Evaluation of the archaeological potential of the Minffordd Good Shed

I.P. Brooks
Engineering Archaeological Services Ltd

Background

Engineering Archaeological Services Ltd were commissioned by Festiniog Railway Company to carry out an archaeological evaluation within the recently restored Goods Shed in the Minffordd yard at SH59761 38618. This building was constructed about 1872 to act as a covered space where goods could be exchanged between the narrow gauge Ffestiniog railway and the standard gauge Cambrian railway. It had a centrally placed, longitudinal platform with a crane mounted towards its western end and the rail beds at different level to allow the level transfer of goods between the two systems. A cross-section drawing, (Caernarfon Archive: XD97/436207) shows that the narrow-gauge rail bed was 2 feet (610 mm) above that of the standard gauge and that the standard gauge rail bed was 14 feet (4.27 m) below the level of the trusses. Before the evaluation took place, the goods shed had been cleared leaving a ground surface which was 13 feet 8 inches (4.19 m) suggesting the majority of the upstanding portions of the platform and the level of the narrow-gauge track has already been lost.

Methodology

A trench approximately 4.83 m long and up to 2.56 m wide was dug, with the disturbed top layer being removed with a mechanical excavator with a smooth faced ditching bucket. The trench was located so that it was below the upper bearing of the crane which is attached to a wooden beam which spans the space between the first and second trusses of the Goods Shed. After the disturbed layer was removed, the revealed surfaces were cleaned by hand and recorded. All remains were left *in situ*.

Photographs were taken with a Nikon D5300 Digital SLR Camera at a resolution of 24.2 MP with the photographs being taken in RAW (NEF) format. These photographs were converted into JPEG format for use as illustration in this report and TIFF for archiving. Photographs were also taken for processing with Agisoft Photoscan Standard v1.3.1, Build 4030. This programme allows digital photographs to be stitched together to produce orthographic 3D images and therefore plans of the excavation. An outline plan was also produced using a Leica TS06 “Total Station” which located the trench within the building and defined key features to check against the plan produced by Agisoft Photoscan.

Results

The trench was located so that one end was below the pivot point for the crane and it extended out towards the expected position of the standard gauge rail bed (Figure 1). Before the excavation took place a stone block, approximately 1.09 m square and at least 200 mm thick was exposed (Plate 1). This has two holes in its upper surface, each 40 mm in diameter and 250 mm apart. The level of flaking around these holes would suggest that the holes were drilled from the other surface of the block and possibly the block is lying upside down.

Plate 1: The stone block

Within the excavated area (Figure 2), below the crane bearing are two large slate slabs (Plate 2), one of which is 1.3 x 0.7 m in size and the other 1.49 x 0.41 m. The wider of the two slabs has two holes drilled in its surface, one of which retains the remains of an iron rod 35 mm in diameter. These holes are directly below the bearing for the upper crane support on the beam above. These holes are space at the same distance to those of the stone block and it is assumed that the stone block was originally placed over the slate slabs and linked by iron rods. The gap between these two elements is unknow, however the displaced stone block is of a similar size to the block shown as the crane pivot on the cross section drawing suggesting there may have originally been a metre, or more, between the slate slabs and the stone block. There are also fragments of slate immediately to the north which suggest there may have been a third slate slab.

A gap between the two slate slabs shows that there is a void below the slabs. When probed this proved to be at least 350 mm deep. No attempt was made to lift one of the slate slabs and thus the form of the void is uncertain. One possible explanation for this void is related to the iron rods holding the crane base together. It is possible that these rods were added during the construction of the crane, thus a void would be needed to allow a nut to be attached to the lower end of the iron rods securing the lower end of the crane support.

Plate 2: The crane base

Immediately to the east of the slate slab with the holes was the remains of a timber (Plate 3) This was a dark stain, containing the occasional fragment of wood, forming a rough “L” shape. It has a maximum size of 0.25 x 0.39 m in size. It is assumed this was a vertical timber and part of the crane support, although this interpretation remains tentative. The lack of significant timber means that it is not possible to determine whether this was an upright post or a fragment of timber lying flat within the deposits.

Plate 3: The timber

Also, adjacent to this possible timber is a stone block 0.09 m wide and at least 1.14 m long (Plate 4) which runs longitudinally along the centre line of the building and probably acted as a part of the central support for platform. This block is partly set in lime mortar.

Plate 4: The longitudinal block

Further to the south is the remains of a stone wall, 0.38 m wide, running longitudinally along the building approximately 3.12 m from the southern wall of the building (Plate 5). It is assumed this is the retaining wall of the platform, although the short length exposed appears to be at a slight angle to the building. To the south of this wall is a spread of lime mortar, the function of which is unknown. Between the crane base and this wall there is a deposit of irregularly arranged stone blocks with some lime mortar which is assumed to be infill within the platform structure.

Plate 5: The platform wall

Discussion

It would appear that the ground level within the Goods Shed has already been reduced to a level below that of the platform, narrow-gauge rail bed and most of the standard gauge rail bed. However, much of the sub-structure survives just below the level of the modern disturbance.

The base of the crane structure survives with at least two slate slabs siting over a chamber. It is assumed this chamber allowed the metal rods, which held the crane support together, to be fixed in place and the assumed nuts under the slabs tightened. It is also clear that stone block to the north and east was part of the crane support, possibly the stone block shown on the cross section drawing acting as a base for the crane itself.

The platform had a stone retaining wall and probably a central spine wall within a deposit of packed stones within a thin lime mortar matrix. There also appears to have been a spread of lime mortar below the standard gauge rail bed.

Whilst much of the superstructure has now been lost there is sufficient structure surviving to record the previous layout of the Goods Shed. This is within 200 mm of the current ground level and thus any intrusive works within the shed should be recorded archaeologically before any works take place so that any details of the structure within the shed can be recorded. Assuming the same level of preservation throughout the Good Shed there is probably enough information to consider the reconstruction of the platform and its crane, particularly if combined the existing records, however, this would require the total excavation of the interior of the Good Shed in order to record the surviving remains before any ground works take place. It may also require the lifting of the existing track within the shed to a level approximately 0.6 m in order to replicate the original track levels either side of the central platform. A similar excavation should also be undertaken if a new flat floor within the shed require any level of excavation to produce a firm base for whatever floor is required.

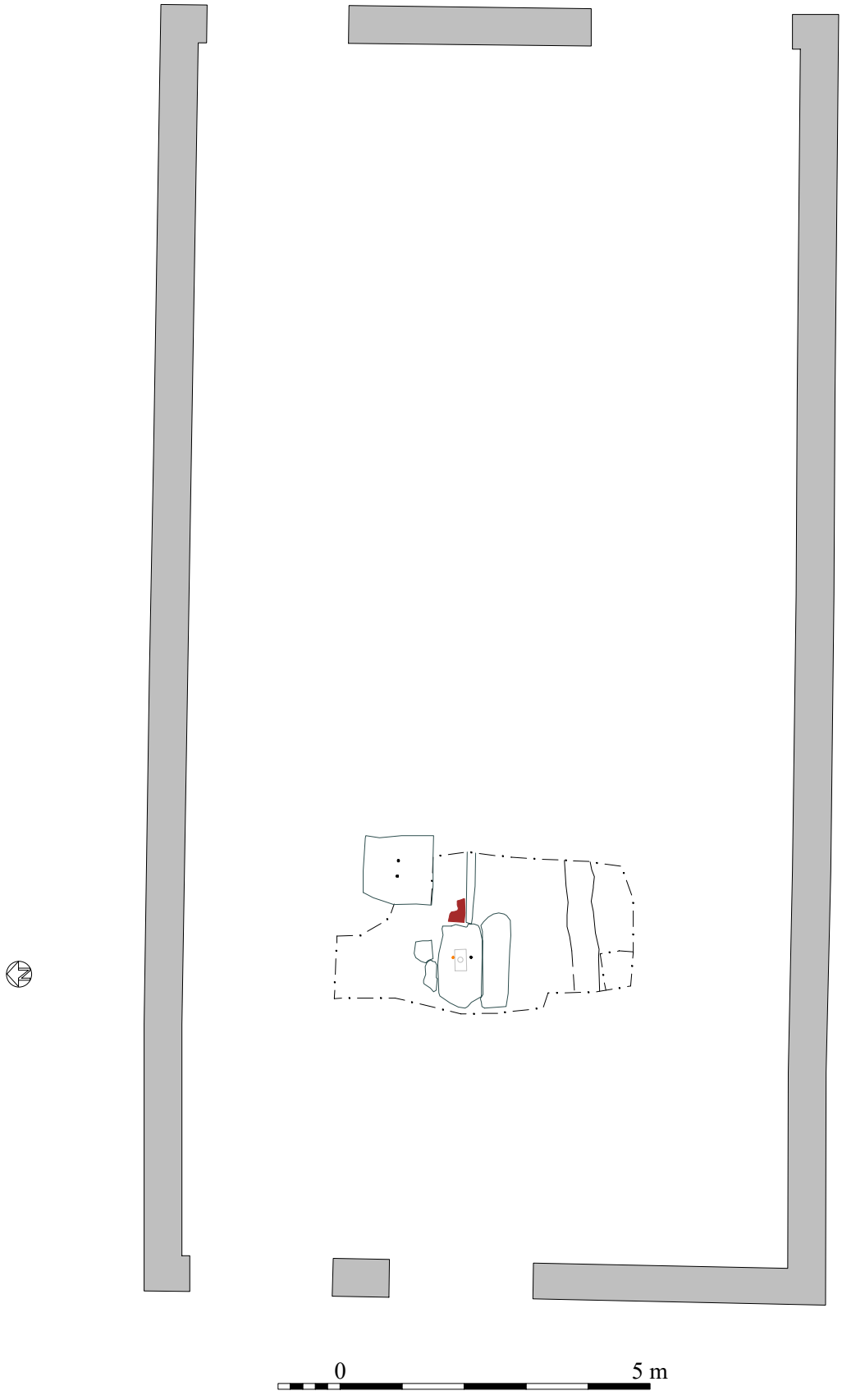

Figure 1: Location of the Trench
Scale 1:100

Figure 2: Plan of Trench
Scale 1:20