

Archaeological Excavation of the possible monastic grange building at Water's Clough, Castleshaw, Saddleworth

2019



Friends of Castleshaw Roman Forts volunteers excavating the north west corner of the western range

Report written by Norman Redhead
for the Friends of Castleshaw Roman Forts

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Background

As part of the Castleshaw Roman Forts Hinterland Survey, the Friends of Castleshaw Roman Forts continued their archaeological evaluation of an area of land adjacent to the south bank of Waters Clough and to the north-west of the Castleshaw Centre, Waterworks Lane, Castleshaw, near Delph, Saddleworth, located at SD99470921. The land is owned by United Utilities who gave permission to carry out the archaeological investigations.



The ruin beside Waters Clough – parch marks during a dry spell indicate wall lines within the central range

Previous investigations from 2016 to 2018 demonstrated that a set of low ruined walls beside Waters Clough form part of a massive building. It comprises a long narrow central range 20 metres long by 10 metres wide, flanked by a west and east range, each being 31.8 metres in length and 8.4 metres wide. The total building length is an astonishing 73.6 metres (including the central range). Each corner has a projecting small chamber. The main plan form has been established and includes a series of internal rooms and a central corridor, with adjacent symmetrical wings.

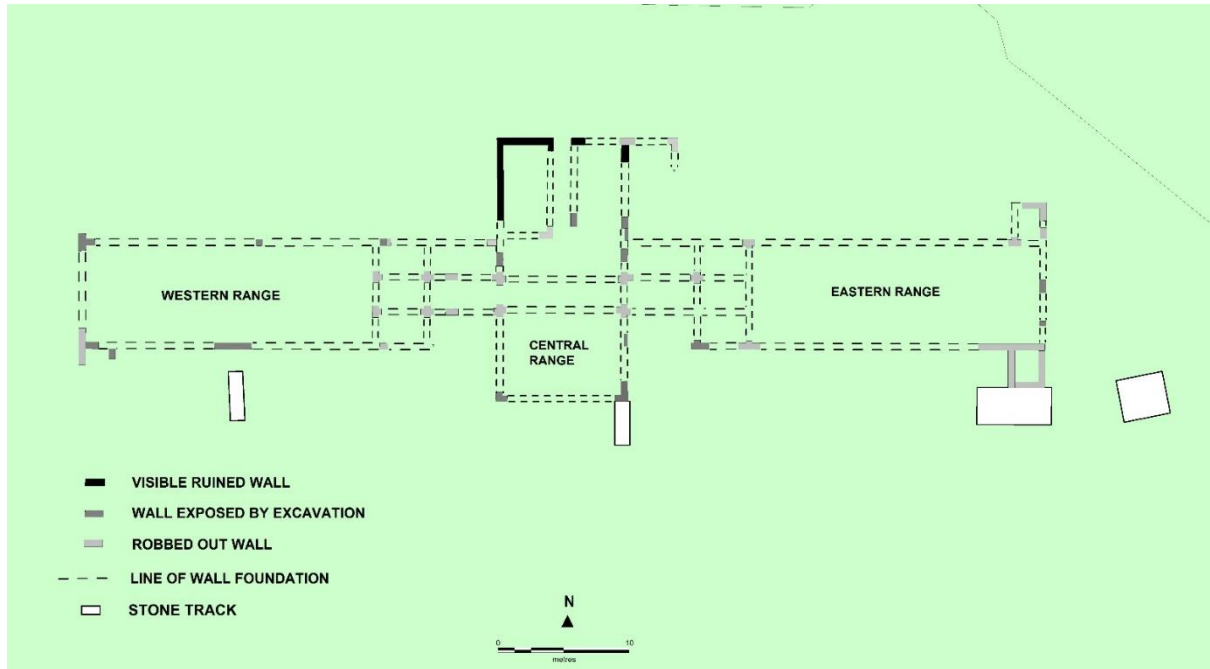
There have been no dateable finds within the building foundations but historical documentation and the presence of medieval pottery within the adjacent trackway point to a 13th century origin, probably shortly after the acquisition of the lands by the Cistercian abbey of Roche in 1199 (Redhead 2019). The remarkably large and well-built structure would have taken considerable resources to erect and it would have dominated the valley floor. Associated with the building site are a series of substantial earth bank field boundaries, creating a series of large enclosed fields for cattle grazing. The building is interpreted as a medieval grange, an outlying estate farm established to provide food and other materials for the use of the mother abbey and for wider distribution. Granges were essential for the self-sufficiency of the Cistercian order. Intensive farming was undertaken by labourers under the supervision of lay brothers who would probably have had accommodation at the grange building.

Excavations have shown that much of the building at Waters Clough has been recycled with most of the stonework removed for use elsewhere. The evidence for this are foundation trenches devoid of stone and with just silt and orange mortar filling them, lengths of surviving foundation stones, and the stone trackway laid down close up the southern side of the building to facilitate carting away of the stonework. The lack of artifacts, dressed stone, roof and floor tiles, suggests that the building was in use for a short time or perhaps not even finished before being abandoned and dismantled. The reasons for this are obscure but

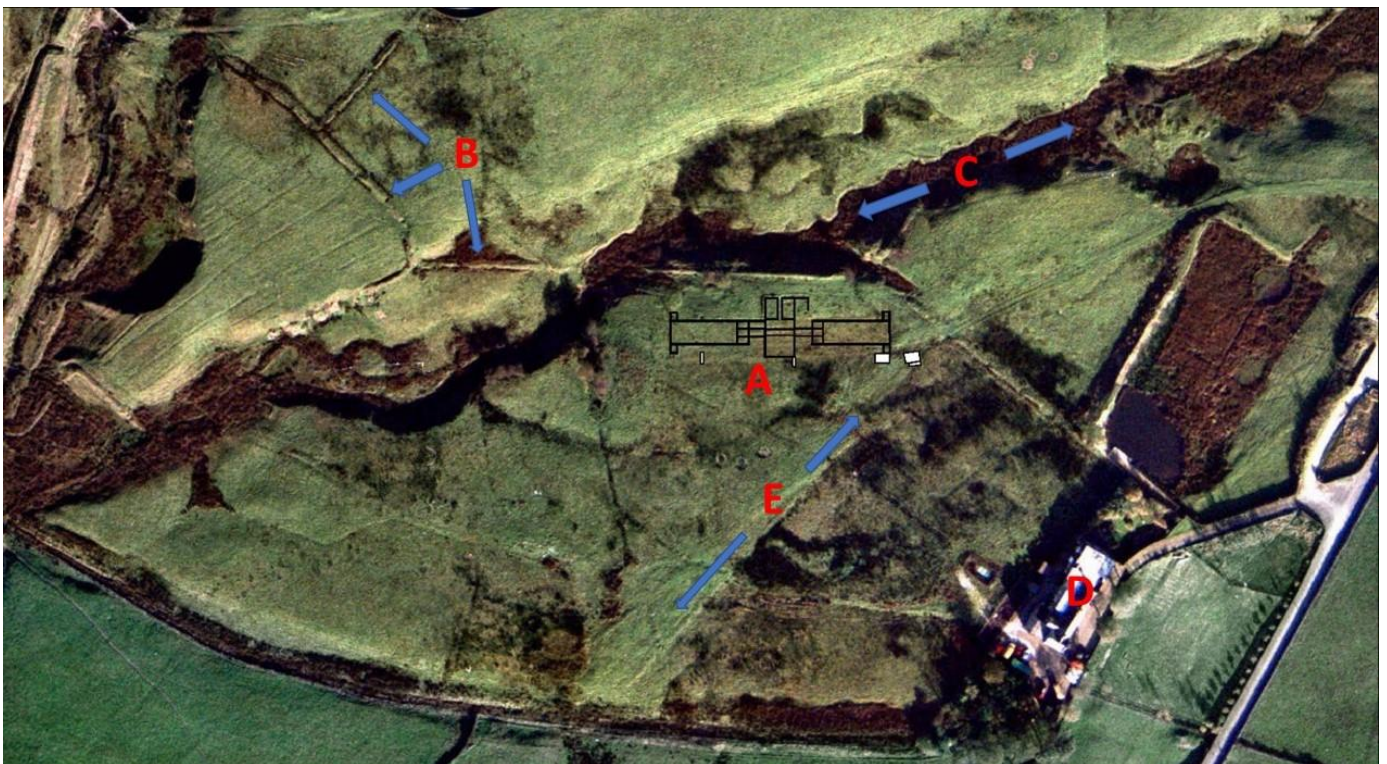
may be due to well documented changes in Cistercian policy towards lay brothers and direct management of outlying granges so that lands were rented out to tenant farmers.

The results of this work, based on the 2018 investigations, were set out in a report by Norman Redhead, who led the Friends' investigations (Redhead, 2019).

The objective for the 2019 research investigations was to fill in the gaps in our knowledge where the alignment and arrangement of walls is not particularly well defined and to obtain further dating evidence.



Plan of excavated remains and interpretation of wall lines following the 2018 investigations



Aerial photo showing the 2018 interpretive plan of the Water's Clough excavated building in its landscape context.
A = outline of grange walls in black, B = medieval field boundary banks, C = Waters Clough, D = Castleshaw Centre,
E = line of Roman road

The 2019 programme of evaluation comprised four days of test pitting and excavation of trenches to build on the work carried out in 2018. The evaluation took place on Sunday 12th May, Sunday 9th June, Saturday 6th July and Saturday 20th July.

Test pitting consisted of 1 metre square sample excavations, with several of these expanded to form trench explorations. 30 test pits and 2 trenches were excavated. A written description and photographic record was made of each test pit and its position recorded. The depth of natural and overlying stratigraphy was recorded. Finds were cleaned and described. This report sets out the results of the test pitting and a copy has been lodged with the Greater Manchester Historic Environment Record and put onto the Friends of Castleshaw Roman Forts website. An Oasis record form has also been created.

The investigations were undertaken by volunteers of the Friends of Castleshaw Roman Forts and were led and reported on by Norman Redhead. 21 Friends volunteers assisted over the 4 days. Their enthusiasm and dedication were amazing and their much valued, continued support is crucial in furthering our understanding of this enigmatic, probable medieval grange site.

This and previous Water's Clough archaeology reports can be found at the Friends of Castleshaw Roman Forts website: www.castleshawarchaeology.co.uk.

2019 Excavation Results

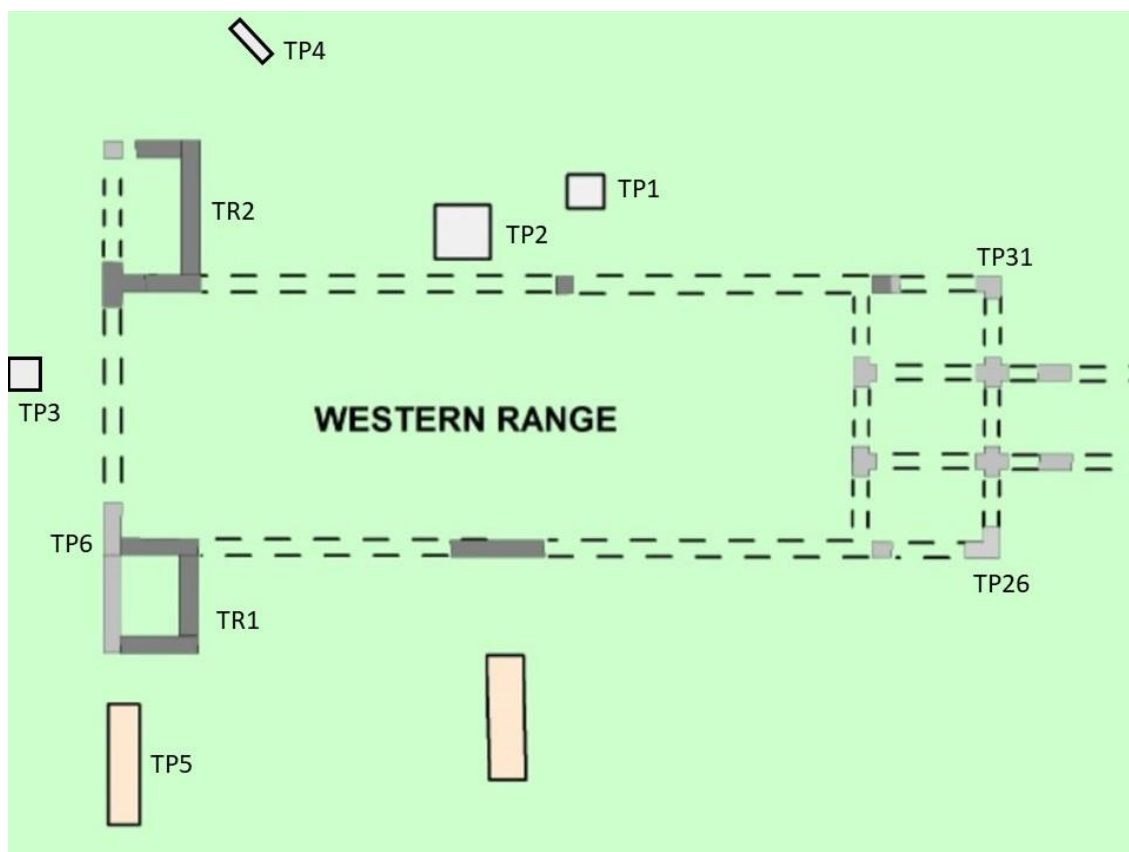
The investigations focused firstly on the western range, then the centre, then the east range, with some exploration also taking place just outside the building footprint to examine potential features and the extent of archaeological remains.

Western Range



Investigations of the western range on 12th May 2019, with some test pitting also taking place outside of the building's north side

Previous excavations had indicated a series of internal room divisions adjacent to the central range. The main south, north and west (gable) wall had been defined but a key question was if the external chamber found projecting from the south east corner of the eastern range in last year's dig was replicated for the western range.



Plan of western range showing excavation trenches and test pits for 2019 season (unlabelled trenches are previous year's investigations). Dark grey = wall foundations stones, light grey = 'robbed-out' foundation trenches, white = external test pits, buff = stone trackway

Trench 1, incorporating Test Pit 6

Initially, a one metre square test pit (6) was excavated on the corner of west and south walls of the western range to see if the western wall ran south beyond the junction.



Work commences on the first day of excavation on the south west corner of the grange building

It soon became apparent in TP6 that although the wall stones had been removed the cut of the foundation trench clearly continued beyond the corner of the building. The trench was almost devoid of stones and filled with a dark grey silt with frequent lumps of orange mortar.

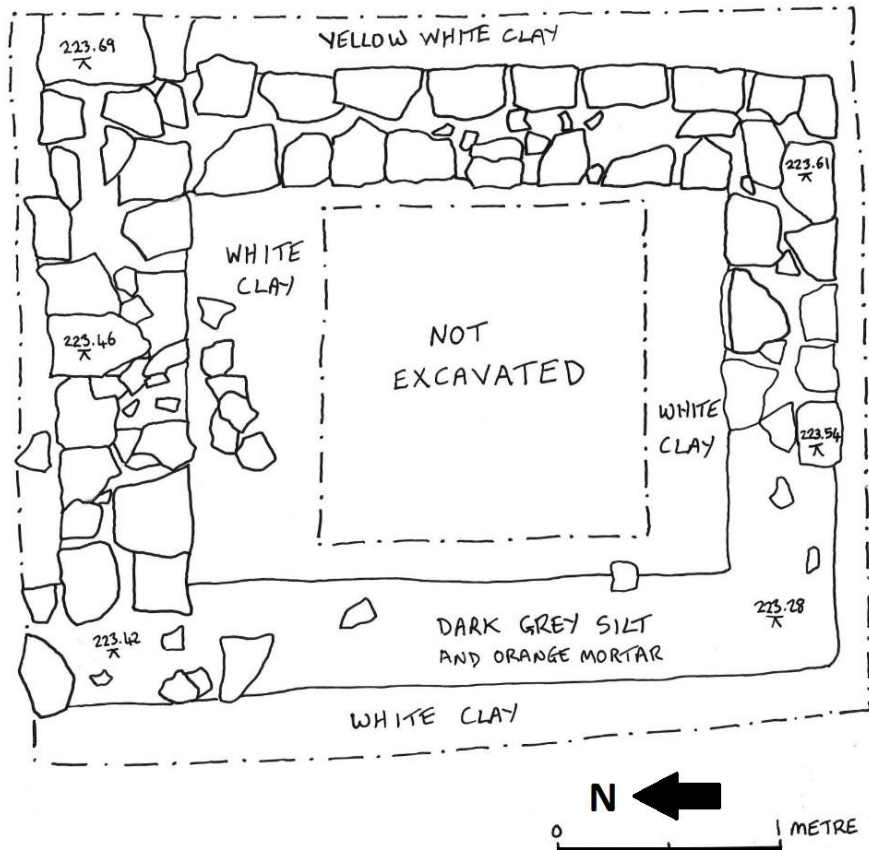


TP6 showing remnant of wall on left (partly under photo scale) and 'robbed out' wall trench in middle

It was then decided to open a much larger area, Trench 1, to expose all the wall foundations forming what was anticipated to be a replica of the chamber discovered at the opposite, south east corner of the grange building last year. The wall foundations were well-preserved on the east and south sides but the western side walling had been completely removed during demolition to leave a silt-filled construction trench showing its location. The north side of the chamber was attached to the intact main south wall foundation of the central range. As seen everywhere else, where walls survive, the stones are well laid and bounded by an orange mortar. The walls were c 50 cm wide and formed a room interior measuring 2.4 by 1.7 metres, which matches the south east projecting chamber. The room interior was not fully excavated but enough was exposed to show that no floor survived, with a creamy white natural clay being revealed.



Closing stages of excavating the walls forming the projecting chamber in the south west corner of the west range.
Looking north east with the south wall of the range being cleaned



Looking west at the wall foundations of the projecting chamber, with the main, south wall of the western range on the right of the photo



Looking south with the main wall in the foreground, from which the chamber projects with the robbed-out foundation trench on the right

Where the wall survived it could be seen that the eastern wall of the chamber was butted on to the western range's south wall, suggesting that the chamber had been added to the existing range. However, only the lower course of stones survives so it is possible that the wall was tied in at a higher level. The removal of all stones from the western wall means that evidence of jointing has been lost. The wall top for the projecting chamber varied from 223.46 to 223.61 metres above Ordnance Datum (m aOD) whilst the robbed out trench silt top level was 223.28 m aOD in the south west corner.

Trench 2

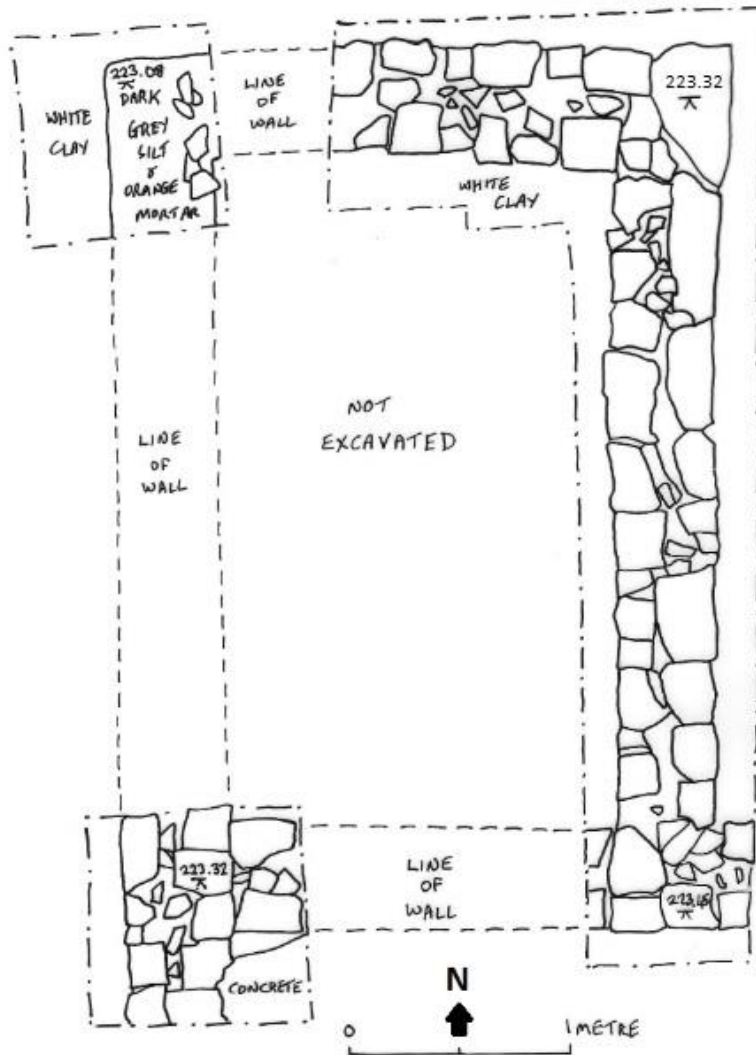
Attention next turned to the opposite corner of the western range to see if this also had a projecting chamber. When the north west corner had previously been exposed it had been noted that a wall appeared to extend northwards from the corner, beyond the gable wall of the range. The full extent of this wall had not been exposed but it had been interpreted as a possible buttress to shore up the corner of the building. In 2019 we were able to reveal a series of walls extending out from the north west corner to demonstrate that there was indeed another projecting chamber and not a buttress. Built in the same technique as all the other walls of the grange building, the chamber's dimensions were markedly different to the two chambers against the southern side of the building. For whatever reason, the chamber was 0.5 metres longer at 2.9 metres but with the same width of 1.7 metres. This gives a long, narrow room.



FoCRF volunteers cleaning the north west project chamber walls

As with the south west chamber, the western wall had mostly been robbed of its stones except for a small section adjoining the corner of the main building. Interestingly, there was a butt joint which showed that the western gable wall of the main building ran on seamlessly to form the west wall of the projecting chamber, with the main wall of the western range being butted up against this wall. A spread of concrete was revealed against the inside corner of the main building. The full extent of the concrete was not revealed and it is uncertain when this originated or what its function was. It could be associated with 20th century pipe trenches that have been cut diagonally through the grange site and it is worth noting that other 20th century material is evident to the west of the building so this area could also have been used to dump waste.

The east and north wall foundations of the projecting chamber were well-preserved, except for where the north wall joined with the robbed out west wall foundation trench. The corner was not fully excavated but part of the west wall line was exposed to show that most of the stones had been removed to leave some smaller stones and lumps of orange mortar in the bottom of the foundation trench. The walls meeting at the north east corner of the projecting chamber were keyed in, and the eastern wall also appeared to key in with the main, north, wall of western range. There appeared to be a break in the main north wall of the western range and, along with the butt joint against the corner of the building; this suggests that the projecting chamber could have originally been open to the main building. However, such an interpretation should be treated with caution as only the lowest level of the foundation wall survives and the wall may have been keyed in above this level. There were just a few sherds of 19th/20th century glazed pottery from this area. The wall tops/surfaces of the opposite, south west and north east, corners had identical levels of 223.32 m aOD.



Plan of the north west corner of the western range



North west corner of the western range looking south, with the western gable wall (right), the butt joint visible with the northern wall of the range (left), and the concrete showing top left against the inside corner of the building



Looking east across the northern end of the projecting chamber, with the robbed out western wall foundation visible in the test pit in the foreground as a linear spread of lumps of orange mortar (in front of the photo scale)



The north west projecting chamber looking south



The projecting chamber looking north, showing the butt joints between the western gable wall on the left and the western range north wall/projecting chamber east wall on the right

Test Pit 1

The geophysical survey had picked up a linear anomaly running north from the north wall of the western range. TP1 was located 2.5 metres to the north of the wall to examine this anomaly to see if it might part of the grange structure, but it quickly became apparent that it was a modern pipe trench.



TP 1 looking north with the cut of the pipe trench clearly visible (left) and a section dug through the trench to reveal the plastic pipe (right)

Test Pit 2

A circular depression lay 2 metres to the north of roughly the mid-point of the western range. This test pit initially half-sectioned the feature before being expanded to about 1.5 x 1.5 metres, with three-quarters of the pit fill being excavated. The dark organic soil fill was removed to reveal a c 25 cm deep stone-rich layer in the side of the feature, sealed by a mixed deposit of yellow clay and dark grey silty clay loam. It could be seen that the pit was a relatively recent feature, to judge by the humic soil fill and it being cut from the turf

level/topsoil level. The top of the mixed clay deposit was 223.55 m aOD with the pit base being at 223.19 m aOD.



TP2 in early stages of excavation, showing the pit cut through a stone deposit (looking west)

When more fully excavated it was found that there was nothing buried in the pit. The reason for its excavation remains obscure. The stone deposit comprised small to medium gritstones in a matrix of mid-grey silty clay with frequent small patches of orange or yellow clay. The stones were generally flat and densely packed horizontally and in places where small stones were packed together resembled road metalling. The deposit appeared to run through the centre of the trench west to east but, as the sealing mixed layer was only partly excavated, it is not clear if the stones run across the full width of the trench. The stone deposit could represent an early track perhaps contemporary with the grange building, or natural. Further investigation is recommended to better define the extent, character and function of this stone layer.



TP2 showing most of the pit excavated, looking north, with the stone deposit clearly visible



TP2 looking east at the section showing the humic soil fill

Test Pit 3

Geophysics had shown several anomalies beyond the western gable wall of the grange. TP3 was located 2 metres west of the wall to examine the archaeological potential of these anomalies. Natural yellow clay was found at a shallow depth so there was clearly no archaeological activity at this place. The turf level was 223.50 m aOD and the top of the clay at 223.31 m aOD. It was noted that in undergrowth near the test pit were pieces of concrete and scrap metal that probably account for the geophysical survey anomalies, so this area appears to have been used for dumping material in the 20th century.



TP3 looking south

Test Pit 4

This was a narrow slot 1.5 metres long by 0.5 metres wide positioned across a small mound around 5 metres north of the western range near its north west corner. At its deepest point the mound was found to be 0.55 metres deep and lying above natural white clay with some charcoal flecks. Material making up the mound comprised mid- grey silty clay loam mixed with small patches of light-yellow clay. Finds included

19th century black glazed earthenware. It can be concluded that this is a post medieval spoil mound but the origin of the spoil is uncertain. The top of spoil mound was 223.42 m aOD and the clay natural was at 222.87 m aOD.



TP4 looking south west

Test Pit 5

A stone track running tight against the southern wall of the grange building had been partly revealed in previous years firstly by geophysical survey then by several trenches. One of these trenches, running from the south east corner of the central range had found cart ruts containing two sherds of medieval Pennine Gritty Ware pottery. Further east, beyond the grange building, the track cut through the Roman road. To the west an excavation trench opposite the mid-point of the western range (Trench 3 in 2018) had shown continuation of the track on this side of the grange. The track was interpreted as providing access to the building to facilitate dismantling and carting away of the stonework. To help prove this theory, TP5 was positioned opposite the western end of the grange building to determine if the track terminated at this point which would strengthen the idea of its use purely to give access to the building to dismantle it.

Initially a one metre square test pit, which successfully located track material, TP5 was opened up to show the full width of the track. This was found to be 2.5 metres wide which was narrower than the 3.8 metres width exposed in Trench 3 in the previous year (located c 10 metres to the east). The track also differed in its composition, comprising predominantly small pieces of weathered sandstone set in a grey silty clay loam, with only occasional grit stones. This contrasts with much more stonework seen in Trench 3 in 2018. The track surface was at 223.40 m aOD. On the south side of the track were two longer grit stones which appeared to represent kerbing. Significantly, it was seen that the track material gave way to the natural white clay at a point almost perfectly in alignment with the western gable wall of the grange building. There was a gap of c 2 metres between the two. It is clear that the stone track was closely connected to the building and this supports the theory that it was laid down to enable carts to get close access to the walls being dismantled. Further, rare, dating evidence came from the top of the track material in the form of a single body sherd of medieval dark green glazed pottery.



TP5 looking west across the terminus of the stone track, with remnant kerb stones on the left and the end of trackway visible against natural white clay.



Looking north across the trackway terminus in TP5 to the projecting chamber foundations at the south west corner of the grange building (left) and the sherd of medieval dark green glazed pottery (right)



Detailed photographs of both sides of the dark green/olive glazed medieval pottery sherd

Test Pit 26

This was positioned to confirm that the room arrangement within the western range mirrored that of the east range. TP26 was located at the south-eastern corner of a set of three rooms in order to expose the corner and confirm that a wall did not carry on eastwards to the central range. In 2018 TP19 had found that the southern wall of the eastern range terminated to leave a gap of c 4 metres between it and the central range wall. It is not clear why this gap exists, but it could relate to an entrance into the complex. Did the western range have a similar arrangement? Excavation of TP26 found former wall foundation slots and was opened up to fully reveal the junction of two former walls lines. These were filled with the usual grey silty clay loam and orange mortar, with occasional small gritstones and no in situ stone blocks. The foundation trenches were cut into natural white clay. Unfortunately, a modern pipe trench, similar to the one exposed in TP1, ran right through the wall's junction. However, enough was exposed to demonstrate that there was the south east corner of a room here and that there was no evidence for a wall continuing eastwards to the central range. This is exactly the same arrangement as for the eastern range. The surface level of the south wall was at 224.40 m aOD to the east at the corner and 224. 31 m aOD at the west end of the test pit.



TP26 showing the junction of the two wall lines, with natural white clay on either side, and with the diagonal pipe trench backfilled with white clay cutting through the corner



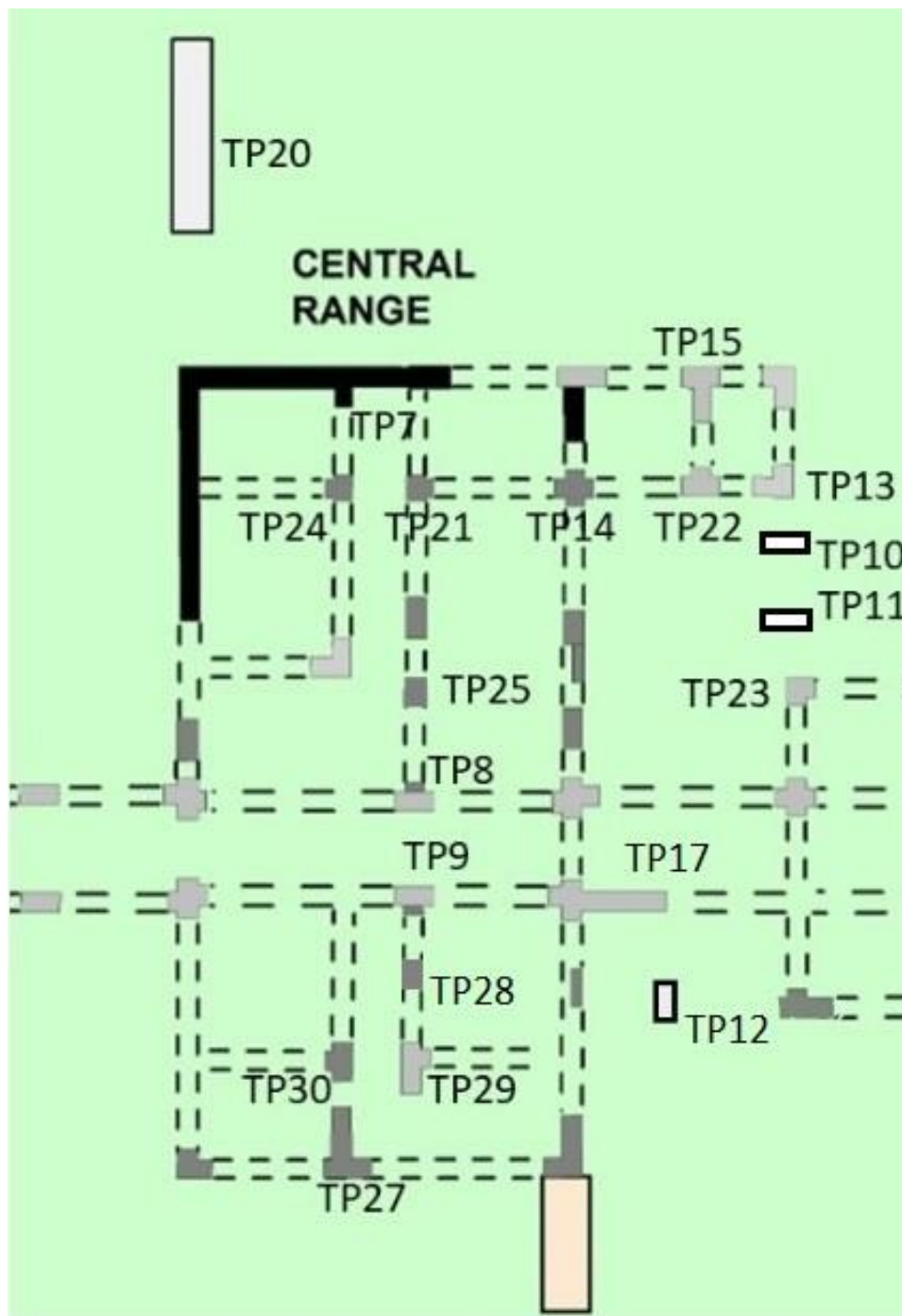
TP26: the pipes are showing in this section excavated through the backfilled trench

Test Pit 31

This was excavated across the north east corner of the northern side of the west range to confirm the wall junctions, as with TP26. Two walls joined to form the outside corner of a room, but there was no evidence for a wall continuing east towards the central range. This concords with the arrangement of walls seen in TP26 to the south and in eastern range; however, it also contradicts previous excavation evidence where a test pit (G) dug in 2017 showed the vestigial remains of a wall trench running west from the central range. The test pit was not photographed. Further investigation is required to confirm arrangements here.

Central Range

Previous excavations had identified that the central range was subdivided into various sized rooms, but the plan of these was sketchy and a much more detailed plan was desirable. Therefore, much of the 2019 investigations were focused on this area with 17 test pits being excavated, whilst one test pit (which became a narrow, short trench) was dug outside to the north of the range.



Plan of central range showing location of excavated test pits in 2019 (unlabelled trenches are previous year's investigations)



The Friends excavating test pits in the central range on 9th June 2019

Test Pit 7

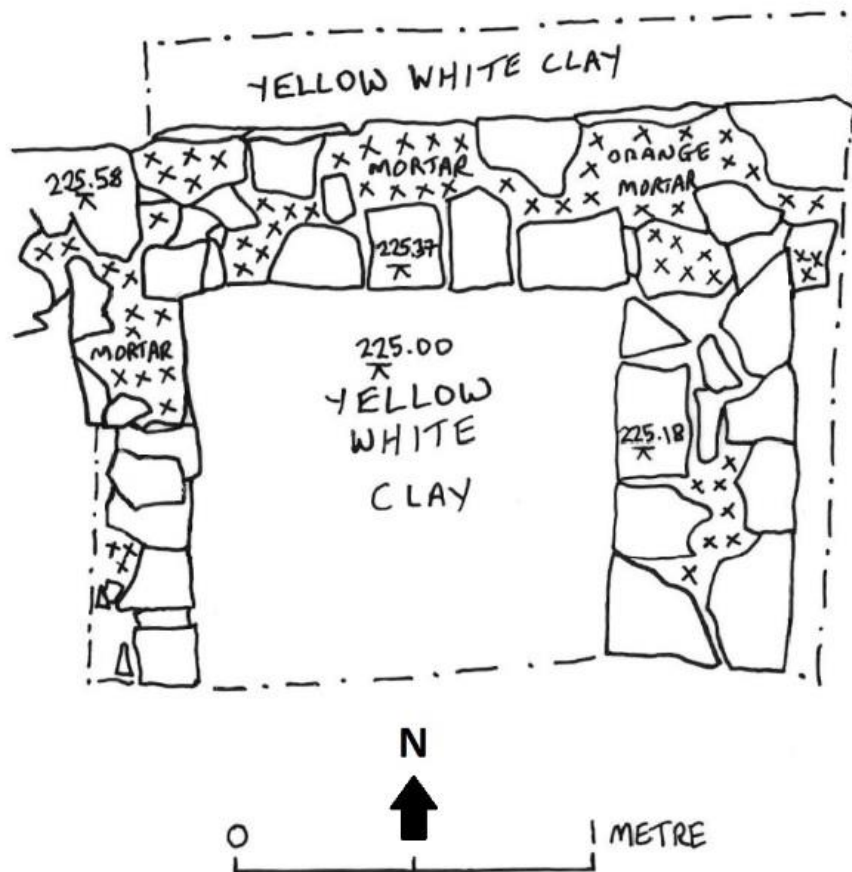
From previous work we know that there is middle corridor in the central range, 1.2 metres wide. It runs up to what appears to be an entrance, however there is a low stone wall blocking this 'entrance' so we wanted to discover what was happening here. TP7 was excavated as a 2 metre square area to fully reveal the three walls framing the 'entrance' and to investigate the internal corridor as it approached the north wall of the central range.



TP7 looking north, showing the rubble deposit pre excavation at the end of the corridor

The walls were cleaned of turf and the topsoil was removed within the corridor to reveal a rubble deposit comprising mostly lumps of orange mortar within a mid-grey silty clay loam and with several small gritstones. There was one medium-sized gritstone near the north wall which had fallen off during

dismantling or post demolition weathering. The rubble deposit was only 10-15 cm deep and came off on to natural light-yellow white clay. There was no evidence for a floor. The cut for the foundation trench was very tight to the wall, which is not surprising given the stiff nature of the natural clay which is ideal foundation material. Two small sondages were dug through the clay against the north west and north east corners of the corridor to examine the foundation stones. They were excavated to 17cm depth and proved that the white clay was natural and revealed the foundation base layer of stones. In the north west corner five courses of surviving masonry were visible. The white clay surface was at 225.00 m aOD with the top of the wall at 225.58 m aOD.



Plan of TP7

The north wall was seen to be continuous across the corridor terminus indicating that there was not a doorway here. Interestingly, there was a butt joint where the western wall of the corridor connected to the north wall of the central range, whereas the east wall was keyed in and integral. There was a lot of orange mortar covering the north wall and the area where it joined with the corridor west wall. Of particular interest were two well-dressed rectangular stone blocks occurring in the base of the corridor west wall and the north wall. These had vertical chisel lines which were very regular. These look to be post-medieval and re-used which suggests that this part of the central range was re-built for later use, perhaps as an animal shelter, store or even human habitation. This would also explain why the only visible walls, surviving above ground, are in this part of the complex. Disappointingly, no dateable artifacts were recovered from the rubble deposit.



TP7 looking north after excavation of the rubble deposit and corner sondages – the two rectangular dressed stones are indicated by blue arrows



TP7 looking south



Detailed view of north west corner of corridor in TP7 showing butt joint and five courses of stonework

Test Pits 8 and 9

The 2018 investigations establish that there was an internal corridor running west to east through the central range. Excavations at the north end of the central range had demonstrated that there was also a south to north corridor, at least in this part of the building. TP8 and TP9 were positioned to examine the continuation of this corridor southwards and its relationship with the west to east corridor. Remains of the lower course of the stone foundation for the corridor were found on either side where it met up with the west to east corridor, the latter having no stones surviving but the foundation cut being visible. The north to south corridor was subservient to the west to east one as white clay natural was evident in TP8 where the wall would be if it continued through. The two corridors divide the central range in to four sections.

In terms of levels, the stone wall tops in TP8 and TP9 were 225.00 and 225.16 m aOD respectively, whilst the west to east corridor trench fill tops were 224.84 and 224.88 m aOD respectively.



TP8 looking east showing: surviving stonework of the south to north corridor (left), the course of the robbed out west to east corridor to the right running from bottom to top of the photo, and white clay natural on the far right side demonstrating that the wall foundation does not carry across the other corridor



TP9 looking north showing surviving stones of the south to north corridor looking



View northwards across TP8 and TP9 showing, with TP7 being excavated in the background

Test Pits 10 and 11

These two test pits were half the normal size, 1 x 0.5 metres, to look for a potential wall line running south from the project chamber attached to the north east side of central range. TP10 was 3.5 metres south of the north wall of the central range and TP11 6.5 metres. Both test pits revealed natural yellow-white clay at a shallow depth of 20 cm beneath the turf, confirming that there were no structural remains here.



Looking south across TP10 in the foreground and TP11 beyond, being dug by Nora

Test Pit 12

This was located across the line of the southern wall of the east range, between the wall terminus revealed in 2018 (TP19) and the east wall of the central range. The test pit was 1 x 0.5 metres and revealed natural white clay at a shallow depth of 15 cm confirming that there was no wall foundation here. This arrangement also pertains on the opposite side of the central range as shown by TP26. The wall top was at 225.21 m aOD.



Test Pit 13

Several test pits were used to examine and better understand the projecting chamber from the north-east part of the central range. The existence of this offshoot structure had first been proved in 2017 through a test pit over the north-east corner (L), but the extent and plan form is not known. TP13 was located to explore a linear depression visible on the ground which ran south from the previously exposed north east corner.



Looking across TP13 westwards to the central range (being excavated in the background)

Excavation of TP13 revealed the corresponding corner of this chamber, with the junction of two walls clearly visible against the white natural clay. No walling survived in situ but there were several small to medium gritstones amidst the dominant fill of lumps of dark orange mortar. As indicated by TP10 and TP11, there was no foundation trench running towards the north wall of the eastern range. This leaves us with a small rectangular structure measuring the same width as the corner chambers at each end of the grange building, ie. 1.70 metres internally and with a length of 4.60 metres internally. The wall construction is exactly the same as seen elsewhere in the grange. The top of the foundation fill was at 225.44 m aOD.



TP13 looking east showing the south east corner of the rectangular chamber jutting out from the north east side of the central range

Test Pit 14

This test pit was located over the eastern wall of the central range to look for the junction with the southern wall of the rectangular chamber revealed in TP13. The stonework was well-preserved here and found immediately under the turf. The southern wall of the rectangular chamber was revealed and another, previously unknown, wall line came to light on the opposite side of the central range east wall. Both walls butted against the main wall of the central range which ran north to south. The newly discovered wall represents an internal room division and creates a chamber of 1.7 metres wide between this wall and the north gable wall of the central range. The top of the main western range east wall foundation was at 225.39 m aOD.



Test Pit 15

A linear depression visible in the turf within the footprint of the narrow chamber projecting from the north east side of the central range suggested an internal division. TP15 was located at the junction of the linear depression and the north wall line of this chamber. A dense concentration of lumps of dark orange mortar and small to medium gritstones was revealed at a shallow depth and showed a former wall foundation trench subdividing the rectangular chamber. This gives a larger room nearest the central chamber measuring 1.7 x 2.5 metres internally and a very small outer room of 1.7 x 1.6 metres internally. A deposit of stones and mortar occurred in the south west side of the test pit. This seems to relate to a shallow spoil mound.

A section was excavated which revealed the neat cut of the foundation trench and nature of its fill. The clumps of orange mortar, which were chipped off the stone blocks when they were reclaimed, were neatly laid and packed in. Medium gritstones were laid over them in a rather haphazard way but generally laid flat. The top of the mortar infill was at 225.31 m aOD. Could this represent a re-use and re-build for this structure using building debris left over from the original dismantling which was re-purposed to create a new, less robust structure? If this is the case, then it supports the evidence of re-use of the northern part of the central range as discussed under TP7.



TP15 looking north, showing the packed lumps of orange mortar infilling the internal wall trench



Looking west across to the central range ruins with TP15 in the foreground - the photographic scale lies in the middle of the small rectangular chamber jutting out from the central range

Test Pit 17

This was a test pit that had previously been excavated as a 1 metre square in 2018 (as TP17). It was located along the eastern wall of the central range, picking up the staggered junction with the internal west to east corridor wall and the external room or corridor wall going into the east range. The test pit was re-opened and extended eastwards to expose a 2 metre length of the room/corridor wall within the eastern range. Removal of stonework during dismantling of the building had been very thorough here with only the orange mortar left behind together with occasional small gritstones.



TP17 looking east, with the staggered wall junction in the foreground

The trench was excavated a little deeper than normal to reveal the foundations' very clean cut through the natural white clay. The top of the mortar infill was at 225.08 m aOD towards the eastern end of the trench, dropping to 224.98 m aOD where it met the central range east wall. A section was cut through the foundation trench at the east end of the excavated area. This showed that the foundation trench was very shallow being only 12 cm deep. The top 7 cm comprised a mixed layer of white clay, orange mortar and dark grey silty clay loam. This layer appeared to be a weathered deposit representing a time when the foundation trenches were left exposed after removal of stones, so that rain and frost had diffused the edges. Lower down, the cut of the foundation trench is much clearer and orange mortar is the prime fill – but only for the bottom 5 cm depth.



Section through the foundation trench at the east end of TP17

Test Pit 20

This was located against and partly over the earthwork bank just north of the central range and overlooking Waters Clough. It has been postulated that the bank is contemporary with the grange construction and formed part of a landscape management system for cattle ranching. The investigation hoped to learn more about the form of the bank and perhaps obtain some dating material. The initial 1 metre square test pit was lengthened to become a 5 x 1 metre trench running from the bank southwards to within 3 metres of the north west corner of the central range. A 0.5 metre wide section was cut through the southern side of the bank which was found to be made of sods of clay and turf, revetted with stones.



Mike excavating TP20 (left) and the stone revetment (right)

When the test pit was extended a deep, cut feature filled with grey sandy silt was found on the inside of the bank. This correlates with the linear depression visible beside the bank. The turf layer above the ditch was at 224.81 m aOD and the base of the ditch 223.93 m aOD. The full profile of the ditch was not revealed due to time constraints. Under the turf and topsoil was a deposit of mixed material comprising mid-yellow clay loam and mid-grey silty clay loam varying from 10 to 15 cm in depth. This sealed the ditch fill but also overlay in the middle of the trench, c 2 metres south from the bank, a layer of weathered smooth stones, crushed orange sandstone and mid- to light grey sandy silt. The surface of this layer, which was not excavated, was very firm and smooth suggesting it is either the top of weathered natural or that it is a road or track. The surface was at 224.40 m aOD. No wheel ruts were visible and the feature was only partially exposed but this is an area that would repay further investigation. There were no finds in the ditch or bank make-up.



View west across TP20 showing its relationship to the earth bank on the right



Looking at the extended trench for TP20 with the ditch on the right and the smooth, compact, weathered layer in the middle of the trench which was not fully exposed/excavated

Test Pit 21

This was excavated to examine the anticipated junction of the newly discovered internal wall in TP14 with the corridor wall in the north eastern wall of the central range. The top of the surviving wall foundation was just under the turf level at 225.25 m aOD.



TP21 looking east (left) showing the two stones at the top belonging to the internal room wall and the lower stones forming part of the central corridor wall and, right, its relationship with TP14, seen in the background



Looking west across TP14 in the foreground to TP21 in the middle left of the photo

Test Pit 22

This was excavated to examine the junction of the internal dividing wall encountered in TP15 with the southern wall of the small rectangular chamber projecting from the north east corner of the central range. The wall at the junction was badly robbed out leaving predominantly orange mortar in the foundation trench, with some small gritstones. However, the southern wall of the structure to the east of the test pit was much better preserved. This may be due to the low mound of rubble spoil being next to it to the north. There was a deposit of mortar and stones opposite the junction, suggesting another wall running further south, but on closer investigation this turned out to be just rubble from the dismantling process as it overlay the natural white clay rather than being within a foundation trench. The top of the extant wall was at 225.46 m aOD and the top of the orange mortar within the robbed-out part of the foundation trench at 225.30 m aOD.



TP22 looking east showing spoil rubble deposit on far left, the well-preserved south wall in the foreground and the robbed-out junction area above

Test Pit 23

This test pit looked for the north west corner of the bank of three rooms partly revealed by investigations in 2018. The corner was clearly revealed in TP23, with the foundation trench cut through white clay natural. There were no stone blocks in situ but a large piece of orange mortar preserved the impression of the stone block it had adhered to, further evidence that the mortar had been knocked off when reclaiming the stonework. The foundation trenches were full of orange mortar lumps mixed with smaller gritstones that had not been worthy of recycling, with the top level of this material being 225.33 m aOD. There was no evidence for a wall line going north towards the projecting chamber at the north east corner of the central range, confirming the evidence seen in TPs 10,11 and 13.



TP23 looking east (left) and the piece of stone-impressed mortar (right)

Test Pit 24

This was located to see if the newly discovered room found through TPs 14 and 21 on the east side of the corridor was replicated on the west side. Again, the wall foundation surface was immediately below the turf. It was soon apparent that there was indeed a similar sized room on this side of the corridor. A wall foundation was keyed in with the west wall of the corridor and could be seen heading west towards the highest wall of the ruin. At the point of connection with the ruined wall, which forms the west side of the central range, stonework projected slightly where this internal wall had been keyed in. The dividing wall top surface was at 225.06 m aOD.



TP24 looking east (left) showing the the room dividing wall keyed in with the corridor wall (top half of test pit)



Looking west across TP24 to the upstanding ruined wall of the west side of the central range, with the detail of the slightly projecting wall joint to the left of the photo scale (right)

Test Pit 25

This test pit confirmed the line of the eastern wall of the south to north internal corridor within the central range. It was located 8 metres south of the north wall of central range and had been intended to check for an internal wall junction but was slightly too far south for this. Given the shallow nature of the wall foundations that were revealed it will be simple matter of revisiting this site during the next season to confirm the presence of an internal room division, as has previously been shown on the opposite side of the corridor. The wall top was at 225.06 m aOD.



TP25 looking north (left) and seen in context (right) with the east side of the corridor visible against the north wall beside the far figure

Test Pit 27

Having established in TP9 that the south to north corridor ran in to the southern part of the central range, it was decided to investigate its relationship with the southern wall of the range to see if it was similar to that in TP7 or if there was evidence for an entrance way. Well-preserved stone foundations existed immediately below the turf in TP27 which focused on the west side of the corridor as it joined with the southern wall. The test pit was extended to reveal 1.5 metre lengths of both wall foundations. The outer stone of the corridor wall was keyed in with the southern wall, but the inner corner had been disturbed by more recent activity with a wooden timber occupying the space. There was no indication of a door setting so, as with TP7, it suggests that the corridor had no entrance at this point. The top of the wall was at 225.08 m OD. The opposite side of the corridor where it meets the southern wall had been disturbed in the 20th century. The stones and foundation trench had been removed and a spread of concrete was visible



TP27 looking north, with the southern wall of the west range in the foreground and the corridor west wall above to the left, whilst the photo below is viewed from the opposite direction and shows the disturbance to the inner corner and to the wall on the left side where there is a spread of concrete



Test Pit 28

This was excavated 2 metres south of TP9 to confirm the character and continuation of the east wall of the south to north corridor. The foundations stonework survived well and was consistent with that seen in TP9. This wall appears to be less well constructed and slightly narrower than other walls, being 40 cm wide rather than the usual 50 cm. A possible foundation trench offshoot was identified on the east side but was found on excavation to be very shallow and not convincing as a wall foundation but might relate to a slot for a wooden room division.



TP28 looking north with possible linear feature to right of the wall

Test Pit 29

This was located over the line of the eastern side of the south to north corridor in the southern part of the central range. Excavation confirmed the line of the corridor wall with the base level of foundation stones partly surviving under the orange mortar and with some small gritstones also seen in the upper fill of the foundation trench. These were of the usual standard of build and better quality than further north in TP28. Of particular interest was the discovery of the internal room division wall foundation running east from the corridor wall which means that the south east part of the central range was divided into the two unequal sized rooms with dimensions as follows: south rooms = 2.2 x 3.4 metres, north rooms = 3.4 x 3.4 metres. The wall foundation trenches were cut into natural white clay. Interestingly, there appeared to be a narrow linear cut running east from the corridor wall, about 40 cm south of the room division. This was not excavated but could represent a slot for a wooden partition. Another grey silt linear feature occurred on the opposite side of the wall, within the corridor. These require further investigation to fully expose their extent and sample excavate. The wall surface was at 225.02 m aOD.



TP29 looking east, with corridor wall running left to right and with the room division wall top left and possible internal slots for wooden partitions either side of the corridor wall

Test Pit 30

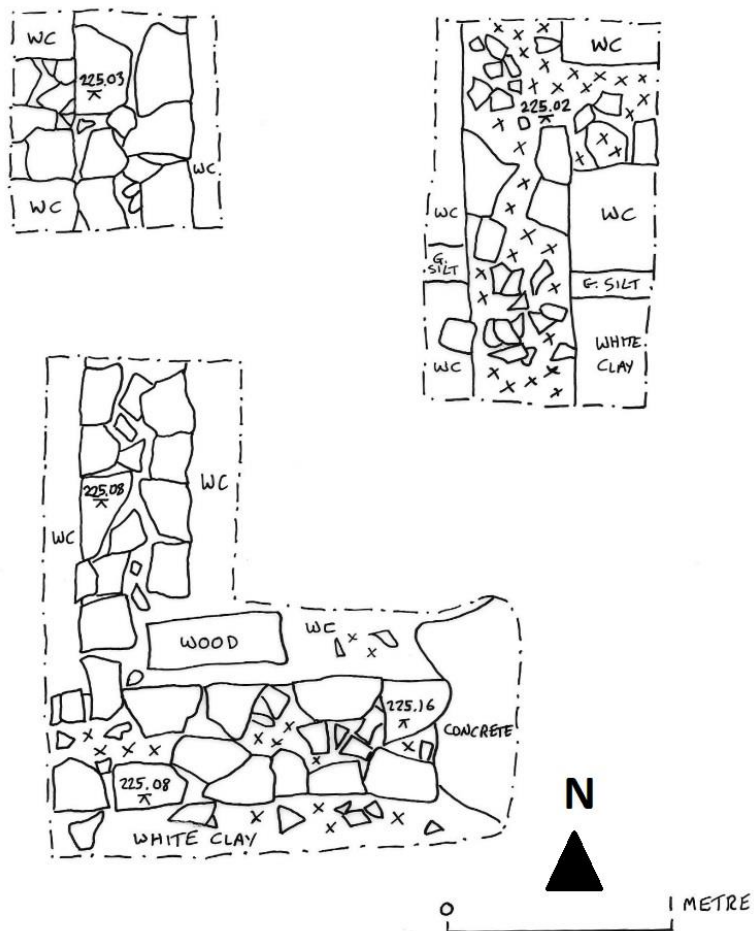
This was positioned across the wall line of the west side of the corridor opposite TP29. It was only 1 metre square but was wide enough to show there was an internal room division on this side of the corridor as well, reflecting the arrangement on the east side. The top of the wall was at 225.03 m aOD.



TP30 looking east showing the internal room wall in the foreground, with the western corridor wall running left to right behind



Looking south along the corridor towards its junction with the central range south wall, with TP29 left, TP30 right and TP27 at the top of the photo



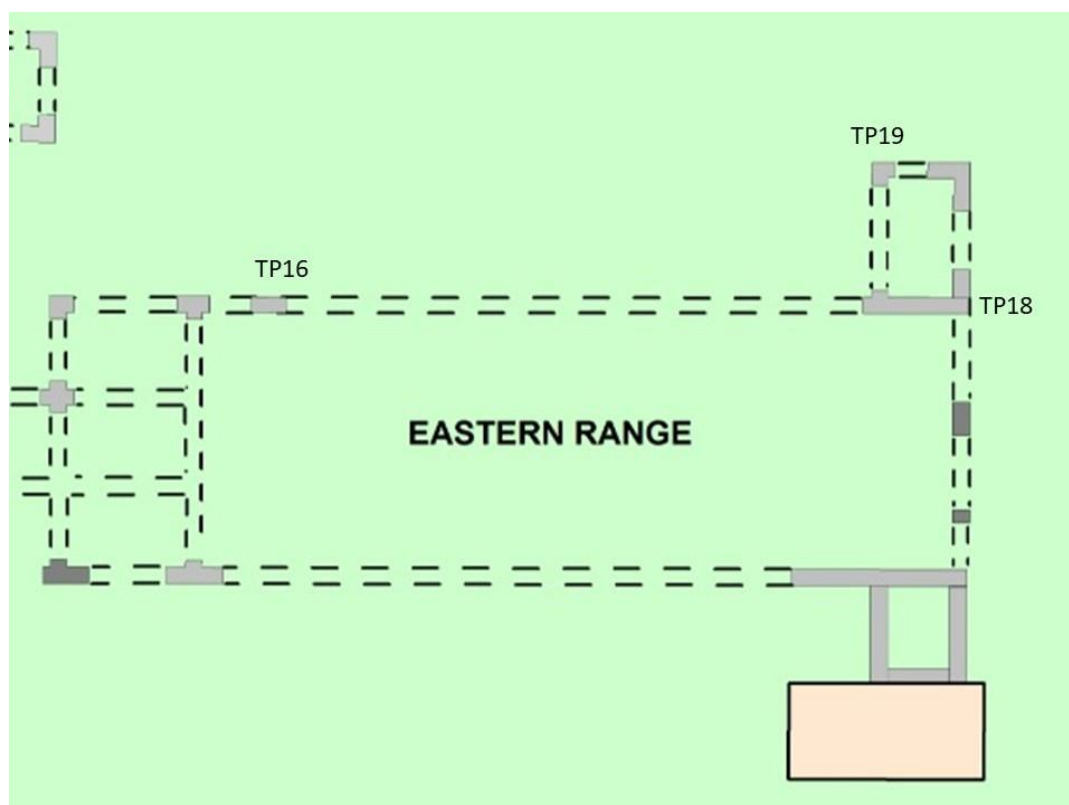
Plan of TP27 (bottom), TP29 (top right) and TP30 (top left) in central range

Eastern Range

Much of the 2018 research was focused on the eastern range, with an open area excavation of the projecting chamber at the south east corner. The 2019 investigations were fairly limited for this area but sought to confirm the existence and form of a north east corner projecting chamber and the line of the north wall of the eastern range.



Investigating the north east corner of the eastern range



Plan of east range showing location of excavated test pits in 2019 (unlabelled trenches are previous year's investigations)

Test Pit 16

This exposed a 1 metre length of the northern wall of the eastern range towards its west end. The wall foundation was shown to be cut into natural white clay and its fill comprised dark orange mortar with some lumps of the mortar on the surface interspersed with small gritstones. No stone blocks survived in situ. The top of the trench fill was at 225.55 m aOD.



TP16 looking east

Test Pit 18

This test pit initially re-exposed the south west corner of the projecting chamber, where it was known to join the north wall of the eastern range based on TP15 excavated in 2018. The wall foundations were at a shallow depth, cut into the natural light yellow-white clay. Stone blocks had been totally removed with discarded small to medium gritstones left in the top of the fill along with the ubiquitous orange mortar. The test pit was then extended to follow the north wall to the opposite corner of the projecting chamber, where the wall joined with eastern gable wall of the grange structure. The fill and character of the remains continued right along this length of the wall and for the short c 1 metre length of east wall foundation trench that was exposed. It was possible to calculate the width of the projecting chamber as 1.8 metres. The top of the fill at the south west corner was at 226.28 m aOD and the south east corner at 226.53 m aOD.



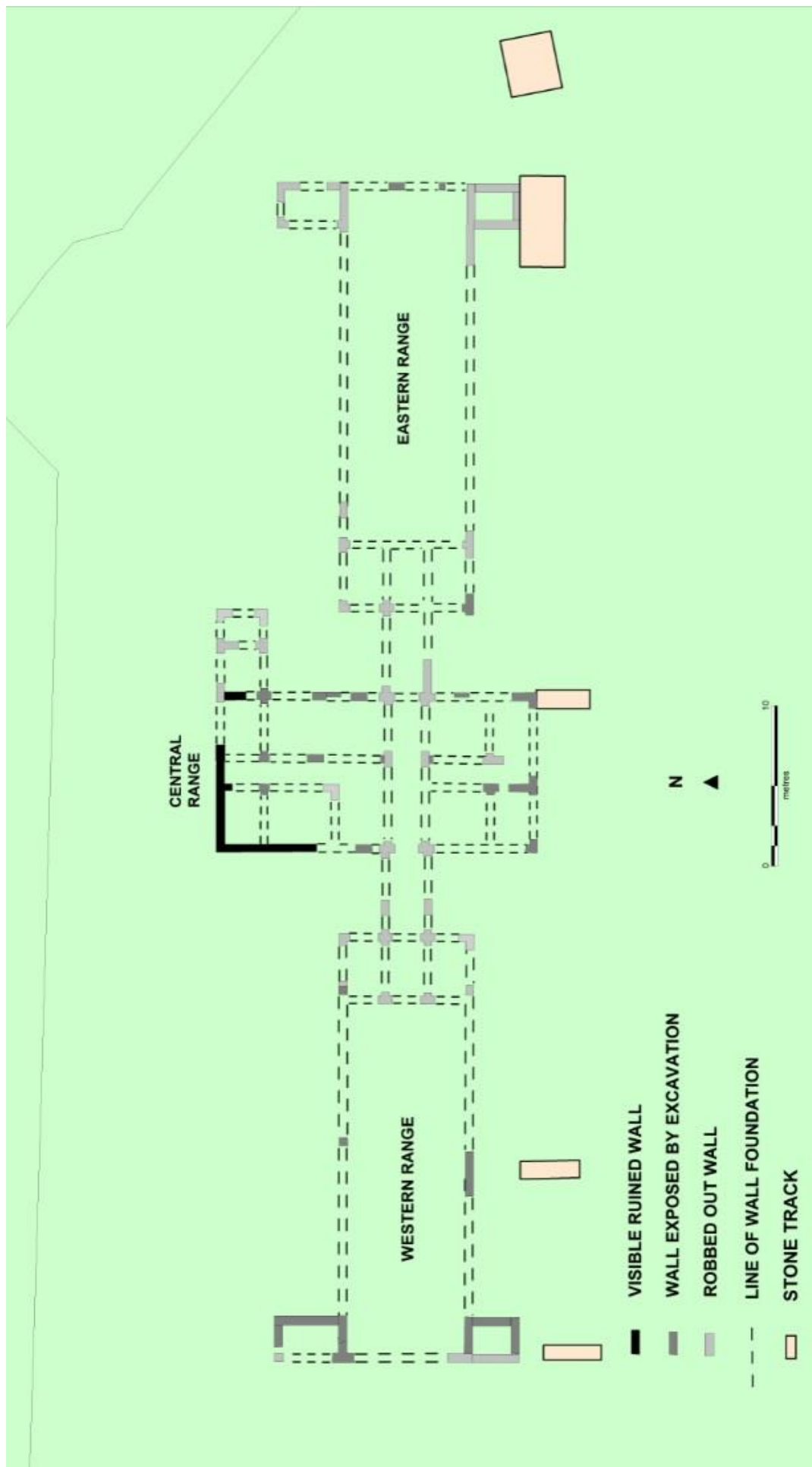
TP18 looking west, with the photo scale within the projecting chamber and the north wall of the eastern grange to the right of the scale and the eastern wall in the foreground

Test Pit 19

This was one metre square test pit located over the north west corner of the projecting chamber. Its character and fill were the same as for TP18. The top of the fill had a level of 226.56 m aOD. The north east corner was also re-exposed – it had been first explored in 2017 (test pit M) and was characterised by the wall foundation being overlain by a dump of stones which appears to have been collected for carting away and then abandoned. We now had all 4 corners of the north east projecting chamber exposed and were able to calculate that the internal dimensions are 2.9 x 1.8 metres. This gives the same length as the opposite chamber in the north west corner, but being slightly wider; however, the stone wall had been removed and the foundation trench was not well defined so some caution must be exercised over the precise dimensions and it is quite likely that the widths were identical. Nonetheless it is curious that the 2 northern projecting chambers are 0.5 metres longer than their southern counterparts. The north east projecting chamber was the most poorly preserved of the 4.



TP19 looking east showing the corner of the projecting chamber (left) whilst the right photo shows the north east corner under the dump of stones (on the left) in relation to TP19 (on the right)



Updated plan following the 2019 investigations



All four corners of the north east projecting chamber are visible here: Mark is by the south west corner (near left), Steve is on the south east corner to the right, Cliff works on the north west corner behind Mark (background left side), and Alan cleans the rubble dump in the north east corner to the rear

Conclusion and Discussion

The 2019 investigations have substantially added to our understanding of the internal layout and plan form of the grange building. The results of all our investigations are shown on the plan below. It is now possible to confirm that each corner had a projecting chamber, each being 1.7 metres wide but with the northern corner rooms at 2.9 metres long being 0.5 metre longer than their southern counterparts. It is not clear why this should be so. Indeed, the function of these peculiar rooms is currently a mystery. Previously it has been speculated that they may have been cells for visiting or residential monks. If this was the case, then the northern rooms gave slightly more spacious accommodation and could have been reserved for higher status personnel.

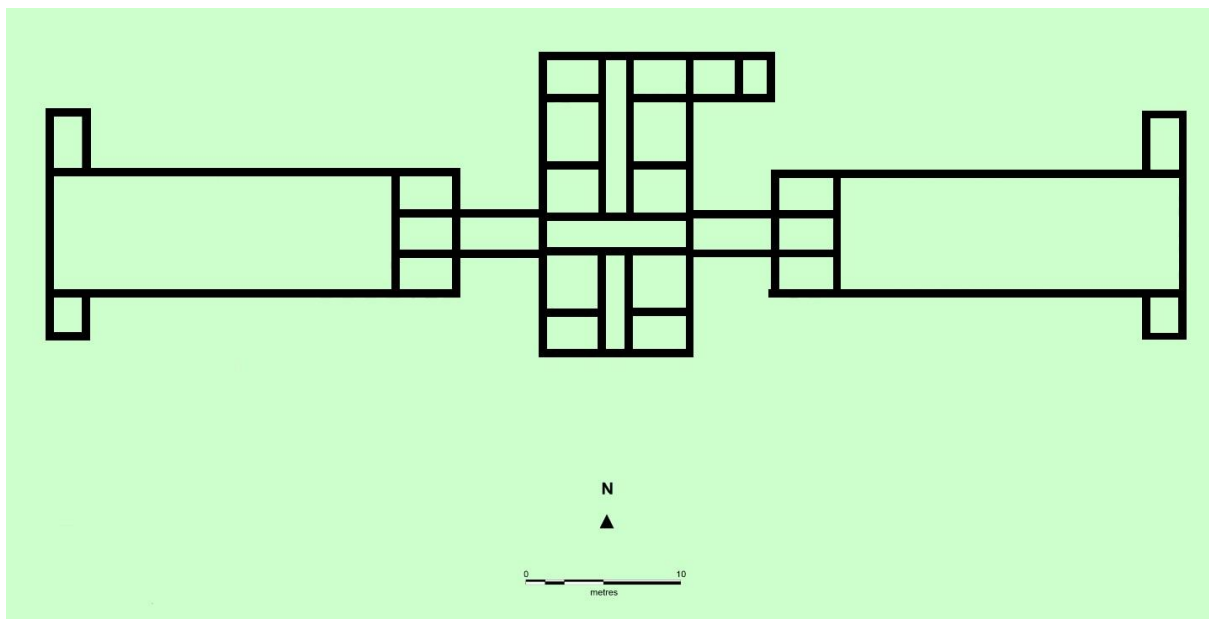
We have clarified the arrangement of the western and eastern ranges where they join the central block. It now appears that there is a link corridor leading on to a suite of rooms and then what appears to be a large empty space. Could these open areas have been used as barns for produce storage and housing animals?

The central range has been shown to be more complex than first thought, being divided by two corridors accessing 10 rooms. The west to east corridor divides the central range into two unequal parts, with the northern part being substantially larger, allowing for 6 rooms as compared with 4 in the southern part. No evidence was found for entrances at the end of the long south to north corridor and it begs the question of how the building was accessed. This was probably via the link corridor either side of the central range. Due to the heavy truncation of the surviving remains, we may never be certain of access arrangements. Rather strangely, a pair of rooms jut out from the north east corner of the central range. This destroys the symmetry of the building's layout. The rooms are small and may have been added for a special purpose other than accommodation. For the first time we have archaeological evidence that part of the complex was re-used. This appears to focus on the northern part of the central range and may explain why upstanding walls survive only in this part of the complex. Perhaps this area was re-built or adapted to create a small animal barn, store or human habitation. Whatever the function, this structure was not important or long-lived enough to be recorded on historic mapping from 1800 onwards.

A remarkable aspect of the remains is the consistency of build for the stone foundations, and this includes the projecting rooms. The whole structure appears to have been laid out and constructed in one phase.

Whether it was ever finished is another matter; the absence of roof and floor tiles, dressed door surrounds or window tracery, along with domestic debris, strongly suggests it was abandoned before completion. Extensive reclamation of the building materials for use elsewhere means that it is very difficult to interpret the intended height of the building or the range of materials used in its construction. Was it designed to be half timbered with a thatch roof or was it a single storey stone walled structure? Could the wall foundations have supported a two-storey building? Comparative research is at an early stage but may shed light on the intended height and character of construction based on other Cistercian grange complexes but, as pointed out in last year's report, the Castleshaw grange structure appears to be unique in its scale and plan form.

Outside the building footprint, the 2019 investigations yielded some important new evidence. This included locating the terminus of the stone track which in places ran tight up to the building's southern wall. The termination coincided with the western end of the building and helps demonstrate that it was laid down with the sole purpose of facilitating access for dismantled stonework to be carted away. A bonus from the excavation was one more sherd of medieval pottery. It is curious that there have been no datable finds from within the building, but the track built to aid its demolition has yielded 3 sherds of medieval pottery. Elsewhere, to the north of the building, a depression was excavated to reveal a stone deposit which might be part of another track. An evaluation trench was excavated through the bank located on the edge of the clough just to the north of the building. The bank was found to be revetted in stone and to have a ditch.



Interpretive plan of the grange building, based on test pits and trenches 2016-19

There are still a few questions to answer to confirm the internal plan form, but the plan above is probably around 90% complete. Who would have used the building and for what purposes? Comparative analysis can shed some light on these questions but ultimately, without internal floors and features such as hearths and artifacts, we can never be sure. Colin Platt published an excellent overview on monastic granges in a seminal work in 1969. Whilst there have been a number of published excavation reports and historical analyses since then, it remains a very relevant study (Platt, 1969). In it he states that the grange was *'designed to house a group of labourers and their supervisors, charged with the farming of the estate.... The grange had little to do with the monastic ideal but was designed as an economic unit to yield a surplus for the monastic community that owned it... The survival of a grange was dependent on the profits that it brought.'*

The grange would have a variety of buildings or rooms, which met the requirements of the labourers and lay brothers who worked and lived there. It is likely that initially, in the 12th and 13th centuries, buildings were fairly plain and functional but by the late 13th and 14th centuries more successful granges were rebuilding and adding architectural refinement. The functional nature of early grange architecture and later rebuilds means that survival of pre-13th century grange buildings is very rare. Essential rooms could be considered to be a kitchen, hall, chapel and bed chambers, but there could also be a host of other rooms and buildings. The nature of these is highlighted by a late 14th century inventory of Llanthony Secunda's grange at Duleek in Ireland (Platt 1969, p 32-5). Here the buildings were set around a court set between gardens and a stream. As well as the rooms mentioned above there was a dairy, brewery, bakery, and

stables. Agricultural buildings took the form of a threshing barn, pigsty, granary, ox-house use for both bullocks and cows, and a sheep-house. There was a guest-chamber for visitors and quarters for the janitor, and toilet provision in the form of a garderobe. Further afield were a kiln-house, dovecot, a wheat and hay storage shed, and water mill. There would be a workshop (perhaps a smithy) and storage for agricultural equipment. Could these types of rooms and functions have been within the grange building at Waters Clough? Certainly, the size and complexity of the structure could accommodate many of these but the lack of functional evidence in the archaeological record is deeply frustrating. Furthermore, our work on exploring the immediate hinterland of the grange building has only just commenced and it is possible that other buildings will come to light.

When the Cistercians started renting out grange estates to tenant farmers, and this was happening as early as the 13th century in places, this often included the use of the grange buildings including for residential purposes. At Castleshaw it is suggested that a huge amount of labour and resources were put in to transforming marginal land into an intensively farmed estate, focusing on cattle ranching but with many other economic activities as well such as iron smelting. This took place at some time during the 13th century. At some stage it was decided to build a new grange building on a large scale. Was the idea to replace or consolidate other buildings around the valley? We know that one of the farms on the western slope of the valley side was called Grange and continued in occupation after the Dissolution of the monasteries in the 16th century. This was one of the tenant farms but could it have housed the original grange buildings in the 13th century prior to construction of the new building at Waters Clough? It is suggested that this new building was never completed, perhaps due to a well-documented Cistercian policy change against the use of lay brothers or/and an economic downturn caused by poor summers, or even due to plague, leading to a possible shortage of labourers and supervisors. For whatever reason, there appears to have been a dramatic turn-about at Castleshaw that saw building work abandoned, the structure dismantled and materials carted away for re-use elsewhere, and the land rented out to tenant farmers. Were these farmers part of the grange work force who were allowed to establish their own farms on the estate, perhaps even using recycled stonework from the abandoned construction project?

In describing the decline of the grange, Platt portrays a scenario that played out at granges across the Pennines so it is not surprising so little survives at Waters Clough: *'The buildings of the grange, if there was no special reason to preserve them, emerged from the process totally unsuited to the purpose of the reorganized estate. A tenant farmer might for some years take up residence in a part of a former establishment. The remaining buildings could conceivably have been used by the tenants together as a store. But clearly the monastery itself could have felt no further obligation to maintain the disused buildings in adequate repair; and if this was true of the monastery, it was still more true of its successors. In the circumstances there could have been nothing unusual in the total destruction of many grange buildings even before the dissolution of the monasteries; after it, the sequence of abandonment and demolition was rarely less than complete.'*

The Waters Clough investigations have transformed our understanding of the medieval period in the Castleshaw Valley. Given the lack of comparative grange building plan forms (based on initial research), the Waters Clough building could be considered a type site for its unique plan form. The fact it was very short lived, and perhaps not completed, provides a fascinating insight to Cistercian policies towards granges. Can the building at Waters Clough be viewed as the equivalent of the 18th/19th centuries new model farms, but in the context of a 13th century grange estate? Perhaps Roche Abbey, as owners of the Castleshaw grange, were seeking to establish a new efficient model of farming and accommodation to maximise surplus for the mother house. This could then be applied to other lands being granted to them at this time, which were being turned into grange estates? A great deal has been accomplished during the 4 years of field investigations by the Friends volunteers at Waters Clough, but there is still a plenty more to do to help understand this remarkable, enigmatic site.

Further Work

In terms of future work, there are still some questions to answer about the internal arrangements within the grange building. These include confirmation of the central room arrangements in the central range and further examination of the west and east ranges to make sure that these large open spaces are not subdivided. However, future research should now move to areas outside the building. In particular the banks, ditches and possible track to the north of the grange should be investigated. There should also be a survey of the immediate landscape to plot the field boundaries and investigate the potential for other

buildings such as a mill. Enhanced LiDAR data is expected to be available soon which will be a useful resource in mapping historic landscape features.

Sources

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Platt, C 1969 'The Monastic Grange in Medieval England', Macmillan Press

Further information on recent archaeological surveys and excavations in Castleshaw valley can be accessed on the Friends of Castleshaw Roman Forts website: www.castleshawarchaeology.co.uk. This also contains details of upcoming events and membership.

Acknowledgements

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The test pitting/trenching was carried out by the following volunteers under the supervision of Norman Redhead. Their efforts and enthusiasm have made this exciting discovery possible.

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The Friends volunteers take a well-earned lunch break on 6th July 2019