



# **New Home Inspections**

**BUILDING CONSULTANTS AND QUALITY INSPECTORS**

## **FRAME STAGE INSPECTION REPORT AND DEFECTS LIST**

**Address of Subject Property:**  
Lot 55 Sample Pde, Sampleville

**Client:**  
Mr John Sample

**Date of Inspection – Tuesday 1<sup>st</sup> March 2011**

**Start Time of Inspection – 2:00 pm**

**Prevailing Weather Conditions – Overcast**

**Builder – Sample Homes**

**Date of Report – Thursday 4<sup>th</sup> March 2011**

## **Client Brief**

We have been requested by the client to attend their property and carry out a building inspection on the quality of work produced to date by their builder and thereafter to prepare an inspection report identifying any defects that exist in the finishes and the quality of those finishes, for which rectification can reasonably be expected to be the responsibility of the builder.

## **Property Details**

Dwelling Type:- House & Garage	Main Construction Type:- Brick Veneer
Class of Buildings:- BCA 1a and 10a	Dwelling Configuration:-Double Storey
Stage of Building Works:- Frame	Footing Type:- Concrete Slab

## **Inspection & Report Particulars**

Our inspection is a visual inspection of the finishes and the quality of those finishes completed by the Builder up to the stage of our site attendance. This report contains a 'Schedule of Building Defects' that lists the items that in the writers judgement and 30 years of industry experience do not reach the minimum acceptable standard of quality, level of building practice, or have not been built in a proper workmanlike manner with regard to the requirements of the Building Acts and Regulations, the Building Code of Australia (BCA), the relevant Australian Standards or to within the Building Commission's guide to acceptable Standards & Tolerances.

## **Client Authority**

None of the rectification methods, procedures or products suggested within this report are to be read as an instruction to the builder, nor are they an authorisation to vary from the original contractual documentation, a manufacturers installation instruction, any Australian Standards or the BCA. Therefore, depending on the rectification works required, the builder must obtain a signed variation and/or agreement from the client prior to carrying out any such work, whenever one would normally be necessary.

This report must be read by the builder in addition to any list or other correspondence provided by the owner/s.

## **Terms & Conditions**

All site inspections, meetings, this report, all future reports, correspondence and advice that we provide in relation to this property, whether written or verbal, are provided subject to the limitations and exclusions detailed in our standard terms and conditions set out on the last page of this report.

## **Access**

Access was gained to all required areas in accordance with clause 6 of the terms and conditions listed on the last page of this report.

## **Inspection Notes**

At the time of our inspection – 1/. The external walls had been wrapped with sarking and the damp-proof course/cavity flashing had also been fitted around their bases into the slab rebate; 2/. The roof tiles had been installed; 3/. I had not been provided with a copy of the engineering, wall bracing, first floor joist system and roof truss designs and layouts.

## **Summary**

A check of the framework found that the walls had been plumbed to within their allowable tolerance and the trusses and joists were bearing and connected correctly onto the wall frames, generally, the framing materials are of a good quality and put together well. However the items detailed in the attached 'Schedule of Building Defects' require further rectification and/or justification prior to this home proceeding to the next stage.

Should the reader of this report have any additional queries or questions in relation to the items set out within it, please do not hesitate to contact the writer via any of the methods detailed below.

Yours faithfully,



Kevin McDonald

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**Please direct all postal correspondence to: P.O.Box 448, Patterson Lakes 3197.**




**Bookings and Enquiries Ph: 0421 311 694**


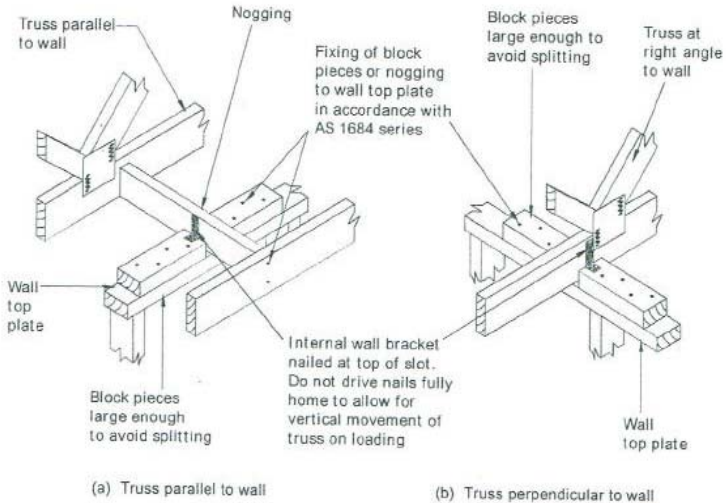

**Web Site: [www.newhomeinspections.com.au](http://www.newhomeinspections.com.au)**

**Office: Suite 5, 100 Gladesville Bvd, Patterson Lakes 3197**

## SCHEDULE OF BUILDING DEFECTS

Item	Observations, Considerations and Recommendations:-
1.	<p>Concrete Floor Slab</p> <p>The steel reinforcement bars from within the floor slab have not been properly positioned prior to the concrete pour along the side wall of Bed 2 &amp; 4, the Rumpus room and the Master Bedroom and as a result have not been covered with concrete and remain exposed to the elements. These bars are starting to rust and will continue to do so over time, expanding as they do, which will lead to the possible future cracking of the slab as well as its possible long term failure.</p>  <p>It is a requirement of part 3.2.3.2 Steel Reinforcement, of the BCA's that <i>'Footings and slabs on ground must have concrete cover between the outer most edge of the reinforcement and the surface of the concrete of not less than 40mm to external exposure; Reinforcement must be cleaned of loose rust; and all reinforcement must be firmly fixed in place to prevent it moving during concreting operations.'</i></p> <p>The builder should remove the soil that has been pushed back up around the remaining edge beams and then have the original design engineers inspect and make recommendations on how to best treat this reinforcement and its lack of side coverage to ensure the slabs long-term performance. The owner/s should ensure that this rectification work is carried out under the full supervision of the relevant Building Surveyor.</p>
2.	<p>The edges of the floor slab have not been correctly boxed up prior to being poured, which has resulted in it protruding out past the pine wall frame along the side of the Family room by up to 32mm which will significantly reduce the required 40mm cavity width across to the back of the brickwork and compromise its ability to drain any water and moisture that collects in it away from the timber wall framing.</p>  <p>Part 3.3.4.2 Width of Cavity of the BCA, requires that <i>'In brick veneer construction, a cavity of not less than 25mm width must be provided between the inner and outer walls and the minimum cavity width is to be maintained between the outer masonry leaf and any services, insulation, sheet bracing or other element located within the cavity'</i>. Additionally, the relevant Australian Standard, A.S.3700-2001 Masonry Structures, clause 11.4.13 Cavities in Walls, requires that <i>'Cavities shall be free from mortar droppings or other materials that might bridge the cavity and allow transmission of moisture'</i>.</p> <p>The builder should therefore, after consultation with the slabs design engineer, carefully trim back the edges of the slab to achieve the required minimum 25mm cavity width, at least down to below the damp-proof course/cavity flashing. Consideration should be given to not</p>

Item	Observations, Considerations and Recommendations:-
3.	<p>exposing the edge of the steel reinforcement or reducing its side cover; not reducing the throat of the edge beam; and also to any protrusion that may exist on the lower edge of the rebate out past the future finished face of the brickwork.</p> <p>The floor slab has been boxed and poured short along the side wall of the Kitchen, which has left the bottom plate of the wall frame overhanging the edge of the floor slab by up to 20mm.</p>  <p>The Building Commission's Guide to Standards and Tolerances clause 4.08 Bottom Plates that Overhang Concrete Slabs, states '<i>Bottom plates that are at least 90mm wide and overhang concrete slabs are defective. An overhang of up to 10mm is permissible</i>'. This overhanging bottom plate will need to be supported by an appropriately designed and certified engineered system so that it complies with this tolerance.</p>
4.	<p>The bottom plate is also overhanging the edge of the floor slab along the side of the Bathroom and Bed 3 by up to 30mm, which has been supported on timber bolted to the edge of the slab in the horizontal position. The problem with this remedy is that as can be seen in the photograph below the timber support has already shrunk away, leaving the bottom plate unsupported and capable of rotating.</p>  <p>These present supports should be removed and replaced with either steel angle or timber cut to length down tight to the lower rebate in the horizontal plane.</p>
5.	<p>Framing Issues</p> <p>There have not been jamb studs installed to the ends of the lintels over most of the required window and doors openings throughout these Units.</p>  <p>It is a requirement of A.S 1684 Residential Timber-Framed Construction, clause 6.3.2.3 Jamb Studs (studs at sides of openings), that '<i>openings are to have 1 full-length stud on either side of the openings</i>'. Additional jamb studs will have to be installed to the required ends of these lintels.</p>

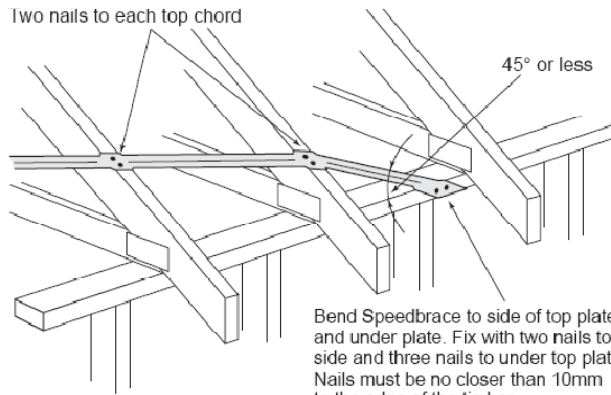
Item	Observations, Considerations and Recommendations:-
6.	<p>The jamb studs supporting the window opening lintels in Bed 2 and the Family room, that are picking up the girder truss concentration of load points, have not been increased in size as required by Australian Standard, A.S 1684 Residential Timber-Framed Construction, clause 6.3.2.3 Jamb Studs, which should either be rectified or otherwise justified. Notably the ones in Bed's 1 &amp; 3 have.</p>
7.	<p>The roof beams over the Porch areas have not been tied or bolted to the post supporting them.</p>  <p>It is a requirement of Australian Standard, A.S 1684 Residential Timber-Framed Construction, clause 9.5 Nominal Fixings (Minimum Fixings), that <i>'Verandah beams and roof beams shall be joined to posts with 1/M12 or 2/M10 bolts'</i>.</p> <p>The fixing and tie-down detail of these beams to their post must be properly rectified in compliance with the above.</p>
8.	<p>None of the internal braced walls have been fixed to the trusses with structural connections as required by clause 2.2.3 of A.S. 4440 Installation of Nailplated Timber Roof Trusses, the detail of which is shown below-</p>  <p>The fixing of the trusses to the required internal braced walls must be rectified in accordance with this requirement.</p>
9.	<p>The diagonal speedbracing that runs across the tops of the trusses has not been fixed to the wall top plates correctly.</p>  <p>The manufacturer's installation guidelines state <i>'Bend the speedbrace to the side of the top plate and in under the plate. Fix with two nails to the side and three nails to under the plate. Nails must be no closer than 10mm to the edge of the timber. Shown below</i></p>

**Item**

**Observations, Considerations and Recommendations:-**

**Heel End Fixing Details**

Two nails to each top chord



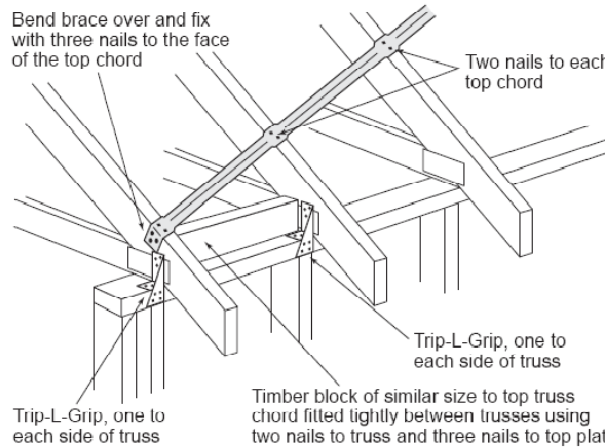
**CAUTION**

The Speedbrace must be positively fixed to the top plate otherwise the bracing will be ineffective.

An alternative method can be used where it is desired to extend the brace to the last truss or where the angles do not permit ready fixing to the top plate. The last two trusses should be fixed to the wall top plate with a minimum of two Trip-L-Grips to each truss, and timber block between trusses as shown.

**Alternative Heel End Fixing Detail**

Bend brace over and fix with three nails to the face of the top chord



The fixing of the speed bracing must be rectified in accordance with the above, or if this method is not achievable then the alternative heel fixing detail must be used.

10.

The bottom jack trusses are missing from each hip around the Porch and Lounge roof lines, which has left the roof tile battens spanning up to 1200mm, which would be more than their capabilities.



These jack trusses will have to be installed.

11.

The external corner in the rear passage that backs onto Bed 2 is approximately 12mm out of plumb.

The Building Commission's, Guide to Standards and Tolerances clause 4.02 Verticality or Plumbness of Steel and Timber Frames and Exposed Posts, states '*Posts and wall frames are defective if they deviate from vertical by more than 4mm within any 2 metre height*'.

This wall, and the walls that run into it, will need to be re-plumbed into its correct position prior to the installation of the plaster.

12.

The side Entry wall that backs onto the Dining room is up to 10mm out of plumb beside the door opening, which for the reasons detailed above will need to be re-plumbed into its correct position prior to the installation of the plaster.

Item	Observations, Considerations and Recommendations:-
13. Approved Engineering Design Issues	<p>From the engineering drawings that I was provided with, the following items have not been constructed on site as set out and detailed within them-</p> <ol style="list-style-type: none"> <li>i. The WB beam along the side of the Stairwell/Garage wall has a Section and Plan View detail on Sheet No. 5, which specifies that double MGP15 top and bottom plates of a <u>continuous single length</u> must be installed to the walls under and over the WB beam and bolted through into it for its entire length, however- <ul style="list-style-type: none"> <li>• Only MGP10 pine has been used; and</li> <li>• There is only a single top plate to the wall below it; and</li> <li>• All of the existing plates have joints in them along their lengths; and</li> <li>• The specified 150mm long M10 coach screws at the ends and at 450mm centres have not been installed; and</li> <li>• The 150 x 100 x 10 steel angle and bolts have not been installed into the internal corner connection to L10; and</li> </ul> </li> <li>ii. The D.S, T.S, D.S.1 and T.S.1 multiple studs throughout both levels have not yet been spiked and fixed together with 3 no. equally spaced metal straps to prevent spreading as specified in the 4<sup>th</sup> point of the General Notes on Sheets No. 3 and 4.</li> <li>iii. The temporary props specified to be installed under the Alfresco roof beams have not been installed as specified on Sheet No. 3.</li> <li>iv. There have been no bolts installed through the P2 post into RL12 roof beam as per Detail “P” on Sheet No. 4.</li> <li>v. The hoop iron strapping fitted to lintel RL6 does not continue in under the bottom plates as specified on Sheet No. 4 and the bottom plate has not been bolted down.</li> <li>vi. The gang nail grips specified on Sheet No. 4 between RL12, RL13 &amp; RL14 have not been installed.</li> <li>vii. The steel plate, bolts and washers specified in Detail “PY” on Sheet No. 5 to the Alfresco P2 post have not been installed.</li> <li>viii. The bolts and washers specified in Detail “PX” on Sheet No. 5 to the P1 and P2 posts have not been installed to the Porch &amp; Alfresco roof beams.</li> </ol> <p>All of these items will need to be re-constructed on site to reflect the designed requirements of the approved drawings or otherwise re-computed and certified by the original design engineer. The original building permit may also need to be amended by the relevant Building Surveyor to reflect the changes to the original approved drawings.</p>

--:End of Schedule:--

**THE STANDARD TERMS & CONDITIONS THAT WE PROVIDED OUR SERVICES SUBJECT TOO:-**

**1. Engagement**

Our engagement is confined to that of a Building Consultant and not that of a Building Surveyor or Inspector as defined in the Building Act of 1993. Our inspectors do not hold qualifications as Engineers, Land Surveyors or Pest & Timber Infestation Inspector and therefore have not check and make no comment on:- 1/. The structural integrity of the building; 2/. The capacity and/or consistency of the sites foundation material; 3/. The correctness of the buildings footing system; 4/. The site and roof drainage systems; 5/. The title boundaries and the location of any easements and/or their assets; 6/. The buildings boundary setbacks; 7/. Compliance with any requirement of Part 4, Siting, of the Building Regulations; 8/. Glazing for compliance with their codes and standards; 9/. The presents of termites & borers or at the completeness of any termite risk management procedures and barriers; 10/. All other requirements that are the responsibility of the above mentioned professions.

**2. Assumptions**

Our inspections are carried out on the quality of the fixtures, fittings and materials as installed and presented at the time of our site attendance and we rely on as fact that they have been installed in accordance with their manufacturer's installation instructions and/or designer's specification, including all associated and substrate works. We also assume that items identified in our previous inspection report/s in relation to this property have been rectified to the owner's satisfaction, with the exception of any item that is still visible and capable of being properly inspected that our inspector believes still requires further rectification and/or justification will be carried forward into this report.

**3. Documentation**

Documentation provided to us to facilitate the carrying out of our inspections and to prepare our reports and/or other correspondence is only viewed on an informal basis and we make no certification that the building has been constructed in accordance with it.

**4. Non-Destructive Inspection**

Our inspections are carried out on a non-destructive basis and exclude any area that would require the dismantling, removal or relocation of any fixture, fitting, plaster, timber, cladding, insulation, sarking, membrane, roof covering, lining, steelwork, scaffolding or excavation of any soil.

**5. Measurements/Levels**

Measurements taken during our inspections are with a standard 4 fold carpenters ruler or 8 metre steel tape; and levels with either a 900 or 2000mm long spirit level, unless otherwise stated within this report.

Floor levels are only checked if the area/rooms are clear of builder's equipment, materials, debris, and furniture. Further, as floor levels need only be rectified just prior to the installation of the floor coverings they will be treated as a builder's Work in Progress until such time, unless otherwise stated within this report, and we rely on as fact that the builder levels and straightens all ceiling lines prior to the installation of plaster.

**6. Access**

Our inspections are limited to areas that can only be safely accessed with the standard equipment that we carry, being an 1800mm high set of aluminium steps, and that can be readily accessed without causing our inspectors to breach any of WorkSafe Victoria's current Code of Practices or any part of the current Occupational Health and Safety Act.

**7. Services, Appliances, Plant, Equipment and Materials**

We do not check or test for the correctness, appropriateness, sizing, grading, capacity, installation, connection, certification, and completeness of any service, appliances, plant, equipment and materials i.e. heaters; hot water units; air conditioners; evaporative coolers; ovens; hotplates; dishwashers; rangehoods; spa pump; electricity supply; electrical and data wiring, switches and fittings; smoke detectors; duct work; insulation R-values; gas lines and fittings; water supply; sewer drains, stormwater and agricultural drains; solar panels; garage doors operating mechanisms; framing members, bracing and tie-down etc.

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**10. Reference**

References contained within this report to the Building Acts & Regulations, the Building Code of Australia (BCA), any Australian Standards, a Building Commissions document, a manufacturers technical data sheet or installation instruction, or any other document are neither exhaustive, complete or a substitute for the original document and are provided to facilitate the understanding of this report only. We therefore accept no responsibility for any loss, damage or expense incurred for reliance upon the part references contained within this report.

**11. Exclusions**

- a) Defects outside the scope of our client brief;
- b) Defects not evident by visual inspection, or only visible from outside the subject properties boundary lines;
- c) Defects in inaccessible parts of the building or site, including but not limited to, areas with limited boundary wall set-backs, within the roof space and sub-floor areas;
- d) Defects only apparent under artificial light;
- e) Defects only apparent in different weather or environmental conditions as to those prevailing at the time of our inspectors attendance;
- f) Defects not consider significant enough to warrant any rectification work at the time of our inspectors attendance;
- g) Defects that would be rectified as a consequence of any other defect detailed within this report;
- h) Defects that our inspector considers to be Work in Progress or already clearly marked for rectification by your builder;
- i) Check measure of rooms, walls and the overall building, for size, height, parallel and squareness;
- j) Compliance with contractual documents such as electrical, heating, cooling, joinery, detailed plans; and/or colour selection specifications.
- k) Landscaping, water tanks, retaining walls and any other structures outside the roofline of the main building;
- l) Enquiries of Councils, the relevant Building Surveyor and/or any Statutory Authority;
- m) Items that meet accepted industry practices and/or generally comply with the Performance Requirements of the BCA even if they are not meeting the Deemed-to-Satisfy provisions of that document.
- n) The identification and reporting of inconsequential paint touch-ups, minor plaster and other small cosmetic defects.
- o) The identification and reporting of minor cracking of cornice and architrave joints; minor alignment of cupboard doors and draw fronts; minor alignment of doors and their latches as it is our considered opinion that these items are best addressed at the maintenance stage.

**12. VCAT Compliance**

In the normal course of quoting our services, we do not allow to present our reports in accordance with Practice Note 2 under Section 158 of the Victorian Civil and Administrative Tribunal Act 1998. Therefore, if this report is to be submitted to VCAT an additional addendum will have to be prepared by us to be attached to it.