asks what the community as a whole gains and loses, money which moves from one group within the community to another is not a cost to the community but a transfer; the QPC identifies the first component of its direct cost figure as "transfers between taxpayers and construction workers". And because the analysis proceeds in money, it takes up what is readily priced and leaves out what is not.[19]

13. The QPC's model works in four steps:

    (a) It assumes that BPIC makes labour dearer and working time shorter, through a wage premium above a comparison rate, days lost to the heat and weather provisions, days lost to rostered days off, union meetings and a five day week, and a site flexibility allowance, which is a benefit of 0.4 per cent in the low scenario and a cost of 0.4 per cent in the high.[20]

    (b) It converts each assumption into a percentage added to the cost of a project.[21]

    (c) It applies that percentage to a list of 73 Queensland Government projects worth about $77.5 billion between 2024–25 and 2029–30, and adds amounts for projects assumed to finish late and for the cost of raising the tax to pay for it.[22]

    (d) It then adds a second set of figures for the housing market and for business investment, upon the footing that BPIC sites absorb workers who would otherwise build houses and commercial premises, and, for the residential market, that BPIC-like conditions spread to high-rise sites.[23]

14. The QPC ran the exercise upon a low scenario, in which BPIC is applied flexibly, and a high scenario, in which it is applied rigidly. Counsel Assisting advances the $19.9

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18 de Valence Report at [18]–[22] and [35].

19 de Valence Report at [31], [37] and [42]; QPC Final Report, Appendix C at p 421.

20 QPC Final Report, Appendix C at p 407, Table C.1; p 411, Table C.3; pp 412–414, Tables C.6 to C.8.

21 QPC Final Report, Appendix C at pp 419–420, Table C.14.

22 QPC Final Report, Appendix C at pp 406 and 408–409; Main Version, 'Project expenditures' worksheet and 'Summary sheet' at cell J10.

23 QPC Final Report, Appendix C at pp 415–418, Tables C.9 to C.12 and Box C.2.

billion at its high end alone, although the same tables give $8.2 billion for the low scenario.[24]

15. The figure's anatomy, taken from the QPC's tables, is this:

Table 1: The QPC's modelled costs and benefits of BPIC, 2024–25 to 2029–30, $ million, net present value

Component	Low scenario	High scenario
Program of projects to which the percentages are applied	77,492	77,492
Uplift applied to project costs	10.1%	24.6%
Direct cost to taxpayers, being:	8,177	19,856
higher wages paid to construction workers	*4,661*	*9,278*
productivity loss (more labour and plant for the same work)	*1,629*	*5,996*
excess burden of taxation (30 cents per dollar)	*1,887*	*4,582*
Indirect costs away from the projects, being:	4,919	18,768
housing market (renters, first home buyers, unit purchasers, those missing out)	*2,759*	*10,727*
business investment	*1,435*	*5,140*
delayed benefits of infrastructure	*725*	*2,901*
Total costs	**13,096**	**38,625**
Total benefits (of which higher wages to construction workers)	7,398 (4,661)	18,037 (9,278)
Net cost	**5,698**	**20,588**

Source: QPC Final Report, Appendix C, Tables C.14 to C.17 (pp 420–422); Main Version, 'Summary sheet'.

16. Counsel Assisting quotes the QPC's net range but advances the gross taxpayer figure.[25] The $19.9 billion described in the Final Report as the direct cost "to the community" is the high scenario's cost to taxpayers before any gain is set against it; the model's own answer, once the gains to construction workers, landlords and existing homeowners are deducted, is a net cost of between $5.7 billion and $20.6 billion.[26] Of that $19.9 billion,

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24 QPC Final Report at p 111; Appendix C at pp 406–407.

25 Further Submissions at [7].

26 QPC Final Report, Appendix C at p 421, Table C.16, and p 422, Table C.17.

$9,278 million is higher wages, which the model books in the same amount as a benefit to construction workers. And almost half of the total cost in the high scenario, $18.8 billion of $38.6 billion, is indirect: $15.9 billion is the assumed effect upon housing and upon business investment of workers assumed to be drawn away from those markets, and a further $2.9 billion is the delayed benefit of the modelled projects themselves.

17. The program to which those percentages are applied is itself a forecast. The QPC took its project list from a commercial investment monitor published in December 2024, describes it as "a possible pool of future projects", and acknowledges that "there is some subjectivity about selecting projects to include in the modelling". Of the 73 projects, whose total cost is $91.6 billion, 18 worth $15.1 billion were under construction and nine worth $7.8 billion were committed. The remaining 46, worth $68.7 billion, were under consideration or merely possible. Where a project carried no start date the worksheet supplied one by rule — 2024 for a project under construction, 2025 for one committed, 2026 for one under consideration and 2027 for one merely possible — and spread its expenditure evenly across the assumed period. An assumed premium applied to a forecast base multiplies the uncertainty in each.[27]

18. The QPC described its own exercise as an analysis "conducted to provide an indication of the potential impacts of BPICs".[28] It was "not intended to provide a precise estimate of actual outcomes, but rather to illustrate how BPICs may impact the community if it applies in the future", and its results "are intended to be illustrative".[29]

19. The QPC also records that its escalations were checked: that "project cost escalations provided by stakeholders were consistent with the modelled results, and consistent with previously benchmarked project cost escalations",[30] that it "did not receive robust evidence that non-BPICs factors are responsible for observed project cost escalations",[31] and that its project cost estimates "were benchmarked against internal to government project cost estimates".[32] What was checked was consistency with what

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27 Main Version, 'Project expenditures' worksheet at column F and the note at cell X2, and column S as to the 73 projects in scope; QPC Final Report, Appendix C at p 408.

28 QPC Final Report, Appendix C at p 404.

29 QPC Final Report, Appendix C at p 407.

30 QPC Final Report, Appendix C at p 407.

31 QPC Final Report, Appendix C at p 408.

32 QPC Final Report at p 111 and fn 16.

stakeholders provided, and the benchmarking is nowhere set out. The modelled figure remains an illustration of a future which may or may not occur, and not a measure of what BPIC cost.

C. THE MODELLED FIGURE IS NOT A MEASURE OF WHAT BPIC COST

20. Counsel Assisting submits that the QPC "modelled the cost impact of BPICs" and that the direct costs "have been as high as $19.9 billion".[33] Such a figure is worth no more than the comparison chosen, the rate it is measured against, the assumptions which fill it and the character of the amounts it counts. Upon the produced material the QPC's figure fails at each: it compares BPIC with a site these contractors were never going to run; it measures a wage premium against a rate these projects never paid; nine-tenths of it is time the QPC assumed was lost; half of the total occurs away from the projects altogether; and three-fifths of what is called a cost to taxpayers is a transfer within the community and the tax loading computed upon it.

C1. The model compares BPIC with a site these contractors were never going to run

21. The QPC never estimated what these projects would have cost under the agreements they would have had without BPIC. It says so. Its explanation of the model records that it was "not possible to observe how enterprise bargaining agreements would have developed in the absence of BPICs" and that the model "did not make an explicit estimation" of them; what it did instead was to consider "the key additional components likely to have been influenced by the establishment of BPICs".[34] Appendix C states the counterfactual in these terms: there are "significant uncertainties associated with estimating this counterfactual … as the market has already been influenced by BPICs", the example given being that "current EBAs for tier 1 construction firms reflect the same conditions as BPICs"; but "current awards and regulations specify standard industry conditions, such as weather-related operating conditions, which are assumed to operate in the counterfactual", so that "the analysis only considers the additional conditions imposed by BPICs".[35] Identifying the components likely to have been influenced is not the same as estimating the agreement these projects would otherwise have had, and the reasoning assumes the direction of the influence, which is the very

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33 Further Submissions at [6]–[7].

34 QPC Letter, Attachment A at [12(a)].

35 QPC Final Report, Appendix C at p 405.

question. The QPC's own qualification is that the extent to which BPIC created pressure upon other sites "is unclear"; the same passage records that the modelling "adopts a 'cautious' approach to attributing changes to BPICs", and the submissions which follow test whether it did.[36]

22. What the QPC used instead was award conditions, which it called the industry standard. In the worksheets the comparison is narrower still. The sheet which produces the stoppage figures records that "CMFEU EBA sites (same as BPICs) allow for 26 rostered days off per year", that "non-CMFEU sites allow for 13, but in practice these are rarely taken", and that rostered days off on CFMEU sites are inflexible, which is "not the case for non-CMFEU EBA sites".[37] These projects were built by tier 1 contractors under agreements with the CFMEU approved by the Fair Work Commission, and without BPIC they would still have been built under agreements with the CFMEU. The QPC's world without BPIC is a site without the union.

23. The rostered days off component shows how that comparison manufactures cost. In the high scenario the model treats 19.5 days a year as lost to rostered days off: the 13 additional days BPIC is said to require, and 6.5 days which are half of the 13 the award already confers, charged to BPIC because upon sites without the union those award days are "rarely taken" as workers "choose to work the extra two hours per day".[38] In that scenario the model therefore charges BPIC for a worker taking leave the award gives him. The agreements covering these projects already provided 26 rostered days off; the additional 13 were not BPIC's doing.[39]

24. The weather component charges BPIC for conditions which are not BPIC's. The heat and humidity conditions apply in the low scenario to sites in south east Queensland and in the high scenario to every site in the State, a choice which takes the average days lost per project outside the south east from about three a year to between 24 and 36. The worksheet records why: those conditions are "not explicitly stated in BPIC however no

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36 QPC Final Report, Appendix C at p 406.

37 Main Version, 'Project delays - other' worksheet at rows 5 to 7.

38 Main Version, 'Project delays - other' worksheet at rows 5 to 13 and cells E9, E11 and E13.

39 QPC Final Report, Appendix C at p 413; de Valence Report at [141].

counterfactual has been identified".[40] An absence of evidence as to what applies outside the south east became the application of the stricter condition everywhere. Separately, the award baseline is not subtracted. Appendix C says that current awards specify "weather-related operating conditions, which are assumed to operate in the counterfactual". In the low scenario the days charged are the worksheet's "rain_base" days, of which it notes that "rain base includes rain conditions outlined in the building and Construction General On-site Award 2020" and that "it is assumed that these conditions hold on all BPIC and non-BPIC sites"; in the high scenario they are "rain_strong" days, which the worksheet records as including "rain_base conditions", upon a rule whose content appears nowhere in Appendix C, under which half a millimetre of rain in an hour stops work for the remainder of the day.[41] In neither scenario is the award day netted out.[42]

25. One further matter belongs to the counterfactual. So far as days or expense were incurred because of what the CFMEU did, under its former leadership, to compel compliance with BPIC, the question the counterfactual asks is what that leadership would have done in the absence of the conditions. Conduct of that kind was not created by BPIC and would not have been ended by its absence. The converse matters equally: the conduct of those who led the union while BPIC was in force is not a guide to what would occur, under the union as it is now administered, were the conditions retained. The behaviour of those in charge of the CFMEU before the Administrator was appointed is not a proxy for a defect in the conditions, and it is not a justification for a code.

C2. The wage premium is measured against a rate these projects never paid

26. Wages are the largest of the four components: 7.0 of the 10.1 percentage points in the low scenario and 11.6 of the 24.6 in the high.[43]

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40 Main Version, 'Low' and 'High' worksheets at rows 11–12; 'High_weather_detailed' and 'Low_weather_detailed' worksheets at rows 19 to 29; QPC Final Report, Appendix C at pp 412–413, Table C.6.

41 Main Version, 'Low_weather_detailed' worksheet at rows 45 to 62 and the notes at cells A46 and A57; 'High_weather_detailed' worksheet at rows 45 to 62 and the notes at cells P45 and P56.

42 Main Version, 'High_weather_detailed' worksheet, note at cell P45; QPC Final Report, Appendix C at pp 405 and 412–413.

43 QPC Final Report, Appendix C at p 420, Table C.14.

27. Table C.14 labels the component "higher than award wages", but the model does not proceed from the award. The premium of 30 per cent in the low scenario and 50 per cent in the high is applied not to any hourly rate but to an assumed wage bill, being 23.3 per cent of project expenditure taken from the cost shares of the Victorian University Regional Model. Table C.1 states the assumption as a premium above "industry standard". The worksheet contains industry wage data drawn from the Australian Bureau of Statistics survey of employee earnings and hours, being the weighted median hourly total cash earnings of six construction occupations, $42.60 for adults and $22.30 for apprentices and trainees.[44] The QPC accepted that industry wages "are likely to be significantly higher than award wages" and that there is "no standard measure for industry wage rates that provide a perfectly suitable comparison"; its worksheet records of that data that it is "from microdata and may be subject to significant survey error".[45] The premium is therefore a figure chosen rather than a distance measured, and the rate these projects were paying plays no part in it.

28. The Department's own records show what BPIC added to what it was already paying. Ms Yeates, then Deputy Director-General of DTMR, endorsed the noting brief prepared for the Minister in April 2020, which recorded the proposed rates as up to 11 per cent above what tier 1 civil contractors were then paying workers upon Queensland projects, and costed that premium at up to $192 million over four years upon about $5 billion of work. She accepted that evidence, and no party sought to cross-examine her.[46] In her statement Ms Yeates had put the comparison differently, contrasting a rate of about $35 an hour for a Grade 5 worker in civil construction with about $60 under BPIC.[47] DTMR's costing for the Coomera Connector negotiations set the weekly cost of the award at $1,195.93, of its own baseline project at $1,786.52, and of the Transport BPIC at $1,987.78: 49 per cent from the award to what DTMR was already paying, and 11 per cent from there to BPIC.[48] Ms Yeates's comparison is of the first kind and the

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44 QPC Final Report at p 411 and Appendix C at p 407, Table C.1, and p 420, Table C.14; Main Version, 'Higher wages' worksheet at cells Q17 to X28 (the Bureau data), C27 and C38 (the assumed wage bill) and C29 to E30 (the inflator).

45 QPC Final Report at pp 410–411; Main Version, 'Higher wages' worksheet, note at cell Q31.

46 Day 47 at p 4299 LL 3–20; witness statement of Amanda Louise Yeates, Annexure ALY-3 (Department of Transport and Main Roads Noting Brief MBN23385, endorsed 20–23 April 2020).

47 Witness statement of Amanda Louise Yeates at [17].

48 DTMR email, 27 July 2021, Exhibit BPIC 1 at bundle pp 68–69.

noting brief's of the second. The same instrument produces either figure according to what it is compared against, which is the difficulty with the QPC's premium.

29. The analysis the State commissioned from KPMG in June 2022 found the Transport BPIC broadly comparable to New South Wales major project agreements, 13 and 21 per cent below Victoria, about 21 per cent below Cross River Rail, 29 per cent below Queens Wharf and 16 per cent below the Energy and Public Works BPIC; Ms Hawkswood, DTMR's Chief Procurement Officer, accepted those comparisons in cross-examination, and Mr de Valence records that the analysis discloses no appreciable premium for the Transport BPIC.[49] Upon Gold Coast Light Rail Stage 3 the rates actually paid exceeded the BPIC rates: Ms Hawkswood put them "in the sort of low to mid 50s" an hour for a CW5 worker, "whereas our BPIC was in the mid 40s".[50]

30. No evidence before the Commission measures the premium BPIC added to the rates these contractors were already paying. The Department's own records, which are the closest thing to such a measure, put it at up to 11 per cent, and cannot be reconciled with a premium of 30 to 50 per cent. The significance of that is not confined to the wage line. It establishes that the standard against which the QPC measured is not the standard these projects were working to, which is the same defect that produces the rostered days off and weather components addressed above.

31. Upon the QPC's own account the wage premium is not where the figure comes from. The QPC re-ran its model assuming that wages upon BPIC sites were no higher than elsewhere, reported that the net cost fell only from $20.6 billion to $18.4 billion, and concluded that the driver of cost was productivity rather than wages.[51] The assumptions as to lost time therefore carry the figure, and they are addressed next.

32. That re-run did not, in any event, do what it was said to do. The model calculates the wage cost in two lines: the premium upon the workers who would have been engaged in any event, and the premium upon an assumed additional workforce. In the second

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49 Transcript Day 36, 15 July 2026 at p 3383 LL 4–13 (**Day 36**); DMH-1, annexure DH-40, KPMG, TMR's BPICs Major Project Cost Analysis (2022) at p 421; de Valence Report at [85].

50 Day 36 at p 3380 LL 33–35.

51 QPC Final Report at p 113, Table 4.2; Appendix C at p 422.

workbook the first line is set to nil while the second still applies the premium in full.[52] A scenario described as assuming no wage difference continues to charge the assumed premium. That is the additional scenario the QPC established in response to the union submissions, and it is the only scenario in which the wage assumption was tested.[53]

C3. Nine-tenths of the figure is lost time the QPC assumed

33. The Summary sheet carries a control which turns off the components said to reduce productivity. With those components applied the high scenario's net cost is $20,588 million; with the control applied and nothing else changed it is $1,853 million. The low scenario moves from $5,698 million to $1,006 million.[54] About nine-tenths of the figure Counsel Assisting quotes therefore rests upon what the model assumes as to time lost upon BPIC sites.

34. The QPC did not take those assumptions from any record of what happened upon a site. The worksheet sources them to "stakeholder evidence" and "stakeholder feedback", which is to say to what industry participants told the QPC was occurring. In the high scenario the model treats 54.9 productive days a year as lost upon every site, in every year, to rostered days off, union meetings, rallies and the five day week, which is 20.8 per cent of a 264 day working year, before weather is counted.[55] The 24 days of union meetings rest upon two meetings a week of two hours each, the worksheet recording that an industry report "assumes 1 per day", so that the figure adopted is below the industry claim but above any record of what occurred. The 6.6 days of rallies rest upon six calendar days in 2023, with a further tenth added "based on stakeholder feedback".[56]

35. The delay assumption is not derived from either of the figures the model itself cites. Projects are assumed to finish 5 per cent late in the low scenario and 20 per cent late in the high. The worksheet records that consultants engaged by DTMR had modelled delays of about 15 per cent for transport projects and about 25 per cent for renewables

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52 Wage Impacts Removed Version, 'Higher wages' worksheet at rows 40 to 45, compared with the same rows of the Main Version.

53 QPC Letter at p 1; Attachment A at [3(d)] and [5]; QPC Final Report, Appendix C at p 422.

54 de Valence Report at [145]–[146] and [148]; Main Version, 'Summary sheet' at cells D6, I6 and J69.

55 Main Version, 'Project delays - other' worksheet at cells A4, A17, A37, E54 and D62.

56 Main Version, 'Project delays - other' worksheet at cells E21 to E33 and the notes at cells F31, V21 and V23.

projects. The low scenario adopts 5 per cent against the note "assume better than transport"; the high adopts 20 per cent against the note "assume worst case scenario".[57] The Final Report records that "ideally, the impact of project delays would be estimated on a case-by-case basis", but that this was "beyond the scope of this analysis".[58] The five percentage points between the figure the Department's consultants had modelled and the figure the model adopts take about a quarter off the $2,901 million charged in the high scenario for delayed infrastructure benefits.[59]

36. The same assumption is then used a second time, to a different end. The proportion of time lost is carried, with the weather and site flexibility components, into the workforce sheet, where it becomes the assumption that BPIC sites require about 29 per cent more workers.[60] That figure inflates the wage line, because the premium is charged upon the additional workers, and it generates the housing and business figures addressed in Part C4, because it is the source of the workers assumed to be drawn from other construction. Table C.1 describes this only as "smaller" or "larger worker shortages",[61] and the reduction it produces in workers available to residential work is published at Table C.9.[62] The 29 per cent figure which produces them appears nowhere in the Final Report.[63]

37. The two scenarios are not independent draws upon the parameters. Table C.1 presents them as a "flexible" and a "rigid" interpretation of the same conditions.[64] The difficulty is that the high scenario sets each parameter at or near its least favourable value together: the QPC accepted that BPIC conditions could "potentially have a positive impact on workplace productivity" and that the literature upon unions and productivity "is mixed", [65] then applied a symmetric adjustment of one per cent. That adjustment is defensible upon the material. What is not explained is why its adverse value sits in the same scenario as the higher wage premium and the stricter weather rule, nor how likely

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57 Main Version, 'Project delays - community' worksheet at row 7.
58 QPC Final Report, Appendix C at p 419.
59 de Valence Report at [137] and [138].
60 Main Version, 'Workforce estimates' worksheet at cells C69 and B73.
61 QPC Final Report, Appendix C at p 407.
62 QPC Final Report, Appendix C at p 415.
63 Main Version, 'Higher wages' worksheet at cells C42, C43 and C45 and the note at cell J40.
64 QPC Final Report, Appendix C at p 407.
65 QPC Final Report, Appendix C at p 414

that coincidence is.[66] Neither end of the range is a best estimate. The Summary sheet offers three scenarios, low, medium and high, but no medium case was built: three components label their middle column "med", which the scenario value "medium" does not match; the delay to the community has no medium parameters at all; and the weather module resolves the scenario to a worksheet name, there being no medium weather sheet. Selecting it returns errors and not a result. The QPC parameterised a middle case, did not build it, and did not say where within the range the answer lies.[67] The choice to advance the higher figure is accordingly Counsel Assisting's and not the QPC's.

38. To parts of the bill the model adds 30 cents in the dollar for the excess burden of taxation. The model's own note records that figure as an average across all Australian States, and attributes it to a 2019 working paper. Mr de Valence has examined that paper. His evidence is that it gives a separate excess burden for each of eleven taxes, eight State and three federal, ranging from 96 cents in the dollar to 4 cents, with company tax producing a gain; and that Table 2.1, the table to which the model's note refers, contains no national average. The figure the model uses is neither a Queensland figure nor tied to any particular tax, and upon his evidence it is not in the source to which the model attributes it.[68]

39. The Final Report acknowledges that taxes "vary significantly in this regard" and that "state government taxes tend to be less efficient than for other levels of government", so that a national average understates the range within which the true figure for the taxes Queensland would raise must lie.[69] Nor did the QPC ask how the additional cost would in fact be funded. Upon a rate reflecting the cost at which the State borrows, the same charge falls from $1,887 million and $4,582 million to $233 million and $464 million, a movement of some $4.1 billion in a net cost of $20.6 billion.[70]

40. The Final Report states that "the key results hold under a wide range of plausible assumptions" and that this was so "under all assumptions tested". The same report states that the results "are intended to be illustrative" and that there is "significant

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66 de Valence Report at [82], [96]–[98] and [144].
67 de Valence Report at [128]; Main Version, 'Higher wages' worksheet at cells C29 to E30.
68 de Valence Report at [106]–[108].
69 Main Version, 'Summary sheet' at cells Q13 and R12; QPC Final Report, Appendix C at p 406 and fn 76.
70 QPC Final Report, Appendix C at p 421; de Valence Report at [111]–[113].

uncertainty around many of the parameters used in the modelling".[71] Robustness in that sense means only that the model returns a negative number whichever way its assumptions are moved. It says nothing about the size of the number, and it is the size upon which the submission depends.

C4. Half the total is an assumed effect away from the projects

41. In the high scenario $18.8 billion of the $38.6 billion total is the assumed effect upon the housing market and upon business investment, and it is that half which lifts the net figure to $20.6 billion. None of it is measured upon any construction site. It is produced by the assumption in Part C3 that BPIC sites absorb workers who would otherwise build houses and commercial premises, between about 1.6 and 6.7 per cent of the workforce across the six years, carried through assumed elasticities and a further assumed multiplier. The housing and business figures do not move when the wage assumption is altered because wages play no part in producing them.[72]

42. Two of the parameters which produce that half were neither measured nor independently sourced. The step from a shortage of workers to a delay in building is a factor of two, entered against the note that the "expectation is that worker shortages would have a bigger impact on delays than the direct shortage",[73] while the Final Report records that "to the best of the Commission's knowledge there are no empirical studies examining the relationship between trades shortages and construction times".[74] That factor doubles the whole of the housing effect. The cost and delay figures applied to high-rise residential work, of 33 per cent and 50 per cent in the high scenario, are taken from an analysis by Queensland Economic Advisory Solutions prepared for Master Builders Queensland and referred to in its public submission, whose author was not called; of the resulting overruns, a flat half is attributed to BPIC, a figure no analysis supports.[75] For business investment the QPC recorded that it "has not received to date any robust market intelligence to guide modelling assumptions" for that sector,

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71 QPC Final Report at pp 113 and 407; de Valence Report at [198].

72 Main Version, 'Indirect effects - residential' worksheet at cells B35 to H35 and E43 to E55; 'Workforce estimates' worksheet at row 77; QPC Final Report, Appendix C at p 420; de Valence Report at [118]–[119].

73 Main Version, 'Indirect effects - residential' worksheet at cells E43, E45, E46, E53 and E55, and the source notes at cells T3 and F50.

74 QPC Final Report, Appendix C at p 415 and fn 79; see also p 416, Table C.10.

75 QPC Final Report, Appendix C at p 416, Table C.10 and the accompanying text; Main Version, 'Indirect effects - residential' worksheet at cell E46, and the notes at cells T3 and F50.

and for that reason confined the impacts to "those arising from worker shortages due to BPICs-affected sites utilising more labour".[76] The housing forecast beneath all of this carries the note "Note - These forecasts are built from data from Queensland Treasury, they are not to be published or used elsewhere",[77] and the rents to which the shortfall is converted are Brisbane asking rents applied to the whole State.[78]

43. There is a more fundamental difficulty with this half of the figure. Either Queensland has enough tradespeople to build the State's projects and to meet the demand for housing at the same time, or it does not. If it does not, competition for labour between the two will raise the cost of residential work and delay it, whether or not BPIC applies. Upon that footing what the model attributes to BPIC is a consequence of the size of the State's capital programme measured against the workforce available to deliver it. The Olympic and Paralympic Games programme falls within the modelled period, and the QPC did not attempt to model the effect of that demand upon the supply of labour, the cost of materials or project delivery times.[79]

C5. Three-fifths of the taxpayer figure is a transfer and the tax computed upon it

44. Counsel Assisting calls the $19.9 billion the direct cost "to the Queensland community".[80] The QPC's figure is a cost to taxpayers, and the difference is most of the figure.[81] Of the $19,856 million, $9,278 million is higher wages, which the model books in the same amount as a benefit to construction workers. The housing figures behave the same way: the loss to renters is the gain to landlords, and the loss to first home buyers the gain to existing homeowners, to the dollar.[82] Construction workers are part of the Queensland community, and so is a landlord. Money moved from one group to another is not value destroyed, and the QPC did not treat it as though it were; Table C.17 sets the two sides against each other and arrives at a net figure.[83]

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76 QPC Final Report, Appendix C at p 418.

77 Main Version, 'Indirect effects - residential' worksheet at cell B3, see also B16.

78 Main Version, 'Indirect effects - residential' worksheet at cell D40 and D41, and the note at cell E40.

79 de Valence Report at [69]–[72].

80 Further Submissions at [7].

81 QPC Final Report at p 112.

82 Main Version, 'Summary sheet' at cells J17, J36, D79, D97, F99 and D117; QPC Final Report, Appendix C at pp 420–422, Tables C.15 to C.17; de Valence Report at [150]–[151].

83 QPC Final Report, Appendix C at p 422, Table C.17.

45. A further $2,783 million of the taxpayer figure is the excess burden of taxation computed upon that same wage line. The model's Summary sheet calculates the $4,582 million of excess burden in two parts: $1,799 million upon the productivity loss, and $2,783 million upon the higher wages.[84] The community is therefore charged with the cost of raising the tax to fund a payment which the model records, in the same amount, as a gain to construction workers. Taken with the wages themselves, $12,061 million of the $19,856 million said to fall upon taxpayers is a transfer within the community and the tax loading computed upon that transfer.

46. Prohibiting a condition which moves money does not create value; it moves the money back. Upon the QPC's own framework the community gains only the excess burden of the tax avoided, and only if wages fall.

47. Nor did the QPC put a figure upon those aspects of BPIC which reduce cost. BPIC set apprentice ratios and training requirements. Apprentices become qualified tradespeople, and qualified tradespeople relieve the shortage of labour upon which the housing and business investment figures depend. The model counts the workers BPIC sites are assumed to draw away from housing; it does not count the workers the conditions were intended to produce.

48. What the QPC's figure measures is the distance between a BPIC site and an award site, upon assumptions as to lost time supplied by industry participants and set at their least favourable, projected forward over a period in which the policy was not in force, and expressed in a way which counts as a loss to the community money the model records as a gain to part of it. It is not a measure of what BPIC cost, and it cannot support the first finding.

D. THE PROJECT EVIDENCE DOES NOT SUPPLY THE MEASURE

49. Counsel Assisting relies upon the QPC's modelling as "particularly compelling support" for Mr Long's evidence as to the cost impacts of BPIC.[85] The two are not independent of one another. The QPC's explanation of its model records that its assumptions and results "were also validated and tested against stakeholder evidence",

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84 Main Version, 'Summary sheet' at cells J36, J37 and J44, and at cell D99; QPC Final Report, Appendix C at p 421, Table C.16.

85 Further Submissions at [6]; and see [4] as to Mr Long's position with the Civil Contractors Federation Queensland.

among the examples given being submission IR-076, which is the submission of the Civil Contractors Federation Queensland, of which Mr Long is Chief Executive Officer; and the Final Report records that the QPC's project cost estimates "appear to be generally consistent with the estimates provided by stakeholders during consultation", quoting that submission.[86] The model was tested against the evidence of Mr Long's organisation, and is then offered as support for Mr Long.

50. The evidence about individual projects must therefore stand upon its own footing. It cannot. Every figure was produced for a purpose other than measuring what BPIC cost; none has been independently assessed; and the one set of figures the Commissioner has been invited to treat as established is contradicted by the documents of the department which produced it.

D1. The figures are prices, estimates and claims

51. The Commission has heard evidence as to the cost of BPIC upon a small number of projects, principally Gold Coast Light Rail Stage 3, Coomera Connector Stage 1 North and the Centenary Bridge Upgrade, from officers of DTMR and from contractors engaged upon them. The figures given were of three kinds: prices submitted by contractors during procurement, estimates prepared for the Department by consultants working from those prices, and claims advanced by contractors after the event.

52. The analysis prepared for DTMR by Fission Consultants took two projects, derived cost impacts of 26 and 12 per cent and time impacts of 17 and 10 per cent, and extrapolated them across DTMR's program. The analysis records that the case studies are "modelled using original BPIC cost premium claims presented by Contractors", and that the light rail contractor "has presented additional BPIC claims, which subject to evaluation, may increase the cost impact premium and schedule delay assessment here-in".[87] The extrapolation is applied to the whole of the Queensland Transport and Roads Investment Program: the column against which the uplift is measured is headed "QTRIP Baseline" and carries a total construction value of $13.1 billion, which the

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86 QPC Letter, Attachment A at [11]; QPC Final Report at p 111, quoting Civil Contractors Federation Queensland, sub. IR76.

87 Witness statement of Deanne Marie Hawkswood affirmed 3 July 2026 (DMH-1) (**Hawkswood Statement**), annexed "Transport BPIC Impact Analysis from Case Study Projects" and Fission Pty Ltd, Labour Rates Independent Estimate Advisor Report F2314 dated 22 May 2023 at nn 4 and 10; Day 36 at p 3363 LL 31–46 and p 3364 LL 1–20.

analysis lifts to $16.6 billion, of which $586 million is risk contingency and $379 million is contractor margin calculated upon the BPIC increase itself. Those are programme figures produced by applying one project's percentage across the program, and not measurements upon any project.[88] In a separate report upon labour rates the same consultant recorded that its approach "will not replicate the exact labour rate for Reference Projects; rather interpretive modelling based upon key assumptions".[89]

53. Ms Hawkswood, DTMR's Chief Procurement Officer, through whom that report was tendered, accepted in cross-examination that the analysis was outsourced and not undertaken by the Department; that it was "based on what they had tendered … of the before and then the after costs", being the contractors' own figures;[90] that "where BPIC was going to be an expense, the state was prepared to pay";[91] and that in consequence "the contractors had every incentive to characterise any cost overrun as being attributable to BPIC".[92] Asked whether the Department had audited those figures, she answered "I'm not 100 per cent sure, I must say".[93] She explained that the two projects were chosen because BPIC had been applied to contracts already priced, so that the Department held costings "before BPIC, and then … costings post BPIC".[94]

54. The Administrator accepts that this is a comparison of the same contractor's price for the same scope. The objection is not that no comparison was made but that both sides of it are the contractor's own unaudited figures, upon projects where the State had agreed to reimburse whatever was attributed to BPIC. Ms Hawkswood said that upon Gold Coast Light Rail the Department had put in place "some strong assurance to make sure that the costs that the state was reimbursing was actually attributable to BPIC and wasn't additional extras".[95] Upon that same project John Holland did attempt to label costs as BPIC related which the State rejected, which shows the assurance operating and which Ms Hawkswood accepted was consistent with the incentive she had

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88 Hawkswood Statement, annexed "Transport BPIC Impact Analysis from Case Study Projects", Gold Coast Light Rail column and notes.

89 Hawkswood Statement, annexed Fission Pty Ltd, Labour Rates Independent Estimate Advisor Report F2314 dated 22 May 2023, bundle p 367, n 10.

90 Day 36 at p 3383 LL 16–32.

91 Day 36 at p 3384 LL 43–44.

92 Day 36 at p 3385 LL 5–8.

93 Day 36 at p 3384 LL 24–29.

94 Day 36 at p 3364 LL 1–8.

95 Day 36 at p 3385 LL 25–27.

described.[96]

55. Ms Hawkswood also accepted that the period was one of COVID, high demand and an inflationary surge of about 20 per cent across 2022 and 2023, and that separating BPIC costs from market costs was done only "where we could".[97] It was put to her that Fission's 26 per cent for the light rail sits against Australian Bureau of Statistics construction cost growth of about 24 per cent between March 2021 and March 2023, upon a national series, so that the increase could not simply be attributed to BPIC. She did not accept the proposition; her answer was "I can see where you're going with that".[98]

56. Mr Ladbrooke, for John Holland, accepted that the company claimed more than the State allowed, that it undertook no interstate comparison, and that Gold Coast Light Rail was "an exceptional project" whose escalation cannot be extrapolated to others.[99] He did not accept that there was an incentive, saying "I don't think there was an incentive, but we did have a commercial framework that … should have provided compensation and relief in the event of any costs associated with BPIC";[100] he considered the comparison should be with the Queensland civil infrastructure market;[101] and he said that John Holland had separated escalation into claims of its own. Asked whether commensurate increases in States without BPIC would indicate that the increases he observed were not BPIC-related, he answered "If we're talking about, like, say, hyper escalation, for instance?" and, upon that footing, "Yes, I would agree with that. And I think we did - we did that extensively through our escalation claim".[102]

57. Mr Sanfilippo's $580 million for Cross River Rail is an estimate of the impact of BPIC and the CFMEU's campaign together, taken from an internal report prepared by the joint venture to support a claim against the Delivery Authority at a time when, as he

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96 Day 36 at p 3364 LL 1–8 (the basis for selecting the case studies) and p 3384 LL 16–32 (the contractors' figures and the absence of an audit);

97 Day 36 at p 3381 LL 24 – p 3382 L 10.

98 Day 36 at p 3386 LL 31–38.

99 Transcript Day 37, 16 July 2026 at p 3518 LL 41–44 (**Day 37**).

100 Day 37 at p 3517 LL 8–10.

101 Day 37 at p 3518 LL 20–24.

102 Day 37 at p 3518 LL 29–39.

accepted, "we're under distress".[103] It is not an external or expert assessment. He did not accept that the joint venture had a commercial interest in attributing the overrun to other causes, answering that "[t]here was a commercial interest in resolving the matters that caused us distress on the project".[104] Asked whether the effect of BPIC could be separated from that of the campaign, he answered "It's – it's all one on the project".[105] The larger component of that figure, $351 million, is produced by applying a 55 per cent productivity reduction averaged from four indicative examples; the balance of $229 million rests upon an assumed impact of "5 to 10 per cent" before July 2023, which he described as "basically an approximation", and of which the Commissioner observed: "There's a lot of data and reasoning that supports the 55 per cent figure. I can't see any that supports the 10 per cent."[106]

58. None of this material measures what BPIC cost a project. A price is what a contractor asked for. A consultant's estimate built upon that price is what the contractor asked for, modelled. A claim is what the contractor sought to recover from a party which had agreed to reimburse whatever was attributable to BPIC. None of these figures was assessed by anyone independent of both parties to the contract.

D2. The absence of challenge does not convert a price into a measurement

59. On the last hearing day the Commissioner observed, of the Centenary Bridge figures, "No one's challenged that, have they, so far?", that it "seems to be unchallenged evidence that close to 22 million, 21.9 million increase in costs is due to BPIC", and that "the evidence uncontradicted is that evidence". Those observations were made during Mr Ryan's examination in chief. The Administrator had applied for leave to cross-examine Mr Ryan and did not press the application, and does not challenge his credit.[107]

60. It does not follow that the figure is a measurement of what BPIC cost. The answer to it is in Mr Ryan's own statement and annexures, which were tendered with it and are

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103 Transcript Day 23, 29 April 2026 at p 2133 LL 10–13 (**Day 23**)

104 Day 23 at p 2133 LL 25–29.

105 Transcript Day 22, 28 April 2026 at p 2030 LL 21–28 and LL 42–47 (**Day 22**); see also witness statement of Vincenzo Sanfilippo at [169] and [172], and Annexure VS-22.

106 Day 22 at p 2030 LL 42–47; Day 23 at p 2144 LL 3–22; Annexure VS-22 at bundle pp 267–268.

107 Day 47 at p 4339 LL 6 and 42, and p 4341 L 41; as to the application for leave to cross-examine, p 4348 LL 38–41 and p 4349 LL 36–39.

addressed in Part D3 below; the Administrator does not dispute anything Mr Ryan said, and the submission is as to the character and effect of the documents he produced. And the character of this class of evidence is already established upon the record, by the concessions set out above, which were obtained in cross-examination and which go to every figure of this kind.

61. Where the analysis itself might have been tested, the witness was not called. When the Fission percentages were pressed with Ms Hawkswood, the Commissioner asked: "Is there a lot of utility in cross-examining this witness on this point? I mean, don't you really want to cross-examine the author of the report?" Senior Counsel for the Administrator answered that he "didn't want to leave those figures unchallenged", accepting the Commissioner's point and that he had "probably taken it as far as I can".[108] The author of the Fission report was never called. The same is true of the modelling: no officer of the QPC has given evidence, and nobody who built the model has explained or defended it.

62. The Commissioner has himself drawn the distinction upon which the Administrator relies. Of Mr Ladbrooke's forecast claim of $428 million, he observed that Senior Counsel's point "in his cross-examination so far has been, I think, legitimate, to say, 'Well, these are just claims'", and that "[y]ou really need both parties to the contract to have it assessed by someone independent". He added that he was "not saying that what the government settles for is an accurate assessment", and that the John Holland document "does look like it's the most comprehensive assessment of the impact of BPIC". The first of those observations is the Administrator's point; the second answers any reliance upon a figure at which a claim was settled; the third goes to the comparative thoroughness of the document and not to whether a claim is a measurement.[109]

63. Absence of contradiction cannot, in this Inquiry, carry the weight it would carry in adversarial litigation between parties. What is in evidence upon any topic is the product of the material gathered and the witnesses called, which in an inquiry is a matter for the Commission and for Counsel Assisting. The Commissioner's function is investigative rather than adjudicative. And freedom from the rules of evidence does not permit

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[108] Day 36 at p 3386 LL 41–47.

[109] Day 37 at p 3516 LL 4–16.

findings upon material without rational probative force: a finding must rest upon material "which tends logically to show the existence or non-existence of facts relevant to the issue to be determined".[110] The Administrator repeats paragraphs [20] to [30] of the August Submissions.

64. The $12 million to which the Commissioner referred in the same passage, from the evidence of Mr Demartini, is the cost of conduct upon the site attributed to union activity.[111] The Administrator does not dispute that figure. It is not a cost of BPIC and cannot be added to the BPIC figures to produce a total attributable to the conditions. The same distinction applies to the $580 million addressed above, which the evidence describes as the impact of the conditions and of the campaign together.

D3. The Centenary Bridge figures do not measure the cost of BPIC

65. The Centenary Bridge Upgrade is the project upon which the Commission has the most particular evidence of what BPIC was priced at. In the course of Mr Ryan's evidence a calculation was put producing "28, 29 million for BPIC" upon a contract value of $149 million: $21.9 million in Envelope 3, together with $23 million of market escalation.[112] Counsel Assisting does not advance those figures in its further submissions. The Administrator addresses them because they may otherwise be thought to supply what the modelling does not.

66. The $21.9 million is a price, not a cost. It is the figure in Envelope 3, which Mr Ryan described as "basically a blank page for the contractor to fill out. They could actually make any submission they want", and as to which "it wasn't mandatory as to the levels they would go to".[113] One of the Department's concerns at the time was that "a contractor might take financial advantage of the situation and have a very, very large bid", though Mr Ryan added in the same answer that "[i]t still had to be value for money … So that's why the financial tension remained".[114] Only the best ranked tenderer's envelope was ever opened, so the figure was never tested against a

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110 *Pochi v Minister for Immigration and Ethnic Affairs* (1979) 36 FLR 482 at 492 (Brennan J).

111 Day 47 at p 4341 L 47 to p 4342 L 1; Day 44 at p 4117 LL 30–46 and p 4118 LL 12–21; witness statement of Chris Demartini dated 17 July 2026 at [82].

112 Day 47 at p 4341 LL 38–46, and p 4349 LL 15–22.

113 Day 47 at p 4329 LL 27–36.

114 Day 47 at p 4337 L 38 to p 4338 L 5.

competing price.[115] It was then settled in an interactive process as a figure "agreed between the joint venture and DTMR". It is a schedule of rates against provisional quantities, so what it fixes is what the State may pay upon measurement, and not what BPIC cost.[116]

67. The $23 million is not a BPIC figure at all. It comes from a letter of 30 November 2022 from Fission Pty Ltd, the Department's independent cost consultant, to Mr Ryan, which assessed "the likely cost increases experienced by the tenderers between the original planned award and the latest planned award of December 2022" and concluded that the amount "that may be fairly attributed to the delay of contract award to December 2022 … is in the order of $23.0 M (excl GST)", a sum which "includes increases in supply and subcontract prices as well as changes to market capacity and availability of resources required for this project".[117] It attributes nothing to BPIC.

68. The delay to which that escalation was attributed was not BPIC's. Mr Ryan's statement identifies three reasons for the delay in awarding the contract: the assessment of the unusually low bids, from November to December 2021; the assessment of the alternative tenders, from October 2021 to March 2022; and the Envelope 3 process, from May to September 2022. Of those he says that "the assessment of Alternative Tenders, which ran concurrently with the assessment of the ULBs, took approximately six months to complete and caused the most significant delay during the tender process", and that "Envelope 3 then took approximately four months". The assessment of alternative tenders was the evaluation of departures from the conforming scope which tenderers had offered, and it had nothing to do with BPIC. Upon the witness's own account the largest single cause of the delay which produced the escalation was unconnected with the conditions.[118]

69. The Centenary Bridge figures are accordingly a tender price which was never tested against a competing price, and an escalation which the Department's independent consultant attributed to the delay in awarding the contract, the largest single cause of which was an assessment unconnected with BPIC. Neither is a measurement of what

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115 Day 47 at p 4338 LL 5–7.

116 Day 47 at p 4338 LL 15–43.

117 Statement of John (Jack) Joseph Ryan dated 17 July 2026 (JJR-1) at [64]–[66] (**Ryan Statement**); Annexure JR-1, Fission Pty Ltd letter dated 30 November 2022, bundle p 226.

118 Ryan Statement at [62]–[63], and at [32] as to the subject matter of the alternative tenders.

BPIC cost this project. No other project figure before the Commission has been tested at all.

E. NOTHING HAS BEEN WEIGHED AGAINST THE COST

70. Counsel Assisting does not describe the modelled figure as a cost. It submits that a well-designed code prohibiting unproductive work practices is "a potential panacea to the wastage and inefficiencies embedded by" BPIC.[119] Wastage is a claim about value rather than about cost: to say that money was wasted is to say that nothing was got for it. That claim requires the other side of the ledger, and nobody has examined it.

71. The QPC estimated the benefits of BPIC at between $7.4 billion and $18 billion, the largest part accruing to construction workers.[120]

72. No assessment of what BPIC delivered has been made. BPIC set apprentice and adult apprentice rates and apprentice ratios; training and related matters; hot weather, inclement weather and air quality procedures; consultation and dispute settlement procedures; and targets for the participation of First Nations people, women and mature age workers. Whether any of those conditions produced anything, in training, in retention, in safety or in the supply of skilled labour, has not been examined. Ms Hawkswood's evidence, led to show that the policy was adopted without a business case, shows equally that nobody measured what it produced: "there was no modelling to demonstrate how that would happen, and nor was there any metrics to be able to measure the benefits of this particular policy".[121]

73. The evidence which does touch the content of the conditions came from witnesses called by Counsel Assisting. Ms Schinnerl of the Australian Workers' Union gave evidence that her union "is, and always has been, supportive of best practice industry conditions as a concept", that "the concept of a best practice principle, in a policy sense, is sound", that BPIC introduced "targets around skills, Indigenous participation, the participation of women, health and safety aspects" which "were very beneficial for workers", and that "the policy framework is a very good one, absolutely"; the vice, she said, was that "it's just when it gets used, for nefarious means" that "it loses its

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119 Further Submissions at [25]; and see [7].
120 QPC Final Report, Appendix C at p 420, Table C.15.
121 Day 36 at p 3362 LL 17–29.

intention".[122] Ms Hawkswood accepted that it is legitimate for a government to pursue social objectives through procurement, including apprenticeships, the participation of women and Indigenous participation, that those are legitimate objectives for a union to pursue, that improving industrial relations upon a site is a legitimate objective, and that working in high temperatures can be dangerous and can cause death, so that heat conditions were a legitimate concern for both the union and the government.[123]

74. The use to which the conditions were put is the conduct of the union as it was then led. What the Administrator has done since his appointment, and the change in the culture of the Queensland branch which has followed, is set out in the August Submissions at paragraphs [128] to [151].

75. Safety was a principal rationale for BPIC, and the model's treatment of it shows what this exercise does to a benefit which resists pricing. The model assumes that BPIC closes three-quarters of the gap between construction's rates of death and serious injury and the all-industry average in the low scenario, and the whole of that gap in the high: that is, that BPIC removes most or all of the excess risk of working in construction.[124] It values that at $12 million and $11 million respectively, which the QPC describes as "less than 0.2 per cent of the benefits accruing to construction workers".[125]

76. Across the six years the model produces 418 fewer serious injuries.[126] The QPC recorded that "no evidence of improved safety outcomes was provided to the Commission", and its Safety worksheet opens with the words "[i]t is a unclear if BPICs will have safety impacts. Nevertheless, it is one of the stated aims".[127] A benefit is not shown to be absent because nobody was asked to demonstrate it, and the benefit the model does assume is priced by a measure which cannot produce a material number.

77. The QPC did not find that the conditions delivered nothing. It accepted that there "may be benefits from government or industry action on some of the objectives of BPICs",

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122 Transcript Day 6, 4 December 2025 at p 565 LL 5–6, p 581 LL 20–21, 28 and 32, and p 597 L 38 (**Day 6**).

123 Day 36 at pp 3372–3376.

124 QPC Final Report, Appendix C at p 407, Table C.1, and pp 411–412, Table C.5; Main Version, 'Safety' worksheet at cells A38 to D38.

125 QPC Final Report at pp 408, 411 and 420, Table C.15; de Valence Report at [99]–[102].

126 Main Version, 'Safety' worksheet at cells D30 to D35 and rows 49 to 69; QPC Final Report, Appendix C at p 412.

127 QPC Final Report, Appendix C at p 408; Main Version, 'Safety' worksheet at cell A2.

and said that those objectives were likely to be "more effectively and efficiently addressed through other levers"; that is a view as to which instrument to use, not a measurement of what the conditions produced.[128] It accepted that "not all direct and indirect impacts have been estimated", and the impacts left out include the benefits which the transport and health projects in the model deliver to the community.[129]

78. The QPC's own account of what went wrong attributes the harm to the use made of the conditions rather than to the conditions themselves. BPIC, "by requiring excessively prescriptive conditions and providing power to a small subset of workers to dictate site activity", "allowed safety issues to be used to support other industrial objectives"; it "established conditions that allowed significant declines in construction site productivity"; and its impacts "were mitigated where parties engaged constructively on achieving the BPICs provisions, with some benefits achieved from fewer industrial stoppages".[130] The model prices the condition at a single rate however it was used. When the QPC faced the same question as to health and safety representatives it declined to restrict the entitlement, because changes of that kind "require careful consideration, to ensure they do not undermine legitimate safety concerns", and recommended measures directed at the misuse.[131] Counsel Assisting's own witnesses drew a similar line. Ms Schinnerl said that it "felt like the CFMEU was bastardising a legitimate and valid government process and policy in order to elicit an outcome for them", while also saying that the policy application "artificially increased an industrial footprint for the CFMEU beyond their lawful coverage" and created opportunities for financial benefit "where they otherwise would not have done so but for the policy": her evidence is that the framework was sound and that the use made of it was the vice. Mr Jenkinson accepted that he had undertaken no analysis distinguishing lawful from unlawful industrial action, adding that it was "my observation from my time on the ground".[132]

79. What the material shows is not that these conditions were without value, but that their value was never measured, and that what went wrong was the use made of them. A cost

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128 QPC Final Report at p 114.

129 QPC Final Report, Appendix C at p 408; de Valence Report at [152].

130 QPC Final Report at pp 13, 14 (Box 2) and 113.

131 QPC Final Report at pp 15, 117 and 118–119 (Box 4.3).

132 Day 6 at p 565 LL 22–26 and p 597 LL 36–39; Day 31 at p 2924 LL 40–45 and p 2925 LL 4–10; August Submissions at [62].

which has never been set against what it purchased cannot be called wastage, and the Commissioner cannot be satisfied that it was.

F. THE CODE WOULD NOT ANSWER THE COST, AT ANY FIGURE

80. The submissions to this point are directed to the cost. Counsel Assisting's case does not depend upon the cost alone: it submits that a code which prohibits unproductive work practices "represents a potential panacea to the wastage and inefficiencies embedded by" BPIC.[133] Taking the cost at $19.9 billion and taking it as incurred, the instrument proposed would not answer it. The model says nothing about a code, and what it projects is a future which has not occurred. The instrument reaches the conduct which produced the cost only through the procurement of the government which imposed it. Where it reaches a component it does not remove the condition, and what it would recover has never been estimated. It cannot alter the agreements in which the conditions now sit. And it is not what the QPC recommended.

F1. The model contains no code, and what it projects has not happened

81. The QPC modelled how far BPIC conditions sit above award conditions upon a program of government projects. The model has no variable for a code of practice, for a regulator, or for any other procurement instrument, and makes no estimate of what such an instrument would do to wages, to time lost, to project costs or to safety. It does not say, and cannot be made to say, that a code would recover any part of the cost it projects. That is no criticism of the QPC, which was never asked to model a code.

82. What the model projects has not happened. The QPC modelled BPIC continuing from 2024–25 to 2029–30 "assuming no pause had occurred", and the State suspended BPIC on 14 November 2024, in the first of those years.[134] The projection therefore describes five and a half years in which a policy that no longer applied to new projects is assumed to have applied to all of them. The submission that the direct costs "have been as high as $19.9 billion" advances a forecast of a future which has not occurred as though it were a record of the past.[135]

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133 Further Submissions at [25].

134 QPC Final Report at p 111 and pp 107–108; Appendix C at p 404.

135 Further Submissions at [7].

F2. The instrument does not remove the conditions, and what it would recover is unknown

83. The four components into which the QPC divided its uplift are set out at paragraph [24] above.[136] The Draft Guidelines address those components in two ways. Part 4 makes certain Workplace Arrangements non-compliant, and the chapeau to paragraph 4(e) does so in general terms: "Parties shall not negotiate or implement Workplace Arrangements that restrict the efficient performance of work or contain provisions that restrict productivity improvement", the paragraphs which follow doing so "without limiting the foregoing". Part 5 requires a tenderer for a building project above $10 million, or a civil project above $20 million, to lodge a Workplace Relationship Management Plan stating, among much else, its "approach to managing inclement weather and heat, RDOs", and to demonstrate how the objectives of the Code can be met in the context of "restrictions on when work can be performed, such as mandated or fixed rostered day off schedules", of site allowances "which are not quantifiable at the time of contracting", and of pattern agreements. Paragraph 5.1(q) requires the tenderer to demonstrate "what Workplace Arrangements a contractor will institute to provide improved productivity and/or cost outcomes as against a BPIC Arrangement that a contractor was or is subject to", "BPIC Arrangement" being a defined term; and Counsel Assisting says that requirement was introduced in response to the concerns the QPC identified "as to the enduring consequences of BPIC Arrangements".[137]

84. The Administrator does not submit that the components lie outside the language of the instrument. Taken together those provisions are wide enough to touch each of them.[138] The question is what the instrument does when it touches them.

85. Part 4 operates by making an arrangement non-compliant. Part 5 operates by requiring a tenderer to satisfy the Building Construction Compliance Branch that it has an approach.[139] Neither removes a condition from an agreement, and neither produces a saving by its own force. Whether a contractor which has stated its approach to managing rostered days off in fact works more days, and at what cost to it, is not addressed by the instrument. Paragraph 5.1(q) is the clearest instance: it requires

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136 QPC Final Report, Appendix C at p 420, Table C.14; August Submissions at [10] and [196].

137 Draft Guidelines, Part 4(e), Part 5.1 and Part 11, definition (b); Further Submissions at [68(i)].

138 Draft Guidelines, Part 4(a), (b), (c), (d) and (k), and fn 1.

139 Draft Guidelines, Parts 4 and 5.1, and Part 10.1 as to assessment of the plan by the Branch.

improvement to be demonstrated at tender against a BPIC Arrangement. It is a requirement to make a case. What it would recover of $19.9 billion, or of any figure, is nowhere stated.

86. The components bear that out. Wages are 11.6 of the 24.6 percentage points in the high scenario. Paragraph 4(d) prohibits the imposition upon a contractor of project-specific wages and conditions, which is the means by which BPIC rates were applied; it does not prohibit a contractor agreeing rates with its own employees, and the model does not separate the premium produced by the imposition from the premium produced by the labour market, the QPC itself recording that "BPICs have influenced industry wage rates outside of government projects". Weather related stoppages are 3.3 points, and are met only by the requirement that a tenderer state its approach to managing inclement weather and heat. Other stoppages are 9.3 points, of which the 24 days of union meetings are reached by the prohibition in paragraph 4(h), and the 6.5 days of inflexibility by paragraph 4(e)(vi), which prevents an arrangement stopping an employer substituting a rostered day off but does not limit their number; the additional 13 days, the 4.8 days of a five day week and the 6.6 days of rallies and protests are met only by the general prohibition and by a plan.[140]

87. The reach of the instrument is therefore a question of construction, and its effect is a question of evidence. There is no evidence. No witness was asked what any clause of the Draft Guidelines would save. No costing of the instrument, clause by clause or at all, is before the Commission. That a form of words is wide enough to catch a condition does not establish that the condition will go, or that anything will be recovered if it does; and it is the recovery, and not the catching, which is said to justify the recommendation.

F3. The code cannot alter the agreements in which the conditions now sit

88. The conditions are now terms of enterprise agreements approved by the Fair Work Commission, and the QPC records that most of them operate until mid-2027.[141] A procurement instrument cannot vary a term of an approved agreement, and the Draft

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[140] Main Version, 'Project delays - other' worksheet at cells E9, E11, E13, E21, E25, E33, E44, E47 and E54; QPC Final Report, Appendix C at pp 409–410; Draft Guidelines, Part 4(d), 4(e)(vi) and 4(h), and Part 5.1(e); August Submissions at [10].

[141] QPC Final Report, Appendix C at p 403, Box C.1.

Guidelines do not purport to. Their operation is upon the tenderer. A party which is to be subject to an industrial instrument approved by the Fair Work Commission must disclose to the client agency "any areas wherein the instrument does not conform with the requirements of these Guidelines"; and a breach may attract sanctions ranging from a formal warning, through partial exclusion from tendering for a specified period, to full exclusion for an unspecified period, the sanction depending upon "the nature and seriousness of the breach".[142] For the life of the existing agreements the instrument therefore does not remove a condition. It puts a contractor to a choice between the agreement to which it is party and eligibility for government funded work, and leaves what follows to the client agency and the Branch.

89. Further, in circumstances where the *Fair Work Act (2009) Cth* now provides in s 270A that if bargaining becomes intractable and is subject to an intractable bargaining determination, arbitrated terms cannot be less favourable to employees or employee organisations than the terms in any pre-existing enterprise agreement, there is no basis for assuming that employees or the unions who represent them, would agree to an enterprise agreement that reduces those terms and conditions.

90. Indeed, were an employer to insist that the terms in existing enterprise agreements be modified in a way that is less favourable to employees or their union, it would be open to that union to bring such application in the knowledge that the Fair Work Commission, in making any intractable bargaining determination, would be required to ensure that, on a term by term assessment, the determination is not less favourable than any existing enterprise agreement.

F4. The QPC did not recommend this instrument

91. Counsel Assisting relies upon the QPC as having recommended the re-introduction of a code.[143] The QPC did recommend a code: that the Building and Construction Code of Practice 2000 be revised, or a new code developed, focused upon the principles and practices which will improve productivity, and including requirements that contractors "preclude any unnecessary productivity limiting clauses in their EBAs", that they not include provisions passing conditions through to subcontractors, and that right of entry

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142 Draft Guidelines, Part 10 and Part 10.1; August Submissions at [10] and [245(f)].

143 Further Submissions at [12(b)] and [27(c)].

provisions prevent the misuse of workplace health and safety procedures. In two respects what is sought departs from it. Upon enforcement the QPC preferred "low-cost options, such as use of 'negative licensing' where there is material evidence of non-compliance, rather than requiring all firms to demonstrate compliance through procurement, tendering or prequalification processes"; the management plan regime in Part 5 is a requirement of the second kind, imposed upon every tenderer above the threshold. And the QPC said that "[s]o as not to dilute its focus on productivity, the government should avoid including other objectives in the revised code"; the Draft Guidelines contain provisions upon freedom of association, right of entry and union coverage. As to a regulator, the QPC recommended none: Recommendation 9 is for a review of regulator powers with a view to establishing one "if required in the future", and is expressly subject to the findings and recommendations of this Commission.[144]

G. THESE MATTERS ARE BEING ADDRESSED AT THE FEDERAL LEVEL

92. The August Submissions recorded that the matters proposed for the code were already before the National Construction Industry Forum, and that the Commonwealth had announced a consultation upon standards for the construction industry.[145] That consultation has begun. On 21 August 2026 the Commonwealth published a discussion paper, Potential Commonwealth standards for the construction industry, with submissions closing on 16 October 2026 and a second stage "expected to test the design and implementation of any proposed model". It invites the States "to actively participate in the design of any construction standards".[146]

93. The questions the Commonwealth asks are the questions the proposed code would answer: fit and proper requirements, bribery and inducements, "industrial fixers", whether enterprise agreements are genuinely agreed and free from coercion, the resolution of disputes, the choice of subcontractors, their payment on time and in full, the inappropriate use of labour hire, and support for the engagement of apprentices. The last two are matters the Draft Guidelines would foreclose: paragraph 4(e)(i) prohibits a Workplace Arrangement prescribing or limiting the number of employees a company

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144 QPC Final Report at p 46 (Recommendations 6 and 7), p 47 (Recommendation 9) and pp 119–120; August Submissions at [67]–[69].

145 August Submissions at [239]–[242].

146 Department of Employment and Workplace Relations, *Potential Commonwealth standards for the construction industry: Discussion Paper* (21 August 2026) at pp 4 and 6 (**Discussion Paper**).

may engage, and paragraph 4(e)(iv) prohibits a provision restricting an employer's labour requirements, including casual labour and labour hire. Counsel Assisting puts the same construction upon them.[147] Upon enforcement the Commonwealth asks "how the construction standards could be enforced by existing regulators through a joined-up approach".[148] The paper describes the industry's difficulties as "influenced by a wide range of factors", which "include workplace arrangements and industrial practices, as well as project design, procurement approaches, contractual risk allocation, commercial decision-making, contracting models and supply chain behaviour", and records that allegations of criminality, serious misconduct, intimidation and violence "are not confined to the CFMEU, and extend to employers, contractors and other players in the industry". The draft Joint Construction Industry Charter released with it is "intended to apply consistently across industry, unions and government"; that reciprocity was one of only two points of common ground between the supporters of a code and the union stakeholders in the Commission's own consultation, and the Draft Guidelines do not provide it.[149]

94. A State code settled now would precede the close of the Commonwealth's consultation upon the same questions, and would settle for Queensland matters upon which the Commonwealth has invited Queensland's participation and upon which it says it is "not proposing a predetermined scope or model". The Draft Guidelines provide for one kind of inconsistency only: Part 2.6 renders of no effect any provision which would require conduct contravening the Fair Work Act 2009 (Cth). That meets unlawfulness. It does nothing about a contractor upon a project touched by both governments being held to two sets of procurement standards which do not agree.[150]

95. The answer to be expected is that a code must be settled now because most construction agreements fall for renegotiation in 2027, and that to wait is to miss the round. That reasoning is the QPC's, and it tells against the adoption of the Draft Guidelines rather than for them. The QPC recommended that the code be directed to productivity, that consideration be given to providing it as guidance while existing agreements remain in

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147 Discussion Paper at pp 19–20; Draft Guidelines, Part 4(e)(i) and (iv); Further Submissions at [41] and [42].

148 Discussion Paper at p 22; August Submissions at Part I.

149 Discussion Paper at pp 7 and 17; National Construction Industry Forum, Joint Construction Industry Charter (draft) at p 4; August Submissions at [225(a)].

150 Draft Guidelines, Part 2.6; Discussion Paper at p 6.

place, and that enforcement be introduced in early 2027 when agreements are renegotiated and "the outcomes of the Commission of Inquiry into the CFMEU and Misconduct in the Construction Industry are known". It did not recommend that a drafted instrument be adopted now. The first stage of the Commonwealth's consultation closes on 16 October 2026 and a second is expected. Queensland may take part in that design and still have an instrument before the 2027 round. What it cannot do is settle the detail now, upon questions the Commonwealth has opened, and discover afterwards that the national standard has taken a different course.[151]

H. IF A CODE IS TO BE RECOMMENDED

96. If, contrary to the Administrator's primary submission, the Commissioner is minded to recommend a code, the recommendation should be directed to the process by which a durable code is to be developed, and not to the adoption of the Draft Guidelines. That course was advanced at Part J of the August Submissions and is not repeated.[152] The second of the six criteria identified there was that a code be directed to productivity and to demonstrable value to taxpayers rather than to the conduct of a single organisation. The modelled cost is the only quantification of that value before the Commission; for the reasons in Part C it will not bear the weight placed upon it; and what the Draft Guidelines would recover of it has never been estimated.[153] If an enforcement mechanism is to be recommended at all, it should be directed to the question the Commonwealth has posed, of enforcement by existing regulators, and not to the establishment of a new State body armed with coercive powers.[154]

I. CONCLUSION

97. Counsel Assisting advances the QPC's estimate that the direct costs of BPIC have been as high as $19.9 billion, and asks the Commissioner to recommend a code and a regulator as the answer to it. The QPC did not measure that cost, and has told the Commission that it made no explicit estimate of the agreements these projects would otherwise have had. What it produced was a projection of a policy the State had suspended, measured against conditions these projects were never going to work under,

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151 QPC Final Report at p 46 (Recommendation 6) and pp 119–120; Further Submissions at [77]; Discussion Paper at pp 4 and 6.

152 August Submissions at [224]–[227]; the six criteria are at [225(a)–(f)].

153 August Submissions at [225(b)].

154 August Submissions at Part I.

filled with assumptions as to lost time which industry participants supplied and which the high scenario sets at their least favourable, and expressed so that three-fifths of the sum said to fall upon taxpayers is a transfer within the community and the tax charged upon making it. The evidence about individual projects supplies nothing further: it is tender prices, consultants' estimates built upon those prices, and contractors' claims, none of them assessed by anyone independent of both parties to the contract. No one has valued what BPIC required by way of apprentices, training and participation, so nothing has been weighed against any of it.

98. At whatever figure the cost is taken, the instrument proposed does not answer it. The model contains no code. What the model projects has not happened. Where the Draft Guidelines reach a component they do not remove the condition; they require a tenderer to explain itself, and permit its exclusion. Not one clause has been costed, so what the instrument would recover is unknown. An opportunity of unidentified content is not a sufficient foundation for the recommendation sought, and for the reasons given above and at paragraph [253] of the August Submissions, neither the code nor the independent regulator proposed by Counsel Assisting should be recommended.

Chris O'Grady KC

Amelia Hughes

Felicity Fox

Ben Bromberg

Counsel for the Administrator

Dated: 21 September 2026

21 September 2026

Mr Stuart Wood AM KC
Commissioner
Commission of Inquiry into the CFMEU and
Misconduct in the Construction Industry

Dear Commissioner,

Report On The Queensland Productivity Commission Cost-Benefit Modelling

Please find attached my report on the Queensland Productivity Commission's cost-benefit model.

The report was prepared in response to a Letter of Instruction from Gordon Legal, acting for the Administrator of the CFMEU.

The report addresses the modelling methodology and assumptions, which were presented in detail in the QPC Report's Appendix C.

Yours sincerely,

[redacted]

Gerard de Valence
Construction Economics research

REPORT ON THE QUEENSLAND PRODUCTIVITY COMMISSION COST-BENEFIT MODELLING

Gerard de Valence

Construction Economics research

THIS REPORT REFERS TO MATERIAL THAT IS THE SUBJECT OF A NON-PUBLICATION ORDER MADE ON 21 AUGUST 2026 AND VARIED ON 26 AUGUST 2026

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Agreement

1. I have read, and agree to be bound by schedule 1C, 'Code of conduct for experts' of the *Uniform Civil Procedure Rules 1999* (Qld). The factual matters stated in the report are, as far as I know, true, and I have made all inquiries that I consider appropriate. I genuinely hold the opinions stated in the report, and the report contains reference to all matters I consider significant. I understand my duty to the Commission and I have complied with that duty.

Qualifications

2. I have an Honours degree in Economics from the University of Sydney, my honours thesis was on defence industry policy. I taught construction economics for 28 years at the University of Technology Sydney, the University of New South Wales, and University College London, made contributions to construction industry inquiries and reports, and provided reports and advice to government agencies and industry associations. A copy of my curriculum vitae is annexed to this report as **Annexure A**.

Instructions and Materials Provided

3. This report was produced in response to a Letter of Instruction provided by Gordon Legal, which is annexed to this report as **Annexure B**.[1]

4. The material provided by Gordon Legal to me for the purposes of this report are set out in the Letter of Instruction. In addition, Gordon Legal provided me with a paper prepared by Professor David Peetz of Griffith University, dated 20 September 2026, 'Median weekly pay rates of employees paid under collective agreements and awards, construction industry, Australia', together with the underlying ABS TableBuilder extracts. The paper from Professor Peetz is annexed to this report as **Annexure C**.[2]

5. The purpose of this report is to assess and evaluate the cost benefit model in the

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1 The attachments to the Letter of Instruction are not annexed.

2 The underlying ABS TableBuilder extracts are not annexed to this report. They have been provided to the Commission as separate files.

Queensland Productivity Commission (QPC) report *Opportunities to Improve Productivity of the Construction Industry* (*Final Report*).

6. The first part of this report is on cost-benefit analysis (CBA) and starts with the objectives and applications of a CBA, then has an assessment of the strengths and weaknesses of CBAs in general, followed by a review of the limitations on their use. Part two is on the QPC's cost benefit model, and the estimates and forecasts it contains. The third part is an analysis of the data on the projects included and their expenditures.

7. Part four considers the assumptions and variables included in the model, and how those variables contribute to the costs and benefits in the model. Part five is on the operation of the model and the controls for the model's scenarios and productivity impacts and discusses the model's costs and benefits. In part six the QPC's productivity estimates are discussed. The conclusion is part seven, where the caveats about the model the QPC identified are discussed.

Summary of Conclusions

8. The most important component of the modelled impact of the Queensland Best Practice Industry Conditions (BPICs) is the difference between industry wages and conditions and those under BPICs. The issue is construction wages actually paid are not the same as minimum award wages, which are lower. Comparing the wage rates under construction enterprise agreements to award rates is misleading. A better comparison would have been the wages and conditions pre- and post-BPIC in Tier 1 enterprise agreements.

9. The *Final Report* compares award wage rates to BPICs wage rates for selected occupations. Because there is no comparison with wages under CFMEU enterprise agreements, the QPC has not shown BPIC wages and conditions were not already present in CFMEU pattern agreements and does not establish their counterfactual that BPICs imposed additional costs. A different counterfactual based on enterprise agreements rather than award rates would have affected the outcome of the CBA estimates of BPIC costs.

10. The ABS multifactor productivity labour share of construction is 20 per cent, but the 23 per cent share from the Victoria University Regional Model (VURM) is used by the QPC. A reduction in the labour share of project costs to 20 per cent would decrease the wage impact. In the high scenario the impact on costs is reduced from 12 per cent to 10 per cent, and in the low scenario the impact on costs is reduced from 7 per cent to 6 per cent.

11. The Summary of key assumptions in Table C.1 on page 407 of the *Final Report* does not include the productivity loss from three Project delays – other, weather, and reduced flexibility, neither do the Key assumptions on pages 405-406. In the high scenario this is 29 per cent, and in the low scenario 8 per cent, and is used to calculate the additional workforce required by BPICs in Workforce estimates. This is an important determinant of the outcomes of the model.

12. The deadweight loss from taxation is the cost of funding any project cost increases. The issue is the appropriate rate to be used, which would be less than the 30 per cent the QPC used for tax financed expenditure, for example the marginal excess burden of the GST is 24 per cent, and would be only 5 per cent for debt financing. The effect of adopting a rate between 15 and 20 per cent on the model's total costs is significant.

13. The effects on the model of the two scenarios included are mainly from the difference between them in project costs and delays. The high scenario has the largest cost effects of BPICs but raises serious questions about some of the assumptions used for project delays and productivity, such as whether there was any increase in the number of rostered days off (RDOs) under BPICs and the forecast number of productive days lost to weather, because those delays cause a large increase in project costs and have a flow-on effect on the number of extra workers and indirect costs.

14. If the increases in project costs and delays are reduced with revisions to the assumptions used for project delays and productivity, the modelled housing impacts and impacts on business investment and infrastructure users are also reduced.

15. The model control to “turn off productivity reducing components” can be set to “Yes” or “No” for the two scenarios. The differences in the outcomes for the two scenarios and two settings is significant. In the low scenario without BPICs the Net impact is only -$1.006 billion, compared to the -$20.558 billion in the high scenario with productivity impacts turned on.

16. Both construction productivity and the volume of work done in Queensland declined from 2014, at the peak of the mining boom, but construction productivity in 2023 was the same as in 2019. The decline in construction productivity was not caused by BPIC because it largely occurred before their introduction, and during the period when they were required between 2021 and 2023 the level of productivity was stable.

17. The *Final Report* claimed “the key results hold under a wide range of plausible assumptions” and that this was so “under all assumptions tested” (page 113), but later included the caveats the model is “not intended to provide a precise estimate of actual outcomes” (page 404) and “The results presented in this paper are intended to be illustrative — while all attempts have been made to ensure accuracy, there is significant uncertainty around many of the parameters used in the modelling.” (page 407).

PART 1 – COST-BENEFIT ANALYSIS

What is Cost-Benefit Analysis?

18. CBA is a technique used by governments to evaluate a project or policy before deciding to proceed or to evaluate a completed project or current policy. The difference between a CBA and private sector project evaluation and feasibility studies is that a CBA includes externalities (i.e. effects on third parties not directly involved) and non-monetary costs and benefits.

19. A CBA provides estimates of the total benefits and costs of a project or policy by taking into account both positive and negative effects, and can include indirect costs and benefits, intangible effects such as motivation, and opportunity costs, based on the loss of choice after a decision is made.

20. A CBA involves the identification, measurement, and assessment of the costs and benefits of a project or policy. A monetary value is given to each cost and benefit, which requires assumptions to be made about both what their value is and the probability of their happening.

21. Because costs and benefits are spread out over time and their value depends on when they are received, discounting is required in a CBA. The discount rate converts future values into present values. The higher the rate the lower the net present value (NPV).

22. The timing of costs and benefits in a CBA is taken into account by discounting them to find their NPV. If the net benefits are greater than net costs, or the ratio of net benefits to net costs is more than 1.0, the project or policy is worthwhile.

23. Although these basic features of a CBA are universally accepted, there are many definitions of a CBA. These differ in the emphasis they place on certain characteristics. Examples of differing definitions of a CBA are:

    (a) Considers the financial, economic, environmental and social impacts of a program from a societal perspective and considers what would have happened in the absence of the program. Requires monetisation of costs and

benefits (where possible) to enable like-for-like comparisons. Calculated in terms of benefit-cost ratio or net benefits (e.g. net present value) (Queensland Treasury, 2026, page 3).

(b) CBA is an economic evaluation method that involves estimating the key benefits and costs from a program or policy … A distinctive feature of CBA is the conversion of all benefits and costs into a dollar value. Even things that are not usually thought about in financial terms are converted to a dollar value. For example, social, environmental and cultural benefits and costs (Australian Centre for Evaluation, 2025, page 2).

(c) A process of identifying, measuring and comparing the benefits and costs of an investment project or program. A program is a series of projects undertaken over a period of time with a particular objective in view. A project is a proposed course of action that involves reallocating productive resources from their current use in order to undertake the project (Campbell and Brown, 2023, page 1).

(d) A CBA involves a systematic evaluation of the impacts of a proposal, accounting for all the effects on the community and economy, not just the immediate or direct effects, financial effects or effects on one group. It emphasises, to the extent possible, valuing the gains and losses from a proposal in monetary terms (Office of Impact Analysis, 2023, page1).

(e) Involves a systematic evaluation of the impacts of a proposal, accounting for all the effects on the community and economy, not just the immediate or direct effects, financial effects or effects on one group. It emphasises, to the extent possible, valuing the gains and losses from a proposal in monetary terms (Snell, 1997, page xiii).

24. These definitions are prospective (*ex-ante*), in that they are for proposed projects or policies. However, CBA can also be retrospective, and used to evaluate actual costs and realized benefits of a completed or ongoing project or policy (*ex-post*). The QPC's CBA on the costs and benefits of the BPICs for the construction industry is a hybrid. It has a retrospective element, in that it was done after BPICs were

introduced, but also has forecasts to 2029-30. The Australian Centre for Evaluation (in the Treasury) has responsibility for post-implementation reviews of the cost-effectiveness and cost-efficiency of Commonwealth Government policies already operating.

25. From the above, the basic principals in a CBA are:

    (a) It is a tool used to evaluate how worthwhile a policy or project may be;

    (b) It uses dollar values as a common unit of measurement;

    (c) Valuation methods are required to convert non-financial costs and benefits to monetary values;

    (d) Discounting is required to convert future values into present values;

    (e) Discounting in a CBA allows comparison of net benefits and net costs.

What Does a Cost-Benefit Analysis Establish?

26. A CBA provides decision makers with relevant information about a project or policy, by identifying and quantifying the costs and benefits. In giving estimates of expected costs and benefits, describing how those costs and benefits were estimated, and by using dollars as a common unit of measurement, a CBA allows comparison of alternatives.

27. The most important outcome of a CBA answers the question of whether the benefits of the project exceed the costs, with the NPV of benefits more than the NPV of costs. Discounting costs and benefits to get their NPV allows for the fact they occur in different periods, a CBA therefore includes the time profiles of costs and benefits, their NPVs, and the discount rate used.

28. In a CBA some assumptions often have to be made, typically when assigning monetary values to externalities like pollution, noise, leisure and other quality of life issues, and those assumptions should be transparent. A list of assumptions should be included. Similarly, any major uncertainties and how they were taken into account in the CBA should be described.

29. A sensitivity analysis estimates the effect on costs and benefits if alternative assumptions are made, an example is the timing of cost increases. If two variables are related, such as a delay in commencement of a project or policy and a subsequent cost increase, a sensitivity test can be done on that as a common cause.

30. As well as a 7 per cent discount rate, net present values can also be calculated with alternative discount rates, such as 3 per cent and 10 per cent. If NPV changes from a net benefit to a net cost, or a net cost to a net benefit, the importance of the discount rate used is revealed.

31. A CBA asks whether a project or policy delivers a net gain in dollar value to society as a whole, but can also reveal how widely costs and benefits are spread, and which group or groups of individuals benefit, and which bear the costs. The distribution of costs and benefits is an equity issue and, although there will be winners and losers from any project or policy, decision makers have to decide whether distribution or equity issues should be addressed.

32. In a prospective analysis the project or policy occurs in the future. In retrospective analysis, actual outcomes in the world with the project or policy can be observed. The expected values, uncertainty and probabilities in a prospective analysis are reduced or eliminated.

33. A CBA answers questions about the economic value of a project or policy, whether it provides value for money, and whether scarce resources and funding are being used efficiently or effectively.

What are the Limits of Cost-Benefit Modelling?

34. A CBA relies on the quality of data used. Any poor quality or missing data affects the estimates and conclusions.

35. A CBA should compare the world without the project or policy to the world with the project or policy. However, this requires separating the effects of the project or policy from other factors or changes that might have affected the estimates of costs and benefits over the period in the model, to the extent that it is possible.

36. Estimating future costs and benefits by forecasting values is inherently inexact and adds uncertainty. Future costs and benefits cannot be observed, and the actual path of future wages and prices is unknown.

37. A CBA can include costs and benefits which are not already quantified in monetary terms. However, valuing such externalities and intangible benefits is difficult and involves value judgements. Valuation methods are required if costs and benefits are different, for example construction costs of a bridge and any reduction in journey time for users.

38. The Office of Impact Analysis *Guidance Note* (2023, pages 15-16) suggests a CBA "should make explicit allowance for costs and benefits that cannot be valued" and "should at least describe such intangibles in a qualitative manner and evaluate the strengths and limitations of the relevant arguments for taking those impacts into account".

39. Costs and benefits will interact and vary with changes in economic conditions. Any change in relative prices will affect estimates of net costs net benefits, and net costs and net benefits may not be the same for every year to the end of the period the CBA covers.

40. Cost benefit modelling can be affected by cognitive limits, biased assumptions, doubts about neutrality and empirical robustness, and equity and distribution issues. A model can be used to make assumptions transparent, force quantification of intangible benefits, and provide alternatives. It is not a substitute for knowledge and information.

Other Relevant Matters

41. There are other issues concerning the nature, use and limits of cost-benefit analysis that might be relevant to the Commission.

42. Because CBA values costs and benefits in monetary terms, it can be biased in favour of projects and policies with costs and benefits that are easy to value.

43. Theoretically, all significant effects should be included in the analysis, any cost and all benefits to society should be counted, even if no one pays for them. In practice, this is not possible.

44. Any valuation method or price adjustment process used for externalities or indirect benefits involves some subjective judgement about importance, probability, and effects. There is no exact 'right' answer, and different analysts or economists will use different prices.

45. A CBA is most useful when a decision-maker understands it and accepts its conclusions, taking the assumptions and limitations into account.

PART 2 – THE QPC MODEL

Purpose of the QPC Model

46. The purpose of the model was to assess the economic impacts of BPICs on government construction projects, and describe the main mechanisms through which BPICs imposed costs and delivered benefits. The *Final Report's* chapter 4 on BPICs outlined the cost-benefit model and explained:

> "To understand the potential impacts of BPICs on the broader community, the Commission conducted a stylised analysis of the likely costs and benefits of BPICs on the broader community over the period 2024-25 to 2029-30 (assuming no pause had occurred).
>
> The analysis is based on an independent assessment of BPICs and the best available evidence available at the time the modelling was undertaken. The analysis includes a cost benefit analysis to consider the direct impacts on project costs, benefits for construction workers as well as impacts on the broader community" (*Final Report*, page 111).

47. A footnote on that page says the "elevated project cost estimates were benchmarked against internal to government project cost estimates, following the introduction of BPICs". Those benchmarks are not provided.

48. In *Appendix C*, the QPC said "CBA is the most appropriate approach for analysing the impacts" for four reasons:

    (a) allows consideration of impacts on all stakeholders;

    (b) provides a well-accepted framework for showing how costs and benefits accrue to stakeholders;

    (c) makes key assumptions transparent; and

    (d) allows for consideration of public benefit. (*Final Report,* page 404)

49. The QPC then says their "analysis has been conducted to provide an indication of the potential impacts of BPICs over the period 2024-25 to 2029-30 … it is not intended to provide a precise estimate of actual outcomes, but rather to illustrate how BPICs may impact the community if it applies in the future" (*Final Report*, page 404).

What Does the QPC Model Measure?

50. The QPC's cost-benefit model estimated the net costs and net benefits of BPICs between 2024-25 and 2029-30 for two scenarios, a low impact scenario where BPICs are applied more flexibly and a high impact scenario where they are applied less flexibly, concluding "the net cost of the policy over the period from 2024–25 to 2029–30 is expected to be between $5.7 billion and $20.6 billion (in NPV terms)" (*Final Report*, page 422).

51. The QPC's CBA had four impacts:

    (a) the benefits of the policy to construction workers from enhanced wages and conditions, and improved safety outcomes;

    (b) community costs and benefits from costs of higher construction costs, as well as costs and benefits from any changes in productivity and project timeframes;

    (c) impacts on residential construction, and how this is likely to impact renters and first home buyers; and

    (d) impacts on other construction, and how this is likely to affect business investment (*Final Report*, page 404).

The Counterfactual Baseline

52. The first assumption listed in the *Final Report's* Appendix C is that "All impacts are measured against a counterfactual, which is a world without BPICs" (page 405). This is a crucial component of a CBA, and requires estimating the no-policy baseline, or what would have occurred in the absence of BPICs. Importantly, this

no-policy world is not the same as a continuation of the before-policy world, because economic and industry conditions will have changed over the period in the CBA with or without BPICs, and the effects of BPICs should be separated from other factors.

53. The Appendix then goes on to explain how the counterfactual is constructed:

> "There are significant uncertainties associated with estimating this counterfactual (see below), as the market has already been influenced by BPICs. For example, current EBAs for Tier 1 construction firms reflect the same conditions as BPICs. However, current awards and regulations specify standard industry conditions, such as weather-related operating conditions, which are assumed to operate in the counterfactual (world without BPICs). The impacts from BPICs then, are the difference between the industry standards and the conditions in BPICs. That is, the analysis only considers the additional conditions imposed by BPICs" (*Final Report*, page 405).

54. In Appendix C1, the *Final Report* compares award wage rates to BPICs wage rates for selected occupations. Because there is no comparison with wages under CFMEU enterprise agreements, the QPC has not shown BPIC wages and conditions were not already present in CFMEU pattern agreements and does not establish their counterfactual that BPICs imposed additional costs. The *Final Report* says "the extent to which BPICs creates pressure on other building sites to adopt 'BPICs-like' conditions is unclear" (page 406).

55. The uncertainties referred to in the explanation above are the impacts of BPICs on government sites. There were five noted by the QPC:

    (a) BPICs terms or conditions may vary from site to site;

    (b) there is ambiguity in the extent that BPICs vary from award or industry standard conditions;

    (c) how negotiable terms are applied to sites where they are not mandatory;

    (d) the extent BPICs created pressure on other building sites to lift wages and

offer more worker-favourable conditions is unclear; and

(e) there have been substantial increases in construction costs that are unrelated to BPICs (Final Report, page 406).

56. The issue with this counterfactual is the difference between award wages and conditions and those in an enterprise agreement. The award is an industry standard, and applies to the whole of construction, but actual wages paid are typically higher. The Fair Work Commission explains this as "Awards tell employees the terms and conditions of their employment. Most awards cover a whole industry or occupation", and:

> "Enterprise agreements are often similar to awards, but they cover a specific business or businesses. They may also have some terms and conditions that are different from the award.
>
> If an agreement applies to an employee, the modern award does not apply even if it covers them"[3].

57. Table 1 compares award and agreement rates in construction between 2018 and 2025.

Table 1. Weighted median of weekly ordinary time cash earnings of employees paid by awards or collective agreements, ($), Construction, Australia, 2018-2025

Year	ANZSIC 2 digit (Sub-division)	Award only	Collective agreement	Weighted average, award and collective agreements	Margin: collective agreement over award
2025	30 Building construction	1053.70	1873.40	1291.00	78%
	31 Heavy and civil engineering construction	888.20	1925.00	1806.50	117%
	32 Construction services	1000.60	2178.70	1418.70	118%
	Total construction	**998.50**	**2033.10**	**1512.80**	**104%**

[3] https://www.fwc.gov.au/work-conditions/awards/difference-between-awards-and-agreements Fair Work Commission, 'The difference between awards and agreements', https://www.fwc.gov.au/work-conditions/awards/difference-between-awards-and-agreements, accessed 21 September 2026.

2023	30 Building construction	818.10	1473.90	925.90	80%
	31 Heavy and civil engineering construction	NA	1879.90	1801.50	NA
	32 Construction services	926.10	2126.80	1330.00	130%
	Total construction	**917.40**	**1985.80**	**1361.70**	**116%**
2021	30 Building construction	911.90	1472.80	974.20	62%
	31 Heavy and civil engineering construction	NA	1776.90	1779.60	NA
	32 Construction services	895.30	1675.00	1207.70	87%
	Total construction	**893.10**	**1669.00**	**1200.70**	**87%**
2018	30 Building construction	795.00	1447.00	1125.80	82%
	31 Heavy and civil engineering construction	873.60	1528.50	1358.60	75%
	32 Construction services	681.60	1821.60	1100.80	167%
	Total construction	**743.00**	**1551.00**	**1183.60**	**109%**
Average	30 Building construction	894.68	1566.78	1079.23	75%
	31 Heavy and civil engineering construction(a)	880.90	1726.75	1582.55	96%
	32 Construction services	875.90	1950.53	1264.30	123%
	Total construction	**888.00**	**1809.73**	**1314.70**	**104%**

Source: Peetz (2026). ABS Employee Earnings and Hours, TableBuilder

https://tablebuilder.abs.gov.au/webapi/jsf/tableView/tableView.xhtml

NA Not available. (a) simple average of 2018 and 2025 only, due to the absence of award data for 2021 and 2023. For other industries the simple averages are of the four years shown in the table.

58. As Table 1 shows, in the construction industry, enterprise agreements negotiated with the CFMEU have higher hourly wage rates than the industry award rates. The difference varies between industry sub-divisions and over time, but is often more than 100 per cent. Median weekly earnings in construction for workers under collective agreements were approximately double those for workers on the award rate. The estimated margin varies between 87 per cent and 116 per cent. In heavy and civil engineering construction, the average margin across the two years for which data are available is 96 per cent. Award rates in construction are not relevant to workers on collective agreements. This analysis is from Peetz (2026), and is

sourced from the ABS Employee Earnings and Hours survey for rates of pay, although the survey does not identify different enterprise agreements

59. For BPIC projects, the enterprise agreements with Tier 1 contractors were different from, and had higher wages than, those in the industry as a whole. As discussed above, a better comparison for the counterfactual would be the wages and conditions pre- and post-BPIC in Tier 1 enterprise agreements.

60. Using a different counterfactual based on enterprise agreements rather than award rates would have affected the outcome of the CBA estimates of BPIC costs, depending on the size of the difference between them.

61. The model forecasts the impacts of BPIC over the period 2024-25 to 2029-30, on the assumption that "no pause had occurred" (*Final Report,* page 111). The assumption is that future projects would be done under the enterprise agreements signed during the period when BPICs were operational, and that any future new agreements would be the same or similar to the BPIC era enterprise agreements. That is an "unknown unknown" because any future new agreements would be negotiated after both the appointment of the administrator to the CFMEU and the election of a new government in Queensland. Note, because BPICs were suspended on 14 November 2024, this forecast is a hypothetical estimate of future costs, with all the uncertainties that entails.

PART 3 – BPIC PROJECT EXPENDITURES

Composition of the Project Expenditure Total

62. The cost-benefit model has $77.493 billion of Queensland Government projects assumed to be in scope, taken from the December 2024 Deloitte Australia Economics *Investment Monitor*. Appendix C of the *Final Report* (page 408) has the methodology explaining how projects were brought into scope. Most of the projects are for the Department of Transport and Main Roads (TMR), many of the others are for Health.

63. Table 2 shows the breakdown of the projects included the model as BPIC project expenditures. Of the 73 projects, 18 were under construction and 9 committed when the modelling was done, totalling nearly $23 billion. Projects valued at $53 billion were under consideration but not committed, and another $15.6 billion were possible.

Table 2. BPIC projects' status

Status	Number of projects	Value $ billion	Major clients and number of projects
Under construction	18	15.142	TMR 9, Health 6
Committed	9	7.773*	Education 4, TMR 2, Health 2
Under consideration	36	53.093	TMR 19, Health 6
Possible	10	15.623+	TMR 5
Total	73	91.631	

Source: Project expenditures sheet, BPICs model main version
*$5.5bn is Sunshine Coast rail, completing 2032.
+$8bn is the Brisbane desalination plant, starting in 2027 and completing in 2035.

64. The BPICs project expenditure total of $77.493 billion is lower than the $91.631 billion total in Table 2 because the table total includes expenditure on projects completing after 2030, but expenditure after June 2030 is not included in the period modelled. The Brisbane desalination plant is an example.

Significance of the Total to the Model

65. The estimate of BPIC project expenditures of $77.5 billion is crucial to the model, because the value of BPIC projects is the basis for the wage and cost effects of BPICs, which are calculated as percentages of the value of BPIC projects. Thus, any revision to the total for project expenditure will affect the percentage increases due to BPICs.

66. As the Appendix notes "there are some uncertainties about which projects would have been covered by BPICs, and which projects are likely to proceed, there is some subjectivity about selecting projects to include in the modelling" (*Final Report*, page 408). Expenditures on costed Queensland Government projects from 2024-25 to 2029-30 over $100 million were included.

67. Forecasts are not exact, many projects get delayed by complex approval processes or are cancelled as circumstances change and, new projects may appear. Nevertheless, the probability of the $53 billion of projects under consideration and $15 billion of possible projects included in the BPIC total should have been accounted for. The conventional method of doing that is to apply a probability factor, for example if the expected probability of a project commencing is 50 per cent that would reduce the value of that project included in the total by half.

68. If there is only a 10 per cent probability projects will be cancelled, that would reduce the total for projects under consideration and possible by $6.8 billion, before discounting. On the other hand, there could be more Olympics projects that are not included in the BPICs data, and their value would be added to the total.

Queensland Capital Works Program

69. Appendix C notes $7.1 billion of Olympic and Paralympic Games projects were included, and the 2024 Deloitte Australia Economics *Investment Monitor* predates the Games Independent Infrastructure and Coordination Authority's review *(Final Report*, page 408).

70. Projects from 2024-25 to 2029-30 over $100 million were included in the CBA, but only two Olympic projects were included: the Brisbane Arena for $2.5 billion and the Athletics Centre for $2.7 billion.

71. The Queensland capital works budget will have to accommodate the Olympics program over the period modelled. This will affect the planned but not committed projects in the model, and will also constrain the supply of labour elsewhere. Project delivery times increase during periods of high demand, but the QPC has not attempted to include these effects in their modelling of labour shortages, material costs and demand for plant and equipment.

72. Construction requires a range of specialised skills and uses many subcontractors, so capacity is largely determined by the availability of labour, skills and expertise. As the available labour, plant and materials are fixed in the short-run and industry capacity is limited by availability, these get spread over more work as new projects are started. The result is fewer people on a site and slower progress of ongoing work, and there is more potential for delays or bottlenecks in supply chains.

Data Source and Method Used

73. The QPC model used a bottom-up approach to estimate BPIC project expenditures, based on the December 2024 Deloitte Australia Economics *Investment Monitor*. This is not the only source of data on current and future projects in Australia, there is also the annual *Infrastructure Market Capacity Report* that Infrastructure Australia produces.

74. Beginning in 2021, Infrastructure Australia built a national project database with the location, cost, stage (pre-construction, under construction, completed), schedule, funding and type of project. Appendix A of their report explains the bottom-up approach used to produce their 'portfolio' of monthly project activity, based on expenditure at the stage of each project with cost breakdowns for each project in the four resource categories of plant, labour, equipment and materials.

75. The *Infrastructure Market Capacity Report* provides forecasts of Australian infrastructure demand and supply of resources, with a five-year forecast that covers sectors like transport, energy, water, and buildings, including housing. It analyses issues such as labour and skill shortages, material costs and equipment demand, productivity, and the energy transition with regional breakdowns.

76. The methodology Infrastructure Australia uses is published and could have been followed by the QPC. That would have provided a more detailed analysis of the effects of increased demand on the supply and availability of resources and the effect on project costs of the increase.

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PART 4 – THE ASSUMPTIONS AND THEIR COMPONENT

Assumptions in the Model

77. There are two sets of assumptions in the model. On pages 405-406 of the *Final Report* there are five "Key assumptions". The first on the counterfactual is discussed elsewhere in this report. The second and third are borrowing costs and the excess burden of taxation, and are discussed below. The last two are uncontroversial. The fourth is the trade-off between work and leisure time, and the fifth is the discount rate of 7 per cent.

78. There is a second "summary of key assumptions" in Table C.1 below. Unlike the economic assumptions in the first set, these are specific and industry-related. The table has nine assumptions, with the difference between them under the Low and High scenarios.

79. Six of the "assumptions" in Table C.1 are also listed as "Key channels for BPICs impacts" in Figure C.3 (*Final Report*, page 409): wages; weather; RDOs; safety; residential market; and business investment. Industrial stoppages, union involvement, and project delays are not included as channels for impacts.

80. Two of the channels for BPICs impacts have "indirect impacts". These are the residential market and business investment that are affected by increased project costs and delays.

81. The *Final Report* says "Sensitivity testing has been conducted by varying model parameters within reasonable bounds. Depending on the variable chosen, this can have a sizable impact on the results. Uncertainty on the modelling inputs has been mainly dealt with by varying assumptions under the low and high scenarios" (page 422). No information is provided on the outcomes of the tests or how they were conducted.

Table 3. Summary of key assumptions

Key assumptions	Low scenario	High scenario
Wages (BPICs sites compared to industry standard)	30 per cent higher	50 per cent higher
Safety	BPICs close 75 per cent of the gap between construction industry WHS outcomes and the industry wide average	BPICs close 100 per cent of the gap between construction industry WHS outcomes and the industry wide average
Weather-related delays	Temperature and humidity conditions only apply in SEQ, rain stoppages same as award	SEQ temperature and humidity conditions apply to all sites in Qld, strict interpretation for rain stoppages
Rostered days off (RDOs)	Additional 13	Additional 13
Industrial stoppages	No additional stoppages, 2-hour union meeting per fortnight.	6 days lost to industrial action, 2 union meetings per week (2 hours per meeting)
Union involvement	Small productivity increase	Small productivity decrease
Residential	Small cost impacts, shorter delay times, smaller worker shortages	Large cost impacts, longer delay times, larger worker shortages
Commercial (business investment)	Smaller worker shortages	Larger worker shortages
Project delays	5 per cent longer construction times	20 per cent longer construction times

Source: *Final Report*, Table C.1, page 407

Wage Impacts

82. The most important component of the modelled impact of BPICs in the calculation of project cost increases were wages. These accounted for 7.0 per cent of a 10.1 per cent increase in the low scenario, and in the high scenario wages were 11.6 per cent, with other stoppages like RDOs 9.3 per cent of a 24.6 per cent increase, as shown in Table C.14 (*Final Report*, page 420).

83. The problem with this estimate is that construction wages actually paid are not the

same as minimum award wages, which are lower. Comparing the wage rates under construction enterprise agreements to an "industry standard" of award rates is misleading, as Table 1 at paragraph 57 above showed. The *Final Report* notes "Industry wages are likely to be significantly higher than award wages, particularly given the current tight labour market for construction workers", and then cited the Queensland Unions submission that suggested "industry wage rates are around 40 per cent above the award minimum rates of pay" (page 410).

84. The *Final Report* found "that BPICs wage rates may be more than double award rates" (page 410). However, although **"**evidence was presented suggesting tier 1 firm wage rates have been unaffected by BPICs" (page 407), **t**he modelling assumes wages on BPIC sites are above the industry standard by 30 per cent in the low scenario and 50 per cent in the high scenario.

85. There is further evidence from a document attached to Ms Hawkswood's statement. KPMG's *TMR's BPICs Major Project Cost Analysis*, in 2022 (DH-40), found no appreciable premium for TMR's Queensland projects. KPMG compared the weekly labour cost for construction, electrical and mechanical trades under the TMR BPIC against a sample of major project enterprise agreements, and found for construction trades the TMR BPIC was 2 per cent above the three New South Wales projectsand 13 per cent and 20 per cent below the two from Victoria (DH-40, page 417), Compared to other Queensland projects, for construction trades the TMR BPIC was 21 per cent below Cross River Rail and 29 per cent below Queens Wharf, and 16 per cent lower than DHPW BPICs (DH-40, page 417). Electrical and mechanical trades were similar to the construction trades.

86. The KPMG report addresses the wage assumption in the QPC's model, that BPIC wages were above the industry standard by 30 per cent in the low scenario and 50 per cent in the high scenario. Their analysis found minimal additional cost from BPICs compared to New South Wales, and that the TMR BPIC was lower than other Queensland major projects. The QPC did not provide evidence from a range of BPIC sites and other projects to support the assumption of higher wages on BPIC sites.

87. Another issue is the conversion of wage effects into project costs. Higher wage rates were converted to project costs using 23 per cent as the average labour share

of output for the construction industry, from the VURM model (*Final Report,* page 411). However, different types of work (such as detached housing and engineering construction) have different ratios of labour, materials and equipment, and the large projects where BPIC is relevant could have this ratio specified in more detail. In the VURM model data, the civil engineering construction labour share is 22 per cent. The spreadsheet for Higher wages contains the ABS multifactor productivity labour share of construction of 20 per cent, but this is not used. Instead the 23 per cent share from the VURM model is used.

88. A reduction in the labour share of project costs to 20 per cent would decrease the wage impact. In the high scenario the impact on costs is reduced from 12 per cent to 10 per cent, and in the low scenario the impact on costs is reduced from 7 per cent to 6 per cent.

89. The Summary of key assumptions in Table C.1 on page 407 does not include the productivity loss from three Project delays – other, weather, and reduced flexibility, neither do the Key assumptions on pages 405-406 of the *Final Report*. In the high scenario this is 29 per cent, and in the low scenario 8 per cent, and is used to calculate the additional workforce required by BPICs in Workforce estimates. The higher wages to these workers are in the Higher wages worksheet.

Model With Wage Impacts Removed

90. In response to the submission from Queensland Unions (sub. 59) that suggested wage rates on BPICs sites were no higher than on non-BPICs sites, the QPC re-ran the model with wage impacts removed and said "this analysis differs from our modelling, in that it does not consider a counterfactual with no BPICs (i.e. it does not consider that the implementation of BPICs is likely to have influenced wages rates on non-BPICs sites), the Commission also modelled an alternative scenario where wage rates are no higher on BPICs sites" (*Final Report*, page 113).

91. Their conclusion was "even if wages were assumed to be unaltered by BPICs, significant net economic costs would still be imposed on the community. These net costs are only slightly lower than the core modelled scenarios ($18.4 billion versus $20.6 billion for the high scenarios). These results are in line with evidence provided

by stakeholders that a key driver of costs from BPICs are from productivity losses rather than wage rates" (*Final Report*, Table 4.2, page 113).

92. The Main version Higher wages sheet and Wage Impacts Removed Higher wages sheet differ because the latter does not include BPICs escalation (the assumed increase in wages on BPICs sites). In both sheets, the total increase from wages is the combined amount of BPICs escalation and the higher wages paid to the extra workers. The cost increase in the BPICs model with wage impacts removed is due to wages paid to the extra workers required (from the Workforce estimates worksheet) because of a productivity loss of 8 per cent in the low scenario and 29 per cent in the high scenario. That productivity loss, in turn, is the result of project delays due to weather, reduced flexibility and other (from those three worksheets), and is the same in both spreadsheets. Higher wages to extra workers from this productivity loss in the high scenario total $2.661 billion, but in the low scenario are $456 million.

93. The Summary of key assumptions in Table C.1 on page 407 does not include this productivity loss, neither do the Key assumptions on pages 405-406 of the *Final Report*. Nevertheless, it inevitably determines the outcome of the model with wage impacts removed.

94. In the re-run of the model, costs to the community, renters and first home buyers, were unaffected. Why these do not change when the model's wage assumptions are changed is unclear, because lower construction costs decrease the cost and increase supply of community building and residential building, which will lower the negative impact on them. The same logic applies to businesses. A rerun would be expected to affect these outputs to some extent.

95. In a cost-benefit model, many of the effects depend on behavioural changes, such as increased demand from lower prices or vice versa, and so changes in key assumptions should flow through to the outputs.

Productivity

96. The productivity effect in the QPC model is a 1 per cent increase or decrease. The

Final Report says BPIC conditions could "potentially have a positive impact on workplace productivity", that the literature on unions and productivity "is mixed", and that unions "may enhance productivity where they promote workplace harmony, reduce turnover or allow improved communication" (page 414).

97. This assumption simplifies a large, heterogeneous literature on worker motivation and productivity, with only a few Australian studies available. Two studies by Lingard and Francis (2004 and 2010) find long work hours affect job satisfaction. Hosseini et al. (2014) looked at age and job satisfaction of construction workers in South Australia. O'Brien and Woodhead (1980) studied building sites in NSW and concluded that the problems of productivity are external to the worker and relate to organisational contexts, reward systems, and communication, with most site problems generated by lack of materials, equipment breakdowns, poor planning and re-doing work.

98. The model does not link the level of wages and the level of productivity, and the *Final Report* does not discuss the possible effects. Akerlof (1982) proposed an "efficiency wage", where employees provide higher effort levels in response to higher wages. A number of studies have linked higher minimum wages to improved outcomes, for example a study of a large US retailer found workers become more productive and are terminated less often after a minimum wage increase (Coviello et al. 2022). Riley and Bondibene (2015) found companies responded to the introduction of the National Minimum Wage in Britain by raising labour productivity. Given the lack of hard data and the minor effect on the model's estimates, the 1 per cent gain or loss in the model is a defensible assumption to include.

Workplace Safety

99. One of the stated aims of BPICs was improved safety. The safety outcomes in the model without BPICs are unchanged historical rates of 2.1 fatalities and 19.2 serious injuries per 1,000 workers.

100. The model uses data from Worksafe Queensland on accidents and fatalities in construction. In the *Final Report* (page 412) these are valued at the median compensation claim of $15,072 from SafeWork Australia (in 2023 dollars) and the

statistical value of life of $5.1 million (in 2023 dollars) from the Office of Best Practice Regulation (OBPR 2023).

101. With BPICs, the low scenario reduces fatalities to within 75 per cent of the all-industry average and the high scenario down to the all-industry average. In the model, between 2024-25 and 2029-30, the cumulative safety improvements in the high scenario were 0.06 of a statistical life and 418 fewer injuries. The NPV of safety benefits is $12 million in the low scenario and $11 million in the high scenario (page 420).

102. The *Final Report* noted "no evidence of improved safety outcomes was provided to the Commission" (page 408),and concluded that the estimated benefits from increased safety are negligible, "making up less than 0.2 per cent of the benefits accruing to construction workers" (page 420).

Deadweight Loss from Taxation

103. The deadweight loss from taxation is the transfer from consumers and producers to government when there is a tax on goods and services. Consumer and producer surplus is reduced, and a government surplus is created from the tax revenue. However, because government expenditure benefits the population, the total loss to consumers and producers is reduced. There is a residual loss to producers and consumers, and the amount by which the combined loss of consumer and producer surplus is greater than government surplus is known as the deadweight loss or excess burden of taxation[4].

104. In the *Final Report* Appendix C includes the assumption that the excess burden of taxation is 30 cents per dollar (page 406):

    (a) There are unavoidable costs associated with raising funds to pay for any higher construction costs — these occur where higher project costs result in higher borrowing costs, increased taxation or higher electricity prices (in the

[4] CORE Econ ebook, The Economy 2.0: Microeconomics, unit 8.12, 'The effect of a tax', version 2.0.0, https://books.core-econ.org/the-economy/microeconomics/08-supply-demand-12-effect-of-tax.html, accessed 21 September 2026. See also Sloman et al. 2015, page 335.

case of energy projects). The modelling assumes any increase in the cost of the government's capital program is paid for through higher taxes, but the assumptions would be broadly similar if the modelling had assumed these costs were paid for through borrowings or passed on to consumers as higher energy prices.

(b) In line with research by Nassios et al. (2019), it is assumed that the excess burden of taxation is 30 cents per dollar, that is, for every $1 of tax raised, taxes are assumed to impose a cost of $1.30 on the broader community. This assumption is consistent with other research on the excess burden of taxation, some of which estimate significantly higher excess burdens (for example see Murphy 2016; Tran & Wende 2017).

105. In the *Final Report* this is described as "the costs of raising funds to pay for BPICs (higher project costs)", and valued at $1.887 billion in the low scenario and $4.582 billion in the high scenario, or 14.4 per cent and 11.9 per cent of total costs respectively (page 421). It is applied to the higher wages paid to workers by government on public projects and cost of the higher wages paid to extra workers needed because of productivity loss.

106. In Nassios et al (2019, page 13) the excess burden is defined as:

> "the ratio of the change in real welfare (leisure-adjusted gross national income (GNI) at the national level) or output (leisure-adjusted gross state product (GSP) at the state level,) to the change in real government lump sum transfers to households."

107. Their paper looked at eight state and three federal taxes, and each of those had a different excess burden. For example, the excess burdens of the three federal taxes were 15 and 34 cents in every dollar raised for GST and personal income tax respectively, while company tax, at -32 cents in every dollar raised, increased welfare, State taxes varied from 96 cents in every dollar raised for new motor vehicles to 4 cents for land tax on dwellings only (Nassios et al 2019, page 15).

108. The Summary sheet notes an "Average excess burden for raising revenue across all

Australian states" sourced from Nassios et al. (2019), where Table 2.1 has marginal and average excess burdens of 11 taxes, eight state and local government and three national taxes. There is no national average in Table 2.1.

109. The Tran and Wende paper cited compares different types of taxes, with the marginal excess burden of the GST at 24 cents in the dollar.

110. All government expenditure has to be financed; the issue here is whether any extra expenditure would be funded by increased state borrowing, with the current rate for Queensland state government bonds around 5 per cent. This raises the question of the appropriate rate to be used, which would be less than 30 per cent for tax financed expenditure, and around 5 per cent for debt funding.

111. The Queensland Treasury Corporation's benchmark bonds on issue have interest rates of 5.25 per cent for maturity in 2036, 5.0 per cent in 2037, and 5.25 per cent in 2038[5]. For the current financial year 2026-27, the Queensland Treasury Corporation has a $28.7 billion debt borrowing program budgeted, of which $5.4 billion is debt refinancing. Next financial year 2027-28 the borrowing program is $33.5 billion, of which $11.3 billion is debt refinancing. The following financial years 2029 and 2030 are similar to 2027-28[6].

112. The deadweight loss from taxation is not straightforward to apply. There is a wide range of excess burdens across different taxes, which measures the net welfare loss from raising tax revenue from each tax. In the Nassios et al. (2019) paper, company tax and council rates increase welfare. If government expenditure is funded by debt, with refinancing not all borrowings are paid out of future taxation.

113. The effect of adopting a different rate on the model's costs is not insignificant. At 30 per cent, the cost of the estimated higher project costs from BPICs were $1.887 billion in the low scenario and $4.582 billion in the high scenario, or 14.4 per cent and 11.9 per cent of total costs. At the other extreme with a 5 per cent rate, these would be $233 million in the low scenario and 1.7 per cent of total costs, and $464

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5 Queensland Treasury Corporation, 'Benchmark bonds', https://www.qtc.com.au/institutional-investors/aud-benchmark-bonds/, accessed 21 September 2026.

6 Queensland Treasury Corporation, 'Borrowing Program, https://www.qtc.com.au/institutional-investors/borrowing-program/, accessed 21 September 2026.

million in the high scenario and 1.4 per cent of total costs. A rate between 15 and 20 per cent would have allowed for an excess burden with some debt funding.

114. Most of the projects in the Project expenditures sheet are for Transport and Main Roads, many of the others are for Health. The deadweight loss from taxation is based on the total economic value lost by consumers and producers being greater than the tax revenue collected by the government. Over lengthy time horizons, this is typically not the case for the transport and health projects that are the majority of the BPIC projects.

115. The relationship between project costs and benefits is the basis of a CBA, if this ratio is greater than 1 the project has a net benefit in NPV terms. The NPV is found by discounting the benefits and costs, including the cost of raising the funds, and the NPV of each is estimated separately. The period in the cost-benefit model can be shorter than both the finance and the benefits, for example roads and bridges have working lives of many decades.

116. The benefits to the community from transport projects (e.g. shorter commuting times) and health projects (e.g. more life years or improved quality of life) are not included in the QPC model. The net value of the benefits of the transport and health projects included in the BPIC project expenditures sheet would be determined by their net cost. If BPICs have increased project costs, those higher costs decrease the value of net benefits.

Labour Shortages and the Residential Market

117. In the model only cost increases and delay time for high-rise residential projects is included, and "the modelling assumes a 1 per cent decline in workforce causes residential construction times to increase by 2 per cent" (*Final Report*, page 415), and that "to the best of the Commission's knowledge there are no empirical studies examining the relationship between trades shortages and construction times" (*Final Report,* footnote 79, page 415).

118. Cost increases were 3 per cent in the low scenario and 33 per cent in the high scenario, and project delay times were 17 and 50 per cent in those scenarios. These

project delays increased rents, with losses for renters and gains for landlords, and prices, with gains for homeowners selling during the period and losses for first homebuyers.

119. If the increases in project costs and delays are reduced with revisions to the assumptions used for the workforce and productivity, the modelled housing impacts are also reduced. The workforce reduction from BPICs is the variable that changes with the scenarios.

Business Investment and Infrastructure Users

120. Similarly to high-rise residential, the spillover effects of BPIC conditions on commercial building sites is assumed to produce higher project costs and delays due to worker shortages. However, there was “no robust market intelligence to guide modelling assumptions” available to the QPC (*Final Report*, page 418).

121. In the low scenario projects are delayed by 5 per cent and reduce project benefits by 1 per cent, and in the high scenario project delays are 20 per cent and reduce project benefits by 3.9 per cent. There are no alternative delays modelled, despite the lack of evidence for the assumptions used.

122. The *Final Report* notes that "ideally, the impact of project delays would be estimated on a case-by-case basis" but doing that was "beyond the scope of this analysis" (*Final Report*, page 419). The costs to infrastructure users were estimated by applying a benefit-cost ratio of 1.2 to all projects over a twenty year horizon, drawn from Infrastructure Australia's annual performance statement (page 419).

123. If the increases in project costs and delays are reduced with revisions to the assumptions used for workforce and productivity the impacts on business investment and infrastructure users are also reduced.

Uncertainties

124. Over the period modelled it is probable that costs and benefits will be different because economic conditions change, inflation has been increasing, movements in construction costs have been volatile, and the labour market is affected by

factors such as demand and migration. There is no discussion of those effects.

125. There are specific references to "uncertainty concerning the impacts of BPICs on government sites" in the *Final Report* (page 406) where it notes:

    (a) BPICs terms or conditions may vary from site to site;

    (b) there is ambiguity in the extent in BPICs vary from award or industry standard conditions;

    (c) how negotiable terms are applied to sites where they are not mandatory;

    (d) the extent BPICs created pressure on other building sites to lift wages and offer more worker-favourable conditions is unclear; and

    (e) there have been substantial increases in construction costs that are unrelated to BPICs.

126. The QPC included this caveat: "The results presented in this paper are intended to be illustrative — while all attempts have been made to ensure accuracy, there is significant uncertainty around many of the parameters used in the modelling" (page 407).

127. The QPC's *Interim Report* (page 286) had an additional comment that was not in the *Final Report:* "These factors make it difficult in some cases to completely disentangle the effects of BPICs from other underlying conditions in the construction industry".

PART 5 – OPERATION OF THE MODEL

Low and High Scenarios

128. The model has low and high scenarios, and also contains a medium scenario, which is not used. The difference in outcome between the low and high scenarios is how strictly the BPIC conditions are applied.

129. In the discussion on uncertainties, the *Final Report* says "the modelling adopts a 'cautious' approach to attributing changes to BPICs. That is, the modelling tries to be conservative when it comes to assessing the likely impacts on wages and conditions. To allow for uncertainty the modelling uses 'high' and 'low' scenarios to test a range of estimates" (page 406).

130. In the *Final Report* the NPV benefits from BPICs are estimated to be between $7.398 billion in the low scenario and $18.037 billion in the high scenario (Table C.15, page 420). The difference between the scenarios is $10.639 billion. The largest component is direct benefits to construction workers of $4.661 billion or $9.278 billion, due to higher wages and reduced working hours. Landlords and existing homeowners also benefit.

131. The NPV of total costs in the low scenario are $13.096 billion, and $38.625 billion in the high scenario, a difference of $25,529 billion (Table C.16 on page 421). Of that difference, higher wages account for $4.617 billion, and productivity loss $4.367 billion.

132. The direct costs to the community were between $8.2 billion in the low scenario, and $19.9 billion in the high scenario, from transfers between taxpayers and construction workers, productivity losses, and higher project costs. Indirect costs from BPICs were between $4.9 billion and $18.8 billion, from housing market impacts reductions in business investment, and infrastructure delays.

133. The difference between the NPV of total benefits and total costs is the net impact, allowing the QPC to come to the conclusion that "BPICs create an estimated net economic cost to Queensland of $5.7 billion to $20.6 billion" (*Final Report*, page 421).

Project Delay Assumptions

134. The effects on the model of the two scenarios are mainly from the difference between them in project costs and delays. Therefore, the assumptions underneath these variables are important, as explained in paragraph 89 above. An example is Project delays - weather, the low scenario has average days lost of 4 to 7, but the high scenario has 19 to 22 days lost on BPIC projects.

135. In the assumptions in Table C.1 in the *Final Report* (page 407), in the low scenario the temperature and humidity conditions are restricted to south east Queensland (SEQ), but in the high scenario the south east temperature and humidity conditions are applied to all sites in Queensland. The table below has this data. The issue is why the High weather scenario outside SEQ has around 10 times the number of total productive days lost per year in non-SEQ BPIC sites compared to the low scenario.

Table 4. Productive days lost per year to weather

	SEQ BPIC sites Low / High	**Non-SEQ BPIC sites Low / High**	**Total Low / High**
2024-25	117 / 285	35 / 392	151 / 677
2025-26	229 / 465	59 / 638	289 / 1103
2026-27	313 / 561	75 / 743	388 / 1304
2027-28	257 / 453	61 / 615	318 / 1068
2028-29	224 / 342	61 / 550	286 / 892
2029-30	170 / 275	39 / 416	209 / 691

Source: Main version worksheets – high and low weather detailed

136. Note the weather station data has not been analysed for this report, and the figures used by the QPC have not been tested.

137. In the Project delays — community worksheet, the model assumes that every dollar spent on a project produces the same benefit, whatever the project is, of 1.2, or $1.20 for every dollar spent. The worksheet note explains this as: “benefits realised per dollar expenditure” and cites Infrastructure Australia's 2024 *Annual*

Performance Statement (page 9) as the source, which says "Rail and public transport projects were found to have slightly lower economic returns, $1.13 for every $1 invested, compared to roads, $1.32 of economic return. This is because road business cases count higher productivity benefits, which are a greater share of overall benefits, while rail and public transport projects offer greater liveability and sustainability benefits". This is an important point, because 25 of the 73 projects in the Project expenditures worksheet are for roads.

138. The Project delays — community worksheet has a note that "Modelling conducted by fission for TMR suggests" Transport BPICs will cause delays of around 15 per cent and Renewables BPICs will cause delays of around 25 per cent. The model actually uses 5 per cent for the low scenario and 20 per cent for the high scenario delays, then uses those to calculate an average delay assuming an average construction time of 3 years. The NPV of the loss from BPICs is $2.9 billion in the high scenario, and $725 million in the low scenario. Reducing the high scenario delay by a quarter from 20 to 15 per cent reduces the average delay and thus the loss from BPICs, also by a quarter.

139. The delay in the Project delays — community worksheet is calculated directly, within the sheet, and estimates the loss of benefits to the community. The Project delays – other worksheet calculates the increase to project costs from delays due to productive days lost. Both worksheets use the total from the Project expenditures worksheet.

140. The Project delays — other worksheet includes rostered days off (RDOs), restrictions on working hours, industrial stoppages and union meetings. These are added together to get a total for productive days lost. In the Project delays — other worksheet, the high scenario total is 55 days lost, including 24 site days lost to union meetings, while in the low scenario there are only 6 days lost to union meetings. The restrictions on working hours, industrial stoppages and union meetings are not necessarily related to BPICs, and will typically be for other industrial relations matters.

141. The Project delays — other worksheet includes RDOs. In the high scenario with productivity reducing components turned on there are 13 additional RDOs, or a

total of 26. The QPC argues there are 13 RDOs on non-BPIC sites, which is the award standard, but CFMEU enterprise agreements have 26 RDOs, and the QPC should have used 26 days, not used them to increase the number of productive days lost.

142. The *Final Report* (page 413) also says RDOs require full site shutdowns because they must be all taken on the same day by all workers, but then includes in Table C.7 (page 414) an impact from less flexible RDOs of 6.5 site days. The QPC is suggesting RDOs both require site shutdowns but are also "less flexible", which means in some cases RDOs will be negotiated.

143. On project delays the *Final Report* says: "Under the low scenario, it is assumed there is much greater flexibility in the way the BPICs provisions are set on sites. Conversely, the high scenario assumes a much stricter interpretation. However, even under the high scenario, impacts may be lower than has been suggested by some industry stakeholders" (page 414).

144. The high scenario has the largest cost effects of BPICs, but there are serious questions about some of the assumptions used. In particular, for BPICs provisions and project delays that are accessed in the Summary sheet through a control to "turn off productivity reducing components", because those delays cause a large increase in project costs.

Productivity Improvements Control

145. The model Summary sheet control to "turn off productivity reducing components" can be set to "Yes" or "No" for the two scenarios. This links to the worksheets for Project delays – weather, Project delays – other, and Reduced flexibility, and the values for project costs in those sheets in the two scenarios.

146. The difference in the effect of the delays in the two scenarios and two settings is significant. Table 5 shows the outcome on the NPV for benefits and costs, and the net impact. This is a key element in the model.

Table 5. Benefits and costs with and without productivity reducing components

Scenario	NPV benefits	NPV Costs	NPV Net benefits	Net impacts

High - No	$18.037	$39.088	-$21.051	-$20.558
High - Yes	$7.444	$9.652	-$2.207	-$1.853
Low - No	$7.398	$13.329	-$5.932	-$5.698
Low - Yes	$4.602	$5.821	-$1.219	-$1.006

Note: Yes is turned off, No is turned on. $ billion.

Is This a Counterfactual?

147. Neither the model nor the *Final Report* explicitly include a counterfactual, a no-policy world before BPICs. Costs and benefits should be clearly stated in a without policy world, i.e. compared to what they were before the introduction of BPICs. Despite the claims made on page 405 that "All impacts are measured against a counterfactual, which is a world without BPICs", there is no statement of what that world looks like. That requires the wages and conditions in the Queensland construction industry before widespread adoption of BPICs to be clearly shown. By not providing this the QPC has not established the counterfactual.

148. The control for “turn off productivity reducing components” in the low scenario without BPICs might be closest to the counterfactual. In that case the Net impact is -$1.006 billion, compared to the -$20.558 billion in the high scenario with productivity impacts turned on.

149. With the productivity improvements turned off, the variables of reduced working hours, and productivity losses from weather and union conditions, are removed. Also, the tax costs and indirect effects on residential and business investment are reduced.

The Modelled Benefits, Costs and Net Impacts

150. The *Final Report* presents the NPVs for benefits and costs, and the net impact in Tables C.15 to C.17 (pages 420-422). These are the estimates with the productivity reducing components turned on.

151. The $19.856 billion cost to taxpayers in Table C.16 is the combined total of higher wages, productivity loss and the deadweight loss from taxation. The higher wages

and productivity loss is a transfer from taxpayers to workers. The deadweight loss from taxation is a cost to the community as a whole, although at a rate lower than 30 per cent would be less. In the model, there are also transfers from renters to landlords of $4.863 billion, and from first home buyers to existing home owners of $2.069 billion.

152. The *Final Report* accepts that "not all direct and indirect impacts have been estimated", however, the excluded impacts "are unlikely to significantly change the results of the modelling" (page 408). These impacts would include the benefits to the community from the transport and health projects in the model data, and their inclusion would increase the net benefits in Table C.15. By how much is unclear, but could be significant because of the number of people affected.

PART 6 – PRODUCTIVITY

Measuring Productivity

153. Measuring productivity is difficult. Multifactor productivity is a residual, the change in the quantity of output after allowing for increases in the quantity of inputs, typically labour inputs as the number of hours worked or the number of people employed and the amount of capital stock in physical capital (such as buildings and machinery) and intellectual capital (such as patents and software). This is a complex measure that captures technological change and improved processes. It is more straightforward for labour productivity, measured as output per hour worked or per person employed.

154. The statistics used for productivity measurement have issues that further complicate analysis, such as deflating output to account for price changes and the capital stock for depreciation. There are no accurate measures of output in service industries and the public sector. For labour productivity, workforce data collected through surveys has associated issues of sampling and representativeness, and there is also a strong relationship between the rate of growth of the economy or an industry and productivity increases. The result is that productivity measurements are estimates, subject to annual variability, and are not exact.

155. Construction productivity has more complexity, and measuring construction productivity is more challenging than for some other industries. The project-based, geographically dispersed nature of the work has long supply chains that bring materials and components from relatively few suppliers to many locations. Manufactured inputs like prefabricated modules or buildings are not included in construction output, nor are the professional services provided by specialist consultants such as designers, quantity surveyors, and engineers. There is extensive use of subcontractors, with temporary teams formed for each project, and there is incremental but continuous change in the machinery and equipment used for onsite work, much of which is leased and not counted in the construction industry's capital stock. Over time, there has been increases in the size of buildings,

and the quality of the services, fixtures and fittings included[7].

Capital Stock and Productivity

156. There are many issues that affect productivity. Some are long-term, such as innovation, R&D, and education and training systems. Others are structural, like the number of micro and small firms, or institutional, like state based occupational licensing and building codes. However, for Australian industry in general, the most important factor in recent low productivity growth is the lack of business investment in the capital stock, made up of machinery, equipment, buildings, structures, software, innovation and R&D (Hambur and Andrews, 2023). The Productivity Commission's 2025 report *Creating a More Dynamic and Resilient Economy* argued weak business investment is a primary driver of Australia's lack of productivity growth, and recommended tax and regulatory reform to increase business investment.

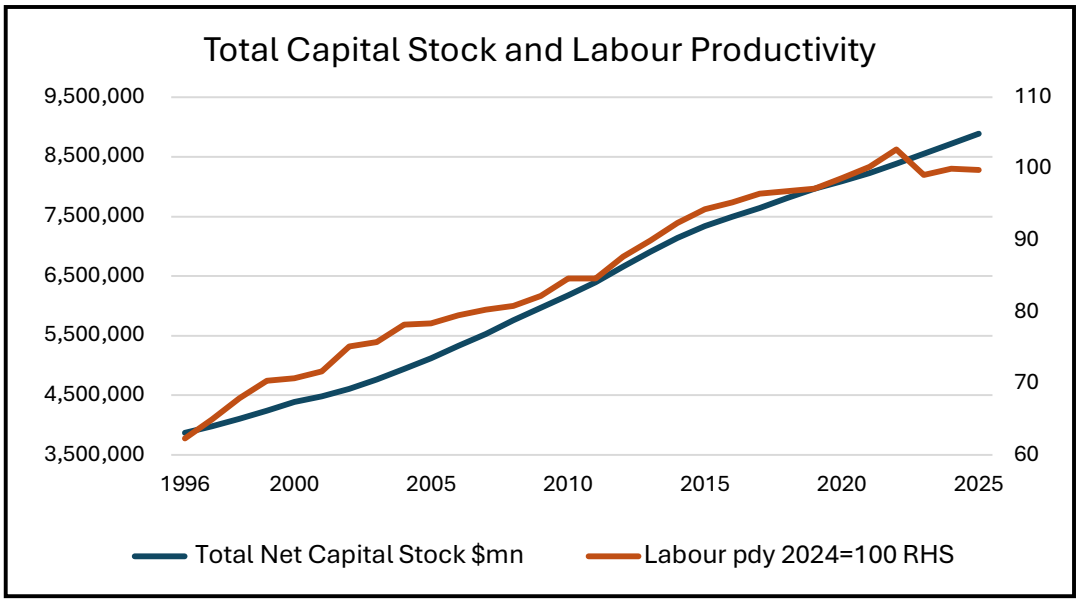
157. The Treasury submission to the 2026 Select Committee on Productivity in Australia stated: "Investment has long played a central role in shaping Australia's productivity performance through capital deepening. Over the long run, increases in the capital-to-labour ratio have been strongly correlated with productivity growth (6.23)", and "Business investment outside mining has declined as a share of GDP over the long run. A major driver of this long-run trend is the change in Australia's industry structure, including the decline in the share of the economy in agriculture and manufacturing, towards less capital-intensive services" (6.29).

158. As Figure 1 below shows, there is a clear historical relationship between the total net capital stock and labour productivity. The total net capital stock has grown steadily over the last 30 years, and was matched by the rate of increase in labour productivity until 2020. Despite the capital stock growing, the relationship has broken down over the last few years as there has been no growth in labour

[7] Houses are larger, but how they are procured, built and what they are made of has not substantially changed in decades. Fundamentally, that is also why the level of residential productivity has not changed. While there are more electrical appliances and services like air conditioning, and offsite manufacturing of trusses, windows, doors and cabinetry, the building's structural materials and services like electricity, water and plumbing in a 1960s dwelling are those found in a new build today.

productivity.

Figure 1. Total capital stock and labour productivity



Source: ABS 5204 and 5260. 16 market sector Industries net capital stock chain volume measure, and hours worked labour productivity.

QPC Productivity Measure

159. The QPC *Final Report* stated at the beginning in the Key Points: "Productivity growth in Queensland's construction industry has been weak. Although there have been periods of growth, labour productivity today is only 5 per cent higher than it was in 1994-95. In comparison, labour productivity in the market economy grew by 65 per cent over the same period" (page 4).

160. The QPC comparison of construction productivity with productivity in the market sector is not appropriate, because there is great diversity in productivity performance across the 16 industries the ABS includes in the market sector. Based on productivity performance, Australian industries divide into three groups. Between 2019 and 2024, three industries had high growth in output per hour worked of over 10 per cent, seven industries had low growth, there was no growth in construction, and five industries had negative growth. The comparison with the market sector does not allow for the fact that construction has performed better than five other Australian industries, and its productivity performance has been similar to another seven industries.

161. The QPC found “since 2018, construction industry productivity has declined by around 9 per cent” (page 4). Figure 2.9 on page 82 of the *Final Report* is based on ABS data, referenced as:

    (a) ABS 2024a, Australia National Accounts: State Accounts, 2023-24 financial year.

    (b) ABS 2025h, Labour account Australia, December 2024.

    (c) ABS 2025j, Labour force, Australia, detailed, February 2025.

    (d) ABS 2025f, Estimates of industry multifactor productivity, 2023–24 financial year.

162. There is no ABS data for hours worked by industry at the state level before 2011-12. How the QPC’s construction labour input from 1995 in Figure 2.9 was estimated is unclear, and not explained. There is labour force data for state employment by industry from 1995, and national hours worked by industry, so this estimate would have probably used that data.

163. Similarly, the ABS has market sector labour productivity for Australia from 1995, but not at the state level. The market sector labour productivity in Figure 2.9 would be the national data, for Australia. This should have been included in the Note for the figure.

State Comparisons

164. Australia, like many other countries, has had no growth in construction productivity over the last couple of decades, and there is an ongoing debate about the reasons why this is the case. However, the national aggregate obscures the different performance of construction productivity across the six states and two territories.

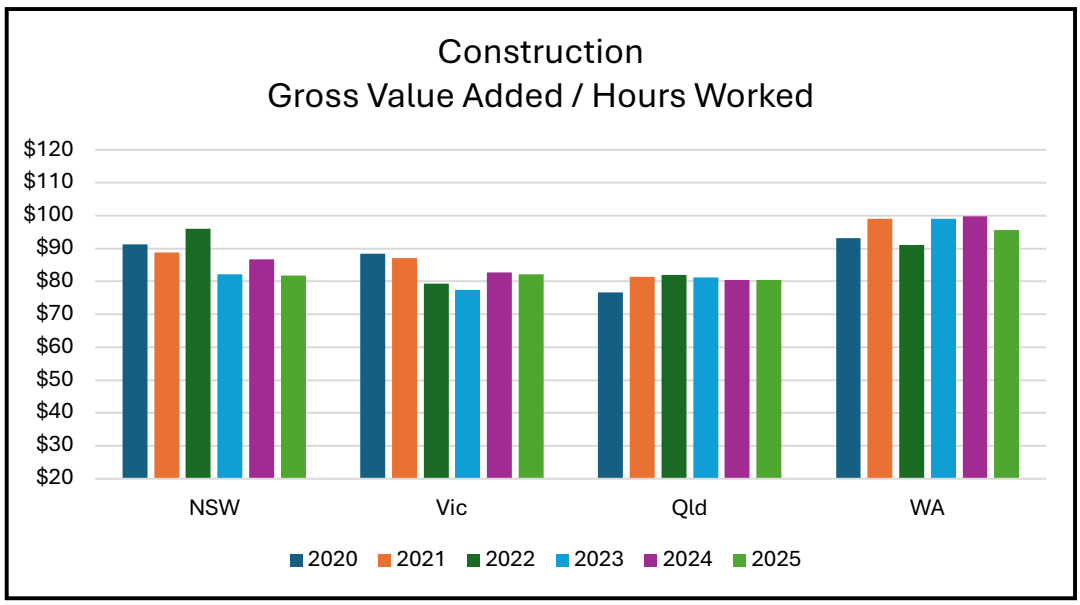
165. The Australian Bureau of Statistics (ABS) produces industry productivity estimates at the national level, but not for states and territories. The measure of construction labour productivity used by the QPC is Gross Value Added (GVA) per hour worked.

166. For Australia, GVA per hour worked for construction can be found for the states and

territories. These estimates combine two Australian Bureau of Statistics publications: *Modelled state and territory estimates of jobs and hours worked by industry* (ABS 6150.0.55.003) has millions of hours worked, and the *State Accounts* (ABS 5220) have chain volume measures of industry GVA (the value of output minus inputs, adjusted for inflation).

167. The four largest states of New South Wales (NSW), Victoria, Queensland, and Western Australia (WA) account for 90 per cent of Australian construction GVA. Their productivity performance since 2020 is in Figure 2 below, showing that they are similar but different. WA has both the highest GVA per hour worked and the highest share of engineering construction in work done, of 70 per cent in 2025.

Figure 2. GVA per hour worked 2019-20 to 2024-25



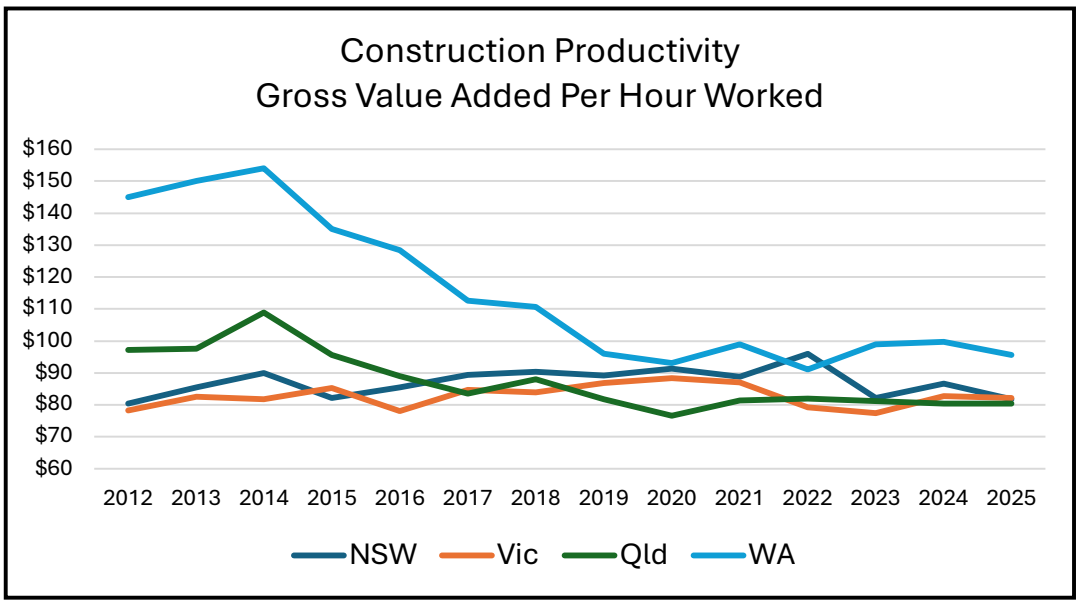
Source: ABS 6150, 5220.

168. In Queensland, engineering construction in 2024-25 was 50 per cent of work done, above NSW with 45 per cent and Victoria with 39 per cent, but GVA per hour worked was slightly lower. In those two states, GVA per hour worked was highest when residential building had a 50 per cent share of work done, during a period when many high-rise residential projects were built.

169. In the longer-run from 2011-12 (when the hours worked data available starts), WA and Queensland productivity followed the decline in construction work done from their peak levels during the mining boom that ran to 2014-15. This trend in

construction productivity was entirely due to the many capital intensive engineering construction resource projects, where the machinery and equipment required for LNG plants, offshore oil and gas platforms, and new mines, was included in the value of work done. This greatly increased the value of work and boosted measured productivity, but much of the increase was not spent on construction.

Figure 3. State productivity



Sources: ABS 6150 and 5220.

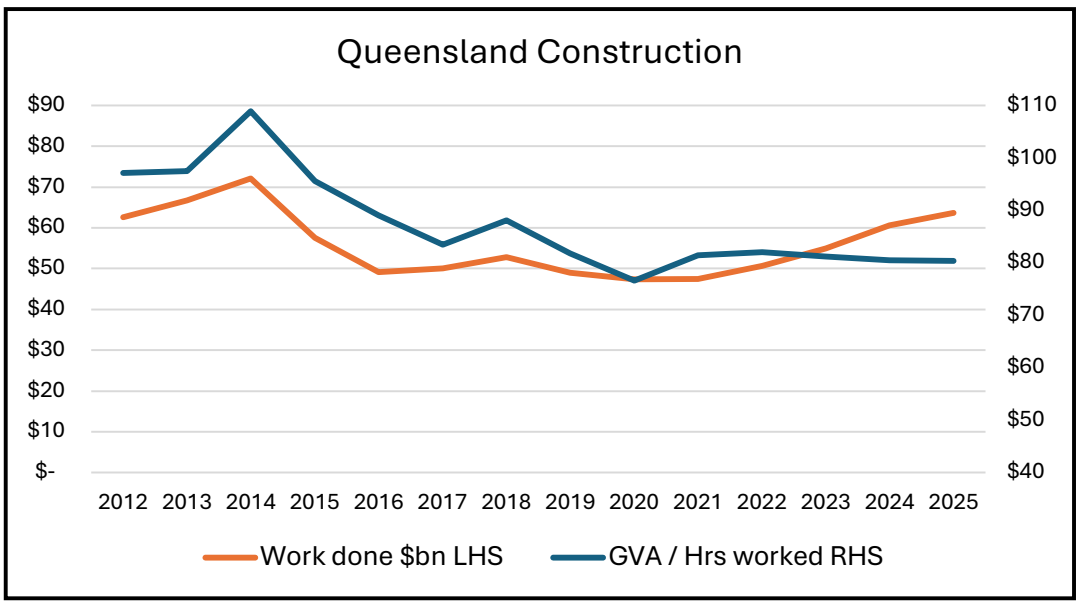
170. That relationship between engineering construction and labour productivity is not found in any of these states since 2020. The volume of construction work done has increased, because engineering work has increased, but there has not been any accompanying increase in productivity. This suggests there are other factors at work, such as increased project complexity, regulatory compliance requirements, and shortages of skilled workers.

171. In Figures 3 and 4, Queensland GVA per hour worked peaked in 2013-14 at $109. By 2019 it had fallen to $82. Productivity has been flat since 2019, and Queensland GVA per hour worked was $80 in 2024-25.

172. Construction work done in Queensland fell from $72 billion in 2014-15 to $47 billion in 2019-20 and 2020-21 except for a dip in 2020-21, before increasing to $64 billion in 2024-25. The fall and rise in the volume of work done has been driven by

engineering construction, which went from $46 billion in 2013-14 to $20 billion in 2019-20 and 2020-21, before increasing to $32 billion in 2024-25.

Figure 4. Construction work done and GVA per hour worked



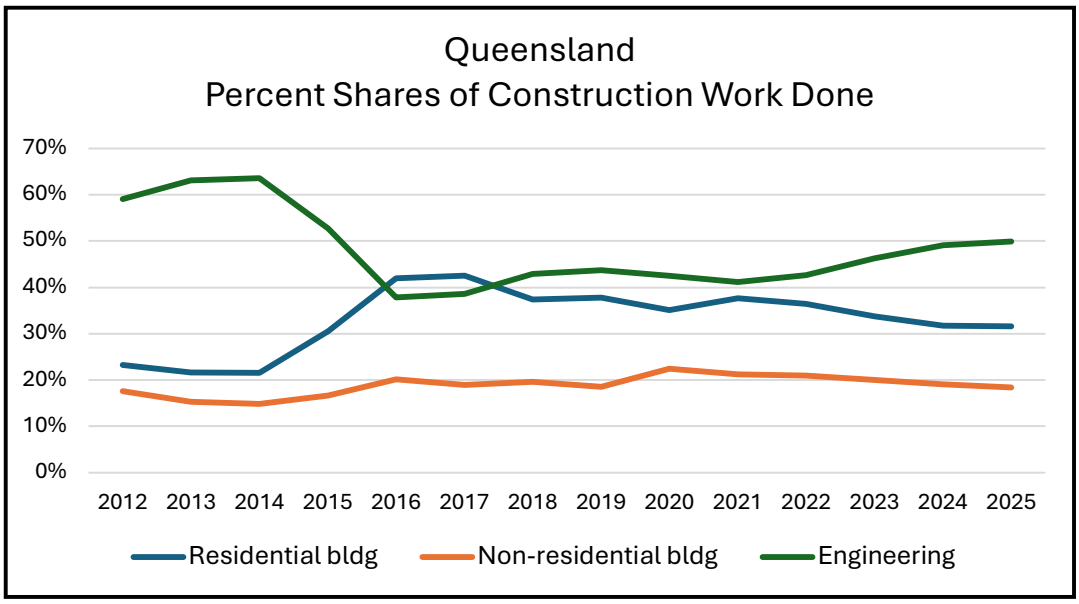
Source: ABS 6150, 5220 and 8755.

173. The decline in Queensland construction productivity after 2012 is explained by compositional changes due to the rapid growth and subsequent decline in heavy and civil engineering activity in the LNG investment boom. In 2014 the Australian mining boom peaked with the value of work done over $70 billion in Queensland, mainly due to construction of three LNG plants. The pro-cyclical nature of Queensland construction productivity is seen in Figure 4 as gross value added per hour worked followed the fall in the volume of work, which declined by around 30 per cent in Queensland.

174. However, the *Final Report* argues "compositional shifts explain most of the large changes in work done per hour worked (a close approximation of labour productivity) until around 2018. After 2018, productivity continued to decline, despite no significant changes in composition. This implies that the recent decline in productivity in Queensland's construction industry since 2018 cannot be explained by compositional effects" (page 84).

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Figure 5. Shares of total work done



Source: ABS 8755.

175. In Queensland, GVA per hour worked was $97 in 2011-12, and peaked in 2013-14 at $109. In 2019 it had fallen to $82, and was almost the same at $80 in 2024-25. Productivity has been flat since 2019, but has not declined.

Other Issues

176. There are other productivity industry issues not discussed. The *Final Report* has no discussion of construction costs and the volatility of the building cycle, or digitisation and automation, digital tools and platforms, AI enhanced systems, and automated planning and code compliance checks. Industry contractual relationships and risk allocation are not considered. Subcontracting is flexible and a method to manage costs and risk, but direct employment has a smaller span of control and is more efficient. Improving productivity through better project management and reform of vocational education and training and occupational licensing are also overlooked.

177. The use of Building Information Modelling (BIM) or other digital tools like design for manufacture and assembly (DfMA) is not included. The Queensland Department of State Development and Infrastructure has had a BIM mandate for public projects over $50 million since 2019, however the QPC did not investigate the effects of the BIM mandate.

178. The *Final Report* has a short discussion of modern methods of construction (MMC) such as prefabrication and modular buildings, included in the section on regulation. The MMC program that QBuild and the Office of the Queensland Government Architect manage is a partnership with 12 industry suppliers to supply housing in regional and remote areas, and has produced over 500 houses. The QPC did not report data from QBuild on MMC productivity, costs and time performance, or provide feedback from occupants on the build quality and liveability of their houses, or from users of modular or prefabricated public buildings like schools and hospitals.

PART 7 – OVERALL CONCLUSIONS ON THE MODELLING

179. This report is on the cost benefit modelling in the Queensland Productivity Commission (QPC) report *Opportunities to Improve Productivity of the Construction Industry*. The purpose of the model was to assess the economic impacts of BPICs on government construction projects, and describe the main mechanisms through which BPICs imposed costs and delivered benefits. The *Final Report's* chapter 4 was on BPICs and the cost-benefit model and Appendix C had the assumptions and data. To allow for uncertainty the modelling uses 'high' and 'low' scenarios.

180. The most important component of the modelled impact of BPICs in the calculation of project cost increases was the difference between industry award wages and conditions and those under BPICs. The issue is that actual wages paid under an enterprise agreement are typically higher than the award. Comparing the wage rates under construction enterprise agreements to an "industry standard" of award rates is misleading.

181. Between 2018 and 2025, median weekly earnings in construction for workers under collective agreements were approximately double those for workers on the award rate. The estimated margin varies between 87 per cent and 116 per cent. In heavy and civil engineering construction, the average margin is 96 per cent. Award rates in construction are not relevant to workers on collective agreements.

182. Because there is no comparison with wages under CFMEU enterprise agreements, the QPC has not shown BPIC wages and conditions were not already present in CFMEU pattern agreements. A better comparison would have been the wages and conditions pre- and post-BPIC in Tier 1 enterprise agreements.

183. The *Final Report* compares award wage rates to BPICs wage rates for selected occupations. Because there is no comparison with wages under CFMEU enterprise agreements, the QPC has not shown BPIC wages and conditions were not already present in CFMEU pattern agreements and does not establish their counterfactual that BPICs imposed additional costs. A different counterfactual based on enterprise agreements rather than award rates would have affected the outcome of

the CBA estimates of BPIC costs.

184. The model forecasts the impacts of BPIC over the period 2024-25 to 2029-30, on the assumption that future projects would be under the enterprise agreements signed during the period when BPICs were operational and any future new agreements would be the same or similar to those agreements. This forecast is a hypothetical estimate of future costs.

185. The NPV of the 73 projects in the data is the basis for the wage and cost effects of BPICs, which are calculated as percentages of the value of those projects. Any revision to the total for project expenditure for potential cancelled projects or additional ones will affect the percentage increases due to BPICs. Both removal and addition of projects is highly probable, which adds to the uncertainty of these forecasts and the model results.

186. The probability of the $53 billion of projects under consideration and $15 billion of possible projects included in the BPIC total should have been accounted for. The conventional method of doing that is to apply a probability factor.

187. The spreadsheet for Higher wages contains the ABS multifactor productivity labour share of construction of 20 per cent, but this is not used. Instead, the 23 per cent share from the VURM model is used. A reduction in the labour share of project costs to 20 per cent would decrease the wage impact.

188. The deadweight loss from taxation is the cost of funding any project cost increases. The issue is the appropriate rate to be used, which would be less than the 30 per cent the QPC used for tax financed expenditure, and would be only 5 per cent for debt financing. The effect of adopting a different rate between 15 and 20 per cent on the model's total costs is significant. At 30 per cent, the cost of the estimated higher project costs from BPICs were $1.9 billion in the low scenario and $4.6 billion in the high scenario. At a 5 per cent rate, these would be $233 million in the low scenario and $464 million in the high scenario.

189. Most of the projects in the Project expenditures sheet are for Transport and Main Roads, many of the others are for Health. The deadweight loss from taxation is

based on the total economic value lost by consumers and producers being greater than the tax revenue collected by the government. Over lengthy time horizons, this is typically not the case for the transport and health projects that are the majority of the BPIC projects. The benefits to the community from transport projects (e.g. shorter commuting times) and health projects (e.g. more life years or improved quality of life) are not included in the model, but the loss of benefits from project delays are.

190. The estimate of BPIC project expenditures of $77.5 billion is crucial to the model, because the value of BPIC projects is the basis for the wage and cost effects of BPICs, which are calculated as percentages of the value of BPIC projects. Thus, any revision to the total for project expenditure will affect the percentage increases due to BPICs.

191. The effects on the model of the two scenarios are mainly from the difference between them in project costs and delays. The high scenario has the largest cost effects of BPICs but raises serious questions about some of the assumptions used for project delays, like whether there was any increase in the number of RDOs and the forecast number of productive days lost to weather, because those delays cause a large increase in project costs and have a flow-on effect on indirect costs.

192. Cost increases were 3 per cent and 33 per cent in the low and high scenarios, and project delay times were 17 and 50 per cent. These increased rents, with losses for renters and gains for landlords, and prices, with gains for homeowners selling during the period and losses for first homebuyers. If the increases in project costs and delays are reduced with revisions to the assumptions used for project delays and productivity the modelled housing impacts and impacts on business investment and infrastructure users are also reduced.

193. The difference between the NPV of total benefits and total costs is the net impact, allowing the QPC to come to the conclusion that "BPICs create an estimated net economic cost to Queensland of $5.7 billion to $20.6 billion" (*Final Report*, page 421).

194. The model has a control to "turn off productivity reducing components" that can be set to "Yes" or "No" for the two scenarios. The differences in the outcomes for the two scenarios and two settings is significant. In the low scenario without BPICs the Net impact is only -$1.006 billion, compared to the -$20.558 billion in the high scenario with productivity impacts turned on.

195. The Summary of key assumptions in Table C.1 on page 407 does not include the productivity loss from three Project delays – other, weather, and reduced flexibility, neither do the Key assumptions on pages 405-406 of the *Final Report*. In the high scenario this is 29 per cent, and in the low scenario 8 per cent, and is used to calculate the additional workforce required by BPICs in Workforce estimates. The higher wages to these workers are in the Higher wages worksheet.

196. The QPC found "measured productivity in the Queensland construction industry has been stagnant over the last three decades". There have been short periods of high productivity, notably during the mining boom between 2012 and 2015, but the level of productivity in their analysis from 2021 to 2023 was the same as 2009 to 2011, after the introduction of BPIC in 2018. Both construction productivity and the volume of work done in Queensland declined from 2014, at the peak of the mining boom, but construction productivity in 2023 was the same as in 2019. The decline in construction productivity was not caused by BPIC because it largely occurred before their introduction, and during the period when they were required between 2021 and 2023 the level of productivity was stable.

197. The *Final Report* argues that "project cost escalations provided by stakeholders were consistent with the modelled results, and consistent with previously benchmarked project cost escalations" (page 407), and that the wage assumptions were cross-checked against "public commentary, intelligence gathered by the Commission and outcomes from previous BPICs site builds" (page 410). Nevertheless, the model's assumptions on wages, delays, and tax costs in the high scenario in the model, and their flow-on effects on residential and business investment, can be challenged.

198. The *Final Report* claimed "the key results hold under a wide range of plausible assumptions" and that this was so "under all assumptions tested" (page 113), but

later included the caveats the model is “not intended to provide a precise estimate of actual outcomes” (page 404) and “The results presented in this paper are intended to be illustrative — while all attempts have been made to ensure accuracy, there is significant uncertainty around many of the parameters used in the modelling.” (page 407). These observations show the QPC has reservations about their model.

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ANNEXURE A

Curriculum vitae of Gerard de Valence

GERARD DE VALENCE

CURRICULUM VITAE

CONTACT
Address: [redacted]
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EDUCATION
B. Economics (Hons), University of Sydney 1986.
Knox Grammar School, Sydney.

SHORT BIOGRAPHY

I taught construction economics at the University of Technology Sydney from 1992 to 2020, at the University of NSW from 1993 to 2003, and at the Bartlett School of Construction and Project Management at University College London from 2014 to 2020.

At UTS in the School of the Built Environment I was the founding Course Director of the Master of Real Estate Investment (2015-17) and Course Director of the Master of Property Development (2007-14) and the Master of Facilities Management (2005-07).

In the 1980s, prior to becoming an academic, I worked for the Australian Stock Exchange Research Department and the Property Council of Australia. From 1990-92 I worked for the Royal Commission into Productivity in the Building Industry in NSW.

In the 1990s I worked with the Australian Construction Industry Development Agency, other Commonwealth Government departments and inquiries, the NSW Department of Public Works and Services, and industry associations representing contractors and subcontractors.

Between 2002 and 2011 I was Coordinator of the International Council for Research and Innovation in Building and Construction's research group on Construction Economics.

With Rick Best I was co-editor of the three Building in Value books published between 1999 and 2003: *Pre-design Issues*; *Design and Construction;* and *Workplace Strategies and Facilities Management*, the last with Craig Langston. In 2011 I published *Modern Construction Economics: Theory and Application,* and in 2022 *Creative Destruction and Constructing the Built Environment: From the first industrial revolution to the fourth*

After retiring from academia in 2020 I have contributed chapters to three books and started my *Construction Industry Issues and Policy* Substack. In 2023 I wrote a research paper for the NSW Building Commission on economic and regulatory trends affecting the construction industry.

EMPLOYMENT HISTORY

2014-20 Visiting Scholar and Teaching Fellow at University College London

Senior Lecturer at University College London's Bartlett School of Construction and Project Management, where I delivered the economics subject in their Master of Construction Economics Course and supervised student theses.

Senior lecturer at University of Technology Sydney

From 1992 to 2020 I was employed in the School of the Built Environment at the University of Technology Sydney (UTS) Faculty of Design Architecture and Building. I taught in both the undergraduates and postgraduate courses, and was responsible for subject and course development, course accreditation and management. I was an active researcher, responsible for research management and publication.

2014-17 Director Master of Real Estate Investment Course UTS

Reporting to Head of the School of the Built Environment. Completed the course documentation and approval process for the Master of Real Estate Investment in 2014. The course was developed from the Master of Property Development course.

2005-13 Director Postgraduate Property Course UTS

Reporting to Head of the School of the Built Environment. Direct report a part-time administrative assistant 2005-07. The role had three aspects:

1. Strategic repositioning of the School's Master of Property Development and Master of Planning degrees in 2008, which saw student numbers more than double. These courses were in decline, and consideration was being given to their termination. Restructuring was proposed in 2006 and prepared in 2007 for commencement in 2008, with a new first year combining subjects from the two Masters courses in Planning and Property. This involved development of new subjects and consulting with industry and employers on the new course.

2. Managing the transition to the new course structure and resolving major administrative problems, including articulation and documentation. The transition involved over 300 students and 20 lecturers the administration of over 300 students and coordination of 20 lecturers.

3. Academic development and curriculum development saw five new subjects introduced in the second and third segments of the Property course over three years, with new academics and lecturers from industry recruited.

2003-05 Director Facility Management Course UTS

Reporting to Head of the School of the Built Environment. Direct report a part-time administrative assistant and a part-time research assistant. This was the first online course offered by UTS, with no class teaching and using new technology.

The role required administration and coordination of the students and lecturers, revision of online subject content to better utilize the medium, and introduction of innovative assessment methods for the online environment.

1999-2003 Senior Lecturer UTS

In the Department of Project Management and Economics, reporting to Head of the Construction Economics Program. Direct report a part-time research assistant.

I was a member of the course development group that put together a new B. Construction degree that commenced in 2004 and combined the previous B. Construction Management and B. Construction Economics degrees.

I was co-editor of the three-volume Building in Value series of books: *Pre-design Issues* (1999), *Design and Construction* (2002), and *Workplace Strategies and Facilities Management* (2004).

During this period there was extensive involvement with both State and Commonwealth Government departments and agencies, and with industry associations.

1992-98 Lecturer UTS

In the Construction Economics Department, reporting to Head of Department. I was responsible for managing the transition of subjects from the B. Building (QS) to the new B. Construction Economics in 1996, and development of new subjects with the introduction of new undergraduate and postgraduate courses in construction, property and project management.

During this period there was extensive involvement with both State and Commonwealth Government departments and agencies, and with industry associations.

1990-92 Research Task Leader at Royal Commission into Productivity

The Royal Commission into Productivity in the Building Industry in NSW was headed by Goger Gyles QC. I was a Task Leader in the Policy and Research Division, reporting to the Research Director. Direct reports of up to five research assistants. I was responsible for:

- The report *Productivity and the Australian Construction Industry;*
- Supervising research on the building materials industry, security of payment for subcontractors, and exports;

- Completing and publishing the *Survey on the Effectiveness of Construction Industry Consultants and Service Providers Export Strategies*.

1989-90 Economist at Building Owners and Managers Association

The Building Owners and Managers Association, Sydney, is now the Property Council of Australia. Reporting to the Research Director, I was responsible for economic analysis and
initial work establishing the Commercial Property Performance Index.

1986-89 Analyst at Stock Exchange Research

Australian Stock Exchange Research, Sydney, is the data management subsidiary of the Australian Stock Exchange. I was in the Index Office reporting to the Index Manager, who administered the All Ordinaries Index on a day-to-day basis, and worked as an analyst developing research products and reports.

Previous Employment

1984-86 University study and working part-time for Media Monitors, a firm that monitored newspapers for mentions of their clients.
1981-83 Market Analyst, Continental Commodities Pty. Ltd. Sydney, writing the daily market reports for clients and account management.
1973-80 Account Supervisor for Warner Hill, Sydney, an insurance broker.

CONSULTANCIES AND REPORTS

de Valence. G. 2023. *Transforming NSW Construction: Regulation, Decarbonisation and Digitisation*, Office of The Building Commissioner, NSW.
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Crawford L., Searle, G., de Valence, G., Kelleher, J. and Swivel, M. 1995. *Immigrant Professionals and Internationalisation of Australian Construction Services*, Bureau of Immigration and Population Research, Melbourne.
de Valence, G. 1994. *Providers Study*: *National Survey on Debt Arising From Non-Payment in the Construction Industry*, Construction Industry Development Agency, Sydney.
de Valence, G. 1993. *Measuring NSW Construction Industry Activity*, QS Services, NSW Department of Public Works and Services, Sydney.

INVOLVEMENT IN INDUSTRY POLICY

2004-07	Member of the Facilities Management Association of Australia Education and Training Task Group.
2002	Contributor to Discussion Papers 1, 3 and 7 on Reform Strategies for the Cole Royal Commission into the Building and Construction Industry.

2001	Contributor to *Innovation 2010*, published by the Dept. of Industry, Science and Resources, Canberra.
1997	Participant in the Tendering and Procurement Strategies Workshop, NSW Department of Public Works and Services.
1995-96	Member of the NSW Industry Leaders Forum, established by the Department of Public Works and Services to provide suggestions on construction industry reform policy and its implementation.
1995	Participant in the AIQS (NSW) Strategic Planning Workshop.
1994-95	Participant in the Australian Science and Technology Council Future Needs Study on technology base for information and communications industries.
1992-94	Member of three Construction Industry Development Agency Action Teams: • Security of Payment Action Team • Performance Measurement and Databases Team • Performance Indicators Forum

RESEARCH AND PUBLICATIONS

2002-11 Coordinator of International Research Group

I was Coordinator between 2002 and 2011 of the International Council for Research and Innovation in Building and Construction Working Commission on Building Economics (CIB W55). The CIB was established in 1953 and developed into a world-wide network of over 5000 people from about 500 member organizations who contribute to over 50 CIB Working Commissions covering all fields in building and construction related research. Each Commission has a defined scope, objectives and work program and is chaired by a Coordinator.

Bond University's Centre for Comparative Construction Research

Between 2013 and 2018 I was a participant in the workshops and seminars that led to Rick Best and Jim Meikle's three volume series of books that I contributed chapters to: *Measuring Construction: Prices, Output and Productivity* (2015); *Accounting for Construction* (2019); and *Describing Construction* (2023).

Books

In 2022 *Creative Destruction and Constructing the Built Environment: From the first industrial revolution to the fourth* was published.

I was the editor of *Modern Construction Economics: Theory and Application*, 2011.

I was co-editor with Rick Best of the three-volume Building in Value series of books published between 1999 and 2003: *Pre-design Issues*; *Design and Construction;* and *Workplace Strategies and Facilities Management,* the last with Craig Langston.

Publications Since 2019

I have published many papers, book chapters, and articles. Links to my publications academic can be found on Google Scholar and ResearchGate. A full list of journal papers and book chapters is attached to this CV, and there are dozens of other refereed conference papers and industry magazine articles.

Publications since 2019, without the reports, included above are:

de Valence, G. 2025. Growth, productivity and structural change: Economic arguments for investment in construction innovation, in Dulaimi, M. (ed.) *Research Companion to Innovation in Construction,* London: Edward Elgar Publishing Ltd. pp. 18-46.

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de Valence, G. 2019. Reframing construction within the Built Environment Sector, *Engineering, Construction and Architectural Management*, 26 (5) 740-745.

Every two weeks I post on my Substack called *Construction Industry Issues and Policy* where there are nearly 100 posts going back to 2021 here https://gerarddevalence.substack.com.

PERSONAL INTERESTS

Volunteering

Since January 2024 I have been driving for a local charity called Pink Finss, taking people to their medical appointments. I am rostered on one day a week.

From 1996 to 1999 I was Treasurer of the Mars Society Australia.

Tai Chi

I studied a wide range of martial arts and became a black belt in Taekwondo and Hwarangdo. Until a severe knee injury in 2009, I was an instructor for the UTS Taekwondo Club and referee for State TKD tournaments.

I was taught Yang style Tai Chi by Howard Choy, and teach a Sunday morning Tai Chi class at a local Pilates studio, where I go three times a week.

Gardening

We live on acreage outside Sydney that I maintain, and I have a particular interest in Australian native plants.

Reading and Writing Book reviews

I have a Substack called *Non-Fiction Book Reviews* where I do a review once a month here https://nonfictionreviews.substack.com

REFEREES

Available on request.

PUBLICATIONS

Journal Articles

de Valence, G. 2022. Situating MMC Within Technological Adoption: Can government and industry work together to develop policies and roadmaps for adopting emerging technologies? *Buildings & Cities*, November.

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de Valence, G. and Lauge-Kirstensen, R. 1998. Views on industry structure, *Form/Work*, Vol. 1: 2, 77-88.

de Valence, G. 1993. Insuring construction project risk: What price surety bonds?, *Land Economics Review*, Vol. 4, No. 1, 42-50.

de Valence, G. 1990. Benchmark for the property market, *JASSA*, Vol. 3, No. 4.

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ANNEXURE B

Letter of instruction provided by Gordon Legal, dated 4 September 2026

4 September 2026

Brad Annson
Partner
E: [redacted]

Lana Dennis
Legal Administrator
E: [redacted]

Ref: 017188

Mr Gerard de Valence
Construction Economics Research

By email only: [redacted]

Dear Mr de Valence

Letter of Instruction — report on the Queensland Productivity Commission modelling

Introduction

1. We act for the Administrator of the Construction and General Division of the Construction, Forestry and Maritime Employees Union (**the Administrator**).

2. This letter records your instructions to prepare a report for the purposes of the Commission of Inquiry into the CFMEU and Misconduct in the Construction Industry (**the Commission**).

3. A list of the material provided to you is set out at **Annexure A**. To the extent material listed at Annexure A has not already been provided to you, it is enclosed with this letter.

4. The two model workbooks were produced in a locked form. The Commission has provided the password, which has been given to you separately. If for any reason you are unable to access or operate the workbooks, please tell us as a matter of urgency.

5. The Administrator has made a request for the weather transformation code, the derivation of the wage escalation parameters, the QPC's peer review of the modelling, and the material against which the project cost estimates were benchmarked. That request is outstanding. We will provide you with an update in due course.

The Inquiry and the issue

6. The Commission is inquiring into, among other things, whether a code of practice should be recommended for Queensland government funded construction work, and whether a regulator should be established to enforce it. Counsel Assisting have made submissions in support of such a recommendation (**Counsel Assisting's submissions**). These submissions are listed at Annexure A.

7. In support of those submissions, Counsel Assisting rely upon the work of the Queensland Productivity Commission (**QPC**) in two ways. First, upon the QPC's cost-benefit modelling of the Best Practice Industry Conditions (**BPIC**), which it submits produce a direct cost of up to $19.9 billion and a net economic cost of between $5.7 billion and $20.6 billion. Second, upon the QPC's own recommendation that the Building and Construction Code of Practice 2000 be updated or a new code developed. In opening, Counsel Assisting also relied upon the QPC's finding that productivity in the Queensland construction industry has declined by approximately 9 per cent since 2018.

8. The Administrator filed submissions on 14 August 2026 which address that material at Part C6 (**Administrator's submissions**). These submissions are listed at Annexure A.

9. The Administrator has been given leave to file further material in light of the QPC material subsequently produced, and your report is intended for that purpose.

Your role and your duties

10. You are engaged to provide an independent expert opinion. Your paramount duty is to assist the Commission impartially on matters within your expertise. That duty is owed to the Commission and prevails over any obligation to the Administrator or to us.

11. We enclose a copy of Part 5, 'Expert Evidence' and schedule 1C, 'Code of conduct for experts' (**code of conduct**) of the *Uniform Civil Procedure Rules 1999* (Qld). The Commission of Inquiry is not bound by court rules of procedure or evidence. However, Part 5 and schedule 1C represent the recognised professional standard for expert witnesses in Queensland and articulate the fundamental duties of an expert witness.

12. We ask that you read both Part 5 and schedule 1C. We also ask that you confirm in your report that you agree to be bound by the code of conduct.

13. You should proceed on the basis that:

    (a) the Administrator intends to tender your report in the Commission and that it will be made available publicly on the Commission's website.
    (b) you will be required to give oral evidence in the Commission and will be cross-examined upon your report. It follows that the report must be your own work, that each figure must be one you have checked, and that your method must be disclosed.
    (c) the instructions and material given to you, any notes made by you or on your behalf, and the record of any calculation or model run carried out by you, may be required to be produced to the Commission.

14. Please retain your working papers, including any version of the model as run by you, and any spreadsheet or calculation prepared in the course of the work.

Confidentiality

15. The QPC material is subject to a non-publication and confidentiality order made by the Commissioner. The material must not be communicated to any person, published or made publicly available. The order is listed at Annexure A.

16. The order permits the material to be provided to you for the sole purpose of assessing whether, and if so what, additional material is to be submitted to the Commission by the Administrator. Your use of the material is confined to that purpose.

17. The order expires upon the tender of material at a public hearing of the Commission, but only in relation to the material tendered. Until then you should prepare the report on the footing that the QPC material remains confidential.

Matters to be addressed in the report

18. We ask you to address the questions set out at **Annexure B.**

19. If a question falls outside your expertise, please say so. If a question cannot be answered on the material presently available, please say that as well, and identify what would be required to answer it.

20. If you consider that any question is wrongly framed, that it proceeds upon an incorrect premise, or that a question ought to be asked which has not been, please tell us. Please also record that fact in the report.

Form of the report

21. The report should be addressed to the Commissioner and signed by you.

22. The report must include the following information:

    (a) Your qualifications, including your CV;
    (b) All material facts, whether written or oral, on which the report is based;
    (c) Your reasons for each opinion expressed in the report;
    (d) References to any literature or material relied on by you to prepare the report;
    (e) For any inspection, examination, or experiment conducted, initiated or relied on by you to prepare the report:
        (i) A description of what was done;
        (ii) Whether the inspection, examination or experiment was done by you or under your supervision;
        (iii) The name and qualifications of any other person involved; and
        (iv) The result;
    (f) If there is a range of opinion on matters dealt with in the report—a summary of the range of opinion, and the reasons why you adopted a particular opinion;
    (g) If you believe the report may be incomplete or inaccurate without a qualification—the qualification;
    (h) A summary of your conclusions;

(i) A statement about whether access to any readily ascertainable additional facts would assist you in reaching a more reliable conclusion.

23. If you believe an opinion expressed in the report is not a concluded opinion, the report must state, where the opinion is expressed, the reason for your belief.

24. You must confirm in the report that:

(a) you have read, and agree to be bound by schedule 1C, 'Code of conduct for experts' of the *Uniform Civil Procedure Rules 1999* (Qld);
(b) the factual matters stated in the report are, as far as you know, true;
(c) you have made all inquiries that you consider appropriate;
(d) the opinions stated in the report are genuinely held by you;
(e) the report contains reference to all matters you consider significant; and
(f) you understand your duty to the Commission and that you have complied with that duty.

Timetable

25. We ask for a draft report by **Friday, 11 September 2026**.

26. The date presently fixed by the Commission for the filing of further material is 4pm on Monday, 21 September 2026. The Administrator has applied for an extension. That application has not yet been determined. You should proceed on the footing that the present date stands.

27. If, upon operating the model, any result is materially different from what you presently anticipate, we would be grateful if you could contact us as soon as possible.

Fees

28. Please confirm your hourly rate and provide an estimate of your fees for the work described in this letter. Please notify us before any material departure from that estimate.

Please contact us if any aspect of these instructions is unclear or you wish to discuss. We are grateful for your assistance.

Yours faithfully

[redacted]

Brad Annson
Partner
Gordon Legal

ANNEXURE A – MATERIAL

A. The QPC material produced under Notice 26618 — subject to the non-publication order

1. Two page document addressed to Mr Stuart John Wood AM KC by the QPC titled "Letter – Commission of Inquiry (Documentation Request) – July 2026"

2. Document produced by the QPC titled "Attachment A CoI Notice 26618"

3. Document produced by the QPC titled "Attachment B CoI Notice 26618"

4. Document produced by the QPC titled "Appendix C Modelling of BPICs"

5. Excel spreadsheets containing SQM data titled: "2023-1" to "2023-12"; "2024-1" to "2024-11" and "backseries"

6. Locked Excel workbook titled "BPICs model used in QPC construction inquiry – wage_impacts_removed"

7. Locked Excel workbook titled "BPICs model used in QPC construction inquiry – main version"

8. Excel workbook titled "DAE_IMU_202412"

9. Excel workbook titled "DES_weather_station_data"

10. The password for the locked workbooks, provided separately

11. Written submissions to the QPC:

    (a) Document produced by Roads Australia titled "Roads Australia Submission on Queensland Infrastructure Reforms"
    (b) Document produced by Workforce Advisory Pty Ltd titled "Opportunities To Improve Productivity Of The Construction Sector"
    (c) Document produced by Australian Flexible Pavement Association titled "Australian Flexible Pavement Association Response to Queensland Productivity Commission Inquiry"
    (d) Document produced by Queensland Renewable Energy Council (QREC) titled "Considerations for QPC Construction Inquiry"
    (e) Document produced by Queensland Council of Unions titled "Improving Productivity in the Construction Industry"
    (f) Document produced by Master Builders Queensland titled "Re-building Productivity: Preliminary Submission to the Queensland Productivity Commission"
    (g) Document produced by Master Electricians Australia titled "Opportunities to Improve Productivity of the Construction Industry – Response to Interim Report"

(h) Document produced by QEAS (Queensland Economic Advocacy Solutions) for Master Builders Queensland titled "Economic Analysis of the Impact of the CFMEU Queensland EBA on Queensland Apartment Construction Prices 2024"
(i) Document produced by Australian Constructors Association titled "Nailing Construction Productivity – Submission to the Queensland Productivity Commission"
(j) Document produced by Civil Contractors Federation Queensland Limited titled "Opportunities to Improve Productivity of the Construction Industry – Interim Report Response"
(k) Document produced by Queensland Major Contractors Association (QMCA) titled "Building & Construction Industry Productivity Issues Paper"

B. Commission material

12. Non-publication and confidentiality order made 21 August 2026, as varied 26 August 2026

13. Counsel Assisting's opening submissions, *The case for the introduction of a code of practice and an independent regulator*

14. Counsel Assisting's further submissions filed 3 July 2026

15. The Administrator's submissions filed 14 August 2026

16. Statement of Ms Deanne Hawkwood dated 3 July 2026, together with Annexures DH-38, DH-39 and DH-40. The analysis prepared by KPMG of BPIC major project costs is Annexure DH-40, which starts at stamped page 407 (page 474 of the PDF).

C. Published QPC reports

17. Final Report dated 24 October 2025

18. Interim Report dated 31 July 2025

D. Procedural

19. Chapter 11, Part 5 and schedule 1C, *Uniform Civil Procedure Rules 1999* (Qld)

ANNEXURE B – MATTERS TO BE ADDRESSED IN REPORT

We ask that you address the questions set out below in your report. They are not intended to dictate the structure of the report, which we leave to you.

Part 1 – Cost-benefit analysis of the kind undertaken by the QPC

1. What is a cost-benefit analysis of the kind undertaken by the QPC?

2. What is an analysis of that kind capable of establishing?

3. What are the limits of this kind of cost-benefit modelling? In answering, address how such an analysis treats costs and benefits which are not readily quantified, and what follows for the reliability of a single net figure derived from it.

4. Please identify any other matter concerning the nature, use or limits of cost-benefit analysis that you consider relevant to the Commission.

Part 2 – The QPC model

5. What is the purpose of the QPC's model and what does it measure?

6. Appendix C of the Final Report states at page 405 that "all impacts are measured against a counterfactual, which is a world without BPICs":

   (a) How is that counterfactual constructed in the model?
   (b) Is it an appropriate counterfactual?
   (c) If not, what comparison would be appropriate?
   (d) What would be the effect upon the modelled outcome of adopting a different counterfactual?

7. The model forecasts the impacts of BPIC over the period 2024-25 to 2029-30, on the QPC's express assumption that "no pause had occurred" (page 111). BPIC was suspended on 14 November 2024. What follows for the modelled figures, and for their use as an estimate of cost incurred?

Part 3 – The project expenditures

8. Appendix C of the Final Report sets out the methodology by which projects were brought into scope, and records that approximately $77 billion of Queensland Government projects is assumed to be in scope (page 408). What is the significance of the project expenditure total to the model?

9. What proportion of the total is accounted for by projects not yet commenced or not yet committed, and what follows?

10. Appendix C of the Final Report records that $7.1 billion of Olympic and Paralympic Games projects were included, sourced from an investment monitor which predates

the Games Independent Infrastructure and Coordination Authority's review (page 408). The Queensland capital works program must accommodate the Olympics program over the period modelled:

(a) What effect, if any, does that have upon the projects included in the model?
(b) What effect, if any, does that works program have upon the availability of labour?
(c) Has the model accounted for it?

Part 4 – The assumptions and their components

11. As to the assumptions:

(a) What assumptions does the model rely upon?
(b) How were they derived?
(c) How, if at all, were they tested?

12. What is the significance of the QPC's approach to the assumptions for the reliability of the modelled outcomes?

13. Which of the assumptions, if altered to other values defensible on the material, materially change the result, and by how much?

14. The Final Report states that "the key results hold under a wide range of plausible assumptions" and that this was so "under all assumptions tested" (page 113). Having operated the model, what do you say about that?

Wage impacts

15. As to the wage impacts:

(a) Against what rates is the wage effect of BPIC measured?
(b) Is that comparison appropriate?
(c) How is the wage effect converted into project costs, what share is applied?
(d) What alternative shares, if any, does the model itself contain?
(e) What is the significance of those choices to the modelled outcome?
(f) The QPC re-ran the model with wage impacts removed. What does that exercise in fact remove, and what follows from its results?

16. Appendix C of the Final Report records that "project cost escalations provided by stakeholders were consistent with the modelled results, and consistent with previously benchmarked project cost escalations" (page 407), and that the wage assumptions were cross-checked against "public commentary, intelligence gathered by the Commission and outcomes from previous BPICs site builds" (page 410). What is the significance of this?

17. Ms Deanne Hawkwood, Chief Procurement Officer at the Department of Transport and Main Roads (**DTMR**) has provided a statement to the Commission. Her statement

annexes as Annexure DH-40 an analysis prepared by KPMG of BPIC major project costs. A copy of that analysis is enclosed. What bearing, if any, does that analysis have upon the wage assumptions adopted in the model?

18. Appendix C of the Final Report records that BPIC conditions could "potentially have a positive impact on workplace productivity", that the literature on unions and productivity "is mixed", and that unions "may enhance productivity where they promote workplace harmony, reduce turnover or allow improved communication" (page 414). Table C.8 on page 414 then assumes a productivity impact of plus 1 per cent (low) and minus 1 per cent (high):

    (a) Does the model treat the level of wages and the level of productivity as related to one another?
    (b) Is that treatment consistent with the economic literature?
    (c) What is the direction and, if it can be estimated, the magnitude of the effect upon the modelled outcome?

Workplace safety

19. The Final Report provides that the estimated benefits from increased safety are negligible, making up less than 0.2 per cent of the benefits accruing to construction workers (page 420) and records that "no evidence of improved safety outcomes was provided to the Commission" (page 408):

    (a) What does the model assume as to safety?
    (b) How is that assumption valued?
    (c) What does the model imply as to safety outcomes if BPIC does not operate?
    (d) What follows from the treatment of safety in the model?

Deadweight loss from taxation

20. Appendix C of the Final Report records that it is assumed that the excess burden of taxation is 30 cents per dollar (page 406):

    (a) What is deadweight loss from taxation?
    (b) Why is it included in an analysis of this kind?
    (c) What is the effect upon the outcome of adopting a different rate?
    (d) To which components of the analysis is it applied, and to which is it not?

Labour shortages and the residential market

21. Appendix C of the Final Report records that "the modelling assumes a 1 per cent decline in workforce causes residential construction times to increase by 2 per cent" (page 415), and that "to the best of the Commission's knowledge there are no empirical studies examining the relationship between trades shortages and construction times" (footnote 79):

    (a) How is that parameter applied in the model?

(b) What is its significance to the modelled housing impacts and to the net figure?
(c) What follows from the absence of an empirical basis for it?

Business investment and infrastructure users

22. Appendix C of the Final Report records that "the Commission has not received to date any robust market intelligence to guide modelling assumptions" for business investment (page 418). How are the business investment impacts estimated, and what follows?

23. The Final Report records that "ideally, the impact of project delays would be estimated on a case-by-case basis" but that doing so was "beyond the scope of this analysis" (page 419), and that costs to infrastructure users were instead estimated by applying a single average benefit-cost ratio of 1.2 to all projects over a twenty year horizon, drawn from Infrastructure Australia's annual performance statement (Table C.13 on page 419):

(a) What does that approach assume about the benefits the projects deliver?
(b) What is its significance to the modelled outcome?

Uncertainties

20. How does the model account for the possibility that costs and benefits will differ from those modelled because of economic conditions, inflation, movements in construction costs, or other influences?

Assumptions – other matters

21. To the extent not addressed above, is there any other assumption upon which the model depends which you consider material to the modelled outcome? For each such assumption, upon what does it rest, and what is its significance?

Part 5 – Operation of the model

22. The Final Report models a low and a high scenario:

(a) What are these two scenarios?
(b) What causes the difference in outcome between them?
(c) Is the high scenario the product of setting each assumption simultaneously to its least favourable value? If so, what follows?
(d) Is there a basis in the material for preferring one scenario over the other?
(e) What does the range indicate as to the reliability of any single figure drawn from the model?

23. The model contains a medium scenario, which is not reported:

(a) What does it produce?
(b) What is the significance, if any, of the medium scenario?

24. The model contains a control described as "turn off productivity reducing components":

    (a) What does the control do?
    (b) What outputs does the model produce when it is operated?
    (c) What impact, if any, does this control have on the counterfactual?

Part 6 – The modelled benefits, costs and net impacts

25. Tables C.15 to C.17 of the Final Report at pages 420-422 record the modelled benefits, costs and net impacts by group:

    (a) What do those figures represent?
    (b) What do they not represent?
    (c) What does the $19,856 million recorded as the cost to taxpayers comprise, and what does it show?

26. Appendix C of the Final Report records that "not all direct and indirect impacts have been estimated" and that the excluded impacts "are unlikely to significantly change the results of the modelling" (page 408). What costs or benefits does the model not capture, and what would their inclusion do to the net figure?

27. Appendix C of the Final Report records that "no assessment has been made of individual projects" and that "impacts are assumed to play out uniformly across all sites" (page 408). What follows for the use of the modelled figures in relation to any particular project?

Part 7 – Productivity

28. What is "measured productivity" as the QPC uses that term?

29. What does measured productivity show, and what does it not show?

30. The QPC compares construction productivity with productivity in the market sector. Is that an appropriate comparison?

31. The QPC's figure is not published by the ABS at State level:

    (a) From the sources the QPC cites, can its estimate be reproduced?
    (b) What published sources bear on the question which the QPC did not use?
    (c) What follows for the reliability of the estimate?

32. The Final Report records that productivity in the Queensland construction industry has declined by around 9 per cent since 2018, while noting that structural changes make recent changes in productivity difficult to assess (page 84). Do you agree?

33. To the extent that there has been a decline, can the decline be attributed to BPIC?

34. What other factors could explain a movement of that kind? Which of them has the QPC tested for, and which has it not?

Part 8 – Overall conclusions on the modelling

35. Taking the model as a whole:

    (a) What does it do well?
    (b) What deficiencies, if any, does it have?
    (c) What is the significance of each?

36. Counsel Assisting rely upon the QPC's modelling as providing "particularly compelling support" for evidence given by an industry participant as to the cost impacts of BPIC, and rely upon it for a direct cost of up to $19.9 billion and a net economic cost of between $5.7 billion and $20.6 billion. The QPC describes its own analysis as "stylised" (page 111) and its results as "intended to be illustrative" (page 407). What weight can properly be placed upon the modelling for those propositions?

Part 9 – Other matters

37. Is there anything advanced in Part C6 of the Administrator's submissions which, on your examination of the material, is wrong or overstated or should be refined in light of the QPC material?

38. Is there any other matter arising from your examination of the material which you consider the Commissioner should be aware of?

ANNEXURE C

Paper prepared by Professor Emeritus David Peetz PhD FASSA, dated 20 September 2026, titled 'Median weekly pay rates of employees paid under collective agreements and awards, construction industry, Australia'

Median weekly pay rates of employees paid under collective agreements and awards, construction industry, Australia

The Australian Bureau of Statistics (ABS) collects data on employees' rates of pay, their method of payment and other matters from employers, using a survey undertaken usually every second May. The main public release has been through the ABS Employee Earnings and Hours (EEH) publication.[1] More detailed data are available through the ABS TableBuilder facility. TableBuilder is a portal operated by the ABS that allows users access to detailed unit record information for statistical analysis without breaching confidentiality. Registered users log on remotely and are able to create, save and download tables.[2] When a cell requested by a user has too few observations for it to be reliable, or to preserve confidentiality, the cell is shown as a zero or "np" (not published) and the data are not available.

The data below were obtained through TableBuilder. The population is employees in the construction industry across Australia as a whole who are paid either according to the relevant award or to a collective agreement. It is broken down into the three construction sub-divisions. 'Building construction' includes construction of residential plus non-residential commercial and industrial buildings. 'Heavy and civil engineering construction' includes construction of roads, bridges, electrical machinery, power lines and power plants, jetties, mine sites, oil refineries, railways, sewage, towers, tunnels, and water filtration plants, amongst other major items. 'Construction services' includes land development, demolition, earthmoving, concreting, bricklaying, roofing, silo erection, plumbing, air conditioning, electrical installation, elevators, carpeting, glazing, landscaping and other related services. The tables only show data relating to workers whose pay rates are determined by an industrial instrument — that is, by the relevant award or collective agreement, so they exclude those whose pay is governed by 'individual arrangements' and, of course, non-employees such as contractors.

As the data come from surveys, the findings for any one year, particularly at the industry level (where cell sizes are smaller), can be significantly affected by sampling error. Thus, when interpreting data, it is more useful to focus on the average shown over several years, rather than the results for a single year or the differences between two particular years.

Table 1 shows the ABS estimates of the median of weekly ordinary time cash earnings in the construction division, and the three industry sub-divisions within construction, in each of the years 2018, 2021, 2023 and 2025, along with a simple average of those years' estimated values. The data are from the EEH survey via TableBuilder.

They show that, on average, median weekly earnings in the construction division for workers under collective agreements (CAs) are approximately double those for workers receiving the award rate. The estimated margin varies between 87% and 116%, across the four observations

In each of the four years, instrument-dependent workers in heavy and civil engineering construction have higher average earnings than those in building construction. The former group have much higher CA coverage than the latter. Indeed, in two of the four recent years for which the ABS collected these data, the number found on the award rate in heavy and civil engineering construction was so small that ABS did not publish the data in TableBuilder. So, one reason why the CA rate is higher across construction is that there are proportionately more CA employees than award employees in the heavy and civil engineering construction sub-division, compared to the building construction sub-division. It is not, however, the main reason.

[1] https://www.abs.gov.au/statistics/labour/earnings-and-working-conditions/employee-earnings-and-hours-australia/latest-release
[2] https://www.abs.gov.au/statistics/microdata-tablebuilder/tablebuilder

At each sub-division level, CA employees also received higher earnings than award employees. In the sub-industry building construction, employees under collective agreements get median earnings 75% higher than those getting the award rate. In the other construction sub-industry for which four years of data are available, construction services, the gap is 123%. In heavy and civil engineering construction, the average margin across the two years for which data are available is 96%. Clearly, the award rates in construction are of little relevance to workers on collective agreements.

Table 1 Weighted median of weekly ordinary time cash earnings of employees paid by awards or collective agreements, ($), Construction, Australia, 2018-2025

Year	ANZSIC 2 digit (Sub-division)	Award only	Collective agreement	Weighted average, award and collective agreements	margin: collective agreement over award
2025	30 Building construction	1053.70	1873.40	1291.00	78%
	31 Heavy and civil engineering construction	888.20	1925.00	1806.50	117%
	32 Construction services	1000.60	2178.70	1418.70	118%
	Total construction	998.50	2033.10	1512.80	104%
2023	30 Building construction	818.10	1473.90	925.90	80%
	31 Heavy and civil engineering construction	NA	1879.90	1801.50	NA
	32 Construction services	926.10	2126.80	1330.00	130%
	Total construction	917.40	1985.80	1361.70	116%
2021	30 Building construction	911.90	1472.80	974.20	62%
	31 Heavy and civil engineering construction	NA	1776.90	1779.60	NA
	32 Construction services	895.30	1675.00	1207.70	87%
	Total construction	893.10	1669.00	1200.70	87%
2018	30 Building construction	795.00	1447.00	1125.80	82%
	31 Heavy and civil engineering construction	873.60	1528.50	1358.60	75%
	32 Construction services	681.60	1821.60	1100.80	167%
	Total construction	743.00	1551.00	1183.60	109%
average	30 Building construction	894.68	1566.78	1079.23	75%
	31 Heavy and civil engineering construction(a)	880.90	1726.75	1582.55	96%
	32 Construction services	875.90	1950.53	1264.30	123%
	Total construction	888.00	1809.73	1314.70	104%

Source: ABS Employee Earnings and Hours, TableBuilder, https://tablebuilder.abs.gov.au/webapi/jsf/tableView/tableView.xhtml
NA Not available
(a) simple average of 2018 and 2025 only, due to the absence of award data for 2021 and 2023. For other industries the simple averages are of the four years shown in the table.

To understand the non-publication of earnings estimates for award employees in the heavy and civil engineering construction sub-division, we can turn to Table 2. This table shows the estimated number of employees paid by awards or collective agreements in the construction division across Australia, in each of the four years shown in Table 1, in the EEH survey. It should be noted at this point that the EEH is not the ABS preferred source for the number of employees in each industry.

Instead, the ABS prefers the monthly labour force survey as the source of estimates of the number of employees at the national and, once a quarter, at the industry level. This preference is for statistical reasons and is associated with the way the EEH sample is drawn, but the LFS also has a large advantage in terms of frequency. However, the EEH survey is the ABS preferred source of data on rates of pay (due to source reliability) and is its only source on rates of pay by method of setting pay.

The data show that, across the four surveys, an average of little more than 5,000 employees in the heavy and civil engineering construction industry were paid the award rate. This is approximately one seventh the number in that sub-division who were paid the collective agreement rate.

Table 2: Estimated number of employees paid by awards or collective agreements ('000), construction, Australia, 2018-2025

Year	ANZSIC 2 digit (Sub-division)	Award only	Collective agreement
2025	30 Building construction	17.6	14.3
	31 Heavy and civil engineering construction	7.1	42.6
	32 Construction services	93.9	112.4
	Total construction	118.5	168.2
2023	30 Building construction	22.2	10.0
	31 Heavy and civil engineering construction	NA	43.1
	32 Construction services	102.6	97.2
	Total construction	129.9	150.2
2021	30 Building construction	34.7	18.4
	31 Heavy and civil engineering construction	0.5	25.8
	32 Construction services	73.7	80.4
	Total construction	109.2	124.3
2018	30 Building construction	29.8	27.0
	31 Heavy and civil engineering construction	8.9	42.9
	32 Construction services	72.7	102.7
	Total construction	110.3	172.4
average	30 Building construction	26.1	17.4
	31 Heavy and civil engineering construction(a)	5.5	38.6
	32 Construction services	85.7	98.2
	Total construction	117.0	153.8

Source: ABS Employee Earnings and Hours, TableBuilder, https://tablebuilder.abs.gov.au/webapi/jsf/tableView/tableView.xhtml
NA Not available
(a) simple average of 2018, 2021 and 2025 only, due to the non-publication of award data for 2023. However, this exclusion is likely to make minimal difference to the average estimate.

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