Initial Evaluation Procedure (IEP) Assessment - Completed for Hutt City Council

Page 1

WARNING!! This initial evaluation has been carried out solely as an initial seismic assessment of the building following the procedure set out in the "The Seismic Assessment of Existing Buildings" Technical Guidelines for Engineering Assessments, July 2017. This spreadsheet must be read in conjunction with the limitations set out in the accompanying report, and should not be relied on by any party for any other purpose. Detailed inspections and engineering calculations, or engineering judgements based on them, have not been undertaken, and these may lead to a different result or seismic grade.

Street Number & Name:	21 Meachen Street	Job No.:	5-C3957.00
AKA:		By:	GSF
Name of building:	Animal Services	Date:	10/12/2019
City:	Seaview, Hutt City	Revision No.:	0

Table IEP-1 Initial Evaluation Procedure Step 1

Step 1 - General Information

1.1 Photos (attach sufficient to describe building)



NOTE: THERE ARE MORE PHOTOS ON PAGE 1a ATTACHED





tructure: Front - timber framed stru	cture with braced walls and bric	k veneer cladding with ties. Rear - port	al frames with cross bracing
oundations: Front - concrete found	ation wall and piles supporting t	imber subfloor. Rear - concrete slab on	grade with reinforced concrete pads and
oundation beams			
loof: Lightweight cladding, super siv	roofing over portal structure ha	as been replaced	
when it. E and an angle NIZC117			
Subsoli: E soft of deep solis - NZSII	0.5:2004 Site Subsoil Classificat	ion of Lower Hutt	
Construction Date: 1968	0.5:2004 Site Subsoil Classificat	on of Lower Hutt	
Construction Date: 1968	0.5:2004 Site Subsoil Classificat	on of Lower Hutt	
	70.5:2004 Site Subsoil Classificat	on of Lower Hutt	
A Note information sources	Tick as appropriate		
A Note information sources Visual Inspection of Exterior	Tick as appropriate	Specifications	
A Note information sources	Tick as appropriate		

Street Number & Name: NKA:	21 Meachen Street		Job No.:	<mark>5-C3957.00 GSF</mark>
lame of building: Sity:	Animal Services Seaview, Hutt City		By: Date: Revision No.:	10/12/2019
ity.	Geaview, Hall Only		Revision No	
Table IEP-2 Initial Ev	valuation Procedure Step 2			
Step 2 - Determination of (%NBS) _b			
Baseline <i>(%NBS)</i> for particular bu	ilding - refer Section B5)			
.1 Determine nominal (%NB	S) = (%NBS) _{nom}	<u>Longitudina</u>	<u>!</u>	<u>Transverse</u>
a) Building Strengthening Dat	a			
Tick if building is known to	have been strengthened in this direction			
If strengthened, enter perc	entage of code the building has been strengthened t	o N/A		N/A
h) Year of Design/Strengthenin	ig, Building Type and Seismic Zone			
b) real of Design/offenginenin	g, Building Type and Seisinic Zone	Pre 1935	<u>,</u>	Pre 1935
		1935-1965		1935-1965
		1965-1976		1965-1976
		1976-1984		1976-1984
		1984-1992		1984-1992
		1992-2004		1992-2004 🔾
		2004-2011		2004-2011 🔾
		Post Aug 2011		Post Aug 2011
	Duilding Topo	0.1	_	Others
	Building Type:	Others		Others 🗸 🗸
	Seismic Zone:	Zone A	•	Zone A
c) Soil Type			_	
From NZS1170.5:20	004, CI 3.1.3 :	E Very Soft Soil	•	E Very Soft Soil
From NZS4203:199				
(for 1992 to 2004 ar	id only if known)	Not applica	ble	Not applicable
d) Estimate Period, T Comment:		h _n = 7		7 m
Comment.		$A_{c} = 1.00$	1	1.00 m^2
			·	
Moment Resisting Concrete		0		0
Moment Resisting Steel Fra		0		۲
Eccentrically Braced Steel F		Q		Õ
All Other Frame Structures:	$T = \max\{0.06h_n^{0.75}, 0.4\}$	۲		Õ
Concrete Shear Walls	$T = \max\{0.09h_{n}^{0.75}/A_{c}^{0.5}, 0.4\}$	Q		Q
Masonry Shear Walls: User Defined (input Period):	$T \leq 0.4$ sec			000000000000000000000000000000000000000
		U		0
vvnere n,	= height in metres from the base of the structure to the	T : 0.40	- 1	0.60



not be relied on by any party for any other purpose. Detailed inspections and engineering calculations, or engineering judgements based on them, have not been undertaken, and these may lead to a different result or seismic grade.

Street Number & Name:	21 Meachen Street	Jol	b No.: <u>5-C3957.00</u>
AKA:		By	: GSF
Name of building:	Animal Services	Dat	te: <u>10/12/2019</u>
City:	Seaview, Hutt City	Re	vision No.: 0
Table IEP-2 Initial Eval	luation Procedure Step	2 continued	
2.2 Near Fault Scaling Factor,	actor E		
If $T \leq 1.5$ sec, Factor E = 1		Longitudinal	<u>Transverse</u>
a) Near Fault Factor, <i>N(T,D)</i>			
		N(T,D): 1	
(from NZS1170.5:2004, CI 3.1.6)		Easter Et 1 00	1.00
b) Factor E	= 1/N(T,D)	Factor E: 1.00	1.00
2.3 Hazard Scaling Factor, Factor	or F		
a) Hazard Factor, Z, for site		Defer right for your defined locations	
Location:		Refer right for user-defined locations	
Z	•••	70.5:2004, Table 3.3)	
Z ₁₉₉₂ =		092 Zone Factor from accompanying Figure 3.5(b))	
Z ₂₀₀₄ =	= 0.4 (from NZS11	70.5:2004, Table 3.3)	
b) Factor F	4/7		
For pre 1992 For 1992-2011	= 1/Z = Z_{1992}/Z		
For post 2011	7 /7		
	= Z ₂₀₀₄ /Z	Factor F: 2.50	2.50
2.4 Return Period Scaling Facto	r, Factor G		
 a) Design Importance Level, I (Set to 1 if not known. For buildings design 	ed prior to 1965 and known to be designed	l as a public	
building set to 1.25. For buildings designed		a public I = 1	1
building set to 1.33 for Zone A or 1.2 for Zo	סווב ם. רטו 1970-1984 set I Value.)		
b) Design Risk Factor, R _o			
(set to 1.0 if other than 1976-2004, or not	known)	$R_{o} = 1$	
		$n_0 = 1$	1
c) Return Period Factor, R			
(from NZS1170.0:2004 Building Important	ce Level) <u>Choose In</u>	nportance Level 🔿 1 💿 2 🔿 3 🔿	4 0 1 • 2 0 3 0
			10
		R = 1.0	1.0
d) Factor G	= IR _o /R		
		Factor G: 1.00	1.00
2.5 Ductility Scaling Factor, Fac			
a) Available Displacement Ductilit	y Within Existing Structure		
Comment:		$\mu = \frac{1.50}{1.50}$	2.00
Steel frames with cross bracing			
b) Easter H			1.
b) Factor H		$m{k}_{\mu}$	κ_{μ}



End Seaview, Hutt City Revision No.: 0 ble IEP-3 Initial Evaluation Procedure Step 3 P p 3 - Assessment of Performance Achievement Ratio (PAR) P er Appendix B - Socian B3.2)	ne of building: Animal Services Seaview, Hutt City Revision No.: Other Other Pate: Other Date: Other Seaview, Hutt City Revision No.: O Other Plan Intial Evaluation Procedure Step 3 potential CSWs Effect on Structural Performance potential CSWs Effect on Structural Performance (Choose a value - Do not interpolate) Plan Irregularity Effect on Structural Performance Comment: Nil Vertical Irregularity Effect on Structural Performance Short Columns Effect on Structural Performance Stort Columns Effect on Structural Performance </th <th>eet Number & Name:</th> <th>21 Meachen Stre</th> <th>et</th> <th></th> <th>Job</th> <th>No.:</th> <th>5-C3957.00</th>	eet Number & Name:	21 Meachen Stre	et		Job	No.:	5-C3957.00
Seaview, Hutt City Revision No.: 0 ble IEP-3 Initial Evaluation Procedure Step 3 0 p. 3 - Assessment of Performance Achievement Ratio (PAR) er Appendix B - Section B3:2) 0 ongitudinal Direction potential CSWs Effect on Structural Performance (Choose a value - Do not interpolate) Plan Irregularity Effect on Structural Performance (Choose a value - Do not interpolate) Factor A Comment: NI Short Columns Factor B Effect on Structural Performance (Severe (Significant Comment: NI) Factor C Short Columns Significant (Insignificant Comment: NI) Factor C Pounding Potential Estimate D1 and D2 and set D = the lower of the two, or 1.0 if no potential for pounding, or consequences are considered to be minimal) Factor D1: - Pounding Effect Note: Values given assume the building has a frame structure. For stiff buildings (eg shear walls), the effect of pounding may be reduced by taking the coefficient to the right of the value applicable to frame buildings. Factor D1 For Longitudinal Direction: 10 Alignment of Floors within 20% of Storey Height 0.1 0.1 Alignment of Floors within 20% of Storey Height 0.4 0.2 Alignment of Floors within 20% of Storey Height 0.4 0.2 Alignment of Floors within 20% of Storey Height 0.4 0.2 Alignment of Floors within 20% of	Seavlew, Hutt City Revision No.: 0 Dele IEP-3 Initial Evaluation Procedure Step 3 p 3 - Assessment of Performance Achievement Ratio (PAR) or Appendix B - Section B3.2) ongludinal Direction potential CSWs Effect on Structural Performance (Choose a value - Do not interpolate) Plan Irregularity Effect on Structural Performance O Severe Significant Comment: Nil Vertical Irregularity Factor A Effect on Structural Performance O Severe Significant Comment: Nil Short Columns Effect on Structural Performance O Severe Significant Comment: Nil Pounding Potential Estimate D1 and D2 and set D = the lower of the two, or 1.0 if no potential for pounding, or consequences are considered to be minimal) Factor D1: - Pounding Effect Note: Values given assume the building has a frame structure. For stiff buildings (eg shear walls), the effect of pounding maintent of Floors within 20% of Storey Height O 1 Significant Significant Table for Selection of Factor D1 Significant Significant Significant Significant Values given assume the building has a frame structure. For stiff buildin	\:				By:		
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4 Pounding Potential (Estimate D1 and D2 and set D = the lower of the two, or 1.0 if no potential for pounding, or consequences are considered to be minimal) a) Factor D1: - Pounding Effect Note: Values given assume the building has a frame structure. For stiff buildings (eg shear walls), the effect of pounding may be reduced by taking the coefficient to the right of the value applicable to frame buildings. Factor D1 For Longitudinal Direction: 1.0 Table for Selection of Factor D1 Severe Significant Separation 0 <sep<.005h< td=""> .005<sep<.01h< td=""> Sep>.01H Alignment of Floors within 20% of Storey Height 0.1 0.1 0.1 Alignment of Floors not within 20% of Storey Height 0.4 0.7 0.8 Comment: Nil b) Factor D2: - Height Difference Effect 1.0 1.0</sep<.01h<></sep<.005h<>	Pounding Potential (Estimate D1 and D2 and set D = the lower of the two, or 1.0 if no potential for pounding, or consequences are considered to be minimal) Factor D1: - Pounding Effect Note: Values given assume the building has a frame structure. For stiff buildings (eg shear walls), the effect of pounding may be reduced by taking the coefficient to the right of the value applicable to frame buildings. Factor D1 For Longitudinal Direction: 1.0 Table for Selection of Factor D1 Separation Separation 0-Sep005H Alignment of Floors within 20% of Storey Height 0.1 Alignment of Floors not within 20% of Storey Height 0.4 0.7 0.8 Comment: Nil Severe b) Factor D2: - Height Difference Effect Height Difference > 4 Storeys 0.4 0.4 0.7 0.4 0.7		ce _{Severe}	OS	ignificant		Insignificant	Factor C 1.0
Values given assume the building has a frame structure. For stiff buildings (eg shear walls), the effect of pounding may be reduced by taking the coefficient to the right of the value applicable to frame buildings. Factor D1 For Longitudinal Direction: 1.0 Table for Selection of Factor D1 Severe Significant Negative in the right of the value applicable to frame buildings. Table for Selection of Factor D1 Severe Significant Insignificant Alignment of Floors within 20% of Storey Height 0 1 0 1 Alignment of Floors not within 20% of Storey Height 0.4 0.7 0.8 Comment: Nil b) Factor D2: - Height Difference Effect Table for Z For Longitudinal Direction: 1.0	Values given assume the building has a frame structure. For stiff buildings (eg shear walls), the effect of pounding may be reduced by taking the coefficient to the right of the value applicable to frame buildings. Factor D1 For Longitudinal Direction: 1.0 Table for Selection of Factor D1 Severe Significant Insignificant Alignment of Floors within 20% of Storey Height 0 1 0 1 0 Alignment of Floors not within 20% of Storey Height 0.4 0.7 0.8 Comment: Nil b) Factor D2: - Height Difference Effect Factor D2 For Longitudinal Direction: 1.0 Table for Selection of Factor D2 Severe Significant Alignment of Floors not within 20% of Storey Height 0.4 0.7 0.8 Comment: Nil b) Factor D2: - Height Difference Effect Factor D2 For Longitudinal Direction: 1.0 O Very Colspan= 200 H Height Difference > 4 Storeys O 0.4 0.7 0	•			for nounding			
Table for Selection of Factor D1 Severe Significant Insignificant Separation 0 <sep<.005h< td=""> .005<sep<.01h< td=""> Sep>.01H Alignment of Floors within 20% of Storey Height 0 1 0 1 Alignment of Floors not within 20% of Storey Height 0.4 0.7 0.8 Comment: Nil Difference Effect Factor D2 For Longitudinal Direction: 1.0</sep<.01h<></sep<.005h<>	Table for Selection of Factor D1 Severe Significant Insignificant Alignment of Floors within 20% of Storey Height 0 1 0 1 Alignment of Floors not within 20% of Storey Height 0 0.4 0.7 0.8 Comment: Nil b) Factor D2: - Height Difference Effect Factor D2 For Longitudinal Direction: 1.0 Table for Selection of Factor D2 Severe Significant Insignificant Height Difference > 4 Storeys 0.4 0.7 0.1	(Estimate D1 and D2 and set D Factor D1: - Pounding Effect	= the lower of the two,	or 1.0 if no potential	ior pounding,	or consequences	are considered	l to be minimal)
Separation 0 <sep<.005h< td=""> .005<sep<.01h< td=""> Sep>.01H Alignment of Floors within 20% of Storey Height 1 1 1 Alignment of Floors not within 20% of Storey Height 0.4 0.7 0.8 Comment: Nil Separation 0.4 0.7 0.8 b) Factor D2: - Height Difference Effect Factor D2 For Longitudinal Direction: 1.0</sep<.01h<></sep<.005h<>	Separation 0 <sep<.005h< td=""> .005<sep<.01h< td=""> Sep>.01H Alignment of Floors within 20% of Storey Height 1 1 1 Alignment of Floors not within 20% of Storey Height 0.4 0.7 0.8 Comment: Nil b) Factor D2: - Height Difference Effect Severe Significant Insignificant VSep<.01H Height Difference Effect Image: Severe Significant Insignificant VSep<.005H VSep<.01H Height Difference > 4 Storeys 0.4 VSep VSep</sep<.01h<></sep<.005h<>	(Estimate D1 and D2 and set D Factor D1: - Pounding Effect Note: Values given assume the I	building has a frame str	ructure. For stiff build	dings (eg shea	r walls), the effect		l to be minimal)
Alignment of Floors not within 20% of Storey Height 0.4 0.7 0.8 Comment: Nil b) Factor D2: - Height Difference Effect Factor D2 For Longitudinal Direction: 1.0	Alignment of Floors not within 20% of Storey Height 0.4 0.7 0.8 Comment: Nil b) Factor D2: - Height Difference Effect Factor D2 For Longitudinal Direction: 1.0 Severe Significant Insignificant 0 <sep<.005h .005<sep<.01h="" sep="">.01H Height Difference > 4 Storeys 0.4 0.7 0</sep<.005h>	(Estimate D1 and D2 and set D Factor D1: - Pounding Effect Note: Values given assume the I may be reduced by taking	building has a frame str the coefficient to the ri	ructure. For stiff build ght of the value appl	dings (eg shea icable to frame or D1 For Lo	r walls), the effect buildings. ngitudinal Direct	of pounding	l to be minimal)
Comment: Nil b) Factor D2: - Height Difference Effect Factor D2 For Longitudinal Direction: 1.0	Comment: Nil b) Factor D2: - Height Difference Effect Factor D2 For Longitudinal Direction: 1.0 Table for Selection of Factor D2 Severe Significant Insignificant 0.58ep<.005H .005 <sep<.01h sep="">.01H Height Difference > 4 Storeys 0.4 0.7</sep<.01h>	(Estimate D1 and D2 and set D Factor D1: - Pounding Effect Note: Values given assume the I may be reduced by taking	building has a frame str the coefficient to the ri	ructure. For stiff build ght of the value appl Fact	dings (eg shea icable to frame tor D1 For Lo Severe	r walls), the effect buildings. ngitudinal Direct Significant	of pounding ion: 1.0	l to be minimal)
b) Factor D2: - Height Difference Effect Factor D2 For Longitudinal Direction: 1.0	b) Factor D2: - Height Difference Effect Factor D2 For Longitudinal Direction: 1.0 Table for Selection of Factor D2 Severe Significant Insignificant 0 <sep<.005h .005<sep<.01h="" sep="">.01H Height Difference > 4 Storeys 0.4 0.7 0.1</sep<.005h>	(Estimate D1 and D2 and set D Factor D1: - Pounding Effect Note: Values given assume the I may be reduced by taking Table for Selection of I	building has a frame str the coefficient to the ri Factor D1	ructure. For stiff build ight of the value appl Fact Separation	dings (eg shea icable to frame o <mark>r D1 For Lo</mark> Severe 0 <sep<.005h< td=""><td>nr walls), the effect buildings. ngitudinal Direct Significant .005<sep<.01h< td=""><td>of pounding ion: 1.0 Insignificant Sep>.01H</td><td>l to be minimal)</td></sep<.01h<></td></sep<.005h<>	nr walls), the effect buildings. ngitudinal Direct Significant .005 <sep<.01h< td=""><td>of pounding ion: 1.0 Insignificant Sep>.01H</td><td>l to be minimal)</td></sep<.01h<>	of pounding ion: 1.0 Insignificant Sep>.01H	l to be minimal)
Factor D2 For Longitudinal Direction: 1.0	Factor D2 For Longitudinal Direction: 1.0 Table for Selection of Factor D2 Severe Significant Insignificant 0 <sep<.005h< td=""> .005<sep<.01h< td=""> Sep>.01H Height Difference > 4 Storeys 0.4 0.7 0</sep<.01h<></sep<.005h<>	(Estimate D1 and D2 and set D Factor D1: - Pounding Effect Note: Values given assume the I may be reduced by taking Table for Selection of I	building has a frame str the coefficient to the ri Factor D1 lignment of Floors within 2	ructure. For stiff build ight of the value appl Fact Separation 20% of Storey Height	dings (eg shea icable to frame cor D1 For Lo Severe 0 <sep<.005h () 1</sep<.005h 	nr walls), the effect buildings. ngitudinal Direct Significant .005 <sep<.01h< td=""><td>of pounding ion: 1.0 Insignificant Sep>.01H () 1</td><td>i to be minimal)</td></sep<.01h<>	of pounding ion: 1.0 Insignificant Sep>.01H () 1	i to be minimal)
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	Height Difference > 4 Storeys $\bigcirc 0.4$ $\bigcirc 0.7$ $\bigcirc 1$	(Estimate D1 and D2 and set D Factor D1: - Pounding Effect Note: Values given assume the I may be reduced by taking Table for Selection of I Aligni Comment: Nil b) Factor D2: - Height Dir	building has a frame str the coefficient to the right Factor D1 lignment of Floors within 2 ment of Floors not within 2 fference Effect	ructure. For stiff build ght of the value appl Fact Separation 20% of Storey Height 20% of Storey Height	dings (eg shea icable to frame cor D1 For Lo Severe 0 <sep<.005h 0 1 0 0.4</sep<.005h 	ngitudinal Direct Significant .005 <sep<.01h 0 1 0.7</sep<.01h 	of pounding ion: 1.0 Insignificant Sep>.01H ① 1 ① 0.8 ion: 1.0	
		(Estimate D1 and D2 and set D Factor D1: - Pounding Effect Note: Values given assume the I may be reduced by taking Table for Selection of I Aligni Comment: Nil b) Factor D2: - Height Di	building has a frame str the coefficient to the right Factor D1 lignment of Floors within 2 ment of Floors not within 2 fference Effect	ructure. For stiff build ght of the value appl Fact Separation 20% of Storey Height 20% of Storey Height	dings (eg shea icable to frame cor D1 For Lo Severe 0 <sep<.005h () 1 () 0.4 cor D2 For Lo Severe</sep<.005h 	ngitudinal Direct Significant .005 <sep<.01h 0 1 0 0.7</sep<.01h 	of pounding ion: 1.0 Insignificant Sep>.01H ① 1.0 ① 0.8 ion: 1.0 Insignificant	
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Comment: Nil



et Number & Name: 21 Meachen Street		Jo	o No.:	5-C3957.00
A:		By	:	GSF
me of building: Animal Services		Da		10/12/2019
ty: Seaview, Hutt City		Re	vision No.:	0
able IEP-3 Initial Evaluation Procedure Step	3			
ep 3 - Assessment of Performance Achievement Ratio	(PAR)			
Transverse Direction				
	ct on Structural Perfo	manaa		Facto
	ose a value - Do not inte			
1 Plan Irregularity				
Effect on Structural Performance O Severe	⊖ Significant		Insignificant	Factor A 1.0
Comment: Nil				-
2 Vertical Irregularity				
Effect on Structural Performance O Severe	─ Significant		Insignificant	Factor B 1.0
Comment: Nil	0.0			
3 Short Columns				
Effect on Structural Performance OSevere Comment: Nil 4 Pounding Potential (Estimate D1 and D2 and set D = the lower of the two, or 1.0 if no	⊖ Significant	or consequences	Insignificant are considered	
Comment: Nil 4 Pounding Potential (Estimate D1 and D2 and set D = the lower of the two, or 1.0 if no a) Factor D1: - Pounding Effect Note: Values given assume the building has a frame structure. For may be reduced by taking the coefficient to the right of the v Table for Selection of Factor D1	p potential for pounding, r stiff buildings (eg shea value applicable to frame Factor D1 For 1 Severe	r walls), the effec e buildings. Transverse Direc Significant	s are considered t of pounding ction: 1.0 Insignificant	
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Comment: Nil 4 Pounding Potential (Estimate D1 and D2 and set D = the lower of the two, or 1.0 if no a) Factor D1: - Pounding Effect Note: Values given assume the building has a frame structure. For may be reduced by taking the coefficient to the right of the v Table for Selection of Factor D1	p potential for pounding, r stiff buildings (eg shea value applicable to frame Factor D1 For 1 Severe Separation 0 <sep<.005h rey Height 0 1</sep<.005h 	r walls), the effect e buildings. Transverse Direct Significant .005 <sep<.01h< td=""><td>s are considered t of pounding ction: 1.0 Insignificant Sep>.01H</td><td></td></sep<.01h<>	s are considered t of pounding ction: 1.0 Insignificant Sep>.01H	
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Effect	on Structural Performance	○ Severe	⊖ Significan	t	Insignificant	Factor E	1.0
	nent: Potential for liquifaction	V	gnificant on performance. Dista		V -		
Reco	Factors - for allowance of a ord rationale for choice ent: Steel portal frames with	e of Factor F:	acterstics of the building structure, braced timber stuctu	otherwise	- Maximum value 2.5 - Maximum value 1.5. No minimum. Iding.	Factor F	1.00
							PAF
	mance Achievement Rat s A x B x C x D x E x F)	io (PAR)			т	ransverse	1.00

treet Number & Name:	21 Meachen Street	Job No.:	5-C3957.00
KA: ame of building: ity:	Animal Services Seaview, Hutt City	By: Date: Revision No.:	GSF 10/12/2019 0
able IEP-4 Initial E	valuation Procedure Steps 4, 5, 6 and	17	
tep 4 - Percentage of Nev	v Building Standard (%NBS)	Longitudinal	Transverse
1 Assessed Baseline %Λ (from Table IEP - 1)	IBS (%NBS) _b	26%	39%
2 Performance Achieven (from Table IEP - 2)	nent Ratio (PAR)	1.50	1.00
3 PAR x Baseline (%NBS) _ь	40%	40%
4 Percentage New Buildi (Use lower of two value	ng Standard <i>(%NBS)</i> - Seismic Rating s from Step 4.3)		40%
tep 5 - Is <i>%NB</i> S < 34?			NO
tep 6 - Potentially Earthq	uake Risk (is <i>%NB</i> S < 67)?		YES
tep 7 - Provisional Gradiı	ng for Seismic Risk based on IEP	Seismic Grad	le C
	ms of note affecting IEP based seismic rating)		
Comment: None			

Grade:	A+	A	В	С	D	E
%NBS:	> 100	100 to 80	79 to 67	66 to 34	< 34 to 20	< 20

WARNING!! This initial evaluation has been carried out solely as an initial seismic assessment of the building following the procedure set out in "The Seismic Assessment of Existing Buildings" Technical Guidelines for Engineering Assessments, July 2017. This spreadsheet must be read in conjunction with the limitations set out in the accompanying report, and should not be relied on by any party for any other purpose. Detailed inspections and engineering calculations, or engineering judgements based on them, have not been undertaken, and these may lead to a different result or seismic grade.

AKA	ne of building:	21 Meachen Street Animal Services Seaview, Hutt City	Job No.: By: Date: Revision No.:	5-C3957.00 GSF 10/12/2019 0
Tal	ble IEP-5 Initial Ev	valuation Procedure Step 8		
	p 8 - Identification of po	otential Severe Structural Weaknesses (SS a significant number of occupants	Ws) that could result in	
8.1	Number of storeys above	ve ground level		1
8.2	Presence of heavy cond	crete floors and/or concrete roof? (Y/N)		N
	Potential Severe	e Structural Weaknesses (SSWs	s):	
	Note: Options that are greye			
		ed out are not applicable and need not be considered.		
	Occupancy not consi	ed out are not applicable and need not be considered.	eration required	
	Risk not considered t	dered to be significant - no further consid	required have been identified	
	Risk not considered t	dered to be significant - no further conside to be significant - no further consideration al Severe Structural Weaknesses (SSWs) I	required have been identified	
	Risk not considered t The following potentia in the building that co	dered to be significant - no further conside to be significant - no further consideration al Severe Structural Weaknesses (SSWs) I ould result in significant risk to a significan	required have been identified	
	Risk not considered to The following potentia in the building that co 1. None identified 2. Weak or soft storey 3. Brittle columns and	dered to be significant - no further conside to be significant - no further consideration al Severe Structural Weaknesses (SSWs) I ould result in significant risk to a significan	nequired have been identified nt number of occupants:	
	Risk not considered to The following potentia in the building that co 1. None identified 2. Weak or soft storey 3. Brittle columns and not constrained by	dered to be significant - no further consident to be significant - no further consideration fal Severe Structural Weaknesses (SSWs) I ould result in significant risk to a significant y (except top storey)	nequired have been identified nt number of occupants: of which are	
	Risk not considered to The following potentia in the building that co 1. None identified 2. Weak or soft storey 3. Brittle columns and not constrained by 4. Flat slab buildings connections	idered to be significant - no further consideration to be significant - no further consideration al Severe Structural Weaknesses (SSWs) I ould result in significant risk to a significant y (except top storey) d/or beam-column joints the deformations other structural elements	required have been identified nt number of occupants: of which are	



WARNING!! This initial evaluation has been carried out solely as an initial seismic assessment of the building following the procedure set out in "The Seismic Assessment of Existing Buildings" Technical Guidelines for Engineering Assessments, July 2017. This spreadsheet must be read in conjunction with the limitations set out in the accompanying report, and should not be relied on by any party for any other purpose. Detailed inspections and engineering calculations, or engineering judgements based on them, have not been undertaken, and these may lead to a different result or seismic grade.



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1. Building Information	ı
Building Name/ Description	Animal Services
Street Address	21 Meachen Street, Seaview
Territorial Authority	Hutt City Council
No. of Storeys	1
Area of Typical Floor (approx.)	480 sqm
Year of Design (approx.)	1968
NZ Standards designed to	NZSS 1900, Chapter 8: 1965
Structural System including Foundations	 Structure: Front - Timber framed structure with braced walls and brick veneer cladding with ties. Rear - portal frames with cross bracing. Foundations: Front - concrete foundation wall and piles supporting timber subfloor. Rear - concrete slab on grade with reinforced concrete pads and foundation beams Roof: Lightweight cladding, super six roofing over portal structure has been replaced
Does the building comprise a shared structural form or shares structural elements with any other adjacent titles?	Νο
Key features of ground profile and identified geohazards	Flat even ground profile, subsoil E, land reclaimed during the 1950s, potential for liquefaction. 250m from shore, limited potential for lateral spreading.
Previous strengthening and/ or significant alteration	Minor alterations with little impact on performance of the building
Heritage Issues/ Status	Nil
Other Relevant Information	Constructed on land reclaimed in the 1950s

2. Assessment Information			
Consulting Practice	WSP New Zealand Ltd		
 CPEng Responsible, including: Name CPEng number A statement of suitable skills and experience in the seismic assessment of existing buildings¹ 			
 Documentation reviewed, including: date/version of drawings/ calculations² previous seismic assessments 	1968 Drawings, proposed building for A Lemmon Ltd. To be erected o lot 19 Seaview Reclamation. Drawings 125 sheets 1A, 2A, 3A, (5A?) and 6A . 1968 Specifications, for construction of an industrial for A Lemmon Ltd. All pages 1 – 12 1968 February – calculations (some poor quality)		
Geotechnical Report(s)	NA – assumed based on local knowledge refer to section 3		
Date(s) Building Inspected and extent of inspection	6 December 2019		
Description of any structural testing undertaken and results summary	None		
Previous Assessment Reports	NA		
Other Relevant Information	Nil		

ISA

¹ This should include reference to the engineer's Practice Field being in Structural Engineering, and

commentary on experience in seismic assessment and recent relevant training

² Or justification of assumptions if no drawings were able to be obtained

3. Summary of Engineering Assessment Methodology and Key Parameters Used			
Occupancy Type(s) and Importance Level	Importance Level 2		
Site Subsoil Class	E assumed based on local knowledge and NZS1170.5:2004 Site Subsoil Classification of Lower Hutt http://nzsee.org.nz/db/2011/013.pdf Reclaimed land 1950s		
For an ISA:			
 Summary of how Part B was applied, including: Key parameters such as μ, S_p and F factors Any supplementary specific calculations 	Ductility – 1.50 Steel cross-braced portal frames and 2.0 Steel Portal frames (2.0 lined and braced timber framed walls, ignore as not the limiting ductility) Sp Factor – 0.85 and 0.70 F Factor – 2.0 Steel portal frames with cross bracing. Front structure, braced timber structure with heavy cladding. 1.5 steel portal frames		
For a DSA:			
 Summary of how Part C was applied, including: the analysis methodology(s) used from C2 other sections of Part C applied 	NA		
Other Relevant Information	NA		

4. Assessment Outcomes				
Assessment Status (Draft or Final)	Final			
Assessed %NBS Rating	40%NBS IL2			
Seismic Grade and Relative Risk (from Table A3.1)	C - 5 – 10 times greater			
For an ISA:				
Describe the Potential Critical Structural Weaknesses	None identified			
Does the result reflect the building's expected behaviour, or is more information/ analysis required?	Yes – the ISA is sufficient			
If the results of this ISA are being used for earthquake prone decision purposes, <u>and</u> elements rating <34%NBS have been identified:	Engineering Statement of Structural Weaknesses and Location NA	<i>Mode of Failure and Physical</i> <i>Consequence</i> Statement(s) NA		
For a DSA:				
Comment on the nature of Secondary Structural and Non-structural elements/ parts identified and assessed				
Describe the Governing Critical Structural Weakness				
If the results of this DSA are being used for earthquake prone decision purposes, <u>and</u> elements rating <34%NBS have been identified (including Parts) ³ :	Engineering Statement of Structural Weaknesses and Location	<i>Mode of Failure and Physical</i> <i>Consequence</i> Statement(s)		
Recommendations (optional for EPB purposes)				

³ If a building comprises a shared structural form or shares structural elements with other adjacent titles, information about the extent to which the low scoring elements affect, or do not affect the structure.