



Inspection Details:	Comprehensive Home Owners Inspection Plaster Cladding Weather-tightness Assessment Non-invasive Moisture Testing Infrared Thermal Imaging
Reference:	Sample Report Low Risk Monolithic Plaster Cladding
Inspection Address:	Undisclosed Sample Report Auckland
Date:	Tuesday, December 6, 2016
Client:	Undisclosed
Client Phone Number:	Undisclosed
Time of Inspection:	Undisclosed
Weather:	12:00pm
House Status:	Occupied
Report is prepared for the client only and not transferable	
SPPI PO Box 80-274 Green Bay Auckland 0643	Inspector: Mark Drew NZS 4306 Compliant Building Inspectors Member of Master Builders Association ISO Qualified Thermographer



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General Inspection Details:

All properties have cosmetic imperfections and general wear and tear. SPPI's inspections are to NZS4306:2005 Standards: Under NZS4306:2005 guidelines our inspection and reporting are for;

- Significant Defects
- Significant Maintenance
- Gradual Deterioration
- Particular Attributes
- Weather-tightness Issues

The condition of the property stated in our report is reflective of the age and style of the property.



Summary:



All properties have cosmetic imperfections.
SPPI's inspections are to NZS4306:2005 Standards:
Under NZS4306:2005 guidelines our inspection and reporting are for;

- Significant Defects
- Significant Maintenance
- Gradual Deterioration
- Particular Attributes

Overall:

*The property is structurally sound with a good overall level of weather-tightness.
The property has general wear and tear consistent with its age and style.
The property is in an acceptable condition for its age and style.*

Weather-tightness Risk Assessment:

The property has a Low Risk Weather-tightness Assessment based on the properties architectural design and that the exterior monolithic plaster cladding is installed over a cavity system. The Low Risk Weather-tightness Assessment is on the condition that the property is kept well maintained.

Moisture Detection:

There were no high moisture readings or signs of moisture ingress or damage

Infrared Thermal Imaging:

Analysis of the Infrared images showed no thermal anomalies which require further investigation.

Remedial Work:

There are cracks in the cladding which are not effecting the Structural integrity or weather-tightness of the property which need to be professionally repaired. See page 6 for details

Maintenance:

- Scheduled exterior house painting and joinery resealing maintenance is now due. See page 10 for plaster cladding maintenance guidelines.
- Recommend that the control joints are resealed in conjunction with scheduled exterior house painting and joinery resealing maintenance.



Weather-tightness Assessment:

Particular Attributes:

Particular Attributes (at risk areas) are included in our report under the NZS:4306 regardless of whether they have moisture ingress issues at the time of inspection. This enables you the prospective purchaser through awareness of the risk areas to assess not only the condition of the property on the day of inspection but also take into consideration the particular attributes (at risk areas) associated with the property.

It also gives you the purchaser the information to plan risk management of the areas in the form of regular routine checks, regular scheduled maintenance or preventative maintenance.

General Building Assessment:

Wind Zone:	Indications are open wind zone
Site Exposure:	Semi-exposed
Complexity of Design:	Medium Complexity of Design
Number of Stories:	Multiple Story
Number of Cladding Types:	Multiple cladding types
Roof Planes:	Multiple Roof Planes
Monolithic cladding:	<ul style="list-style-type: none"> • Brick Veneer is not a monolithic cladding system • TCFC is a monolithic cladding system
Cavity System:	<ul style="list-style-type: none"> • Brick Veneer has a cavity system • Texture Coated Fibre Cement (TCFC) is installed over a cavity system on this property.
Eaves:	The property has acceptable eave cover

Particular Attributes (Risk Areas):

The property does not have high risk particular attributes (risk areas)

Moisture Testing and Visual Inspection Results:

Visual Signs of Moisture Ingress and/or High Moisture Readings:

- There were no obvious signs of moisture ingress, damage or high moisture readings recorded at the time of inspection.

Summary:

The property has a Low Risk Weather-tightness Assessment based on the properties architectural design and that the exterior monolithic plaster cladding is installed over a cavity system.

The Low Risk Weather-tightness Assessment is on the condition that the property is kept well maintained.



Cavity System for Monolithic Cladding:



A Cavity System is now required for all new monolithic cladding and was designed largely to address the issues causing the leaky home syndrome.

The biggest issue with monolithic cladding was if moisture did get in, it became trapped and was unable to dry, causing damage to the structure of the building.

The cavity system was designed in conjunction with the 4Ds as specified in E2/AS1 to address the issues associated with monolithic cladding and make it a safe and durable cladding system.

How the Cavity system and 4DS of External weather-tightness is applicable to EIFS monolithic cladding on this property.

Deflection:

The exterior cladding with its plaster and paint deflect moisture from entering the cavity system.

Drainage:

There is a continuous gap to the bottom of the cladding between the timber framing and cladding. At the bottom of the cladding is a vented vermin strip allowing moisture to drain and keeping vermin from entering the cavity.

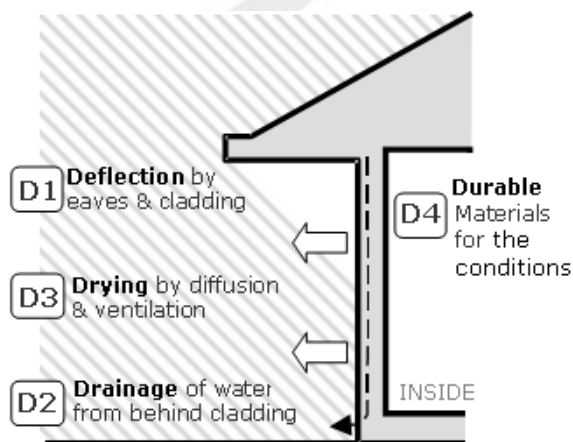
Drying:

The vented strip at the base of the cladding allows the cavity system to breathe and moisture to escape and dry.

Durability:

Texture Coated Fibre Cement (TCFC) cladding does not rot and when the claddings plaster and paint membrane are applied is a durable cladding material as required under E2/AS1 specifications.

- D1** Check claddings and flashings for **deflection** (aim to keep water out)
- D2** Arrange for **drainage** paths to outside (should water get in)
- D3** Arrange for ventilation & vapour diffusion **drying** (to eliminate remaining water)
- D4** Choose components that are **durable** for conditions (to avoid damage while drying)





Remedial Work Crack Repairs:



General Description:

There were cracks in the cladding which require professional repairs to ensure that the property has a good long-term level of weather-tightness.

Scope of Work:

Scope of work involves grinding out the cracks and inserting a fiberglass or similar reinforcing mesh and plastering with a Flexi-plast or similar plaster system.

Recommendation:

Recommend that repairs to the hairline cracks are carried out in conjunction with scheduled exterior house painting and maintenance. Recommend that remedial work is carried out by a suitably qualified licensed tradesman.

Internal Inspection:

Internal Inspection of the adjacent areas using moisture testing, visual and thermal imaging recorded no obvious signs of moisture ingress or high moisture readings.

Trade Links:

- **Plaster Repairs Specialist:** Elite Exteriors Shafraz 021 025 88406

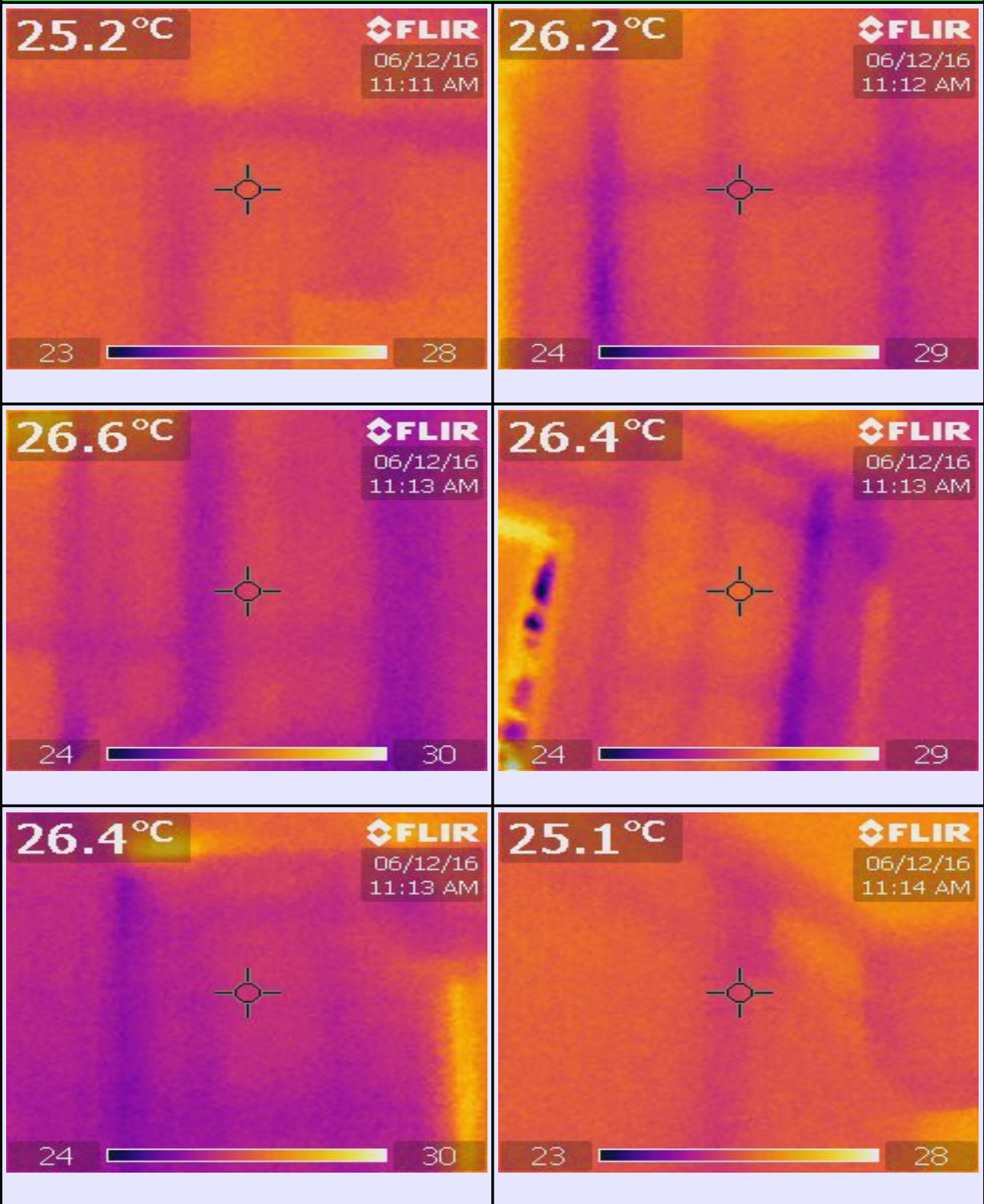


Moisture Testing General Information:

Location:	Reading Range:	Meter:	Summary:
Ground Floor:			
Kitchen	32	Capacitance	Acceptable readings indicating dry.
Dining	33	Capacitance	Acceptable readings indicating dry.
Lounge	35	Capacitance	Acceptable readings indicating dry.
Garage/Laundry	37	Capacitance	Acceptable readings indicating dry.
Hot Water Cupboard	33	Capacitance	Acceptable readings indicating dry.
Storage	30	Capacitance	Acceptable readings indicating dry.
Master Bedroom	37	Capacitance	Acceptable readings indicating dry.
Ensuite	34	Capacitance	Acceptable readings indicating dry.
First Floor:			
N/West Bedroom	35	Capacitance	Acceptable readings indicating dry.
Bathroom Common	39	Capacitance	Acceptable readings indicating dry.
N/East Bedroom	33	Capacitance	Acceptable readings indicating dry.
Master Bedroom	35	Capacitance	Acceptable readings indicating dry.
Ensuite	37	Capacitance	Acceptable readings indicating dry.
<i>Moisture Testing Equipment and Moisture Test Result Explanations:</i>			
<p>SPPI have three different moisture testing meters. We have Capacitance only meter, a Resistance only meter and a dual Capacitance / Resistance combination meter.</p> <p><i>Capacitance Dielectric Meter Readings Trotec T650 and Extech MO257</i> of below 50 are within normal industry guidelines for timber framing and gib board lining.</p> <p><i>Capacitance Dielectric Meter Readings Protimeter Surveymaster</i> of below 150 are within normal industry guidelines for timber framing and gib board lining.</p> <p><i>Resistance Moisture Meter Readings Trotec T500 & Protimeter Surveymaster</i> of 18% and below are within normal industry guidelines for timber framing and gib board lining.</p> <p>SPPI have a range of meters giving us the equipment to cross reference inspection results helping eliminate false readings and substantiate high moisture readings.</p>			
Moisture Readings Summary:			
<p>The property has a good overall level of weather-tightness with no high moisture readings or signs of moisture ingress or damage.</p> <p>There were no areas of concern.</p>			



Infrared Thermal Imaging Inspection:



Analysis of the Infrared images showed no thermal anomalies which require further investigation.



Exterior Cladding:	
Exterior Cladding Description:	<p>Primary Base Cladding Type: Brick Veneer is a low maintenance cladding system with a proven history for durability and weather-tightness.</p> <p>Primary First Floor Cladding Type: Texture Coated Fibre Cement (TCFC) is a fibre cement board approximately 7.5mm thick and is installed over a cavity system on this property. A texture coating is then applied which is approximately 3mm thick.</p>
Monolithic Cladding:	<ul style="list-style-type: none"> • Brick Veneer is not a monolithic cladding system • TCFC is a monolithic cladding system
Cavity System:	<ul style="list-style-type: none"> • Brick Veneer has a cavity system • Texture Coated Fibre Cement (TCFC) is installed over a cavity system on this property.
Cladding Condition:	Exterior monolithic plaster cladding is due for scheduled exterior house painting and joinery resealing maintenance. There are cracks in the cladding which are not effecting the Structural integrity or weather-tightness of the property which need to be professionally repaired. See page 6 for details
Plaster Finish:	Plaster was in an acceptable overall condition but there are some areas which require crack repairs mainly at the sheet joins which require remedial work. See page 6 for details
Paint Finish:	Scheduled exterior house painting and joinery resealing maintenance is now due. See following page for plaster cladding maintenance guidelines.
Mid-Section Banding:	Not applicable.
Control Joints:	Recommend that the control joints are resealed in conjunction with scheduled exterior house painting and joinery resealing maintenance.
Ground to Cladding Clearances	Ground to Cladding Clearances were
Weep Holes:	
Joinery:	Aluminium joinery was in an acceptable condition.
Joinery to Cladding Junction:	Joinery to cladding junctions require resealing
Joinery Head Flashings:	Head flashing detail were acceptable
<p>Summary:</p> <p>Exterior was structurally sound and maintaining an acceptable level of weather-tightness. Scheduled exterior house painting and joinery resealing maintenance is now due</p>	



Plaster Cladding Maintenance Guidelines:

- **General Cladding Description:**

Texture Coated Fibre Cement (TCFC) is a fibre cement board approximately 7.5mm thick and is installed over a cavity system on this property. A texture coating is then applied which is approximately 3mm thick. Specialist inspections SPPI recommend that Exterior painting and sealing is done by suitably qualified licenced tradesman experienced in the repair and painting of plaster cladding systems.

- **Exterior Cleaning Maintenance:**

It is recommended that monolithic plaster cladding is regularly wash at least annually using a LOW pressure cleaning system. Using water and a mild chemical solution is acceptable. Special attention should be given to non-rain washed areas.

- **Exterior Cladding to Joinery Junctions:**

It is important that the cladding to joinery junctions are kept well sealed, this includes removing the old sealant which fails over time. Joinery to cladding sealing is as important as the exterior painting. It is important that any penetrations through the cladding are correctly re-sealed.

- **Vegetation:**

Trees, Scrubs, Grass, Weeds and other vegetation should be cut or removed from the exterior cladding to ensure that the paint and plaster finish are kept in good condition.

- **Ground Clearances:**

It is important that acceptable ground to cladding clearances are maintained and that no fill, gardens, paths or concrete and directly against the exterior cladding unless specifically designed with suitable water proofing membranes installed.

- **Paint Details:**

An Elastomeric paint is required to be used for plaster cladding.
Recommended paint: Dulux AcraTex Elastomeric 201 or similar.

- **Paint Colour:**

It is important that the elastomeric paint has a Light Reflective Value (LRV) of over 40 is used.. Cracking can occur to the plaster when the cladding is painted with colours with a LRV of under 40 (Dark colours) due to the thermal expansion and contraction.


- **Remedial Work / Maintenance:**

Specialist Inspections SPPI recommend that maintenance is carried out by suitably qualified licenced tradesman experienced in the maintenance, painting, sealing and remedial work of monolithic cladding. Specialist Inspections (SPPI) recommend that any hairline cracks sighted are professionally repaired. This involves grinding out the cracks and if required re-fixing and installing a fiberglass reinforcing mesh to strengthen the joint in combination with applying Flexi Plast to safe guard against further cracking.

- **Recommended tradesman:**

Recommended Plaster Cladding Repair and Painting Specialist:
Elite Exteriors: Shafraz 021 025 88406 shafraz@eliteexteriors.co.nz



Certification:	I hereby certify that I have carried out the inspection of the property at
Address:	Sample Report Low Risk Monolithic Plaster Cladding
Reference:	Undisclosed Sample Report Auckland
Date:	Tuesday, December 6, 2016
	In accordance with NZS4306:2005 and that I am certified to undertake this inspection.
Signature:	
Inspector:	Mark Drew Managing Director SPPI Certified Building Inspector NZS4306:2005 Member Master Builders Association Member Building Officials Institute of NZ ISO Qualified Thermographer Professional Indemnity Insurance Policy #NI/02778/000/12/D Public Liability Insurance Policy # 20058861-BPS-005 Important Note: Public Liability and Professional Indemnity Insurance are not house insurance or home warranty insurance cover. House and Contents Insurance Cover is recommended if you purchase this or any property.
Limitations:	The client shall assume all risk, for any conditions or problems that may be concealed at the time of inspection. No item shall be dismantled, moved, or dislodged during the inspection, and there will be no destructive testing undertaken. An investigation of the condition and location of underground drainage and services and of hidden electrical, gas and plumbing is not included. No invasive or destructive inspection methods have been used in the assessment and concealed work can not be inspected, therefore no opinion or warranty can be offered in respect of the said concealed work. An inspection carried out in accordance with NZS4306:2005 is not a statement that a property complies with the requirements of any act, regulation or by-law, nor is the report a warranty against any problems developing after the date of this report.



Glossary:

Particular Attributes Explanation:

It has been well publicised that plaster clad properties can have issues. Every issue we find can be directly attributed to an architectural detail fault, an application fault or lack of routine maintenance. *Plaster cladding does not fail for no reason.*

Particular Attributes are areas which have been identified that *can be* problematic with moisture ingress issues. Regardless of whether these areas have

- No high moisture readings
- No signs of moisture ingress
- No signs of significant damage

Under the NZS4306:2005 we have to include these areas in our report.

This enables you as a prospective purchaser through awareness of the areas to assess any risk involved. It also gives you the purchaser the information to plan risk management of the areas in the form of regular routine checks and regular scheduled maintenance.

Highlighted Text Colour Legend:

Red Text: Red text generally indicates that there is remedial work and/or further invasive investigation required. Red text indicates that there is / could be significant damage. Red text content generally has images and further details on a separate page as detailed.

Blue Text: Blue text generally indicates that there is maintenance and/or preventative maintenance required. Blue text is generally a Low to Medium Priority.

Green Text: Green text is used to bring to your attention details or attributes of the property which significantly increase the weather-tightness or durability of a property.

Terms Legend:

Good condition:

The item is in a condition expected for the age and style of the property

Generally good:

The item is good overall condition, there could be isolated areas with excessive wear and tear.

Average condition:

The item described is in standard below that expected for the age and style of the property. The item describes is in a functional condition

Poor condition:

The condition of the item described is below an acceptable standard. There is damage or excessive wear which requires remedial work or replacement

Further invasive investigation:

There will be areas which will be assumed as having moisture ingress and/or damage which will require further invasive investigation to identify if there is significant damage and/or the source of moisture ingress and/or what remedial work is required.

SPPI recommend that the invasive investigation is initially done by removing gib board when possible. Gib board is generally easier and cheaper to replace than the exterior cladding. Removing gib board also does not further compromise the exterior's weather-tightness.

Remedial Work:

Remedial Work is the work required when the property has issues which need to be repaired so that the structural integrity and weather-tightness of the property is to an acceptable standard.

Preventative Maintenance:

Preventative maintenance are recommendations to address high risk areas which with property.

Preventative maintenance are to increase the overall weather-tightness of a property.



Terms and Conditions:	
Pricing:	As per the Prices and Services page at www.sppi.co.nz
Booking Inspections:	Booking by our online booking facility.
Payment:	Payment by credit or debit card in our online secure payment facility.
Scope of Inspection:	SPPI inspections are carried out under the guidelines of the NZS4306:2005. The inspection is a visual non-invasive inspection of the property with the intention of inspecting and reporting on <ul style="list-style-type: none">• Significant Defects• Particular Attributes• Gradual Deterioration• Significant Maintenance Required
Limitations and Liabilities:	
<p>Our inspections are intended to give the highest standard of assessment of the condition of the property and are carried out under NZS4306:2005 guidelines. Without destructive testing it is not possible to be 100% certain that significant defects have been discovered.</p> <p>Our inspection is confined to the limitations specified by NZS4306:2005 for residential property inspections.</p> <p>Due to these factors it is not possible for us to guarantee that all potential defects have been discovered.</p> <p>Notwithstanding anything in this or any other agreement with Specialist Pre-Purchase Inspections, the liability of Specialist Pre-Purchase Inspections, the person carrying out the inspection, and all of Specialist Pre-Purchase Inspections employees, contractors, directors and shareholders (“the protected parties”), for any loss, damage or delay arising from any act, default or omission (whether negligent or otherwise) in relation to the inspection, the report, or any service provided by, or statement made by, or act of, any of the protected parties (“the defects”) is restricted to any bad faith defects; is excluded in the case of all other defects made in good faith, including mistakes, mis-descriptions and omissions whether made negligently or recklessly, and whether they occurred during the course of the inspection, were made verbally, in the written report, or otherwise howsoever; shall be limited to physical damage or injury to any person or property which in any case is the foreseeable result of the defect. Shall be excluded in the case of economic and consequential loss (including loss of rent or enjoyment of the property) In any event is limited to the fee paid to Specialist Pre-Purchase Inspections.</p> <p>The above limitations are severable with the intention that if any one of them is unenforceable then the other limitations is still enforceable.</p> <p>This limitation of liability binds the person who requested the report and any other person to whom the report is provided to, together with their successors and assigns.</p> <p>The report generated by Specialist Pre-Purchase Inspections is not to be relied upon by any person other than the person to whom the report is addressed to.</p>	