



School Buildings Organisation SA

Answers to competitors' questions
International Architectural Competition
Innovative Bioclimatic European School in Crete, Greece

UIA – International Union of Architects
UIA-ARES Architecture & Renewable Sources International Work Program

00. Preface

This document was prepared by the Organising, Scientific and Technical Committee of the International Architectural Competition "Innovative Bioclimatic European School in Crete, Greece" and is distributed to the registered competitors on July 2012. The main goal of the document is to provide clarifications and answers to the competitors' questions, in accordance with Chapter 17 [Questions and answers procedure].

01. Overview

The School Buildings Organisation has launched this architectural competition in the quest for original and innovative ideas about the buildings as well as the educational process; ideas that multi-national and multi-cultural students will benefit from. The "Innovative Bioclimatic School Complex in Crete" will provide a contemporary educational environment. Created by the utmost of bioclimatic design with the use of renewable energy sources, it will contribute to the development of students into conscious and conscientious world citizens.

Aiming at an infrastructure that will host high quality educational procedure, the task is to design an exemplary *state of the art* school building complex. In this context, the vision of the competition is to deliver a project that will:

- Reflect and symbolise the multi-cultural character of the complex.
- Ensure a good quality of education process in all required spaces.
- Produce buildings that are innovatively designed and energy efficient.
- Be a state of the art complex.
- Ensure the use of renewable energy sources and energy efficient conceptual design.

There is a number of restrictions that have been set [regarding maximum constructible surface, total floor area, maximum height, minimum distance, etc] and competitors are requested to comply with them. However, it is understood from the Promoter's side that some of the restrictions might limit the innovative spirit of the proposals. We therefore clarify that:

- i. One single building combining all four different uses is an acceptable option.
- ii. Any element of architectural interest that will comply with the maximum height restriction of 25m is acceptable.
- iii. Competitors are welcome and enhanced to propose additional spaces of specific educational function, not included in the schedules of accommodation, as long as they abide to the maximums set in Chapter 07 [Technical description] of the Technical Guidelines.
- iv. The different educational levels will operate as different units; it is therefore preferred not to propose the combined use of common areas [such as the library, the dining hall, etc] or educational areas [such as classrooms] by different educational levels. This will be an option, only if mutually agreed by the future administrations of the separate units and should therefore not be taken for granted in advance.
- v. The administration areas of each level can be more easily combined, i.e. mixing the reception area with the secretariat area, as long as the total floor area is sufficient and according to the guidelines.
- vi. The spaces of an educational level should be connected to each other. The spaces of different educational levels and the different buildings are not required to be connected to each other.
- vii. The different educational levels/units will have their own schoolyard/playground. For operational reasons, it is preferred to separate the different playgrounds, but not necessarily by fencing them. The connection between the three buildings reflected on the landscape configuration [with walkways, pergolas, etc] is an acceptable option. Underground tunnels connecting the buildings is not a typical option, yet an acceptable one, as long as it serves the general concept of the complex.
- viii. Semi-buried classes are not typically permitted by Greek legislation; however, it lies with the competitors to propose a design study that will provide for natural lighting and ventilation of the

classrooms, as well as allowing the pupils to feel comfortable inside the classroom. The Jury might be advised by the Technical Committee on any such issue, yet the final decision will be the Jury's responsibility.

Please note that the design study awarded the first prize might need to be amended in order to further comply to the Greek legislation on school buildings. Also note that at this stage, the competitors are not required to submit a detailed electro-mechanical nor a structural design study. Drafting the school's budget is also not a required deliverable for this competition.

02. General information

The **site** is part of the University Campus in the area of Voutes, close to Heraklion and it has not been developed in the past. A larger topographical map with contour lines and a larger satellite map have already been uploaded in the downloadable documents section of the website.

The land use of the general area is as follows:

- to the east university buildings;
- to the north agricultural areas [mainly with olive trees];
- to the south housing and agricultural areas [mainly with olive trees];
- to the west light industrial and agricultural areas [mainly with olive trees].

Additional information regarding the site of the competition include:

- i. There is no existing pond in the site.
- ii. Exact Latitude/Longitude of the site: Use the KML file provided; the borderline of the site should be opened by any coordinate supporting software [i.e. google earth, gis, autocad map].
- iii. The link to google-maps is: <http://goo.gl/maps/hi0I>
- iv. Competitors can interfere with the inclined slope of the plot, as long as the intervention is in harmony with the physical environment. A 2m difference from the natural slope is an acceptable option.
- v. The Promoter cannot anticipate the future use of the adjacent land.
- vi. The University Campus does not have its own building laws, except for the 10m-distance restriction that is site specific.

Further information regarding the **climate** of the area can be found through Hellenic National Meteorological Service, with general meteorological data on Heraklion and Climatic Bulletins [spanning from July 2009- May 2012], using the following link:

<http://www.hnms.gr/hnms/english/climatology/climatology.html>

03. Environment

Please find below the clarifications on a number of **environment and energy-related issues**:

- i. National legislation is in compliance with: "DIRECTIVE 2002/91/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2002 on the energy performance of buildings" and its recast: "Energy Performance of Buildings Directive 2010/31/EU". The ENERGY PERFORMANCE CERTIFICATE GRADE B and its' qualification data are analysed in the above mentioned European Directives.
- ii. Competitors are not requested to attach the results of Energy Simulation, nor the complex analysis. If a team integrates results of energy simulations, either in panels or in technical descriptions, they will be appreciated and taken into consideration during the evaluation process.
- iii. Central heating and partial cooling [assembly halls, administration, computer rooms etc.] is mandatory. Passive cooling is desirable for the entire complex. Also, an active system of pre-

conditioned fresh air supply is required for all main indoor areas [apart from support areas - maintenance, storage etc.].

- iv. Tree management is necessary and provision should be made for it. The majority of the trees is olive trees; there are no specific trees that should be retained. It is advised that you relocate a proportion of the trees that are to be removed.
- v. A geothermal air-conditioning system of all types [horizontal or vertical cone type] is applicable on this plot, since there is space available for this application. Moreover, the area reportedly has underground water, so at the detailed designed stage of the project, the geological and geothermal study will determine the type and details of the installations should this option be chosen.
- vi. It is mandatory to have classroom windows opening directly to the open air. The total windows area should be minimum 20% of the surface of each teaching area that they provide lighting to.
- vii. Building orientation should be determined by bioclimatic design principles.
- viii. The boiler room is typically located in the basement of the building. The term "boiler room" refers to the central heating/ hot water installations.
- ix. A public natural gas network is not available on the island of Crete.

04. Technical issues

Calculating maximums

- i. An additional 40% of the total plot area can be placed underground and outside of the boundaries of the buildings, as long as the use is related to electromechanical and energy-savings installations, and parking space. In these cases, this area will not be calculated in the total coverage calculation.
- ii. Any corridor or gallery connecting the three buildings will be measured against the total constructible area, if its' area exceeds the boundaries of the buildings above.
- iii. The deviation of -5% to +5% is accepted on separate calculations of one single area, or one single unit. However, the total coverage and total floor area maximums should always be taken into account.
- iv. For the maximum total volume one should calculate only buildings' volume above ground. Underground parking, sheltered areas and pergolas are not calculated against the total volume.
- v. An atrium is not calculated against neither the total coverage nor the total floor area, provided that its' minimum dimensions are 5.5m width and 11m length. Both width and length should have these minimum dimensions. If an atrium does not comply to both these restrictions, then its' surface will be calculated against the total coverage and the total floor area.
- vi. Open sports areas and playgrounds are not calculated against the total coverage, nor the total floor area.
- vii. Sheltered areas are not calculated against the total floor area of the complex; they are only calculated in the total coverage/constructible surface of the complex.

Functionality of areas / Schedules of accommodation

- i. The detailed functional requirements of each room will be defined during the implementation of the detailed design study phase. At this stage, competitors are required to provide for the space for each use.
- ii. No staff room is required for the kindergarten, since the kindergarten staff usually consists of two teachers and one or two assistants. A head-teacher's office is considered sufficient for the needs of this educational level.
- iii. The staff rooms of the primary and secondary schools should be close to the headmaster's office. The staff rooms are actually office space and should have adequate working stations [desk and chair] for the teachers that are working in each school.
- iv. The correct basketball court dimensions are 15X28m.
- v. Competitors are free to include changing rooms in their proposals, as long as they abide to the constraints of the total coverage and the total floor area.
- vi. Competitors are free to include lockers in their proposals.
- vii. The minimum dimensions for atriums should be 5.5m X 11m.

International Architectural Competition | Answers to competitors' questions

Innovative Bioclimatic European School Complex in Crete, Greece

- viii. The main uses for the multi-purpose hall is for gymnastics and school events, such as theatre plays.
- ix. Canteen area serves mainly as a selling point.
- x. The kitchen of the secondary school was deliberately deleted in the revised Technical Guidelines document, because this area is not required.
- xi. Sewage treatment is meant to be within the site boundary.
- xii. The minimum height required for the sheltered sports areas, the backstage spaces and the multi-purpose halls is 3.5m.
- xiii. Technical channels or shafts to be used solely for electromechanical installations are acceptable.

Entrances to the plot

It is required to have minimum two entrances in the plot from the main access road. One of the two entrances should be able to accommodate the entry of an ambulance and/or other emergency services vehicles. Please note that access to all units by emergency services vehicles should be provided, in order to comply with international fire regulations.

10m distance between the buildings

The 10m distance between the buildings of the complex is determined by local administration regulations. As mentioned in Chapter 01 [Overview], it is accepted to propose one single building instead of separate ones. It is also acceptable to connect the different buildings with each other in various ways.

15m zone from the boundaries

The 15m distance applies to all plot boundaries. Open-air pergolas, playgrounds, sports fields and parking spaces are allowed within the 15m zone from the plot boundaries. Sheltered and/or completely covered areas are not to be located within the 15m zone. The basement of a building cannot be extended in the 15m zone. Cantilevers may be located in the 15m zone.

Parking

The car parking of 25-28 teaching staff may be located in the basement. Please note that this number is the minimum requirement for parking spaces according to regulations. The total staff number of the complex is estimated to be minimum 62 people, comprised as follows: kindergarten 2; primary school 15; secondary school 41; administration 4.

Regulations

The Greek school building standards are not available in English; at this stage, competitors are only required to comply with the restrictions described in the Technical Guidelines document.

Please follow this link for the European Directive on energy efficiency:

http://ec.europa.eu/energy/efficiency/buildings/buildings_en.htm

Accessibility

Appropriately sized elevators are considered adequate means of access to the different building levels of the complex. Ramps are usually required to enable access to the external school grounds.

05. Operation of the school

The "Innovative Bioclimatic European School in Crete, Greece" is a public school and will operate during the Greek school year, from September to mid June. Two periods of 15-day vacations will apply around Christmas and Easter periods. The operating hours of the school are expected to be 08:00-16:00. The use of the complex off-school hours for extra-curriculum activities is also anticipated, but further details remain to be clarified by the School's administration.

Curriculum

The School will primarily serve the needs of ENISA, thus meaning that children of different nationalities are expected to attend. The curriculum will be defined by the Ministry of Education; language classes are anticipated. Details on exchange programs have not been finalised. Type I and Type II classrooms refer to differently sized classrooms intended for a different number of students and not to curriculum variations.

Transportation

Children will be transported to the School either by private vehicles [i.e. their parents' cars] or buses. A drop-off zone for two buses and five cars should be provided on the main entrance road, as well as two parking spaces for 52-seat buses of 12m length. The staff of the school may be using private vehicles and a number of parking lots should be provided. As previously indicated, parking space[s] may be underground.

Catering

There is no thorough planning about the catering process at this stage. Competitors should bear into account that pupils of the all-day primary school are expected to bring in their lunch boxes, that will have to be stored, refrigerated and heated before lunch time.

Technology

The School will provide latest technology to students and teachers for educational purposes in the classrooms as well as in common areas.

06. Logistics of the competition

Electronic files

All files requested should be submitted on a CD. A pendrive or FTP are not acceptable options.

Model

Competitors are **not** required to submit a model of the complex, and models will neither be accepted nor received by the Technical Committee. Photos of the model integrated in panels or technical descriptions will be appreciated and evaluated.

Modification of participating teams

Amendment of a team is possible at this stage, provided that the team leader does not change. Also note that it is the responsibility of the team leader to ensure there is no financial implication in changing the team members. In case of a prize award, please note that only the team leader and the original team members will be announced.

Scale of the designs

The drawings will be submitted in scales 1:1000 and/or 1:500 [the master plan] and 1:200 and/or 1:100 [the architectural plans, sections and elevation]]. Competitors are given the option to submit their designs in any of the above mentioned scales. All options are acceptable and submitting a design on the less detailed scale will not be judged as negative or minor effort by the Jury.

Other information on the material to be submitted is as follows:

- i. Apart from the mandatory drawings competitors are welcome to include anything they wish in order to enrich their presentation. Bird's eye views, perspectives, sketches, 3D images, drawings and collages can be integrated in any of the 3 A1 boards to be examined by the Jury.
- ii. There is no restriction for the perspectives to be placed in a specific panel. The only mandatory perspective being the bird's eye view towards the south-east of the buildings must be placed in panel No 1. More perspectives apart from bird's eye views are allowed.
- iii. Color can be used anywhere in the presentation.

International Architectural Competition | Answers to competitors' questions

Innovative Bioclimatic European School Complex in Crete, Greece

- iv. A1 boards should be in landscape format. The 3 A1 boards will be presented during jury meetings in a row. The exhibition panel should be in portrait format.
- v. White background should be applied in bird's eye views such as daylight images.
- vi. There is no limit on the number of pages in the design description document.
- vii. On the A1 panels, a few sentences alongside the drawings pointing the concept or the idea is an acceptable option. A full text placed in the panels should be avoided.
- viii. The numbers 1, 2 and 3 noted in 8.19.1 of Competition Terms refer to panels No1, No2 and No3 and not to specific drawings placed inside the presentation panel. The drawings are not necessarily numbered.
- ix. The Team Leader, being the official representative of the Team, must sign both the Identification form and Acceptance of promoter's terms form. Members of the team other than the Team Leader are allowed but not required to sign these forms.
- x. The required photocopy of Architect's License must be an exact copy of the official document, signed by the owner of the license.
- xi. The Architect's Diploma or Degree is sufficient; however, should an architect [or a team] be awarded the 1st prize, the architect's license will be mandatory for the following phase.