

# Report on the metalworking remains at Coolmine, Co. Dublin (E4511)

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## **Abstract**

Test excavation ahead of the construction of a fence line at Coolmine, Co. Dublin revealed two possible medieval features and a more modern kiln (O'Flanagan 2013). One of the earlier features, C003 filled with C009, yielded about 730g of ironworking slag. Most, and likely all, of the material represents the waste of secondary iron smithing.

## **Description of the remains**

Feature C003 was exposed and excavated as a short section of a linear feature. Its fill, C009, was charcoal rich and contained slag, burnt and unburnt bone.

The slag consisted mainly of rather light to rather dense pieces, some of which could be fragments of Smithing Hearth Cakes, one of the typical residues from smithing. One dense piece was identified with confidence as a partial Smithing Hearth Cake (Fig. 1). The largest piece of slag, and one smaller one, showed flow structure (Fig. 2), generally a characteristic of smelting slag but also known from smithing slag. As such, the assemblage most likely represents material from secondary iron smithing.

There are no indications for the use of ceramic tuyeres or bellows protectors, which are characteristic for Early Medieval and Late Medieval indigenous Irish black smithing (Rondelez 2014 Vol. 1: 298-290). This could imply that the assemblage is related to non-indigenous Late Medieval, or later, smithing or that the tuyere material was not present in the limited assemblage available.

Some pieces had inclusions of charcoal which would have been the fuel used in metalworking context from the earliest periods. From the Late Medieval period onwards, coal was used in iron smithing but the use of charcoal persisted until modern times.

## **Conclusions**

Most, and probably all, the metal working material from Coolmine, Co. Dublin represents the waste from secondary iron smithing which was deposited within the excavated feature and produced elsewhere. There are no clear indications in the material about the date of the activity.

## Bibliography

O'Flanagan, Neil 2013. Preliminary Report of Monitoring and Excavation at Millenium Park – Coolmine, Dublin 15, Co. Dublin. Unpublished Preliminary Excavation Report, Reliqua Archaeology and Heritage, Dublin.

Rondelez, Paul 2014 Ironworking in late medieval Ireland, c. AD. 1200 to 1600. Unpublished Doctoral Thesis, University College Cork.

## Catalogue

Cut	Fill	Feature type	Description	Weight (g)
3	9	Linear feature	Rather dense piece of slag with multiple cavities and some flow structure on the outer surface	189
3	9	Linear feature	Five pieces of rather dense slag with oxidized upper surfaces and irregular lower ones. They have charcoal inclusions. Likely fragments of Smithing Hearth Cakes	327
3	9	Linear feature	Fragment of dense slag with irregular upper surface and smoother base. Piece of a Smithing Hearth Cake	69
3	9	Linear feature	Twelve fragments of irregular rather light to rather dense slag	135
3	9	Linear feature	Ten small fragments of slag, the largest having a drippy nature	9

## Figures



Fig. 1. Fragment of Smithing Hearth Cake (Cut C003, Fill C009)



Fig. 2. Slag with flow structure (Cut C003, Fill C009)