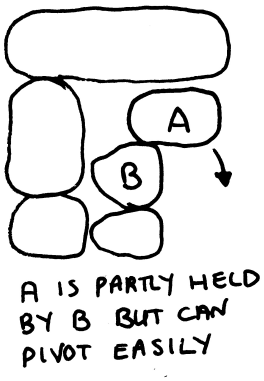
PROFESSIONAL COLUMN: *Waller and Dyker, Summer 2010*
Corners

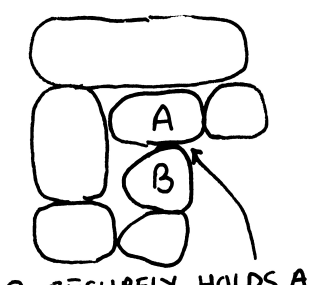
Before dealing with corners first we return to lunkies to cover a point only touched upon last time, and which I have been discussing with the chief examiner subsequently. The current advanced test criteria do not set out any minimum dimensions for a passageway, if the passageway is not fit for purpose you might (but not necessarily) fail. At one extreme you could just create a rabbit smoot which meets the criteria although whether or nor the sides are tall enough or the lintel long enough to really demonstrate a grasp of the techniques could become a (s)moot point. On occasion these have actually been put forward for testing and given that there are no actual requirements it's down to the commonsense of the examiners as to whether they are suitable. I would not wish to cast aspersions in the direction of fellow examiners however rumour has it that small smoots or similar have been passed as suitable in the past. Whilst none of us want to see the tests become overly bureaucratic it might be that in future minimum dimensions are instigated to try to achieve uniformity. Problem is there are passageways in these parts that are large enough for sheep, but the sides are only one or two stones high and effectively the same as the rabbit smoot for the number of stones used is concerned. It is always a problem trying to provide a uniform and fair framework within which to fit diverse stone and tradition from around Britain.

There is of course the consideration as to whether or not they can be too large. Passages often exist to let sheep move from one field to another whilst containing larger stock, in this photo taken since the last article we appear to have a horse trying to use one. Whilst it is a somewhat overly tall lunky, it is of course a Shetland Pony. The serious point is that rather than pass through it is having a good scratch on the corner and lintel, and hopefully it serves to emphasise the need for sound technique as you can never be entirely sure what sort of pressures will be brought to bear on your constructions.

So to corners. In fact most of the technical considerations relating to corners have in effect been dealt with in the preceding articles. The most relevant is probably that dealing with "broken ties" (W&D Winter 2009/10) as to all intents and purposes the 'L-shaped' building technique for ends is just a corner minus the batter. The same pitfalls relating to jointing and tracing apply equally here.

That of course essentially deals with the outside of the corner, but corners also have insides. *"Dry Stone Walling"* (BTCV p.93 and http://handbooks.btcv.org.uk/handbooks/content/section/1634) does little other than mention the technique of extending the internal runners as far as possible (even to the outside face of the return), which is all very well in theory if you have suitable stone. In an ideal world the inside and outside corner would be constructed out of similarly sized stone, in practice the outside is more likely to be built of large stone, the inner by smaller stone. This reflects practicalities, the outside of a corner is by its very nature exposed, rarely will they be protected by gate posts as many ends are and in this respect are more likely to be damaged by stock rubbing against them than wall ends. The craftsman test requires examiners to ensure that the longest stones have been used on the outside of the corner partly for this reason. It also requires that the inside corner stones also tie well into the wall. Whilst the stones in the return of an inside corner will actually support one end of the inside stone this will do little other than help pivot a stone should it try to move unless there is sufficient overlap (left). Like *"DSW"*, *"Walling Techniques and Traditions"* (DSWA) offers limited advice on corners, the diagram does show the inside corner stones well set into the corner, this will add stability however the minimum extension into the main body of the wall will mean that once the next course/layer is sat on it getting sufficient overlap from anything other than very regular stone will be problematic (right). Essentially as with most walling it is a matter of compromise, you need to bear these problems in mind and not just use any old standard walling stone for the inner corner it will need to be the longer building stones you have available in order to provide a suitable bed to facilitate sufficient overlap. There are of course concerns with tracing, but the support of the return will minimise these, although particularly long stones should ideally still be tied in.

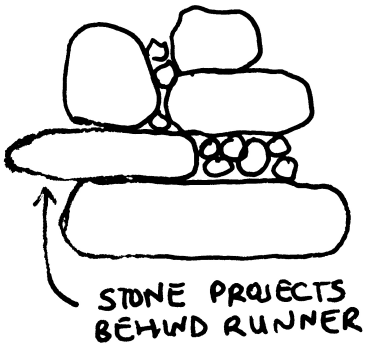




Technically there are some concerns with using nothing but large stone on the outside and smaller stone on the inside as this can lead to differential settlement, although in this instant the buttressing effect of the return might compensate for this. This aspect is a little more technical than I would wish to deal with within this column. If you want to find out more about the theory and effects of differential settlement there is an article in *"Stonechat 20"* published by the North Wales Branch and viewable as a pdf at the bottom of the North Wales Branch page of the DSWA website (http://www.dswa.org.uk/north-wales-g.asp). It is again a question of swings, roundabouts and compromise vis-à-vis the need for a solid exposed face.

There is only a little more that I can think of that can be usefully added. As with ends you should always build the corner first keeping the courses/layers higher than the main body of the wall so that you are building into it not trying to fit it in. The main problems involved with corners are probably organisational rather than technical. *"Walling Techniques and Traditions"* (p.26) suggests setting frames a slight distance beyond the end of the wall, if you set them up at the actual corner they will of course get in the way, beyond the corner you remove one problem but will still be dealing with a cats cradle of lines and trip wires. Little can be done to resolve this unless you don't use lines at all and build by eye. You can always set the bars/frames but just use the lines as required rather than have them in place permanently. Place the corner stones by eye and then extend the strings to check the actual alignment, rather than being looped around the line bar and tied, the line is loose and pulled tight as required. The bars/frames can still be a little intrusive and personally I set line bars a metre or so **in** from the corner on the line of the wall rather than beyond it. I then pull the line through/up as required and align it so that it 'kisses' the line bar. This works well provided it is not pushed out of line by a protruding stone between the two sets of bars, thus distorting the line and angle at which it then 'kisses' the nearer bar. Once some of the corner is built I secure the lines whilst building the main body and there is still free access around the corner itself. Either method can involve a degree of checking and re-checking (especially if you are not used to aligning stones accurately by eye) but to my way of thinking generally preferable to literally getting tied in knots and tripped up. The other logistical problem is the huge amount of stone you have to strip out on the inside compared to the space available. Hence I tend to strip all the coping, throughs and the majority of the hearting to the outside where there is more than enough space (and often most of the inner corner runners too, unless they are large and heavy). If I ever work out a way of avoiding the inevitable mess that still results unless you move the stone relatively vast distances, I'll let you know, assuming you don't know better already, in which case I eagerly await YOUR advice.

One final consideration is corners at gateways. Corners are battered and so a tapering gap occurs between gatepost and wall. The expedient solution is often to jam stones in the gap. A perhaps more aesthetic solution is to project runners as seen here in Nant Ffrancon, Gwynedd. This is fine if you have suitable runners. On the other side of the yard a variation has been used where the runners are shorter, stones have been projected from behind the runners, assuming the wall is sufficiently wide enough to accommodate the projecting stone without compromising the inside corner.



That isn't quite it square pillars are a collection of corners however there's a little too much to include in the space available here, so I'll save them for next time..

Finally, last time we had a competition, swamped with one entry the winner is…

"The Cheeky End" by Elaine Wood.

It's easy to find fault I think
With other people's walling
Especially if, like some I know,
Master Craftsman is your calling

But ponder, mighty criticisers
And those who don't, but could
It's mere mortals, lowly souls like me
Who make your work look good.

Whether tongue in cheek or serious this does raise an issue worthy of some discussion about the whole role of analysing and criticising within walling. However time and space dictate that this will have to take place on another day and maybe another place.

Maybe I should have noted that to the best of my knowledge the wall end in the photo was built by a professional.

Craig Arbennigol