LABOUR, LIME AND STONE

Highfield part of a bastle door jamb with rebate for door notches for two draw bars and cut-out for a later lock

Thorneyburn Common lime pit

Thorneyburn Quarry

The Builders

Bastles are simple buildings, but they required skilled workmen to quarry, dress and place the heavy stones, as well as shape and assemble door and window jambs. As lime mortar cannot be used in frosty weather, they were probably travelling tradesmen - working in the summer when most of the family would be away at the shielings, and leaving before the raiding season began in autumn.

Quantities 'Standard' bastle, without vault: approx. 400 tonnes of sandstone blocks
Bastle with vault: approx. 460 - 470 tonnes of sandstone
Total size: 310 cubic metres - 230cu.m of masonry and 60 cu m of lime mortar, rubble and voids

Costs

Building would have been expensive. Example of day rates from 1543 repairs to Wark-on-Tweed Castle. 5d equivalent now to £100

(in old pence)			
Master Mason 12d.	Lime burners 5d	Clerks & Overseers 6d
Labourers 4d to 5d.	Masons, setters & hewers 7d	Women to carry earth etc 3d
Rough layers and wallers 5d to 6d.	Carters 4d	Carpenters 6d to 8d

Materials

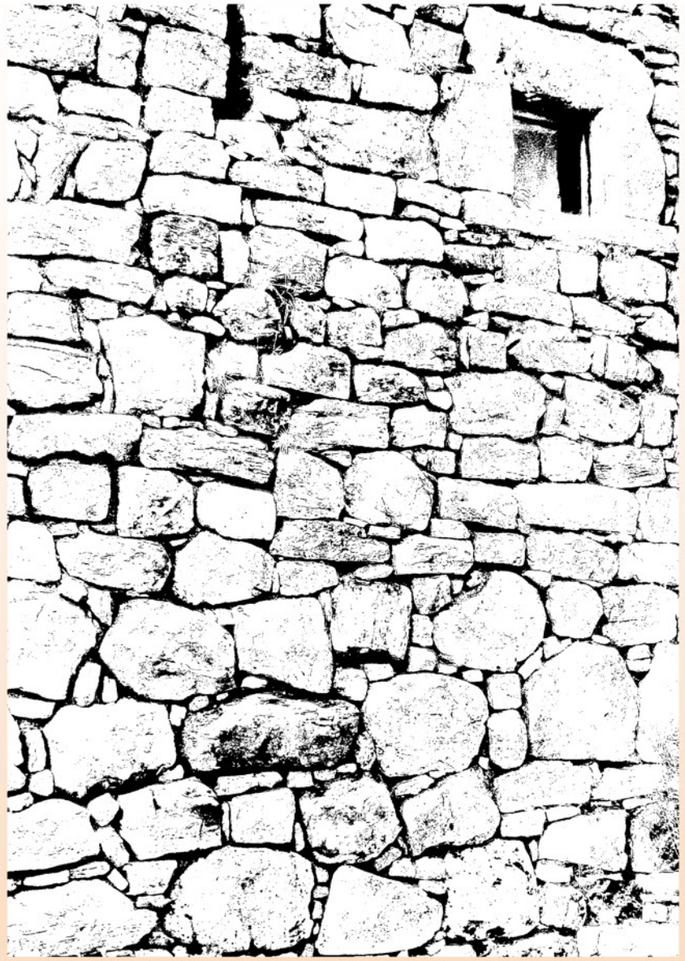
Sandstone There were numerous crag outcrops in the area.
- difficult to transport stone to site over rough ground with no roads
- oxen with carts or sledges probably used to drag stone downhill
- quarry sites within 1km of half of Tarset's bastles; 2km from a further third; remaining 17% had no obvious source of stone within 2km

Lime Lime mortar was made from sand and slaked lime, in various proportions.
- thin beds of limestone in the area but no significant outcrops; difficult to quarry
- limestone probably burnt in clamps, like charcoal, rather than kilns; fuelled by either charcoal or coal to produce quicklime
- not known where burning and slaking of the lime took place (at quarry or building site)

Quarries Few distinctive types of sandstone can be identified in the buildings.
- stone hard to match to possible sources as masonry lichen-covered and some possible quarry sites are overgrown
- many quarries likely to have been reworked and extended for general building, especially for drystone walling and 19th century railway construction

Sand
- possibly dug from floodplains (haughs) or river terraces
- sporadic outcrops of glacial sands also available
- pockets of sand may be also have been found below some sandstone crags, but no specific sources have been identified

Boulders
- some bastle builders used boulders to supplement quarried stone
- usually found in lowest courses of masonry as a 'boulder plinth'
- boulders might have been dug out when clearing fields or forming ditches through Glacial Till (Boulder Clay) or lifted from river beds
- several disadvantages in using boulders: hard to shape and fix in the masonry; difficult to haul uphill from rivers



North Gatehouse masonry

Some common features of bastle masonry

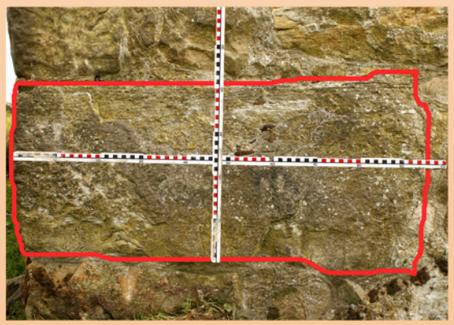
- dressed stone in door and window jambs
- roughly squared stone in somewhat irregular courses
- some rounded boulders with gaps packed with smaller stones (galleting or snecking)

Roofing

- bastle roofs had to be weather and fire proof
- thin slabs or flags of sandstone made ideal material, but as no source known in Tarset, most likely material used was turf
- roof crucks visible at Black Middens may have supported later slate roof

The Hole Bellingham example of a stone-roofed Bastle

Boulders examples in the Tarset Burn



Black Middens quoin estimated to be 440kg; large blocks of stone distinctive feature of bastle masonry

Black Middens remnant roof supports