

**Requirements on Qualifications and Experience for Registration as a
Specialist Contractor in the Ground Investigation Field Works Category**

Scope of Works

The scope of works for registered specialist contractors in the ground investigation field works category (RSC (GIFW)) is as follows:

- (a) all exploratory drilling, boring, excavation and probing of land for obtaining information on ground conditions, and includes the installation of instrument, sampling, field testing in boreholes, and any other associated site operations;
- (b) pre-drilling for foundation works;
- (c) proof-drilling for cast-in-place concrete foundation, mini-piles and socketed H-piles; and
- (d) field testing of ground, the loading capacity of which has been improved by ground treatment.

2. The following list of works, not exhaustive, are examples of works which are required to be undertaken by RSC (GIFW):

Types of Works	Details of Works
Excavation	Trial pits, trial trenches, slope surface stripping.
Boreholes	Hand auger boring, corehole drilling, light cable percussion boring, rotary open hole drilling, rotary core drilling.
Sampling	Disturbed samples, U76 samples, U100 samples, split barrel standard penetration test samples, thin-walled piston samples, continuous soil and rock samples, rotary core samples, Mazier samples, block samples, groundwater samples and vibro-coring.
Instrumentation	Installation of instruments e.g. piezometers, standpipes, tensiometers, piezometer buckets, inclinometers, extensometers.
Field Testing in Boreholes	Standard penetration test, vane shear test, permeability tests, packer (water absorption) test, plate test, pressuremeter test, borehole discontinuity survey (impression packer survey) and cone penetration test.
Cast-in-Place Concrete Foundation	Pre-drilling to determine rockhead level, core-drilling to verify quality of founding stratum.
Ground Treatment	Field testing to verify load carrying capacity of treated ground.

3. Works which may be carried out by more than one category of contractors are detailed at Appendix 2.

Qualification and Experience Requirements

4. The minimum requirements on the qualifications and experience of the key personnel of RSC(GIFW) are given in the following table :

Alternative Requirements	Technical Director (TD)		Authorized Signatory (AS)		Other Officer (OO)	
	Experience	Qualifications	Experience	Qualifications	Experience	Qualifications
1	5 years' experience in geotechnical works, of which 3 years' experience was in local ground investigation. [See Note (a)]	A bachelor degree or equivalent in a relevant field. [See Note (e)]	5 years' experience in geotechnical works, of which 3 years' experience was in local ground investigation. [See Notes (a)] Has worked for not less than 18 months in 10 local ground investigation projects. [See Note (b)]	A higher certificate, diploma or equivalent in a relevant field. [See Note (e)]	-	-
2	8 years' experience in managing a building contractor company or equivalent. [See Note (c)]	-	5 years' local experience in geotechnical works, of which 3 years' experience was in ground investigation. [See Notes (a)] Has worked for not less than 18 months in 10 local ground investigation projects. [See Note (b)]	A bachelor degree or equivalent in a relevant field. [See Note (e)]	-	-

Appendix 1 (SC-GIFW)

Alternative Requirements	Technical Director (TD)		Authorized Signatory (AS)		Other Officer (OO)	
	Experience	Qualifications	Experience	Qualifications	Experience	Qualifications
3	8 years' experience in managing a building contractor company or equivalent. [See Note (c)]	-	5 years' experience in geotechnical works, of which 3 years' experience was in local ground investigation. [See Notes (a)] Has worked for not less than 18 months in 10 local ground investigation projects. [See Note (b)]	A higher certificate, diploma or equivalent in a relevant field. [See Note (e)]	5 years' experience in geotechnical works, of which 3 years' experience was in local ground investigation. [See Notes (a)]	A bachelor degree or equivalent in a relevant field. [See Note (e)]
4 [See Note (d)]	5 years' experience in geotechnical works, of which 3 years' experience was in local ground investigation. [See Notes (a)]	A bachelor degree or equivalent in a relevant field. [See Note (e)]	12 years' experience in ground investigation. [See Notes (a)] Has worked for not less than 21 months in 10 local ground investigation projects. [See Note (b)]	Was an authorized signatory under the previous registration system. Has completed a recognized top-up course.	-	-

Appendix 1 (SC-GIFW)

Alternative Requirements	Technical Director (TD)		Authorized Signatory (AS)		Other Officer (OO)	
	Experience	Qualifications	Experience	Qualifications	Experience	Qualifications
<p align="center">5 [See Note (d)]</p>	<p>12 years' experience in managing a building contractor company or equivalent. [See Note (c)]</p>	<p>Was an authorized signatory under the previous registration system.</p> <p>Has completed a recognized top-up course.</p>	<p>12 years' experience in ground investigation. [See Note (a)]</p> <p>Has worked for not less than 21 months in 10 local ground investigation projects. [See Note (b)]</p>	<p>Was an authorized signatory under the previous registration system.</p> <p>Has completed a recognized top-up course.</p>	-	-
			<p>OR</p> <p>Alternative Requirement 1, 2 or 3 above</p>			

/Notes

Notes to Paragraph 4

- (a) Experience in geotechnical works/ground investigation should be substantiated by project details and endorsed by the employers concerned or the AP/RSE/RGE/Registered Contractors(RC)/government architects, engineers or surveyors of the projects. If the person was self-employed, other documentary justification e.g. specified forms under the BO or contract documents may also be acceptable.
- (b) Project experience should be submitted in BD standard form and should be endorsed by the AP/RSE/RGE/RC/government architects, engineers or surveyors of the projects. For the purpose of calculating the period of experience under alternative requirements 1 to 3, aggregation of the durations of experience under different projects of the same period is not permitted.
- (c) Experience in managing a contractor company should be substantiated by a proof of directorship or ownership of the contractor company, or a proof of holding a top management position in the contractor company with overall management responsibilities in technical and financial matters and staff resources. The claimed experience should be substantiated with project details (e.g. specified forms under the BO or contract documents) to demonstrate that the company was an active contractor when the experience was obtained.
- (d) Alternative requirements 4 and 5 are only applicable to those applicants who had applied for registration under these alternative requirements on or before 2 July 2002. These applicants may continue to apply under alternative requirements 4 and 5.
- (e) The higher certificate, diploma or university degree should be in the field of geotechnical engineering, geology, engineering geology or construction technology such as architecture, building studies, building surveying, civil engineering and structural engineering. Academic qualifications in other fields of studies will be assessed individually by the CRC according to the relevance of the curriculum in relation to the work of an RSC(GIFW). Only courses with adequate coverage and appropriate proportion of subjects relevant to geotechnical engineering, geology, engineering geology or construction technology (e.g. soil and rock mechanics, foundation engineering, applied geology, earth science, construction technology, building design, structures, temporary works, building and land surveying, building materials, maintenance technology, building services, construction management, etc.) and construction industry practice (e.g. construction laws, contract management, quantity surveying, construction economics, building development, etc.) will be considered. General guidelines on acceptance of academic qualifications for the purpose of contractors registration are detailed at Appendix 3.

Competent Persons and Geotechnical Field Technician

5. In addition to the appointment of AS/TD/OO, the RSC(GIFW) shall demonstrate that it has the access to engage:
 - (a) a competent person to carry out logging and preparation of borehole logs (CP(Logging));
 - (b) a competent person to supervise on site the different stages of GIFW (CP(Supervision)); and
 - (c) a geotechnical field technician to provide full time on-site supervision on GIFW (GFT).
6. The qualifications and experience requirements of CP(Logging), CP(supervision) and GFT are stipulated in PNRC 46.