

CONSTRUCTION DETAILS FOR

'ELK ASPHALT SHINGLES'

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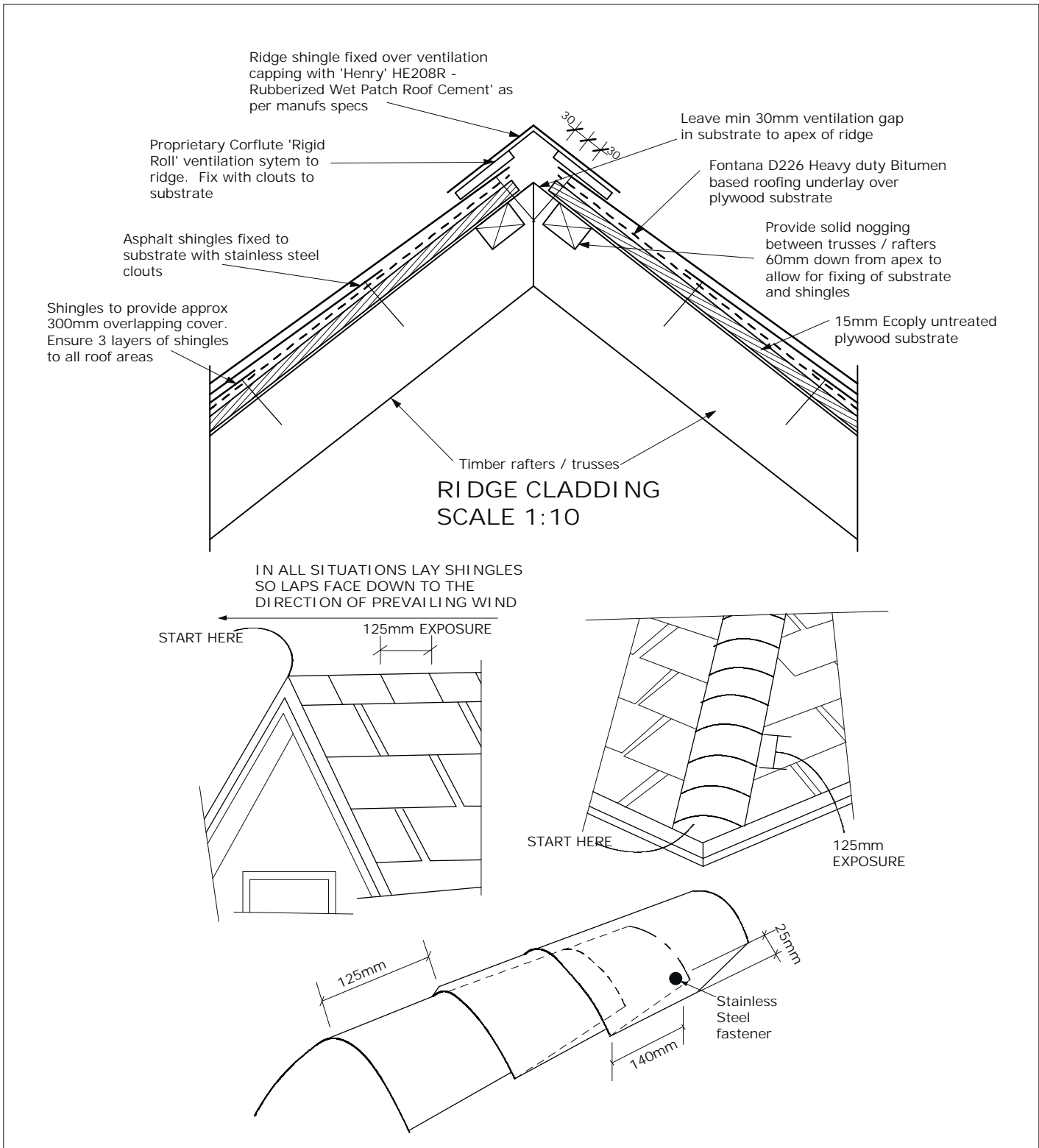
**“Leading The Industry...
As One!”**

THESE DETAILS HAVE BEEN COLLATED FOR THE BRANZ APPRAISAL USE ONLY. THEY ARE TO SERVE AS A GUIDELINE FOR CORRECT DETAILING OF 'ELK ASPHALT SHINGLES'.

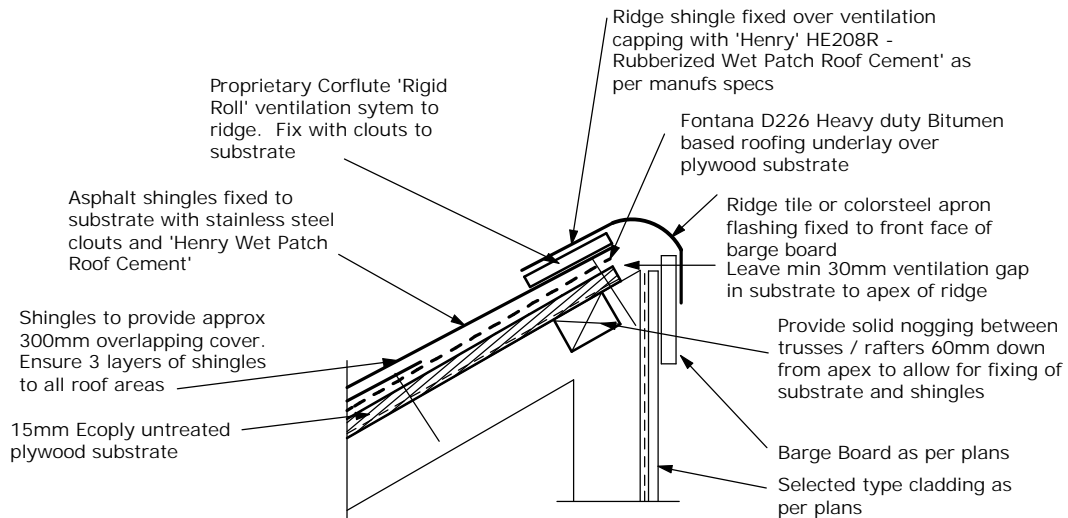
WHERE PRODUCT IS TO BE USED IT IS THE DESIGNERS RESPONSIBILITY TO ENSURE THAT THE CORRECT DETAILS ARE SHOWN ON THE PLANS AND SPECIFICATIONS.

GREENTREE (N.Z.) LTD. WILL NOT BE HELD RESPONSIBLE OR LIABLE FOR ANY DAMAGES TO PROPERTY OR PRODUCT INSTALLED IN A MANNER OTHER THAN AS DIRECTED BY A TRAINED AND APPROVED APPLICATOR.

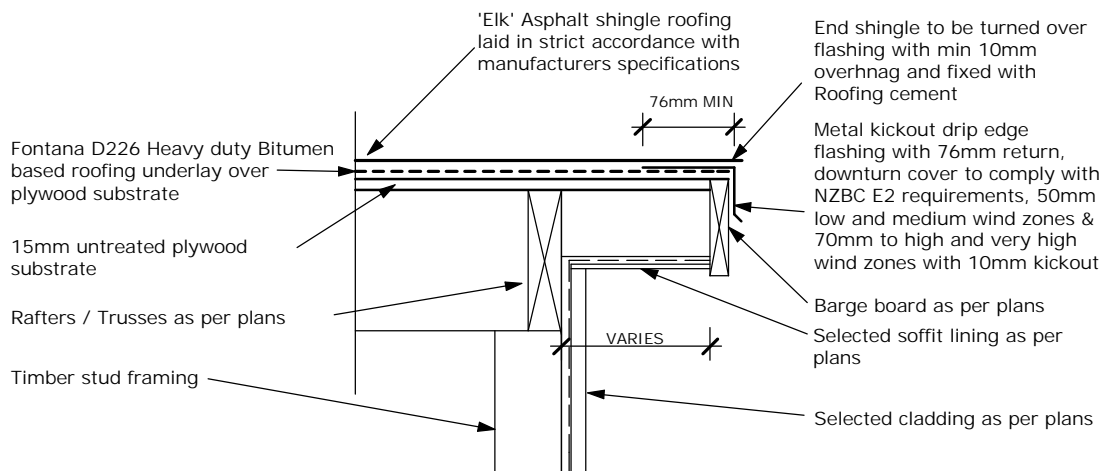
 “Leading The Industry... As One!”	TITLE PAGE		SHEET # 1
			OF 18
	SCALE:	AS SHOWN	THE DETAILS SHOWN ON THESE PAGES ARE DESIGNED FOR USE EXCLUSIVELY WITH 'ELK PREMIUM ROOFING PRODUCTS' AND SHALL NOT BE USED FOR ANY OTHER PRODUCT RANGE.
	DRAWN	TG	
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	RIDGE DETAIL		SHEET # 2 OF 18
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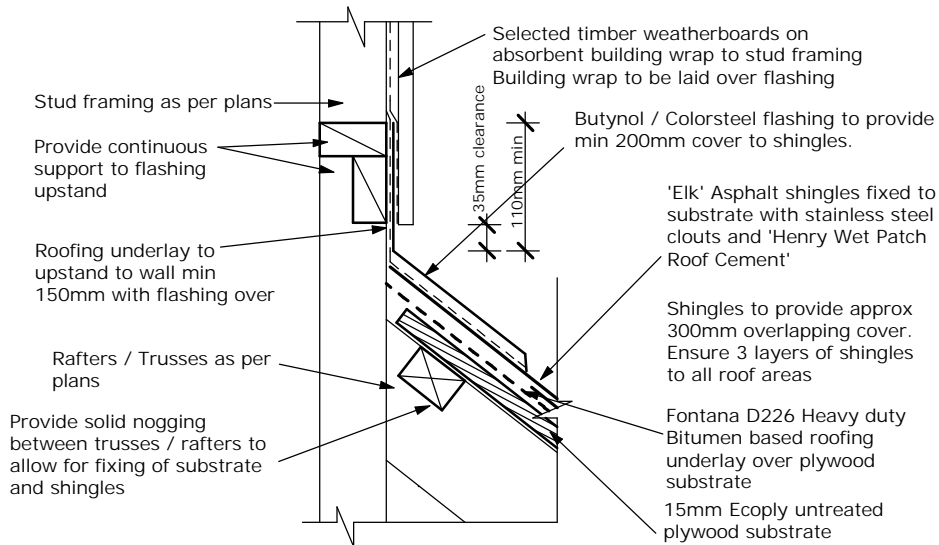


ROOF/WALL RIDGE
SCALE 1:10

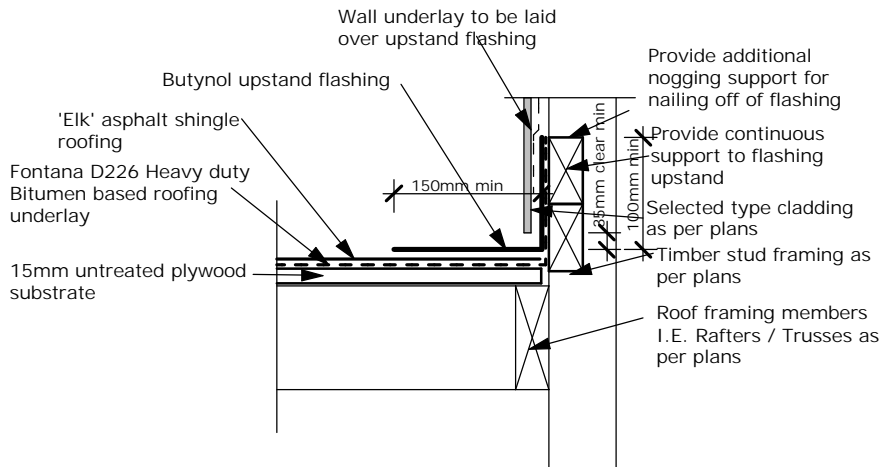


BARGE END
SCALE 1:10


 <p>GAF ELK ™ "Leading The Industry... As One!"</p>	BARGE / RIDGE DETAILS		SHEET # 3 OF 18
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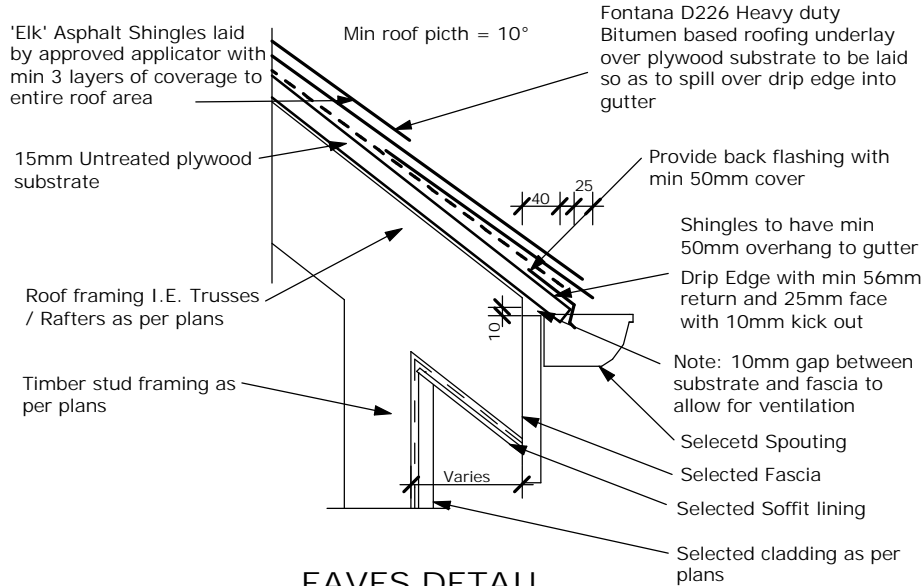


APRON FLASHING - TRANSVERSE
SCALE 1:10

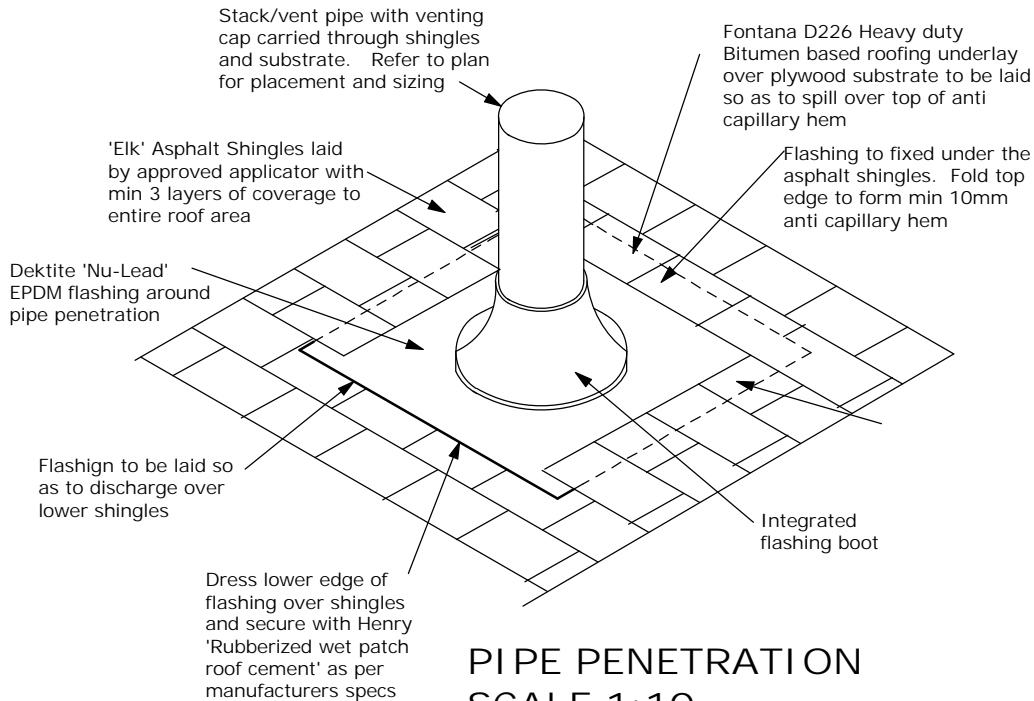


PARALLEL FLASHING
SCALE 1:10

 "Leading The Industry... As One!"	APRON FLASHINGS		SHEET # 4
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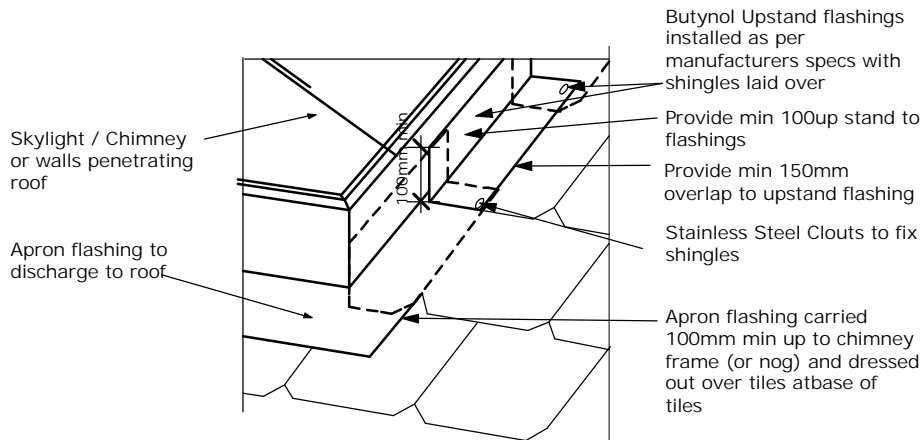


EAVES DETAIL
SCALE 1:10

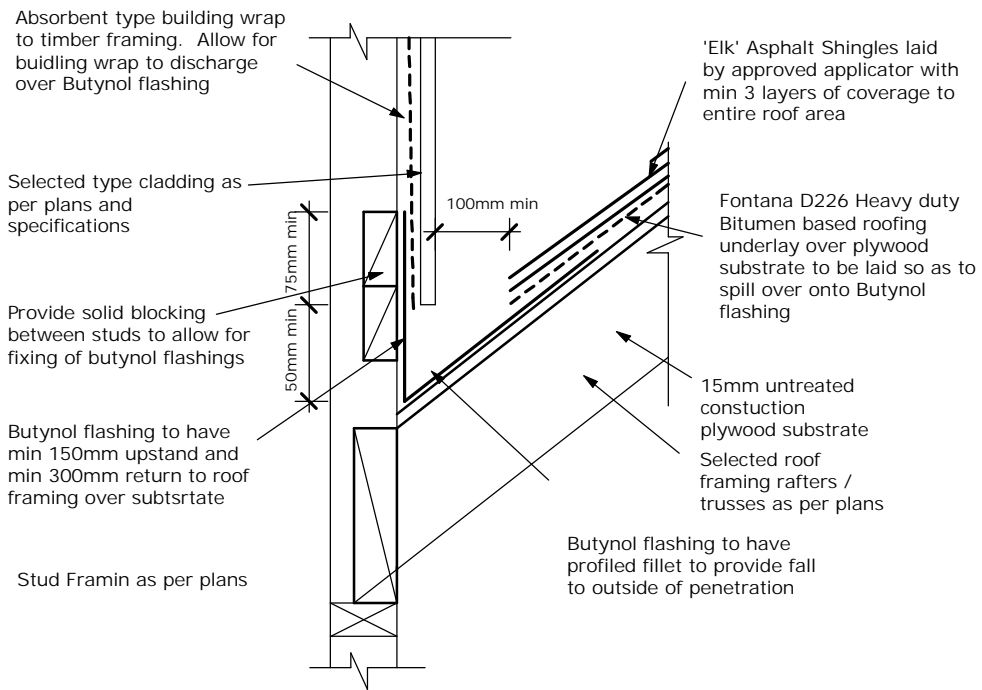


PIPE PENETRATION
SCALE 1:10

 <p>GAF ELK ™ "Leading The Industry... As One!"</p>	EAVE AND PENETRATION DETAILS		SHEET #	5
			OF	18
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	DRAWN	TG		
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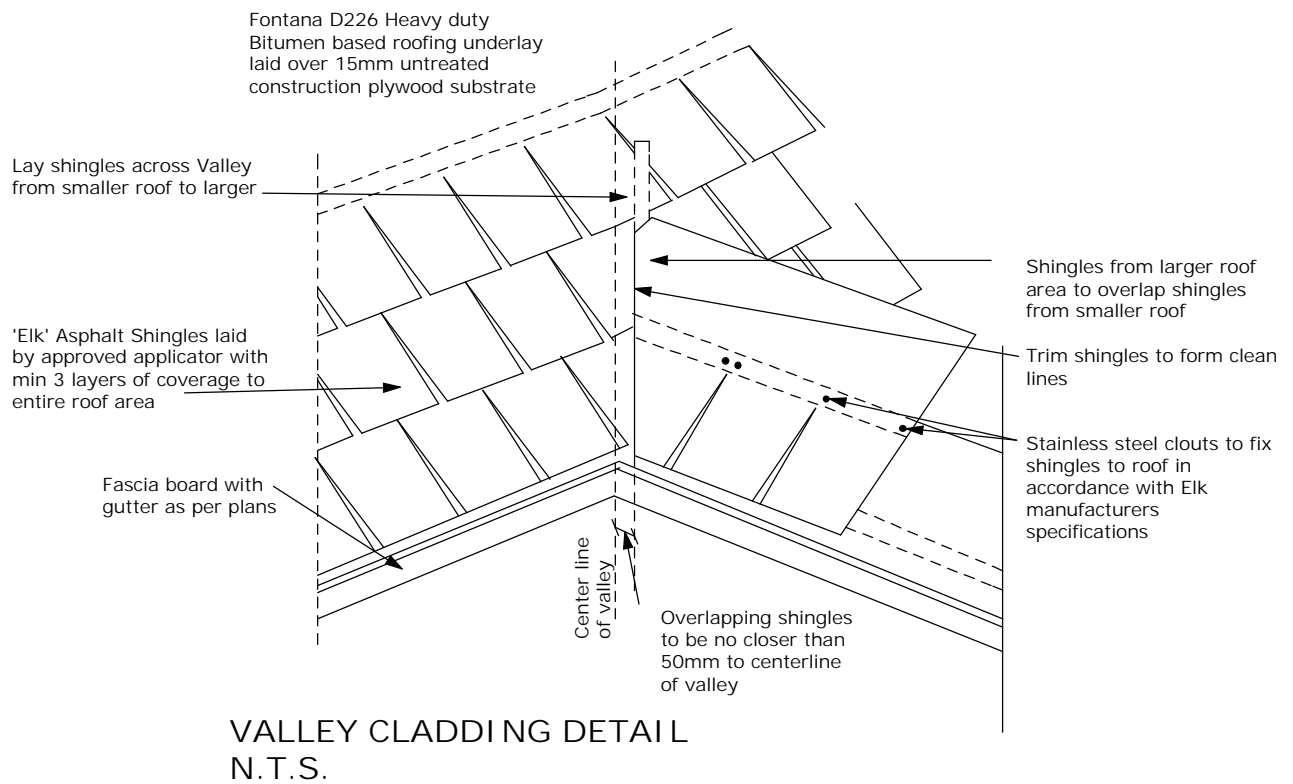
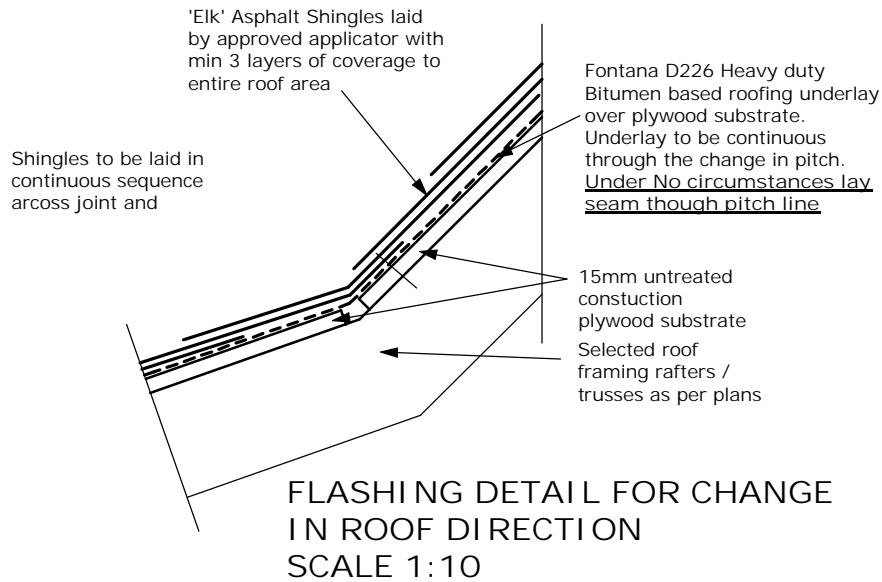


**SPECIFIC PENETRATION
N.T.S.**



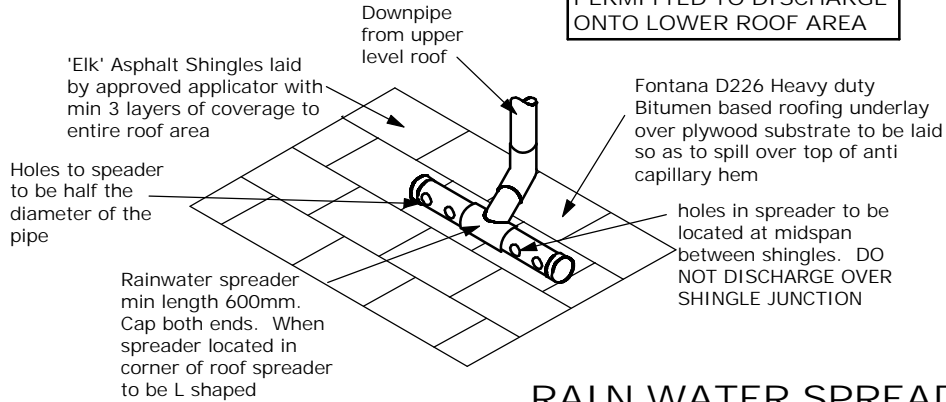
**CHIMNEY FLASHING
SCALE 1:10**

	SPECIFIC PENETRATION		SHEET # 6 OF 18
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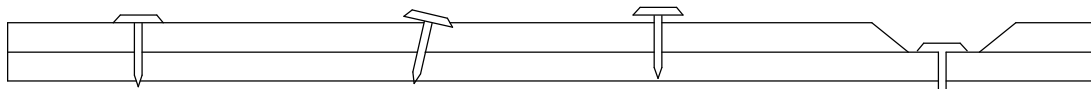


	CHANGE IN PITCH AND VALLEY		SHEET # 7
			OF 18
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MAX 25m² CATCHMENT
PER SPREADER SHALL BE
PERMITTED TO DISCHARGE
ONTO LOWER ROOF AREA



RAIN WATER SPREADER SCALE 1:10



CORRECT

Head flush to shingle.
Tool head
perpendicular to
shingle during driving

CROOKED

Decreased holding,
shingle torn. Prevents
next shingle from
sealing
SEE REPAIR NOTE 1

UNDERDRIVEN

Decreased holding,
shingle torn. Prevents
next shingle from
sealing
SEE REPAIR NOTE 1

OVERDRIVEN

Decreased holding,
shingle torn
SEE REPAIR NOTE 2

REPAIR NOTE 1:
FLATTEN NAIL HEAD TO PREVENT INTERFERENCE WITH NEXT SHINGLE

REPAIR NOTE 2:
DRIVE ANOTHER NAIL NEARBY. SEAL OVERDRIVEN NAIL WITH ASPHALT PLASTIC CEMENT
FASTENERS

While nailing is the preferred method for fixing raised roof profile shingles, Elk will accept fastening methods according to the following instructions:

Allways nail through the fastener line.

NAILS: refer to NZS 3604:1999 chapter 4.4 for corrosion protection requirements

10mm Head 12 gauge roofing nails. Elk recommends 30mm nails for new roofs and 40mm for roof overs. in cases where you are applying shingles to a roof that has an exposed overhngag, for new roofs only 20mm ring shank nails are allowed to be used from the eaves edge to a point up the roof that is past the outside wall line. 25mm ring shank nails are allowed for re-roof

NOTE: an improperly adjusted nail gun can result in raised nails that can cause a fish mouthed appearance and can prevent sealing



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RAINWATER DISPERSAL

SCALE: AS SHOWN

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DATE 23/02/2009

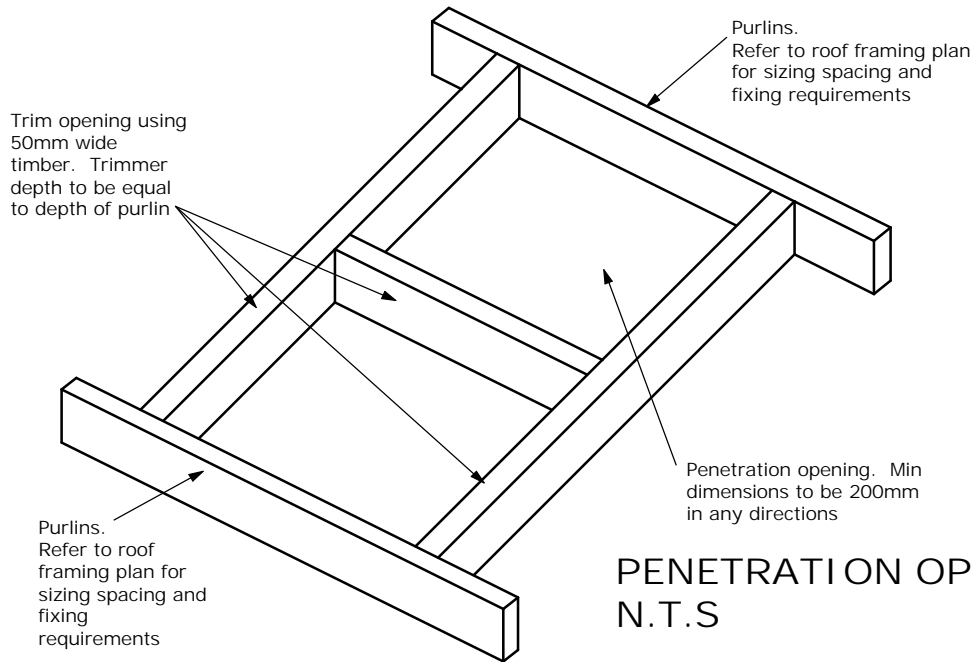
REV # DN

SHEET # 8

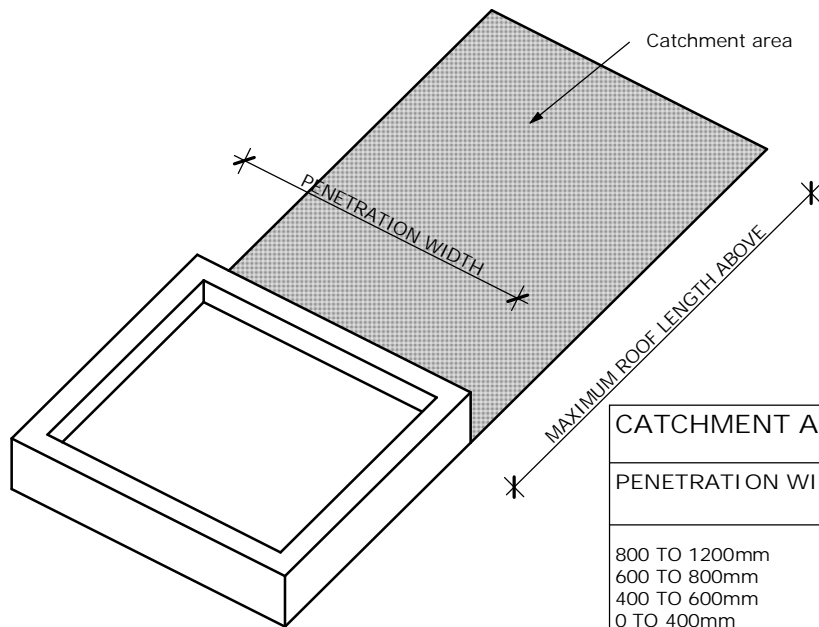
OF 18

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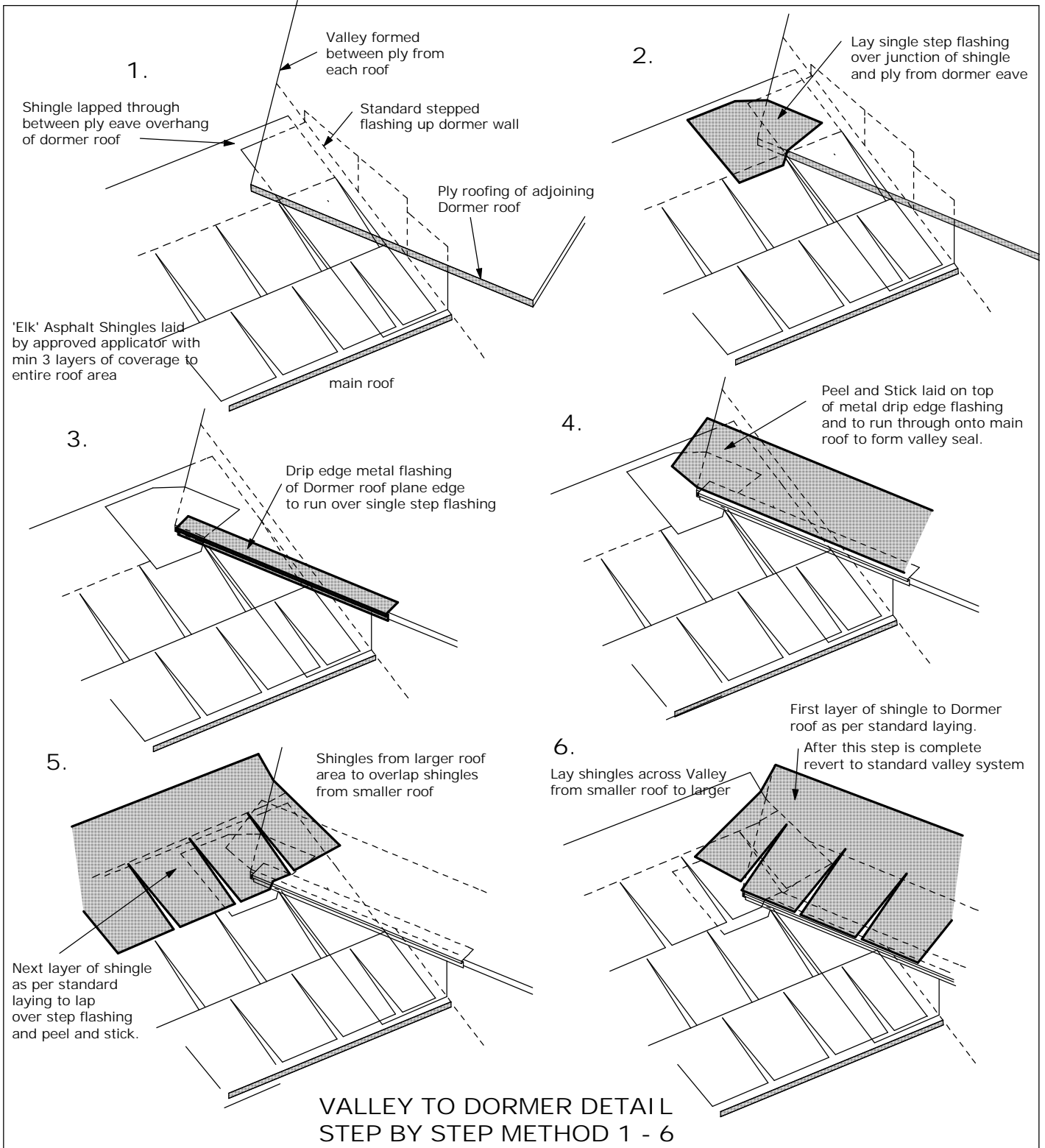



PENETRATION OPENINGS N.T.S



CATCHMENT AREAS	
PENETRATION WIDTH	MAX ROOF LENGTH ABOVE PENETRATION
800 TO 1200mm	4m
600 TO 800mm	6m
400 TO 600mm	8m
0 TO 400mm	10m

	PENETRATION FRAMING		SHEET # 9 OF 18
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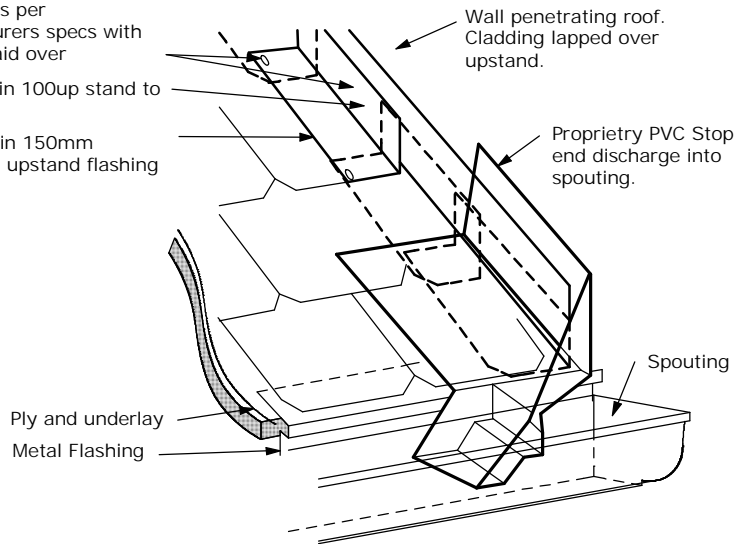


	DORMER VALLEY		SHEET # 10
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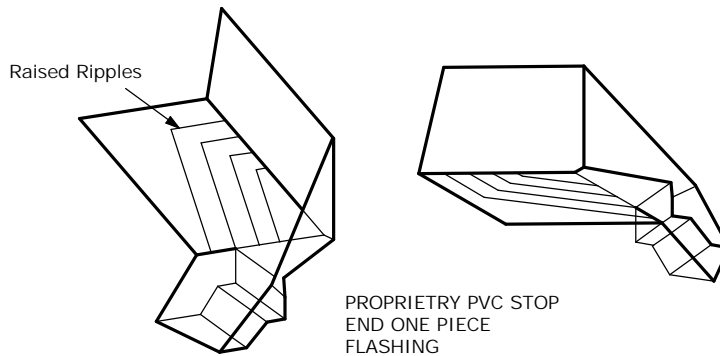
Butynol Upstand flashings installed as per manufacturers specs with shingles laid over

Provide min 100up stand to flashings

Provide min 150mm overlap to upstand flashing



GUTTER WALL JUNCTION
N.T.S.



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STOP END FLASHING

SCALE: AS SHOWN

DRAWN TG

DATE 23/02/2009

REV # DN

SHEET # 11

OF 18

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**CONSTRUCTION NOTES:
READ THOROUGHLY BEFORE COMMENCING WORKS**

ALL MATERIALS TO BE DRY AT THE TIME OF APPLICATION. UNDER NO CIRCUMSTANCES SHOULD ANY MATERIALS BE TORCH DRIED

ALL SARKING AND SUBSTRATE MATERIALS TO BE DRY PRIOR TO LAYING OF WATERPROOF MEMBRANE. ENSURE ALL CONDENSATION AND RAINWATER HAS THOROUGHLY EVAPORATED PRIOR TO COMMENCEMENT OF WORKS.

ALL FLASHING AND FIXING MATERIALS TO BE CORROSION RESISTANT AND APPROVED FOR THE CORROSION ZONE AS SPECIFIED BY THE NEW ZELAND BUILDING CODE AND NZS 3604:1999

SEA SPRAY ZONES - TYPE 304 STAINLESS STEEL
ALL OTHER ZONES - TYPE 304 STAINLESS STEEL OR HOT DIP GALVANISED WITH ADDITIONAL PROTECTION AS PER NZS 3604:1999 4.4.4 AND 4.4.5 REQUIREMENTS

FOR HIGH, VERY HIGH AND SED WIND ZONES, THE NUMBER OF FIXINGS PER SHINGLE SHALL BE DOUBLED AND ALL SHINGLE TOES TO BE GLUED WITH APPROVED ROOFING CEMENT

PLYWOOD SUBSTRATE TO BE LAID WITH STAGGERED JOINTS TO SHEET EDGES.

ALL SHEET EDGES SHALL BE SUPPORTED WITH NOGGS OR ROOF FRAMING TO ALLOW FOR FIXING UNLESS A STRUCTURALLY TESTED AND APPROVED TONGUE IN GROOVE EDGE SHALL PROVIDE EQUIVALENT OR BETTER SUPPORT

ALL SHEETS TO BE LAID WITH A 3mm INTER SHEET EXPANSION JOINT

PLYWOOD SUBSTRATE SHALL BE LAID WITH THE FACE GRAIN AT RIGHT ANGLES TO THE SUPPORTS


UNDER NO CIRCUMSTANCES SHALL THE SARKING / SUBSTRATE BE LAID DIAGONALLY

ALL SARKING / SUBSTRATES SHALL HAVE A MAX OF 18% MOISTURE CONTENT AT THE TIME OF APPLICATION OF MATERIALS

UNDERLAY TO BE MIN 15w ASPHALT SATURATED UNDERLAY OR MEETING ASTM D4859 OR D6757 REQUIREMENTS

UNDERLAY TO MEET NZBC E2 REQUIREMENTS AS SET OUT BELOW
 ABSORBENCY - • 100g/m² TO AS/NZS 4201: PART 6
 VAPOUR RESISTANCE - • 7 MN s/g TO ASTM E 96 B
 WATER RESISTANCE - • 100mm TO AS/NZS 4201: PART 4
 pH OF EXTRACT - • 6.0 AND • 9.0
 SHRINKAGE - • 0.5% TO AS/NZS 4201: PART 3
 MECHANICAL - EDGE TEAR AND TENSILE STRENGTH TO AS/NZS 4200

ALL UNDERLAYS TO BE LAID WITH MIN 100mm END LAPS

	CONSTRUCTION NOTES		SHEET # 12
			OF 18
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GENERAL SPECIFICATIONS

1 ROOF PENETRATIONS:

ROOF DECKS / SUBSTRATES SHOULD BE DRY, WELL SEASONED 150X25 BOARDS OR EXTERIOR GRADE PLYWOOD

2 UNDERLAY:

APPLY FONTANA D226 HEAVY DUTY BITUMEN BASED ROOFING UNDERLAY OVER PLYWOOD SUBSTRATE IN ACCORDANCE WITH NZBC E2 REQUIREMENTS

8.1.5

ALL ROOF UNDERLAYS SHALL HAVE LAPS NO LESS THAN 150mm WHERE REQUIRED, ROOF UNDERLAYS SHALL BE LAID

HORIZONTALLY, WITH THE UPPER SHEETS LAPPED OVER LOWER SHEETS TO ENSURE WATER IS SHED TO THE OUTER FACE OF THE UNDERLAY

3 ROOF PITCH

MIN ACCPETABLE ROOF PITCH = 10°

FOR ROOF PITCHES 10 - 18 DEGREES COMPLTETELY COVER ROOF WITH 2 LAYERS OF UNDERLAY IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS

FOR ROOF PITCHES 18 DEGREES AND GREATER COMPLETELY COVER ROOF AREA WITH 1 LAYER OF ROOFING UNDERLAY

STARTER SHINGLE COURSE

USE AN ELK STARTER STRIP OR A STRIP SHINGLE INVERTED WITH THE HEADLAP APPLIED AT THE EAVE EDGE. WITH AT LEAST 10mm TRIMMED FROM THE END OF THE FIRST SHINGLE, START AT THE RAKE EDGE OVERHANGING THE EAVE 12mm TO 20mm. FASTEN 50mm FROM THE LOWER EDGE AND 25mm FROM EACH SIDE. SHINGLES MAY BE APPLIED WITH A COURSE ALIGNMENT OF 45° ON THE ROOF

FIRST COURSE

START AT RAKE AND CONTINUE COURSE WITH FULL SHINGLES LAID FLUSH WITH THE STARTER COURSE

SECOND COURSE

START AT THE RAKE WITH THE SHINGLE HAVING 145mm TRIMMED OFF AND CONTINUE ACROSS ROOF WITH FULL SHINGLES

THIRD COURSE

START AT THE RAKE WITH THE SHINGLE HAVING 285mm TRIMMED OFF AND CONTINUE ACROSS WITH FULL SHINGLES

FOURTH COURSE

START AT THE RAKE AND CONTINUE ACROSS WITH FULL SHINGLES ACROSS ROOF.

FIFTH AND SUCCEEDING COURSES

REPEAT THE APPLICATION AS SHOWN FOR SECOND, THIRD AND FOURTH COURSES
DO NOT RACK SHINGLES STRIGHT UP THE ROOF


FASTENERS

ALLWAYS NAIL THROUGH THE FASTENER LINE

SHINGLING NAILS: STAINLESS STEEL GUN NAILS WITH 1 9mm HEAD, SEMI RING SHANKED, 32mm OR 25mm IN LENGTH WITH A 3mm DIAMETER SHANK. ELK RECOMMENDS 30mm FOR NEW ROOFS AND 40mm FOR ROOF OVERS. IN CASES WHERE YOU ARE APPLYING SHINGLES TO A ROOF THAT HAS AN EXPOSED OVERHANG, FOR NEW ROOFS ONLY, 20mm RING SHNAK NAILS ARE ALLOWED TO BE USED FROM THE EAVES EDGE TO A POINT UP THE ROOF THAT IS PAST THE OUTSIDE WALL LINE 25mm RING SHANK NAILS ALLOWED FOR RE-ROOF

NOTE: AN IMPROPERLY ADJUSTED NAIL GUN CAN RESULT IN RAISED NAILS THAT CAN CAUSE A FISHMOUTHED APPEARANCE AND PREVENT SEALING

FASTENERS SHOULD BE LONG ENOUGH TO OBTAIN A 19mm PENETRATION OR PENETRATION THROUGH SUBSTRATE, WHICHEVER IS LESS

	SPECIFICATIONS		SHEET # 13
	SCALE:	AS SHOWN	OF 18
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