

SPECIFICATION AND DESIGN CONSIDERATIONS

- Ensure tilt fillet height is at least equal to top of the batten
- Width of lining pieces will vary depending on catchment area, see Publication Reference Update 1.
- Gutter linings minimum code 4 in lengths not exceeding 1500mm
- Historic or Listed Buildings minimum of code 5. Where there is a risk that moss and lichen may be present on slates or tiles heavier codes of lead should be specified, i.e. code 6 or 7.
- Slates felt should terminate over the top of the lining pieces at the tilt fillet area.
- Patination oil. Consider use to reduce risks of staining where water from gutter may discharge over surrounding roof materials.

A	WITH BEDDED TILES OR SLATES	
	Width of lead to 'line valley' (mm approx.)	Width of lead to 'line valley' (mm approx.)
100	500	400
125	525	425
150	550	450
200	600	500
250	650	550

DETAIL 9F

Lead Sheet Association Standard Detail Sheet No. 9F Contract Information Practice Details
 Telephone 01892 822773 Title: Pitched Valley Gutter Lining
 Fax 01892 823003

Publication Reference:
 Lead Sheet Manual Volume One, Page Nos. 37 to 39 and Update No. 1
 Rolled Lead Sheet - The Complete Manual, Page Nos. 50, 54 to 58

SPECIFICATION AND DESIGN CONSIDERATIONS

- Ridge and Hip Flashings minimum code 4, in lengths not exceeding 1500mm.
- Code 5 preferred in lengths not exceeding 2000mm for Ridge Rolls, and 1500mm for Hips.
- Where there is a moderate to severe exposure additional thickness is required for resistance to windlift, and for Historic or Listed Buildings minimum code 6 should be specified.
- Free edge clipped to suit exposure, at between 300mm to 500mm centres. Lead is only suitable for sheltered situations, copper or stainless steel for moderate to severe exposure. An additional tile batten may be required where extra screw fixing is needed for moderate and severe exposures.
- Where lead is used for clips consider use of one code heavier than flashings.
- Patination oil. Consider use for flashings to reduce risks of staining.

DETAIL 12F

Lead Sheet Association Standard Detail Sheet No. 12F Contract Information Practice Details
 Telephone 01892 822773 Title: Ridge and Hip Rolls
 Fax 01892 823003

Publication Reference:
 Lead Sheet Manual Volume One, Page Nos. 8, 9, 41, 42
 Rolled Lead Sheet - The Complete Manual, Page Nos. 7, 22, 30, 59, 60

SPECIFICATION AND DESIGN CONSIDERATIONS

- Back gutter and Cover Flashings minimum code 4 in lengths not exceeding 1500mm
- Soakers minimum code 3
- Where deeply profiled tiles are used and/or additional thickness is required for bossing and for Historic or Listed Buildings min. code 5 should be specified.
- Where stack width exceeds 500mm ensure free edges of apron flashings are clipped to suit exposure see Detail Sheet: No. 7 Apron Flashings at Abutments.
- Chimney Stack brickwork ensure flashings are fitted in correct relation to any damp proof tray. See publication reference.
- Patination oil. Consider use to reduce risk of staining over slated or tiled areas.
- Type of side flashing will vary depending upon type of tiles or slates.

DETAIL 16F

Lead Sheet Association Standard Detail Sheet No. 16F Contract Information Practice Details
 Telephone 01892 822773 Title: Chimney Flashings
 Fax 01892 823003

Publication Reference:
 Lead Sheet Manual Volume One, Page Nos. 8, 9, 13, 14, 15, 17, 26 to 33
 Rolled Lead Sheet - The Complete Manual, Page Nos. 7, 17 to 23, 30, 36 to 48

SPECIFICATION AND DESIGN CONSIDERATIONS

- Soakers Minimum code 3.
- Patination oil. Consider use for soakers to reduce risks of staining.
- Step Flashings Minimum code 4, in lengths not exceeding 1500mm.
- Historic or Listed Building minimum code 4 for soakers and minimum code 5 for flashings in 1500mm lengths.
- Abutments. If in a severe exposure single step flashings should be detailed, see Detail Sheet No. 4 Single Step and Cover Flashings.
- Cavity Brickwork ensure flashings are fitted in correct relation to any tray system. See Publication Reference.

DETAIL 2F

Lead Sheet Association Standard Detail Sheet No. 2F Contract Information Practice Details
 Telephone 01892 822773 Title: Abutment with Soakers and Step Flashings Slates
 Fax 01892 823003

Publication Reference:
 Lead Sheet Manual Volume One, Page Nos. 8, 13, 20 to 22 and Appendix A
 Rolled Lead Sheet - The Complete Manual, Page Nos. 17 to 22, 36, 47, 48, 49

SPECIFICATION AND DESIGN CONSIDERATIONS

- Cover Flashings Minimum code 4, in lengths not exceeding 1500mm.
- Where deeply profiled tiles are used and additional thickness is required for bossing and for Historic or Listed Buildings minimum code 5 should be specified.
- Free edge clipped to suit exposure, at between 300mm to 500mm centres. Lead is only suitable for sheltered situations, copper or stainless steel for moderate to severe exposure. An additional tile batten may be required where screw fixing is needed for moderate and severe exposures.
- Where lead is used for clips consider use of one code thicker than Flashings
- Patination oil. Consider use for flashings to reduce risks of staining
- Cavity Brickwork ensure flashings are fitted in correct relation to any tray system. See Publication Reference.

DETAIL 7F

Lead Sheet Association Standard Detail Sheet No. 7F Contract Information Practice Details
 Telephone 01892 822773 Title: Apron Flashings at Abutment with Lean to Roof Tiles and Slates
 Fax 01892 823003

Publication Reference:
 Lead Sheet Manual Volume One, Page Nos. 6 to 8, 17, 23 to 25 and Appendix A
 Rolled Lead Sheet - The Complete Manual, Page Nos. 7, 17 to 23, 30, 59, 50, 51

SUNPIPE FLAT ROOF DETAIL

SPECIFICATION AND DESIGN CONSIDERATIONS

- Secret Gutter Lining Minimum code 4, in 1500mm lengths
- Step Flashings Minimum code 4, in lengths not exceeding 1500mm.
- Historic and Listed Buildings heavier codes should be specified, i.e. minimum code 5
- Ensure Secret Gutter has adequate capacity for length and height of abutment and can cope with water flow in storm conditions
- Secret gutters are not advised where there is a risk they can become blocked by leaves etc. See Detail Sheet 6F
- Cavity Brickwork ensure flashings are fitted in correct relation to any tray system. See Publication Reference.

DETAIL 5F

Lead Sheet Association Standard Detail Sheet No. 5F Contract Information Practice Details
 Telephone 01892 822773 Title: Abutment Flashing with Secret Gutter
 Fax 01892 823003

Publication Reference:
 Lead Sheet Manual Volume One, Page Nos. 6, 7, 8, 13, 14, 15, 20 to 22 and Appendix A
 Rolled Lead Sheet - The Complete Manual, Page Nos. 7, 17 to 23, 30, 36 to 38, 47, 48, 49

SPECIFICATION AND DESIGN CONSIDERATIONS

- Clips: The free edge of the lead flashing must always be 'adequately clipped' to prevent lifting and distortion in high wind conditions. Adequate clipping will depend on the location, orientation and exposure of the building and these, in turn will determine the material used for the clips, their spacing and, most important, the method of fixing. Clips should be spaced at between 300 and 500mm centres depending on exposure. For sheltered exposures clips fixed at the top (as in Fig.1) with a clip at each lap joint and at about 500mm centres will be adequate. However in more exposed situations, this method will not prevent wind lift in storm conditions and additional restraint will be needed. The important principle: 'The lower the fixing the stronger the clips' is illustrated in Fig.3. A typical example of extra fixings to clips are shown in Fig.2. Therefore, although the spacing and the material used are important, the method of fixing is an essential factor to be considered if the clips are to provide effective resistance to wind lift in storm conditions.
- Patination of external leadwork: In rainy or damp conditions new lead sheet flashings will produce an initial, uneven white carbonate on the surface. This can be aesthetically unacceptable in some situations but, more importantly, the white carbonate can be washed off by rain to cause unsightly staining on materials below flashings. To reduce staining and also provide a pleasing appearance, a coat of Patination Oil should be applied to the flashings as soon as practical after fitting. Preferably the oil should be applied no later than the end of the day's work since overnight rain can cause the white stain to develop. Patination Oil should be applied evenly with a soft cloth and, in vulnerable locations such as mansard flashings, fixed over dark grey slates or tiles, it is important to oil
- Clips-copper: Copper or tinnead copper clips should be not less than 50mm wide. The thickness will depend on the exposure of the building. Normally 0.8mm thick thinned copper sheet (0.7 copper) should be specified.
- Clips-stainless steel: These should be cut from austenitic stainless steel sheet or strip not less than 50mm wide and 0.38mm thick. However, for high exposure situations a thicker sheet (0.48 stainless steel) should be used.
- Clips-lead: Lead is only suitable for clips in sheltered locations and the thickness of the sheet used should not be less than the thickness of the flashings.
- Nails: Nails should be large headed copper or austenitic stainless steel, with an annular ring, helical ring or shank not less than 19mm long. The shank diameter of copper nails should not be less than 3.35mm or, for stainless steel, not less than 2.65mm.
- Screws: Screws should be brass or stainless steel complying with BS1210, not less than 19mm long and 3.35mm in diameter.
- Further guidance on specifications of thickness of lead flashings. See detail sheet 1R.

DETAIL 18F

Lead Sheet Association Standard Detail Sheet No. 18F Contract Information Practice Details
 Telephone 01892 822773 Title: Accessories
 Fax 01892 823003

Publication Reference:
 Lead Sheet Manual Volume One, Page Nos. 8, 13, 14, 20 to 22 and Appendix A
 Rolled Lead Sheet - The Complete Manual, Page Nos. 3 to 7, 17 to 24

0	22.09.06	ISSUED FOR DPP	CL	DL	DL
REV	REVISION DATE	PURPOSE OF REVISION	DRAWN	CHECKED	APPROVED
JACOBS JACOBS HOUSE, 427 LONDON ROAD, READING, RG5 1BL, ENGLAND TEL: +44(0)118 983 5000 FAX: +44(0)118 948 1054 WEBSITE: WWW.JACOBS.COM					
NOMS Property					
JACOBS SECURITY IDENTIFICATION					
DATE: 03.10.06		REF No. 8405/012...			
PROJECT: HMP Latchmere House Admin Reroof					
DRAWING TITLE: Proposed Roof Details Sheet 2					
DRAWING NUMBER: RE-J24108-A2/1.13/117		REV: 0			
BPRN No. 56103/8405					
DRAWN: 22 Sep 2006		SCALES: 1:5 @ A1			
DO NOT SCALE OFF THIS DRAWING.					
0mm 10mm		100mm			
ORIGINAL SCALE 1:1					
THIS DRAWING IS NOT TO BE USED IN WHOLE OR PART OTHER THAN FOR THE INTENDED PURPOSE AND PROJECT AS DEFINED ON THIS DRAWING. REFER TO THE CONTRACT FOR FULL TERMS AND CONDITIONS.					