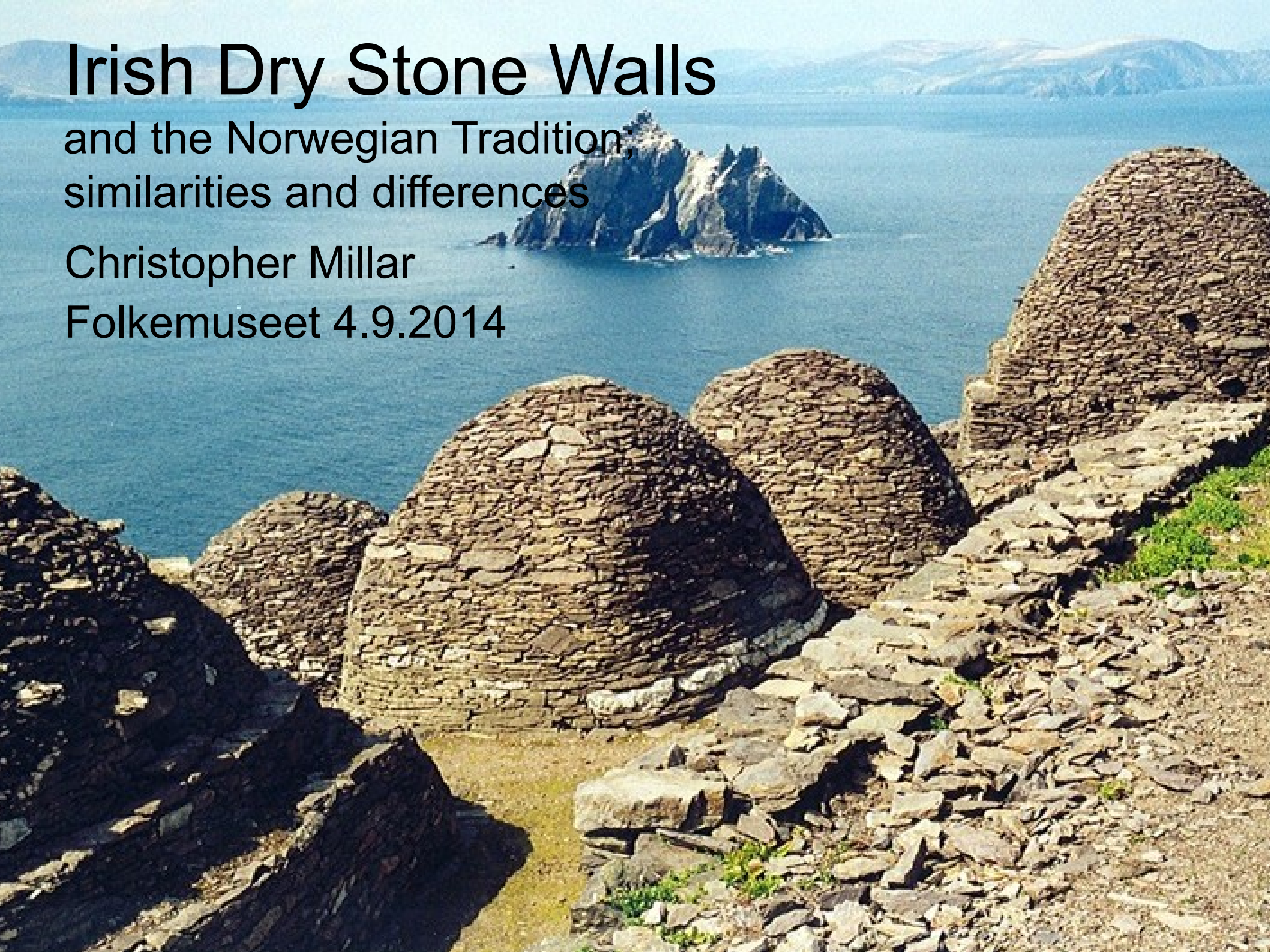


Irish Dry Stone Walls

and the Norwegian Tradition;
similarities and differences

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6000 year tradition

In Ireland, stone as a building material has strong cultural significance.

The long history of its use as a building material confirms somehow, the continuity of civilisation in Ireland.

This history and the material contribute to a national cultural identity.

The Ceide Fields of Mayo. 6000 year old agricultural settlement.

The stone walls preserved partly beneath the peat are then some of the oldest of their kind.



6000 year tradition



An important element on the built heritage landscape of Ireland are stone burial chambers.

Around 1200 such structures are thought to exist.

The most famous of these are Newgrange and Knowth which date from around 3000 to 3200 BC.



Passageway inside Newgrange with slab (heller) ceiling

Cashels

- Cashels are stone forts, enclosures for houses
- Grianan of Aileach is thought to date back to 1700 BC
- Walls around 4.5 metres wide



Tourism

- Strong promotion of selected sites
- Big investment in Newgrange Visitor centre
- Influences international and national idea of cultural identity
- Large burial chambers all over Northern Europe not given the same focus
- Controversial facade work with white quartz found on site
- What kind of identity?



Norway

- Can perhaps compare this cultural identification with Norway's love of timber.



Norway

- Cultural connection of craft skills with wood to a 'Golden Age'?



6000 year tradition?

- No continuity between the *people* building Newgrange 4500 years ago and the Christian monks of eighth century Kerry or the people of the Aran islands in the seventeenth and eighteenth centuries
- Some shared building principles; but very widespread principles eg corbelling
- Several traditions sharing the same island
- A tradition made effectively redundant in only the second half of 20th century
- Boundary walls remain more relevant to most people than stone walls in buildings

Most dry-stone walls in Ireland are from after ca 1840

- Famine caused big changes in village life/ farming practices
- The West hit the hardest
- Rundale farming system ended
- Redistribution of larger estates began in late nineteenth century, and continued after 1920s and Home Rule



Historical Context

The Rundale system was a farming system similar to the English 'common field' system

Villages (clachans) of small houses sharing common land

Believed to have been practised in the West since early medieval (debated)

When this system ended, necessary to redefine boundaries to individual properties; walls!

Some exceptional areas like Aran dictated by sheer amount of stone. And increased numbers of people post 1654

Often better farming land further East; greater number of 'ditches' and hedgerows

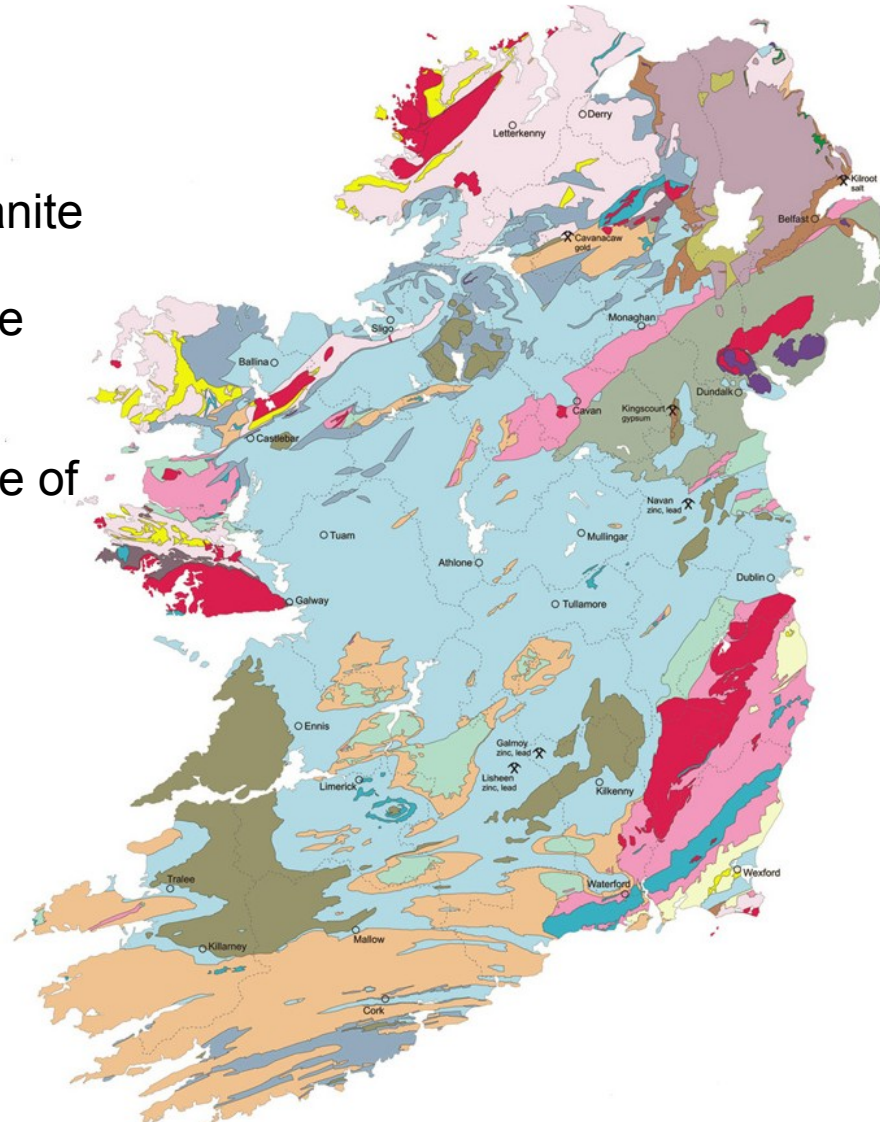
Norway and Ireland both underwent rapid commercialisation of agriculture/ forestry sector in 18th and 19th centuries; in Ireland, the English Estate system, in Norway, trelastindustrien

Both underwent significant land reform in the middle of 19th century

The postal service and railway lines were also important for both countries; changing rural landscape and intensification of craft skills

Geology of Ireland

- Limestone most common
- Also well used areas of granite
- Different kinds of sandstone also widespread
- Limited use of gneiss, some of schist (kleber?)



Key

ERA	AGE	PERIOD	MAP COLOUR	MAIN ROCK TYPES
CENOZOIC	1.8	Quaternary*		
		Tertiary		Clay
	65			Basalt
MEZOZOIC		Cretaceous		Chalk
	144			
		Jurassic		
	203			Shale & limestone
		Triassic		
PALAEOZOIC	250			Sandstone 'New Red Sandstone'
		Permian		
	298			Sandstone & shale
		Carboniferous		Limestone
	354			Sandstone & shale
		Devonian		Sandstone 'Old Red Sandstone'
	410			Sandstone & shale
		Silurian		Sandstone & shale
	440			Sandstone & shale
		Ordovician		Shale & sandstone, basalt & rhyolite
PALAEOZOIC	495			
		Cambrian		Sandstone & slate Quartzite in above
PRECAMBRIAN*	545			Schist & gneiss Quartzite in above

*Precambrian and Quaternary not to scale.

The Basics

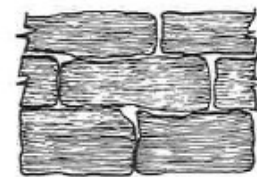
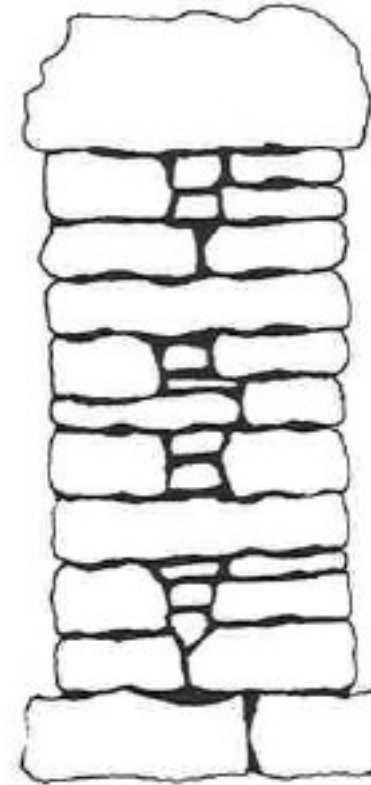
(Double Walls)

General approach to building **very similar** as for double walls or kistemur in Norway

Principles:

- Lay stones on natural beds
- Stones running into the depth of the wall/ tverband (bed bonding)
- 'Breaking the joints' as often as possible/ forband (face bonding)
- Largest stones first
- Importance of well placed hearting

('Tukting': you might say 'he's putting manners on that stone')



Acceptable



Acceptable

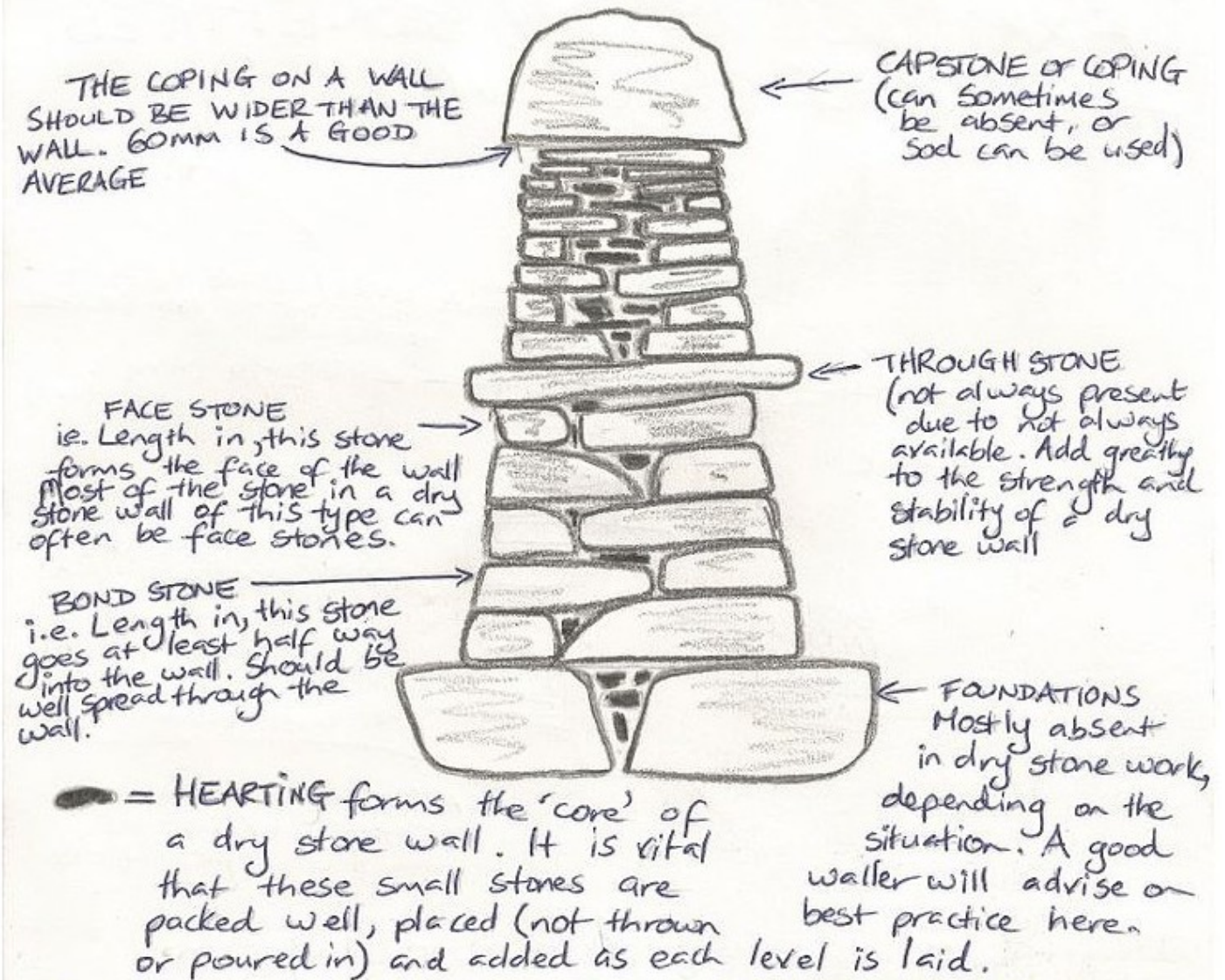


Acceptable



Not acceptable

Diagram of a battered (med trasering) wall from the Dry Stone Walling Association of Ireland



A FREE-STANDING DOUBLE DRY STONE WALL

(example shown is a free standing double dry stone wall i.e. it stands by itself and has two faces and a core between them.)

Note: Original terms in 18th and 19th century would have been in the Irish language.

Also, in practice, I have only ever heard people refer to coping/ capping or foundations

Some differences

Term confusion: double wall and a 'kistemur'

A double wall without a batter (trasing), as is usual in a building, fits the description of a 'kistemur'

Norway seems to have less 'naturlig kantet' stone, at least in the boundary walls (glacial deposits?)

The lack of 'coping' in Norway.

Coping:

A top layer of stone, often heavy, that has at least two functions:
*to keep animals and people from climbing over
*to weigh down the top course, usually of smaller stones

Quite a lot of variety giving a distinctive finish

Stacked walls or other single walls (eg Aran island) will rarely need coping

Coping

Coping can be in many forms;
Here projecting from wall alternately vertically and horizontally

Known by many names; 'cow and calf',
Or 'king and queen' for example

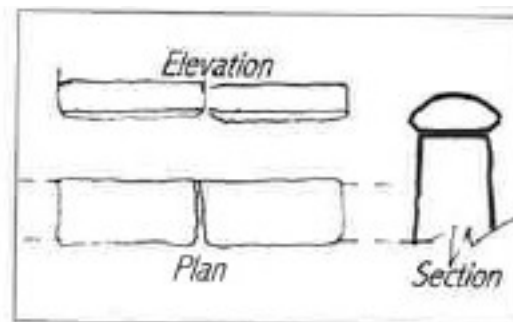
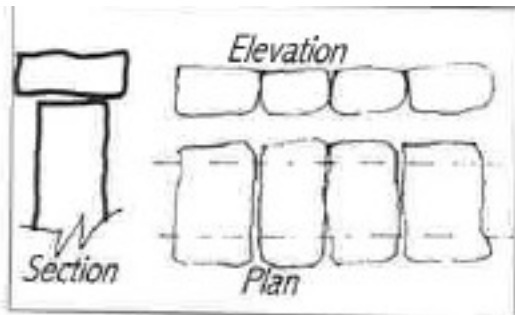


Coping

This is commonly called
'soldier coping'

Many varieties: eg
Half barrel coping
Flat projecting

All generally hang over the
top of the wall





”After two days march, without anything remarkable but bad quarters, we entered into the barony of Burren, of which it is said, that it is a country where there is not water enough to drown a man, wood enough to hang one, nor earth enough to bury him.”

Edmund Ludlow, General to Oliver Cromwell, 1652.

Famine wall in the burren



As the Great Famine took hold, some landlords offered their tenants work building what were then called 'Penny walls' as workers were paid a penny a day for their trouble.

Famine wall in the burren



They were later known as Famine Walls and can be seen in several parts of the country, going in no particular direction and serving no function other than to clear the land of some stone.

The Aran Islands



“To hell or to Connacht”

Cromwell, 1653/ 54.

Three of the four provinces to be dealt out to the victorious planters.

Rest of population sent to the least profitable agricultural land West of the Shannon river.

Subsistence living

Clearing of land to 'grow soil' using seaweed and protecting what was already there

Many small fields: each growing patch had to be 'won' one at a time

Around 2000 km of walls on the three islands

Distinctive walling styles and features



Here, a series of 'mother' stones frames the sections of smaller stones laid in a 'stacked' style.



Similar style also found on Sherkin Island, Co. Cork
The other side of the country.

Feidin



The 'Feidin' is a base of smaller stones.

Here the top is in a vertical stacked style. In other areas the top may be with rounded stones

Tighter base may be to protect new soil from low wind or new shoots from rabbits.

The more unstable seeming top part may put sheep off from jumping over.

Similar to the Galloway walls of Scotland. Possibly brought over by Scottish landlords

The Aran gate or 'Bearna'



Smaller stones not as suitable for walling stacked loosely.

Can be pushed down and stack again after moving livestock in for example.

Why use flat limestone in this way?

Allows some wind through (wall won't fall)
Light coming through and fragile appearance deters animals from trying to get out
Is more stone used up this way?

'Lace' walls from Aran



Deliberate: letting through light and *some* wind
Single walls of aran only around 50 cm wide
These stacking and lace styles work well as single walls
Free up available farming space: soil scarce

Further East

A 'consumption' wall in Co Meath



Richer farming land in the East
Walls up to 2 metres wide to 'consume' stone.
They had enough land to spare

Local variations



Local needs and materials dictate style
'Slab' (heller) wall of Liscannor slate (skifer)
Protecting walkers from the edges of the Cliffs of Moher

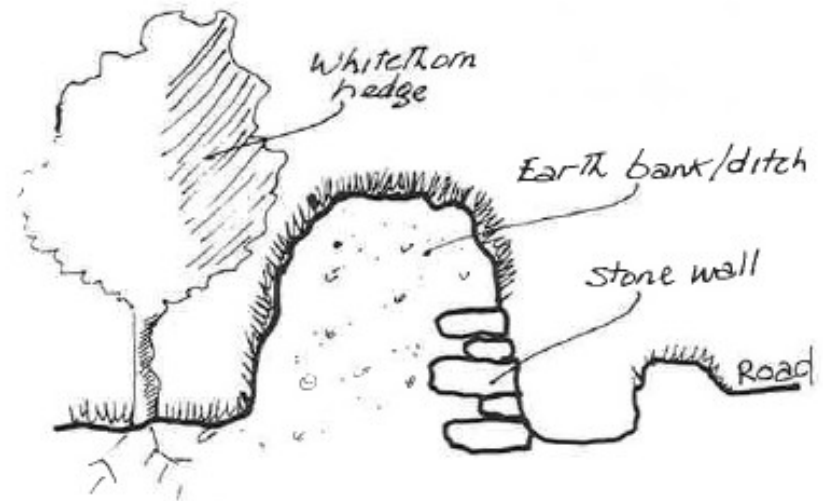
Louth fence



A Louth fence (gjerde) in Co. Louth, in the East.

A retaining wall in an earth bank/ hedge, dividing farming property

Herring bone style much more common in England but found in some areas.



The hedge can also be into the side of the bank/ ditch

Single stone granite wall



Mourne mountains,
County Down

Single stone boundary
walls in granite



The Mourne Wall



1904- 1922

The Mourne Wall was defines boundary of Silent Valley Reservoir. 35 km long.

Worked with tools tempered on the mountain
Compare with boundary walls with round granite

Other constructions

Stone buildings may show more continuity in construction than field walls.

In the Rundale system, there may not have been as many walls but many agricultural constructions survived into the twentieth century.

Difficult to distinguish between many of them

Images from E Evans, Irish Folkways, 1957

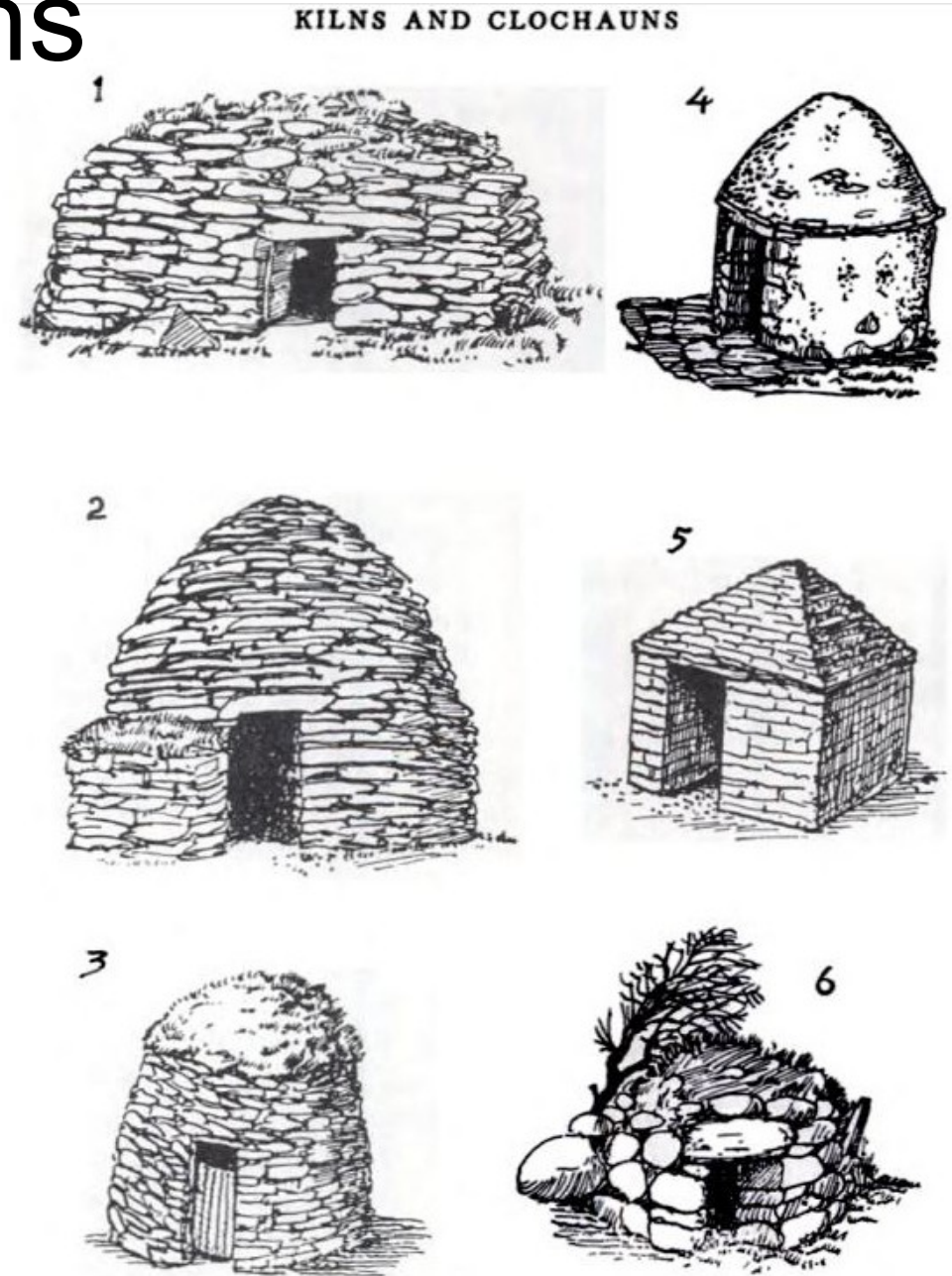


FIG. 37. Clochauns. (1) Oval house, Aran Island. (2) Hut, Skellig Michael. (3) Poultry house, Dingle. (4, 5) Pigsties, Co. Down. (6) Sweat-house, Co. Leitrim.

Function?



This structure, identified as a sweat lodge, or primitive sauna, in County Leitrim

Much uncertainty surrounds these 'sauna' structures.



Strongly resembles this one, identified as a beehive hut in Kerry

Conclusions

Basic walling principles are the same in Ireland and Norway (as in many countries)

Special characteristic/ small differences defined by :

different materials eg glacial deposits in Jomfruland versus limestone pavement on surface on Aran Islands

local innovation, practices (eg food storage, potato cellars)

Land reform and wider social conditions eg increasing commercialism of agriculture, famine

Not dictated by the age of existing walls or structures

ONE STRIKING DIFFERENCE:

Cultural significance/ resonance

Discussion

1. Are there any features you see here from the Irish tradition that you recognise in the walling you have seen in Norway?

Are there similarities and differences I have ignored?

2. How much innovation can we achieve with a material if we are only interested in conservation or restoration?

Could dry stone building conceivably have a role in the future other than as a kulturminne?