

# Report on the pyrotechnical waste from Broadstone Plaza, Dublin (15E0337)

Paul Rondelez

Macroom, Co. Cork

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## **Description and Interpretation**

Just over 22kg of material related to pyrotechnical processes was uncovered at Broadstone Plaza (15E0337). The material recovered from leveling deposits C114, C119 and C125, from deposits C188 and C302, from C154 fill of ditch C150 and from gully C280 is very similar in nature and is interpreted as having the same origin.

The material consists of pieces of cinders, the largest weighing 2427g, with frequent inclusions of burnt stone, which is likely shale, and small fragments of coal (Fig. 1). This type of cindery material is the waste of fire-related activities, in this case using low grade shale-containing coal. Some pieces have a certain iron content which is the result of loss of iron from the containers wherein the fire took place or because the coal contained pyrite (iron-sulphide). These pyrotechnical activities can range from domestic fires to more industrial processes such as corn-drying and brewing.

The levelling deposits are considered to be related to the construction of the canal at the site in the 1790s which, based on the similarity of the material, is like the deposition date for all the cindery material. An origin from domestic fires can be excluded due to the large size of the material. The cinders could have been the waste from the distillery active on Constitution Hill in 1791 or the lime kilns recorded on Constitution Road in the 1840s (Goodbody 2014: 54, 59) or from a similar industrial plant not recorded or further afield.

The piece found in garden soil C130 consists of heat-affected coarse clay which is vitrified on one side and has a flattened surface on the other side to which iron had adhered (Fig. 2). It has inclusions of small coal fragments and organic material. This appears to be heat-affected packing material around an iron vessel and might represent part of a boiler structure.

## **Recommendation for future research**

Analyses, chemical or otherwise, would unlikely result in further insights into the above material and is not recommended.

## Recommendation for retention

The assemblage should be, for retention purposes, be considered as:

**Low Significance:** While the deposition of the material is dated, its information value for future analytical and typological studies is limited.

## Bibliography

Goodbody R. 2014 *Irish Historic Towns Atlas, no. 26, Dublin, Part III, 1756 to 1847*. Royal Irish Academy, Dublin

## Catalogue

Context #	Feature description	Sample #	Material description	Weight (g)
114	Levelling deposit	23	Several hundred pieces of rather light to rather dense cindery material with frequent inclusions of burnt stone, likely shale. Occasional small fragments of adhering coal. Some of the material has an iron content	10427
114	Levelling deposit	24	Large piece of cindery material with frequent inclusions of burnt stone, likely shale. Occasional small fragments of adhering coal.	2427
114	Levelling deposit	45	Two pieces of cindery material with frequent inclusions of burnt stone, likely shale.	28
119	Levelling deposit	276	Twenty pieces of rather light cindery material. Most have inclusions of heat-affected stone, likely shale. Some have small coal fragments adhering	502
119	Levelling deposit	277	About 100 pieces of cindery material with frequent inclusions of burnt stone, likely shale. Some adhering small fragments of coal. Some pieces have an iron content	4521
125	Levelling deposit	265	Small piece of cindery material	15
130	Garden soil	41	Heat-affected coarse clay, vitrified on one side, with a flattened side on the other to which iron had adhered. Inclusions of small coal fragments and organic material	101
154	Fill of ditch C150	36	Five pieces of rather light cindery material with inclusions of burnt stone, likely shale	188
245	Sandy silt deposit	212	Heavily corroded iron object	47
280	Gully	279	Three pieces of rather dense cindery material with frequent inclusions of burnt stone, likely shale. Occasional small fragments of adhering coal. The largest piece has a clear iron content	2131
302	Silty clay deposit	278	Three pieces of rather light to rather dense cindery material with frequent inclusions of burnt stone, likely shale. Occasional small fragments of adhering coal. The largest piece has a clear iron content	1696

Figures



*Fig. 1. Cindery material with burnt stone inclusions from gully C280*



*Fig. 2. Possible boiler lining from garden soil C130*