

***shelter***

**An Independent Opinion**

Shelter Architects & Planners Pty Ltd

ABN 44 121 018 353 ACN 121 018 353

## 1 SAMPLE STREET



### REPORTS PROVIDED

<u>Expert Witness Report</u>	<input checked="" type="checkbox"/>	<u>Specialist Report</u>	<input type="checkbox"/>	<input type="checkbox"/>
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### INSPECTOR DETAILS

Name:	Markus Pye	Phone:	00434631555	Email:	markus@shelterarchitectsplanners.com.au
Architect's Registration No:	16589	BSA license No:	71249		

### CLIENT DETAILS

Name:	SAMPLE CONSTRUCTIONS PTY LTD	Phone:	SAMPLE
Address:	SAMPLE	Email:	SAMPLE

### PROPERTY DETAILS

<u>Roof finish</u>	Corrugated Metal	<u>Storeys</u>	Double	<u>Vegetation</u>	Low
<u>Superstructure</u>	Timber framed	<u>Site</u>	Flat	<u>Aspect</u>	Northerly
<u>Substructure</u>	Concrete Strip	<u>Age</u>	90	<u>Occupied</u>	Occupied
<u>Floor structure</u>	Timber frame & Concrete slab	<u>Additions</u>	Yes	<u>Weather</u>	Fine

### DETAILS of ADVICE SOUGHT

#### ADVICE SOUGHT: Provide Expert Witness report for QCAT Hearing

Conduct site inspection, review and recommend actions in response to 2 supplied documents regarding extensions and additions to subject property:

1. BSA Initial Inspection Report No 3-4291-10
2. Z\*#@ Construction DEFECTS Report dated 26 April 2012
3. \*&^\$ Architects Amendment 'D' & @#\$%^ Engineer drawings.

Carry out additional inspections and offer independent advice regarding itemised defects as noted in Z\*#@ Constructions and BSA reports of construction work of additions to dwelling at 1 Sample Street. Construction by Sample Constructions PTY LTD.

#### REFERENCE DOCUMENTS:

BCA Volume 2 2009  
Guide to STANDARDS & TOLERANCES 2007  
Australian Standards



### Information Regarding the Scope of the Inspection and the Report

**Client Agreement:** This report confirms your instructions to undertake inspections and report on any significant items at the time of the inspection. The inspection shall be undertaken within the terms of the inspection and all statutory obligations. The following statements outline our observations and opinions in relation to the condition of the dwelling and complex as reasonably accessed. It should be noted that this report relates only to that which is readily viewable. No opinion or warranty is made on that which cannot be readily seen. The following notes form an integral part of the report. If there are any items that are not clear or legible or you do not understand, please contact the office for clarification before accepting the property.

#### **Purpose of Inspection**

The Client has identified what is to be accomplished by the inspection by nominating the purpose of the inspection. Any changes to the scope, purpose or acceptance criteria shall be agreed to by all parties at the appropriate time.

#### **Scope of Inspection**

The scope of the inspection covers the type, extent and boundaries of the inspection and shall be suitable for the defined purpose of the inspection. The inspection agreement shall include the defined purpose, scope and acceptable criteria. The inspection scope and acceptance criteria shall be defined by the Client and agreed to by the client and inspector.

#### **Access**

The inspector shall inspect all area included in the scope of the inspection. The inspector shall not enter or inspect areas where safe unobstructed access is not available. The extent of accessible areas, as defined by the presence of safe and reasonable shall be determined by the inspector, based on the conditions encountered at the time of the inspection.

If in the opinion of the inspector, restrictions on access have compromised satisfaction of the purpose of the inspection, a recommendation shall be made as to the necessity to gain access to allow further inspection.

#### **Limitations**

Limitations that are expected to be present, or that may occur, shall be identified where possible including deliberate concealment of defects and any other relevant factor restricting the inspection.

#### **Extent of Reporting**

The extent of reporting shall be nominated and the extent comprises the significant item/s for the particular inspection.

#### **Significant item**

An item/s that is to be reported within the scope of the inspection, which may be a feature that is either present or absent.

#### **Report content.**

- Inspection details;
- Limitations;
- Observations;
- Significant items;
- Conclusions

## **BUILDING DEFINITIONS**

**Defect – Fault or deviation from the intended condition of a material, assembly, or component.**

**Major defect (xx)** – The Australian Standard 4349.1 defines Major Defect as: *“A defect of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property”*. Including **Structural defect**.

In addition, **QLD Building Services Authority** defines a major defect as: Category 1 defective building work that is faulty or unsatisfactory because it does one or more of the following:

*(a) adversely affects the structural performance of a building; (b) adversely affects the health or safety of persons residing in or occupying a building; (c) adversely affects the functional use of a building; (d) allows water penetration into a building.*

**Minor defect (x)** – A defect other than a major defect, and includes:

**Appearance Defects:** Where in the inspector's opinion the extent the decline in operational effectiveness, aesthetic appearance and general presentation is *below that of compared to the accepted standards appropriate to the building elements and services*.

**Serviceability Defect:** Fault or deviation from the intended serviceability performance of a building element, or where in the Inspector's opinion the expected consequence is unknown until further information is obtained.

## OBSERVATIONS & RECOMMENDATIONS

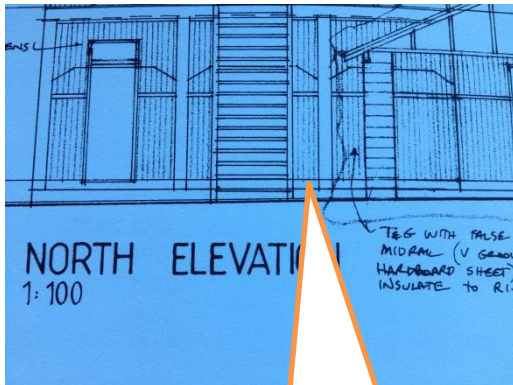
### Z\*#@ Report 4.1 Front Steps / BSA Complaint 1 a & b

**Reference:** \*^%\$ Architect Dwgs Sheets 1 to 6

**Observation 1a:** NORTH ELEVATION on SHEET 5 of 6

- The documentation notes the base tread being generally at the same level as the Carport and as noted z\*#@ photo 1 and;
- Height difference from driveway to ground level suggesting awaiting 'finished ground levels' from graded fill.

**Photo/s:**



Note 'indicative' finished height match of step to slab.



Safety issue due to height to frontage supporting proposed future fill.

**Deemed:** Incomplete works.

**Recommendation:** Owner to fill to suitable 'finished ground levels' to comply with BCA and make frontage area including fill to driveway edge foot traffic useable.

**Observation 1b:** Regarding oversize gap (requires maximum 124mm gap) between risers. 'Completed painting' to stair case deems the work as considered complete and therefore a defect.

**Builder's Statement:** Stair Company, <?>< Stairs, came on site to fit staircase packing onto make staircase gap compliant and was ordered off site by owner as she threatened to call police.

**Photo/s:**



150mm gap

**Deemed:** Defect

**Recommendation:** Install & paint d.a.r. h.w.d. plantings as required to comply.

## OBSERVATIONS & RECOMMENDATIONS

### **Z\*#@ Report 4.2 Ground Levels / BSA Complaint 12**

**Reference:** \*^%\$ Architect Dwgs Sheets 1 to 6 & BCA Report

**Observation:**

No earth works were required to prepare the site given the building pad existed and required no earthworks- Refer BCA

#### **EARTH WORKS SITE PREPERATION**

##### **3.1.1.0 Application**

- (a) The work is undertaken in normal *site* conditions; defined by
- (b) (vi) drainage on the allotment is maintained.

The following photos note that falls to the building perimeter generally discharge surface water away from perimeter as the BCA intention. Note: It was also stated by Builder that boundary retaining wall/fencing was to be installed which would enable excavation works, final trim and hard surfacing to be carried out concurrently.

**Photo/s:**



Surface water generally falls to boundary.



Surface water generally falls to frontage

**Deemed:** NO DEFECT & “Alternative (Performance) Solution” at present, awaiting final desired surface finish.

#### **BCA SECTION 3 – ACCEPTABLE CONSTRUCTION**

There is no obligation to accept any particular option contained in Section 3 of the Housing Provisions if it is to meet the Performance Requirement in some other way.....The performance nature of this document provides flexibility and allows the use of alternative construction methods even though they may not be specifically described .....

#### **BCA SECTION 2 – PERFORMANCE PROVISIONS**

##### **F2.2.1 Surface Water**

A building including any associated site work is to be constructed in a way that protect people and other property from the adverse effects of **redirected** surface water.

**Recommendation:** Owner to finish intended paving landscaping to areas. The large access door indicates hard surface treatment is expected to occupy the area. Note: Refer 4.2 Z\*#@ conclusion BCA Part 3.2.2.1 refer to Excavation for footings is NA.



## OBSERVATIONS & RECOMMENDATIONS

### Z\*#@ Report 4.3 Carport

**Builder's Statements:** Builder met with owner, architect and site foreman, Phillip Horstman, when it became evident carport posts were constructed 200mm narrower which was not to plan and Craig offered to move posts and replace carport trusses at his own expense. Owner elected to go ahead with existing posts and trusses; "Panels to carport – owner asked builder to leave bracing panels off and was not charged for them as contract was cost plus."

#### **Observation:**

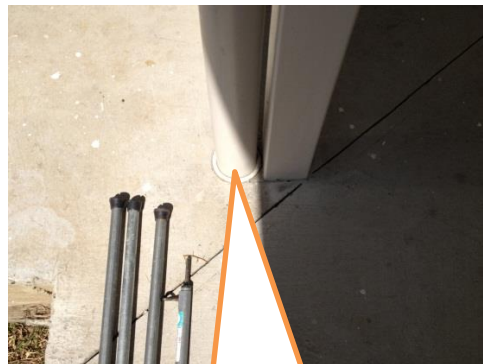
Garage is 200mm shorter in width (bracing panels also omitted). The modification has enabled the rear to mate with the house without impact. Omission of bracing panels is considered a having irrelevant structural impact with reference to AS 1170,4100,3700. The modifications to gain the extra 200mm opening to 5800mm as documented with have a substantial 'appearance' impact on the structure as it will require:

1. Structural modifications to the roof and support framing potentially disturbing the carport symmetrical- 'appearance' defect;
2. Relocating the posts will cause an appearance defect to concrete slab at base and require differing fixing methods to new post location causing 'appearance' defects;
3. Require purpose built downpipe discharge point to be relocated causing 'appearance' defects.

#### **Photo/s:**



Posts relocated  
off centre of  
slab concrete.



Roof would have variable  
size members

New downpipe location will be  
unsuitable.

**Deemed:** A 'no impact non-compliance with documentation'. As it has neither an appearance or operational impact, or a not 'fit or purpose' defect, therefore it is not considered a defect.

**Recommendation:** Pursuing any 'rectification' action will be detrimental to the finished appearance of the building as the work 'as is' has no 'operational' impact to rectify. Engineering is considered not required to confirm structural adequacy for deletion of bracing walls due to method of post fixing, lateral movement roof bracing and existing house as bracing walls.

## OBSERVATIONS & RECOMMENDATIONS

### Z\*#@ Report 4.4 Slab Edge / BSA Complaint 2

#### Observation:

**REVIEWED 17 9 12** The cutting of existing slab exposed inadequate depth of concrete in areas causing exposed unsightly areas. New slab has spot proud concrete slurry to edges of existing slab to 2 corners. The finished Concrete patio apron slab was noted by Builder as to have tiled finish, recommended to horizontal and vertical surfaces.

**Photo/s: ALSO REFER Z\*#@ REPORT PHOTO 3.**



Current finish condition due to existing slab depth.



Minor preparation work to take tiling.



Minor preparation work to take tiling.

**Deemed:** Incomplete works regarding slab edge finish to take proposed finish.

**Recommendation:** No Action

- Minor preparation work to proud slurry to corners by Tiler.
- Simple butt joint as per subject is 'one' of the typical industry practice of this context. *Refer AS 2870 Residential Slabs and Footings*. No movement joint is recommended as this may impact on any 'physical' termite barrier required once slab and slab faces are tiled. Slab edge was always going to be face treated before tile installation, and with regard to retaining physical termite barrier.

## OBSERVATIONS & RECOMMENDATIONS

### **Z\*#@ Report 4.5 Electrical wiring to water pump**

**Observation:** Wiring in Store has not been adequately fixed, or wall penetration sealed. It was stated that the appliance came with fixed length of wiring and fixed plug not requiring further works to be carried out.

**Deemed:** Considered an 'appearance' defect.

**Recommendation:** Bundle exposed wiring and permanently fix to avoid accidental damage; close and seal wall penetration with cover plate to dissuade pest entry.

### **Z\*#@ Report 4.6 Chamfer board patching / BSA Complaint 4**

**Observation:** Patched portion cladding due to work carried out post painting completion. Painter was contracted by Owner.

**Builder's Statement:** "Patch was fixed professionally by builder and was OK'd by client. Client said there was no reason to get the painter back for a five minute job as there was more touch-up work she wanted done herself as painting was not part of my contract."

**Deemed:** Has been repainted.

**Recommendation:** No Action Required.

### **Z\*#@ Report 4.7 Termite Protection Zone / BSA Complaint 5**

**Observation:** Modified concrete surrounds allows adequate visual barrier to slab edge. Considered that the current visual barrier dimension is adequate and permanent and therefore complies with the intent.

**Refer BCA 3.1.3.5 attachments to Buildings:**

*(a) Structure such as steps (etc) ...must be separated from the building by a gap of not less than 25mm, to allow clear and uninterrupted visual inspection.*

**Photo/s:**



50mm exposed slab edge to both fixtures.

**Deemed:** Has been Rectified.

**Recommendation:** No Action



## OBSERVATIONS & RECOMMENDATIONS

### **Z\*#@ Report 4.8 Rear Rumpus Door sill / BSA Complaint 6**

**Observation:** Door frame has been installed per standard location, the depth of the frame required by the door number has forced sill to sit not full supported with minor warping of sill board. Note that also no deflection was noted on operating of doors.

**Photo/s:** REFER Z\*#@ REPORT PHOTO 5.

**Deemed:** Considered latent 'operational' defect

**Recommendation:** Installing 2 non-corrosive metal brackets equally spaced for support, or install continuous angle for support off slab edge.

### **Z\*#@ Report 4.9. Unprotected Electrical wiring / BSA Complaint 7**

**Observation:** Exposed wiring from slab into wall subject to possible damage.

**Photo/s:**



Secured and protected.

**Deemed:** Has been rectified.

**Recommendation:** No Action,

### **Z\*#@ Report 4.10 Wall lights**

**Builder's Statement:** Owner has supplied external light fittings to which she did not supply any mounting blocks because she did not want them.

**Observation:** 8 external light fittings have been fitted without mounting blocks to substrate. Fitting gaps has caused caulking to be required to fill gaps in VJ boards in parts and around base profile.

## OBSERVATIONS & RECOMMENDATIONS

Photo/s:



**Deemed:** No Defect to Sample.

**Recommendation:** Review all fittings if required.

### **Z\*#@ Report 4.11 Edging to Tile Splashbacks.**

**Observation:** Exposed 'raw' edging to tile and FC substrate requires to be finished.

**Builder's Statement:** Builder suggested to owner at the time of construction to fit timber cover strips but owner preferred no cover strip finish as she said it was a cleaner finish.

**Photo/s:** REFER Z\*#@ REPORT PHOTO 8.

**Deemed:** Class 2 'appearance' Defect

**Recommendation:** Fit painted timber cover mouldings to all exposed sides.

## OBSERVATIONS & RECOMMENDATIONS

### **Z\*#@ Report 4.12 Gap to edge of architrave.**

**Observation:** Wall surfaces are defective if they deviate from vertical by more than 4mm within any 2m of wall. Appears within tolerance.

**Photo/s:** REFER Z\*#@ REPORT PHOTO 9.

**Deemed:** No defect.

**Recommendation:** No action

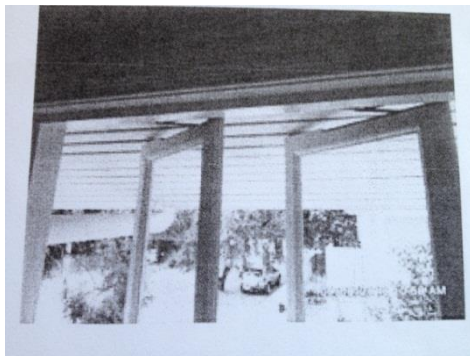
### **Z\*#@ Report 4.13 Casement windows to kitchen / BSA Complaint 8**

#### **Observation:**

Item a. Casement windows bind on soffit lining due to height of installation into 'existing opening'. STANDARDS & TOLERANCES 2007 *'If windows bind or jam as a result of the builders work. All clearances shall be sufficient to enable installation to be plumb, level and operate as intended by the manufacturer'*. Recommend referral to subsequent written correspondence with builder & owner regarding acceptance of binding noting that the Owner was known to have acceptance to the effect *'that there was adequate opening ability in the existing opening'*;

Item b. Light warping to casements in part not enabling casement to fully seal on all sides. This appears to be a manufactures tolerance, noting the windows are constructed of materials subject to environmental variations.

**Photo/s:** REFER Z\*#@ REPORT PHOTO 8.



#### **Deemed:**

- a. Class 2 Defect- However the photo indicates adequate 'operability'.
- b. No defect, as it is considered within acceptable tolerances.

#### **Recommendation:**

- a. No action. Consider install shallow profile soffit battens to area.
- b. No action. Alternatively Owner to remove existing seals or install softer compressible seals.

## OBSERVATIONS & RECOMMENDATIONS

### Z\*#@ Report 4.14 Kitchen Floor

**Builder's Statement:** Owner asked builder to match gap in existing floorboards to new floorboards to make floorboards match existing so kitchen floor did not look like an extension.

**Observation:** Gaps in 2 floor boards. Gap to exposed timber flooring is defective if it has a gap of more than 2mm between adjacent boards that extend for more than 1m. However it does continue to match the existing floor gaps in the adjacent Dining room supporting Builders statement. Note that modern flooring does not generally suffer shrinkage as would appear to be the case in this instance further supporting Builder.

### Photo/s



Extensive gaps to adjacent  
Dining Room floor

**Deemed:** Plausible 'Purpose made' Class 2 appearance defect.

**Recommendation:** Confirm correspondence between Client/Builder/Floorer to continue gaps. Fill gap with matching strip as method of any rectification.

## OBSERVATIONS & RECOMMENDATIONS

### **Z\*#@ Report 4.15 Termite Protection measures.**

**Observation:** Refer approvals regarding compliance with AS 3660.

**Deemed:** No apparent defect.

**Recommendation:** Termite management system installer to prove compliance and install durable notices, warranty and conditions of future compliance as required under Part 3 3.1.3.2 (b).

### **Z\*#@ Report 4.16 Cracked glass in Bed 2 window/ BSA Complaint 10.**

**Builder's Statement:** Owner commented that she thought glass was cracked by painter who contracted directly to her as painting was not in the contract.

**Observation:** Cracked glass noted to 'highlight'.

**Deemed:** No defect as unable to establish responsibility.

**Recommendation:** No action

### **Z\*#@ Report 4.17 Tank water to the Washing machine/ BSA Complaint 11.**

**Builder's Statement:** Certifier confirmed that at that time of building approval it was not a requirement of the Brisbane City Council for renovations to connect rainwater to washing machine.

**Observation:** Alleged noncompliance with Client requirement to connect tank water to washing machine.

**Deemed:** No defect, as unable to establish Owner's request requirement in documentation to connect tank to washing machine.

**Recommendation:** No action