

E108(1)

CITY OF GLASGOW DISTRICT COUNCIL

DEPARTMENT OF ARCHITECTURE AND RELATED SERVICES

ENGINEERING SERVICES - GEOTECHNICAL GROUP

ADVISORY REPORT - WESTTHORN RECREATION GROUND

1.0 Source

1.1 A request for information on soil investigations on the above area was received from the Planning Department. Preliminary information was given by way of telephone advice ([REDACTED] 12 June 1986).

2.0 Action Taken

2.1 An examination was made of the following geo-databank records:-

- (i) Soils file 402/1/541
- (ii) Mineral abandonment plans for the area.
- (iii) Environmental Geology Maps (E.G.Ms.)
- (iv) Old editions of the Ordnance Survey Maps.

2.2 A brief visual inspection was carried out on 30 June 1986.

2.3 The Mineral Valuer (M.V.) and British Coal (B.C.) were requested to give their comments on the mineral stability of the site.

3.0 Comments

3.1 Mineral

3.1.1 The strata underlying this area belong to the Productive Coal Measures and dip generally to the south-west.

3.1.2 Several coal seams within these measures outcrop at the conjectural positions shown on the enclosed 1/1250 scale plan of the area.

3.1.3 These coal seams are known to have been worked in this area in the past.

3.1.4 Three rotary boreholes were drilled at the positions shown on the enclosed plan in 1978 and encountered workings in both the E11 and Main Coal seams at shallow depth below rockhead.


3.1.5 The Mineral Valuer (MV) and British Coal (BC) agree that the site is underlain by workings in the Main and E11 Coal seams, with workings extending at or near the outcrop zones of both seams.

3.1.6 The Mineral Valuer was of the opinion that "although future ground movements at the surface of the site would not be expected to be severe, movements of significance in relation to buildings or structures are likely".

3.1.7 British Coal were of the opinion that "as the thickness of the superficial deposits over the site was in the order of 25 to 29 metres this would greatly minimise the risks of serious belated subsidence occurring".

- 3.1.8 Both the M.V. and British Coal considered that precautions should be incorporated in the design and construction of any building development in order to reduce the risk of structural damage occurring.
- 3.1.9 The M.V. has indicated the approximate position of an old shaft which is shown on the enclosed 1/1250 Ordnance Survey extract.
- 3.1.10 This shaft would require to be precisely located, its condition fully investigated and dependent on the results of the investigation, be made secure before development is considered. In this context it is not good engineering practise to erect any building or structure directly over or in close proximity to a shaft even if remedial measures have been taken.
- 3.2 Soils
- 3.2.1 No soils boreholes have been drilled within the area of the site however the rotary boreholes encountered 25 to 29 metres of superficial deposits above rockhead.
- 3.2.2 These superficial deposits consisted of made ground, sandy clay, plastic clay and silty sand.
- 3.2.3 Examination of the 1895 edition of the Ordnance Survey indicated that this site was formerly occupied by two reservoirs of the former Westthorn Pumping Station. The positions of these reservoirs is shown on the enclosed 1/2500 scale O.S. extract.
- 3.2.4 The depth and type of infilling within these former reservoirs is not known and a search for this information proved negative.
- 3.2.5 The relevant E.G.M. indicates a large area of fill to the north of the site and it can be seen from the enclosed 1/2500 scale plan that this area was formerly occupied by the Westthorn brick works and clay pit. The possibility of this fill extending further south cannot be overlooked.
- 3.2.6 The extent and depth of any made ground and the engineering properties of the natural soils could only be established by carrying out a comprehensive site investigation.
- 4.0 Conclusions
- 4.1 The site is underlain by old mine workings, in more than one seam, occurring at shallow depth below rockhead.
- 4.2 The mineral support position below this site is very suspect. Future ground movements at surface level due to collapse or continuing consolidation of these old workings cannot be ruled out.
- 4.3 The Mineral Valuer and British Coal are both of the opinion that provided suitable precautions are incorporated in the design and construction of any building development they would not advise against same.

- 4.4 The responsibility for deciding whether or not to proceed with development and for the precautions to be incorporated in the development design and construction would rest with the developer.
- 4.5 The exact position and condition of the old shaft would need to be established by a site investigation and any remedial measures carried out if required, before development is considered.
- 4.6 The engineering properties of the natural soils and the extent and depth of any made ground could only be established by carrying out a comprehensive site investigation.


22 October 1986