



# ICE Exam Pilot 2019

03 September 2019

## Syrian Crisis Refugee IDP\* Camp

\*IDP – Internally Displaced Persons

### General description:

In 2016 an additional 31.1 million people were displaced either as a result of conflict or because of natural disaster and it is estimated by the UNHCR that there are currently 65.6 million forcibly displaced people worldwide and 22.5 million refugees. Around 5.5m of these refugees come from Syria where conflict has decimated homes and livelihoods. Given the duration of some of these conflicts many people are spending long periods of times in host countries living in camps that were designed and built for the short term only.

Increasingly the world, led by organisations such as the UN and the Red Cross / Crescent (IFRC) are waking up to the needs of communities and the requirement for providing shelters and planning camps that can evolve over time and help revitalise those affected by living long-term as refugees. However, providing adequate provisions for refugees is not simple. Many countries only reluctantly accept refugees due to concerns over the economic burden faced by the host country, the requirement for space and land planning and having to divert land for temporary shelters that will be occupied for an unspecified length of time.

The biggest challenge therefore facing the designers of a refugee camp is how to supply services and provisions that respect the needs of the refugees in the short term (first 6 months), respond to their changing requirements in the medium term (up to 5 years) and supply suitable provisions for long term/semi-permanent stays (15 years +) whilst at the same time allowing for complete deconstruction and removal. Balancing these needs with the physical engineering requirements is a huge challenge, the solution to which requires broad lateral thinking.

This project requires the development of complete functional plans for a refugee camp to house, at its peak up to 50,000 people. All provisions that would be expected in a town or city of this size must be supplied and the necessary infrastructure network must be carefully planned to allow rapid assembly of the camp and eventually complete disassembly.

### Site location:

The refugee camp will be in Southern Turkey (refer to map on page 4) and will be used to house refugees from the Syrian crisis. Determining the exact location is one of the first tasks that the project team is being asked to make recommendations on.

### Requirements for the Camp

The client has set out the following aims / requirements for the project:

- All aspects of the design should demonstrate how they function at the short/medium/long terms (6 months, 5 years and 15 years). Consideration should be given to:
  1. Camp master planning
  2. Safe, fit for purpose structures
  3. Transport network around the camp

4. Drainage and utilities
  5. Sustainability
  6. Construction processes
- The site must be able to accommodate 50,000 refugees within 6 months. Shelters must consider the IFRC emergency shelter aims:
    1. Climate protection for all seasons
    2. Security and personal safety
    3. Resistance to ill health and spread of disease
    4. Support family / community life
    5. Communal coping strategies
    6. Encourage self-sufficiency and independence
    7. Minimise adverse impacts on environment and local economy
  - Provide a safe environment for a community to grow and function across the short/medium/long terms.
  - Provide the opportunities for local people to engage with the refugee community.
  - Provide opportunities for the camp refugees to contribute to the community and/or learn new skills.
  - The camp must be completely demountable and recyclable at the end of its life.
  - Provision for: Food distribution centres, medical centre, a community centre and school facilities.
  - Contribute to as many of the 17 UN Sustainable Development Goals as possible. These are:
 

<ol style="list-style-type: none"> <li>1. No Poverty</li> <li>2. Zero Hunger</li> <li>3. Good Health and Wellbeing</li> <li>4. Quality Education</li> <li>5. Gender Equality</li> <li>6. Clean Water and Sanitation</li> <li>7. Affordable and Clean Energy</li> <li>8. Decent Work and Economic Growth</li> <li>9. Industry, Innovation and Infrastructure</li> <li>10. Reduced Inequalities</li> </ol>	<ol style="list-style-type: none"> <li>11. Sustainable Cities and Communities</li> <li>12. Responsible Production and Consumption</li> <li>13. Climate Action</li> <li>14. Life Below Water</li> <li>15. Life on Land</li> <li>16. Peace, Justice and Strong Institutions</li> <li>17. Partnerships for the Goals</li> </ol>
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  - Meet the minimum standard set out by the 'The Sphere Project' on the following issues:
    1. Water supply, sanitation and hygiene promotion (WASH)
    2. Food security and nutrition
    3. Shelter and settlement
    4. Health



## Questions:

### Pre-Construction Phase:

1. What factors would you consider when researching and recommending an exact location for a project of this type? How would you (with justification) prioritise these factors assuming they cannot all be fully found or met in the same location?
2. One of the concerns of the local government is conflict in and around the camp; Conflict within the camp as a result of conditions / environment but also between the camp residents and the existing local population. What do you think are likely to be the contributing factors to conflict and how might you help to address these issues in your design?
3. Which of the United Nations Sustainable Development Goals could this project contribute to and how could these goals influence your design?

### Construction Phase:

4. During the construction phase of the project one of the refugees falls from a community centre whilst working on the roofing.
  - a. The local authorities conduct an investigation into both the design of the project and the construction phase activities. What elements of the project do you think the investigators are likely to focus on (for both design stage and construction) and what documentation (or other evidences of work) will they need to be provided with?
  - b. Before work can recommence on the project what tasks would you, as the contractor, carry out to prevent reoccurrence?
5. The designers have specified timber as the main construction material for the shelters, however, the number of shelters needed means that the volumes of timber required are too large to be supplied locally. Some of the timber will need to come from as far away as Ukraine and Russia. What are the potential impacts and project risks associated with such a widespread supply chain and how might you, as the contractor, manage these?
6. 3 months into the project it becomes clear that you will have only completed shelters for around 30,000 people within the initial 6 month timeframe (by which time shelters for 50,000 people were required). Discuss the Project Management options available to you and how you might manage or mitigate this shortfall.