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CONTEMPORARY SCIENTISTS

Catalogue of the papers and correspondence of

**Peter Walter Rowe D.Sc.**

(1922-1997)

**VOLUME III**

PWR/5 Research

PWR/6 Publications and technical papers

PWR/7 Lectures

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PWR/9 Professional bodies

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Bibliography

By Heather Bird and Sarah Davis

John Rylands University Library of Manchester reference

PWR

NCUACS catalogue no.132/5/04

**Reference and contact details:** PWR/5

## Research

**Dates:** 1948–1986

**Extent:** 5 series (71 items).

### Scope and Content:

The papers in this section of the archive reflect the theoretical and experimental research activities and interests pursued by Peter Rowe throughout his career, from his early investigations into sheet pile walls in the late 1940s and 1950s, through work on dams and reservoirs in the 1960s, to the testing of offshore structures in the 1970s and 1980s. The majority of Rowe's research took place at the University of Manchester, and was greatly facilitated by the construction of the massive centrifuge adjacent to the Simon Engineering Laboratories. This was designed to test dam structures, but was later used extensively to test offshore oil and gas facilities (PWR/5/4). The development of the Rowe Consolidation Cell for testing clays, and the ring shear apparatus used to measure the shearing resistance of drained soils, are also documented in this section of the archive (PWR/5/2).

Although Rowe's academic research contrasted with his commercial consultancy work, inevitably there was significant cross-fertilization between the two aspects of his career. Engineering problems and issues encountered in the course of consultancy projects tended to influence Rowe's research interests, and provided 'real-world' data for testing and experimentation, much of which was very practically based. Simultaneously his work as a consultant benefited from the knowledge he gained in the laboratory. Consequently there is some overlap of subject matter between PWR/4 and PWR/5.

### Arrangement:

As there was no inherent arrangement to the research papers, this section of the archive has been broken down into the various aspects of Rowe's research work, based on his *curriculum vitae*. Included in this section are files of correspondence relating to the manufacture of the Rowe Consolidation Cell and the centrifuge, since these were developed in tandem with the research work.

The subfonds PWR/5 contains the following series:

### Related Units of Description:

See also the Consultancy section of the archive, PWR/4, and the Publications and Technical Papers section, PWR/6. Some of Rowe's research proposals and findings are outlined in his letters to fellow academics and civil engineers; these can be found in PWR/10/3 and PWR/10/4.

### Publication Note:

The following theses were submitted to the University of Manchester by M.Sc. research students under the supervision of Peter Rowe. Copies of all the theses are available in the John Rylands University Library, although they do not form part of the archive.

G.R. Sides, 'Foundation settlements on sand' (1955).

S.Y. Andrea, 'The stability of piling in clay' (1956).

G. Watkinson, 'Anchored sheet-pile walls in clay' (1956).



- I.G. Bowrie, 'The long-term strength of clay' (1956).
- P.H. Oldham, 'The shear strength of clay at equilibrium' (1956).
- B.N. Verry, 'Anchored sheet pile walls in clay' (1957).
- B.M. Freedman, 'Triaxial tests on sands' (1959).
- F.M. Rahmatallah, 'Study of the factors affecting the coefficient of consolidation of clay' (1959).
- J. Barnes, 'Experimental evidence for the stress-dilatancy theory' (1960).
- J.E. Gray, 'The relationship between principal stresses, dilatancy and friction angle of a granular material' (1960).
- A. Briggs, 'Strutted sheet pile excavation in cohesionless material' (1960).
- R.G. Holland, 'The measurement of the coefficient of consolidation of remoulded lacustrine clay' (1960).
- J.A. Cheetham, 'An investigation of the factors influencing the value of the coefficient of consolidation of a compacted clay fill material' (1961).
- D.B. Oates, 'Experimental evidence of the stress-dilatancy theory' (1962).
- N.A. Skermer, 'A study of the stress-dilatancy characteristics of clay' (1962).
- K.Z. Andrawes, 'The behaviour of particulate materials in the 'at rest' state' (1964).
- A.J. Berry, 'Primary and secondary consolidation of clay' (1965).
- A.J. Khayatt, 'The influence of stress path on the stress-dilatancy behaviour of sand' (1965).
- R.J.W. McDermott, 'The use of free ends in the triaxial testing of clay' (1965).
- M. Mesdary, 'The lateral resistance of sand to displacement' (1966).
- S.T. Wharton, 'The consolidation characteristics of artificially layered soils' (1966).
- D.Y. Larmour, 'One dimensional consolidation of partially saturated clay' (1966).
- E.L. Shipley, 'Laboratory permeability tests on undisturbed samples of an estuarine clay' (1967).
- D.C. Procter, 'The stress-dilatancy behaviour of dense sand in the hollow cylinder test' (1967).
- A. Wightman, 'The stress-dilatancy of sands during plane strain compression' (1967).
- C.B. Hill, 'Consolidation of compacted clay' (1967).
- R.D. Parkes, 'Determination of density changes in a sand mass by a gamma ray technique' (1968).
- H.A. Elhag Ismail, 'Effect of mean stress and straining conditions on the dilatancy behaviour of sand' (1969).



- R.O. Birdsell, 'A theoretical and experimental investigation of mildly non-linear consolidation behaviour in saturated soils' (1970).
- N.A.D.R. de Alwis, 'Fabric analysis of two clays in relation to permeability' (1970).
- R.W. Sarsby, 'Undrained stress path characteristics of clay elements in plane strain and triaxial compression' (1970).
- W.H. Craig, 'The undrained shear strength of a boulder clay in an element and in the mass' (1970).
- S. Kay, 'An experimental and theoretical study of hollow cylinder tests on sand' (1970).
- G. Pavlakis, 'Permeability characteristics of partially saturated soils' (1970).
- M. Richardson, 'The consolidation of peat' (1971).
- R.A. Fraser, 'Applications of the finite element method in soil mechanics' (1971).
- L.D. Fuglsang, 'Preliminary centrifugal studies of the deformation and failure of uniform earth slopes' (1971).
- R.R. Barton, 'Direct measurement of interparticle friction' (1972).
- D.P. O'Halloran, 'Analysis of prestressed multi-anchored retaining walls by the finite element method' (1974).
- J.S. Al-Zubaidi, 'Behaviour of soil slopes under drawdown condition' (1975).
- J.H. Khaffaf, 'The behaviour of saturated undrained clay under cyclic loading conditions' (1975).
- G.P. Ellis, 'The behaviour of North Sea sand under cyclic loading conditions' (1975).
- M.P. Boon, 'Load tests on model ground anchors' (1975).
- J.M. McGrath, 'Model foundation simulation of North Sea gravity platforms' (1976).
- N.A. Kalteziotis, 'An experimental study of the elastic behaviour of a granular mass under constant effective stress ratios' (1976).
- E.H. Haddad, 'An experimental investigation into the effect of particle size on membrane penetration' (1976).
- Amr. E. Salami, 'Numerical solutions for pile driving' (1976).
- P.J.D. Neville-Jones, 'Model tests on North Sea oil production platforms' (1976).
- A.W. Lloyd, 'An investigation of the mechanisms of liquefaction of sands under cyclic loading' (1977).
- P.J. Felton, 'Model sand bed preparation techniques' (1978).
- A.J. Dubdub, 'Softening of clay under undrained cyclic shearing' (1979).



- Y.K. Chin, 'Elasto-plastic finite element analysis in foundation engineering' (1979).
- P.C. Suen, 'Differential and integral methods of pile analysis' (1980).
- N.M. Salim, 'Effect of rate of loading on offshore foundations' (1981).
- J.A. Kachachi, 'The behaviour of normally and overconsolidated clays under cyclic loading' (1981).
- N.Y. Khourshid, 'The effect of viscous pore fluid on the cyclic strength of sand' (1981).
- T.C. Kiang, 'The influence of geometric non-linearity in geomechanics' (1981).
- W.Q. Brook-Hart, 'Time stepping methods for linear dynamic structures' (1982).
- E.E. Heshmati, 'Static and dynamic analysis of offshore structures' (1983).
- G.B. Kachachi, 'The behaviour of clays under reversed undrained triaxial cyclic loading' (1983).
- A. Mokrani, 'Rate effects in cohesive soils' (1983).
- T.Y. Wong, 'The behaviour of laterally loaded piles in clay' (1983).
- D.C.E. Oldham, 'Lateral load tests on piles' (1983).
- M.D. Higham, 'Models of jack-up rig foundations' (1984).

The following theses were submitted to the University of Manchester by Ph.D. students under the supervision of Peter Rowe. Copies of all the theses are available in the John Rylands University Library, although they do not form part of the archive.

- D. Bond, 'The use of model tests for the prediction of settlement under foundations in dry sand' (1956).
- J. Purushottam, 'Stability of earth masses by electronic digital computer' (1960).
- D.H. Shields, 'The influence of vertical sand drains and natural stratification on consolidation' (1963).
- M.A. El-Sohby, 'The behaviour of particulate material under stress' (1964).
- K. Peaker, 'Passive earth pressure measurements' (1964).
- R.M.F. Isaacs, 'Active earth pressure of sand on a rigid translating wall' (1967).
- J.P. James, 'Stress-displacement relationship for sand subjected to passive pressure' (1967).
- A.O. Madedor, 'Consolidation characteristics of compacted clay' (1967).
- A.J. Khayatt, 'Some incremental stress-strain relations for sand' (1967).
- P.V. Parikh, 'The shearing behaviour of sand under axisymmetric loading' (1967).
- N.A. Younan, 'Consolidation of layered clays' (1968).



- W.B. Wilkinson, 'Permeability and consolidation measurements in clay soils' (1968).
- P.L. Berry, 'The consolidation of peat and clay' (1969).
- A.P. Tyrrell, 'Consolidation properties of composite soil deposits' (1969).
- A. Senthival, 'Passive resistance of sand to lateral displacement' (1969).
- G.R. Sides, 'Pore pressure and volume change characteristics of compacted clay' (University of Salford Ph.D. thesis, 1970).
- P.Y.L. Tong, 'Plane strain deformation of sands' (1970).
- J.A. Cheetham, 'The influence of fabric on the consolidation properties of clay soils' (1971).
- G.P. Karunaratne, 'Fabric analysis of some natural soils in relation to permeability' (1971).
- U. Birder, 'Constant head permeability measurements on compressible soils' (1972).
- R.J.W. McDermott, 'Deformation characteristics of sand under axisymmetric loading' (1972).
- J.E. West, 'An investigation into the influence of specimen size on the undrained shear strength of undisturbed clays' (1972).
- G. Subrahmanyam, 'Non-linear consolidation behaviour of saturated soils' (1973).
- W.H. Craig, 'Model studies of the stability of clay slopes' (1974).
- N.M. Al-Mosawy, 'Plane strain of sand in model tests' (1974).
- R. Hobbs, 'Finite element analyses of centrifugal soil slopes' (1975).
- S. Yildirim, 'Centrifuge tests of cuttings in clay' (1976).
- G. Pavlakis, 'An investigation into the performance of a model earth dam' (1976).
- F. Molenkamp, 'Static and dynamic analysis of off-shore gravity structures' (1977).
- J.H. Khaffaf, 'Weakening of undrained saturated clays under cyclic triaxial stress' (1978).
- A.C.S. Wright, 'Silos - model and field studies' (1979).
- N.K.S. Al-Saoudi, 'Offshore gravity platform model foundations' (1979).
- R.W. Sarsby, 'The deformation behaviour of particulate media subjected to constant stress ratio stress paths' (1979).
- R.M. Thomas, 'Numerical solution in differential equations arising in engineering' (1979).
- D.V. Griffiths, 'Finite element analyses of walls, footings and slopes' (1980).
- Y.K. Chow, 'Dynamic behaviour of piles' (1981).



- S.K. Sabagh, 'Model pile tests in sand using the centrifuge' (1983).
- W.T.P. To, 'Dynamic response of footings and piles' (1985).
- B. Gilvary, 'Element by element methods for heat conduction problems' (1986).
- M.O. Odiowei, 'Mathematical analysis of numerical methods for dynamic structural vibration problems' (1986).
- M.D. Lambson, 'The behaviour of axially loaded piles in clay' (1987).
- S.W. Wong, 'Element-by-element methods in transient analysis' (1987).
- J.H. Kan, 'Behaviour of laterally loaded piles' (1987).
- C.O. Li, 'Finite element analyses of seepage and stability problems in geomechanics' (1988).
- D.A. Shuttle, 'Numerical modelling of localisation in soils' (1988).
- A. Mokrani, 'Centrifuge and finite element modelling of buried flexible culverts' (1988).
- D.K.H. Ho, 'Analyses of geotechnical construction by the finite element method' (1989).
- K. Tani, 'Stability of skirted gravity foundations on very soft clay' (1990).
- D.J. Kidger, 'Visualization of finite element eigenmodes and three dimensional plasticity' (1990).
- B.K. Huat, 'Simulation of field trial structures' (1991).

**Reference and contact details:** PWR/5/1

## Sheet Pile Walls

**Dates:** 1948–1957

**Extent:** 6 items.

### Scope and Content:

This series comprises notebooks and files of notes compiled by Rowe in the 1950s, relating to sheet pile walls. Rowe's research in this field culminated in the publication of his major paper, 'Anchored sheet pile walls' in the *Proceedings of the Institution of Civil Engineers* (1952).

**Reference and contact details:** PWR/5/1/1

## Volume of research notes

**Dates:** c 1948

**Extent:** 1 hard-back volume. Condition: spine damaged.



**Scope and Content:**

The volume contains MS notes on soil mechanics, mostly summarizing publications on the subject from 1932–1948. Includes notes on compression tests on clay soils, apparatus for measuring the shear strength of soils, settlement analysis of engineering structures, earth pressure of flexible walls, gravity bulkheads and culverts.

**Related Units of Description:**

See also PWR/6/3 for notes which Rowe compiled when formulating ideas for his text book (not completed). These take a similar form, giving details of current research on soil mechanics.

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**Reference and contact details:** PWR/5/1/2

**Volume of research notes**

**Dates:** 1950s

**Extent:** 1 hard-back volume, 1 sheet.

**Scope and Content:**

Volume containing notes on flow and fracture of materials, budge circuits and sheet steel piling. At the back of the volume are notes on statistical mechanics.

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**Reference and contact details:** PWR/5/1/3

**Volume of notes on sheet pile wall co-efficients**

**Dates:** n.d. [c 1950]

**Extent:** 1 hard-back volume, 41 sheets . Condition: some damage to the spine of the volume.

**Scope and Content:**

Volume and loose pages containing calculations and graphs. One page entitled 'Sheet pile subject to passive force at top'.

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**Reference and contact details:** PWR/5/1/4

**'Anchored sheet pile retaining walls'**

**Dates:** 1952x

**Extent:** 1 folder.

**Scope and Content:**

Design procedures based on Rowe's research, with worked examples.



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**Reference and contact details:** PWR/5/1/5

## **Notes on sheet pile wall research**

**Dates:** Aug–Sep 1952

**Extent:** 5 soft-back volumes.

**Scope and Content:**

Exercise books with notes on relaxation, cantilever pile theory, theory of concrete pavements and sheet piles.

**Archival History:**

These volumes were not kept with the rest of Rowe's papers, but remained in the Department of Engineering of the University of Manchester.

**Archival History:**

The volumes were subsequently deposited by Dr W.H. Craig of the Department of Engineering.

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**Reference and contact details:** PWR/5/1/6

## **Notes on sheet pile walls at failure**

**Dates:** 1956–1957

**Extent:** 1 folder.

**Scope and Content:**

File entitled 'sheet pile walls at failure, dense sands, compressible subsoil', comprising sheet piling data sheets and graphs of results.

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**Reference and contact details:** PWR/5/2

## **The Rowe Consolidation Cell and Ring Shear Apparatus**

**Dates:** 1953–1986

**Extent:** 12 items.

**Scope and Content:**

In the 1950s Rowe began work on the consolidation behaviour and permeability of clays, initially using samples from the Derwent Reservoir site and the Manchester Ship Canal deposit grounds. Existing equipment proved inadequate, and so Rowe developed at Manchester the Rowe Consolidation Cell. This enclosed the sample between the body of the cell and a convoluted upper rubber membrane, allowing the hydraulic pressure to act across a membrane. This achieved uniformity of loading and allowed the testing of samples of up to 0.5 m. A



detailed analysis of the uses of the cell can be found in Peter W. Rowe and Laing Barden, 'A new consolidation cell', *Géotechnique*, vol. 16 (1966).

The ring shear apparatus was designed to measure the 'residual strength' of drained soils, i.e. the lowest shearing resistance, when a shear plane is formed and sliding continues on that plane. The load was applied centrally to the cell body through a steel sphere and machined spigot.

Both the ring shear apparatus and the Rowe Consolidation Cell were developed by Rowe at Manchester and manufactured commercially by the Armfield Hydraulic Engineering Company Limited of Ringwood, Hampshire. Rowe also provided detailed instruction manuals.

The series comprises diagrams of Rowe Cells; an instruction manual and commercial catalogues issued by Armfield Hydraulic Engineering; and correspondence relating to manufacturing, marketing and patent issues.

#### **Related Units of Description:**

See also PWR/4/2/7/94.

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**Reference and contact details:** PWR/5/2/1

### **Diagram of a triaxial cell**

**Dates:** 21 Oct 1953

**Extent:** 1 design drawing. 50 x 75 cms (h x w).

#### **Scope and Content:**

Diagram based on Building Research Station design drawing no. 489, produced by the Clockhouse Engineering Ltd. Drawing No.V. 7021.

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**Reference and contact details:** PWR/5/2/2

### **Diagram of the Rowe cell**

**Dates:** 12 Jan 1967

**Extent:** 1 design drawing. 75 x 100 cms (h x w). Condition: water damage to the diagram has blurred some of the writing.

#### **Scope and Content:**

Diagram of the 10-inch diameter consolidation cell, produced by the Armfield Hydraulic Engineering Company. Drawing No. EH 8955 G.

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**Reference and contact details:** PWR/5/2/3

### **Instruction manual**



**Dates:**n.d. [1960s]

**Extent:** 1 volume.

**Scope and Content:**

Draft copy of the instruction manual produced by the Armfield Technical Equipment Division for the Rowe Consolidation Cell.

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**Reference and contact details:** PWR/5/2/4

## Catalogues

**Dates:**n.d. [1960s]

**Extent:** 4 sheets.

**Scope and Content:**

Armfield catalogues for the Rowe Consolidation Cell, listing the advantages of the cell, with photographs (issues 1–3). Armfield catalogue for the ring shear apparatus (issue 1).

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**Reference and contact details:** PWR/5/2/5

## Correspondence

**Dates:**25 Feb 1969–24 Jun 1986

**Extent:** 2 folders.

**Scope and Content:**

Correspondence between Rowe and Armfield Engineering Limited, relating to the marketing of the ring shear apparatus and the Rowe Consolidation Cell.

**Arrangement:**

Divided into 2 folders: (1) 1969–1970, (2) 1971–1986.

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**Reference and contact details:** PWR/5/2/6

## Letter

**Dates:**18 Jul 1972

**Extent:** 1 sheet.

**Scope and Content:**

Letter from Laing Barden to Rowe, relating to Barden's efforts to promote sales of the Rowe cell.

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**Reference and contact details:** PWR/5/2/7

## **Letter**

**Dates:** 9 Aug 1977

**Extent:** 1 sheet.

**Scope and Content:**

Letter from Engineering Laboratory Equipment Limited to Rowe, concerning Rowe's comments on the specification of the Rowe cell, detailed in the 5th edition catalogue.

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**Reference and contact details:** PWR/5/2/8

## **Correspondence**

**Dates:** 27 Oct–5 Nov 1978

**Extent:** 2 sheets.

**Scope and Content:**

Correspondence between Rowe and Fairclough Civil Engineering Ltd, with Rowe's comments on the Bromhead ring shear equipment, manufactured by Wykeham Farrance.

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**Reference and contact details:** PWR/5/2/9

## **Engineering Laboratory Equipment Ltd file**

**Dates:** 1981–1982

**Extent:** 2 pieces.

**Scope and Content:**

The file contains design drawings of the ELE – Rowe Consolidation Cell and correspondence concerning collaboration at the expiry of Armfield's patent for the Cell.

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**Reference and contact details:** PWR/5/2/9/1

## **Diagrams of the ELE–Rowe Cell**

**Dates:** 19 Aug 1981–3 Feb 1982

**Extent:** 3 design drawings. 75 cm x 100 cm (h x w).

**Scope and Content:**

All drawn by S. Whitman of Engineering Laboratory Equipment Limited.

/1 Diagram of the 254 mm ELE– Rowe cell (SP 1179–D-001), 17 August 1981.



/2 Diagram of the 76 mm ELE – Rowe cell (SP 1177–D-001), 2 September 1981.

/3 Diagram of the 151.4 mm ELE – Rowe cell (SP 1178–D-001), 3 February 1981.

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**Reference and contact details:** PWR/5/2/9/2

## **Correspondence**

**Dates:** 2 Apr–17 Dec 1982

**Extent:** 1 folder.

### **Scope and Content:**

Correspondence between Rowe, Engineering Laboratory Equipment Limited and Armfield Technical Education Company, concerning their intended collaboration following the expiry of the Armfield patent no. 1144158.

The file also includes an undated copy of the agreement between Rowe and ELE as to marketing rights of the apparatus and a draft of the ELE operating instructions.

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**Reference and contact details:** PWR/5/2/10

## **Letter**

**Dates:** 3 Dec 1981

**Extent:** 1 sheet.

### **Scope and Content:**

From J.J. Brady of the University of Melbourne to Rowe, asking for the calculations for the Rowe Consolidation Cells, as the University was intending to manufacture them in Australia.

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**Reference and contact details:** PWR/5/2/11

## **Letter**

**Dates:** 1 Nov 1983

**Extent:** 29 sheets.

### **Scope and Content:**

From Gammon (Hong Kong) Limited to Armfield Technical Education Co. Ltd, concerning problems when conducting equal strain consolidation tests with double drainage in the vertical direction. With copies of the test results.

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**Reference and contact details:** PWR/5/2/12

## List of service equipment for consolidation cells

**Dates:** n.d.

**Extent:** 2 sheets.

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**Reference and contact details:** PWR/5/3

## Dams and Reservoirs

**Dates:** 1960-1983

**Extent:** 5 items.

### Scope and Content:

This series comprises research data on various aspects of the design and construction of dams and reservoirs. The data particularly concerns radial flows to wells and dewatering bore-holes, falling head permeability tests on piezometers, dam design details and reservoir clays. There are also notes on sample clays from Derwent Reservoir and elsewhere.

### Arrangement:

The papers were found loose, and were sorted by Mr John Scriven.

### Related Units of Description:

For papers relating to Rowe's consultancy work on dams and reservoirs, see PWR/4/2/1.

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**Reference and contact details:** PWR/5/3/1

## Data

**Dates:** 1960-1963

**Extent:** 24 sheets.

### Scope and Content:

Relating to radial flow to wells (pumped) or dewatering bore-holes. Includes extract from an article on Rutledge on relief walls, *Transactions of the American Society of Civil Engineers*, vol. 112 (1947) pp. 1335-1360 and a copy of the final report on ground-watering lowering trials at Derwent Reservoir by Sunderland and South Shields Water Company, May 1960-August 1961.

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**Reference and contact details:** PWR/5/3/2

## Notes

**Dates:** n.d. [c 1960]

**Extent:** 1 folder.

**Scope and Content:**

Relating to sample tests including some at Derwent Reservoir. Includes a note book with a draft of a [lecture?] on soil sampling and pages 4, 5, 10 and 13 of a typed report.

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**Reference and contact details:** PWR/5/3/3

**Data**

**Dates:** 6 Sep 1961

**Extent:** 2 sheets.

**Scope and Content:**

Relating to falling head [permeability] tests on piezometers. With typed notes on the proof.

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**Reference and contact details:** PWR/5/3/4

**Data**

**Dates:** 1963–n.d.

**Extent:** 13 sheets.

**Scope and Content:**

Relating to dam design details Some of the notes refer to the 'Grimwith Model'. The papers include typed 'notes on drawdown with cohesionless fill', possibly used for lecturing.

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**Reference and contact details:** PWR/5/3/5

**Data on reservoir clays**

**Dates:** n.d. [1977–1978]

**Extent:** 15 sheets.

**Scope and Content:**

MS draft of a report on 'The effect of frequency upon the softening behaviour of clays under reversed cyclic loading'. With Rowe's graphs and calculations relating to clay at Grimwith, Covenham and Derwent Reservoirs.

The report was prepared for Dr Jalal Khaffaf's Ph.D., which was submitted in 1978. Rowe, who was his supervisor, used some of the results for his own work on centrifuge modelling. Khaffaf and David Proctor of the University of Manchester subsequently wrote three papers using this test data: D.C. Proctor and J.H. Khaffaf, 'Use of cyclic



element tests to assess scale models' *Journal of the Engineering Division of the American Society of Civil Engineers* (1982); D.C. Proctor and J.H. Khaffaf, 'Cyclic triaxial tests of remolded clay', *Journal of the Engineering Division of the American Society of Civil Engineers* (1984); D.C. Proctor and J.H. Khaffaf, 'Cyclic axial displacement tests on model piles in clay- technical note', *Géotechnique*, vol. 37, no. 4 (1987).

Source: Dr Khaffaf in conversation with Mr John Scriven.

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**Reference and contact details:** PWR/5/4

## The Centrifuge

**Dates:** 1968–1983

**Extent:** 4 items.

### Scope and Content:

In 1968 Peter Rowe designed a powerful centrifuge adjacent to the Simon Engineering Laboratories at the University of Manchester. It was built specifically to model dams, but by 1973 there was little demand for this type of research. However, the development of the North Sea oil and gas industry meant that a facility to test offshore platforms under cyclic loading suddenly became important and thereafter the centrifuge was primarily used for this purpose.

### Related Units of Description:

This series contains items relating only to the general use of the centrifuge at the University of Manchester. For papers relating to the use of the centrifuge to test offshore structures, see PWR/5/5.

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**Reference and contact details:** PWR/5/4/1

## Correspondence

**Dates:** 9 Dec 1968

**Extent:** 5 sheets.

### Scope and Content:

Between Rowe, the Secretary of the Aeronautical and Civil Engineering Committee of the Science Research Council and Prof. Schofield of the Public Works Engineering Division, University of Manchester. Relating to the application by Prof. Roscoe of Cambridge for a grant to build a centrifuge. Rowe comments on the application and the need for two centrifuges.

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**Reference and contact details:** PWR/5/4/2

## Newspaper cutting



**Dates:** 9 May 1973

**Extent:** 1 sheet.

**Scope and Content:**

From an unidentified [local] paper. Entitled '170 m.p.h. test for rig model'. Relating to the use of the centrifuge for testing models of oil rigs and designs of earth dams.

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**Reference and contact details:** PWR/5/4/3

## **Project announcement**

**Dates:** Feb 1978

**Extent:** 1 pamphlet.

**Scope and Content:**

For the Centrifuge facility for research in geotechnical engineering [in America].

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**Reference and contact details:** PWR/5/4/4

## **Correspondence**

**Dates:** 19 Nov 1982–21 Jan 1983

**Extent:** 2 sheets.

**Scope and Content:**

Letter from Luigi Belloni of ELC, Milan, to Rowe, asking about the possible use of the centrifuge at Manchester for investigating the stability of a dam. In his reply, Rowe states that, Belloni's request is, in fact, the first for testing dams despite the fact that,

In 1968, I [Rowe] designed the centrifuge specifically to model dams, but by 1973, it was clear that there was no demand. The offshore platform under cyclic loading became suddenly important and has been developed for testing offshore structures ever since.

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**Reference and contact details:** PWR/5/5

## **Offshore Structures**

**Dates:** 1954–1982

**Extent:** 3 sub-series (44 items).

**Scope and Content:**

This series contains papers relating to Rowe's theoretical and experimental research into offshore platforms and structures, primarily for the North Sea oil and gas industry. Much of the research involved the use of the large centrifuge at the University of Manchester (for which see PWR/5/4). Although the research was undertaken under the auspices of the



University, inevitably there was some overlap with Rowe's commercial consultancy work on offshore structures, documented in PWR/4/4. There is also information on the testing of caissons for the Oosterschelde Storm Barrier in the Netherlands.

**Arrangement:**

This series comprises two original subseries of box files, which have been retained as PWR/5/5/1 and PWR/5/5/2, followed by a third subseries of loose papers, PWR/5/5.

**Related Units of Description:**

See also the files for Rowe's offshore consultancy work in PWR/4/4.

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**Reference and contact details:** PWR/5/5/1

**Box files (1st series)**

**Dates:** 1954–1979

**Extent:** 9 items. Condition: papers in all of these files display rust marks from metal paper clips.

**Scope and Content:**

This subseries contains nine box files of papers relating to the testing of North Sea oil and gas platforms and caissons for the Oosterschelde Storm Surge Barrier in the Netherlands. The titles given below are those which were inscribed by Rowe on each box.

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**Reference and contact details:** PWR/5/5/1/1

**'Offshore platforms Signal Oil and Gas'**

**Dates:** Nov 1972– 31 Jan 1975

**Extent:** 5 folders. Condition: some of the papers have been joined with adhesive tape.

**Scope and Content:**

File of reports, plans, letters and notes concerning the offshore platform for Signal Oil and Gas in block 211/18, UK sector of the North Sea (the Thistle Field). Including correspondence between Rowe, C.A. Rykicki of Signal Oil and Gas Company, S.B. Stubbs of Taylor Woodrow Construction Limited and McClelland Engineers, who conducted the site investigation. Rowe's letters explain the progress of the testing, using the centrifuge, at the University of Manchester. There are also several photographs, both in the reports and loose, with accompanying negatives.

Signal Oil and Gas Company and its associates in the North Sea created a 2-year fellowship allowing the University of Manchester, under the direction of Rowe, to investigate soil fatigue of hard and soft clay beneath deep sea gravity platforms subject to storm wave loading. The project was referred to by Stubbs in his paper



for the Conference for Offshore Research and Development for Offshore Structures in October 1974.

**Arrangement:**

Divided into 5 folders: (1) April 1972–November 1973, (2) November 1973–March 1974, (3) April 1974, (4) May 1974–January 1975, (5) photographs.

**Related Units of Description:**

See also PWR/6/3/24–25 for further details of the papers presented at the Offshore Conference in 1974.

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**Reference and contact details:** PWR/5/5/1/2

## **'Offshore platforms Taylor Woodrow'**

**Dates:** 21 May 1973–1 Oct 1974

**Extent:** 5 folders.

**Scope and Content:**

File of reports, plans, negatives, MS notes and correspondence between Rowe and S.B. Stubbs of Taylor Woodrow Construction Limited, concerning the investigation of liquefaction of undrained sands subject to cyclic loading. Mostly relating to tests for the offshore platform for Signal Oil and Gas in block 211/18, (the Thistle Field), but also reference to platforms for Mobil in block 9/13 (the Beryl Field) and Occidental Petroleum (the Piper Field), all in the UK sector of the North Sea.

Also, a further draft of Stubb's paper for the Conference for Offshore Research and Development for Offshore Structures in October 1974.

**Arrangement:**

Divided into 5 folders: (1) May–December 1973, (2) [1973], (3) January 1974, (4) January–March 1974, (5) March–October 1974.

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**Reference and contact details:** PWR/5/5/1/3

## **'Centrifuge equipment'**

**Dates:** 12 Oct 1973–23 Oct 1979

**Extent:** 4 folders.

**Scope and Content:**

File relating to equipment purchased to carry out contract F3/2/90, an investigation into the behaviour of stiff circular model foundations when tested in the centrifuge. Correspondence between Rowe and other staff at the Simon Engineering Laboratories, University of Manchester and mechanical engineering



suppliers: Mand Precision Engineering Co. Ltd, ESH Testing Ltd, Transducers Ltd, Thomas Whitaker, Dartek Ltd, LOS System, Instron, EMI Electronics Ltd and the RDP Group. Includes advertisements for the suppliers and design drawings.

**Arrangement:**

File divided into 4 folders: (1) 1973–March 1975, (2) March–July 1975, (3) August 1975–October 1979, (4) maps.

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**Reference and contact details:** PWR/5/5/1/4

## **'Offshore platforms Harris and Partners'**

**Dates:** 4 Dec 1973–17 May 1976

**Extent:** 2 folders.

**Scope and Content:**

Correspondence between Rowe and Low and Parsons Brown, Consulting Engineers, J.N. McFeeters and J.G. Patrick of Frederic R. Harris and Partners (later Harris and Partners), Consulting Engineers. Also includes an undated report by Rowe on 'the foundation stability of deep sea gravity structures' and a newspaper cutting relating to Laing Pipelines Offshore's contract with Signal Oil and Gas, 26 July 1974.

Harris and Partners were appointed to write the section 'Offshore platforms' for a report on the exploitation of UK underwater petroleum and resources, commissioned by the Department of Trade and Industry. Rowe contributed a report on soil sampling and methods of analysis to this. At the same time, Harris and Partners were also involved in the design of a long-range fixed production platform for BP Trading Development Ltd and Rowe gave advice based on his own research.

**Arrangement:**

Divided into 2 folders: (1) December 1973–July 1974, (2) August 1974–May 1976.

**Related Units of Description:**

See also PWR/3/3/18.

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**Reference and contact details:** PWR/5/5/1/5

## **'Offshore papers'**

**Dates:** 1973–1979

**Extent:** 4 folders.

**Scope and Content:**



Comprising test results on Manchester Ship Canal silt [c.1973]. With pre-prints and drafts of publications and papers relating to offshore structures, including reports 1 and 2 on 'Concrete in the oceans', submitted by G. Somerville and H.P J. Taylor to the Marine Materials Panel, the Ship and Marine Technology Requirements Board and the Department of Industry, 1974 and 5 volumes of consul information from the Rijkswaterstaat-Deltadienst Waterloopkundige Afelding, April 1977.

Also a list of amendments to Rowe's paper, 'Studies of offshore caissons founded on sand', June 1976 and a letter from Denzil Taylor Smith of the University College of North Wales, Anglesey, to Rowe relating to the use of geophysics to determine engineering properties on land and the SRC research grant application, 18 February 1977.

**Arrangement:**

Divided into 4 folders: (1) 1973-1974, (2) 1975, (3) 1976, (4) December 1976-1979.

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**Reference and contact details:** PWR/5/5/1/6

**'Eastern Scheldt'**

**Dates:** 1954-22 Sep 1975

**Extent:** 1 volume, 5 folders.

**Language:** Dutch

**Scope and Content:**

Concerning research into sea defence structures. The file comprises correspondence between Rowe, the Delft Soil Mechanics Laboratory, design drawings, results of preliminary tests of silty sand from the Manchester Ship Canal and results of tests on the model caisson, with MS notes by Rowe. Also includes reports of the Delta Commission, the Rijkswaterstaat and the Ministry of Transport and Waterstaat, 1954-1971 and Rowe's report on the primary investigation of liquefaction of undrained sands subject to cyclical shearing, with photographs and diagrams, 21 May 1973.

On 21 February 1953, the Dutch government set up the Delta Committee to look into the prevention of flooding, after a spring tide had overwhelmed existing sea defences leading to catastrophic floods and the loss of 1,850 lives. The Delta Bill, passed in 1957, set out a scheme for closing the sea inlets in the south west by the means of four massive dams in the Haringvliet, the Brouwershavense Gat, the Eastern Scheldt and the Veerse Gat, with secondary dams in the Sandkreek, the Greveling and the Volkerak. Rowe and staff at the University of Manchester were involved in the Delta Project, particularly in the testing and construction of the 9 kilometer dam to close off the Eastern Scheldt or Oosterschelde. The consultancy work, as in many cases, went hand-in-hand with Rowe's more general research into the project.

**Arrangement:**

Divided into 5 folders: (1) 1954-1971, (2) 1973, (3) August 1974, (4) August 1974-February 1975 (5) April-May 1975, (6) May-September 1975.



**Related Units of Description:**

See also Oosterschelde Storm Surge Barrier among the consultancy papers, PWR/4/3/23; and also PWR/5/5/2/3-5 below.

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**Reference and contact details:** PWR/5/5/1/7

**'Eastern Scheldt'**

**Dates:** 13 Feb-15 Oct 1975

**Extent:** 4 folders.

**Language:** Dutch

**Scope and Content:**

Comprising cyclic pile pulling tests, model tests of field test caissons and prototype stress scale tests at Oosterschelde and cyclic caisson sinking tests at Zonnemaire. Also reports, 3 photographs, several design drawings and correspondence between Rowe and E. H. de Leeuw of the Delft Soil Mechanics Laboratory.

**Arrangement:**

Divided into 5 folders: (1) February-October 1975 (2) Sub file of test results (3) June 1975, (4) July-October 1975.

**Related Units of Description:**

See also Oosterschelde Storm Surge Barrier among the consultancy papers, PWR/4/3/23; and also PWR/5/5/2/3-5 below.

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**Reference and contact details:** PWR/5/5/1/8

**'Frigg Field tests'**

**Dates:** Dec 1973-n.d.

**Extent:** 5 folders. Condition: some of the papers have been joined with adhesive tape.

**Scope and Content:**

Comprising consolidation test results and calculations, MS notes, design drawings, reports and photographs relating to the study of a Howard Doris type structure on the Frigg Field. The file contains a copy of the Offshore Technology Conference paper 2436, 'Certification of concrete gravity platforms in the North Sea', to which Rowe contributed. There are also details of a discussion on the application of the results of cyclic loading testing on clay soils to the foundation analysis of gravity structures, presented at Shell Technical Forum in February 1975.

The Frigg platform was constructed by C. G. Doris/John Howard for Total Oil Marine Limited and was settled on the seabed in September 1975. The platform

was designed as a booster station on the Frigg to Peterhead pipeline, but later it was decided to use the platform for drilling and production. Two tests were subsequently performed at Manchester University using the centrifuge to simulate loading conditions.

**Arrangement:**

Divided into 3 folders (arranged as found).

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**Reference and contact details:** PWR/5/5/1/9

**'Offshore papers'**

**Dates:** 1965–1977

**Extent:** 2 folders.

**Scope and Content:**

MS notes on Rowe's research and testing. Also reports, including a report on the technical forum 'Application of results of cyclic testing of clay soils to the foundation analysis of gravity structure' February 1975 by H.A.M. van Eekelen for Shell Research BV (confidential).

**Arrangement:**

Divided into 2 folders: (1) 1965–1966, (2) 1975–1977.

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**Reference and contact details:** PWR/5/5/2

**Box files (2nd series)**

**Dates:** Dec 1973–Dec 1979

**Extent:** 7 items. Condition: papers in all of these files, display rust marks from metal paper clips.

**Scope and Content:**

This subseries contains seven box files of papers relating to cyclic loading tests on clay soils, tests on caissons for the Oosterschelde Storm Surge Barrier in the Netherlands, and research into offshore piles and structures. The titles given below are those which were inscribed by Rowe on each box.

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**Reference and contact details:** PWR/5/5/2/1

**'Element cyclic loading tests'**

**Dates:** 21 Dec 1973–1977

**Extent:** 3 folders.



**Scope and Content:**

MS notes on cyclic research, element and model tests, with advanced sheets of test data on clay elements (Derwent and Alvingham), figures, photograph. These seem to have formed the basis of Rowe's lecture notes on 'sand liquefaction and clay softening with cyclic loading' as well some of his papers. The file includes a first draft of Kenneth L. Lee's report for McClelland Engineers on the 'Effect of cyclic loading on the strength of clay', 12 December 1973, an undated draft of D.C. Procter and J.H. Khaffaf, 'The significance of clay faction and frequency in modelling gravity structures subjected to cyclic loading', with Rowe's annotations and amendments and copies of P.W. Rowe, 'Inherent difficulties in the application of geotechnical science', *Symposium on recent developments in the analysis of soil behaviour and their application to geotechnical structures* (1975) and P.W. Rowe, W.H. Craig and D.C. Procter, 'Dynamically loaded centrifugal model foundations' *Proceedings of the 9th international conference on soil mechanics and foundation engineering* (1977).

**Arrangement:**

Divided into 3 folders: (1) test results, (2) tests and notes, (3) papers.

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**Reference and contact details:** PWR/5/5/2/2

**'Papers on cyclic loading; field and model tests'**

**Dates:** Feb 1975

**Extent:** 1 volume.

**Scope and Content:**

Report on the application of the results of cyclic testing on clay soils to the foundation analysis of gravity structure, for the forum held at the Shell Centre, London, 25-26 February 1975. Prepared by Dr J.B. Burland of the Building Research Station, Watford.

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**Reference and contact details:** PWR/5/5/2/3

**'Oosterscheldt [sic] surface caissons 1'**

**Dates:** 13 Jan 1975-24 Jun 1977

**Extent:** 6 folders.

**Language:** Dutch

**Scope and Content:**

Includes results of the *in situ* tests for the Oosterschelde caissons conducted by the Delft Soil Mechanics Laboratory at Neeltje Jans, notes made by Jan W. Boehmer and correspondence between Rowe and researchers at the Laboratory with Rowe's MS notes and calculations and typed reports on the 'research into sea defence structures' on cohesionless soils and tests on the behaviour of the prototype caisson. Also some papers relating to a conference on the design and construction of offshore facilities at Massachusetts Institute of Technology, 22-24 June 1977,



with overheads [used by Rowe at the conference?].

The Delft Soil Mechanics Laboratory drew up a program to study the soil mechanics problems of the caisson-dam project, which had similarities to gravity type structures for offshore oil production platforms. Experts were consulted to predict the mechanical behaviour of the large caissons under actual loading conditions. A test caisson was loaded in September 1975 and the evaluation of the test provided a guide for the prediction methods used for the prototype caissons.

**Arrangement:**

Divided into 5 folders: (1) *in situ* tests, 1975, (2) model tests, 1975, (3) general information, July 1975, (4) general information and notes, 1975, (5) general and conference papers, n.d. and 1977.

**Related Units of Description:**

See also Oosterschelde Storm Surge Barrier among the consultancy papers, PWR/4/3/23; and also PWR/5/5/1/6-7 above.

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**Reference and contact details:** PWR/5/5/2/4

## **'Oosterscheldt [sic] surface caissons 2'**

**Dates:** 13 Jun 1975-Sep 1977

**Extent:** 4 folders.

**Language:** Dutch

**Scope and Content:**

Includes Rowe's reports on 'research into sea defence structures on cohesionless soils: closure Oosterscheldt' on the centrifuge model tests simulating conditions for the field test caisson at Oosterschelde, 13 June-9 December 1975. Some of these duplicate information in PWR/5/5/2/1, but together form a more coherent set of reports. Also, there are several reports from the Delft Soil Mechanics Laboratory and the Rijkswaterstaat Projectgroep Oosterschelde and some MS notes by Rowe.

**Arrangement:**

Divided into 4 folders: (1) 1975, (2) 1976, (3) February 1977, (4) May-September 1977.

**Related Units of Description:**

See also Oosterschelde Storm Surge Barrier among the consultancy papers, PWR/4/3/23; and also PWR/5/5/1/6-7 above.

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**Reference and contact details:** PWR/5/5/2/5

## **'Oosterscheldt [sic] deep caissons 1'**



**Dates:** 16 Dec 1975–Jun 1977

**Extent:** 1 folder.

**Scope and Content:**

Concerning Kats tests for the Oosterschelde caissons. Includes notes made by Rowe and Jan W. Boehmer on the centrifuge prediction for the Kats test results, communications from the Rikswaterstaat Deladienst and a report by another expert, T. William Lambe of Carlisle, Massachusetts, USA, June 1977.

The experts visited Holland in November 1975 to observe the tests.

**Related Units of Description:**

See also Oosterschelde Storm Surge Barrier among the consultancy papers, PWR/4/3/23; and also PWR/5/5/1/6–7 above.

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**Reference and contact details:** PWR/5/5/2/6

## **'Fugro-Cesco pile research'**

**Dates:** 26 Sep 1976–13 Dec 1979

**Extent:** 2 folders.

**Scope and Content:**

Relating to research for Fugro-Cesco, Consulting Geotechnical Engineers and a co-ordinated programme of research into the design of offshore piles, funded by the Department of Energy. Including MS notes, correspondence and proposals, also documents relating the purchase of equipment from RDP Howden in order to carry out the research project.

**Arrangement:**

Divided into 2 folders: (1) 1976–1977, (2) 1978–1979.

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**Reference and contact details:** PWR/5/5/2/7

## **'Copies of reprints and publications on offshore structures for distribution'**

**Dates:** 1979–n.d.

**Extent:** 1 folder.

**Scope and Content:**

Letter from Rowe to the Building Research Establishment, with the first interim report on the research contract into piled jacket structures, 6 June 1979 with MS notes. Also typed notes on 'modelling in geotechnical engineering', a list of Rowe's publications and typescript drafts with annotations, figures and 2



photographs for Rowe, 'Inherent difficulties in the application of geotechnical science', *Proceedings of the symposium on recent developments in the analysis of soil behaviour and their application to geotechnical structure*, University of New South Wales, Australia (1975). and Rowe and W.H. Craig, 'Studies in offshore caissons founded on Oosterschelde sand', *Design and construction of offshore structures*, (London: Institution of Civil Engineers, 1976).

#### **Appraisals:**

The box file contained reprints of papers relating to offshore structures, all of which are on open access in the John Rylands Library.

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**Reference and contact details:** PWR/5/5/3

## **Other papers relating to offshore research**

**Dates:** 1973–1982

**Extent:** 28 items.

#### **Scope and Content:**

The majority of these papers relate to a research project for the Department of Energy on 'Displacement and safety predictions of offshore structure foundations by centrifuge models'. The contract was initially for 3 years, from 1979, with the final report to be submitted in September 1982.

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**Reference and contact details:** PWR/5/5/3/1

## **Notes**

**Dates:** 10 Sep 1973–n.d.

**Extent:** 2 folders.

#### **Scope and Content:**

MS notes, reports and design drawings relating to the design of sea platforms. Also includes correspondence between Rowe, L. N. Henderson, Consulting Engineers and Taylor Woodrow Construction Ltd, September 1973–May 1974 and a draft of lecture notes on 'Sand liquefaction and clay softening with cyclic loading', February 1974. Also copies of undated extracts from the North Sea Forties Field drilling-production platform study relating to Condeep and documents on the updating of expert evidence on offshore platform design, produced by Frederic H. Harris and Partners, Consulting Engineers for the Department of Energy, June 1974.

Rowe was commissioned by L. N. Henderson Associates, Consulting Engineers to produce a desk study of foundation stability in the North Sea.

#### **Arrangement:**

Divided into 2 folders: (1) 1973–May 1974, (2) June 1974–n.d.



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**Reference and contact details:** PWR/5/5/3/2

## **Untitled file**

**Dates:** 11 Mar 1974-13 Oct 1976

**Extent:** 2 folders.

### **Scope and Content:**

Relating to ground engineering problems in North Sea structures. Includes minutes of a meeting between Rowe and representatives of most of the major oil companies, 11-12 March 1974, foundations studies and test data, MS notes and correspondence between Rowe, Shell UK Exploration and Production Ltd, Lloyd's Register of Shipping, McClelland Engineers Inc. and Total Campagne Francaise des Petroles.

The file also includes a report by Rowe of a 'centrifuge model study of the performance of a Howard Doris type structure on surface strata related to the Frigg Field' [block 9/10], with photographs and negatives, 19 May 1975. The negatives were in a folder marked 'Part of thesis P. J. Felton'.

### **Arrangement:**

Divided into 2 folders: (1) 1974-19 May 1975, (2) 20 May 1975-1976.

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**Reference and contact details:** PWR/5/5/3/3

## **'Prediction of foundation movements; centrifuge model tests of gravity structures'**

**Dates:** 22 Jul 1975

**Extent:** 12 sheets.

### **Scope and Content:**

Report to Rowe by McClelland Engineers Inc., with MS annotations by Rowe.

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**Reference and contact details:** PWR/5/5/3/4

## **'Drammen clay'**

**Dates:** 9 Mar 1976-Jul 1978

**Extent:** 1 folder.

### **Scope and Content:**

File of correspondence between Rowe and Kaare Høeg, Director of the Norwegian Geotechnical Institute, 1976. With MS notes and Rowe's 'Comparison of NGI predictions of centrifuge models of circular platforms on Drammen clay

with test data', July 1978.

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**Reference and contact details:** PWR/5/5/3/5

## **'Drammen results'**

**Dates:** 1975–8 Nov 1978

**Extent:** 1 folder.

### **Scope and Content:**

File of correspondence between Rowe and the Norwegian Geotechnical Institute relating to centrifuge testing of Drammen clay, with a copy of Rowe's 'Notes on centrifugal models of circular platforms on Drammen clay', July 1978 and an annotated copy of Rowe, 'Displacement and failure modes of model offshore gravity platforms founded on clay', *Conference on Offshore Europe 75, Aberdeen* (1975).

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**Reference and contact details:** PWR/5/5/3/6

## **Research proposal**

**Dates:** n.d. [1978]

**Extent:** 23 sheets.

### **Scope and Content:**

Proposal by the Building Research Establishment (Geotechnics Division) for research into the behaviour of piles as anchorages for buoyant structures. With a page of MS notes by Rowe

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**Reference and contact details:** PWR/5/5/3/7

## **Research contract on displacement and safety predictions**

**Dates:** 19 Apr 1978

**Extent:** 1 folder.

### **Scope and Content:**

MS drafts of Rowe's 5th interim report for the Building Research Establishment in connection with a research contract [for the Department of Energy] on the 'Displacement and safety predictions of offshore structure foundations by centrifuge models', with 14 photographs, test results and a covering letter from Rowe to Hugh St John.

The file was originally inscribed 'Namir K. Said Al-Saoudi figs and photographs' and 'deformation zones'.



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**Reference and contact details:** PWR/5/5/3/8

## **'Compilation report no. 1 on centrifugal model test data'**

**Dates:** Apr 1978

**Extent:** 1 folder. Condition: 1st page torn.

**Scope and Content:**

Rowe's typed report.

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**Reference and contact details:** PWR/5/5/3/9

## **Notes**

**Dates:** Jun 1978–Nov 1979

**Extent:** 2 folders.

**Scope and Content:**

MS and typed notes by Rowe and others, including W.H. Craig and David Proctor of Manchester University, graphs and test results of tests of Mersey River sand, Manchester Ship Canal silt bed, Drammen clay, Dutch sand and soil at Grimwith and Alvingham reservoir sites. By Rowe and W.H. Craig. This also contains part of a draft of the PWR/5/5/3/13.

**Related Units of Description:**

See also 'Sample piles in sand', PWR/5/5/3/13.

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**Reference and contact details:** PWR/5/5/3/10

## **'Future tests'**

**Dates:** Oct 1978–Jun 1979

**Extent:** 1 folder.

**Scope and Content:**

MS and typed notes by Rowe and others including David Proctor of Manchester University, and test results on tests of Mersey River Sand, Manchester Ship Canal silt bed, Drammen clay and Dutch sand. This is the continuation of the above papers.

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**Reference and contact details:** PWR/5/5/3/11



## **'Pile groups in clay: 7 piles 0.019 mm lateral and vertical'**

**Dates:** Jun–Nov 1979

**Extent:** 1 folder.

### **Scope and Content:**

File of Rowe's MS notes and graphs relating to pile testing, with an undated typed report on 'Model studies of a proposed foundation design' in the Brae Field Block 16/7. Also letters from the Pan Ocean Oil Corporation to Rowe concerning the model tests, 27 June–16 July 1979.

### **Related Units of Description:**

See also the Brae B Field files among the Consultancy papers, PWR/4/4/6.

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**Reference and contact details:** PWR/5/5/3/12

## **'Pile groups: 9 piles 0.008 mm vertical loading in clay'**

**Dates:** 1979–25 Jan 1980

**Extent:** 1 folder.

### **Scope and Content:**

File of Rowe's MS notes on pile testing. Also a report by Taylor Woodrow Construction on 'P.O.R.P. – Stage 2, Telescopic Arcolprod with inverted joint, design on piled foundations', 11 June 1979.

### **Related Units of Description:**

See also the Arcolprod files among the Consultancy papers, PWR/4/4/1.

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**Reference and contact details:** PWR/5/5/3/13

## **'Sample piles in sand'**

**Dates:** 29 Nov 1979–n.d.

**Extent:** 1 folder.

### **Scope and Content:**

Report on pile testing on clay and sand beds. [in connection with the Building Research Establishment proposal]. With MS notes by W.H. Craig of the University of Manchester.

### **Related Units of Description:**

See also notes in PWR/5/5/3/9.

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**Reference and contact details:** PWR/5/5/3/14

## **Photographs**

**Dates:** n.d. [c 1979]

**Extent:** 12 photographs.

**Scope and Content:**

Of soil samples, probably connected with the above testing.

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**Reference and contact details:** PWR/5/5/3/15

## **'Cambridge model piles'**

**Dates:** Dec 1979–28 Nov 1980

**Extent:** 1 folder.

**Scope and Content:**

Report on the laboratory model pile tests prepared by M. F. Randolph, J. S. Steenfelt and C. P. Wroth of the University of Cambridge as part of the Amoco ESACC project, December 1979, forwarded to Rowe by Hugh St John of the Building Research Establishment.

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**Reference and contact details:** PWR/5/5/3/16

## **Various notes**

**Dates:** 1979

**Extent:** 1 folder.

**Scope and Content:**

Rowe's notes relating to the Hutton pile group tests. With a draft of R. Butterfield and N. Ghosh 'A linear elastic interpretation of model tests on single piles and groups of piles in clay', *International conference on numerical methods in offshore piling* (1979), which concerned the Hutton field.

**Related Units of Description:**

See also the Hutton Field Tension Leg Platform file among the Consultancy papers, PWR/4/4/13.

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**Reference and contact details:** PWR/5/5/3/17



## **Diagrams**

**Dates:** n.d.

**Extent:** 4 sheets.

**Scope and Content:**

Strays of evolution of a diagram on tension pile performance. Possibly relating to the Hutton Field.

**Related Units of Description:**

See also the Hutton Field Tension Leg Platform file among the Consultancy papers, PWR/4/4/13.

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**Reference and contact details:** PWR/5/5/3/18

## **Notes**

**Dates:** Jan 1980–26 Feb 1981

**Extent:** 14 sheets.

**Scope and Content:**

Rowe's notes and correspondence between Rowe and Taylor Woodrow Construction Ltd relating to test programme on pile group at Cowden.

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**Reference and contact details:** PWR/5/5/3/19

## **'Piles at Cowden'**

**Dates:** 19 Mar 1980–n.d.

**Extent:** 1 folder.

**Scope and Content:**

File of correspondence between Rowe and Taylor Woodrow Construction Ltd, test results and Rowe's MS notes relating to the jacking of a circular pile at Cowden. A single circular pile was jacked into the boulder clay at Cowden, North Humberside. After jacking, the pile was extracted and returned for remedial work on instrumentation.

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**Reference and contact details:** PWR/5/5/3/20

## **Soil bed preparation data at Cowden**

**Dates:** n.d.

**Extent:** 1 folder.

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Reference and contact details: PWR/5/5/3/21

## **Rowe's notes on single and group pile tests**

**Dates:** n.d.

**Extent:** 5 sheets.

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Reference and contact details: PWR/5/5/3/22

## **Correspondence and papers**

**Dates:** 15 Feb 1980

**Extent:** 1 folder.

### **Scope and Content:**

Relating to cyclic pile testing. Includes letters from Ronald F. Scott of the California Institute of Technology, N. Krebs Ovesen of Danmarks Ingeniørakademi, Hugh St John of the Building Research Establishment and F. L. Beringen of Fugro, Geotechnical Engineers and Surveyors. With Rowe's notes on F. L. Beringen, D. Windle and W. R. Van Hooydonk, 'Results of loading tests on driven piles in sand', *Recent developments in the design and construction of piles* (London: Institution of Civil Engineers, 1979).

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Reference and contact details: PWR/5/5/3/23

## **Letter**

**Dates:** 7 Apr 1981

**Extent:** 17 sheets.

### **Scope and Content:**

From Exxon Production Research Company to Rowe, inviting him to submit a proposal for performing the centrifuge test programme in connection with obtaining foundation behaviour data for gravity base structures.

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Reference and contact details: PWR/5/5/3/24

## **Notes and diagrams relating to piles and caissons under load**

**Dates:** Aug 1981

**Extent:** 1 folder.

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Reference and contact details: PWR/5/5/3/25



## **Load control capabilities using computer**

**Dates:** Nov 1981

**Extent:** 2 sheets.

### **Scope and Content:**

W.H. Craig's notes on the possibilities of computer control of loading for models in the centrifuge. Probably for the University's contract with Gulf Canada, but could be have been used for Hutton tests.

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**Reference and contact details:** PWR/5/5/3/26

## **Statement of research needs in offshore foundation design**

**Dates:** Aug 1982

**Extent:** 15 sheets.

### **Scope and Content:**

Prepared by the Society for Underwater Technology Geotechnics Committee.

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**Reference and contact details:** PWR/5/5/3/27

## **Letter (copy)**

**Dates:** 13 Sep 1982

**Extent:** 1 sheet.

### **Scope and Content:**

From Hugh St John of the Building Research Establishment to J.N. Mansfield of the Department of Energy relating to a possible extension of the Manchester University contract: displacement and safety predictions of offshore structure foundations by centrifuge models, which was due for completion in March 1982. St John also mentions the simulated tension pile tests, using reconsolidated Cowden clay.

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**Reference and contact details:** PWR/5/5/3/28

## **Diagrams**

**Dates:** n.d. [1982]

**Extent:** 9 sheets.

### **Scope and Content:**

From work by W.H. Craig on piles. Some of these were for the report on piled jacket structures to the Department of Energy, September 1982 and some from attached offprint of A.S. Cakmak, A.M. Abdel-Ghaffar and C.A. Brebbia 'Soil Dynamics and Earthquake Engineering' *Proceedings of the conference on soil dynamics and earthquake engineering, Southampton (1982)*.

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Reference and contact details: PWR/6

## **Publications and Technical Papers**

**Dates:** 1940–1994

**Extent:** 3 series (114 items).

### **Scope and Content:**

This subfonds comprises drafts and proofs of some of the many geotechnical papers produced by Peter Rowe, with associated notes and correspondence; drafts of unpublished monographs prepared by Rowe, with notes and correspondence; and drafts and proofs of papers written by others but submitted to Rowe for comment or review.

### **Arrangement:**

The subfonds PWR/6 contains the following series:

/1 Papers written by Rowe, 1954–1994

/2 Unpublished books written by Rowe 1960s–1992

/3 Drafts of papers written by others, which Rowe advised on, reviewed or in some way contributed to, 1940–1994.

The series containing papers written by Rowe himself is the most voluminous of the three series, and has been further broken down so that each of the publications is a sub-series, with constituent documents.

### **Related Units of Description:**

The subject matter of many of Rowe's papers relates closely to the preceding Research section, PWR/5.

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Reference and contact details: PWR/6/1

## **Papers written by Rowe**

**Dates:** 1954–1994

**Extent:** 25 subseries (54 items).

### **Scope and Content:**

This subseries contains drafts of some of the many technical papers published by Rowe, together with preparatory notes, data and diagrams, proof copies and correspondence. A complete list of Rowe's papers can be found at the beginning of this catalogue.

### **Arrangement:**

The items are arranged chronologically, by date of publication.

**Related Units of Description:**

See also PWR/9/1/1 (Institution of Civil Engineers) for a correspondence file containing letters relating to publications and some drafts and PWR/10/3/1-2 (Scientific correspondence) for correspondence relating to Rowe's early research and papers.

---

**Reference and contact details:** [PWR/6/1/1]

**['A stress strain theory for sand']**

**Scope and Content:**

[Published in *Géotechnique* (1954)]

**Related Units of Description:**

For correspondence with Karl Terzaghi *et al* relating to Rowe's thesis and papers on anchored sheet pile walls, see PWR/10/3/. The file of correspondence also includes some drafts and copies of discussions following publication of the paper.

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**Reference and contact details:** [PWR/6/1/2]

**['Measurements on model strutted sheet pile excavations']**

**Scope and Content:**

[Published in the *Proceedings of the 5th International Conference on Soil Mechanics, Paris* (1961) ].

**Related Units of Description:**

For a correspondence file containing a draft of this article by Rowe and A. Briggs (an M.Sc. student at the University of Manchester), see PWR/10/3/2.

---

**Reference and contact details:** PWR/6/1/3

**'Sheet pile walls at failure'**

**Dates:** 1955-1956

**Extent:** 3 items.

**Scope and Content:**



Published in the *Proceedings of the Institution of Civil Engineers*, vol. 5 no. 3 (1956).

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**Reference and contact details:** PWR/6/1/3/1

## **Test results used in the paper**

**Dates:** n.d. [c 1955]

**Extent:** 1 folder.

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**Reference and contact details:** PWR/6/1/3/2

## **Details of a sheet pile wall at Brewers Quay**

**Dates:** Mar–31 Jul 1956

**Extent:** 5 sheets. 1 design drawing.

### **Scope and Content:**

Probably used in writing 'Sheet pile walls at failure'. Papers include a letter from Rowe to Scott and Wilson, Kirkpatrick and Partners with advice and details of the method of construction of the river wall, MS notes, a bore-hole log and a preliminary drawing of the proposed office block at Brewers Quay.

---

**Reference and contact details:** PWR/6/1/3/3

## **Typescript draft**

**Dates:** 1956

**Extent:** 1 folder.

### **Scope and Content:**

Including photographs and figures. With a typescript draft of Rudolf Briske's contribution to the correspondence following the paper, which was published in *Proceedings of the Institution of Civil Engineers*, vol. 6 (1957).

---

**Reference and contact details:** PWR/6/1/4

## **'Sheet pile walls in clay'**

**Dates:** 1957

**Extent:** 1 item.

### **Scope and Content:**

Published in the *Proceedings of the Institution of Civil Engineers*, vol. 7 (1957).

---

**Reference and contact details:** PWR/6/1/4/1

## **File**

**Dates:** Jul 1957

**Extent:** 1 folder.

### **Scope and Content:**

Entitled 'Theory of walls in clay'. Containing MS draft of the paper, with calculations.

---

**Reference and contact details:** PWR/6/1/5

## **'Limit design of flexible walls'**

**Dates:** 1957

**Extent:** 1 item.

### **Scope and Content:**

Published in *Proceedings of the Midlands Soil Mechanics and Foundation Engineering Society*, vol. 1 No. 2 (1957).

---

**Reference and contact details:** PWR/6/1/5/1

## **Proof copy**

**Dates:** Feb 1957

**Extent:** 1 soft-back volume.

### **Scope and Content:**

The paper was read before the Society on 5 November 1956.

---

**Reference and contact details:** PWR/6/1/6

## **'Analysis of two sheet-pile wharves'**

**Dates:** n.d. [1957]

**Extent:** 1 item.

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**Reference and contact details:** PWR/6/1/6/1

## **Draft**

**Dates:** n.d. [1957]



**Extent:** 1 folder.

**Scope and Content:**

Typescript draft of paper no. 1, with diagrams. Marked 'Engineering Department, Manchester, Division 5'. The paper discusses the wharf at Aalborg and the Brooklyn Pier. Possibly intended for submission at the Brussels Conference on Earth Pressures, 1958.

---

**Reference and contact details:** PWR/6/1/7

## **Contribution to discussion**

**Dates:** 1958

**Extent:** 1 item.

**Scope and Content:**

On the stability of steel pile bulkheads, published in the *Proceedings of the Brussels Conference on Earth Pressures*, vol. 2 (1958). Rowe presented his paper, 'Measurements on sheet pile walls driven into clay' earlier in this session.

---

**Reference and contact details:** PWR/6/1/7/1

## **Draft**

**Dates:** 24 Sep 1958

**Extent:** 3 sheets.

**Scope and Content:**

Typescript draft, with MS amendments, of Rowe's contribution to the discussion. Headed 'To continue from first typed discussion S5'.

---

**Reference and contact details:** PWR/6/1/8

## **'The stress-dilatancy relation for static equilibrium of an assembly of particles in contact'**

**Dates:** 1954–1961

**Extent:** 7 items.

**Scope and Content:**

Published in the *Proceedings of the Royal Society*, vol. 269 (1962).

---

**Reference and contact details:** PWR/6/1/8/1

## Research notes

**Dates:** 1951–1960

**Extent:** 1 folder.

### Scope and Content:

Rowe's MS notes with a MS draft of the introduction to the paper. Also includes the research notes of J.E. Gray, as well as correspondence between Rowe and A.D.M. Penman of the Building Research Station, concerning test results on Braehead silt, and a letter from P.L. Newland, concerning his research.

In the final publication of his paper, Rowe thanked J. Barnes, B.M. Freedman and J.E. Gray for their assistance while reading for research degrees and A.D.M. Penman for supplying test results. He also referenced P.L. Newland and B.H. Alley, 'Volume changes in drained triaxial tests on granular materials', *Géotechnique*, vol. 17, no. 1 (1957), p. 17.

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**Reference and contact details:** PWR/6/1/8/2

## Test results

**Dates:** 1959

**Extent:** 1 folder.

### Scope and Content:

With a MS draft of the paper, 1959. Includes references to differences in research at Cambridge and Manchester. Also includes 1 photograph and correspondence between Rowe, A.D.M. Penman of the Building Research Station concerning test results and correspondence between Rowe, the Secretary of the Institution of Civil Engineers and P.L. Newland and B.H. Alley concerning relevant articles in *Géotechnique*.

---

**Reference and contact details:** PWR/6/1/8/3

## File

**Dates:** 1954–[1959]

**Extent:** 1 folder.

### Scope and Content:

Inscribed 'stress-strain triaxial tests on sand' and also 'mechanism of particle movement in shear'. Comprising mainly test results but includes some MS drafts, 5 mounted photographs and figures. Also a draft of a lecture 'Little grain of sand', given to engineering staff on 8 December 1954.

---

**Reference and contact details:** PWR/6/1/8/4



## **File**

**Dates:** 1957–[c 1961]

**Extent:** 1 folder.

### **Scope and Content:**

Containing typescript draft and MS notes on test results. Also a copy of a postgraduate lecture on the mechanics of particle movements in shear strength given in 1957.

---

**Reference and contact details:** PWR/6/1/8/5

## **Typescript drafts**

**Dates:** n.d. [c 1961]

**Extent:** 1 folder.

### **Scope and Content:**

With MS amendments and diagrams.

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**Reference and contact details:** PWR/6/1/8/6

## **Typescript draft**

**Dates:** 1961

**Extent:** 1 folder.

### **Scope and Content:**

With MS amendments.

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**Reference and contact details:** PWR/6/1/8/7

## **Galley proof**

**Dates:** 1962

**Extent:** 1 folder.

### **Scope and Content:**

With MS amendments.

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**Reference and contact details:** PWR/6/1/9

**'Stress-dilatancy, earth pressures and slopes'**

**Dates:** 1963–1964

**Extent:** 4 items.

**Scope and Content:**

Published in the *Journal of the Soil mechanics Foundations Division of the American Society of Civil Engineers*, vol. 89 (1963).

---

**Reference and contact details:** PWR/6/1/9/1

## Notes

**Dates:** n.d. [1960s]

**Extent:** 9 sheets.

**Scope and Content:**

MS and typed notes on the 'Application to the stability of earth masses', which formed basis of part of the paper.

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**Reference and contact details:** PWR/6/1/9/2

## MS draft of the paper

**Dates:** n.d. [c 1963]

**Extent:** 15 sheets. Condition: the first sheet is badly torn.

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**Reference and contact details:** PWR/6/1/9/3

## Correspondence and drafts

**Dates:** Mar 1963

**Extent:** 1 folder.

**Scope and Content:**

Correspondence between Rowe and the American Society of Civil Engineers, concerning the publication of the paper, 5–20 March 1963. With two typescript drafts and copies of diagrams.

---

**Reference and contact details:** PWR/6/1/9/4

## Drafts

**Dates:** May 1963–Jul 1964

**Extent:** 1 folder.

**Scope and Content:**



Typescript drafts of the author's replies to the discussions printed in the journal between May 1963 and July 1964.

---

Reference and contact details: PWR/6/1/10

## **'Passive earth pressure measurements'**

**Extent:** 2 items.

**Scope and Content:**

The paper was co-written with K. Peaker. Published in *Géotechnique*, vol. 15 (1965).

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Reference and contact details: PWR/6/1/10/1

### **Draft**

**Dates:** Aug-Sep 1964

**Extent:** 1 folder.

**Scope and Content:**

Typescript draft of the article, notes, copies of diagrams and correspondence between Rowe and Dr Peaker, August–September 1964.

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Reference and contact details: PWR/6/1/10/2

### **Typescript draft**

**Dates:** n.d. [c 1965]

**Extent:** 1 folder.

**Scope and Content:**

With 5 photographs, notes and copies of the diagrams.

---

Reference and contact details: PWR/6/1/11

## **'A new consolidation cell'**

**Dates:** 1965

**Extent:** 1 item.

**Scope and Content:**

Paper co-written with L. Barden. Published in *Géotechnique*, vol. 16 (1966).

---

Reference and contact details: PWR/6/1/11/1

## **Typescript draft**

**Dates:** 1965

**Extent:** 1 folder.

**Scope and Content:**

With mounted photographs and diagrams. Also copies of letters from Rowe to TESTlab Corporation relating to the reproduction of diagrams and photographs for the paper, 29 October-5 November 1965.

---

Reference and contact details: PWR/6/1/12

## **'The influence of geological features of clay deposits upon the design and performance of sand drains'**

**Dates:** 1964-1968

**Extent:** 6 items.

**Scope and Content:**

Published in the *Proceedings of the Institution of Civil Engineers supplement*, vol. 1 (1968).

---

Reference and contact details: PWR/6/1/12/1

## **File**

**Dates:** 1965-1966

**Extent:** 1 folder.

**Scope and Content:**

Inscribed 'Sand drains paper'. Comprising test data from Frodsham (Manchester Ship Canal Company consultancy work) and diagrams.

---

Reference and contact details: PWR/6/1/12/2

## **File**

**Dates:** c 1965-1966

**Extent:** 1 folder.

**Scope and Content:**



Data, diagrams and bibliography relating to sand drains. With letters from the Foundation of Canada Engineering Corporation Ltd and Department of Highways, Canada, giving Rowe permission to quote from a report on the Latimer Road test in his forthcoming paper, May-August 1966.

---

**Reference and contact details:** PWR/6/1/12/3

## **File**

**Dates:** c 1965–1967

**Extent:** 1 folder.

### **Scope and Content:**

Further test data and typescript draft of the paper, with mounted photographs and diagrams. Also a bundle of letters relating to permissions to use material in both this paper and another paper on the 'Failure of foundation and slopes on layered deposits in relation to site investigation practice', January–October 1967.

---

**Reference and contact details:** PWR/6/1/12/4

## **File**

**Dates:** c 1965–1969

**Extent:** 1 folder.

### **Scope and Content:**

Test data from Frodsham, with a copy of the meeting agenda at which the paper was given and a letter from the Institution of Civil Engineers, relating to corrections to the proofs, 6 March 1969.

---

**Reference and contact details:** PWR/6/1/12/5

## **Correspondence**

**Dates:** 18 Dec 1964– 28 Jun 1968

**Extent:** 1 folder.

### **Scope and Content:**

Between Rowe and the Institution of Civil Engineers relating to the publishing of the paper, using normal typing and photocopying, 5 June 1967–28 June 1968.

Also a stray letter from W.A. Lewis of the Department of Scientific and Industrial Research Road Research Laboratory relating to Rowe's enquiries about bore-holes and soil samples, probably in connection with the paper, 18 December 1964.

---

**Reference and contact details:** PWR/6/1/12/6

## Typescript drafts

**Dates:** May-Dec 1968

**Extent:** 1 folder.

### Scope and Content:

Drafts of Rowe's introduction to the paper, which was presented at the meeting of the Institution of Civil Engineers on 7 May 1868. Also 1 photograph, a copy of Dr D.H. Cornforth's contribution to the discussion on the paper and correspondence between Rowe and the Institution of Civil Engineers relating to publication of the paper, May-December 1968.

---

**Reference and contact details:** PWR/6/1/13

## 'Failure of foundations and slopes on layered deposits in relation to site investigation practice'

**Dates:** 1966-1968

**Extent:** 3 items.

### Scope and Content:

Published in the *Proceedings of the Institution of Civil Engineers supplement*, vol. 1 (1968).

---

**Reference and contact details:** PWR/6/1/13/1

## File

**Dates:** 1966-c 1968

**Extent:** 1 folder.

### Scope and Content:

File of preparatory notes, including details of failure of foundations on layered deposits and notes for a lecture on the subject in September 1966, mounted photographs and 1 loose photograph from work on the Manchester Ship Canal at Frodsham. Also MS and typed drafts of the appendix - 'Amendments for consideration when revising the British Standard code of practice CP2001 (1957)'.

---

**Reference and contact details:** PWR/6/1/13/2

## Photographs

**Dates:** n.d. [c 1969]

**Extent:** 10 photographs.



**Scope and Content:**

Photographs used in the paper, mostly of foundations at Staunton Harold Reservoir and Ska Ederby Aerodrome, Sweden. Mounted photographs and 6 loose photographs.

---

**Reference and contact details:** PWR/6/1/13/3

**Typescript drafts**

**Dates:** 1969

**Extent:** 1 folder.

**Scope and Content:**

Drafts of the paper, the summary and conclusions and appendix. With copies of all figures used (except 4, 19, 29 and 30). Including 3 loose photographs.

---

**Reference and contact details:** PWR/6/1/14

**'The relation between the shear strength of sands in triaxial compression, plane strain and direct shear'**

**Dates:** 1969

**Extent:** 1 item.

**Scope and Content:**

Published in *Géotechnique*, vol. 19 (1969).

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**Reference and contact details:** PWR/6/1/14/1

**Proof copy**

**Dates:** 1969

**Extent:** 12 sheets.

**Scope and Content:**

With a few MS amendments.

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**Reference and contact details:** PWR/6/1/15

**'Osborne Reynolds and dilatancy'**

**Dates:** 1969

**Extent:** 1 item.

**Scope and Content:**

Published in *Géotechnique*, vol. 19 (1969)

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**Reference and contact details:** PWR/6/1/15/1

**Proof copy**

**Dates:** 1969

**Extent:** 6 sheets.

**Scope and Content:**

With MS amendments.

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**Reference and contact details:** PWR/6/1/16

**'Derwent dam – embankment stability and displacements'**

**Dates:** 1967–1970

**Extent:** 4 items.

**Scope and Content:**

Published in *Proceedings of the Institution of Civil Engineers*, vol. 45 (1970).

**Related Units of Description:**

See also PWR/6/3/15 and PWR/6/3/16 for papers on the design and construction of Derwent Dam by Ruffle and Buchanan respectively. These were published alongside Rowe's paper.

---

**Reference and contact details:** PWR/6/1/16/1

**File**

**Dates:** 1967–1970

**Extent:** 1 folder.

**Scope and Content:**

File containing typescript drafts, figures and proofs of the papers. With correspondence between Rowe, and the Institution of Civil Engineers, 30 October 1967–23 January 1970.

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**Reference and contact details:** PWR/6/1/16/2

## **File**

**Dates:** 1969–1970

**Extent:** 1 folder.

### **Scope and Content:**

File containing typescript drafts, with MS amendments and notes. With correspondence between Rowe, Neil Buchanan of the Sunderland and South Shields Water Company and the Institution of Civil Engineers, concerning the publication of the paper, discussions and authors' replies, 12 May 1969–7 December 1970.

Also a copy of Steve Poulos's comments on the paper, 2 April 1970.

---

**Reference and contact details:** PWR/6/1/16/3

## **Discussion**

**Dates:** 1969–1970

**Extent:** 1 folder.

### **Scope and Content:**

Typed copies of the discussion on Rowe's paper, with the author's reply. Also two letters from Neil Buchanan and Nigel Ruffle of the Sunderland and South Shields Water Company relating to Rowe's paper and discussion, 25 June 1969–19 November 1970.

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**Reference and contact details:** PWR/6/1/16/4

## **Discussion**

**Dates:** 1970

**Extent:** 1 folder.

### **Scope and Content:**

Typed copy of the contribution to the discussion, with illustrations, by Prof. A.W. Bishop of the Imperial College of Science and Technology, London, September 1970.

---

**Reference and contact details:** PWR/6/1/17

## **'Representative sampling in location, quality and size'**

**Dates:** 1971

**Extent:** 1 item.

**Scope and Content:**

Published in *Sampling of soil and rock; Special technical publication*, no. 483 (Philadelphia: American Society for Testing and Materials, 1971).

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**Reference and contact details:** PWR/6/1/17/1

## **Letters to Rowe**

**Dates:** 20 Jan 1971–16 Mar 1971

**Extent:** 5 sheets.

**Scope and Content:**

From the editor of the American Society for Testing and Materials relating to Prof. Peck's discussion on the paper.

---

**Reference and contact details:** PWR/6/1/18

## **'Stress-strain relationships for particulate materials at equilibrium'**

**Dates:** 1969–1971

**Extent:** 4 items.

**Scope and Content:**

Published in *American Society of Civil Engineers proceedings of the conference on performance of earth pressures and earth-supported structures*, vol. 3 (1973).

As well as drafts of the paper itself, these files contain other drafts and notes for a Ph.D. thesis, which seem to have been used in writing the paper.

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**Reference and contact details:** PWR/6/1/18/1

## **File**

**Dates:** 1969–1970

**Extent:** 1 folder.

**Scope and Content:**

Typed and MS drafts with a bibliography. Also MS draft of 'Notes on the undrained behaviour of sands', December 1969 and parts of Richard McDermott's Ph.D. on 'Deformation characteristics of sand under axially symmetric loading', 1970–1971.



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**Reference and contact details:** PWR/6/1/18/2

## **File**

**Dates:** 1969

**Extent:** 1 folder.

### **Scope and Content:**

Typescript and MS drafts. Also typed draft, with MS amendments, of the paper 'Notes on stress-strain relationships for particulate materials at equilibrium' with altered title 'Theoretical meaning and observed values of deformation parameters for soil'. Also includes a typed copy of 'Notes on the relative principal strains of a particulate assembly during change in the mean principal stress at constant stress ration in the triaxial cell', test data and a page of corrections.

---

**Reference and contact details:** PWR/6/1/18/3

## **File**

**Dates:** 1969–1971

**Extent:** 1 folder.

### **Scope and Content:**

File containing a typed draft, with MS amendments and figures. Also parts of a Ph.D. thesis.

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**Reference and contact details:** PWR/6/1/18/4

## **Further parts of a Ph.D. thesis**

**Dates:** 1970–1971

**Extent:** 1 folder.

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**Reference and contact details:** PWR/6/1/19

## **Report on the foundation stability of deep sea gravity structures**

**Dates:** 1973

**Extent:** 1 item.

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**Reference and contact details:** PWR/6/1/19/1

## **Typescript draft of the report**

**Dates:**1973  
**Extent:** 1 folder.

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Reference and contact details: PWR/6/1/20

**'Displacement and failure modes of model offshore gravity platforms formed on clay'**

**Dates:**1975  
**Extent:** 1 item.

**Scope and Content:**

Published in *Conference on Offshore Europe 75, Aberdeen, (1975).*

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Reference and contact details: PWR/6/1/20/1

**Typescript draft, with figures**

**Dates:**1975  
**Extent:** 1 folder.

---

Reference and contact details: PWR/6/1/21

**'Applications of models to predictions of offshore gravity platform foundation performance'**

**Dates:** 1979  
**Extent:** 1 item.

**Scope and Content:**

Co-written with W.H. Craig. Published in the *Proceedings of the international conference on offshore site investigation, London, (Society for Underwater Technology: 1979).*

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Reference and contact details: PWR/6/1/21/1

**'First draft'**

**Dates:**1979  
**Extent:** 1 folder.

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Reference and contact details: PWR/6/1/22

**'Prediction and observation of a model gravity**



## platform on Drammen clay'

**Dates:** c 1978–1981

**Extent:** 4 items.

### Scope and Content:

Co-written with K.H. Anderson, P.B. Selens and W.H. Craig. Published in *Applied Ocean Research*, vol. 13 (1981).

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**Reference and contact details:** PWR/6/1/22/1

### MS draft

**Dates:** n.d. [c 1978–1981]

**Extent:** 1 folder.

### Scope and Content:

Draft of part of the paper, with notes, graphs and calculations.

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**Reference and contact details:** PWR/6/1/22/2

### MS draft

**Dates:** n.d. [c 1978–1981]

**Extent:** 1 folder.

### Scope and Content:

Draft of part of the paper, with notes and calculations.

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**Reference and contact details:** PWR/6/1/22/3

### Typed draft

**Dates:** 1978–n.d.

**Extent:** 1 folder.

### Scope and Content:

With figures, 8 photographs and letters from K.H. Anderson of the Norwegian Geotechnical Institute (NGI), 8 December 1978–5 January 1978.

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**Reference and contact details:** PWR/6/1/22/4

### Typed draft

**Dates:** n.d. [c 1981]

**Extent:** 1 folder.

**Scope and Content:**

With test results, graphs and figures.

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**Reference and contact details:** PWR/6/1/23

**'Use of large centrifugal models for offshore and nearshore works'**

**Dates:** 1984

**Extent:** 1 item.

**Scope and Content:**

Published in *Geotechnical aspects of coastal and offshore structures*, (Rotterdam: Balkema, 1983).

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**Reference and contact details:** PWR/6/1/23/1

**Copy**

**Dates:** 1984

**Extent:** 1 folder.

**Scope and Content:**

Published copy of the paper with correspondence between Ann Rowe and Dott. Lesmo relating to translation of Rowe's paper for the Ordine Nazionale Geolgi magazine *Geologia Tecnica*, 10–29 October 1984.

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**Reference and contact details:** PWR/6/1/24

**'Jamuna river 230 KV crossing – Bangladesh'**

**Dates:** 1982–1985

**Extent:** 4 items.

**Scope and Content:**

The paper was published jointly in the *Proceedings of the Institution of Civil Engineers*, vol. 76 (1984) and the *Proceedings of the Electrical Engineers*, vol. 131 (1984).

It consisted of 4 parts: part 1: L.W. Hinch, D.M. McDowell, P.W. Rowe, 'Design of the Foundations'; part 2: D.A. Hughes, A.B. Wood, 'Design of the transmission line'; part 3: J.A. Chandler, J. Peranio, P.W. Rowe, 'Construction of foundations'; part 4: R.I. Rair, D.A. Hughes, 'Construction of the transmission line'.



**Related Units of Description:**

See also files relating to the Jamuna River Crossing and Bridge Projects, Bangladesh, among the Consultancy papers, PWR/4/3/13.

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**Reference and contact details:** PWR/6/1/24/1

**File**

**Dates:** Dec 1982

**Extent:** 1 folder.

**Scope and Content:**

Inscribed 'RPT paper, theoretical analysis and SPT data', containing a typescript draft of Rowe's contribution to the proposed joint paper on the Jamuna river crossing.

---

**Reference and contact details:** PWR/6/1/24/2

**Correspondence**

**Dates:** 21 Aug-6 Nov 1983

**Extent:** 1 folder.

**Scope and Content:**

Between Rowe and J.A. Chandler of Rendel, Palmer and Tritton, Consulting and Designing Engineers relating to the submission of the paper to the Institution's referees. With a typescript draft of the paper, November 1983.

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**Reference and contact details:** PWR/6/1/24/3

**Diagrams and figures**

**Dates:** n.d. [c 1983]

**Extent:** 1 folder.

**Scope and Content:**

These were used in the paper and possibly also used in a lecture on the crossing.

---

**Reference and contact details:** PWR/6/1/24/4

**Typescript draft**

**Dates:** c 1983-1985.

**Extent:** 1 folder.

**Scope and Content:**

With correspondence between Rowe, J. Chandler and L.W. Hinch of Rendel, Palmer and Tritton, relating to the introduction and discussion of the Jamuna river crossing papers at the Institution of Electrical Engineers on 25 March 1985, August 1984–9 December 1985.

---

**Reference and contact details:** PWR/6/1/25

**'A reassessment of the Carsington embankment failure'**

**Dates:** 1991–1994

**Extent:** 1 item.

**Scope and Content:**

Published in *Géotechnique*, vol. 41 (1991).

**Related Units of Description:**

See also correspondence relating to the Carsington slip in PWR/10/5/7, chapters for Rowe's book on case studies, PWR/6/2/7 and consultancy projects, PWR/4/2/1/24.

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**Reference and contact details:** PWR/6/1/25/1

**Correspondence**

**Dates:** 24 Sep 1991–20 Nov 1994

**Extent:** 1 folder.

**Scope and Content:**

Relating to the discussion on the paper and author's reply at the meeting of the Institution of Civil Engineers on 5 March 1992, with a copy of D.W. Cox's contribution to the discussion, March 1993. Also summaries of lectures on the Carsington embankment articulated slips: the simple explanation, given at the Institution of Civil Engineers, Northern Counties meeting on 24 November 1992 and 19 October 1993.

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**Reference and contact details:** PWR/6/2

**Unpublished books written by Rowe**

**Dates:** 1960s–1992

**Extent:** 8 items.

**Scope and Content:**



For several years Peter Rowe planned to write a text book on soil mechanics and geotechnical engineering, and many of the MS notes and draft chapters appear to related to this. The idea was later rejected in favour of a volume of 'geological memoirs'. Neither work reached publication.

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**Reference and contact details:** PWR/6/2/1

## **Drafts of chapters for an unpublished text book**

**Dates:** n.d. [? 1960s]

**Extent:** 6 folders.

### **Scope and Content:**

Including the following sub-files:

/1 MS draft of chapter 1 on geotechnical properties of soil, with headings, references and figures.

/2 MS draft of chapter 2 on the strength of materials.

/3 MS draft of chapter 4 on laboratory soil tests.

/4 MS draft of chapter 5 on the theory of soil structures.

/5 MS draft and part of typescript draft of chapter 6 on retaining walls.

/6 Notes made on various publications and research of others, possibly for use in the book. Also draft notes on deformation problems, history of shear strength materials and piling.

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**Reference and contact details:** PWR/6/2/2

## **Correspondence between Rowe and George Allen and Unwin (Publishers)**

**Dates:** 2 Apr 1982–16 Dec 1983

**Extent:** 5 sheets.

### **Scope and Content:**

Relating to Rowe's thoughts on writing a book on geotechnical engineering, largely based on case histories.

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**Reference and contact details:** PWR/6/2/3

## **Letter from Pitman Books Ltd**

**Dates:** 15 Nov 1982

**Extent:** 1 sheet.

**Scope and Content:**

Relating to plans for a series of international monographs and core undergraduate texts.

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**Reference and contact details:** PWR/6/2/4

## **Drafts of chapters for a memoir source book**

**Dates:** 1986–1989

**Extent:** 3 folders.

**Scope and Content:**

/1 Letter from Graham and Trotman Limited, 26 September 1986, relating to their future publication plans in the area of engineering geology and geotechnics. Rowe was asked if he, or his colleagues, had proposals for monographs or practical handbooks on specific issues.

/2 MS draft of a chapter on building in a gravitational field, 31 March 1988.

/3 MS draft of a chapter on earth dams, based on Rowe's own experience, c 1989.

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**Reference and contact details:** PWR/6/2/5

## **Notes for structure of a book on case histories**

**Dates:** n.d. [1980s]

**Extent:** 1 sheet.

**Scope and Content:**

The book was to include chapters on case histories and example of construction problems, fundamental engineering properties – strength consolidation, techniques and modelling.

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**Reference and contact details:** PWR/6/2/6

## **MS notes for book on case histories**

**Dates:** n.d. [1980s]

**Extent:** 1 folder.

**Scope and Content:**

With a list of 28 topics and diagrams.

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**Reference and contact details:** PWR/6/2/7

## **Carsington sections for book on case histories**

**Dates:** Oct 1990–Jul 1992

**Extent:** 1 folder.

### **Scope and Content:**

Containing typescript drafts for a chapters entitled 'An earth dam embankment failure during construction' and 'The design and construction of the original Carsington embankment', July 1992. Also a typescript draft of 'The causes of the Carsington embankment failure', October 1990 and a proof copy of P.W. Rowe, 'A reassessment of the causes of the Carsington embankment failure', *Géotechnique*, vol. 41, no. 3 (1991).

### **Archival History:**

This file was amongst additional material donated by Ann Rowe in July 2001.

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**Reference and contact details:** PWR/6/2/8

## **File of draft chapters for a book on case histories**

**Dates:** 1983–1991

**Extent:** 6 folders and 6 sheets.

### **Scope and Content:**

The file contained typescript drafts of the following chapters, written c 1990–1991:

/1 'Earth dams.'

/2 'Structure-soil-structure-interacton yield and creep of a coral reef.'

/3 'Deep strutted excavations in soft clay, a case of construction delay.'

/4 'Interactions between site operations and adjacent buildings, a case involving hand dug caissons and grouting.'

The file also contained:

/5 Loose illustrations, mainly relating to the silos and a summary of silo-ground-silo-sugar interaction.

/6 An MS draft of the introduction or philosophy of the book, n.d.

/7 MS notes on chapter headings, n.d.

/8 A letter from Pitman Publishing to Rowe, concerning his views on a script by Lee and Tomlinson and suggesting thoughts on a possible work by Rowe himself, 8 December 1983.

/9 Correspondence between Rowe and Macmillan Education Ltd relating to a possible collaboration with David Proctor on a book, 1 June and 6 July 1987.

/10 MS notes on a 'review of progress' giving details of completed chapters, 20 June 1991.

**Archival History:**

This file was donated by Ann Rowe in November 2001.

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**Reference and contact details:** PWR/6/3

**Papers written by others**

**Dates:** 1940–1994

**Extent:** 52 items.

**Scope and Content:**

Peter Rowe was regularly invited to comment, advise upon or review technical papers, either by the authors themselves, or as a referee or reviewer on behalf of academic journals and other publishers. This series comprises typescript and manuscript drafts of papers, proof copies, and correspondence between Rowe, authors, editors and publishers.

**Arrangement:**

The items are arranged chronologically, by the date of the documents, rather than by date of publication.

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**Reference and contact details:** PWR/6/3/1

**A. Casagrande, First progress report to U.S.  
Waterways Experiment Station, Vicksburg, Mississippi  
on the Cooperative research on stress-deformation and  
strength of characteristics of soils conducted at  
Harvard University**

**Dates:** Jun 1940

**Extent:** 1 hard-back volume.

**Scope and Content:**

With passages marked by Rowe.

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**Reference and contact details:** PWR/6/3/2

**Gregory P. Tschebotarioff and John David Welch,**



## **'Effect of boundary conditions on lateral earth pressures'**

**Dates:** 1948

**Extent:** 1 soft-back volume.

### **Scope and Content:**

Typescript draft of the article, submitted to the second international conference on soil mechanics and foundation engineering, Rotterdam, Holland.

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**Reference and contact details:** PWR/6/3/3

## **Gregory P. Tschebotarioff and Phillip P. Brown, 'Lateral earth pressure as a problem of deformation or of rupture'**

**Dates:** 1948

**Extent:** 1 soft-back volume.

### **Scope and Content:**

Typescript draft of the article, submitted to the second international conference on soil mechanics and foundation engineering, Rotterdam, Holland.

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**Reference and contact details:** PWR/6/3/4

## **F. E. Richart jun., 'Analysis for sheet pile retaining walls'**

**Dates:** May 1955

**Extent:** 1 pamphlet.

### **Scope and Content:**

Published in the *Proceedings of the American Society of Civil Engineers*, vol. 81 (1955).

Annotated by Rowe, possibly for contribution to the discussion, which was open until September 1955.

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**Reference and contact details:** PWR/6/3/5

## **Edgar Schultze, 'The distribution of contact pressures under foundations: theory and reality'**

**Dates:** 6 Mar 1957

**Extent:** 1 folder.

**Scope and Content:**

MS and typescript copies of a lecture given at Manchester by Prof. Schultze of Aachen Technical High School. Possibly for subsequent publication.

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**Reference and contact details:** PWR/6/3/6

**Alan W. Bishop, 'Test requirements for measuring the coefficient of earth pressure at rest'**

**Dates:** n.d. [1958]

**Extent:** 1 folder.

**Scope and Content:**

Published in the *Proceedings of the Brussels conference on earth pressure problems* (1958).

Typescript, referenced 'S1'. A paper given at the first session of the conference. Rowe chaired and contributed to the following discussions.

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**Reference and contact details:** PWR/6/3/7

**Bernt Jakobson, 'On the influence of wall movement on earth pressures'**

**Dates:** n.d. [1958]

**Extent:** 1 folder.

**Scope and Content:**

Published in the *Proceedings of the Brussels conference on earth pressure problems* (1958).

Typescript, with minor corrections. Referenced 'S2'. A paper given at the second session of the conference. Rowe chaired and contributed to the following discussions.

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**Reference and contact details:** PWR/6/3/8

**Joseph G. Zeitlen, G. Kassiff and D. Rafaeli, 'Earth pressure on flexible and rigid retaining structures'**

**Dates:** Nov 1960

**Extent:** 1 volume.

**Scope and Content:**



Copy of the progress report to Ford Foundation, part of research project no. D-5 at the Technion Israel Institute of Technology, Haifa.

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Reference and contact details: PWR/6/3/9

## **P.J. Thompson and M.A.J. Matich, 'Performance of some steel sheet pile bulkheads'**

**Dates:** n.d. [c 1960]

**Extent:** 22 sheets.

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Reference and contact details: PWR/6/3/10

## **V.N.S. Murthy, 'Design of anchored bulkheads'**

**Dates:** 18–27 January 1961

**Extent:** 4 sheets.

### **Scope and Content:**

Correspondence between Rowe and Prof. H. Bolton Seed of the University of California, Berkeley, with Rowe's comments on the paper, which was submitted for inclusion in the *Journal of the Soil Mechanics and Foundations Division of the American Society of Civil Engineers*.

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Reference and contact details: PWR/6/3/11

## **Peter A. Hakman and Warren M. Buser, 'Bulkhead test program at Port of Toledo, Ohio'**

**Dates:** 18 Oct –20 Nov 1962

**Extent:** 9 sheets.

### **Scope and Content:**

Published in the *Journal of the Soil Mechanics and Foundations Division of the American Society of Civil Engineers*, vol. 1 (1962).

Correspondence between Rowe and Harold T. Larsen and Albert W. Turchick of the American Society of Civil Engineers relating to the discussion following the publication of Hakman and Buser's paper. Includes typed copy of Rowe's contribution and also two letters concerning Rowe's own paper on 'Stress-dilatancy, earth pressures and slopes'.

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Reference and contact details: PWR/6/3/12

## **'Clay/silicate and cement/clay grouting, Bevercotes Colliery'**

**Dates:** Jul 1962  
**Extent:** 7 sheets.

**Scope and Content:**

Typescript draft with one page of MS notes of the report by the Mitchell Construction Co. Ltd, Peterborough.

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**Reference and contact details:** PWR/6/3/13

**J.F. Bailey and G.R. Aldersley, 'Remedial measures taken on the slip at Spade Mill Reservoir No. 2'**

**Dates:** 20 Oct 1965  
**Extent:** 14 sheets.

**Scope and Content:**

Paper presented to the Institution of Water Engineers (Northern Section) at Preston. With pencil notes in the margins.

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**Reference and contact details:** PWR/6/3/14

**R.D. Mackey and A.A. Khafagy, 'Vertical pressure distribution due to a flexible distributed load applied in the interior of a semi-elastic medium'**

**Dates:** 2 May–9 Jun 1966  
**Extent:** 1 folder.

**Scope and Content:**

Correspondence between Rowe and P.B.E. Thompson of the Institution of Civil Engineers, relating to the paper for which Rowe is acting as assessor. With a typescript copies of the paper and figures.

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**Reference and contact details:** PWR/6/3/15

**N.J. Ruffle, 'Derwent dam – design considerations'**

**Dates:** 1969  
**Extent:** 1 folder.

**Scope and Content:**

Published in the *Proceedings of the Institution of Civil Engineers*, vol. 45 (1969).

File containing typescript draft and figures. The paper was written by the Deputy



Engineer of the Sunderland and South Shields Water Company, Engineer-in-charge of the Derwent scheme and was published alongside papers by N. Buchanan and Rowe.

**Related Units of Description:**

See also PWR/6/1/16 and PWR/6/3/16 for papers by Rowe and Buchanan respectively.

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**Reference and contact details:** PWR/6/3/16

**N. Buchanan, 'Derwent dam – construction'**

**Dates:** 1969

**Extent:** 1 folder.

**Scope and Content:**

Published in the *Proceedings of the Institution of Civil Engineers*, vol. 45 (1969).

File containing typescript draft and figures. The paper was written by the Engineer for Special Works of the Sunderland and South Shields Water Company, formerly Resident Engineer, Derwent Reservoir and was published alongside papers by N.J. Ruffle and Rowe.

**Related Units of Description:**

See also PWR/6/1/16 and PWR/6/3/15 for papers by Rowe and Ruffle respectively.

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**Reference and contact details:** PWR/6/3/17

**Working party report on the logging of rock cores for engineering purposes**

**Dates:** Nov 1969

**Extent:** 1 folder.

**Scope and Content:**

Sixth draft for the Geological Society of London Engineering Group.

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**Reference and contact details:** PWR/6/3/18

**B.H. Rofe and P.F. Tye, 'Application of instrumentation to earth dams'**

**Dates:** 19 Feb 1970

**Extent:** 24 sheets.

**Scope and Content:**

Typescript draft of the paper, which was presented to the Institution of Water Engineers South East Section, with MS amendments [possibly by Rowe].

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Reference and contact details: PWR/6/3/19

**Ladislav Lamboj and H.Y. Fang, 'Comparison of maximum moment, tie rod force and embedment depth of anchored sheet pile'**

**Dates:** Mar 1970

**Extent:** 1 volume.

**Scope and Content:**

Fritz engineering laboratory report no. 365 part 1 of Leith University.

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Reference and contact details: PWR/6/3/20

**K.D. Philpott 'Suction and swelling pressures of certain argillaceous materials'**

**Dates:** Sep 1970

**Extent:** 1 folder.

**Scope and Content:**

University of Durham, M.Sc. thesis, 1970. Photocopy.

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Reference and contact details: PWR/6/3/21

**D.H. Shields and A.Z. Tolunay, 'Passive pressure coefficients by the method of slices'**

**Dates:** 16 May 1972

**Extent:** 6 sheets.

**Scope and Content:**

Typescript draft of the paper and letter from D.H. Shields of the University of Ottawa, Canada, asking whether Rowe would consider co-authoring it.

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Reference and contact details: PWR/6/3/22

**Edgar Morton 'Review of the influence of geology on the design and construction of impounding dams'**



**Dates:** 30 Apr 1973

**Extent:** 1 sheet.

**Scope and Content:**

Published in the *Journal of the Institution of Water Engineers*, vol. 5 (1973).

Letter from Edgar Morton to Rowe, concerning Rowe's favourable comments on a recent article for the Institution of Water Engineers.

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**Reference and contact details:** PWR/6/3/23

**Laing Barden, Sheet pile wall design based on Rowe's method**

**Dates:** 26 Apr–10 May 1973

**Extent:** 1 folder.

**Scope and Content:**

Typescript draft of Barden's monograph on Rowe's sheet pile design method, which was being discussed by the CIRIA (the Construction Industry Research and Information Association) steering group on quay wall design. Also a copy of comments by T.K. Hsieh of George Wimpey and Co. Ltd, and correspondence between Barden and Rowe.

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**Reference and contact details:** PWR/6/3/24

**Laurits Bjerrum, 'Geotechnical problems involved in the foundation of structures in the North Sea'**

**Dates:** 1971–Jun 1973

**Extent:** 1 folder.

**Scope and Content:**

Revised copy of the paper, by Bjerrum of the Norges Geotekniske Institutt, presented at Imperial College, London on 1 March 1973. With Rowe's notes and amendments and a covering letter from Prof. Helge Lundgren of the Technical University to S.B. Stubbs of Taylor Woodrow Construction Ltd and Rowe, 25 June 1973. Also a reprint of D.A. Fox, 'Offshore site investigations: marine drilling and boring techniques', *Proceedings of the Society for Underwater Technology*, vol. 1 (1971).

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**Reference and contact details:** PWR/6/3/25

**S.B. Stubbs, 'Sea bed foundation considerations for gravity structures'**

**Dates:** Nov 1973–May 1974



**Extent:** 1 folder.

**Scope and Content:**

Correspondence between Stubbs and Rowe, concerning the paper. Rowe's letter of 23 May 1974 details his comments on the paper, which was submitted to the Institution of Civil Engineers Conference on Research and Development for Offshore Structures in October 1974. Also a copy of a paper, which Stubbs refers to, Carl J. Fridmann Clausen, 'Stability problems related to offshore gravity structures; a lecture presented to the Foundation Design for Offshore Structures at Herriott-Watt University on 28 November 1974'.

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**Reference and contact details:** PWR/6/3/26

## **I.M. Smith and R. Hobbs, 'Finite element analysis of centrifuged and built-up slopes'**

**Dates:** 1974–1976

**Extent:** 1 folder.

**Scope and Content:**

Published in *Géotechnique*, vol. 24 (1974).

Reprint of the paper, with MS calculations and comments by Hobbs, March 1976.

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**Reference and contact details:** PWR/6/3/27

## **CIRIA guide for the dynamics of marine structures**

**Dates:** 14 Feb 1974–13 Sep 1976

**Extent:** 1 folder.

**Scope and Content:**

Draft and proof copies of the section for the guide compiled by Atkins Research and Development for CIRIA (the Construction Industry Research and Information Association) concerning gravity platform foundation analysis, with Rowe's comments. Also correspondence between Rowe and N.J. Heaf, Richard Hart and Dr Hallam of Atkins Research and Development. This relates both to the guide and to potential work for Burmah Oil (North Sea) Ltd.

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**Reference and contact details:** PWR/6/3/28

## **ALMHA Consulting Engineers**

**Dates:** May 1975–23 Feb 1976

**Extent:** 1 volume, 2 sheets.



**Scope and Content:**

Part of the *Management design manual for design and certification of offshore installations* (May 1975).

Copy of the manual, with correspondence between Rowe and T.D. Wilson of Mott, Hay and Anderson, Consulting Civil Engineers relating to the manual and progress in model and testing techniques.

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**Reference and contact details:** PWR/6/3/29

**J.B. Burland, 'Research on foundations'**

**Dates:** 11 Feb 1976

**Extent:** 6 sheets.

**Scope and Content:**

Written contribution to the CIRIA (Construction Industry Research and Information Association) Underwater Engineering Group discussion on 'Offshore structures – does current research match industry's needs?' annotated by Rowe.

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**Reference and contact details:** PWR/6/3/30

**P. Laut, 'Determination of power requirements in connection with the design of geotechnical centrifuges'**

**Dates:** 29 Jul-20 Aug 1976

**Extent:** 17 sheets.

**Scope and Content:**

Copy of the internal report produced by Peter Laut at the Danish Academy of Engineering. With correspondence between Rowe and Laut as to a suitable place for publication.

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**Reference and contact details:** PWR/6/3/31

**Fumio Tatsuoka, 'Stress-dilatancy relations of anisotropic sands in three dimensional stress condition'**

**Dates:** Jun-12 Jul 1976

**Extent:** 10 sheets.

**Scope and Content:**

Published in *Soils and Foundations* (1976).

Reprint of the paper, with a letter from Prof. Hakuju Yamaguchi of the Japanese Society of Soil Mechanics and Foundation Engineering, editor of the journal, asking Rowe to write a discussion of the paper for the journal, 12 July 1976.

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**Reference and contact details:** PWR/6/3/32

## **J.H. Atkinson Foundations and slopes**

**Dates:** 22 Jan 1979

**Extent:** 17 sheets.

### **Scope and Content:**

Copy of the draft preface and contents of chapters (typescript) with a letter from Prof. R.H. Evans, asking Rowe for comments on the proposals.

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**Reference and contact details:** PWR/6/3/33

## **T.J. Kvalstad and R. Dahlberg, 'Cyclic behaviour of clay as measured in laboratory'**

**Dates:** 1978–1 Oct 1979

**Extent:** 1 folder.

### **Scope and Content:**

Pre-print of the paper to be presented at the international symposium on soils under cyclic and transient loading in January 1980, with a letter from I. Foss of Det Norske Veritas, in which he refers to discussions with Rowe on the subject. Also a copy of an earlier paper, I. Foss, R. Dahlberg and T. Kvalstad, 'Design of foundations of gravity structures against failure in cyclic loading', OTC 1978.

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**Reference and contact details:** PWR/6/3/34

## **Ewa T. Stepkowska, 'Clay fabric hypothesis for strength and deformation interpreting'**

**Dates:** 12 Dec 1979

**Extent:** 1 sheet.

### **Scope and Content:**

Letter from Stepkowska to Rowe, relating to the use of three of his published photographs in the article, which is intended for publication in *Studia Geotechnica*.

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**Reference and contact details:** PWR/6/3/35



## **I.M. Smith and P. Molenkamp, 'Dynamic displacements of offshore structures due to low frequency sinusoidal loading'**

**Dates:** n.d. [1980]

**Extent:** 1 folder.

### **Scope and Content:**

Published in *Géotechnique*, vol. 30 (1980).

Typescript draft of the paper – no annotations.

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**Reference and contact details:** PWR/6/3/36

## **D.J. Coats and G. Rocke, 'The Kielder headworks',**

**Dates:** 2 Mar 1982–14 Jul 1983

**Extent:** 1 folder.

### **Scope and Content:**

Published in the *Proceedings of the Institution of Civil Engineers* part 1, vol. 72 (1982).

Proof of the paper, with Rowe's amendments, also letters to Rowe from Coats and J.P. Millmore of Babbie, Shaw and Morton, Consulting Engineers, relating to the publication of the paper and discussion.

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**Reference and contact details:** PWR/6/3/37

## **Toshinobu Akagi and T. Hashiba, Earth structures in case histories**

**Dates:** 1 Nov 1982

**Extent:** 1 sheet.

### **Scope and Content:**

Letter from Prof. Akagi, of Toyo University, Japan, asking permission to reproduce illustrations in the book, which was to be published from Shokokusha. Note on the letter indicates that Rowe gave permission.

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**Reference and contact details:** PWR/6/3/38

## **William Keith Elson Selected case histories on geotechnical engineering**

**Dates:** 21 Jan-2 Mar 1983

**Extent:** 1 folder.

**Scope and Content:**

Correspondence between John Hindley of Pitman Books Ltd and Rowe relating to Elson's proposal for a third-year text book, including synopsis of the book and Elson's C.V. Rowe gave a detailed review, explaining his own definition of a "case history." He suggested the book should be entitled 'Design examples in soil mechanics'.

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**Reference and contact details:** PWR/6/3/39

**Proposal for an undergraduate text book on soil mechanics**

**Dates:** 7 Dec 1983-20 Aug 1984

**Extent:** 3 sheets.

**Scope and Content:**

Two letters from Alastair Fyfe Holmes of McGraw-Hill Books Company (U.K.) Ltd, asking whether Rowe would review the book. The letter of 20 August mentions the possibility that teaching notes were included in the sample chapters, which led to a revision of certain chapters, and subsequent need for a second review.

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**Reference and contact details:** PWR/6/3/40

**M.A. Koenders, J.R.F. Arthur and R.K.S. Wong,  
'Predictions using a heterogeneous deformation model  
compared to experimental data for sand'**

**Dates:** n.d. [c 1984]

**Extent:** 19 sheets.

**Scope and Content:**

Typescript draft.

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**Reference and contact details:** PWR/6/3/41

**Report on soil structure**

**Dates:** n.d. [c 1984]

**Extent:** 1 folder.

**Scope and Content:**

Proof of a paper by the Institution of Structural Engineers in response to a report on



'structure-soil interaction' published in 1978. The proof contains corrections by Rowe.

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Reference and contact details: PWR/6/3/42

## **E.C. Hambly 'Soil buckling and the leaning instability of tall structures'**

**Dates:** 14 Mar 1985

**Extent:** 6 sheets.

### **Scope and Content:**

Published in *The Structural Engineer* (1985).

Letter from Hambly enclosing copy of his article and asking Rowe to criticize it.

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Reference and contact details: PWR/6/3/43

## **Bobby O. Hardin, 'Strength of soils in terms of effective stress'**

**Dates:** n.d. [1985]

**Extent:** 38 sheets.

### **Scope and Content:**

Draft of the paper to be as part of the Richart Commemorative Lectures, held in conjunction with the American Society of Civil Engineers Convention in 1985. Rowe was sent the paper for comment before publication.

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Reference and contact details: PWR/6/3/44

## **Hamid Ahmed Elhag Ismail, 'A constant volume plasticity theory for granular material'**

**Dates:** 17 Aug 1987

**Extent:** 1 volume, 1 sheet.

### **Scope and Content:**

Copy of Ishmail's sabbatical leave work at Imperial College, London, which was dedicated to Rowe, with covering letter.

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Reference and contact details: PWR/6/3/45

## **Paulo R. Rogério, 'Trabalho: Cálculo do recalque de**

## **um grupo de estacas cravadas em areias sobrejacente a uma argila marinha'**

**Dates:** 21 Feb–14 May 1988

**Extent:** 12 sheets.

### **Scope and Content:**

Correspondence between Rowe and Rogério of Dobermann Engenharia Ltd, Brazil, in which Rowe offers advice divided into "academic, physical and practical." Copy of Rogério's article, in Spanish.

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**Reference and contact details:** PWR/6/3/46

## **Various papers by Nichol Broug**

**Dates:** 1988–1981

**Extent:** 6 folders.

### **Scope and Content:**

/1 Draft of Broug, 'Constitutive equations describing the behaviour of an arrangement of grains', for the 1st geotechnical seminar on deep foundations on bored and auger piles in Ghent, with correspondence between Rowe and Broug, 26 May–14 June 1988.

/2 Draft of Broug, 'The origin of  $K_0$ , the at-rest stress ratio in granular material', with letter from Broug of 27 March 1989.

/3 Draft of Broug, 'A constituent micro-mechanical analysis of a granular arrangement in theory and practice', with letter from Broug of 17 May 1990

/4–6 Three drafts of Broug, 'Assembly characteristics on the basis of discrete particle equilibrium "the single particle equivalent model"', submission for the MacRobert Award, 1991. With comments by Rowe and letters from Broug of 4 May–3 June 1991.

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**Reference and contact details:** PWR/6/3/47

## **M. Fukue, R.N. Yong and S. Okusa, 'Relative energy concept and compression law'**

**Dates:** 7–19 Jul 1988

**Extent:** 13 sheets.

### **Scope and Content:**

Letters from D.J. Wallace of the Institution of Civil Engineers, asking Rowe to review the paper GI 758 submitted to Géotechnique, with Rowe's detailed comments on the paper.



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Reference and contact details: PWR/6/3/48

## **Yu Tiao-Mei, 'Foundation engineering in Shanghai with special reference to piles'**

**Dates:** Dec 1988–17 Aug 1992

**Extent:** 4 sheets.

### **Scope and Content:**

Correspondence between Prof. Yu Tiao-Mei and Rowe relating to the paper, which won the Rupert H. Myers Medal. Rowe obviously commented on the draft, but his advice is not extant.

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Reference and contact details: PWR/6/3/49

## **John H. Tellam, 'An examination of the water pressure assumptions used in the analysis of plane failure in fractured but otherwise impermeable rock slopes'**

**Dates:** 1–11 Feb 1991

**Extent:** 7 sheets.

### **Scope and Content:**

Letter from K. M. Baxter of Thames Water Utilities to Rowe, via the Engineering Department, suggesting that he review the paper, and Rowe's review of the paper written as a letter written in reply. Also MS notes made by Rowe.

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Reference and contact details: PWR/6/3/50

## **I.M. Smith and K.H. Ho, 'Influence of construction technique on performance of a braced excavation in marine clay'**

**Dates:** 22 Nov 1991–19 Feb 1992

**Extent:** 1 folder.

### **Scope and Content:**

Correspondence between Rowe and Smith relating to the paper, which was submitted as paper GI 988 for publication in *Géotechnique*. With a draft of the paper itself.

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Reference and contact details: PWR/6/3/51

## **CIRIA report on chalk**

**Dates:** 23 Feb 1994

**Extent:** 2 sheets.

**Scope and Content:**

Correspondence between Alan Gilbertson of W.S. Atkins Consultants Ltd and Rowe relating to the recent report, with Rowe's comments. For CIRIA (the Construction Industry Research and Information Association).

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**Reference and contact details:** PWR/6/3/52

**Graham Barnes, 'Practical soil mechanics'**

**Dates:** 20 Jul-15 Aug 1994

**Extent:** 2 sheets.

**Scope and Content:**

Letter from Barnes, requesting permission to use one of his figures, with Rowe's reply.

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**Reference and contact details:** PWR/7

## Lectures

**Dates:** 1962–1993

**Extent:** 29 items.

### Scope and Content:

This subfonds relates to lectures and speeches delivered by Peter Rowe, apart from his routine university lecturing duties. Among the most significant was the Twelfth Rankine Lecture on soil sampling and testing techniques, given to the British Geotechnical Society at the Institution of Civil Engineers in 1972 (PWR/7/4). For this Rowe adopted the then innovative method of using twin slide projectors. Besides draft and final texts of lectures, PWR/7 contains correspondence concerning the arrangements for lectures, preparatory notes, lists of slides, programmes and letters of thanks. The first two files also contain chronological lists of lectures.

### Arrangement:

The first two files were obviously compiled by Peter Rowe for reference purposes and so have been kept as distinct units. There was no inherent order to the subsequent material and so this has been arranged chronologically.

### Related Units of Description:

See PWR/3/1 for lectures given to undergraduate and postgraduate students at the University of Manchester and PWR/2 for lectures given to students at St Andrews University. Some details of speeches are also included under PWR/8, Visits and Conferences. Also, the file PWR/6/1/8 contains a draft lecture, 'Little grain of sand', given to engineering staff on 8 December 1954. For slides and illustrative material, used by Rowe in his lectures, see PWR/11.

**Reference and contact details:** PWR/7/1

## Lecture file

**Dates:** 1962–1985

**Extent:** 2 folders.

### Scope and Content:

Correspondence, drafts of lectures and lists of slides used in lectures. Also includes some details of lectures given to students at the University of Manchester and UMIST, but mainly relates to outside lectures, both in the U.K. and abroad.

Lectures were given to various bodies including the British National Society, Institution of Civil Engineers, the Institution of Structural Engineers, the Turner Asbestos Cement Company, University of Liege, Belgium, and many academic institutions in the U.K.

### Arrangement:

A list at the back of the file gives summary details of the majority of the outside lectures given



by Peter Rowe between 1966 and 1982. The contents of the file are arranged in chronological order to reflect this list. Divided into 2 folders: (1) 1962–1972, (2) 1972–1985.

**Related Units of Description:**

Some of the lectures were given at conferences, such as Boss '76. For further details of conferences see PWR/8.

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**Reference and contact details:** PWR/7/2

**Lecture file**

**Dates:** 1969–1982

**Extent:** 1 folder.

**Scope and Content:**

Correspondence concerning administrative arrangements for lectures. Includes some notes for a lecture given to the Institution of Civil Engineers, Merseyside Branch on 14 February 1973.

**Arrangement:**

A list at the back of the file, gives summary details of the majority of the outside lectures given by Peter Rowe between 1966 and 1980. The contents of the file are arranged in chronological order to reflect this list.

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**Reference and contact details:** PWR/7/3

**Foundation failures on layered deposits in relation to site investigation**

**Dates:** 30 Jan–19 Feb 1969

**Extent:** 4 sheets.

**Scope and Content:**

Programme of events and letter of thanks from the Honorary Secretary of the Midlands Association.

The lecture was given to the Midlands Association of the Institution of Civil Engineers at their sixth ordinary meeting, held at the University of Aston in Birmingham on 13 February 1969.

---

**Reference and contact details:** PWR/7/4

**Soil mass strength and the representative sample in relation to site investigation, the Twelfth Rankine Lecture**

**Dates:** 1969–1972



**Extent:** 7 sub bundles.

**Scope and Content:**

The lecture, based upon the observation of the fabric of natural soils, was given to the British Geotechnical Society at the Institution of Civil Engineers on 16 February 1972. Rowe used the innovative technique of simultaneous projections of slides to his left and right to compare soil structures.

It includes the following sub-bundles:

---

**Reference and contact details:** PWR/7/4/1

## **Correspondence**

**Dates:** 20 Feb 1969–18 May 1971

**Extent:** 11 sheets.

**Scope and Content:**

Between Rowe and Robert E. Gibson of the University of London, relating to the Twelfth Rankine Lecture. Letters concern the shortlist of engineers who were willing to give the Rankine Lecture on 16 February 1972 and include Rowe's summary of his intended topic for submission to the British Geotechnical Society.

---

**Reference and contact details:** PWR/7/4/2

## **Pages from a note book**

**Dates:** n.d. [1970s]

**Extent:** 8 sheets.

**Scope and Content:**

Calculations and diagrams for the lecture.

---

**Reference and contact details:** PWR/7/4/3

## **Preparation for the Rankine Lecture**

**Dates:** Jul 1971–4 Jan 1972

**Extent:** 1 folder.

**Scope and Content:**

Preparatory notes for the lectures on types of soil and costs of site investigations, with some notes (MS and typescript) sent to Rowe by Ken Peaker of William Trow Associates. The file includes letters from Ken Peaker, Professor R.B. Peck of the University of Illinois, U.S.A. and M.J. Tomlinson of George Wimpey and Co. Ltd,

giving advice on the draft of the lecture. There is also correspondence between Rowe and practising consulting engineers concerning typical expenditure and costs of recent works. Also contains four photographs of a bore-hole being drilled.

File entitled 'Note on Prof. Rowe's Clay Samples' [in Ken Peaker's hand] and 'Preparation for the Rankine Lecture' [in Rowe's hand].

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**Reference and contact details:** PWR/7/4/4

## **File of photographs of the centrifuge**

**Dates:** n.d. [1970s]

**Extent:** 1 folder.

### **Scope and Content:**

Typed draft of the Rankine Film Commentary, with corresponding photographs and details of cost of film production.

---

**Reference and contact details:** PWR/7/4/5

## **Draft of a letter**

**Dates:** 8 Feb 1972

**Extent:** 3 sheets.

### **Scope and Content:**

From Rowe to P.C. Beresford of the British Geotechnical Society, concerning requirements for the lecture. With manuscript notes on applications and lessons of the lecture.

---

**Reference and contact details:** PWR/7/4/6

## **Spoken version of the Twelfth Rankine Lecture**

**Dates:** 1972

**Extent:** 1 folder.

### **Scope and Content:**

Typescript of the spoken version, with manuscript notes on comments of academics and practising civil engineers who heard the lecture.

---

**Reference and contact details:** PWR/7/4/7

## **Correspondence**



**Dates:** 21 Jul–20 Sep 1994

**Extent:** 3 sheets.

**Scope and Content:**

Correspondence between Rowe and Graham James of Thomas Telford Publications, concerning the publication of a compilation of the Rankine Lectures.

---

**Reference and contact details:** PWR/7/5

## **Letter from B. Scarlett of the University of Technology, Loughborough**

**Dates:** 8 Jun 1970

**Extent:** 1 sheet.

**Scope and Content:**

Scarlett thanks Rowe for his recent lecture to the course.

---

**Reference and contact details:** PWR/7/6

## **'Some considerations on behaviour, calculation and design of sheet pile walls'**

**Dates:** 16 Sep 1970

**Extent:** 1 sheet.

**Scope and Content:**

Programme and list of topics for Rowe's lecture at the Koninklijk Instituut Van Ingenieurs, Den Haag, Netherlands.

---

**Reference and contact details:** PWR/7/7

## **'Foundation failures in relation to site investigation practice'**

**Dates:** 1970

**Extent:** 2 sheets.

**Scope and Content:**

Membership card for the Institution of Civil Engineers, giving details of Rowe's lecture on 16 December 1970. With undated letter of thanks from Charles Roe.

---

**Reference and contact details:** PWR/7/8

## **'Stress/strain properties of sands'**

**Dates:** 8 Jun 1972

**Extent:** 1 sheet.

### **Scope and Content:**

Letter from D.H. Bennett of the University of Aston in Birmingham, giving thanks for Rowe's recent seminar.

---

**Reference and contact details:** PWR/7/9

## **Osborne Reynolds Society dinner**

**Dates:** n.d. [1974–1977]

**Extent:** 3 sheets.

### **Scope and Content:**

Typescript with MS amendments for speech at the [Osborne Reynolds] Society Annual Dinner, usually given in May. Rowe gave the speech when he was president of the Society and introduced the guest speaker, Mr Ruffle of the Sunderland and South Shields Water Company and graduate of the University of Manchester.

---

**Reference and contact details:** PWR/7/10

## **Mid career training session 1974–1975**

**Dates:** 24 Jan–6 Feb 1975

**Extent:** 2 sheets.

### **Scope and Content:**

Letters from the Institution of Civil Engineers relating to Rowe's lecture on 22 January 1975 and reimbursement of travelling expenses.

---

**Reference and contact details:** PWR/7/11

## **Mathematical and physical modelling short course**

**Dates:** Apr 1976

**Extent:** 3 sheets.

### **Scope and Content:**

Introductory leaflet for the course at the Universities of Liverpool and Manchester and Rowe's notes and list of slides.



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**Reference and contact details:** PWR/7/12

## **North Sea modelling**

**Dates:** May 1977

**Extent:** 2 sheets.

**Scope and Content:**

Rowe's notes for a lecture on North Sea modelling at UMIST.

---

**Reference and contact details:** PWR/7/13

## **'A professional view: the choice of a topic for research'**

**Dates:** 1980

**Extent:** 5 sheets.

**Scope and Content:**

Letter from Dr J.H. Atkinson of the City University, London, relating to arrangements for the lecture to be given by Rowe at the Symposium for Young Research Workers in Geotechnical Engineering. With MS notes and "first ideas".

---

**Reference and contact details:** PWR/7/14

## **'Some unexpected geotechnical events'**

**Dates:** Nov 1982

**Extent:** 2 sheets.

**Scope and Content:**

Printed synopsis of Rowe's lecture and MS notes. The lecture was given to the North West Geotechnical Group of the British Geotechnical Society at UMIST and was followed by the presentation of the Cooling Prize.

---

**Reference and contact details:** PWR/7/15

## **Lecture given at conference for young research workers in geotechnical engineering**

**Dates:** 27 Oct 1982– Mar 1983

**Extent:** 1 soft-back volume and 10 sheets.

**Scope and Content:**

Correspondence from Dr J.H. Atkinson of the City University relating to arrangements for the course, course brochure with details of delegates and Rowe's MS notes and list of slides. Single sheet headed "Research or search" which seems to be related.

---

**Reference and contact details:** PWR/7/16

## **'Some unexpected geotechnical events'**

**Dates:** 22 Dec 1982–30 Jun 1983

**Extent:** 4 sheets.

### **Scope and Content:**

Letter from Dr I.F. Christie of the Institution of Civil Engineers relating to Rowe's lecture in Edinburgh for the local association on 7 December 1983. With provisional programme for 1983–1984 and a synopsis of the lecture on the same subject which Rowe gave on 17 November 1984.

---

**Reference and contact details:** PWR/7/17

## **'Thirty years of surprises after ground investigation'**

**Dates:** 3 Mar–4 Jul 1983

**Extent:** 1 soft-back volume and 8 sheets.

### **Scope and Content:**

Letters from S.E. Quarrell of the Association of Ground Investigation Specialists (AGIS) relating to Rowe's agreement to speak at the A.G.M., a copy of the specification for ground investigations of 1978 but with Rowe's annotations [of 1983], MS notes and correspondence relating to reimbursement of expenses.

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**Reference and contact details:** PWR/7/18

## **'10 years of centrifuge testing'**

**Dates:** 10 Nov 1983–13 Jan 1984

**Extent:** 3 sheets.

### **Scope and Content:**

Letters from R.S. Steedman relating to the arrangement for Rowe's lecture to the Soil Mechanics Group Colloquia on 25 January 1984 and also for an evening talk at the Institution of Civil Engineers' A.G.M. on 'Some unexpected geotechnical events'. Includes Rowe's 15 requirements for illustrated lectures, with case histories of mishaps when lecturing.

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**Reference and contact details:** PWR/7/19



## **'Failures and claims arising from inadequate site investigations'**

**Dates:** 30 Nov–16 Dec 1983

**Extent:** 6 sheets.

### **Scope and Content:**

Correspondence between Rowe and I.L. White of UMIST, relating to Rowe's lecture as part of a two-week course on Geotechnical Engineering in Highway Design and Construction, for the Department of Transport. The course was split between 2 weeks, 2–6 April 1984 and 2–6 July 1984.

---

**Reference and contact details:** PWR/7/20

## **Sixth-form lectures**

**Dates:** 24 Jul–2 Aug 1984

**Extent:** 2 sheets.

### **Scope and Content:**

Correspondence between Rowe and B.S.H. Rarity of the Manchester Literary and Philosophical Society. Rowe was invited to lecture to sixth formers in the Society's series of lectures but declined due to other commitments.

---

**Reference and contact details:** PWR/7/21

## **Talk at Keele University**

**Dates:** 11 Mar 1985

**Extent:** 1 sheet.

### **Scope and Content:**

Letter from Mike Eggboro of the Institution of Geologists, thanking Rowe for giving a talk at Keele University.

---

**Reference and contact details:** PWR/7/22

## **Talk at Osborne Reynolds' Dinner**

**Dates:** Jun 1986

**Extent:** 11 sheets.

### **Scope and Content:**

Typescript of the talk with MS amendments, referring to various stories to be incorporated.

With letter of thanks from Peter Montague, the Chairman of the Osborne Reynolds Society. Also attached are copies of letter from Addleshaw, Sons and Latham (Solicitors) to Rowe, 1976, referring to Philips Patents Ltd v. Labour and Plant Hire (Manchester Ltd) and Rowe's typed comments on the judgement [possibly related to the talk].

---

**Reference and contact details:** PWR/7/23

## **'Unforeseen foundation problems on rocks and soil'**

**Dates:** 26 Jul–29 Sep 1992

**Extent:** 7 sheets.

### **Scope and Content:**

Correspondence between Rowe and R.A. Forth of the University of Newcastle upon Tyne, relating to Rowe's guest lecture to the postgraduate geotechnical group at the University.

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**Reference and contact details:** PWR/7/24

## **'History of soil mechanics in the North West'**

**Dates:** 22 Mar–4 Aug 1993

**Extent:** 9 sheets.

### **Scope and Content:**

Correspondence between Rowe and T. Boniface, Secretary of the Institution of Civil Engineers, North Western Association relating to Rowe's talk on the 19 February 1993. With outline of proposed talk and MS notes.

---

**Reference and contact details:** PWR/7/25

## **'A rare case of structure-rock-structure-content interaction'**

**Dates:** 16 Nov 1993–2 Feb 1995

**Extent:** 10 sheets.

### **Scope and Content:**

Correspondence between Rowe and Hugh St John of the Geotechnical Consulting Group and programme co-ordinator of the British Geotechnical Society relating to Rowe's guest lecture to the Society on 9 November 1994. Also letters of appreciation following the lecture.

---

**Reference and contact details:** PWR/7/26

## **Miscellaneous lecture notes**



**Dates:**n.d. [post 1976]

**Extent:** 4 sheets.

**Scope and Content:**

One page is headed "Greek lecture" and possibly refers to a lecture given in Greece at the request of George Pavlakis, a Ph.D. student at Manchester and friend of Rowe.

---

**Reference and contact details:** PWR/7/27

## **List of slides used in a talk**

**Dates:**n.d.

**Extent:** 7 sheets.

**Scope and Content:**

References to reservoirs and dams, possibly used in a talk on Tittesworth Reservoir.

---

**Reference and contact details:** PWR/7/28

## **After-dinner speech to the Federation of Dredging Contractors**

**Dates:**n.d. [post 1978]

**Extent:** 12 sheets.

**Scope and Content:**

MS and typed drafts of an after-dinner speech given by Rowe to dredging contractors [in Holland].

**Archival History:**

The typed draft was found by Ann Rowe and deposited in November 2001.

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**Reference and contact details:** PWR/7/29

## **Lecture on building the Fish Dock at Grimsby**

**Dates:**n.d.

**Extent:** 13 sheets.

**Scope and Content:**

Typed draft of a talk on the building of the dock. With MS annotations and details of slides. Also a note relating to missing slides. The typescript appears to be quite early, but the annotations and original location of the draft indicates that it was used again towards the end of Rowe's career.

**Arrangement:**

The draft was found in one of the boxes of slides.

**Related Units of Description:**

For details of slides, used by Rowe in his lectures, see PWR/11.

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**Reference and contact details:** PWR/8

## **Visits and Conferences**

**Dates:** 1962–1992

**Extent:** 34 items.

**Arrangement:**

Items within the subfonds are arranged by date of conference or visit.

---

**Reference and contact details:** PWR/8/1

### **Symposium on Estuary Barrage Projects**

**Dates:** Oct 1964

**Extent:** 18 sheets.

**Scope and Content:**

Programme, lists of information and synopses of the papers to be presented at the symposium. The symposium was held on 30 October 1964 at the Manchester College of Science and Technology and reviewed the state of knowledge relating to schemes of regional development based on damming estuaries of rivers.

---

**Reference and contact details:** PWR/8/2

### **Fifth Australia New Zealand Conference, Auckland**

**Dates:** 9 Nov 1962–3 May 1967

**Extent:** 2 sheets.

**Scope and Content:**

Letter from the Technical Secretaries of the New Zealand National Society for Soil Mechanics and Foundation Engineering, inviting Rowe to speak at the conference in Auckland and thanking him for an "outstanding contribution". Rowe spoke in at what was the fifth Australia New Zealand conference in Auckland on the evening of 14 February 1967 and also visited research schools in Sydney and Melbourne.

---

**Reference and contact details:** PWR/8/3

### **Visit to Australia and New Zealand**

**Dates:** 24 Nov 1966–19 Feb 1967

**Extent:** 2 folders.

**Scope and Content:**

Correspondence between Rowe and Prof. N.A. Mowbray relating to potential visits to the University of Auckland and letters referring to various tour options, tentative list of participants and second bulletin of the Fifth Australia New Zealand conference. Also included are copies of papers and information relating to engineering works of the New Zealand Electricity Department, some of which Rowe visited during his stay.

**Arrangement:**

Divided into 2 folders: (1) letters, correspondence and brochures; (2) lectures.

---

**Reference and contact details:** PWR/8/4

## **Short course on critical state soil mechanics**

**Dates:** Jan 1969

**Extent:** 1 folder.

**Scope and Content:**

Supplementary list of course members, including Rowe, Rowe's MS notes and a full copy of lecture notes and figures made by A.N. Schofield and C.P. Wroth.

---

**Reference and contact details:** PWR/8/5

## **Seventh International Conference on Soil Mechanics and Foundation Engineering**

**Dates:** Oct 1969

**Extent:** 9 sheets.

**Scope and Content:**

Questionnaire based upon the conference, which was held by the International Society for Soil Mechanics and Foundation Engineering in Mexico City on 22–23 August 1969, filled out by Rowe. With a telegram relating to papers.

---

**Reference and contact details:** PWR/8/6

## **Offshore Technology Conference, Houston**

**Dates:** n.d. [1969–1979]

**Extent:** 1 folder.

**Scope and Content:**

Notes made by Rowe [for the conference?] on papers submitted. Of the papers themselves only those with annotations have been kept. The notes are undated and approximate dates are taken from the printed proceedings.



**Related Units of Description:**

Full copies of the Offshore Technology Conference proceedings can be accessed at the John Rylands University Library of Manchester.

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**Reference and contact details:** PWR/8/7

## **Roscoe Memorial Symposium**

**Dates:** Mar 1971

**Extent:** 1 folder.

**Scope and Content:**

Programme and papers, with Rowe's annotations, for the symposium. Also a typed draft of Rowe's paper on 'Large scale laboratory model retaining wall apparatus'.

The symposium took as its topic the stress-strain properties of soil. It was held on 29–31 March 1971 in Cambridge as a memorial to Prof. K.H. Roscoe, formerly head of the Soil Mechanics section of the University Engineering Department of Cambridge University.

---

**Reference and contact details:** PWR/8/8

## **Conference on Offshore Structures**

**Dates:** 10–12 Sep 1974

**Extent:** 2 sheets.

**Scope and Content:**

Correspondence between Rowe and Ernest Low of Low Parsons and Brown. Low invited Rowe to contribute to session 2 of the conference, which was to be held on 7–8 October 1974.

---

**Reference and contact details:** PWR/8/9

## **International Seminar on Centrifugal Modelling**

**Dates:** Apr 1975

**Extent:** 1 folder.

**Scope and Content:**

Abstract, objectives and background of the seminar, which was held in Cambridge on 22–26 September 1975. Also copy of G.I. Pokrovsky and I.S. Gyodorov, *Centrifugal model testing in the mining industry* (Moscow: 1969), which was supplied to delegates. With a note to Rowe from Prof. Andrew Schofield, organizer of the seminar.

---

**Reference and contact details:** PWR/8/10

## Australia

**Dates:** 1975–1981

**Extent:** 3 pieces.

### Scope and Content:

Papers relating to Rowe's attendance at the Second Australia-New Zealand Conference on Geomechanics in Brisbane, July 1975; correspondence with Australian engineers, mainly concerning visits to Manchester, 1975–1981; and papers relating to a reference for a professorial position at the University of New South Wales, 1977–1980.

---

**Reference and contact details:** PWR/8/10/1

## Second Australia-New Zealand Conference on Geomechanics etc.

**Dates:** Jun 1974– Oct 1975

**Extent:** 1 folder.

### Scope and Content:

Sub-folder of papers relating to arrangements for the Second Australia-New Zealand Conference on Geomechanics and the Symposium on Recent Developments in the Analysis of Soil Behavior and their Application to Geotechnical Structures, held in Brisbane, 21–25 July 1975, at which Rowe chaired session 8b. Papers relating to the Symposium on Recent Developments in the Analysis of Soil Behavior and their Application to Geotechnical Structures at Sydney, 14–18 July 1975, at which Rowe gave a keynote address in the opening session. Includes an application for a grant from the British Council and Rowe's notes on the lectures.

---

**Reference and contact details:** PWR/8/10/2

## Correspondence

**Dates:** 12 Dec 1975–29 May 1981

### Scope and Content:

General correspondence with Australian engineers, mainly relating to possible sabbaticals by Australian lecturers in Manchester, including letters and *curricula vitae* for W.H. Cogill of the University of New South Wales, Prof. E.H. Davis of the University of Sydney and S.J. Hain of the University of New South Wales.

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**Reference and contact details:** PWR/8/10/3

## References



**Dates:** 28 Feb 1977–6 Jun 1980

**Extent:** 1 folder.

**Scope and Content:**

Papers relating to a reference supplied by Rowe for Prof. I.K. Lee's application to the post of Chief of the Division of Applied Geomechanics, University of New South Wales. Papers also relate to applications made by Lee for Australian Research Grants, for which Rowe was an assessor.

**Access Conditions:**

To protect confidentiality, these records are closed until 1 January 2031.

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**Reference and contact details:** PWR/8/11

## **Behavior of Offshore Structures: Boss '76**

**Dates:** Aug 1976

**Extent:** 5 pamphlets.

**Scope and Content:**

List of participants and copies of papers given at the conference. This was hosted by the Norwegian Institute of Technology on 2–5 August 1976.

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**Reference and contact details:** PWR/8/12

## **Conference on Design and Construction of Offshore Structures**

**Dates:** Oct 1976

**Extent:** 1 folder.

**Scope and Content:**

Programme, delegate list and Rowe's notes and overheads his talk 'Model studies of offshore gravity structures founded on clay'. The conference was held by the Institution of Civil Engineers, the Institution of Structural Engineers and the Society for Underwater Technology at the Institution of Civil Engineers, London, on 27–28 October 1976.

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**Reference and contact details:** PWR/8/13

## **Tokyo Conference**

**Dates:** n.d. [Jul 1977]

**Extent:** 1 folder.

**Scope and Content:**

Typed copy of Rowe's contribution to the offshore speciality session for the Ninth International Conference on Soil Mechanics and Foundation Engineering, with diagrams.

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**Reference and contact details:** PWR/8/14

## **ICOLD Conference**

**Dates:** 12 Oct 1977

**Extent:** 3 sheets.

### **Scope and Content:**

Letter from A.D. Penman of the Building Research Establishment, Watford, relating to the conference of the International Commission on Large Dams in Delhi, enclosing a list of questions on the deterioration of dams. Rowe was asked to contribute a paper on the puddle core dam with underlying gravel. Penman also mentions his recent visits to dams in the U.K.

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**Reference and contact details:** PWR/8/15

## **International Symposium on Soil Mechanics Research and Foundation Design for the Oosterschelde Storm Surge Barrier**

**Dates:** n.d. [1977]– 1978

**Extent:** 2 pieces.

### **Scope and Content:**

The symposium entitled 'Foundation aspects of coastal structures' was held on 9–12 October 1978 at Delft, the Netherlands.

---

**Reference and contact details:** PWR/8/15/1

## **Letter**

**Dates:** n.d. [1977]

**Extent:** 1 sheet.

### **Scope and Content:**

To Rowe from the symposium committee relating to arrangements for the symposium, which seems to have been originally scheduled for 13–15 October in Rotterdam.

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**Reference and contact details:** PWR/8/15/2

## **File**



**Dates:** 21 Feb 1978–20 Jun 1978

**Extent:** 2 folders. Condition: Some of the pages appear to have suffered from damp and are brittle.

**Scope and Content:**

Correspondence between Rowe and J.D. Nieuwenhuis of the Soil Mechanics Laboratory in Delft relating to arrangements for the symposium. Also MS and typescript drafts and diagrams for the lecture on 'Predictions of caisson and pier performance by dynamically loaded centrifugal models' given by Rowe and W.H. Craig of the University of Manchester. Also a copy of the paper presented by E.P. Hudig, D.W. de Hann, C.J. Van Rossen and F. Stam, 'Full scale direct shear and penetration tests for the design of the intermediary layer at the interface between concrete structure and foundation layer'.

**Arrangement:**

Divided into 2 folders (arranged as found).

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**Reference and contact details:** PWR/8/16

## **Visit to Sweden**

**Dates:** 19 May 1978

**Extent:** 1 sheet.

**Scope and Content:**

Letter from the British Council relating to Rowe's report on his recent tour in Sweden, where Rowe lectured to the Swedish Geotechnical Society.

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**Reference and contact details:** PWR/8/17

## **International Symposium on Soils under Cyclic and Transient Loading**

**Dates:** 11–19 Dec 1979

**Extent:** 3 sheets.

**Scope and Content:**

Correspondence between Rowe and G.N. Pande of University College of Swansea. Rowe was invited to lecture on 8 January 1980 and chair a session of 7 January. The symposium was held at the Swansea University on 7–11 January 1980.

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**Reference and contact details:** PWR/8/18

## **Stockholm Conference**

**Dates:** 3–19 Mar 1981

**Extent:** 1 folder.

**Scope and Content:**

Correspondence between Rowe and Göran Sällfors of the Institutionen för geoteknik med grundläggning relating to four articles on centrifugal testing from Session 4 of the Tenth International Conference on Soil Mechanics and Foundation Engineering, 1981. Rowe has added MS comments to each of these.

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**Reference and contact details:** PWR/8/19

## **International Symposium on Geotechnical Aspects of Offshore Structures, Bangkok**

**Dates:** 2 Feb 1981-24 Mar 1982

**Extent:** 1 folder.

**Scope and Content:**

Correspondence between Rowe and Prof. A.S. Balasubramaniam of the Asian Institute of Technology and letters relating to Rowe's application for a grant from the British Council to attend the Symposium in Bangkok, Thailand. Also a programme, report, MS notes and a photograph of students on the maritime civil engineering course (1981-1982) with all students identified.

Rowe spoke at sessions on the modelling of soil behaviour and case studies. The Symposium was held at the AIT on 7-18 December 1981.

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**Reference and contact details:** PWR/8/20

## **International Conference on Case Histories in Geotechnical Engineering**

**Dates:** 18 Jun 1982-1 Jun 1983

**Extent:** 13 sheets.

**Scope and Content:**

Letters from Prof. Shamsheer Prakash of the University of Missouri-Rolla requesting a contribution from Rowe. Also brief MS notes on case studies by Rowe. The conference was held in St Louis, Missouri on 6-11 May 1984.

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**Reference and contact details:** PWR/8/21

## **Workshop on Offshore Structures**

**Dates:** 18 Aug 1982-22 Sep 1982

**Extent:** 11 sheets.



**Scope and Content:**

Correspondence between Rowe, Prof. V.S. Chandrasekaran of the Indian Institute of Technology, Bombay and the British Council relating to a possible visit to the Institute. Rowe intended to lecture on 'Use of large centrifugal models for offshore and near shore works', but was unable to attend due to ill health.

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**Reference and contact details:** PWR/8/22

## **Symposium on Fixed Offshore Structures**

**Dates:** 22 Nov 1982

**Extent:** 1 sheet.

**Scope and Content:**

Letter from the J.C. McKenzie, the secretary of the Institution of Civil Engineers, thanking Rowe for being the chairman for session 4.

---

**Reference and contact details:** PWR/8/23

## **Applications of Centrifuge Modelling to Geotechnical Design**

**Dates:** 4 Mar 1983–Apr 1984

**Extent:** 1 folder.

**Scope and Content:**

Circulars from the University of Manchester relating to the three-day meeting held on 16–18 April 1984, as a contribution to the activities of the International Society for Soil Mechanics and Foundation Engineering Technical Committee on Centrifuges.

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**Reference and contact details:** PWR/8/24

## **Hydrogeology in the Service of Man**

**Dates:** 18 Jun 1984

**Extent:** 13 sheets.

**Scope and Content:**

Letter from Prof. W.B. Wilkinson of the Royal Military College of Science, Shrivenham, Swindon, Wiltshire, thanking Rowe for agreeing to present a keynote paper at the conference and enclosing an introductory leaflet and list of participants. Wilkinson also thanks Rowe for acting as a sponsor in his application for the class of Fellow of the Institution of Civil Engineers.

The eighteenth conference hosted by the International Association of Hydrogeologists was

held on 8–13 September 1985 in Cambridge.

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**Reference and contact details:** PWR/8/25

## **Groundwater in Engineering Geology**

**Dates:** n.d. [Sep 1985]

**Extent:** 1 folder.

**Scope and Content:**

Delegate list for the twenty-first regional conference of the Engineering Group of the Geological Society. With photographs and captions used by Rowe. The conference proceedings, including Rowe's paper, 'The potentially latent dominance of ground water in ground engineering', were published by the Geological Society in *Groundwater in Engineering Geology* (London: 1986)

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**Reference and contact details:** PWR/8/26

## **International Conference on Structural Failures**

**Dates:** 18 Jul 1983–23 Aug 1983

**Extent:** 3 sheets.

**Scope and Content:**

Letter from Prof. Bengt B. Broms of the Nanyang Technological Institute, Singapore asking Rowe to give a lecture at the conference relating to anchored sheet pile walls, silos and cofferdams. With a call for papers and Rowe's reply. The conference hosted by the Singapore Concrete Institute and Nanyang Technological Institute was held on 30–31 March 1987 in Singapore.

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**Reference and contact details:** PWR/8/27

## **Indian Geotechnical Conference 1987**

**Dates:** 19 Jan 1987–16 Feb 1987

**Extent:** 2 sheets.

**Scope and Content:**

Letter from Prof. K.S. Subba Rao of the Indian Institute of Science, Bangalore, inviting Rowe to contribute a technical paper and special lecture at the conference, with Rowe's letter declining due to other commitments. The conference was held 16–19 December 1987 at the Indian Institute of Science.

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**Reference and contact details:** PWR/8/28



## **Soil Structure Interactions Conference**

**Dates:** 10 Nov 1987–28 Apr 1988

**Extent:** 1 folder.

**Scope and Content:**

Letters from British Petroleum International and the Institution of Structural Engineers confirming arrangements for the conference, with programme of events. Also lecture notes, overheads and draft of Rowe's introduction to the session of retaining walls (for which he acted as chairman). The conference was held on 12–13 May 1988 at Britannic House, London.

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**Reference and contact details:** PWR/8/29

## **International Conference on Geotechnical Centrifuge Modelling: Centrifuge '88**

**Dates:** 6 Jan 1988–25 Apr 1988

**Extent:** 1 folder.

**Language:** French

**Scope and Content:**

Correspondence between Rowe and J.F. Corte, chairman of the organizing committee, programme and list of participants. Rowe chaired one of the sessions of the conference which was held on 25–27 April 1988 in Paris.

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**Reference and contact details:** PWR/8/30

## **Sugar Technical Conference**

**Dates:** 28 Jun 1988–4 Jul 1988

**Extent:** 2 papers.

**Scope and Content:**

Letter from R.J. Bass of British Sugar thanking Rowe for his involvement in the conference, which was held at Eastbourne. With Rowe's reply, commenting on the feedback on the talk.

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**Reference and contact details:** PWR/8/31

## **Using the Ground to Financial Advantage: an AMEC Group in house symposium**

**Dates:** 20 Dec 1989–22 Feb 1990

**Extent:** 3 folders.

**Scope and Content:**

Correspondence between Rowe and K.A.L. Johnson of Fairclough Civil Engineering Limited relating to arrangements for Rowe's talk on the 'Reliability of interpreting site investigation reports'. With drafts of Rowe's talk (MS and typescript), overheads, copy of Rowe's *curriculum vitae* used in Cofferdam litigation and symposium support notes and conference proceedings. Also a copy of Rowe's 'Compilation report no. 1 on centrifugal model test data', April 1978, possibly referred to when writing the talk.

The symposium was initially planned for 22 March 1989, but actually held on 4 October 1989 at Birmingham Botanical Gardens.

**Arrangement:**

Divided into 3 folders: (1) Correspondence and notes; (2) Conference proceedings; (3) Report.

**Reference and contact details:** PWR/8/32

## **Opening of the geotechnical centrifuge, Delft Geotechnics**

**Dates:** 20 Apr 1989–8 May 1989

**Extent:** 1 folder.

**Scope and Content:**

Faxes from Delft Geotechnics, the Netherlands, with Rowe's reply, concerning Rowe's talk on 'The centrifuge and industry – some mutual lessons'. With a MS draft of the talk.

The inauguration of the Delft geotechnical centrifuge was held on 15 June 1989.

**Reference and contact details:** PWR/8/33

## **Inauguration of the London geotechnical centrifuge**

**Dates:** Apr 1990

**Extent:** 1 folder.

**Scope and Content:**

Information relating to the opening of the centrifuge on 3 April 1990, with a memorandum from David Proctor of the University of Manchester, who attended the day.

**Reference and contact details:** PWR/8/34

## **Twenty-eighth Regional Conference of the Engineering Group of the Geological Society of London: EG 92**

**Dates:** 21 Jan 1992–19 Nov 1992

**Extent:** 4 sheets.

**Scope and Content:**



Letters from Steve Walthall of the organizing committee relating to Rowe's offer to address the conference. With a letter from Malcolm Eddleston of North West Water concerning the book prepared from papers delivered at the conference.

The conference was held on 7 September 1992 at Owen's Park, Manchester.

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Reference and contact details: PWR/9

## Professional Bodies

**Dates:** 1955–1995

**Extent:** 9 series (14 items).

### Arrangement:

The subfonds PWR/9 contains the following series:

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Reference and contact details: PWR/9/1

## Institution of Civil Engineers

**Dates:** 1955–1995

**Extent:** 4 items.

### Administrative and Biographical History:

The Institution of Civil Engineers was founded in London in 1818. Two years later Thomas Telford accepted the post of President and in 1828 the Institution obtained a Royal Charter. The Institution expanded rapidly during the 19th century and in 1894 the ICE moved into its present home at One Great George Street, Westminster. The ICE now represents over 70,000 professionally qualified civil engineers in some 145 countries. It seeks to advance the knowledge, practice and business of civil engineering, to promote the breadth and value of the civil engineer's global contribution to sustainable, economic growth, and ethical standards, and to include in membership all those involved in the profession.

### Scope and Content:

Rowe was elected as a member of the Institution of Civil Engineers in 1952 and became a fellow in 1963. Between 1963 and 1968, he was also a member of the Géotechnique Papers Panel.

### Related Units of Description:

See also correspondence relating to the awards given to Rowe by the Institution of Civil Engineers in recognition of his work, PWR/1, and also details of papers published by the Institution, PWR/6. The archives of the Institution of Civil Engineers can be found in their Library at the Institution's headquarters building, Great George Street, Westminster, SW1.

---

Reference and contact details: PWR/9/1/1

## Correspondence file

**Dates:** Jan 1955–29 Dec 1969

**Extent:** 4 folders.



**Scope and Content:**

Correspondence between Rowe and the Institution, mostly relating to Rowe's role as a referee for the Géotechnique advisory panel. Includes some drafts of Rowe's comments and contributions to discussions in *Géotechnique* and the *Proceedings of the Institution of Civil Engineers*. Also some correspondence relating to general membership matters.

**Arrangement:**

Divided into 4 folders: (1) 1955–1964; (2) 1965–1966; (3) 1967–1968; (4) 1969.

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**Reference and contact details:** PWR/9/1/2

## **North West Association centenary**

**Dates:** 1985–1986

**Extent:** 1 soft-back volume, 1 sheet.

**Scope and Content:**

Brochure and list of centenary year celebrations.

---

**Reference and contact details:** PWR/9/1/3

## **Letter relating to awards for papers**

**Dates:** 22 Mar 1991

**Extent:** 2 sheets.

**Scope and Content:**

Letter from the Administrator for Awards and Competitions, asking Rowe if he would mark papers published by the Institution in connection with the granting of awards.

---

**Reference and contact details:** PWR/9/1/4

## **Letter relating to Géotechnique Advisory Panel**

**Dates:** 24 Jul 1995

**Extent:** 1 sheet.

**Scope and Content:**

Letter from P. Skanthan of the Engineering Division, asking Rowe to carry on refereeing papers submitted to *Géotechnique*. Marked 'declined'.

---

**Reference and contact details:** PWR/9/2



## Institution of Water Engineers

**Dates:** 1961

**Extent:** 1 item.

### Administrative and Biographical History:

The Institution of Water Engineers (IWE) was established in 1896 as the British Association of Waterworks Engineers. In 1911 it was incorporated as the IWE and later became the Institution of Water Engineers and Scientists (IWES). In 1987 the IWES merged with the Institution of Public Health Engineers and the Institute of Water Pollution Control to form the Institution of Water and Environmental Management. The Institution was granted a royal charter in 1995 and became the Chartered Institution of Water and Environmental Management (CIWEM).

Rowe became an Associate Member of the IWE in 1961. This grade later became Member (with Senior Members becoming Fellows) as in the Institution of Civil Engineers. By 1993 Rowe's membership of the Institution had lapsed.

---

**Reference and contact details:** PWR/9/2/1

## Correspondence relating to membership

**Dates:** 8 May–23 Oct 1961

**Extent:** 18 sheets.

### Scope and Content:

Correspondence between Rowe, A.G. McLellan of the Sunderland and South Shields Water Company, H. Waterhouse of the River Dove Water Board, J.W. Seddon of the Cardiff Corporation Waterworks, W.K. Lewis of Manchester Corporation Waterworks and the Secretary of the Institution of Water Engineers relating to Rowe's membership. McLellan proposed that Rowe be admitted as a professional associate or associate member. Waterhouse, Seddon and Lewis were asked to support the proposal.

Also includes a letter from Rowe to McLellan of 12 October 1961, referring to developments at the University. Rowe's states that, 'One difficulty I believe is that of my insistence that teaching, research and *practice* are essentially complementary. There is a strong school of thought that professors at the Victoria side of the University should be strictly "academic".'

---

**Reference and contact details:** PWR/9/3

## British Geotechnical Society

**Dates:** 1966–1991

**Extent:** 1 item.

### Administrative and Biographical History:



The British Geotechnical Society was formed in 1949 as an unincorporated association. It became a registered charity in 1981, and was renamed the British Geotechnical Association (BGA) in 2000. The BGA is the principal association for geotechnical engineers in the United Kingdom and is the UK Member Society of the International Society for Soil Mechanics and Geotechnical Engineering (see PWR/9/5). The Association organizes the annual Rankine Lecture (see PWR/7/4).

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**Reference and contact details:** PWR/9/3/1

## **Circulars and correspondence**

**Dates:** 1966–1991

**Extent:** 1 folder.

### **Scope and Content:**

Mostly circulars relating to meetings, special lectures and the Cooling Prize awards. Also includes correspondence between Rowe and Dr C.R.I. Clayton, Chairman of the Society, relating to suggestions for future Rankine lecturers, 11 April–13 May 1991.

---

**Reference and contact details:** PWR/9/4

## **British Section, International Commission on Large Dams (ICOLD)**

**Dates:** 1982–1987

**Extent:** 1 item.

### **Administrative and Biographical History:**

The International Commission on Large Dams (ICOLD) was founded in 1928 and has National Committees in over eighty countries with approximately 7,000 individual members, who are practising engineers, geologists and scientists from governmental and private organizations, consulting firms, universities, laboratories and construction companies. Its original aim was to encourage advances in the planning, design, construction, operation, and maintenance of large dams and their associated engineering works, by collecting and disseminating relevant information and by studying related technical questions. Since the late 1960s, its focus has been on subjects of current concern such as dam safety, monitoring of performance, reanalysis of older dams and spillways, effects of ageing and environmental impact.

The British Section of ICOLD was formed in 1967, comprising both individual and corporate members, who elected the British National Committee of the British Section of the International Commission on Large Dams (BNCOLD). The British Dam Society was formed in 1990 to reflect the changing activities and interests of the members. It is an Associated Society of the Institution of Civil Engineers.

---

**Reference and contact details:** PWR/9/4/1



## Circulars

**Dates:** 2 Apr 1982–Aug 1987

**Extent:** 1 folder.

**Scope and Content:**

Notices, application forms and programmes for meetings and conferences, copies of annual reports, and minutes of executive committee meetings and Annual General Meetings.

---

**Reference and contact details:** PWR/9/5

## International Society for Soil Mechanics and Foundation Engineering

**Dates:** 1982

**Extent:** 1 item.

**Administrative and Biographical History:**

The Society had its origins in the First International Conference on Soil Mechanics and Foundation Engineering held in Harvard in 1936. An Executive Committee was set up with Karl Terzaghi as President and Arthur Casagrande as Secretary; but war intervened and the Second ICSMFE was not held until 1948 in Rotterdam. By the time of the Third ICSMFE in Zurich in 1953, the International Society had become firmly established, with Terzaghi as President and Donald Taylor as Secretary. In 1997, Council approved a change in name to the International Society for Soil Mechanics and Geotechnical Engineering to reflect more accurately its activities. The aim of the Society is 'the promotion of international co-operation amongst engineers and scientists for the advancement and dissemination of knowledge in the field of geotechnics, and its engineering and environmental applications.'

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**Reference and contact details:** PWR/9/5/1

## ISSMFE News

**Dates:** 1982

**Extent:** 7 sheets.

**Scope and Content:**

Issues 3 and 4 of *ISSMFE News*, comprising photocopied sheets.

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**Reference and contact details:** PWR/9/6

## Science and Engineering Research Council

**Dates:** 1982



**Extent:** 1 item.

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**Reference and contact details:** PWR/9/6/1

## **Letters from the Council**

**Dates:** 5 Jul–6 Sep 1982

**Extent:** 2 sheets.

**Scope and Content:**

Letters relating to Rowe's retirement from the Civil Engineering Sub-Committee on 31 August 1982.

---

**Reference and contact details:** PWR/9/7

## **The Fellowship of Engineering**

**Dates:** 1983

**Extent:** 1 item.

**Administrative and Biographical History:**

The Fellowship of Engineering was founded in 1976 on the initiative of the Duke of Edinburgh, to bring together the most distinguished British engineers from all branches of the profession, to promote the public understanding of engineering to society, to encourage excellence, and to provide expertise and advice on engineering-related matters. In 1992 the Fellowship was renamed the Royal Academy of Engineering.

---

**Reference and contact details:** PWR/9/7/1

## **Letter from the Fellowship Secretariat**

**Dates:** 24 May 1983

**Extent:** 1 sheet.

**Scope and Content:**

Relating to suggestions for research which might be undertaken by universities in support of U.K. civil engineering projects overseas.

---

**Reference and contact details:** PWR/9/8

## **University External Examiners' Boards**

**Dates:** 1983–1986

**Extent:** 3 items.

**Scope and Content:**

Peter Rowe served as an external examiner for many higher education institutions, including the Polytechnic of Central London, the University of Newcastle upon Tyne, and the University of London.

**Related Units of Description:**

Further correspondence relating to Rowe's role as an external examiner can be found in the Academic Correspondence Files, PWR/10/2.

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**Reference and contact details:** PWR/9/8/1

**Polytechnic of Central London**

**Dates:** 10 Jun 1983

**Extent:** 1 sheet.

**Scope and Content:**

Letter from J.A. Percival, Head of Civil Engineering, inviting Rowe to attend the academic awards ceremony in his capacity as external examiner.

[The Polytechnic of Central London later became the University of Westminster.]

---

**Reference and contact details:** PWR/9/8/2

**University of Newcastle upon Tyne**

**Dates:** 5 Dec 1985–14 Jan 1986

**Extent:** 5 sheets.

**Scope and Content:**

Letters from P.S. Mitchell, Senior Assistant Registrar, relating to the University's wish to appoint Rowe as an examiner for T.W. Grinsted's Ph.D. thesis, 'Earthmoving in submerged sands'.

---

**Reference and contact details:** PWR/9/8/3

**University of London**

**Dates:** 30 Jan–3 Feb 1990

**Extent:** 2 sheets.

**Scope and Content:**

Correspondence between Rowe and the Secretary of the Board of Studies in Civil and Mechanical Engineering, relating to Rowe's inclusion in a list of potential examiners of



D.Sc. degrees.

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Reference and contact details: PWR/9/9

## British Academy of Experts

**Dates:** 1988

**Extent:** 1 item.

### Administrative and Biographical History:

The British Academy of Experts was founded in 1987 as the professional body for expert witnesses, with the objective of establishing and promoting high objective standards for witnesses. 'British' was later dropped from the organization's title as The Academy of Experts became an International Centre of Excellence for Experts with a substantial multi-disciplinary membership, acting as both an accrediting and professional body. Since 1997 the Academy has been actively involved in the development of agreed standards for experts across the European Union. Peter Rowe, who regularly acted as an expert witness in legal disputes and arbitration cases concerning geotechnical engineering (see PWR/4/5), joined the Academy in 1988.

---

Reference and contact details: PWR/9/9/1

## Correspondence and circulars

**Dates:** 29 Jun–23 Aug 1988

**Extent:** 1 folder.

### Scope and Content:

Correspondence between Rowe and the Chairman of the Academy relating to Rowe's application for membership, approved on 23 August 1988. The papers also include a copy of Rowe's completed application form and draft *curriculum vitae*.

---

**Reference and contact details:** PWR/10

## **Correspondence**

**Dates:** 1948–1996

**Extent:** 6 series (82 items).

### **Scope and Content:**

This subfonds contains correspondence arising out of Peter Rowe's research, academic and consultancy activities throughout his career. It should be noted, however, that the majority of Rowe's correspondence is to be found with other types of material in the thematic sections of the archive, for example the Consultancy papers (PWR/4), Research papers (PWR/5) and Publications and Technical Papers (PWR/6).

### **Arrangement:**

The subfonds PWR/10 contains the following series:

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**Reference and contact details:** PWR/10/1

## **Files of Outgoing Letters**

**Dates:** 1963–1980

**Extent:** 7 items.

### **Scope and Content:**

The files contain copies of Rowe's outgoing letters, typed by the Secretary for the Engineering Department.

The majority of letters relate to the soil mechanics course at the University of Manchester, including comments on the course content, equipment, applications and other administrative matters. There are also a few letters which contain references for former students. Other letters concern papers written by Rowe and papers for which he acted as a referee. There are also letters to fellow academics and practising civil engineers relating to the development of new theories and recent research in the field of soil mechanics, with some references to the projects for which Rowe was acting as a consultant.

---

**Reference and contact details:** PWR/10/1/1

## **Master file**

**Dates:** 4 Jun 1963–29 Oct 1964

**Extent:** 2 folders.

### **Arrangement:**

Divided into 2 folders: (1) 1963; (2) 1964.



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**Reference and contact details:** PWR/10/1/2

## **Master file**

**Dates:** 2 Nov 1964–29 Dec 1965

**Extent:** 2 folders.

**Arrangement:**

Divided into 2 folders: (1) November 1964–April 1965; (2) May–December 1965.

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**Reference and contact details:** PWR/10/1/3

## **Master file**

**Dates:** 10 Jan–23 Dec 1966

**Extent:** 2 folders.

**Arrangement:**

Divided into 2 folders: (1) January–June 1966; (2) July–December 1966.

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**Reference and contact details:** PWR/10/1/4

## **Master file**

**Dates:** 6 Jan–22 Dec 1970

**Extent:** 2 folders.

**Arrangement:**

Divided into 2 folders: (1) January–April 1970; (2) May–December 1970.

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**Reference and contact details:** PWR/10/1/5

## **Master file**

**Dates:** 4 Jan–20 Dec 1971

**Extent:** 2 folders.

**Arrangement:**

Divided into 2 folders: (1) January–April 1971; (2) May–December 1971.

---

**Reference and contact details:** PWR/10/1/6

## **Master file**

**Dates:** 5 Jan 1976-30 May 1978

**Extent:** 3 folders.

**Arrangement:**

Divided into 3 folders: (1) 1976; (2) 1977; (3) 1978.

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**Reference and contact details:** PWR/10/1/7

## **Master file**

**Dates:** 12 Jun 1978-27 Nov 1980

**Extent:** 2 folders.

**Arrangement:**

Divided into 2 folders: (1) 1978–April 1979; (2) May 1979–1980.

---

**Reference and contact details:** PWR/10/2

## **Academic Correspondence Files**

**Dates:** 1950–1981

**Extent:** 31 items.

**Scope and Content:**

The files contain correspondence between Rowe and academics at the given institutions. Typically, they concern research projects, equipment, recent publications and meetings. Rowe acted as an external examiner for many universities and hence examinations of Ph.D. theses can be found in the files. In addition there are references for post-graduate degree places and for teaching posts.

**Arrangement:**

Arranged as found in alphabetical order of place. The first five files relate to international universities, while the remainder relate to British and Irish universities.

**Archival History:**

These files were not kept with the rest of Rowe's papers, but remained in the Department of Engineering of the University of Manchester.

**Archival History:**

The files were subsequently deposited by Dr W.H. Craig of the Engineering Department.

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**Reference and contact details:** PWR/10/2/1

## **Delft University of Technology, the Netherlands**

**Dates:** 3 Nov 1972-15 Jun 1976

**Extent:** 1 folder.

**Scope and Content:**

Mostly correspondence between Rowe and Prof. Gerard de Josselin de Jong, relating to Rowe's visit to Delft University, with letters relating to funding by the British Council. Also letters relating to research on dilatancy and friction.

---

**Reference and contact details:** PWR/10/2/2

## **University of Lagos, Nigeria**

**Dates:** 28 Apr 1978-6 Jun 1980

**Extent:** 6 sheets.

**Scope and Content:**

Correspondence between Rowe and Prof. Dotun Adepegba relating to assessment of publications for professorial appointments.

---

**Reference and contact details:** PWR/10/2/3

## **University of Liege, Belgium**

**Dates:** 4 Dec 1973-26 Nov 1975

**Extent:** 1 folder.

**Scope and Content:**

Correspondence between Rowe and Prof. A. Fagnoul, relating to Rowe's visit to the University of Liege, with letters relating to funding by the British Council. Also notes for Rowe's lecture at the Hague in April 1973.

---

**Reference and contact details:** PWR/10/2/4

## **Israel Institute of Technology**

**Dates:** 25 Mar 1971-25 Jun 1972

**Extent:** 1 folder.

**Scope and Content:**

Correspondence between Rowe and Dr Sam Frydman, relating to Rowe's recent visit to the Institute of Technology at Haifa and discussion of work on sands.

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Reference and contact details: PWR/10/2/5

## **University of Palermo, Italy**

**Dates:** 31 Oct 1972–15 Jun 1973

**Extent:** 1 folder.

### **Scope and Content:**

Correspondence between Rowe and Prof. Ing. Ruggiero Jappelli, relating to Rowe's visit to the University of Palermo, Italy, with letters relating to funding by the British Council.

---

Reference and contact details: PWR/10/2/6

## **Queen's University of Belfast**

**Dates:** 19 Jun 1962–19 Nov 1972

**Extent:** 5 sheets.

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Reference and contact details: PWR/10/2/7

## **University of Birmingham**

**Dates:** 1 Jul 1969–8 Oct 1979

**Extent:** 17 sheets.

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Reference and contact details: PWR/10/2/8

## **University of Aston in Birmingham**

**Dates:** 17 Jan 1966–5 Feb 1973

**Extent:** 8 sheets.

---

Reference and contact details: PWR/10/2/9

## **Bolton Institute of Technology**

**Dates:** 29 Jan–14 Mar 1973

**Extent:** 2 sheets.

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Reference and contact details: PWR/10/2/10

## **University of Bristol**



**Dates:** 4 Oct 1965–13 Jan 1975

**Extent:** 1 folder.

---

**Reference and contact details:** PWR/10/2/11

## **University of Cambridge**

**Dates:** 6 Feb 1956–13 Jan 1976

**Extent:** 2 folders.

**Arrangement:**

Divided into 2 folders: (1) 1956–1966; (2) 1967–1976.

---

**Reference and contact details:** PWR/10/2/12

## **University of Wales, Cardiff**

**Dates:** 16 Feb 1952–3 Apr 1978

**Extent:** 1 folder.

**Scope and Content:**

Early letters are headed "University College of South Wales and Monmouthshire". This was part of the federal University of Wales and later merged with University College, Cardiff to become the University of Wales, Cardiff. Cardiff is also the centre for the registry of the University of Wales.

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**Reference and contact details:** PWR/10/2/13

## **University of Dublin**

**Dates:** 20 Mar 1958–1 Mar 1973

**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/2/14

## **Queen's College, Dundee**

**Dates:** 8 Nov 1951–8 Sep 1965

**Extent:** 3 sheets.

**Administrative and Biographical History:**

Queen's College, Dundee became the University of Dundee in 1967 by Royal Charter.

---

**Reference and contact details:** PWR/10/2/15

## **University of Edinburgh**

**Dates:** 7 Sep 1956–11 Jun 1968  
**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/2/16

## **Heriot-Watt University**

**Dates:** Mar 1957–29 Oct 1976  
**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/2/17

## **University of Glasgow**

**Dates:** 5 Jan 1955–10 Jan 1975  
**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/2/18

## **University of Lancaster**

**Dates:** 4–23 Sep 1964  
**Extent:** 12 sheets.

### **Scope and Content:**

Correspondence between Rowe and Prof. G. Manley relating to the proposed Joint University Committee to study the Morcambe Barrage Project.

---

**Reference and contact details:** PWR/10/2/19

## **University of Leeds**

**Dates:** 1 Aug 1956–15 Jan 1980  
**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/2/20

## **University of Liverpool**

**Dates:** 18 Feb 1960–11 Dec 1969  
**Extent:** 1 folder.



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**Reference and contact details:** PWR/10/2/21

## **City University, London**

**Dates:** 16 Feb 1967–5 Mar 1969

**Extent:** 13 sheets.

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**Reference and contact details:** PWR/10/2/22

## **University of London**

**Dates:** 12 Jun 1950–24 May 1978

**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/2/23

## **University of Newcastle upon Tyne**

**Dates:** 10 Jul 1958–25 Nov 1981

**Extent:** 1 folder.

### **Scope and Content:**

The early letters are headed "University of Durham, King's College", which in 1963 became the University of Newcastle upon Tyne.

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**Reference and contact details:** PWR/10/2/24

## **University of Nottingham**

**Dates:** 20 Mar 1967–29 Sep 1976

**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/2/25

## **University of Salford**

**Dates:** 1 May 1956–12 May 1980

**Extent:** 1 folder.

### **Scope and Content:**

The early letters are headed "The Royal Technical College", which became the University of Salford in 1967.

---

**Reference and contact details:** PWR/10/2/26

## **Sheffield Polytechnic**

**Dates:** 19 Mar 1976–25 May 1977

**Extent:** 13 sheets.

### **Administrative and Biographical History:**

Sheffield Polytechnic became Sheffield Hallam University in 1992.

---

**Reference and contact details:** PWR/10/2/27

## **University of Sheffield**

**Dates:** 13 Sep 1963–25 Mar 1975

**Extent:** 28 sheets.

---

**Reference and contact details:** PWR/10/2/28

## **University of Southampton**

**Dates:** 20 Jan 1971–21 Jan 1976

**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/2/29

## **University of Strathclyde**

**Dates:** 26 Oct 1965–27 Nov 1974

**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/2/30

## **University of Wales, Swansea**

**Dates:** 27 Sep 1960–6 May 1981

**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/2/31

## **University of Manchester Institute of Science and Technology (UMIST)**

**Dates:** 24 Nov 1967–12 May 1980

**Extent:** 1 folder.



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Reference and contact details: PWR/10/3

## Scientific Correspondence Files

**Dates:** 1948–1961

**Extent:** 4 items.

**Scope and Content:**

These files contain correspondence between Rowe and fellow academics and engineers in Britain and overseas, relating to sheet pile walls and earth pressures, friction, and tests on sand.

---

Reference and contact details: PWR/10/3/1

### Correspondence file

**Dates:** 27 Feb 1948–16 Jul 1953

**Extent:** 3 folders. Condition: papers are creased and torn.

**Scope and Content:**

Concerning research into sheet pile walls and earth pressures by Rowe and others. Correspondents include W.T. Marshall of University College, Dundee (part of St Andrews University), A.W. Skempton of Imperial College, London, J.O. Lake and S. Packshaw of the British Steel Piling Company, G.P. Tschebotarioff of Princeton University, USA, and Karl Terzaghi of Harvard University, USA. The file includes MS notes and details of the printed discussion following the publication of Rowe, 'Anchored sheet pile walls' *Proceedings of the Institution of Civil Engineers*, vol. 1, no. 1 (1952).

**Arrangement:**

Divided into 3 folders: (1) 1948–1951; (2) January–March 1952; (3) April 1952–July 1953.

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Reference and contact details: PWR/10/3/2

### Correspondence file

**Dates:** 16 Jul 1953–10 Jul 1961

**Extent:** 2 folders.

**Language:** German

**Scope and Content:**

Concerning research into sheet pile walls and earth pressures by Rowe and others. Correspondents include G.P. Tschebotarioff of Princeton University, USA, J. Brinch Hansen of Christiani and Nielson, Copenhagen, I. Toth of Paris, and Rudolf Briske of Hamburg. Includes a copy of P. Rowe, 'A stress-strain theory for cohesionless soil with

applications relating to earth pressures at rest and moving walls' *Géotechnique* vol. 4, no. 2, (1954) and a typed draft of P. Rowe and A. Briggs, 'Measurements on model strutted sheet pile walls' *Proceedings of the 5th International Conference on Soil Mechanics, Paris* (1961).

**Arrangement:**

Divided into 2 folders: (1) 1953–1954; (2) 1955–1961.

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**Reference and contact details:** PWR/10/3/3

**Correspondence file**

**Dates:** Apr 1958– 27 Oct 1958

**Extent:** 1 folder.

**Scope and Content:**

File inscribed 'S1'.

Correspondence between Rowe and G. de Josselin de Jong of Delft Soil Mechanics Laboratory, the Netherlands, and Dr L. Bjerrum of the Norwegian Geotechnical Institute, concerning friction. Includes a draft of de Jong's paper on 'The indefiniteness in kinematics for friction materials' with figures and a photograph.

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**Reference and contact details:** PWR/10/3/4

**Correspondence file**

**Dates:** 11 Jul 1961

**Extent:** 1 folder.

**Scope and Content:**

Letter to Rowe from L. Bjerrum of the Norwegian Geotechnical Institute, concerning tests on Valgrenda sand. With calculations.

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**Reference and contact details:** PWR/10/4

**Shorter Scientific Correspondence**

**Dates:** 25 Mar 1954– 11 Feb 1996

**Extent:** 3 items.

**Scope and Content:**

Containing letters on research, recent papers, conferences and aspects of soil mechanics and engineering.



**Arrangement:**

These letters were found loose in the miscellaneous boxes and have been arranged chronologically into artificial bundles.

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**Reference and contact details:** PWR/10/4/1

**Scientific correspondence**

**Dates:** 25 Mar 1954–27 Feb 1978

**Extent:** 1 folder. Condition: some papers creased.

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**Reference and contact details:** PWR/10/4/2

**Scientific correspondence**

**Dates:** Feb–26 Apr 1978

**Extent:** 1 folder.

**Scope and Content:**

Correspondence relating to P. Leimdorfer, 'Sheet piling', *Dock Harbour Authority*, vol. 58, no. 687, (1978).

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**Reference and contact details:** PWR/10/4/3

**Scientific correspondence**

**Dates:** 6 Feb 1979– 11 Feb 1996

**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/5

**Consultancy Correspondence**

**Dates:** 1965–1996

**Extent:** 7 items.

**Arrangement:**

These letters were found loose in the miscellaneous boxes.

**Related Units of Description:**

See also PWR/4 for consultancy files.

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**Reference and contact details:** PWR/10/5/1

## **Consultancy correspondence**

**Dates:** 10 Feb 1965–13 May 1970

**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/5/2

## **Consultancy correspondence with Rofe, Kennard and Lapworth**

**Dates:** 27 Aug 1970–Feb 1981

**Extent:** 1 folder.

### **Scope and Content:**

Includes 3 strips of negatives and 5 slides dated February 1981.

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**Reference and contact details:** PWR/10/5/3

## **Consultancy correspondence**

**Dates:** 17 Mar 1971–25 Apr 1974

**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/5/4

## **Consultancy correspondence**

**Dates:** 14 May 1974–12 Jan 1981

**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/5/5

## **Consultancy correspondence**

**Dates:** 11 Mar 1981–30 Mar 1989

**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/5/6

## **Consultancy correspondence**

**Dates:** 8 Jan 1990–Dec 1995

**Extent:** 1 folder.



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**Reference and contact details:** PWR/10/5/7

## **Consultancy correspondence relating to Carsington**

**Dates:** 23 Dec 1989–19 Jan 1996

**Extent:** 20 sheets.

### **Scope and Content:**

Correspondence concerning reasons for the failure of the Carsington dam. Includes references to Rowe's papers on the subject and resulting controversy.

### **Related Units of Description:**

See also the consultancy files relating to Carsington, PWR/4/2/1/24, and Rowe's research papers on the Carsington slip, PWR/6/1/25 and PWR/6/2/7.

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**Reference and contact details:** PWR/10/6

## **References and Recommendations**

**Dates:** 1964–1996

**Extent:** 5 sub-series (30 items).

### **Scope and Content:**

Peter Rowe was regularly asked to provide references for students, colleagues and associates applying for studentships, positions at the University of Manchester and other universities, Fellowships of the Institution of Civil Engineers and other awards.

### **Arrangement:**

The series is divided into 5 sub-series:

### **Access Conditions:**

To protect confidentiality, these records are closed for 100 years. Under the Data Protection Act, data subjects may request files.

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**Reference and contact details:** PWR/10/6/1

## **Examinations**

**Dates:** 1967

**Extent:** 1 item.

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**Reference and contact details:** PWR/10/6/1/1

## **Oral examination of D. R. White for a Ph.D. at the University of Leeds**

**Dates:** May 1967  
**Extent:** 23 sheets.

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**Reference and contact details:** PWR/10/6/2

## **Postgraduate Course References**

**Dates:** 1984–1990  
**Extent:** 2 items.

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**Reference and contact details:** PWR/10/6/2/1

### **Reference for C. Human for commonwealth sponsorship for a Masters degree at the University of California, Berkeley, USA**

**Dates:** Oct 1984–Feb 1985  
**Extent:** 9 sheets.

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**Reference and contact details:** PWR/10/6/2/2

### **Reference for M. Rikabi for an advanced course in soil mechanics, Imperial College, University of London**

**Dates:** Aug 1990  
**Extent:** 7 sheets.

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**Reference and contact details:** PWR/10/6/3

## **Job References**

**Dates:** 1964–1995  
**Extent:** 18 items.

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**Reference and contact details:** PWR/10/6/3/1

### **Reference for Dr R. Mathieson for Chair of Hydraulics, University of Liverpool**



**Dates:** May 1964  
**Extent:** 5 sheets.

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**Reference and contact details:** PWR/10/6/3/2

## **References for J.A. Tyddesley**

**Dates:** Mar 1970–Aug 1973  
**Extent:** 5 sheets.

### **Scope and Content:**

For posts of Engineer-in-Chief, South Staffordshire Water Board and Department of the Environment Director General.

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**Reference and contact details:** PWR/10/6/3/3

## **Reference for P. Lumb for Personal Chair in Civil Engineering, Cranfield Institute of Technology**

**Dates:** Feb 1973–Jan 1974  
**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/6/3/4

## **Reference for Dr D.G. McKinley for Professor of Soils, University of Strathclyde**

**Dates:** Jul–Aug 1974  
**Extent:** 2 sheets.

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**Reference and contact details:** PWR/10/6/3/5

## **Recommendations for Chair in Mechanical Engineering, University of Manchester Institute of Science and Technology (UMIST)**

**Dates:** Mar 1976–Nov 1978  
**Extent:** 8 sheets.

### **Scope and Content:**

Recommendations for Dr A.C. Palmer and Dr G.E. Roe. Also correspondence concerning the Chair in Civil and Structural Engineering at UMIST.

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Reference and contact details: PWR/10/6/3/6

**Reference for re-appointment of D.V. Griffiths as  
Lecturer in Engineering, University of Manchester**

Dates: Feb-Jun 1980

Extent: 15 sheets.

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Reference and contact details: PWR/10/6/3/7

**Reference for Dr J. Khaffaf for a research  
fellowship, University of Manchester**

Dates: 5 Nov 1980

Extent: 1 sheet.

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Reference and contact details: PWR/10/6/3/8

**Reference for Dr R.B. Sarsby for Reader in Civil  
Engineering, Plymouth Polytechnic**

Dates: Dec 1982

Extent: 4 sheets.

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Reference and contact details: PWR/10/6/3/9

**Reference for Dr R.B. Sarsby for Professor of Civil  
Engineering, University of Natal, South Africa**

Dates: Mar 1983

Extent: 13 sheets.

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Reference and contact details: PWR/10/6/3/10

**Curriculum vitae of J.D. Graham**

Dates: Aug 1983

Extent: 10 sheets.

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Reference and contact details: PWR/10/6/3/11

**Reference for Dr R.K. Taylor for Reader in  
Engineering Geology, University of Durham**



**Dates:** Sep 1982–Nov 1983  
**Extent:** 1 folder.

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**Reference and contact details:** PWR/10/6/3/12

**Reference for D.C.E. Oldham for Lecturer in Civil Engineering, University of Manchester**

**Dates:** Jun 1985  
**Extent:** 9 sheets.

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**Reference and contact details:** PWR/10/6/3/13

**Reference for Dr J.H.A. Khaffaf for a research assistant, City University, London**

**Dates:** Jun 1986  
**Extent:** 2 sheets.

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**Reference and contact details:** PWR/10/6/3/14

**Reference for B. Parry for General Manager, Construction and Maintenance Service Board**

**Dates:** Sep–Oct 1988  
**Extent:** 9 sheets.

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**Reference and contact details:** PWR/10/6/3/15

**Reference for Dr J.H.A. Khaffaf for Lecturer in Civil Engineering, Bolton Institute of Higher Education**

**Dates:** Jul–Aug 1991  
**Extent:** 5 sheets.

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**Reference and contact details:** PWR/10/6/3/16

**Reference for Dr N.K. Al-Saoudi for an academic position at the University of Malaysia**

**Dates:** Dec 1994–Jan 1995  
**Extent:** 2 sheets.

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Reference and contact details: PWR/10/6/3/17

## **Reference for Dr W.H. Craig for Chair in Geotechnical Engineering, University of Birmingham**

**Dates:** Dec 1994–Jan 1995

**Extent:** 1 folder.

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Reference and contact details: PWR/10/6/3/18

## **Curriculum vitae of D.J. Eastaff**

**Dates:** n.d.

**Extent:** 1 volume.

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Reference and contact details: PWR/10/6/4

## **Recommendations for Fellows of the Institution of Civil Engineers**

**Dates:** 1983–1995

**Extent:** 5 items.

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Reference and contact details: PWR/10/6/4/1

## **Recommendation of Dr B. Wilkinson**

**Dates:** Dec 1983–Feb 1984

**Extent:** 4 sheets.

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Reference and contact details: PWR/10/6/4/2

## **Recommendation of Dr I.M. Smith**

**Dates:** Jun 1984

**Extent:** 3 sheets.

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Reference and contact details: PWR/10/6/4/3

## **Recommendation of P. Montague**

**Dates:** Jul 1985

**Extent:** 2 sheets.



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Reference and contact details: PWR/10/6/4/4

## **Letter of thanks for recommendation of P.H. Oldham**

**Dates:** Feb 1988

**Extent:** 1 sheet.

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Reference and contact details: PWR/10/6/4/5

## **Recommendation of R. Boorman**

**Dates:** Jan-Jul 1995

**Extent:** 3 sheets.

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Reference and contact details: PWR/10/6/5

## **Miscellaneous References and Recommendations**

**Dates:** 1974-1996

**Extent:** 4 items.

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Reference and contact details: PWR/10/6/5/1

## **Reference for Geo-Research**

**Dates:** Aug 1974

**Extent:** 2 sheets.

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Reference and contact details: PWR/10/6/5/2

## **Reference for B.J. Amies for select list**

**Dates:** Apr-Sep 1984

**Extent:** 9 sheets.

### **Scope and Content:**

With further correspondence relating to contracts with Amies Pipe Trenching Ltd.

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Reference and contact details: PWR/10/6/5/3

## **Recommendation of Dr W.H. Craig for Fulbright**

## travel grant

**Dates:** Jan-May 1989

**Extent:** 16 sheets.

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**Reference and contact details:** PWR/10/6/5/4

## Reference for Dr J.A. Charles for Individual Merit Promotion

**Dates:** Jan 1996

**Extent:** 1 folder.

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**Creation:** This finding aid was compiled in two phases. Sections PWR/1-3, PWR/4/2/2-PWR/4/2/6 and PWR/5-PWR/10 were encoded in EAD v.1.0 by Sarah Davis at the JRULM using Epic Editor v. 4.1, April-November 2001. Sections PWR4/1, PWR/4/2/1, PWR/4/2/7 and PWR/4/3-PWR/4/5 were encoded in CALM 2000 by Heather Bird and Peter Harper at the NCUACS, Bath, March 2003-May 2004, and exported in EAD format. Merging of the two parts and final editing in Epic Editor v. 4.1 was undertaken by John Hodgson at the JRULM, June-August 2004.

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