

14 May 2020

Blair Collie  
PO Box 6696  
Wellesley Street  
Auckland

**Attention: Blair Collie**

Dear Blair,

**NEW DUNEDIN HOSPITAL, FAÇADE RETENTION OPTION ESTIMATES  
ADDENDUM CLARIFICATION**

Please find attached our memorandum addendum to our original report dated October 2019 regarding the WSP Opus Addendum dated May 2020.

We trust that our report is of assistance, but any queries, please do not hesitate to contact us.

Yours faithfully



**Neil O'Donnell**

RIDER LEVETT BUCKNALL CHRISTCHURCH  
Director

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Cc – R. Murdoch – Greenwood Roche

## Addendum to Report

### Ministry of Health – New Dunedin Hospital

#### Heritage Demolition Consent Application (May 2020)

Rider Levett Bucknall (RLB) was commissioned by the Ministry of Health to undertake an assessment of the capital cost for options put forward in the WSP/Opus report for the possible retention of the existing heritage facades at the proposed new Dunedin Hospital (NDH) site.

The retention options in the WSP Opus report were identified on the context of the original Preliminary Site Masterplan which indicated a preferred location for the NDH extending across both the Cadbury and Wilsons sites in central Dunedin.

Further options evaluation process for the layout of the NDH was completed subsequent to the finalising of reports by WSP Opus and RLB. The Ministry of Health has now confirmed that the NDH will locate across the entirety of the Cadbury site and extend into the southern end of the Wilsons site. The southern portion of the Cadbury site is proposed to be used primarily for vehicle/ambulance access, circulation and parking, and plant required for the functioning of the NDH.

The Ministry of Health consequently asked WSP Opus to consider whether this preferred layout would have any material impact on the findings of its original assessment. In response to that request, WSP Opus issued an addendum to its original assessment, identifying the relevant impacts. RLB has reviewed that addendum, and advises the following:

- Potential minor changes have been identified due to the reconfiguration of the layout.
- The proposed configuration would require further works to retain the existing façade as highlighted in the WSP report, the facades currently block off the proposed entry ways.
- Regarding option 1, it is noted that the ability to retain the existing façade based on the current configuration would only be possible to a limited elevation along the proposed laundry.
- For option 3, we have assumed that the reference to the extension of the isolation plane refers to extending the lower level connection to the proposed building; as per our report, all costs associated with the connection between any of the façade retention options and the proposed new buildings are excluded.
- RLB emphasizes that the costs submitted do not include for any costs associated with the additional design fees for further reconfigurations of the existing site and no allowances for additional architectural and / or services required in retaining the existing facades; this would be a potential significant increase from those costs identified.

Overall, based on the minor potential changes, we do not consider that these will a material impact on the overall quantum set out in our report.

25 OCTOBER 2019

# NEW DUNEDIN HOSPITAL, FAÇADE RETENTION OPTIONS

MINISTRY OF HEALTH

**Prepared For**

Ministry of Health

**Submitted on**

25 October 2019

**Prepared By**

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**Project number**

CH1595



25 October 2019

Blair Collie  
PO Box 6696  
Wellesley Street  
Auckland

**Attention: Blair Collie**

Dear Blair,

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**NEW DUNEDIN HOSPITAL, FAÇADE RETENTION OPTION ESTIMATES**

Please find attached our Report for the façade retention options.

We trust that our report is of assistance, but any queries, please do not hesitate to contact us.

Yours faithfully



**Neil O'Donnell**

RIDER LEVETT BUCKNALL CHRISTCHURCH  
Director

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**Project Director**

Neil O'Donnell  
Director  
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## 1.0 EXECUTIVE SUMMARY

This Report has been prepared by Rider Levett Bucknall (RLB) for the Ministry of Health to assist and inform the potential capital cost for the options put forward for the possible retention of the existing heritage facades at the proposed new Dunedin Hospital site.

Our report has been prepared on a GST exclusive basis.

### 1.1 SCOPE OF REPORT

- RLB have received the WSP / Opus Façade Retentions options report dated 3<sup>rd</sup> October 2019 which provides 8 potential options for the retention of the existing facades to the proposed new hospital.
- The costings for options 1A -3B are for the façade retention works only; this includes for additional costs associated with the demolition works as necessary to retain the facades based on the retention option. It does however exclude the cost of standard demolition.
- The costing for option 4 is for the retention of the concrete framed facades and the reconstruction of the unreinforced masonry to blocks 1 and 2 only.
- The costing for option 5 is based on the replica of the existing façade in a GRC solution. This option excludes for all demolition works as this is assumed would be undertaken separately.
- Where piling is deemed necessary, we have assumed for the purposes of the exercise that any permanent structure / underpinning works are to be treated as per the main building; a depth of approx. 40m.
- Due to the concept level of this estimate, no allowance has been made for the connection to the proposed new hospital structure. Should any façade retention option progress, this shall need to be considered in addition to the costs set out below.
- **No allowances** have been included for the works associated with the architectural / building services works which will be required to part of the proposed building if the existing facades are retained, as the extent is currently unknown. We expect a **significant cost increase** to accommodate this.

### 1.2 CLARIFICATIONS

We draw your attention to the following clarifications:

- Options 1A, 2A and 3A assumes that the precast foundations shall be laid on the existing ground surface and no excavation of existing highways will be required.
- For all options with works extending into the main highway, allowances have been made for the making good of the road on completion (topcoating the existing substrate).

- For options 1A, 2A, 3A and 4 where the propping is indicated to extend into the highway, we believe State Highway 1 will require partial closure. We have currently assumed that this will be allowed on a termed basis (for a fixed duration) during the works and have allowed a provisional sum for traffic management. We have not allowed for any costs associated with sequencing if deemed required by NZTA.
- We have assumed that works would be undertaken during normal working hours; rates do not include for out of hours working.
- It is assumed that the propping structure shall be single use throughout the works; no allowance has been made for potential staging of the works.
- For options 1, 2, 3 and 4, allowance has been made for the temporary removal of existing glazing and temporary sealing of existing openings during the works.
- Allowance has been made for minor repairs / replacements to the façade materials to options 1, 2, 3 and 4. The extent of replacement works required will be dependent upon the condition of the façade at the time of the works.
- Steel grillage to options 1, 2 and 3 have been included to the unreinforced masonry construction only as indicated.
- For the purposes of pricing, it has been assumed that a deep piled solution will be required as part of the underpinning works. Allowances have been made on this basis to a depth of approx. 40m to reflect the main structure.
- It is assumed that the temporary piles under option 1B, shall be shallow depth piles (no deeper than 10m) to be removed upon completion. Our rate reflects this.
- For building 4A, it is noted that there are currently existing piles insitu. No allowance has been made for removing these piles; it is assumed that the new underpinning works would be cast alongside the existing foundation to the deeper depths indicated.
- All allowances for proposed substructures are provisional until further details become available to firm the proposals up.
- It is assumed for options 1B, 2B and 3B, that all bracing works would be undertaken in the first instance prior to the significant demolitions works. Allowances have been made for the estimated additional cost associated with the potentially, piecemeal methodology of demolition which will be required to achieve this.
- Option 3A and 3B excludes for any connection of the proposed reinforced concrete frame to the new hospital construction; this would need to be reviewed and accommodated separately once details are known.
- For option 3B, it has been assumed, for pricing purposes, that the screw piles as identified in options 1B and 2B will be required to anchor the foundation of the temporary propping structure.

- No allowance on any option, unless stated, has been made for the demolition of the existing buildings. Any additional costs associated with the complex demolition works have been accounted for.
- For options 4 and 5, no allowance has been made for the demolition / removal of the existing foundation where required. It is assumed that these would form part of the demolition contract (and staged accordingly where required).
- For option 4, it is understood that the masonry to blocks 1 and 2 only are to be deconstructed and reconstructed. Allowances have been made as per option 1A for the remainder of structures to prop external the existing frame / facades as appropriate.
- Allowances have been made under option 4 for the removal and reconstruction of the masonry infills to the ground floor only. This is assumed on the basis of the Opus report and that the remainder of the construction is concrete frame and infill panel construction.
- For option 5, allowance has been made for joints within the panels. This is provisional and subject to confirmation as to location / extent.
- Unless otherwise stated, no allowance has been made for the connection between the proposed existing façade retention system and joint to the new build structure.
- We have made **no allowance** associated with the additional architectural and building services required due to the constraints imposed by retaining the existing façade. We understand that there is a strong likelihood of options 2 and 3, of additional services, seismic connections etc being required to facilitate the changes in floor levels to suit the variance between the imposed existing façade floor junctions and indicated current concept design. This would need to be assessed subject to the information becoming available, however, we note, we would expect this would add **significant costs** to the current budget.
- No allowance has been made for the potential loss of useable space related to the various options proposed. This would need to be accounted for in the space planning calculations as to the potential impact.
- Due to the nature of the risk associated with the proposed works, we have included a Design and Construction contingency and Project Contingency, both at 15%.
- An allowance for dewatering has been included due to the need to excavate to expose the existing foundation.

### 1.3 EXCLUSIONS

We draw your attention to the following exclusions:

- Demolition of existing structures; allowance for additional costs associated with the proposed façade retention works only.
- Remediation of Contaminated ground
- Ground Improvement unless otherwise stated
- Upgrades to existing services
- Access to existing services during the works
- New build construction costs; these are deemed to be treated separately
- Costs associated with the architectural and services due to the constraints associated with facilitating the design around the retention of the existing façade.
- Land Costs
- Development Contributions
- Specific Flood Remediation Requirements
- DHB Internal Project and Direct Management/Staff Costs
- Costs associated with any potential dispute associated with the façade retention options and delays to the project
- GST
- MOH / DHB costs

## 2.0 SUMMARY COST OPTIONS

| Option                | Estimated Total Cost |
|-----------------------|----------------------|
| Option 1A             | \$47,000,000         |
| Option 1B             | \$58,800,000         |
| Option 2A             | \$63,800,000         |
| Option 2B             | \$69,800,000         |
| Option 3A             | \$66,200,000         |
| Option 3B             | \$74,600,000         |
| Option 4 <sup>1</sup> | \$51,000,000         |
| Option 5              | \$32,600,000         |

<sup>1</sup>Note, as confirmed with RCP, option 4 is for the disassembly and reconstruction of the unreinforced masonry facades to block 1 and 2 only. The remainder of this option is to be propped as per option 1A.

\*Clarifications and exclusions as noted above

### 3.0 BASIS OF REPORT

This report has been prepared on the basis of the following assumptions:

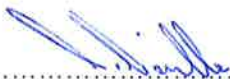
- Rates have been based on recent projects from RLB's extensive database of recent Projects in New Zealand.
- The dates used to calculate escalation during Design and Construction are based on recent experience.
- The rates included in this report are solely for the use of the Dunedin Hospital project and should not be used in the preparation of estimates for any other purpose.

This report has been prepared on a GST exclusive basis except where otherwise noted.

### AUTHORISATION

This report has been prepared by:

and authorised for issue by:



Siobhan Neville



Neil O'Donnell

**RLB.com**

AFRICA | AMERICAS | ASIA | EUROPE | MIDDLE EAST | OCEANIA

