Mineral Assessment Appendix D - Sand and Gravel Map

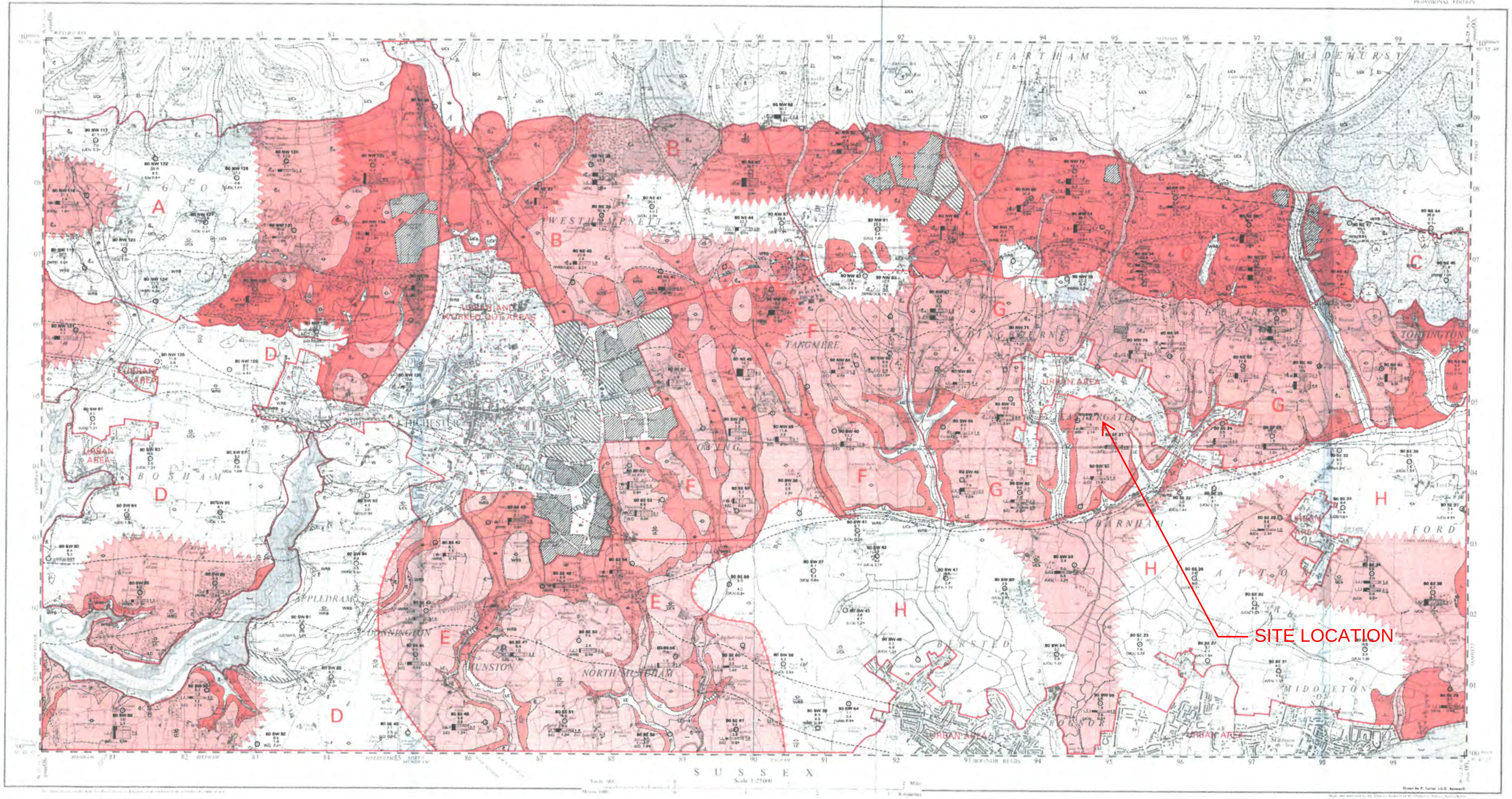
INSTITUTE OF GEOLOGICAL SCIENCES

INDUSTRIAL MINERALS ASSESSMENT UNIT

THE SAND AND GRAVEL RESOURCES OF THE COUNTRY AROUND CHICHESTER AND NORTH OF BOGNOR REGIS, SUSSEX

Scale 1:25 000 or about 2½ Inches to 1 Mile

ORDNANCE SURVEY
SHEETS SU 80 & 90
PROVISIONAL EDITION



The GRID lines on this sheet are at 1 Kilometre interval.

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Geological lines from 1:10 000 surveys by F. G. Berry, A. R. Shephard-Thorn and R. J. Wyatt in 1981-82.
W. A. Read, District Geologist

Sand and Gravel survey by P. M. Hopson, P. H. A. Nancarrow and D. Thomas in 1981
R. G. Thurrell, Head, Industrial Minerals Assessment Unit

1:25 000 Sand and Gravel Resource Sheet published 1983
G. M. Brown, D.Sc., F.R.S., Director, Institute of Geological Sciences

THE SAND AND GRAVEL RESOURCES OF SHEETS SU 80 AND 90 (CHICHESTER AND NORTH OF BOGNOR REGIS, SUSSEX)

This map should be read in conjunction with the accompanying Report which contains details of the assessment of resources

EXPLANATION OF SYMBOLS AND ABBREVIATIONS

▥ **Landslip**

DRIFT

RECENT AND PLEISTOCENE

- **Alluvium** - clay, silt, sand and some gravel
- **Dry Valley Deposits** - angular flints in brown loam and silt
- **River Terrace Deposits** - sand, gravel and clay
- **Fan Gravel** - flint gravel in matrix of chalky silt and clay
- **Marine Beach and Tidal Flat Deposits** - soft organic mud, silt, clay and sand
- **Marine or Estuarine Alluvium** - soft shelly silt, clay and sand
- **Brickearth** - yellow brown silt, pebbly in parts
- **Head, undifferentiated** - flinty, clayey loam and reworked Brickearth
- **Head Gravel** - angular flint gravel in brown clay matrix
- **Raised Storm Beach Deposits** - topographic mounds of sand and gravel
- **Raised Beach Deposits (Younger)** - widespread, fossiliferous sand and gravel
- **Raised Beach Deposits (Older)** - patches of fossiliferous, intertidal sand and gravel
- **Clay-with-Flints** - broken flints in reddish brown clay

SOLID

TERTIARY: EOCENE, PALAEOCENE; CRETACEOUS

- LC **London Clay** - blue-grey clays, weathering brown
- WRB **Woolwich and Reading Beds** - silty clays, mottled reddish brown and grey with chalk and flint clasts
- UCk **Upper Chalk** - white, microporous limestone, deeply weathered at top, with nodular and tabular flints

▨ **Made Ground**

▨ **Worked-out ground, sand and gravel**

BOUNDARY LINES

- Geological boundary, Drift
- Geological boundary, Solid
- Fault, crossmark indicates downthrow side
- Inferred boundary between recognised categories of deposit
- Resource Block boundary

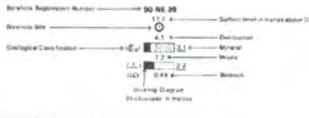
Broken lines denote uncertainty

BOREHOLE DATA

SITE LOCATIONS

○ Industrial Minerals Assessment Unit (I.M.A.U.) boreholes

I.M.A.U. BOREHOLES



Notes

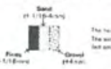
(i) Figures underlined denote thicknesses used in the assessment of resources
(ii) The + sign indicates that the base of the deposit was not reached
(iii) The Geological Classification is given only for mineral and bedrock

Borehole Registration Number

Each I.M.A.U. borehole is identified by a Registration Number, e.g. **90 NE 39**. The first number and letters refer to the quarter sheet, and the second number is the I.G.S. Serial number for that quarter. The unique designation for borehole **90 NE 39** is **SU 90 NE 39**.

Grading Diagrams

Each grading diagram shows the mean particle size distribution of a distinct deposit of mineral.



The height of the diagram is proportional to the mineral thickness. The widths of the columns show the proportions of **Fines**, **Sand** and **Gravel** but small amounts of gravel may be omitted or exaggerated.

CATEGORIES OF DEPOSITS

🟥	**Exposed mineral (average thickness of overburden less than 1.0m)**
▧	**Continuous or almost continuous spreads of mineral beneath overburden**
☐	**Sand and gravel either not potentially workable (see Report) or absent**
⁖	**Sand and gravel at the surface not assessed**

RESOURCE BLOCKS

For the purpose of assessment the mineral is divided into Resource Blocks (see Report). Each is designated by a letter.

Detailed records may be consulted on application to the Head, Industrial Minerals Assessment Unit, Institute of Geological Sciences, Keyworth, Nottingham, NG12 5GG.

Compiled and produced by the Keyworth Drawing Office of the Institute of Geological Sciences.