JANUARY

Nearby site investigation.
Wind-load on tents calculation (plans and elevations with dimensions)

<table>
<thead>
<tr>
<th>TENT TYPOLOGY</th>
<th>m²</th>
<th>Weight (kp)</th>
<th>Catalogue</th>
<th>Elevations and plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Familiar tent</td>
<td>17.5</td>
<td>75 – 250</td>
<td>pending</td>
<td>pending</td>
</tr>
<tr>
<td>2 Group/multipurpose tent</td>
<td>45.0</td>
<td>300 – 500</td>
<td>X</td>
<td>pending</td>
</tr>
<tr>
<td>3 Temporary shelter</td>
<td>20.0</td>
<td>500 – 1.500</td>
<td>pending</td>
<td>pending</td>
</tr>
<tr>
<td>4 Warehouse tent</td>
<td>240.0</td>
<td>3.000 – 4.000</td>
<td>X</td>
<td>pending</td>
</tr>
</tbody>
</table>

Catalogue: [http://procurement.ifrc.org/catalogue](http://procurement.ifrc.org/catalogue)

Wind load:
Snow load:

Classification and definition of soils

<table>
<thead>
<tr>
<th>SOIL CLASS</th>
<th>DESCRIPTION</th>
<th>N (SPT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rock</td>
<td>&gt; 60</td>
</tr>
<tr>
<td>2</td>
<td>Dense fine compacted sands. Very hard silt or clay.</td>
<td>45 – 60</td>
</tr>
<tr>
<td>3</td>
<td>Dense gravel and sand. Hard clay and silt</td>
<td>35 – 50</td>
</tr>
<tr>
<td>4</td>
<td>Medium-dense sandy gravel. Stiff to hard silt and clay</td>
<td>24 – 40</td>
</tr>
<tr>
<td>5</td>
<td>Medium dense coarse sand and sandy gravel. Stiff to very stiff silt and clay</td>
<td>14 – 25</td>
</tr>
<tr>
<td>6</td>
<td>Loose to medium dense fine to coarse sand. Firm to stiff clay and silt</td>
<td>7 - 14</td>
</tr>
<tr>
<td>7</td>
<td>Loose fine sand, alluvium, soft clay and silt</td>
<td>4 - 8</td>
</tr>
<tr>
<td>8</td>
<td>Very loose uncompacted fill. Residual soils</td>
<td>0 - 4</td>
</tr>
</tbody>
</table>

Suppliers contact
Test planning and organization: types of soils, types of anchors, installation, test apparatus, loads, measurements.

FEBRUARY: Execution of tests: 10 anchors in 5 soils = 50 tests

Identification/classification of soils:
- on site: description, standard penetration test (SPT) and samples
- at the laboratory: grain-size distribution, Atterberg limits, moisture content, moist unit weight and soil classification

Installation of anchors
- rammed into the earth by means of a tube which is subsequently withdrawn
- screwed
- buried

Installation of test apparatus:
- reaction device
- jack
- dynamometer
- displacement measurement
Preloading

Loading at an angle of 45° from 1 kN to 50 kN

Measurements:
- pull-out load (in stages)
- deformations registered step-by-step (from undisturbed soil)
- creep behaviour during successive 24 hours

MARCH

Analysis of the results. Conclusions

a) Scoping study of common practices of anchoring

b) Comparative report: loads, soils, cost, weight, efficiency, simplicity of use, recoverability.

c) Matrix for anchors to identify the most adequate solution for a range of particular contexts, including efficiency and guide values.

Remarks:
2. Wind and snow load may vary according to anchor spacing and location. Conformance to local codes is the responsibility of the purchaser.

d) Recommendation of anchors for the emergency items catalogue

e) Check-list of critical specifications when assessing anchors.

APRIL

Conference