

External Works, Roads and Drainage

A practical guide

Phil Pitman



CRC Press

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External Works, Roads and Drainage: A Practical Guide bridges the gap between theory and practice in building, construction and civil engineering, providing practical guidance, and the knowledge required 'on the job'.

This comprehensive book includes sections on legislation, environmental issues, surface water, highway and foul drainage design, road and pavement design, and external works. The book is well illustrated, with flowcharts to help guide you through the design process, bullet points and tables.

Written in an accessible style, this guide is an essential reference for engineers, architects, designers, technicians and students looking to increase their design and project planning knowledge.

Phil Pitman is a freelance Civil Engineer with his own design and engineering services consultancy. With eighteen years' experience in the industry, including work for local authorities and private companies, Phil's principal areas of expertise are in infrastructure design, above and below ground drainage, and consulting on technical and legislative issues.



CRC Press

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www.crcpress.com

ISBN 978-1-138-40887-6



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Boca Raton London New York

CRC Press is an imprint of the
Taylor & Francis Group, an **informa** business
A TAYLOR & FRANCIS BOOK

CRC Press
Taylor & Francis Group
6000 Broken Sound Parkway NW, Suite 300
Boca Raton, FL 33487-2742

First issued in hardback 2017

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CRC Press is an imprint of Taylor & Francis Group, an Informa business

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ISBN 13: 978-1-138-40887-6 (hbk)

ISBN 13: 978-0-419-25760-8 (pbk)

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Publisher's Note

This book has been prepared from camera-ready copy provided by the author.

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data

A catalog record for this book has been requested

Preface

xiii

Welcome to the first edition of *External Works, Roads and Drainage – A Practical Guide*. In this first edition, I have tried to incorporate many of the different aspects of road, drainage and external works design.

It is intended that the book, which is aimed at young and graduate engineers, technicians and those enrolled on higher education courses, will provide sufficient information to enable a designer to understand and overcome the difficulties which will often be encountered during the course of a particular construction project, from the construction of a new leisure complex or housing/industrial estate through to infrastructure design on an altogether larger scale.

Acknowledgements

I am extremely grateful to a number of colleagues who have contributed in different ways during the preparation of this book. In particular, my thanks go to two reviewers, Bill Jeffries of Southern Water, for his invaluable comments on the drainage aspects covered in this book, and Derek Barton of Owen Williams for his review and comments on the chapters covering pavement and highway design.

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