



Memo

To: Leadership Team
From: Merv Dacre, Associate DCE Organisational Solutions
Date: 6 October 2015
Security level: IN CONFIDENCE

56 The Terrace – Reception Ceiling Technical Requirements and Commissioning of Maori Artwork

Purpose

At the Leadership Team (LT) meeting on 15 September 2015 four options for the reception ceiling at 56 The Terrace were discussed and the project team was directed to report back with the details of the technical design requirements for the ceiling and information on how each of the potential four options addresses these requirements. This paper responds to that direction and seeks a decision by LT on the reception ceiling treatment to be installed.

This paper also seeks LT agreement to the budget for an artwork for the public space at 56 the Terrace in recognition of the relationship Taranaki Whanui ki te Upoko o te Ika has with the land on which the Ministry's new home will be located, as well as our present and future relationship with the iwi.

Recommendations

1. It is recommended that you:

Reception Ceiling

- a) note** that at the meeting on 21 July 2015 the Leadership Team discussed reception area ceiling options at 56 The Terrace and, in the context of ensuring the most cost effective option, directed the project team to look at alternative ceiling treatments before making a decision on the final design;
- b) note** that at the meeting on 15 September 2015 the Leadership Team considered the cost of four ceiling treatments for the reception space at 56 The Terrace and agreed that further information was required regarding the acoustics in the reception area and the impact the four ceiling options will have on this;
- c) note** that the technical requirements for a suitable reception ceiling treatment at 56 The Terrace are that it meets or exceeds the minimum noise reduction threshold determined by our acoustic engineers, is structurally sound in the event

of a moderate earthquake, and is sufficiently durable to minimise maintenance throughout lease term (a minimum of 18 years);

d) acknowledge that reception ceiling options 1 and 2 meet all the requirements in recommendation (a), that option 3 does not meet the acoustic or maintenance requirements, and that option 4 does not meet any of the requirements;

e) note that the estimated cost difference between options 1 and 2 is \$7,500;

either

f) agree that the option 1 reception ceiling treatment, *Kauri Root System*, be installed at 56 the Terrace at an actual cost of \$74,025;

Yes / No

or

g) agree that the option 2 reception ceiling treatment, *Fibrous Plaster Fins*, be installed at 56 the Terrace at an estimated cost of \$66,505;

Yes / No

Commissioning Local Iwi Artwork

h) note that the project has convened a Maori Working Group to support the development of a range of initiatives associated with our relocation to 56 The Terrace, one of which is an artwork from the local iwi, Taranaki Whanui ki te Upoko o te Ika;

i) agree that an artwork reflecting the Ministry's story, our relationship with the local iwi and the local iwi's relationship to the site of 56 The Terrace be commissioned for the public space at 56 The Terrace; and

Yes / No

j) endorse a budget of up to \$30,000 from the 56 The Terrace Project budget for design, materials, labour, transport and installation of the artwork in recommendation (g).

Yes / No

Discussion

Reception Ceiling

Design and uses of nearby spaces (refer Appendix A for floor plans)

1. The reception ceiling design must take account of the design and uses of the spaces in close proximity to the reception area. At 56 The Terrace these include a large void connecting the ground, first and second floors, a café, another retail space, lobby doors opening to the Terrace, and stairs and a lift from the ground floor lobby to our reception area on level 1.
2. The ground floor lobby at 56 The Terrace has been designed by the building owner to reflect the building's quality status. The lobby is a public space that will act as the main entry point for Ministry staff and visitors into the building as well as public entry points for the two retail tenancies, one of which includes a café that will have an open wall and seating that will 'flow' into the lobby area. The commercial use for the other retail tenancy is yet to be determined.
3. A key design feature of the lobby is a large 5m x 5m void that provides a connection to level one. A smaller 3m x 5m void continues up to level 2. It is located in centre of the lobby space in close proximity to the main entrance doors to The Terrace. It creates a height of approximately 6m from the lobby floor to the ceiling on level one.
4. The lobby also includes the public stair and accessible lift to the Ministry's Communications Centre on level one. Level 1 will be the primary place for staff to meet with our external stakeholders. It is a large open plan floor incorporating the reception area which will greet and register around 800 visitors per week, the visitor waiting area and informal meeting spaces, as well as the main auditorium and external meeting rooms on the perimeter.

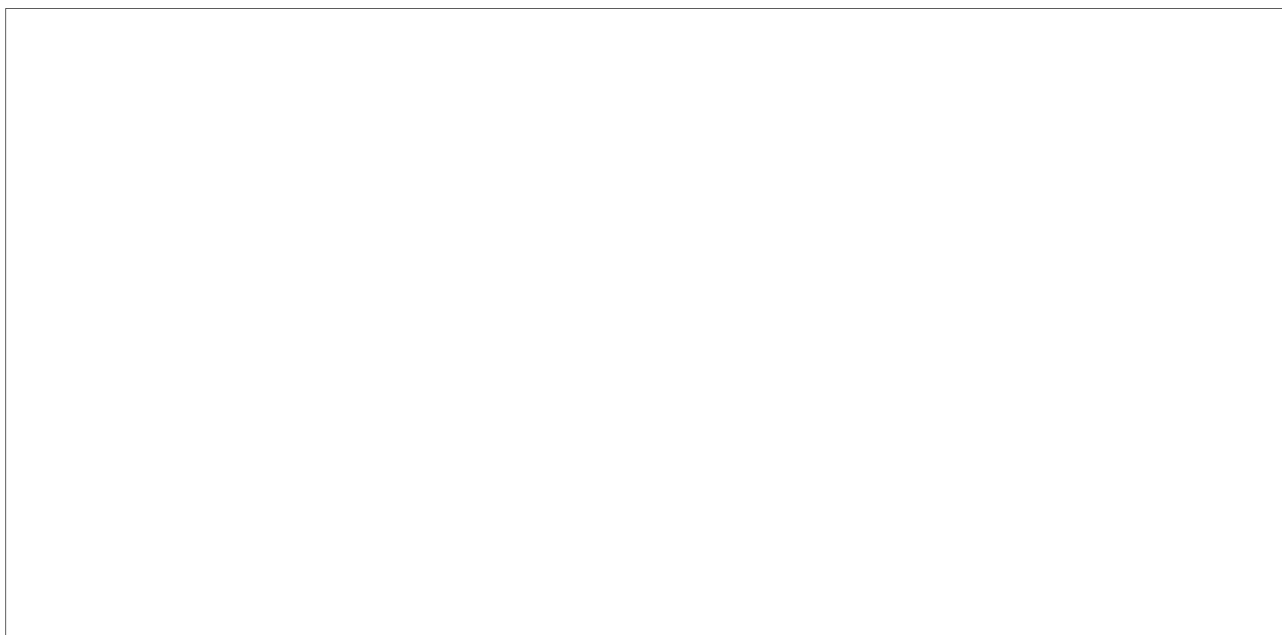
Technical requirements

5. Having regard to the use and design of the lobby and public areas the following considerations have been taken into account by the Ministry's design team when designing the reception area ceiling at 56 The Terrace.
 - The level of acoustic treatment required to control any breakout noise from the ground floor lobby and adjacent tenancies. [redacted]
[redacted] necessary to retrofit acoustic treatments to the areas close to the void because of noise from the ground floor commercial café and the reception area. In addition, the following specialist advice has been provided by Marshall Day Acoustics in respect of the level 1 open plan space:
"In order to control atrium noise being reflected into the open plan areas, it is important to install acoustically absorptive treatment to the ceiling areas immediately adjacent to the atrium opening and to the ceiling directly above the atrium. The treatment should have a minimum NRC¹ [Noise Reduction Coefficient] of 0.85^{1/2}.
 - The structural design necessary for fixing a ceiling over a 6m high void to minimise the risk of any part of it falling into the void as well as to minimise the level of damage the ceiling may incur in a moderate seismic event.

¹ NRC (or Noise Reduction Coefficient) is the number which rates the effectiveness of a material at absorbing sound. One way to look at NRC ratings is to see them as a percentage of sound that comes in contact with a sound absorption material and are not reflected back into the room. For example, a Noise Reduction Coefficient of 0.7 would indicate that 70% of sound waves are absorbed by the material.

² MSD Fitout Acoustics - Preliminary Design Advice, Marshall Day Acoustics, June 2014

- The need to minimise on-going maintenance of the ceiling and retain access to the building's in-ceiling services over the term of the Ministry's lease (a minimum of 18 years).



Options assessment

9. The following table details how each of the four ceiling options presented on 15 September align with the technical considerations outlined in paragraph 5. Of the four options, only options 1 and 2 meet the necessary acoustic threshold for the space as advised by Marshall Day. It is therefore recommended that LT dismiss options 3 and 4, and select either option 1 or option 2 for the reception ceiling treatment at 56 The Terrace. Note that at an estimated \$7,500 the cost difference between the two options is negligible. Refer to Appendix B for images of options 1 and 2.

	Option 1: Kauri Root System	Option 2: Fibrous Plaster Fins	Option 3: Perforated Plasterboard	Option 4: Base Build Ceiling tiles
Acoustic design	<ul style="list-style-type: none"> • Industrial looking acoustic blanket with high NRC rating fixed to underside of concrete ceiling • Acoustic blanket covered by root shaped Melteca fins • Shape of fins reduces number needed to cover acoustic blanket as well as number of fixings to connect it to the structure above. 	<ul style="list-style-type: none"> • Industrial looking acoustic blanket with high NRC rating fixed to underside of concrete ceiling • Acoustic blanket covered by straight fins made of fibrous plaster • Straight fins with close spacing to cover acoustic blanket. 	<ul style="list-style-type: none"> • Seamless plasterboard on suspended grid system with perforated surface • Size of building's in-ceiling space restricts ability to add in additional acoustic baffling above the suspended grid. • Additional baffling would not help reduce the reflected noise from the surface of the plasterboard. 	<ul style="list-style-type: none"> • Suspended ceiling tile • Same ceiling tiles as the working floors • Size of building's in-ceiling space restricts ability to add in additional acoustic baffling above the suspended grid. • Additional baffling would not help reduce the reflected noise from the surface of the tile.
Noise Reduction Coefficient	• 0.9	• 0.9	• 0.6	0.7
Structural design	<ul style="list-style-type: none"> • Fixed with structural supports bolted directly to the main 	<ul style="list-style-type: none"> • Fixed with structural supports bolted directly to the main 	<ul style="list-style-type: none"> • Designed to allow to flex with the building as it moves 	<ul style="list-style-type: none"> • Suspended ceiling grid • Height of ceiling

	structural beams and slab <ul style="list-style-type: none"> Designed to allow to flex with the building as it moves in a seismic event Melteca finish not expected to require repainting or significant remedial work following a seismic event. 	structural beams and slab <ul style="list-style-type: none"> Designed to allow to flex with the building as it moves in a seismic event Cracking and flaking of plaster likely following a seismic event which would require scaffolding to repair and paint. 	in a seismic event <ul style="list-style-type: none"> Cracking and flaking of plasterboard likely following a seismic event which would require scaffolding to repair and paint. 	from ground floor lobby raises concern in relation to level of restraint required to ensure tiles cannot fall from grid in a seismic event.
Ongoing maintenance	<ul style="list-style-type: none"> Melteca finish will require little maintenance during lease term Shape of fins allows for access to in-ceiling services. 	<ul style="list-style-type: none"> Painted plaster finish likely to require repainting during lease term Close proximity of fins will require some removable fins to allow access to ceiling mounted services Handling of fins will need to be carefully managed to avoid marking and damage. 	<ul style="list-style-type: none"> Painted plaster finish likely to require repainting during lease term Enclosed ceiling will require multiple access hatches to allow access to in-ceiling services. 	<ul style="list-style-type: none"> Easy access to in-ceiling services Handling of tiles when undertaking services checks may result in need for replacement of selected tiles on an on-going basis.
Cost	\$74,025 (actual)	\$66,505 (estimate)	\$35,000 (estimate)	\$20,000 (estimate)

Engagement with the local iwi to support transition to 56 The Terrace

10. A Maori Working Group

and

Merv Dacre has been convened to support the Ministry's transition to its new home at 56 The Terrace. The group has met on several occasions and has been given information on the design of the building and working environment we are creating for our people. Initiatives/activities we are exploring with local the iwi include:

- a staff education programme (which may include a series of events around the history and stories of the Wellington area);
- blessings of Bowen Campus and 56 The Terrace;
- supporting the relocation of key pieces of Maori artwork (e.g. the Chief Executive cloak);
- potentially naming some of the public meeting rooms; and
- commissioning an artwork by the local iwi artist for display in the public space.

Commissioning of artwork from Taranaki Whanui ki te Upoko o te Ika

11. Commissioning an artwork from Taranaki Whanui ki te Upoko o te Ika for display 56 The Terrace recognises the relationship the iwi has with the land on which 56 The Terrace is located and which will be the place the Ministry makes its new home. An artwork also allows for a physical representation of the present day relationship we have established with the iwi and the commitment of each party to foster the relationship into the future.

12. We met with representatives from the iwi and local iwi artist, on 4 September to discuss potential concepts and ideas for an artwork for the public space, including how it could be a representation of:

- our Purpose;
- the people and communities we serve;
- our connections across New Zealand; and
- the history of the site and surroundings of the building.

13. The developed story will inform the form and medium of the artwork. Potential ideas include, but are not limited to, a carving around the entrance to the auditorium, an artwork on the wall beside the reception counter or a glazing design on the glass wall adjacent to the entry stairway.

14. It is proposed that a budget of up to \$30,000 be set aside in the 56 The Terrace Project for artwork design, materials, labour, transport and installation.

15. Once the budget is confirmed and the design brief completed we will formally commission to produce the artwork. As part of the process he will develop concept designs which we will present to the Leadership Team for approval before work commences.