ART. XIV.—The Rampside Sword; with Notes on the Church and Churchyard of Rampside in Furness. By HARPER GAYTHORPE, F.S.A.Scot.

Communicated at Carlisle, April 15th, and Barrow-in-Furness, September 9th, 1909.

OUR knowledge of Rampside Churchyard as a place of early interment dates from 1860, when a stone axehammer of the Neolithic age was found by the sexton, William Iackson, amongst a heap of bones while digging a grave (these Transactions, o.s., xv., p. 160). This find suggests that the site had at one time been a barrow. The position is just such as would be chosen for the purpose, and from the recent discovery of the Viking sword, it seems to have been at a much later date the place of interment of a Scandinavian sea-rover. From its elevated position, 75'4 feet above Ordnance datum, can be seen Piel Castle, Roa Island, Beacon Hill, Walney Island and channel, Morecambe Bay, and the Irish Sea beyond. village and Walney channel are each about a mile distant, and near at hand are places with names of Norse origin— Yarlside, Cowp Scar, Old Barrow, Ramsey, &c.

At a still later date there may have been a chapel at the Rampside Grange founded by the monks of Furness before 1292. At these granges the crops from the ground attached to the monastery and also the rents paid in kind were stored, and one of the monks, called the prior of the grange, was deputed to keep the accounts of the farm. In most cases there was a chapel either included in the farm buildings or standing apart as a separate edifice, and at this grange in all probability was the monastic chapel of Rampside. Kirk Hill is to the west of Rampside Church, 100 feet above Ordnance datum, and Chapel Ing is in the valley, about 50 feet below the churchyard.

In Dr. Close's MS. (c. 1810, p. 19) he states that the church at Dalton has three appendant chapels of ease—viz., Walney (built before 1577), Rampside, and Ireleth. The first two are endowments of immemorial antiquity, but the last was founded as a school or chapel by Giles Brownrigg in the year 1608. Dr. Close further states that in his time the chapel of Rampside exhibited some features of ancient architecture in the door, which was a pointed arch, and had been opposed by a similar door on the north side; and at the east end was a minor chapel or part of smaller breadth and height than the rest. The bell was contained in a square freestone cupola.

I am informed by Mr. George Helm, aged 63 years, a waller, whose father was one of the builders of the present church, that his father described the old chapel as built of cobbles, with freestone quoins, and paved with cobbles.

Since the year 1621, when Rampside Chapel seems to have been rebuilt, as this date appeared on a foundation stone (*Notitia Cestr.*, p. 514), various alterations have been made to the chapel and graveyard. In 1650, in an inquisition taken at Lancaster, the inhabitants of Rampside prayed to be made parochial.

In 1840 the old chapel was pulled down, and the present church, dedicated to St. Michael, was rebuilt partly on the old foundations. At that time the foundations for the tower were sunk to a depth of nine feet, and from the remains of bones found beneath the foundations it was evident that it had been dedicated to religious uses at an earlier period. In 1840 dark outlines like the shape of two coffins were found by Richard Helm, one of the builders, under the walls of the old chapel, of which the foundations are 3 feet 6 inches deep, and also old-fashioned iron hinges very much corroded. It was then thought that the coffins had been fitted with hinged lids, but Mr. W. B. Kendall informs me that wooden coffins were not in use in Furness till late in the seventeenth century.

The old pointed arch stones of the doors referred to by

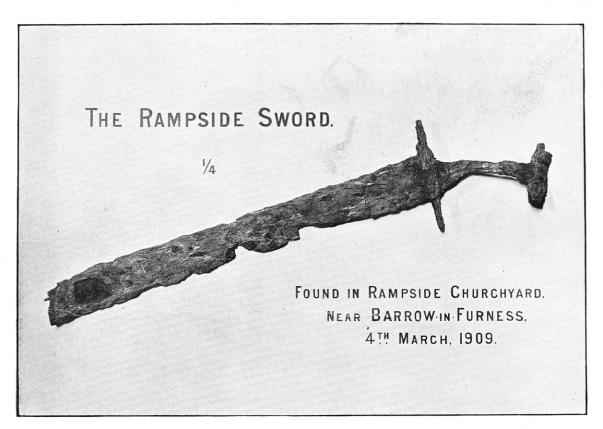
Dr. Close may have been carted from Furness Abbey c. 1621, and used in the rebuilding of a still earlier chapel. The present church is roughcast, and there are no carved or dated stones visible to help in forming an opinion as to the period when any earlier chapel might have been built.

During the rebuilding of the church in 1840 the curate, the Rev. William Dawson, wrote to the bishop of Chester asking whether the ground near the church was consecrated, and received for reply that it had been consecrated for hundreds of years (George Helm). The Sunday School, built 1842, in the south-east corner of the old churchyard, was pulled down in 1892.

About the year 1850 William Jackson, the sexton, in digging a grave, found a large freestone slab covering a skeleton, the teeth being perfect. His grandson, Mr. William Winder (aged 68 years), was present at the time, and relates to me how his grandfather gave him a lesson on bone setting, and by the aid of this skeleton illustrated how a thigh bone could be set. The freestone slab is believed to be the mediæval grave slab now built into the boundary wall of the new churchyard, which was consecrated by Bishop Goodwin on November 9th, 1889. During the time when the foundations of the church tower were got out in 1840, and when the Sunday School was built in 1842, the old churchyard, previously a rough piece of ground, appears to have been levelled, and this probably explains why the freestone slab was found beneath the surface.

About the year 1854-5, William Jackson found in digging a grave an iron dagger or sword, much corroded. It was about twelve inches long and about one inch or so wide, with a straight guard about three inches long, and a "tongue" (tang) or handle, but no pommel or knob. His grandson, my informant, was not present when this sword was found, but saw it afterwards. Its present whereabouts is unknown.

Since 1840 there have been found in Rampside Church-



yard, while digging graves, many large stones; one of lava, 5 by 4 feet by I foot thick, and weighing about 1½ tons, found in 1890 in digging the grave of John Helm, and other boulders (granite) from 2 feet 6 inches to 3 feet across, and weighing 5 to 8 cwts. each (see Furness: Past and Present, vol. ii., p. 170). These stones were found resting on skeletons or human bones. There are traditions extending back about one hundred years of drowned sailors being buried in Rampside Churchyard. They were usually buried on the low side towards the west.

The church bell, 17 inches in diameter, was cast by Luke Ashton of Wigan. The inscription is as follows:—

THE GIFT OF IOHN GARDNER TO ST. MICHALLS CHAPPELL SEPR 26TH 1739.

The lettering and heart-shaped stops correspond with those on the first bell at Urswick Church, dated 1724.

The door was formerly on the west side, and opened through the tower, but in 1866 a new porch and vestry were added at the expense of Mr. C. Burton Kennedy. A new chancel was also added by public subscription in 1892.

On Thursday, March 4th, 1909, an ancient sword was found in the old churchvard by Mr. Jacob Helm, sexton, and his son Thomas, while digging a grave for Mr. Thomas Curwen, Trinity House pilot, of Piel. It was about 2 feet 6 inches below the surface, in made earth, at a point about 8 yards west of the boundary wall and 16 yards south of the chancel—that is to say, on the site of the northern wall of the Sunday School already mentioned. The sword lay at the west end of the grave, about six inches of the blade from the broken end being in the sandy earth beyond the grave, and further to the west. At the eastward end of the grave the earth and clay were firm, and did not appear to have been disturbed. When first seen, the find was covered with a thick incrustation; unfortunately this was removed by Mr. Helm, and an attempt was made by his son to bend the sword.

It is a fragment only, having been broken about the middle of the blade. The Ormside sword, now in the museum at Tullie House, Carlisle (and described in these Transactions, o.s., xv., p. 377), offers an analogy, with much resemblance in the guard, tang and pommel; this suggests that the full length must have been about 33 or 34 inches, and that the Rampside sword, like that from Ormside, is of the Viking age. But unlike most weapons of that period, the Rampside blade has only one edge; to this, however, there is an analogy in a weapon figured in Du Chaillu's Viking Age (vol. i., p. 136, fig. 203). The back of the sword is $\frac{3}{8}$ of an inch thick near the guard, and $\frac{5}{16}$ of an inch thick near the broken end, and badly corroded.

The sizes of the various parts of the sword are as follow:—Length of blade from guard, I foot 4 inches; length of guard (which is rectangular in section, $\frac{1}{2}$ inch by $\frac{1}{4}$ inch), $4\frac{5}{8}$ inches; length of tang or grip, which is bent, 4 inches: grip on the lower or concave side, $3\frac{1}{2}$ inches.

The grip is rectangular in form and widens where it joins the guard and pommel, and is about $\frac{1}{8}$ to $\frac{5}{16}$ of an inch thick in section. The pommel is also rectangular in form, and $2\frac{3}{8}$ inches long by $\frac{3}{4}$ by $\frac{5}{16}$ of an inch in section exclusive of rust, which was removed by Mr. Helm from the end of the pommel.

The sword weighs I lb. $9\frac{1}{2}$ ozs., including the concretions or nodules of rust at the ends of the pommel. One of these concretions was detached when the sword came to my hands, and when found it was covered all over with sandy earth and rust as the pommel is now.

The sword blade is too rusted for any of the workmanship to be seen, except that the fibre of the wrought-iron guard and grip or tang shows the direction where they have been forged, and by testing the broken end with a properly tempered graver, the sword proves to be steely iron. The grip, although bent, accommodates a hand 3\frac{3}{4} inches wide across the palm. The pommel appears to have had a weighted end rivetted to it, which in course of time has rusted away, and what has every appearance of being the head of a rivet can still be seen on the inside of the pommel where the thick incrustation of rust and earth has been removed.

An additional lump of corroded iron incrusted together with sandy earth and formed into a nodule was found among the débris thrown out from the grave. This may be the missing portion of the blade, as on investigation it shows in section the thickness of the iron plates and rust, about 1/6 to 1/8 of an inch, as well as a cavity about one inch deep and $\frac{3}{8}$ by $\frac{1}{12}$ of an inch in size at the This lump, including the detached portion referred to, weighs I lb. 8 oz., and one of the detached The iron surrounding the cavity is black portions 2 ozs. with age, and cannot be cut with a knife. Another portion of the large lump when broken off was found to be thickly incrusted with rust, and afforded evidences of a wooden sheath. This was further proved when tested by Miss Rayner, B.Sc., of the Botanical Department of University College, Reading, who found that the iron plate had been surrounded with wood, though the fibres were so impregnated with iron and so decayed that she was unable to determine the kind of wood. This additional lump measures 5\frac{3}{4} inches in length, 3\frac{1}{2} inches in width, and 2 inches in thickness. I carefully examined the débris which was left after the grave was filled up, and which was deposited at the foot of the slope behind the church tower, for traces of the outer part of the rust removed from the sword blade, but found none. Helm also turned it over subsequently, but was equally unsuccessful.

In the British Museum there are many examples of Scandinavian swords, differing in pattern. One labelled "From a tomb—Norway," resembles the Rampside sword, but is double-edged. Beside the specimen from Ormside there have been discovered in our district also the sword

from the tumulus at Hesket, found February 15th, 1822 (these Transactions, N.S., v., p. 306), with a double edge, and now in Carlisle Museum: the Workington sword. which like some in heathen interments, had been bent up and broken, apparently on purpose (found in the winter of 1002-3: see Sagabook of the Viking Club, iii., p. 302): and another found about 1805 or 1896 in a bed of sandy gravel some six feet from the surface at the foot of Whitbarrow Scar (these Transactions, N.S., i., p. 193). was nothing observed or recorded to show that this last was from an interment; the Hesket and Workington swords appear to have been buried in heathen interments: the Ormside and Rampside swords were both found in sites which at any rate eventually became Christian The Rampside sword, though broken. churchvards. cannot be positively said to have been broken at the time of the interment, since the soil had been stirred before the period of the discovery, and therefore it may not be a relic of the heathen age, but (like that at Ormside) possibly part of the grave goods of a Christianised Norse or Danish settler. The name of the place, Rampside—i.e., Hramnssetr—points (like Ormside) to a Scandinavian immigrant. "Raven," whose setr or dairy pasture was here.

An interesting question is raised by the steely nature of the blade, in which connection the following letter is of great value:—

> Naval Construction Works, Barrow-in-Furness, October 23RD, 1909.

An analysis of the metallic and corroded portions proves conclusively that the [Rampside] sword was made from what we know today as "steely" iron—or wrought iron containing carbon, the latter conferring hardening properties when the material is heated and suddenly quenched. The metallic portion as received was comparatively soft and malleable, and I was able to hammer a small piece of it, in the cold state, to a knife edge without its showing any signs of cracking. On heating a small piece to redness and cooling it in water, it became so hard that I was unable to file it. This, in view of the carbon it contains, is not surprising, but what one would

The presence of slag and the absence of manganese indicate that the material was not made by one of the modern processes. and that it was not fused-i.e., it was not delivered from the furnace in a liquid state, but in the form of semi-fused globules agglomerated together, that were subsequently welded by hammering in this form. It is impossible to say whether the carbon was contained in the iron as reduced from the ore in contact with an excess of wood or charcoal, or whether iron, free from carbon, was first produced and the carbon subsequently added by means adopted in what we now call the cementation process. Owing to the comparatively low temperatures obtainable, it is probable that the iron as reduced would contain a large excess of carbon in order to enable the product to be even semi-fused at such temperatures as were obtainable by primitive smelters, such excess of carbon being subsequently removed by exposing the iron to an oxidising influence for a considerable time whilst strongly heated—a process the reverse of the cementation process already mentioned, but the same in principle by which cast iron (high in carbon) is rendered "malleable" to-day by the removal of the excess of carbon.

The results of the analyses are as follows:-

	THE I	METALLIC	PORTION.		
					Per cent.
Carbon			•••	•••	1.08
Phosphorus	•••	•••	•••	•••	.25
Sulphur			•••	• • • •	. 04
Manganese	•••		•••		nil
Slag	•••				traces
Iron (by diff	erence)		•••	98.63
					100,00
THE CORRODED PORTION.					
					Per cent.
Ferrous oxide (Fe O)			•••	•••	14.13
Ferric oxide			•••	•••	67.67
Carbonate o	•••	•••	· 85		
Silica (Si O	3)				1:72
Alumina (Al	$_{2}O_{3})$	•••	•••	•••	1.12
Magnesia (M	1g O)		•••	•••	trace
Water of hydration (H ₂ O)				•••	13.78
Phosphoric	;)		·58		
Sulphuric	,,	(SO_3)		•••	.10
					99 ' 94

The water would, of course, be in combination with the Fe_2O_3 —probably represented by the formula $2 \text{ Fe}_2\text{O}_3 + 3 \text{ H}_2\text{O}$, whilst the lime, silica, alumina, and magnesia would be derived from the outside of the portion in contact with the soil in which it had been placed.

H. B. WEEKS, F.I.C., F.C.S.

There were good swords and bad ones at all times, but good ones were rare until about the time of the Crusades. If local smiths were not able to make the steel, foreign trade brought valuable swords from the East and from Spain into the North, and the famous weapons of the Sagas were no doubt of foreign steel. This blade was most probably imported, and the guard, grip, and pommel—possibly the favourite hilt of the owner—welded to it. That the fittings are of wrought iron is just what would be expected; the blade alone was imported, and the guard and pommel are of northern form and craftmanship.

Mr. Alfred Fell, in his Early Iron Industry in Furness, p. 161, states the ground for the belief that the making of iron may have been introduced into Furness by our Viking ancestors, but adds that it is not a little significant that no piece of iron ware having any claim to antiquity has been met with in the Furness district. The Rampside sword, however, is a very probable example.

This relic has been presented to the Municipal Museum of Barrow-in-Furness through the kindness of the vicar of Rampside, the Rev. Stephen A. Adams, and the churchwardens, Mr. Thomas Pearson and Mr. W. J. Postlethwaite; a gift confirmed by the parishioners. The illustration is from a photograph by Mr. Sidney B. Gaythorpe; the block has been kindly lent by the Viking Club.