

115 Vivian Street

BUS: Building Resilience <BuildingResilience@wcc.govt.nz>

To: John Callam <john.callam@raywhite.com>, "BUS: Building Resilience" <BuildingResilience@wcc.govt.nz>

Hi John

The building at [115 Vivian Street](#) is not considered earthquake-prone under the current legislation.

This status comes as a result of an assessment process carried out under Council's previous earthquake-prone building policy 2009 which Council is reasonably satisfied qualifies as a previous assessment in terms of the current EPB Methodology. The original assessment process was part of a programme of assessments and subject to a moderation process and oversight by suitably qualified engineers.

As part of the previous assessment process an Initial Evaluation Procedure (IEP) was completed which indicated the building achieves 96% NBS.

The Initial Evaluation Procedure (IEP) assessment was a very basic and broad assessment carried out by engineers contracted to the Council. They visited the outside of the building to view the building in its environs and may have reviewed drawings held on file. Council initiated IEP's were carried out as a screening tool and should not be relied on by anyone for any other purpose and a detailed engineering inspection and/ or engineering calculations, may lead to a different result or seismic grade.

Ngā mihi

Kind Regards

Sharon Bennett

Resilience Team | Wellington City Council

M +64212278161 | E Sharon.Bennett@wcc.govt.nz | W Wellington.govt.nz |



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**Absolutely Positively
Wellington City Council**

Me Heke Ki Pōneke

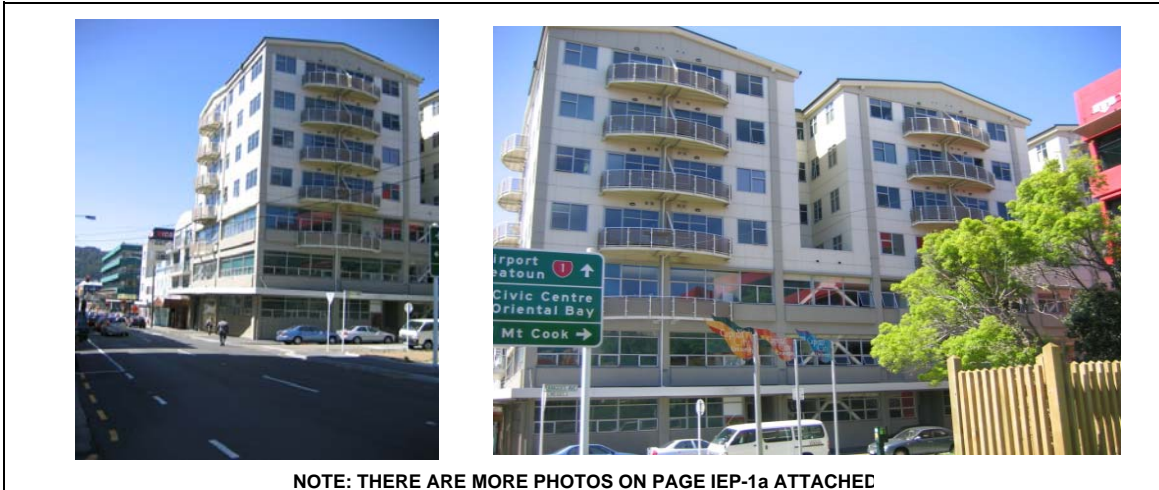
Table IEP-1 Initial Evaluation Procedure Step 1

(Refer Table IEP - 2 for Step 2; Table IEP - 3 for Step 3, Table IEP - 4 for Steps 4, 5 and 6)

Street Number & Name:	115 Vivian St	Ref:	Lot # 26
AKA:	119 Vivian St	WUFI:	1045499
Name of building:	Vivian apartments	By:	GC
Suburb:	Te Aro	Date:	25/10/2007

Step 1 - General Information

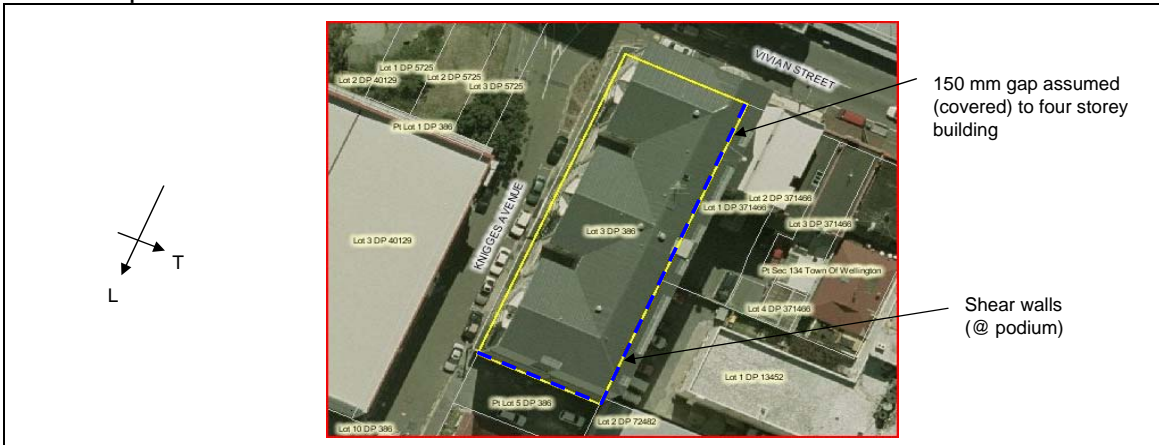
1.1 Photos (attach sufficient to describe building)



NOTE: THERE ARE MORE PHOTOS ON PAGE IEP-1a ATTACHED

Note: There is additional room for photos, notes and sketches on page IEP-1a

1.2 Sketch of plan



Note: There is additional room for photos, notes and sketches on page IEP-1a

1.3 List relevant features

7 storeys @ ~3.8 m (3 original, 4 stories added in 2002)
 Strengthening observed
 RC frame/Masonry wall/retrofitted K braces
 Occupancy; apartments
 No signs of structural degradation
 Seems building checked for 100% of 4302: 1922 during extension

1.4 Note information sources

Visual Inspection of Exterior	<input checked="" type="checkbox"/>
Visual Inspection of Interior	<input type="checkbox"/>
Drawings (note type)	<input type="checkbox"/>
Specifications	<input type="checkbox"/>
Geotechnical Reports	<input type="checkbox"/>
Other (list)	<input checked="" type="checkbox"/>
WCC summary sheet, aerial photomap, building extension calcs and drawings	

(Refer Table IEP - 1 for Step 1; Table IEP - 3 for Step 3; Table IEP - 4 for Steps 4, 5 and 6)

Street Number & Name:	115 Vivian St	Ref.	Lot # 26
AKA:	119 Vivian St	By	GC
Direction Considered:	a) Longitudinal & b) Transverse		
(Choose worse case if clear at start. Complete IEP-2 and IEP-3 for each if in doubt)			Date: 25/10/2007

Step 2 - Determination of (%NBS)_b

2.1 Determine nominal (%NBS) = (%NBS)_{nom}

(Baseline (%NBS) for particular building - refer Section B5)

a) Date of Design and Seismic Zone

- Date of Design:** (or date of code strengthened to)
- Pre 1935
 - 1935-1965
 - 1965-1976
 - 1976-1992
 - 1992-2004

Strengthening

Tick if building has been strengthened

If strengthened enter original design date:

See Note 4 below also

Building Category:

Seismic Zone:

b) Soil Type

From NZS1170.5:2004, CI 3.1.3 :

- NZS1170.5:2004
- A or B Rock
 - C Shallow Soil
 - D Soft Soil
 - E Very Soft Soil

From NZS4203:1992, CI 4.6.2.2 : (for 1992 to 2004 only and only if known)

- NZS4203:1992
- Rigid
 - Intermediate or Not Known

c) Estimate Period, T

Comment: **7 x 3.8 m**

- Moment Resisting Concrete Frames: $T = 0.09h_n^{0.75}$
- Moment Resisting Steel Frames: $T = 0.14h_n^{0.75}$
- Eccentrically Braced Steel Frames: $T = 0.08h_n^{0.75}$
- All Other Frame Structures: $T = 0.06h_n^{0.75}$
- Concrete Shear Walls: $T = 0.09h_n^{0.75} / A_c^{0.5}$
- Masonry Shear Walls: $T \leq 0.4sec$
- User Defined (input Period):

Where h_n = height in m from the base of the structure to the uppermost seismic weight or mass.

Longitudinal	Transverse
$h_n = 27$ m	27 m
$A_c = 1.00$ m ²	1.00 m ²

- | | |
|---|--|
| <input type="checkbox"/> MRCF | <input checked="" type="checkbox"/> MRCF |
| <input type="checkbox"/> MRSF | <input type="checkbox"/> MRSF |
| <input type="checkbox"/> EBSF | <input type="checkbox"/> EBSF |
| <input type="checkbox"/> Others | <input type="checkbox"/> Others |
| <input type="checkbox"/> CW | <input type="checkbox"/> CW |
| <input type="checkbox"/> MSW | <input type="checkbox"/> MSW |
| <input checked="" type="checkbox"/> Defined | <input type="checkbox"/> Defined |

0.40	1.07	Seconds
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d) (%NBS)_{nom} determined from Figure 3.3

Longitudinal:	22.33%
Transverse:	25.77%

Note 1: For buildings designed prior to 1965 and known to be designed as public buildings in accordance with the code of the time, multiply (%NBS)_{nom} by 1.25.

For buildings designed 1965 - 1976 and known to be designed as public buildings in accordance with the code of the time, multiply (%NBS)_{nom} by 1.33 - Zone A, or by 1.2 - Zone B

Note 2: For reinforced concrete buildings designed between 1976-84 multiply (%NBS)_{nom} by 1.2.

Note 3: For buildings designed prior to 1935 multiply (%NBS)_{nom} by 0.8 except for Wellington where the factor may be taken as 1.

Note 4: If the building is known to have been strengthened, enter the percentage of the code selected in 2.1 a) that the building has been strengthened to for each direction. Longitudinal Direction

Transverse Direction

(%NBS)_{nom}	
Longitudinal:	22.33%
Transverse:	25.77%

(Scaled as per Notes 1 to 4)

Continued over page.....

(Refer Table IEP - 1 for Step 1; Table IEP - 2 for Step 2; Table IEP - 4 for Steps 4, 5 and 6)

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AKA:	119 Vivian St	By: GC
Direction Considered:	a) Longitudinal & b) Transverse	Date: 25/10/2007
<i>(Choose worse case if clear at start. Complete IEP-2 and IEP-3 for each if in doubt)</i>		

a) Longitudinal Direction

Step 3 - Assessment of Performance Achievement Ratio (PAR)

(Refer Appendix B - Section B3.2)

Critical Structural Weakness	Effect on Structural Performance (Choose a value - Do not interpolate)	Building Score
3.1 Plan Irregularity Effect on Structural Performance <input type="checkbox"/> Severe <input type="checkbox"/> Significant <input checked="" type="checkbox"/> Insignificant Comment:		Factor A <input type="text" value="1.0"/>
3.2 Vertical Irregularity Effect on Structural Performance <input type="checkbox"/> Severe <input type="checkbox"/> Significant <input checked="" type="checkbox"/> Insignificant Comment:		Factor B <input type="text" value="1.0"/>
3.3 Short Columns Effect on Structural Performance <input type="checkbox"/> Severe <input type="checkbox"/> Significant <input checked="" type="checkbox"/> Insignificant Comment:		Factor C <input type="text" value="1.0"/>
3.4 Pounding Potential (Estimate D1 and D2 and set D = the lower of the two, or =1.0 if no potential for pounding)		

a) Factor D1: - Pounding Effect
Select appropriate value from Table

Note:
Values given assume the building has a frame structure. For stiff buildings (eg with shear walls), the effect of pounding may be reduced by taking the co-efficient to the right of the value applicable to frame buildings.

Factor D1 For Longitudinal Direction:		1.0		
	Severe	Significant	Insignificant	
Separation	0<Sep<.005H	.005<Sep<.01H	Sep>.01H	
Alignment of Floors within 20% of Storey Height	<input type="checkbox"/> 0.7	<input type="checkbox"/> 0.8	<input checked="" type="checkbox"/> 1	
Alignment of Floors not within 20% of Storey Height	<input type="checkbox"/> 0.4	<input type="checkbox"/> 0.7	<input type="checkbox"/> 0.8	
Comment: Free standing (150 gap)				

b) Factor D2: - Height Difference Effect
Select appropriate value from Table

Factor D2 For Longitudinal Direction:		1.0		
	Severe	Significant	Insignificant	
	0<Sep<.005H	.005<Sep<.01H	Sep>.01H	
Height Difference > 4 Storeys	<input type="checkbox"/> 0.4	<input type="checkbox"/> 0.7	<input checked="" type="checkbox"/> 1	
Height Difference 2 to 4 Storeys	<input type="checkbox"/> 0.7	<input type="checkbox"/> 0.9	<input type="checkbox"/> 1	
Height Difference < 2 Storeys	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	
Comment:				

Factor D
(Set D = lesser of D1 and D2 or..
set D = 1.0 if no prospect of pounding)

3.5 Site Characteristics - (Stability, landslide threat, liquefaction etc)

Severe	Significant	Insignificant	Factor E	<input type="text" value="1.0"/>
<input type="checkbox"/> 0.5max	<input type="checkbox"/> 0.7	<input checked="" type="checkbox"/> 1		

Comment:

3.6 Other Factors

For ≤ 3 storeys - Maximum value 2.5,
otherwise - Maximum value 1.5. No minimum. Factor F

Record rationale for choice of Factor F:

3.7 Performance Achievement Ratio (PAR)
(equals A x B x C x D x E x F) PAR (Longitudinal):

b) Transverse Direction

Step 3 - Assessment of Performance Achievement Ratio (PAR)
(Refer Appendix B - Section B3.2)

Critical Structural Weakness	Effect on Structural Performance (Choose a value - Do not interpolate)	Building Score
3.1 Plan Irregularity Effect on Structural Performance <input type="checkbox"/> Severe <input type="checkbox"/> Significant <input checked="" type="checkbox"/> Insignificant Comment: 	Factor A	1.0
3.2 Vertical Irregularity Effect on Structural Performance <input type="checkbox"/> Severe <input type="checkbox"/> Significant <input checked="" type="checkbox"/> Insignificant Comment: 	Factor B	1.0
3.3 Short Columns Effect on Structural Performance <input type="checkbox"/> Severe <input type="checkbox"/> Significant <input checked="" type="checkbox"/> Insignificant Comment: 	Factor C	1.0
3.4 Pounding Potential (Estimate D1 and D2 and set D = the lower of the two, or =1.0 if no potential for pounding)		

a) Factor D1: - Pounding Effect
Select appropriate value from Table

Note:
Values given assume the building has a frame structure. For stiff buildings (eg with shear walls), the effect of pounding may be reduced by taking the co-efficient to the right of the value applicable to frame buildings.

Factor D1 For Transverse Direction: 1

Table for Selection of Factor D1	Severe 0<Sep<.005H	Significant .005<Sep<.01H	Insignificant Sep>.01H
Alignment of Floors within 20% of Storey Height	<input type="checkbox"/> 0.7	<input type="checkbox"/> 0.8	<input checked="" type="checkbox"/> 1
Alignment of Floors not within 20% of Storey Height	<input type="checkbox"/> 0.4	<input type="checkbox"/> 0.7	<input type="checkbox"/> 0.8

Comment: **Free standing (150 gap)**

b) Factor D2: - Height Difference Effect
Select appropriate value from Table

Factor D2 For Transverse Direction: 1

Table for Selection of Factor D2	Severe 0<Sep<.005H	Significant .005<Sep<.01H	Insignificant Sep>.01H
Height Difference > 4 Storeys	<input type="checkbox"/> 0.4	<input type="checkbox"/> 0.7	<input checked="" type="checkbox"/> 1
Height Difference 2 to 4 Storeys	<input type="checkbox"/> 0.7	<input type="checkbox"/> 0.9	<input type="checkbox"/> 1
Height Difference < 2 Storeys	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1

Comment:

Factor D 1.0
(Set D = lesser of D1 and D2 or..
set D = 1.0 if no prospect of pounding)

3.5 Site Characteristics - (Stability, landslide threat, liquefaction etc)

Severe	Significant	Insignificant	Factor E
<input type="checkbox"/> 0.5max	<input type="checkbox"/> 0.7	<input checked="" type="checkbox"/> 1	1.0

Comment:

3.6 Other Factors

For ≤ 3 storeys - Maximum value 2.5,
otherwise - Maximum value 1.5. No minimum. **Factor F** 1.0

Record rationale for choice of Factor F:

3.7 Performance Achievement Ratio (PAR)
(equals A x B x C x D x E x F) **PAR (Transverse):** 1.00

Table IEP-1a Additional Photos and Sketches

(Refer Table IEP - 2 for Step 2; Table IEP - 3 for Step 3, Table IEP - 4 for Steps 4, 5 and 6)

Street Number & Name:	115 Vivian St	Ref. Lot #	26
AKA:	119 Vivian St	By:	GC
		Date:	25/10/2007

Add any additional photographs, notes or sketches required below:

Note: print this page separately



Masonry walls on sides not facing the street

