

14 December 2021

Review of the essential works list, nexus, efficient design and benchmark costs for local infrastructure

Independent Pricing and Regulatory Tribunal

PO Box K35
Haymarket Post Shop
SYDNEY NSW 1240

Dear Ms Ogilvy

NSROC Submission to IPART on the Review of the essential works list, nexus, efficient design and benchmark costs for local infrastructure – Draft Report

Northern Sydney Regional Organisation of Councils (NSROC) appreciates the opportunity to make a submission to IPART on the Review of the essential works list, nexus, efficient design and benchmark costs for local infrastructure – Draft Report.

NSROC strongly objects to the inclusion of the following constraint in the Terms of Reference for this review. *‘The essential works list must not expand beyond the current parameters and community facilities works must not be included.’* This is an unnecessary limitation on IPART. It has significantly fettered the independent consideration and identification of the most effective policy settings to support Councils’ capacity to provide communities with much needed infrastructure.

Government has not provided a compelling justification for excluding critical community infrastructure from being part-funded through contributions from demand generating development.

NSROC is firmly of the view that:

- Councils require sustainable ongoing funding to deliver the NSW government priorities for open spaces and community placemaking;
- The reforms must not shift the cost of additional community infrastructure from new development to the existing community;
- The essential works list should not apply to developer contribution (s7.11) plans. Councils are best placed to understand the infrastructure needs of their communities and plans are developed with significant public consultation.
- The proposed benchmark costs do not reflect the complexity, nature or items typically delivered in NSROC brownfill and infill environments. Councils are best placed to estimate efficient project costs taking into account the local context.
- Councils should be given flexibility to spend infrastructure contributions consistent with that available to the NSW Government expenditure of the Regional Infrastructure Charge (RIC). However, both levels of government should be required to demonstrate the principle of nexus for the works proposed.

NSROC engaged Mitchell Brandtman (expert quantity surveyors) to review IPART’s proposed benchmark costs. Their response is attached to this submission. Importantly, Mitchell Brandtman have confirmed that contribution planning estimates completed within NSROC are well planned, documented, more complex in nature and cost more than comparable scope of work adopted in the Cardo Report. The level of detail and appropriateness of Cardo’s scope of works and rates do not reflect the items commonly included in NSROC contribution plans which are delivered in brownfield and infill environments.

NSROC contribution plans include a high degree of upgrading existing infrastructure in an existing environment to accommodate a growth in population in lieu of providing new infrastructure. Examples include underground water storage basins, small pocket parks and upgrading existing playing fields (particularly given the lack of land for new green playing fields).

NSROC's response to the questions raised in IPART's Draft Report are attached. NSROC member councils would welcome further engagement on these matters as the new policy settings are being finalised. If you require further information, please don't hesitate to contact me on [REDACTED] or [REDACTED]

Yours sincerely

[REDACTED]
Dr Meg Montgomery
Executive Director NSROC

Submission

IPART Review of the essential works list, nexus, efficient design and benchmark costs for local infrastructure – Draft Report

14 December 2021

Prepared by Northern Sydney Regional Organisation of Councils

Member Councils: Hornsby Council
 Hunter's Hill Council
 Ku-ring-gai Council
 Lane Cove Council
 Mosman Council
 North Sydney Council
 City of Ryde Council
 Willoughby City Council

Contact: Dr Meg Montgomery
 Executive Director, NSROC

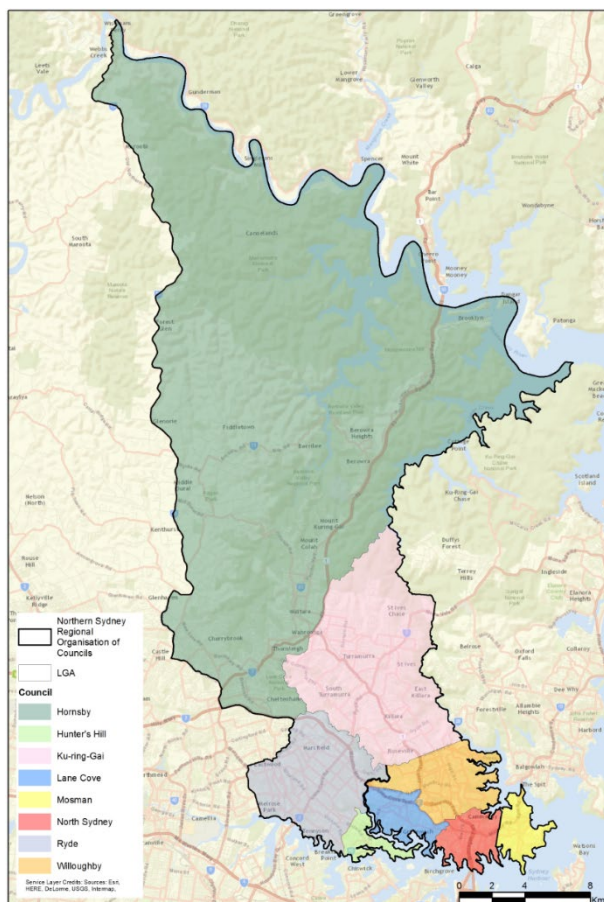


Introduction

The Northern Sydney Regional Organisation of Councils (NSROC) is pleased to make this submission to the Independent Pricing and Regulatory Tribunal's Review of the essential works list, nexus, efficient design and benchmark costs for local infrastructure – Draft Report.

The Northern Sydney Regional Organisation of Councils (NSROC) is a voluntary association of eight local government authorities in Sydney. NSROC assists member councils to collaborate on key issues and activities to develop regional solutions that generate benefits – social, environmental and economic – for their communities and for the region as a whole.

NSROC member councils service an area extending from the Hawkesbury River in the north to Sydney Harbour in the south, west to Meadowbank on the Parramatta River, as shown in Map 1.



Map 1: Northern Sydney Regional Organisation of Councils area

The eight NSROC member councils are:

- Hornsby Shire Council
- Hunter's Hill Council
- Ku-ring-gai Municipal Council
- Lane Cove Council
- North Sydney Council
- Mosman Municipal Council
- City of Ryde
- Willoughby City Council.

The Gross State Product (GSP) for NSROC is estimated at \$70.24 billion, or around 13% of the state's GSP (economy.id, 2020). The economy altogether provides over 400,000 jobs (NIEIR, 2020).

The Northern Sydney Region, as an established region, is experiencing residential densification and demographic change. In 2020, the NSROC Region had an Estimated Resident Population of 655,817 (profile.id), representing 8% of the NSW total, with a population density of 10.26 persons per hectare.

Forecast population growth in the Northern Sydney region is lower than for other regions of Sydney. The region has limited new release development areas and faces considerable cost constraints in sourcing land for community infrastructure. As at June 2018, the median house price in the region was 144% more than the state average (profile.id).

IPART was unreasonably constrained in its review of the Essential Works List.

NSROC strongly objects to the inclusion of the following constraint in the Terms of Reference for this review. *'The essential works list must not expand beyond the current parameters and community facilities works must not be included.'* This is an unnecessary limitation on IPART. It has significantly fettered the independent consideration and identification of the most effective policy settings to support Councils' capacity to provide communities with much needed infrastructure.

Furthermore, government has not provided a compelling justification for excluding critical community infrastructure from being part-funded through contributions from demand generating development.

NSROC is firmly of the view that:

- Councils require sustainable ongoing funding to deliver the NSW government priorities for open spaces and community placemaking;
- The reforms must not shift the cost of additional community infrastructure from new development to the existing community;
- The essential works list should not apply to developer contribution (s7.11) plans. Councils are best placed to understand the infrastructure needs of their communities and plans are developed with significant public consultation.
- The application of the essential works list restricts the provision of public domain improvements which are essential to the creation of livable, connected and accessible communities.
- The proposed benchmark costs do not reflect the complexity, nature or items typically delivered in NSROC brownfill and infill environments. Councils are best placed to estimate efficient project costs taking into account the local context.
- Councils should be given flexibility to spend infrastructure contributions consistent with that available to the NSW Government expenditure of the Regional Infrastructure Charge (RIC). However, both levels of government should be required to demonstrate the principle of nexus for the works proposed.
- Developer contributions should revert from COVID-19 measures and be paid prior to the construction certificate stage

Responses to the list of issues for stakeholder comment in the IPART draft report

1. *Do you think our proposed principles-based approach to the EWL, as part of our broader framework incorporating efficient design and delivery and benchmark costs, provides enough certainty? Have we got the balance right between flexibility and certainty?*

IPART states that keeping the EWL broadly defined provides opportunities for councils to put forward innovative and cost-effective solutions. However, clarity and certainty are also a major consideration for councils in deciding whether to embark on a time- and resource-consuming s7.11 plan preparation.

The proposed EWL, apart from the group terms, is proposed to vary according to the characteristics of the area concerned. This will mean councils will have to prove what essential infrastructure is. The choice of embarking on the rigorous efficient design / benchmark costs process is fraught when it is not clear who will be checking that the process is being properly followed.

The limited Terms of Reference IPART was provided is understood, however there remains uncertainty for a number of specific categories of works, in particular public domain works, recreation centres and carparking. These are items which several NSROC councils currently levy for in the s7.11 contributions plans.

Definitions around the key terms in the proposed EWL would aid understanding of the implications. For instance, what are 'community facilities'? say compared to 'recreation facilities' – the latter in many cases would be provided on open space. Removing the description of base level embellishment from the EWL has made it unclear whether facilities such as indoor recreation facilities could be included in 'open space'.

2. *Is the proposed evidence to establish nexus for infrastructure in a contributions plan appropriate and reasonable? Is there any other guidance on nexus for local infrastructure that should be included in an updated practice note to assist councils, developers and other stakeholders in preparing and assessing contributions plans?*

Advice and guidance on establishing nexus must be consistent with and provide detail to the legislative scheme. Currently, IPART's advice on establishing nexus for different categories of infrastructure is high level, and of little use in determining fair and reasonable apportionment of costs in infill as distinct from greenfield development circumstances and contexts. For example:

- How should costs of traffic network upgrades be shared when new development tips an intersection level of service from satisfactory to unsatisfactory? Or should the development pay for the full cost of the upgrade because, but for the development, no upgrade would be required?
- In many infill contexts the road network performance has reached saturation, the network performs poorly without any new development and road upgrades will have a negligible positive effect. It would be useful if advice could be provided on what an 'options analysis' looks like in this situation. One would imagine that efficient infrastructure design considerations would require an examination of alternative modes of transport to improve accessibility (e.g., public and active transport).
- Redevelopment of suburban areas that evolve to higher intensity urban areas require upgraded stormwater infrastructure because of the greater amount of impervious area. IPART's statement on page 31 that 'it is unlikely nexus would be established for any works required to manage existing demand or repair damage to creeks and other stormwater infrastructure from pre-development land uses' is misleading. Stormwater schemes in renewal areas with existing drainage infrastructure need to address both current deficiencies and future needs. Guidance on the rationale for the fair sharing costs between current and new development would be useful.
- Open space and recreation facilities comprise a significant proportion of the infrastructure costs and the contribution rates in NSROC council s7.11 plans. With the growth rates recently and continuing to be experienced, infill councils could easily justify the need to acquire many hectares of new open space to meet base level expectations of communities. The problem is that the cost of meeting these needs, and thus the developer contributions, would be so great that developers could not afford them and carry out profitable development. Open space to meet growth in infill areas is a good example of where merely establishing nexus is not enough, because meeting needs is too expensive. Comprehensive advice should be

provided on how new development can be accommodated without adverse impacts on the level and quality of open space enjoyed by the existing community.

3. *What further guidance on base level, efficient local infrastructure should be included in an updated practice note to assist councils, developers and other stakeholders in preparing and assessing contributions plans? How definitively should the guidance in an updated practice note specify the standards expected of infrastructure (e.g., legislation and other industry standards)?*

The term 'base level' is not intuitive across infrastructure categories and can be interpreted in a number of different ways. For example, social infrastructure studies often recommend that multipurpose indoor recreation centres and aquatic centres be provided for a certain number of residents and it is unclear as to whether or not this will meet the definition of "base level" open space or community land requirements.

'Base level' becomes highly contestable and unclear when 'value for money' is also a consideration in preparing s7.11 contributions plans. Which entity will be the judge of what is value for money essential works? For instance:

- Would the purchase and embellishment of open space (which in urban settings will be very expensive) be better value because it exists in perpetuity thus having an enduring benefit, compared to providing facilities with extra carrying capacity in existing open space?
- There are likely to be situations where providing 'base level' infrastructure and value for money infrastructure is seen as competing rather than complimentary objectives. Optimising value for money over the infrastructure life cycle will in some cases mean choosing infrastructure components that are more expensive than what might be interpreted as 'base level'.

The following is also recommended:

- Advice as to how a council / proponent would prepare a life cycle costs assessment.
- All benchmark costs items should identify what standard the specification is based on.

4. *4. Are there other items that we should consider benchmarking?*

NSROC member councils do not support the development of benchmark costs. The constraint placed on councils through the use of the Essential Works List and benchmark costs will stifle innovation and limit council's capacity to deliver fit for purpose infrastructure for their communities.

5. *5. Do you agree with our approach to use adjustment factors so that the benchmarks are applicable to a broader range of projects?*

NSROC member councils do not support the use of benchmark costs. Many infrastructure items in infill areas will not have costs reflecting the benchmark costs. This is because the matters included in the site constraint adjustment factors vary significantly from project to project. Also the benchmark costs for open space do not recognise that these spaces are often designed and constructed for multi-purpose use.

The benchmark costs methodology report also notes that site constraint factors are inappropriate for the Sydney CBD. Specialised costing would likely need to be done for infrastructure items in NSROC council CBD areas such as North Sydney, Chatswood, Macquarie Park and Hornsby.

NSROC engaged Mitchell Brandtman (expert quantity surveyors) to review IPART's proposed benchmark costs. Their response is attached to this submission. Importantly, Mitchell Brandtman have confirmed that contribution planning estimates completed within NSROC are well planned, documented, more complex in nature and cost more than comparable scope of work adopted in the Cardo Report. The level of detail and appropriateness of Cardo's scope of works and rates do not reflect the items commonly included in NSROC contribution plans which are delivered in brownfield and infill environments.

6. 6. What other factors increase the complexity of a project that could be used as an adjustment factor?

Fragmented development can add significant costs to infrastructure provision when infrastructure has to be provided in a more piecemeal, stop-start fashion. For example, a new intersection may need to be provided in stages to reflect gradually changing traffic conditions.

7. We seek stakeholder views on the approach to project allowances, including the rates and their application

NSROC member councils do not support the use of benchmark costs. The constraint placed on councils through the use of the Essential Works List and benchmark costs will stifle innovation and limit council's capacity to deliver fit for purpose infrastructure for their communities.

This notwithstanding, the allowances provided are not reflective of actual costs in infill areas. The complexity of carrying out works in an established centre adds significantly to costs (service relocations, traffic control and safety measures, out of hours works to minimise disruption to business etc).

8. We seek stakeholder views on alternative benchmarks for open space. Is there value in a per person benchmark? How would it work?

The difficulty with a 'per person' open space benchmark in a local infrastructure context in high density urban areas (which applies to the Northern Sydney Region), is that land is so scarce and expensive that councils need to make strategic planning decisions for the population's needs which best utilises existing open space and also ensures that facilities can be provided in an affordable and sustainable manner. There can be significant variation in land scarcity from one LGA to the next.

9. Does 1.5% of the total value of works excluding land broadly reflect the actual cost councils face to administer a contributions plan? If not, what percentage would better reflect the actual cost councils face?

Although setting the administration cost benchmark as a percentage allowance has the benefit of simplicity (1.5% of works costs), it may not be reflective of actual costs incurred by all councils. IPART have only assessed high value plans that typically have high works costs. Councils with contribution plans that have high land acquisition costs and low works costs will be disadvantaged by this proposal.

Councils also incur significant costs when it comes to administering land under contribution plans, including negotiating land acquisitions, managing annual land valuations, negotiating works in kind

agreements and planning agreements that include land etc. To only allow 1.5% of the total value of works only tells part of the story of administering a contributions plan.

10. What other types of information or data would provide a clear evidence base for the true costs of plan administration

Examples of other types of information:

- Costs associated with land acquisition – Some councils need to complete initial and annual land valuations and update LVIs
- Reporting requirements – Councils will also have to dedicate a significant amount of time and resources to meet additional annual reporting required under the contributions system.

IPART is requiring councils to provide significant amounts of information when amending a contributions plan, particularly where costs are being updated. The time taken and resources required to meet these requirements are yet to be determined but is anticipated to add significant expense to a plan’s administration costs.

IPART should consider increasing the % allowance to cater for these costs.

11. We seek views on our proposed approach to annual escalations and 4 yearly reviews of benchmarks, including the choice of index and timeframe

The proposed indices for benchmark costs item escalation are inconsistent with the draft EP&A Regulation which proposes that all works costs in contributions plans be adjusted annually with the PPI Road and Bridge Construction Index only.

NSROC councils experience has been that cost escalation in capital projects has been greater than the Road and Bridge PPI. Councils usually index costs with the CPI in accordance with traditional practice. A move to index all costs to the Road and Bridge PPI is an improvement, but only marginally when compared to the 5- and 10-year average annual movement in Sydney CPI, as shown in the following table.

Average annual movement in index	3020 Non-residential building construction NSW	3101 Road and bridge construction NSW	Sydney (All Groups) CPI comparison
last 5 years	2.53%	1.87%	1.71%
last 10 years	2.10%	2.31%	1.91%

Also evident is that the Road and Bridge PPI has moved at a lower rate than the PPI Non Residential Building Construction Index over the last 5 years, which Cardno has recommended be applied to open space benchmark costs. Most of the works in current s7.11 plans in the NSROC area are focused on open space and recreation rather than new or upgraded roads and stormwater,

A single PPI (Road and Bridge) as recommended by the Productivity Commission has the benefit of simplicity, which will be an important consideration if land costs are already to a separate index in a plan.

12. We seek views on an appropriate feedback or data collection mechanism to obtain reliable and consistent project information to refine the benchmarks over time.

Annual targeted consultations with developers and councils about the performance and relevance of the benchmark costs.

13. Are the proposed principles and information requirements for councils using an alternative costing approach adequate? Should councils be required to provide any further information to justify deviations from the standard benchmark costs?

This is likely to adversely affect infill councils disproportionately where the IPART recommended constrained land allowances are likely to be inadequate for many S7.11 contributions plan infrastructure items.

The complex minimum requirements will require councils to have in-house staff and engage consultants with experience in cost planning of engineering works

The requirement for all councils in all s7.11 contributions plans to justify the basis for any scope variance of benchmark items through documented evidence such as an options analysis, supporting investigation reports, and to provide evidence that the estimate has been reviewed (if initially prepared internally), or prepared by, a proficient independent third party¹ will be highly resource intensive for arguably little gain.

DPIE's best practice approach to the preparation of contributions plans is to have plans prepared and exhibited at the same time as the planning proposal or soon after.

The governance arrangements / information requirements for councils using alternative costing approaches are considered excessive and will add a significant amount of time to the preparation of contributions plans and will potentially impact a council's ability to exhibit a draft plan alongside a planning proposal.

Including all this additional information will also add a significant amount of extra detail to contributions plans, impacting their usability.

14. Are the proposed principles for reviewing plans and updating costs adequate? Are there any principles that should be removed from or added to this list?

Table 10.1. Principal 3 - explanation should be given as to what is considered 'a material impact on the level of infrastructure contributions'.

15. Are the proposed information requirements for councils enough? Are there any other pieces of information that should be added to this list?

The following information requirement on page 70 is poorly worded and difficult to understand:

¹ Cardno (NSW/ACT) Pty Ltd (2021) Draft Benchmarking Items and Costing Methodology - Benchmark Costs for Local Infrastructure, prepared for IPART 27 October 2021, page 16

2. How the components of their cost estimates and actual costs relate to the components of benchmark costs that were originally used (e.g., direct costs, share of overheads, any contingencies), ensuring that delivery of non-base level infrastructure, or inefficient procurement or delivery has not been included in actual costs used for updates

The information requirements 1-6 supporting the plan review principles are, on the whole, excessive if intended to apply to every review of a s7.11 contributions plan. It will add further detail to an already lengthy document.

16. Do you support our approach for a threshold to determine which plans must be reviewed?

The draft EP&A Regulation clause 33A states the review of any s7.11 or s7.12 plan must happen at least once every 4 years.

The review of all plans is desirable to keep plan assumptions up to date, however many councils will struggle to find resources to meet this requirement.

17. Do you support our proposal for a fixed 4 yearly review of contributions plans?

The regular review of contribution plans is less important in low growth councils. These plans may only collect contributions for a small number of high value items that may not be delivered for many years after the adoption of a contributions plan.

These plans should be reviewed by exception if significant changes to the plan, infrastructure needs, scope or assumptions have occurred since it was adopted/last reviewed.

Adopting appropriate indexation practices is more important where reviews extend beyond the suggested 4-year intervals.

18. Does the annual update and four-yearly review provide an appropriate balance between cost reflectivity and certainty?

Yes, where it is required. As previously mentioned, it may be difficult or unnecessary for low growth councils to conduct comprehensive reviews of their contributions plans every 4 years.

- ENDS -



10th December 2021

Executive

Shane Brandtman
AAIQS

Andrew Opperman
AAIQS

Simon Brandtman
AAIQS

Matthew Kritzler
AAIQS

Tass Assarapin
AAIQS

Northern Sydney Regional Organisation of Councils
48 Longueville Road
LANE COVE NSW 2066

Attention: Dr Meg Montgomery

Dear Dr Montgomery,

RE: REVIEW OF DRAFT CARDNO BENCHMARK REVIEW

I have reviewed the Draft Cardno Benchmark Costs for Local Infrastructure, dated 10 November 2021 and consider that the scope of work and rates do not reflect work that is commonly included within Northern Sydney Regional Organisation of Councils (NSROC) Local Government Areas (LGA's) contribution plans.

Cardno's Report does not clarify what the 'base costs' represent. Based upon my experience as a quantity surveyor the rates appear to reflect costs for delivering large, highly productive projects in new residential subdivision developments in Sydney's growth areas.

Most contribution planning estimates that I have completed within NSROC LGA's include projects being delivered in brownfield environments. Typically, these projects are well planned, well documented, smaller, more complex in nature and cost more than comparable scope of work adopted in the Cardno Report. Estimates are measured in detail and not on a square or lineal metre basis. Therefore, the level of detail and appropriateness of Cardno's scope of works and rates do not reflect the items commonly included in NSROC LGA's contribution plans.

NSROC LGA's contribution plans include a high degree of upgrading existing infrastructure or building infrastructure in an existing environment to accommodate a growth in population in lieu of providing new infrastructure. Examples of these works are underground concrete water storage basins in parks in lieu of above ground water storage basins, small pocket parks in urban rezoned areas with a high percentage of hardscape in lieu of large active greenfield parks, building parks and playgrounds on building podiums in lieu of greenfield environments, upgrading existing playing fields in lieu of

new green field playing fields. Cardno's Report does not include for this scope of work or include appropriate adjustment factors that could be applied to their rates to accommodate the cost differential. Cardno have included some adjustment factors that can be applied to their rates such as regional and raw material sourcing; site constraints; soil condition; indexation; on-costs and contingency. These allowances do not include for all factors that can influence costs on brownfield projects such as:

- a) Demolition, clearing and disposal of rubbish left on land from previous owners;
- b) Smaller amounts of work being delivered in stages due to fragmented land ownership;
- c) Demolition, clearing and disposal of rubbish left on land from previous owners;
- d) Remediation including the disposal of general solid waste and contaminated material off-site and the replacement with suitable fill;
- e) Demolition and removal redundant infrastructure to deliver new works;
- f) Requirement to import or dispose fill due to existing site constraints as the balance cannot be integrated into the design process;
- g) Undergrounding, relocation and protection of existing utility infrastructure;
- h) Staging of works due to half road construction and works adjoining developments;
- i) Generally work is not as productive on brownfield sites when compared to greenfield subdivisions resulting in higher comparable rates;
- j) Additional costs associated with significant horizontal and vertical road realignment when upgrading existing infrastructure;
- k) Additional costs associated with community consultation and design amendments in areas with an existing population of residents;
- l) Delivering smaller scale projects resulting in higher costs per square metre;
- m) Delivering projects on a building podium in lieu of ground level;
- n) Scope increases to tie-in with existing infrastructure;
- o) Modification and adjustment of adjacent impacted properties;
- p) Noise walls and sound attenuation of adjacent dwellings;
- q) Out of hours work requirements;
- r) Maintaining property access during works;
- s) Traffic and pedestrian management during works;

- t) Temporary works including diversions to deliver transport and stormwater infrastructure
- u) Additional preliminary, margin and cost escalation associated with prolonged delivery programmes;
- v) Additional design and coordination costs.

The extent of soil condition impacts is not typically determined until subgrade is encountered and tested. Therefore, the factors included in Cardno's adjustment factor for '*Note 3 Soil Condition*' cannot be readily applied at the planning or design stage unless the worst-case scenario is adopted without the necessary due diligence having been undertaken. Typically, a rate for sub-grade improvement would be included in lieu of a percentage if this scope is expected based upon geotechnical reports or expected local conditions.

Cardno do not include an adjustment factor for removing debris, general solid waste and contamination from sites. Brownfield projects would need to allow for these factors and the costs can potentially outweigh the embellishment costs.

Cardno's suggested escalation factor adjustment method of applying ABS data in '*Note 4 Indexation*' is more appropriate than using CPI Sydney All-Groups. Over the past decade building indices has escalated at a higher rate than CPI so the proposed is preferable, however specific escalation should be applied to certain items if required. For example, steel has increased over 40% in the last year so items like street lighting and reinforced concrete culvert and pipes should escalate at a higher rate than ABS indices if deemed appropriate.

On-cost rates can vary considerably depending on the complexity of a project and should not be categorically calculated based upon the cost. For an example a \$5M rail over bridge collector road with multiple underground services would likely require an on-cost of over 12% to enable the delivery. It would be ideal if the on-costs could be flexible so that percentages could be adjusted if required to reflect the actual expected cost of the works being delivered. Typically, on-costs for brownfield works would be higher than comparable greenfield projects due to the smaller nature and complexity of projects.

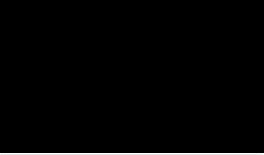
Contingency rates should be applied depending on the risk profile of specific projects and not just fixed percentages. For example, at 'planning' stage a greenfield collector would only require a 5% to 10% contingency, where a large intersection upgrade would require 30% to 40% contingency. The suggested rate of 20% is therefore not applicable to all work with this project category. At a 20% rate, the contingency on greenfield projects would be excessive, whilst brownfield projects would be insufficiently calculated. Improvements to the contingency would include the option to include specific rates dependent on the works being delivered or contingencies calculated after undertaking a P90 Monte Carlo simulation.

Based on my experience and review of Cardno's Benchmarking costs, there would be very limited instances where I would deem the rates or adjustment factors appropriate for works I have estimated in NSROC LGA's.

Should you require further information and details, please contact the undersigned.

Yours faithfully

MITCHELL BRANDTMAN



MATTHEW KRITZLER
PARTNER