

Structural engineers processing checklist

Address:		Consent N°:	
Processed by:		Date:	
Description of work:			
Code clauses reviewed	<input type="checkbox"/> B1	<input type="checkbox"/> B2	

Brief description of the work reviewed

- Acceptable Solution (*describe*)
- Verification Method (*describe*)
- Alternative Solution (*describe*)
- Full review (*refer SESOC Practice Guideline – SESOC Journal Volume 23, N°: 2 September 2010*) (*describe*)
- Partial review (*describe*)
- Structural Systems (*refer SESOC Interim Design Guidance – Design of Conventional Structural Systems following the Canterbury Earthquakes*) (*describe*)

Structural documentation supplied	Decision			Reasons for decision / comments
	Yes	RFI	N/A	
Design features report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Structural calculations <input type="checkbox"/> Clear <input type="checkbox"/> Complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Structural specifications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Structural drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Design / detailing of structural elements for durability

Acceptable Solutions

- NZS 3604
- NZS 3101
- Other
(*describe*)

Alternative Solutions

- AS/NZS 2312
- NZS 3404:Part 1:2009
- Other
(*describe*)

Section 112.1 the BCA is satisfied that after the alteration the building will:	N/A <input type="checkbox"/>	Decision	
		Yes	No
1(b) Continue to comply with the provisions of the Code that relate to structural performance, to at least the same extent as before the alteration		<input type="checkbox"/>	<input type="checkbox"/>

Section 115	N/A <input type="checkbox"/>	Decision	
		Yes	No
Complies as near as is reasonably practicable with the provisions of the Building Code that relate to structural performance		<input type="checkbox"/>	<input type="checkbox"/>

Items checked	Decision			Reasons for decision / comments
	Yes	RFI	N/A	
Design loadings <input type="checkbox"/> Dead <input type="checkbox"/> Live <input type="checkbox"/> Wind <input type="checkbox"/> Seismic <input type="checkbox"/> Other specific loadings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
GIS special land features	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Geotechnical / soil report <input type="checkbox"/> Completeness of geotechnical report <input type="checkbox"/> Slope stability <input type="checkbox"/> Expansive soils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Site subsoil class (NZS 1170.5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Excavation and construction near boundary <input type="checkbox"/> Excavation procedure <input type="checkbox"/> Surcharge loads <input type="checkbox"/> Retaining wall design (strength & stiffness)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Landscape retaining walls <input type="checkbox"/> Surcharge (driveway, buildings, backslope) <input type="checkbox"/> Height >1.5m	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basement retaining walls <input type="checkbox"/> Type <input type="checkbox"/> Surcharge (driveway, buildings, backslope) <input type="checkbox"/> Retained height <input type="checkbox"/> Design and detailing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Drain bridging details	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Strip footings and pads <input type="checkbox"/> Size <input type="checkbox"/> Depth <input type="checkbox"/> Reinforcing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bored piles <input type="checkbox"/> Pile size <input type="checkbox"/> Pile depth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Items checked	Decision			Reasons for decision / comments
	Yes	RFI	N/A	
Concrete <input type="checkbox"/> Strength <input type="checkbox"/> Specifications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Driven piles <input type="checkbox"/> Calculations <input type="checkbox"/> Hammer drop <input type="checkbox"/> Hammer weight <input type="checkbox"/> Pile set <input type="checkbox"/> Pile size <input type="checkbox"/> Pile depth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Screw piles <input type="checkbox"/> Eccentricity check <input type="checkbox"/> Adequate specification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Block walls <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> Height <input type="checkbox"/> Shear walls <input type="checkbox"/> Reinforcing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Slabs <input type="checkbox"/> Raft <input type="checkbox"/> On-grade <input type="checkbox"/> Suspended	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Slab <input type="checkbox"/> Thickness <input type="checkbox"/> Reinforcement <input type="checkbox"/> Construction joints	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Floor design loads <input type="checkbox"/> Recorded on plans <input type="checkbox"/> Line loads <input type="checkbox"/> Point loads <input type="checkbox"/> Vibration check	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Proprietary floor system <input type="checkbox"/> Manufacturer's information <input type="checkbox"/> Support details	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Columns and posts <input type="checkbox"/> Calculations <input type="checkbox"/> Combined action <input type="checkbox"/> Detailing (size, connections) <input type="checkbox"/> Concrete columns detailed for ductility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete moment resisting frames <input type="checkbox"/> Ductility <input type="checkbox"/> Calculations <input type="checkbox"/> Detailing (reinforcing, beam/column joints)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Steel moment resisting frames <input type="checkbox"/> Ductility <input type="checkbox"/> Calculations <input type="checkbox"/> Restraint points <input type="checkbox"/> Detailing (size, connections)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Timber wall framing outside scope of NZS3604 <input type="checkbox"/> Calculations <input type="checkbox"/> Height <input type="checkbox"/> Loadings <input type="checkbox"/> Openings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Items checked	Decision			Reasons for decision / comments
	Yes	RFI	N/A	
Steel braced frames <input type="checkbox"/> Ductility <input type="checkbox"/> Type	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rafters, beams and lintels outside scope of NZS3604 <input type="checkbox"/> Calculations <input type="checkbox"/> Point loads <input type="checkbox"/> Lateral restraint	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Purlins and girts <input type="checkbox"/> Size <input type="checkbox"/> Spacing in relation to cladding <input type="checkbox"/> Local wind press. effects at knee, ridge & end <input type="checkbox"/> Lateral restraints <input type="checkbox"/> Number of braces per bay	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Trusses <input type="checkbox"/> Member sizes <input type="checkbox"/> Connections <input type="checkbox"/> Support details	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bracing <input type="checkbox"/> Roof <input type="checkbox"/> Wall <input type="checkbox"/> Mezzanine <input type="checkbox"/> Lateral load paths to bracing elements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Firewall <input type="checkbox"/> Stability <input type="checkbox"/> Connections (NZS 3101 cl 4.8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Precast panels <input type="checkbox"/> Development length of starters <input type="checkbox"/> No wire mesh as primary reinforcement <input type="checkbox"/> Thickness and reinforcement <input type="checkbox"/> Embedded anchors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Welded connections <input type="checkbox"/> Grade G <input type="checkbox"/> Grade S <input type="checkbox"/> Weld type/size <input type="checkbox"/> Fatigue considerations <input type="checkbox"/> Adequately specified and detailed <input type="checkbox"/> Inspection requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bolted connections <input type="checkbox"/> Shear and tension <input type="checkbox"/> Fatigue considerations <input type="checkbox"/> Adequately specified and detailed <input type="checkbox"/> Edge and end distances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vertical load paths to foundations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Building lateral deflection under ULS wind or earthquake loading vs. boundary separation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serviceability deflections (under gravity and / or wind loadings)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wind pressures mapped for cladding / glazing design	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Items checked	Decision			Reasons for decision / comments
	Yes	RFI	N/A	
Note on drawings that manufacturer to provide shop drawings for design engineer's approval before construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Balustrades (refer AC2223 Timber barriers and MBIE guidance document on Barriers) <input type="checkbox"/> Design loading <input type="checkbox"/> Height <input type="checkbox"/> Connections <input type="checkbox"/> Infill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pallet racking (refer AC2246 Pallet racking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Heritage buildings (refer AC2248)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Structural steel <input type="checkbox"/> Imported structural steel. Has compliance with NZS3404 been demonstrated? <input type="checkbox"/> How was this achieved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Requests for further information	Decision		Date requested	Date resolved
	Yes	N/A		
Information requested	<input type="checkbox"/>	<input type="checkbox"/>		
Information requested	<input type="checkbox"/>	<input type="checkbox"/>		
Information requested	<input type="checkbox"/>	<input type="checkbox"/>		
Information requested	<input type="checkbox"/>	<input type="checkbox"/>		

Final check / sign off	Decision		Final check / sign off	Decision	
	Yes	N/A		Yes	N/A
PIM issues resolved	<input type="checkbox"/>	<input type="checkbox"/>	Conditions completed	<input type="checkbox"/>	<input type="checkbox"/>
Agreement to provide PS4 required	<input type="checkbox"/>	<input type="checkbox"/>	Computer tasks completed	<input type="checkbox"/>	<input type="checkbox"/>
Specialist inspections identified	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Superseded plans separated / retained	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

Final sign off (<i>signature</i>)	Yes	No
The structural engineering specialist input on this building consent has been completed and I am satisfied resolves any items identified	<input type="checkbox"/>	<input type="checkbox"/>
Engineers name:	Date:	

Notes / comments/ RFI summary