

BY EMAIL - Gaylene.Prince@rangitikei.govt.nz

10th February 2017

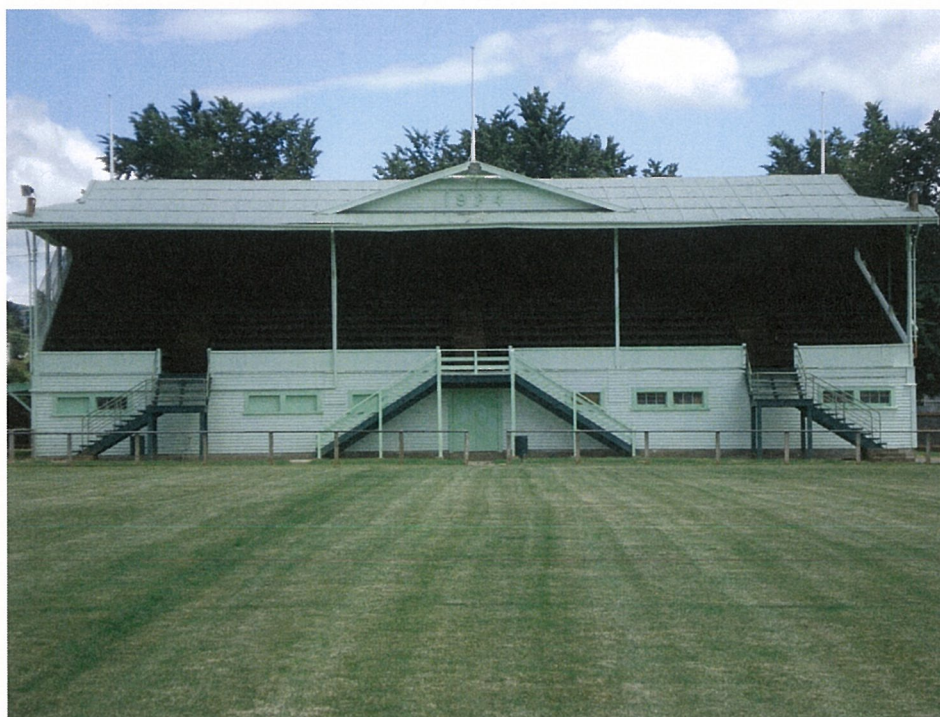
Rangitikei District Council
PO Box 187,
TAIHAPE 4720

Attention: Ms Gaylene Prince - Team Leader Community & Leisure Services

Dear Gaylene,

**INDICATIVE COST ESTIMATE TAIHAPE GRANDSTAND,
MEMORIAL PARK, KOKAKO STREET, TAIHAPE**

Thank you, for the opportunity to provide an *indicative cost estimate* for the structural strengthening of the Taihape Grandstand.



General information

The grandstand is located in Memorial Park reserve, located on Kakako Street close to the centre of Taihape. The building is adjacent to the existing playing fields on a topographically flat site. We are advised that the grandstand can seat approximately 625 people and contains changing facilities underneath that are used by clubs¹. This council owned asset was constructed in 1924 (original drawings for the building are dated 1923). The original drawings detailed the central stair directly up into the Grandstand. The built stairs are different and there are three in total. There is no wheelchair access to the upper level and barriers also exist in excess of 20mm at door thresholds below. We are advised that the grandstand is used at night, but has no lighting or emergency lighting.

The grandstand facility is primarily utilised by the rugby club; providing raised sheltered spectator seating for rugby events and changing facilities for teams².

Rangitikei District Council has provided us with a copy of the Kevin O'Connor and Associates Limited September 2009 Structural Report 109325 dated 22 September 2009. This report provides an assessment of the grandstand facility in accordance with AS/NZS 1170 "Structural Design Actions". We are briefed to base our *indicative cost estimate* on this report. We record, that this 2009 report was furnished by KOA to RDC post the 2008 amendments to the New Zealand Standards pertaining to Structural Design but prior to the Christchurch earthquakes of 2010 – 11 and the more recent Seddon 2013 and Kaikoura 2016 major seismic events.

We are aware that the *New Zealand Society for Earthquake Engineering Incorporated* www.nzee.org.nz, based on increased knowledge gained from recent seismic events are further amending the 2006 publication; "Assessment and Improvement of Structural Performance of Buildings in Earthquakes" previously relied on by engineers throughout New Zealand is in the process of being superseded by a new document; "The Seismic Assessment of Existing Buildings". This new document will provide a technical basis for engineers to carry out seismic assessments throughout New Zealand and the final version 2017 will be released to coincide with the Building (Earthquake-Prone Buildings) Amendment Act coming into force in 2016.

The KOA 2009 report places this building in the earthquake prone classification at less than 33% NBS (New Building Standard). The report recommends remedial works in terms of structural strengthening for seismic design but does not detail the consequential architectural, fire protection and service requirements anticipated under the Building Act 2004. There are a number of laws affecting the continued use of any public building when it is classified as earthquake prone especially where the building is classified with an Importance Level 3 due to its use for crowd activities, these include (but are not limited to); the Occupiers' Liability Act 1962 (relevant if the space is leased), the Health and Safety at Work Act 2015 (HSWA2015), in addition to the Building Act 2004 and the Building (Earthquake-Prone Buildings) Amendment Act 2016³ when it comes into force. The KOA 2009 report reflects aspects of previous

¹ 2010 Taihape Memorial Park Management Plan, Adopted: 25 March 2010 (10/RDC/085)

² 2016 Taihape Community Board Discussion Document.

³ Date of assent -13 May 2016

replacement of some structural components but does not outline when that work was carried out. We have located a reference to RDC 00086:2:22 Specification: Repairs and Strengthening work to Recreation Ground Grandstand from 1980 in the Archives Central database; Taihape Borough Council (legacy identifier:2011201/6045), we have not obtained that document but record it as a possible reference source for future planning if the building is to be re-purposed and structurally upgraded.

The KOA 2009 Report discusses the work required to bring the building out of the earthquake prone category summary points 1 to 6 on page 5. It does not state the NBS level achieved by completing the additional summary points 7 to 12 on pages 5-6, the design of which would be subject to a further work. In the absence of that work we assume that completion of items 1 to 12 elevates the NBS of the building to 67% or higher.

From our discussions with Rangitikei District Council (RDC) we understand the following about the existing facility and as informed by reports referenced we make the following clarifications and assumptions;

- 1) *The grandstand presently has changing rooms underneath, however Council has agreed to fund a new public amenities block on Memorial Park consisting of changing rooms and public toilets.*
- 2) *If the Grandstand is maintained, the structure would need to be strengthened and the Grandstand itself made fit for purpose, while the downstairs area would have the showers etc removed and become as open plan as possible for storage.*

Tangata Whenua⁴

Ngati Hauiti, Ngai Te Ohuake including Ngati Paki and Ngati Hinemanu, Ngati Tamakopiri and Ngati Whitikaupeka, are recognised as the founding ancestors of Mokai Patea. We are advised that Council has undertaken initial consultation on previous management plan with relevant iwi through the Otaihape Māori Komiti, on the advice of its Standing Iwi Advisory Komiti, Te Roopu Ahi Kaa. We advised that there are no matters that would affect the *indicative cost estimate*. We exclude Iwi and Hupu liaison from the indicative cost estimate.

Heritage/Archaeological Considerations

We are advised that;

- the existing grandstand was established circa 1924; and
- there is no archaeological authority in relation to the site (land); and
- the existing grandstand is not pre 1900; and
- there is no Heritage New Zealand listing for the building; and
- no Heritage or Character Overlay protection is afforded to the building in the Operative District plan

⁴ Treaty of Waitangi claim (WAI1705) status unknown to the author.

Accordingly we have made no inclusion in the indicative cost estimate for archaeological authority investigations and/or reporting during construction, nor have we included consultant fees or consenting in relation to conservation or heritage preservation requirements. We note that the engineers recommend seismic upgrade or demolition of the chimney.

We assume that demolition of the chimney is therefore a *permitted activity* and will not attract resource consent fees. We include an allowance for demolition and making good of the external wall without a wall cavity if the building is retained. The chimney removal alters the original design but removes the seismic load imposed on the building structure at this location.

Existing Ground Condition

We are not aware or provided with any geotechnical investigations. The KOA Report 2009 records that; *“We have not undertaken any soil testing on this site and so have assessed the building on the basis of Category D soil. While the soil makes a large difference to the design loads, the nature of the construction is such that this does not affect the conclusions of this report”*. Our *Indicative Cost Estimate* therefore excludes soft ground conditions and any instability issues that would result in additional subgrade costs. We also exclude contamination.

Maintenance

The KOA Report 2009 (approximately 7 years old) indicates areas of rot to the fabric of the building, the level of replacement of any rotten timber members is unknown. The 2010 Taihape Memorial Park Management Plan indicates that; *“Council has depreciation reserves to upgrade the facility”* and we are advised (2017) that the building was last painted over 10 years ago. The roof is clad in short sheet lengths overlapped (painted) not long run, the roof has not been recently inspected and we have not viewed it, its condition is therefore unknown. The external wall cladding, doors, door frames, facings, etc are all timber /painted and require maintenance. We have therefore assumed in our costing that for reasons of efficiencies painting and maintenance should be included and carried out concurrent with any strengthening. Under the HSWA2015 Scaffolding and/or edge protection will be required for aspects of demolition work, roof strengthening, painting, etc.

Physical Footprint / Physical Description

Footprint Building

Based on the KOA drawings provided the building is 30.60m long by 10.45m wide being a total footprint of 319.77m², approximately 320m rounded. The overall height from the ground floor to the underside of roof trusses is 8.35m and the overall height from the existing ground level to the apex (ridge of the roof) is approximately 10.3m.

The KOA report highlights that the ground concrete is cracked and pitted, in its existing condition but is not considered to be a structural deficient floor. Note: KOA 2009 Report does not assess the ground floor for suitability for storage loadings that may be implied on the slab.

No slab strengthening or additional foundations have been included in the estimates with the exception of requirements around stair replacement pads.

Roof

The roof overhangs the walls by approximately 0.40m on the rear and sides of the Grandstand and by approximately 0.9m on the front, the overall plan area of the roof is 31.40m long by 11.75m giving a plan area of approximately 368.95m. The area of the physical area of the roof is estimated at approximately 440m² and includes requirements for approximately 46m of ridge/hip flashings, 15.5m of valley gutter flashings and 12m of and 90m of spouting. We observe that the current downpipes and spouting appears to be undersized in terms of the NZBC approved documents and if replaced as part of any reroof to enable the engineers recommendations for Purlin replacement (100x50 on flat / replaced with 150x50) and roof bracing, then calculations of roof catchments should be undertaken.

We assume that if the purlins are replaced and engineers recommendations for bracing are implemented, that a reroof in 0.55 Prefinished Metal roofing on fire retardant building underlay and netting would occur con-current complete with replacement flashings, gutters and downpipes.

Walls, Doors, Frame, Posts, Trims

External face area of walls is approximately 470m², the internal face is unlined at Grandstand level, (no building paper). The lower ground floor walls are clad in timber weatherboards, direct to the framing, whether building paper exists is unknown, it is unlikely that there is any insulation to the building, this is not of great concern given that the existing use is changing rooms and showers and the proposed use is as storage (non-habitable use).

We have assumed replacement of existing cladding where rotten, repaint of external painted surfaces, internal demolition, seal off wastes and water supplies, new internal linings and bracing elements in plywood where identified in the KOA Report 2009. Allowance has been made for making good prior to repaint.

Fire Protection & Accessibility

There are NZBC deficiencies in relation to the stairs and fire rating of the existing building. We have not been provided with a fire report or building warrant of fitness for the existing building. Our desktop assessment is that a Type 4 Alarm (including smoke) would be required to comply with the NZBC AS1/C-Documents, the underside of the floor/ceiling below the terraced seating and the supporting structure will require fire rating. **Note:** until the height of storage and fuel load of the items to be stored in the future are known a Type 4 Alarm is to be treated as the minimum level Alarm Type.

There is no lift, handrails and balustrades to the existing stairs are not compliant with safety from falling, the stairs and door thresholds are non-compliant with accessibility requirements,

there are three existing escape routes from the upper grandstand but they are non-compliant in our preliminary assessment, emergency lighting is required for change in level.

Accessible toilet/Shower facilities are to be removed and made good as per Council brief.

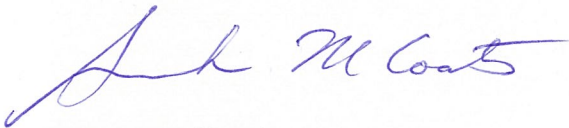
Indicative Cost Estimate

We attach an indicative cost estimate based on the brief and the KOA 2009 Report which brings the building out of the earthquake prone category to an assumed level above 67% NBS, we must record that there are a series of 'unknowns' which are illustrated throughout this letter in relation the indicative cost estimate and final brief and structural drawings for the proposed remedial works may increase costs.

The *indicative cost estimate is \$320,900 plus GST*, but this figure is subject to a number of exclusions and qualifications which cannot be confirmed until a final brief is available and a more informed structural design solution is documented. We recommend that the estimate is reviewed once the project direction is fully confirmed.

If we can assist further please do not hesitate to contact us.

Yours faithfully,
On behalf of Proarch Consultants Limited



AMANDA M. COATS
Director, Registered Architect

Encl.

Other Photographs







Rangitikei District Council Brief KOA 22 September 2009 Structural Report

	Total
<u>Siteworks</u>	
make good isolated areas as required due to demoltion,	
• grass	incl.
<u>Building</u>	
• Minimum of Type 4 Fire Alarm	
• New general purpose power outlets to ground floor	
New florescent light fittings to proposed ground floor storage	
•	
• Demolish Chimney & Foundation / Demolition Internal	
Make good external wall cladding on completion of Chimney	
• demolition	
• Painting External & Internal	
Seismic remedial as set out in KOA 2009 report items, 1-12,	
inclusive of replacement of canopy and new purlins, building	
underlay, netting and roofing, flashings to upper roof level	
•	
• replace stairs/ balustrades	
Sub Total - Construction	\$ 260,000.00
• Contingency Sum	\$ 10,000.00
• Preliminaries & General	\$ 8,700.00
• Contractor's Margin	\$ 14,500.00
TOTAL - CONSTRUCTION	\$ 293,200.00
Consent Fees	
• Building Consent	\$2,500.00
Professional Fees	
• Architectural / Structural / Fire	\$25,200.00
• Structural Peer Review costs for PS2 (at BC)	by council
• Fire Peer Review costs (at BC).	by council
TOTAL - PROJECT	\$ 320,900.00 plus GST

Notes:

Costs are based on Rawlinsons 2014 & Costs returned from
competative tenders of similar types of projects throughout
NZ

Exclusions

Client Supplied

- Signage.
- Furniture, furnishings and equipment.
- Blinds/ Curtains/floor coverings
- Data, UPS, server.

- PABX / Telecommunications.
- Air conditioning /mechanical ventilation

Council / T.A. / Statutory

- Resource Consent/ Conservation Work /Heritage AEE
- Development levys.

Ground Conditions

- Unforeseen ground conditions and contamination.
- Removal of unforeseen hazardous materials like asbestos, lead.
- Liquefaction investigation.

Finance

- GST.
- Legal fees.
- Contract works insurance required by the Principal.
- Cost escalation.
- Non-competitive tendering.
- Inflation adjustment beyond date of estimate.

Specialist Systems

- Lifts.

Proarch Consultants Limited are not registered Quantity Surveyors