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RAILTRACK PLC

**MODEL CLAUSES FOR SPECIFYING
CIVIL ENGINEERING WORKS**

**SECTION 30
Ground Investigation**

ISSUE NO. 1 REVISION C

**RT/CE/C/008/030N
Page 1 of 26**

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Submitted by: Eifion Evans
Compliance Engineer, Geotechnics
Civil Engineering Directorate
King's Cross

Approved by: Model Clauses (Civil Engineering)
Committee 15 January 1997

Signature:
for Director, Civil Engineering

John Horsler
Civil Engineer, Structures Compliance
Chairman Model Clauses (Civil Engineering)
Committee

Amendments

Amendments and additions since the previous issue are marked by a vertical line in the right hand margin.

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SECTION 30

GROUND INVESTIGATION

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SECTION 30

GROUND INVESTIGATION

NOTES TO SPECIFIER:

These notes do not form part of the Specification.

Generally

- 30.1** To select his requirements the Specifier should refer to Site Investigation in Construction Volume 3: "Specification for Ground Investigation" referred to within the Section as the "ICE Specification for Ground Investigation". The following Clauses within the Schedules provide information or are amendments or additional Specification to the ICE Specification for Ground Investigation.

The Model Form of Tender may also include similar Clauses to those specified in these Sections. However, the Clauses in this Section are applicable for a Ground Investigation Contract, and thus it is recommended that the relevant Clauses in the Model Form of Tender are amended to refer to Clauses in these Sections.

European and British Standards and codes of practice

- 30.2** For ground investigation only Contracts, clause 3.1 of the ICE Specification for Ground Investigation makes unnecessary the inclusion of the equivalent paragraphs of Technical Workscope Technical Module: General Requirements. However, it is recommended that Appendix D is included to ensure all references applicable to the Contract are listed.

Schedule of Contract Drawings

- 30.3** The inclusion of a list of Contract Drawings in Section 31: Schedule 1: Information makes unnecessary the inclusion of a list following the Appendix to the Form of Tender.

Drafting a Contract for ground investigation

- 30.4** These Model Clauses are intended to be used in conjunction with the ICE Conditions of Contract for Ground Investigation.

For ground investigation only Contracts, it is suggested that where Clauses refer to other Sections in the Model Clauses for specifying Civil Engineering Works, the relevant Clause or paragraph is imported into this Section from the other Sections, and the cross reference amended or deleted as applicable.

Clauses from other Sections in the Model Clauses for specifying Civil Engineering Works required to be included in the Contract should be included in Section 35: Schedule 5: Specification Additions.

Clause numbers within these notes to Specifier refer to clauses in ICE Conditions of Contract for Ground Investigation, and should an alternative Form of Contract be used, the various clauses listed need to be considered for compatibility with the Form of Contract to be used.

Contaminated land

- 30.5** The Contract Specification should list all the contaminants that are known to be present on the Site, and provide within it all available relevant information in Section 31: Schedule 1: Information to enable the Contractor to assess the risks at Tender.

Completion of site operations

- 30.6** The whole of the site operations should be shown as one or more Sections of the Investigation in accordance with clause 47 of the ICE Conditions of Contract for Ground Investigation.

- Bills of Quantities** **30.7** The work may be measured in accordance with the Bill of Quantities contained within Site Investigation in Construction Volume 3: "Specification for Ground Investigation".
- Alternatively, Bills of Quantities may be measured in accordance with "Civil Engineering Standard Method of Measurement, 3rd Edition (CESMM3), General Items and Ground Investigation Work Classifications".
- For minor investigations, Bills of Quantities need not be provided.
- The ICE Conditions of Contract for Ground Investigation assumes that the work will be valued by admeasurement (clause 5.5). If a lump sum Contract is required amendments to the Conditions of Contract and Form of Tender will be necessary.
- Cost of continued site operations at Contractor's discretion** **30.8** With reference to the ICE Conditions of Contract for Ground Investigation clause 13(4), Railtrack may wish to set a sum as a limit on the Contractor's discretionary continuation of work at Tender Stage. Any such sum should be specified in Clause 31.009: Particular Contract Restrictions.
- Care of samples and cores** **30.9** Clause 20(2) of the ICE Conditions of Contract for Ground Investigation provides for the Contractor to take full responsibility for the care and storage of the samples and cores until 28 days after the issue of the report to the Employer's Representative. After this period the Contractor will be at liberty to dispose of them. If other arrangements are required these must be stated in Section 34: Schedule 4: Specification Amendments by amending the period in the Clause.
- Interpretative report** **30.10** Although the information provided by an Interpretative Report will depend upon the type of investigation carried out, in all cases an Interpretative Report must fully address the object and scope of the Contract in respect of project design requirements and/or remedial measures.

GROUND INVESTIGATION

SECTION 30

GENERAL REQUIREMENTS FOR GROUND INVESTIGATION

Generally

30.001

Ground Investigation shall be carried out in accordance with Site Investigation in Construction Volume 3: "Specification for Ground Investigation", published by Thomas Telford Services Ltd herein referred to as the "ICE Specification for Ground Investigation" with information, amendments and additions specified in the Schedules in the following Sections of the Specification:

!C! Section 31: Schedule 1: Information,*!CHECK!*

!C! Section 32: Schedule 2: Exploratory Holes,*!CHECK!*

!C! Section 33: Schedule 3: Employers Representative's Facilities,*!CHECK!*

!C! Section 34: Schedule 4: Specification Amendments,*!CHECK!*

!C! Section 35: Schedule 5: Specification Additions.*!CHECK!*

All margin clause references are to the ICE Specification for Ground Investigation clause or Schedule number.

(30.001)

Contaminated land 30.002

Ground investigation on land suspected or known to be contaminated shall be carried out in accordance with the recommendations in Site Investigation in Construction Volume 4: "Guidelines for the Safe Investigation by Drilling of Landfills and Contaminated Land" published by Thomas Telford Services Ltd herein referred to as the "ICE Guidelines".

(30.002)

Definitions

30.003

In addition to the definitions given in the ICE Specification for Ground Investigation, the following definitions shall apply:

NOTE TO SPECIFIER

These Model Clauses assume the use of the ICE Conditions of Contract for Ground Investigation. If another form of Contract is being used the Specifier should check that definitions in the ICE Conditions of Contract for Ground Investigation are included in the Contract being used and any omissions or variations incorporated in this Clause.

For ground investigation only Contracts the applicable definitions listed in Section 10: General should be listed in this Clause.

(30.003)

SECTION 31

SCHEDULE 1: INFORMATION

Name of Contract SI.1	31.001 !C!	The name of the Contract shall be as shown on the cover to this Contract Document. !CHECK!
<i>Alternative</i>	!C!	The name of the Contract shall be Insert Contract name (31.001)
Description of the Site SI.2	31.002 !C!	The description and location of the Site shall be as stated in the Contract. !CHECK! (31.002)
Main Works proposed and purpose of this Contract SI.3	31.003 !C!	The Main Works proposed to be carried out at the Site are as follows:
<i>NOTE TO SPECIFIER</i>		<i>Insert details of proposed structures, earthworks, anticipated foundations, roadworks, drainage etc.</i> The purpose of this Contract shall be as follows: (i) to identify any contamination of the underlying soil and groundwater, and on the surface of the soil, (ii) to install within boreholes a suitable lining so that groundwater samples may be recovered and tested for contamination throughout the construction period, (iii) to obtain appropriate soil strength parameters for use in designing shallow pad foundations, (iv) to obtain appropriate soil strength parameters for use in designing piled foundations, (v) to obtain appropriate soil strength parameters for use in designing earth retaining structures, (vi) to obtain appropriate soil strength parameters for use in designing sheet piled cofferdams and other temporary works used to ensure safe excavation, (vii) to obtain appropriate soil strength parameters for use in designing embankments, cuttings and other earthworks, (viii) to obtain appropriate soil strength parameters, bulk densities and water pressure information for use in slope stability analysis, (ix)
<i>Select or modify as appropriate</i>		
<i>Insert any matter not covered above</i>	!C!	(31.003)