

## Contents

|   |     |
|---|-----|
| Preface   | vi  |
| ROSE, E. P. F., EHLEN, J. & LAWRENCE, U. L. Military use of geologists and geology: a historical overview and introduction  | 1   |
| <b>Coastal fortification</b>  |     |
| BROMHEAD, E. N. The landslip-damaged Roman fort at Lympne in SE England   | 31  |
| MATHER, J. D. Groundwater supplies to maritime and coastal defences in southern England: a story of risk and innovation   | 47  |
| HENDERSON, S. W. American coastal defence Third System forts: how geomorphology and geology dictated placement and influenced history   | 61  |
| HÄUSLER, H. The northern Atlantic Wall: German engineering geology work in Norway during World War II   | 83  |
| <b>Excavation</b>   |     |
| DOYLE, P. Trench construction and engineering geology on the Western Front, 1914–18   | 109 |
| WILLIG, D. German military geology and military mining on the Eastern Front in World War I  | 131 |
| ROSE, E. P. F. Quarrying Companies Royal Engineers in World War I: a geologically constrained innovation to support British armies on the Western Front   | 151 |
| ROSE, E. P. F. Quarrying Companies Royal Engineers in World War II: contributions to military infrastructure within the UK and to Allied forces during the North African, Italian and NW Europe campaigns | 173 |
| ROSE, E. P. F. Tunnelling Companies Royal Engineers in World War II: excavation of bomb-proof facilities in France, Gibraltar, Malta and the UK   | 201 |
| MACKAY, A. D. Engineering geological considerations for the ‘Old’ Beacon Hill Railway Tunnel, Hong Kong Special Administrative Region   | 233 |
| BULMER, M. H. Geological considerations of contemporary military tunnelling near Mosul, northern Iraq   | 241 |
| <b>Terrain evaluation</b>   |     |
| HARRELSON, D. W., TORRES, N., TILLOTSON, A. & ZAKIKHANI, M. Geological influence of the Great Red River Raft on the Red River Campaign of the American Civil War  | 267 |
| ROSE, E. P. F. Aerial photographic intelligence during World War II: contributions by some distinguished British geologists   | 275 |
| MALM, F. One hundred years of cross-country mobility prediction in Germany  | 297 |
| Index   | 307 |