



## Califat Coal Mine, St George's Hill, Swannington

### Excavation and consolidation of the Califat engine house

Swannington Heritage Trust own the Califat Spinney, which is the site of the Califat Coal Mine (1855-1873). When replanting and maintaining the spinney Trust volunteers found part of a brick floor in the area where old maps showed the outline of a building. The Trust's partner, Leicestershire Industrial History Society, began an excavation of the site on the 15<sup>th</sup> June 2006.

LIHS member David Lyne describes the beginning of the dig:

*LIHS always had in mind carrying on at the present site after we had withdrawn from the pumper site. The first diggers were David Ramsey, John Bailey, Alan Brittan, Denis Baker and David Lyne. There could have been a few more, Keith Drury joined in 2006/09. Denis was the Key person with both organisations and he generally made the decisions. We found a slightly domed brick floor within the walls of the engine house. Two pot eggs proved that the brick floor was indeed a chicken run! It was a few digs later when we uncovered the engine base under the floor! We started about 9.00 with a break for lunch but back again until about 4.00 pm.*

### Hen House Floor



Photo 15<sup>th</sup> June 2006 by David Lyne

The excavation soon uncovered a large brick floor.



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*Photo 15<sup>th</sup> June 2006 by David Lyne*

The slightly domed brick floor.

Villagers had told the Trust that Jim Curtis (who lived in the Califat cottages until they were demolished in 1958) used to have a hen house in the vicinity. Diggers explored the area around the brick floor and discovered a ventilation tunnel and other evidence of an engine house.





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#### **Engine House Under Hen House Floor**



*Photo 14<sup>th</sup> August 2007 by David Lyne*

By July 2007 diggers had removed a cross-section of the hen house floor and discovered a brick structure underneath.





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*Photo 11<sup>th</sup> September 2007 by David Lyne*

As the diggers kept digging they uncovered more of the hidden brick structure.



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*Photo 11<sup>th</sup> December 2007 by David Lyne*

By December 2007 it was possible to see that layers of clay and mining spoil had been laid on top of the lower brick structure. These were topped with the domed floor of the hen house.



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### Two Plinths



*Photo 11<sup>th</sup> December 2007 by David Lyne*

What appeared to be two brick plinths were uncovered by December 2007.



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*Photo 12<sup>th</sup> February 2008 by David Lyne*

In February 2008 LIHS used a mini-digger to carefully move large volumes of material from around the brick structures.

George Rush lived on the neighbouring smallholding and used his mini-digger to assist with the excavation.



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*Photo 12<sup>th</sup> February 2008 by David Lyne*

The mini-digger dug out a void (approx 2ft or 70cm wide) between the plinth and the surrounding wall.



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*Photo 11<sup>th</sup> March 2008 by David Lyne*

The void was about 6ft 6in or 2m deep and required a ladder to descend and ascend in safety.



## **Califat Coal Mine, St George's Hill, Swannington**

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*Photo 8<sup>th</sup> January 2008 by David Lyne*



*Photo 11<sup>th</sup> March 2008 by David Lyne*

The plinths had deep, square holes. Some were damaged and the line of the hole descending to the bottom of the plinth could be clearly seen.

It is believed that an engine stood on each part of the plinth and the square vertical holes were for the engine holding down bolts. Horizontal “rag holes” at the bottom of the void enabled locking bars to be inserted into the bottom of the holding down bolts to keep them in place.



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### Cherry picker photo of engine house and boiler house



*Photograph November 2009 by David Lyne*

This November 2009 photograph shows the progress of the overall excavation. The engine house is at the top, the boiler house towards the bottom and the flues leading to the chimney are bottom left.

When the cap and fantail were crane hoisted to the top of Hough Mill a cherry picker was also required. Afterwards the cherry picker driver stopped on the track on the way out so that photographs of the excavation could be taken.



## **Califat Coal Mine, St George's Hill, Swannington**

### **Excavation and consolidation of the Califat engine house**



*Photo 13<sup>th</sup> November 2012 by David Lyne*

LIHS excavation work continued to focus on the boiler house and ventilation tunnels. Nevertheless in November 2012 (allowing for the leaves) the plinth and engine house walls could be clearly seen. Diggers had filled in the voids between the plinth and engine house walls after recording their details, thereby eliminating a safety hazard for visitors.

The bench is in front of the copper beech tree.





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### Engine House Consolidation 2013



*Photo 3<sup>rd</sup> May 2013 by Bill Pemberton*

A Trust member provided a generous donation which enabled the engine house brickwork to be consolidated. The dig-master carefully measured the engine house and drew detailed plans that were followed by Classic Building Services of Ashby.



## Califat Coal Mine, St George's Hill, Swannington

### Excavation and consolidation of the Califat engine house



*Photo 3<sup>rd</sup> May 2013 by Bill Pemberton*

Loose bricks were removed from the walls until a sound level was reached that enabled the walls to be built up to a consistent level that was higher than that uncovered during the dig. This effectively was adding sacrificial courses of bricks on top of the original archaeology to protect it. All the bricks used in the consolidation were original bricks uncovered during the excavation. The lines of the walls were followed precisely, hence the noticeable kink in the wall on the boiler house side of the engine house.



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*Photo 14<sup>th</sup> May 2013 by Bill Pemberton*

The engine plinth was consolidated and the ragged damaged shapes made rectangular as would have been the case when the engine house was in use. The plinth exposed by the excavation was covered with an additional course of bricks. These newly laid bricks will thus take the force of the weather while protecting the undisturbed original structure underneath.



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*Photo 14<sup>th</sup> May 2013 by Bill Pemberton*

Within the walls the interior was filled with breeze blocks to save on the number of bricks required. These were topped with bricks. Should future archaeologists re-excavate the buildings, the differences between the original archaeology and the consolidation will be clearly identifiable.





## **Califat Coal Mine, St George's Hill, Swannington**

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#### **Consolidation Completed**



*Photo 18th May 2013 by Bill Pemberton*

Consolidated engine house looking south from the copper beech tree towards the track.



## **Califat Coal Mine, St George's Hill, Swannington**

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*Photo 18th May 2013 by Bill Pemberton*

Consolidated engine house looking north towards the woodland. The two pairs of holding down bolt holes on each part of the engine plinth can be clearly seen.





## **Califat Coal Mine, St George's Hill, Swannington**

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*Photo 18th May 2013 by Bill Pemberton*

Consolidated engine house view from the chimney area.



## Califat Coal Mine, St George's Hill, Swannington

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#### Finishing touches



*Photo 11<sup>th</sup> June 2013 by Bill Pemberton*

Within the engine house, the voids in between the walls and engine plinths were topped with a weed control fabric and pea shingle.