

Examples of Weathertightness Remediation Drawings - Detail Design

Purpose: These example drawing extracts help convey the levels of presentation and the standard of documentation required by the Ministry for Weathertightness Remediation projects. Reference should also be made to WRP Guide # 2 which lists the deliverables required at the **Detail Design** stage. They are intended to aid architects and designers to understand the expectations of the WRP Panel, in order to aim a smooth review process.

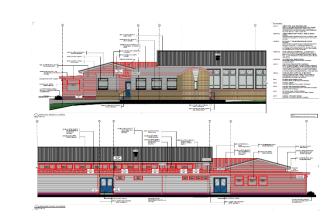
Please note, the drawing images in this guide are examples only and do not represent standardised or Ministry approved details. It is also important to note that the levels of documentation need to be appropriate for the scale and complexity of each project. The drawing extracts have been sourced from several architects and designers across a variety of weathertightness remediation projects at school sites. The images have also been adjusted to suit the format of this example set.

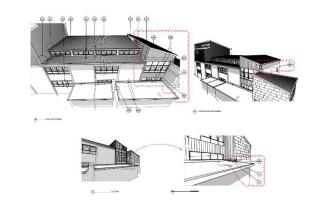
This example set and other key documents such as the Design Report template, Site Specific QA Plan template and the Weathertightness Remediation and Regulatory Strategy are available under the following file-path: https://www.education.govt.nz/school/property-and-transport/maintenance-repairs-security/weathertightness-remediation/

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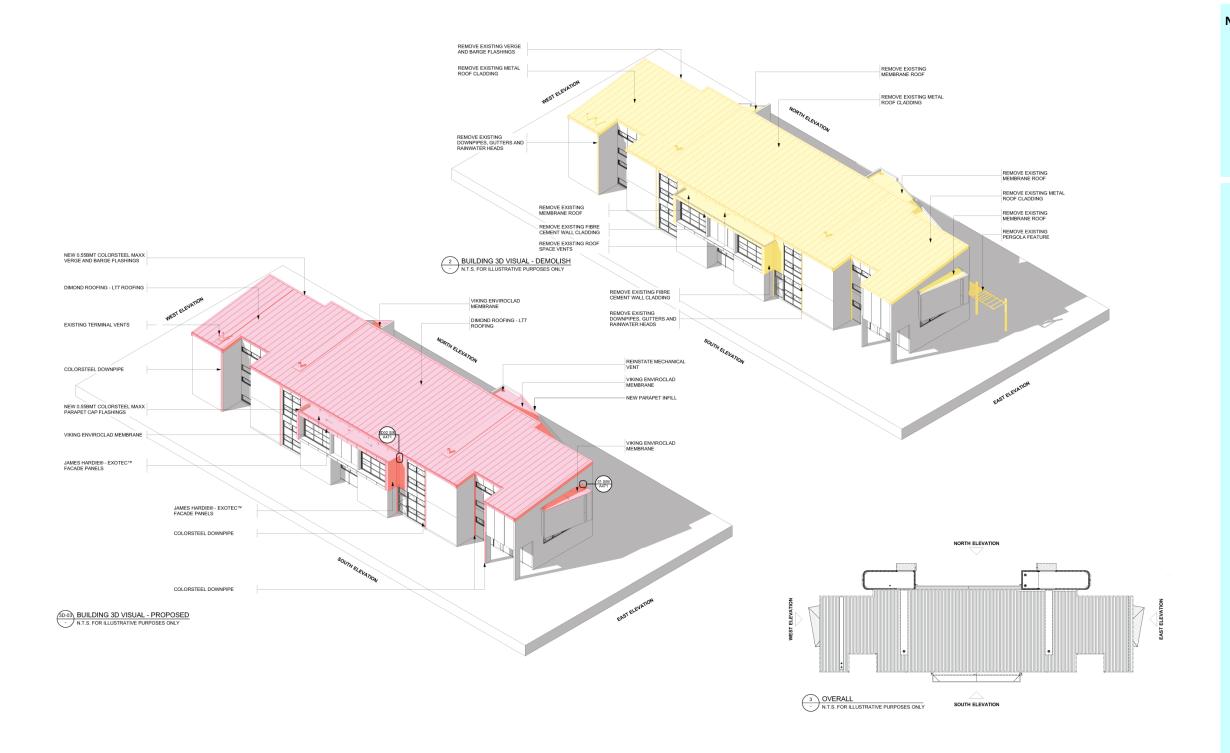








3D Images - Existing and Proposed Works



Sheet 2

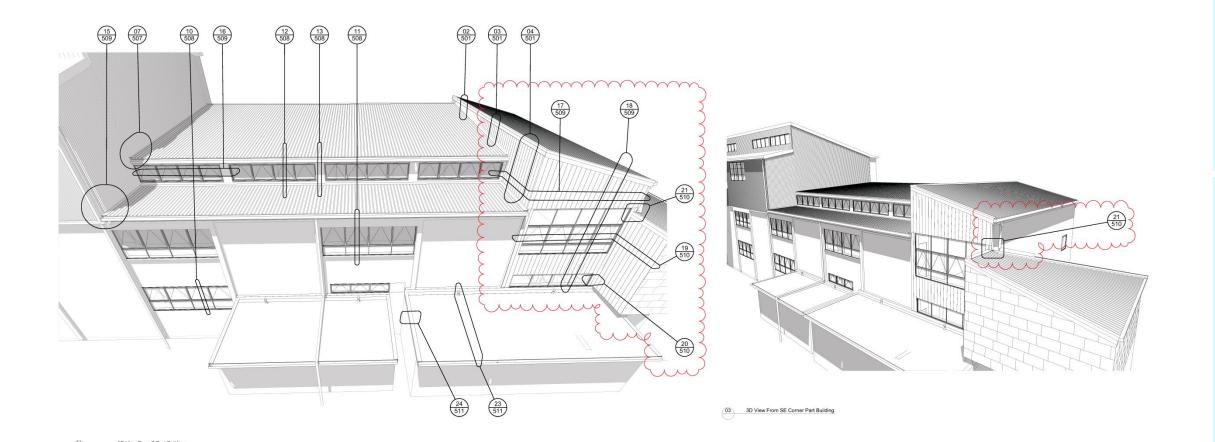
Notes:

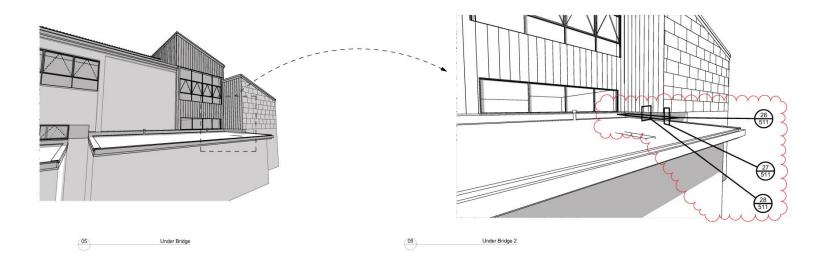
 The example images on this sheet are provided for the sole purpose of conveying the levels of presentation and standard of documentation required by the Ministry for Weathertightness Remediation projects

- 3D images of the existing and proposed building arrangement help to clearly convey the proposed changes and scope of work to the existing building
- 3D images with annotations can also be very effective for communicating the intended scope
- In this example, both the existing and as proposed 3D images are provided on the same sheet. This is an excellent way of clearly identifying the proposed scope of works
- The upper image with yellow shading shows the cladding and roofing areas to be removed. Correspondingly, the lower image shows the as proposed arrangement with red shading for the new cladding and roofing systems
- Sufficient annotations with arrows are also used to clearly define the highlevel scope of work
- Whilst not a compulsory requirement, 3D views are very useful in aiding the reviewer to understand buildings which have complex roof and/or envelope forms



3D Images – Location of Key Junctions





Sheet 3

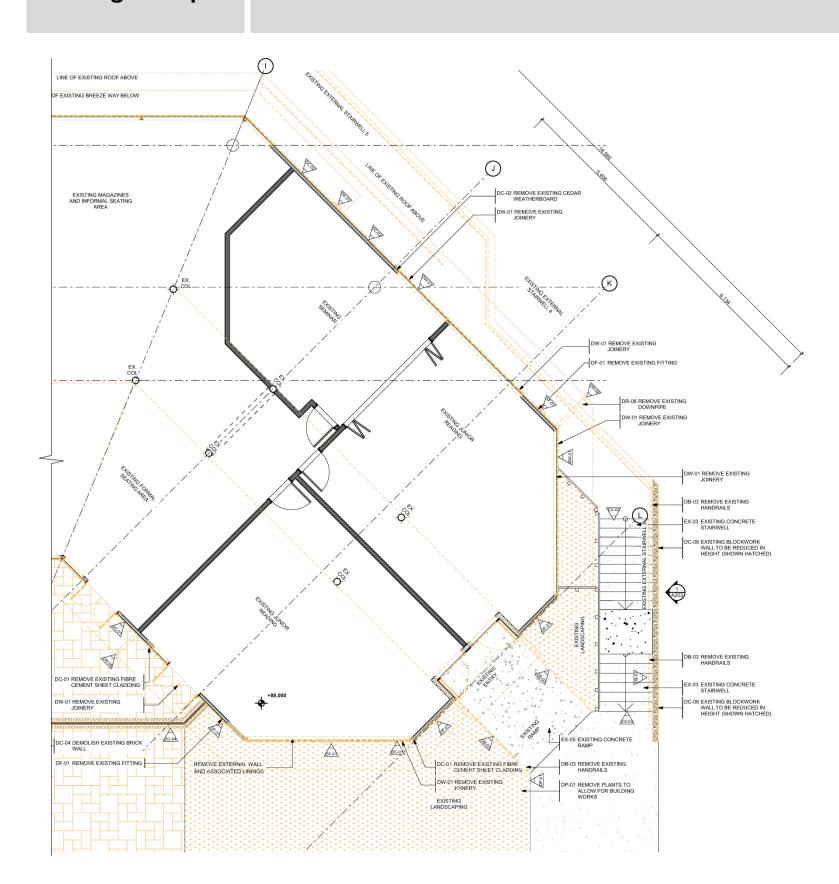
Notes:

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- 3D images of the existing and proposed building arrangement help to clearly convey the proposed changes and scope of work to the existing building
- In this example, the images are used to cross-reference detailed drawings, as well as showing difficult junctions in three dimension
- Referencing 3D construction details in this way is a good way to demonstrate to the Reviewer that all complex 3D junctions have been considered and detailed



Floor Plan - Demolition Works



EXISTING LEGEND





REMOVE AND DISCARD EXISTING BAYWINDOW BACK CONCRETE SLAB TO FORM NEW FLOOR EDGE



EXISTING LANDSCAPING TO BE REMOVED TO ALLOW FOR CONSTRUCTION WORKS AND REMOVE ALL TANKING TO SOUTH EAST RETAINING WALL



EXISTING PAVING TO BE REMOVED TO ALLOW FOR CONSTRUCTION WORKS, AREA TO HAVE NEW LANDSCAPING

NOTES

- 1 ALL EXISTING CLADDING IS TO BE REMOVED AND DISCARDED. REFER ELEVATIONS FOR EXTENT OF EXISTING EXTERIOR CLADDING.
- 2 ALL EXPOSED TIMBER FRAMING IS TO BE INSPECTED FOR DECAY. REMOVE DECAYED TIMBER AND COAT REMAINING TIMBER WITH PROTIM FRAMESAVER TO THE EXTENT DIRECTED BY THE TIMBER REMEDIATION SPECIALIST.
- 3 ALL EXTERNAL WINDOW JOINERY IS TO BE REMOVED AND DISCARDED.
- 4 ALL INTERNAL WALL LININGS ARE TO REMAIN UNLESS OTHERWISE INDICATED OR INSTRUCTED BY THE ENGINEER TO THE CONTRACT
- 5 ALL EXISTING DOWN PIPES ARE TO BE REMOVED & DISCARDED.
- 6 CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK
- 7 ALLOW TO PROTECT EXISTING INTERNAL LININGS, FITTINGS AND FIXTURES. IF NECESSARY CAREFULLY REMOVE FITTINGS DURING THE WORK AND REINSTATE UPON COMPLETION.
- 8 THE CONTRACTOR SHALL COMPLY WITH THE RECOMMENDATIONS OF NZS6830P:1999 WHERE THEY ARE APPLICABLE TO THE WORKS.
- 9 ALL DEMOLITION SHALL BE CARRIED OUT IN A CAREFUL MANNER AND IN ACCORDANCE WITH THE "HEALTH AND SAFETY AT WORK ACT 2015"
- 10 ALL DEMOLITION WORK TO BE CARRIED OUT IN ACCORDANCE WITH NZBC, WORKSAFE AND LOCAL AUTHORITIES GUIDELINES AND

KEYNOTES

REMOVE EXISTING FIBRE CEMENT SHEET CLADDING

REMOVE EXISTING CEDAR WEATHERBOARD REMOVE AND DISCARD EXISTING CEDAR WEAT CLADDING, INCLUDING BUILDING WRAP AND F

REMOVE BRICK VENEER CLADDING
REMOVE AND DISCARD EXISTING BRICK VENEER CLADDING,
INCLUDING BUILDING WRAP AND FIXINGS

DEMOLISH EXISTING BRICK WALL
DEMOLISH EXISTING BRICK WALL DOWN TO GROUND LEVEL

EXISTING BLOCKWORK WALL TO BE REDUCED IN HEIGHT (SHOWN HATCHED)
EXISTING BLOCKWORK WALL TO BE REDUCED IN HEIGHT (SHOWN HATCHED)
EXISTING BLOCKWORK WALL AT EXTERNAL STARWELLS TO BE REDUCED IN HEIGHT TO IMPROVE PASSIVE SURVEILLANCE AND SAFETY IN DESIGN (SHOWN HATCHED)

REMOVE PLANTS TO ALLOW FOR BUILDING WORKS

STALLATION. CUT BACK ALL GARDENS FROM WALLS TO LOW FOR NEW MOWING STRIP REMOVE EXISTING DOWNPIPE

PENOVE AND DISCARD DOWNPIPE AND FIXINGS

REMOVE EXISTING JOINERY
REMOVED AND DISCARDED EXISTING ALUMINIUM

Sheet 4

Notes:

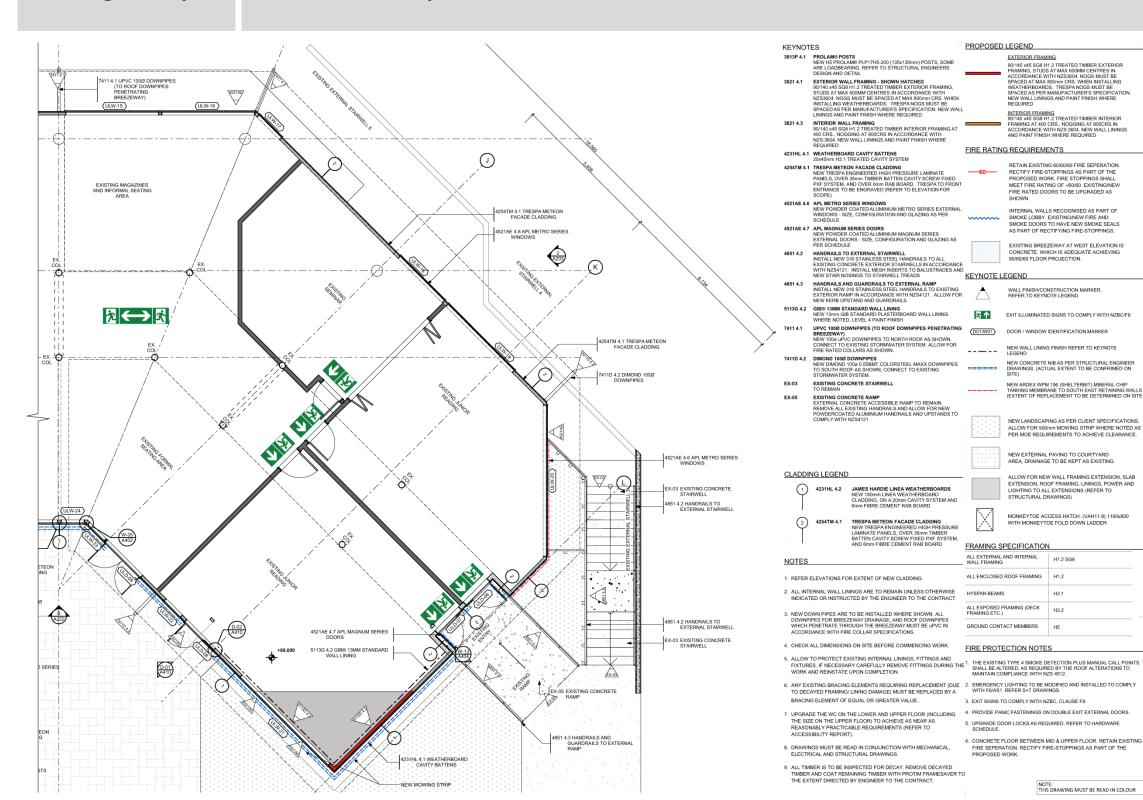
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- Ensure floor plans or part-floor plans are provided at 1:50 scale for an A1 sheet or 1:100 for an A3 sheet. In this example, due to the size of the building, the plans have been split into three zones, in order to convey the required information at a legible scale
- Ensure that the drawing clearly delineates between existing and proposed layouts
- Colour is very useful for differentiating between the existing building elements to be demolished or the new construction
- In this example, coloured dashed lines are used to indicate existing elements / components to be removed, including external paving
- Dimensions and section references are important for relevant parts of the building where remediation works are being proposed
- If using keynotes referenced to a specification document, these should be accompanied by a detailed legend on the same drawing sheet for ease of reference for the Reviewer





Floor Plan - Proposed Works



Sheet 5

Notes:

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- Ensure floor plans or part-floor plans are provided at 1:50 scale for an A1 sheet or 1:100 for an A3 sheet. In this example, due to the size of the building, the plans have been split into three zones, in order to convey the required information at a legible scale
- Provide clear cross-referencing to large scale details and sections
- In this example, other detail and section drawings are cross referenced
- A detailed legend with key notes are provided on the right-hand side
- New elements such as cladding, windows and downpipes are all indicated with the use of concise annotations and arrows
- Dimensions are important for relevant parts of the building where remediation works are being proposed
- If using keynotes referenced to a specification document, these should be accompanied by a detailed legend on the same drawing sheet for ease of reference for the Reviewer



Elevations – Proposed Works



Sheet 6

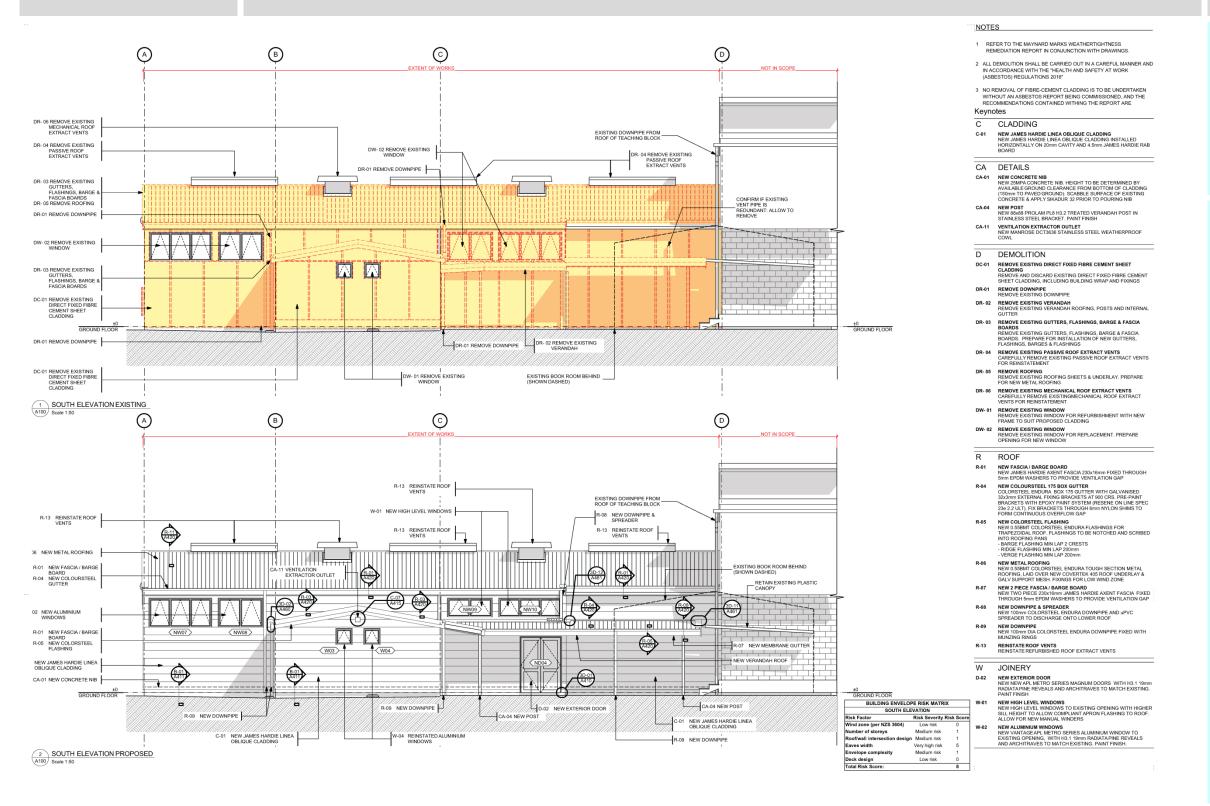
Notes:

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- Ensure floor plans or part-floor plans are provided at 1:50 scale for an A1 sheet or 1:100 for an A3 sheet
- Ensure that the drawing clearly delineates between existing and proposed layouts
- In this example, colour shading has been used to clearly show the differing elements and cladding systems
- The elevations are titled by their orientation which helps to convey the location against the plan



Elevations – Existing and Proposed Works



Sheet 7

Notes:

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- Ensure floor plans or part-floor plans are provided at 1:50 scale for an A1 sheet or 1:100 for an A3 sheet
- In this example, both the existing and as proposed elevations are provided on the same sheet. This is an excellent way of clearly identifying the proposed scope of works for ease of comparison
- The yellow shaded area represents existing cladding and other components to be removed
- Use of sun shading in elevations can assist with understanding depth of field and steps in the building façade/ roof
- Ensure that elevations are titled by their orientation which helps to convey the location against the plan
- Dimensions and sufficient annotation are important for relevant parts of the building where remediation works are being proposed
- Provide clear cross-referencing to large scale details and sections



Roof Plan – Proposed Works

New dp23 from assembly hall roof to ground, connect to existing SW c.o.s EXISITING PROFILED METAL ROOFING TO REMAIN on to comply with current NZ metal roofing and Practice. Allow for expansion joints where leng is per NZ metal roofing and cladding Code of F (B) position of existing dp. Allow for a water flashing on where gutter sit on profiled r new dp02 serving both profiled metal Roof Underlay: REFER TO DWG 210 PROPEOSED ELEVATION Notes, 4161 Wraps, Underlays and DPC ASSEMBLY ROOF: Existing corrugated metal roofing to remain, replace all existing fixings with new screws, replace gutter and ridge flashing New membrane on existing roof structure and substrate. Check condition of existing substrated and make good as required (0A) (510) New gutter to bend around come Line of extg roof cladding : Viking Enviroclad TPO Membrane 19mm H3.2 CCA treated CD plywood fix wi screws, but jointed allow 3mm gap betwee sheets with bape over. Check condition of existing timber framing New H3.2 timber firting, allow for airflow between firring for roof ventilation (D03) 503) ROOFING ON NEW ROOF STRUCTURE, FALL TO MATCH EXTG Roof vent Viking Alum Cavity Vent IMV112 Grey NEW MEMBRANE OVER EXTG SUBSTRATE NEW PROFILED METAL ROOFING @1) 506 4550VS Velux Opening and Fixed Skylights Bring membrane up wall + New dp 21 and spread NEW MEMBRANE OVER EXTG SUBSTRATE Proprietary soffit vent 10 (lower roof) Build up diverter in membrane roof to gutter edge New watershed flashing and diverter to all skylights 7411M Metalcraft Roofing Rainwater Spouting System Allow for expansion joints where lengths exceeds 12m, as per NZ metal roofing and cladding Code of Practice Where downpipe is discharging onto roof below always allow for preader in accordance with E2/AS1 Fig. 20 NEW PROFILED METAL ROOFING OVER EXTG STRUCTURE

Sheet 8

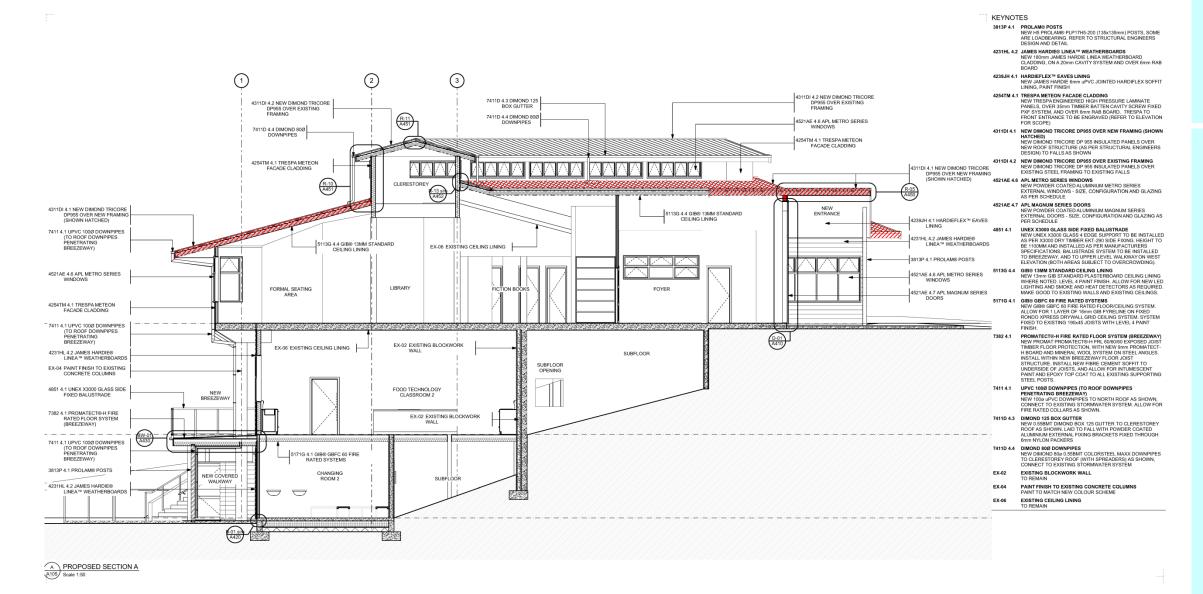
Notes:

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- Ensure floor plans or part-floor plans are provided at 1:50 scale for an A1 sheet or 1:100 for an A3 sheet
- Provide clear cross-referencing to large scale details and sections
- In this example all drainage outlets, direction of roof falls and roof pitches are shown together with crossreferences for large scale details
- Colour shading has been used to signify the differing roof types as well as differentiating between existing and proposed



Sections – Proposed Works



Sheet 9

Notes:

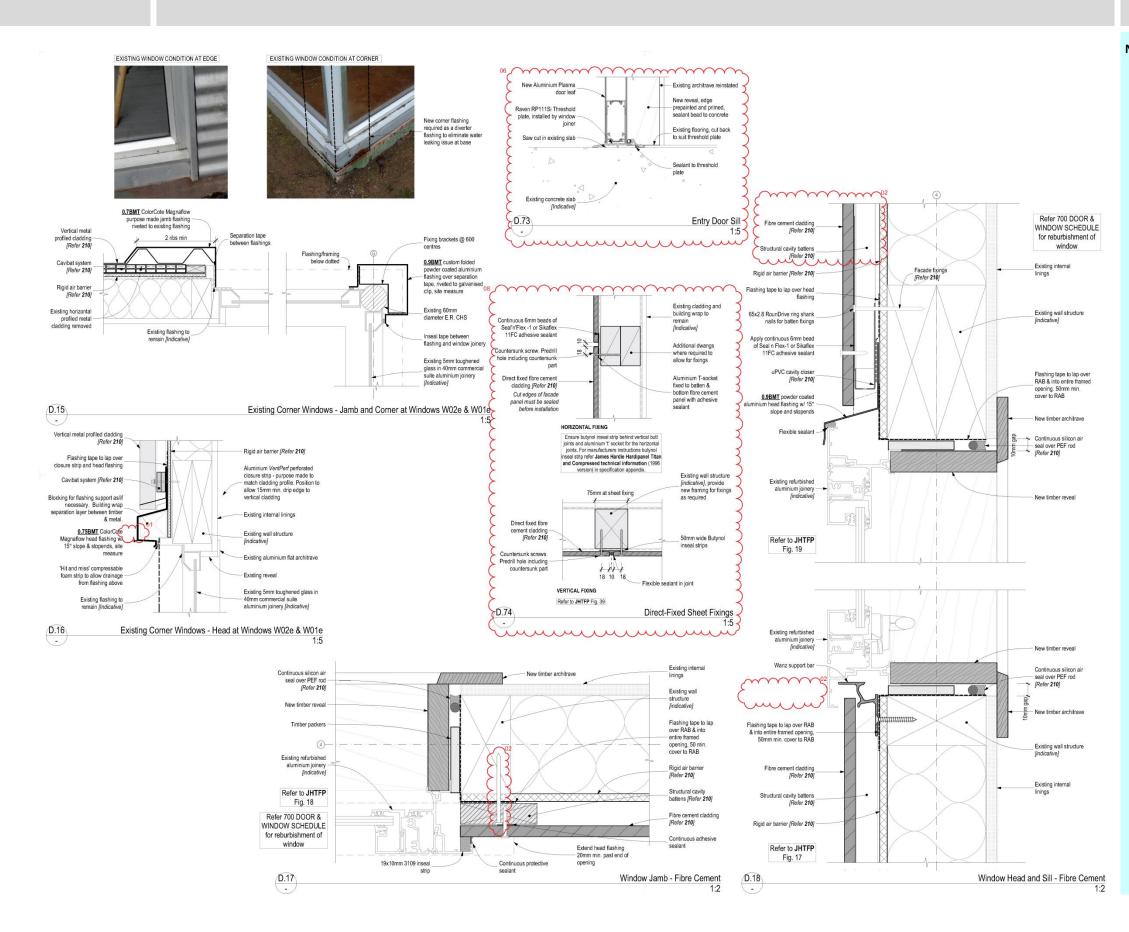
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- Ensure section or part-sections are provided at no smaller than 1:50 scale for an A1 sheet or 1:100 for an A3 sheet
- Provide clear cross-referencing to large scale details
- Colour or shading is very useful for differentiating between the existing based building and elements to be demolished or to identify new construction.
- In this example, both existing and proposed elements are annotated.
 The red hatching in this drawing shows the new roof cladding system



Details

Sheet 10



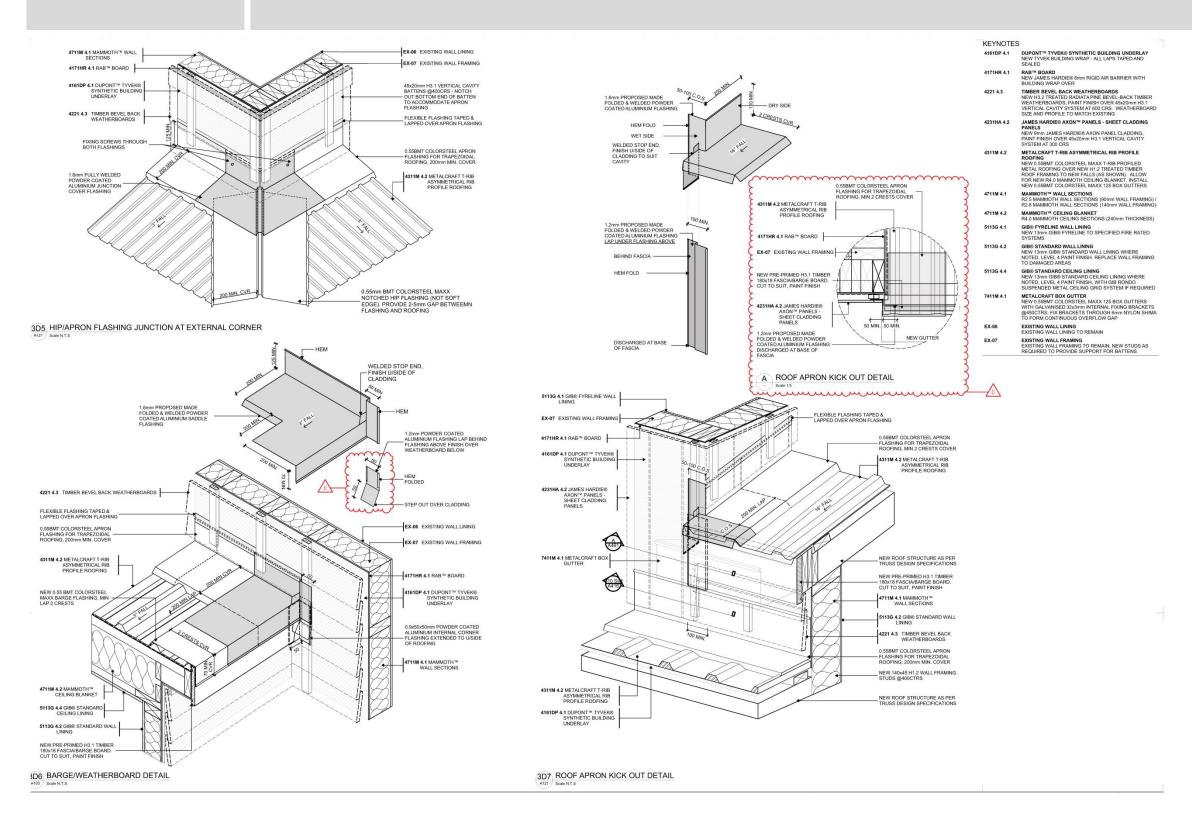
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- Details should be at large scale such as 1:2 or 1:5 so that these are clear for document reviewers such as the WRP and Council, and for the Contractor on site
- All window and door joinery details should be drawn at 1:2 @ A1 scale (1:4 or 1:5 @ A3) and clearly showing, notating and dimensioning all flashings, airseals, tapes, packers etc.
- Where various layers of underlays and tapes are used, it is important to provide separation between the linework so each layer can be clearly differentiated
- This example has inset photo images of the existing as-built condition to assist with communication
- Any drawing changes should be clearly indicated using revision clouds – in this example red clouds have been used
- In this example, existing building elements have been shown in a light grey colour, whilst new elements are shown in black to clearly differentiate



3D Details



Sheet 11

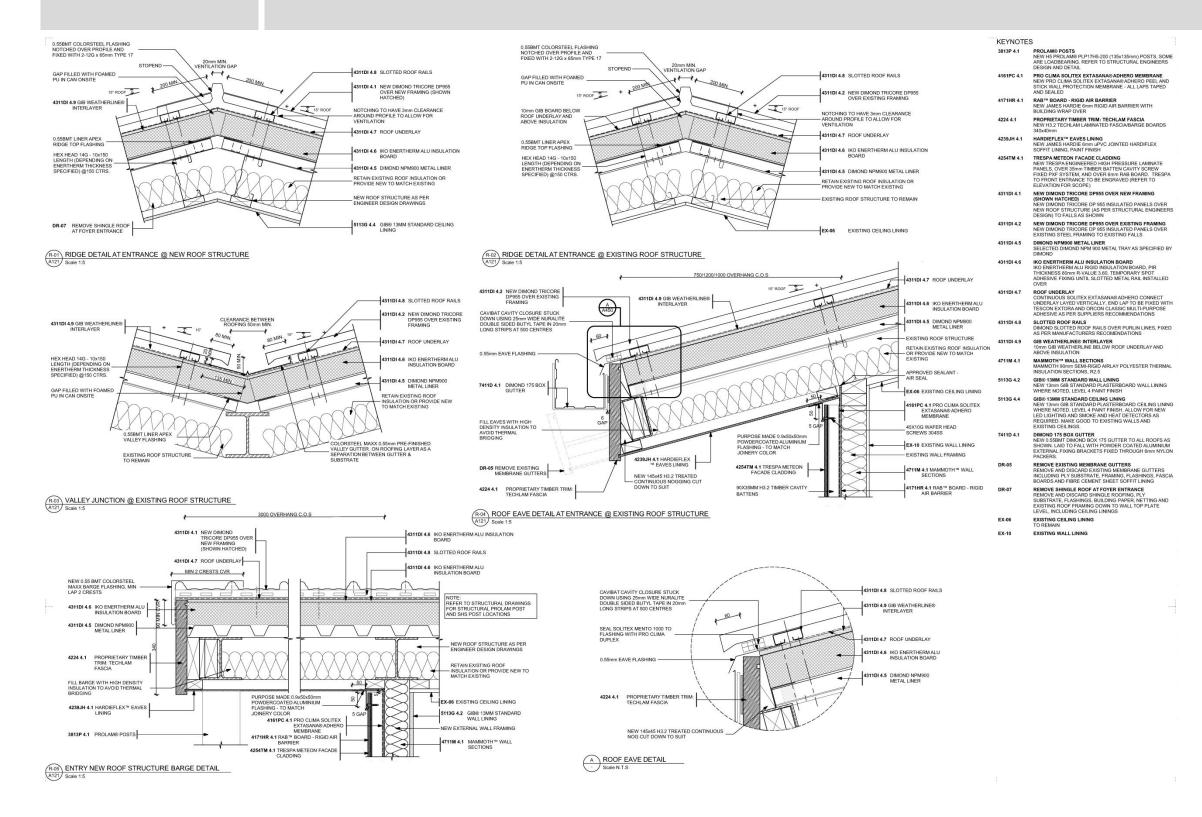
Notes:

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- Details should be at sufficient scale so that these are clear for document reviewers such as the WRP and Council, and for the Contractor on site
- This example provides exploded 3D views of all complex junctions to help reviewer and contractors understand the proposed assembly
- In this example, the custom welded flashings are shown in context (to demonstrate how they interface with surrounding building elements), and also shown separately so the custom flashing can be clearly described and dimensioned
- Most commonly used architectural software programmes have the ability to model details three dimensionally in this manner, however it is also acceptable to provide quality hand sketched 3D details
- 3D details should be project specific scanning in details from documents such as E2/AS1 or the Roofing Code of Practice is generally not acceptable because they do not show the specific situation. The exception to this is for typical details such as pipe penetrations or expansion laps



Details



Sheet 12

Notes:

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- Details should be at large scale such as 1:2 or 1:5 so that these are clear for document reviewers such as the WRP and Council, and for the Contractor on site
- In this example, a particularly complex area around the eave flashing has been blown up to a larger scale to adequately convey the detail