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International Maarif Schools - Erbil

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main content

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Introduction:

This report is about analyzing school of MARF to determine the sustainability or green by evaluating the factor of green building by explain briefly the use of natural recourse for energy use determining weather its suitable in three parts socially, environmentally and economically. This school since 2010 was named balkent .but in 2018 they changed its name to maarif

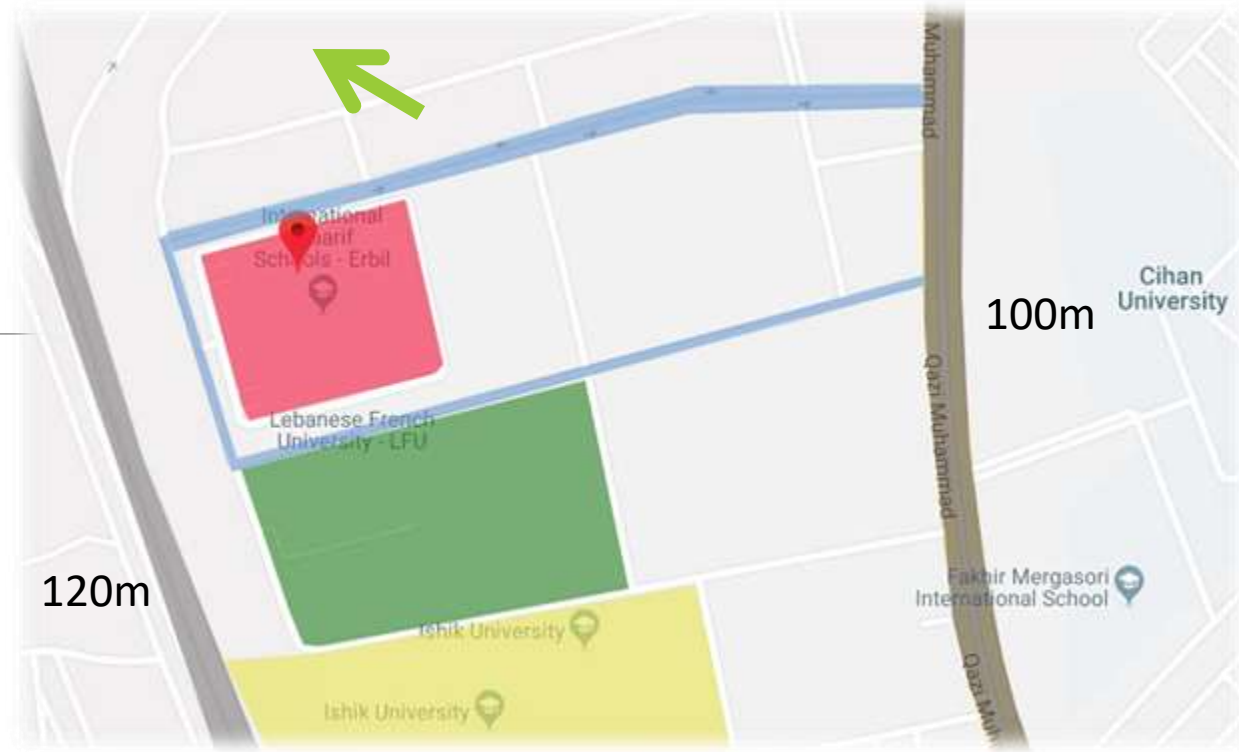
Site Plan

LOCATION :

120m Street Erbil

Erbil Governorate 44001

-  Main street
-  Local street
-  The school of maarif
-  Ishik university
-  Lebanese french university



AREA :school grounds= 75,000 m²

Inside floor space (school premises): 33,000 m²

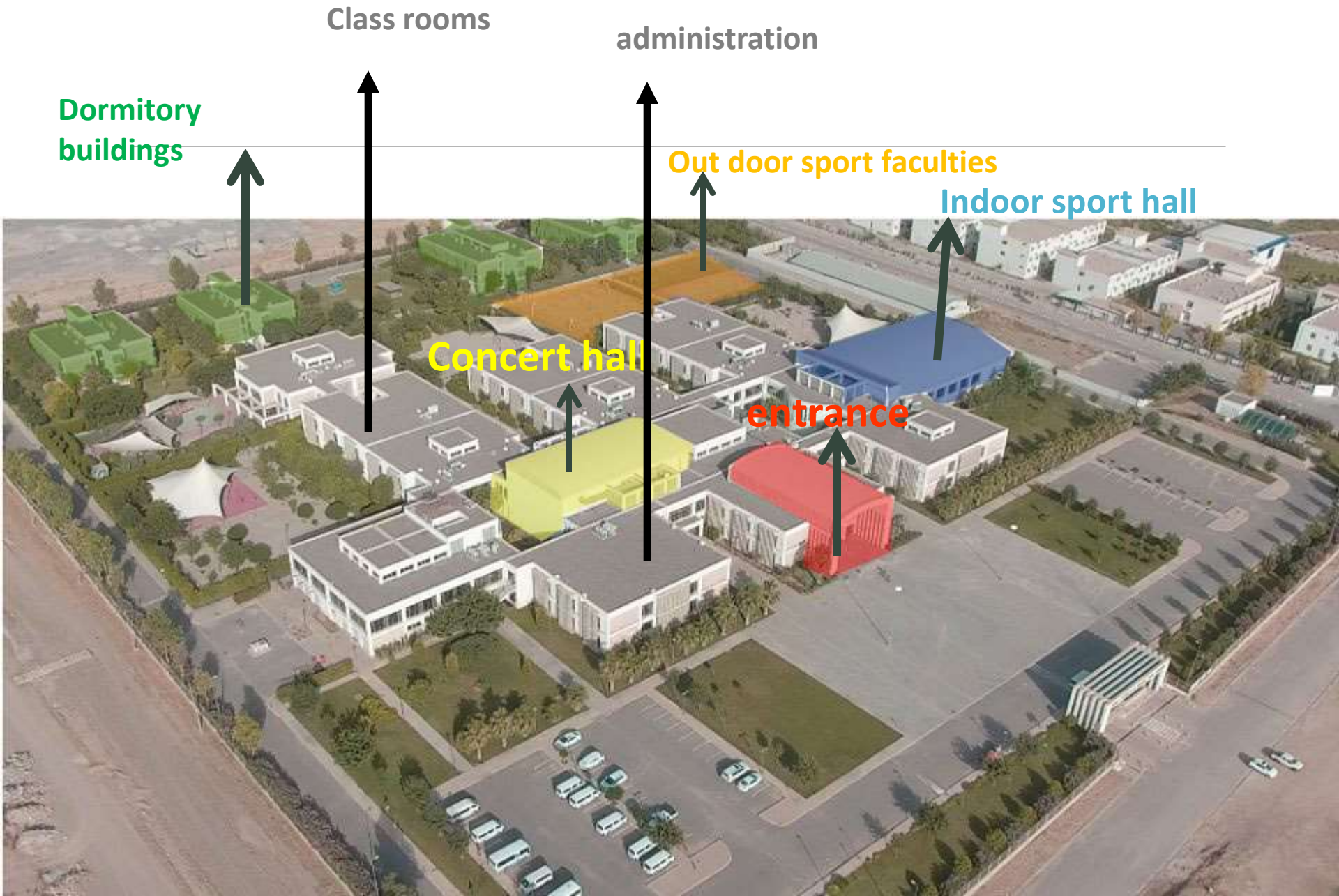
Garden and outdoor play areas: 8,000 m²

Number of classrooms: 70

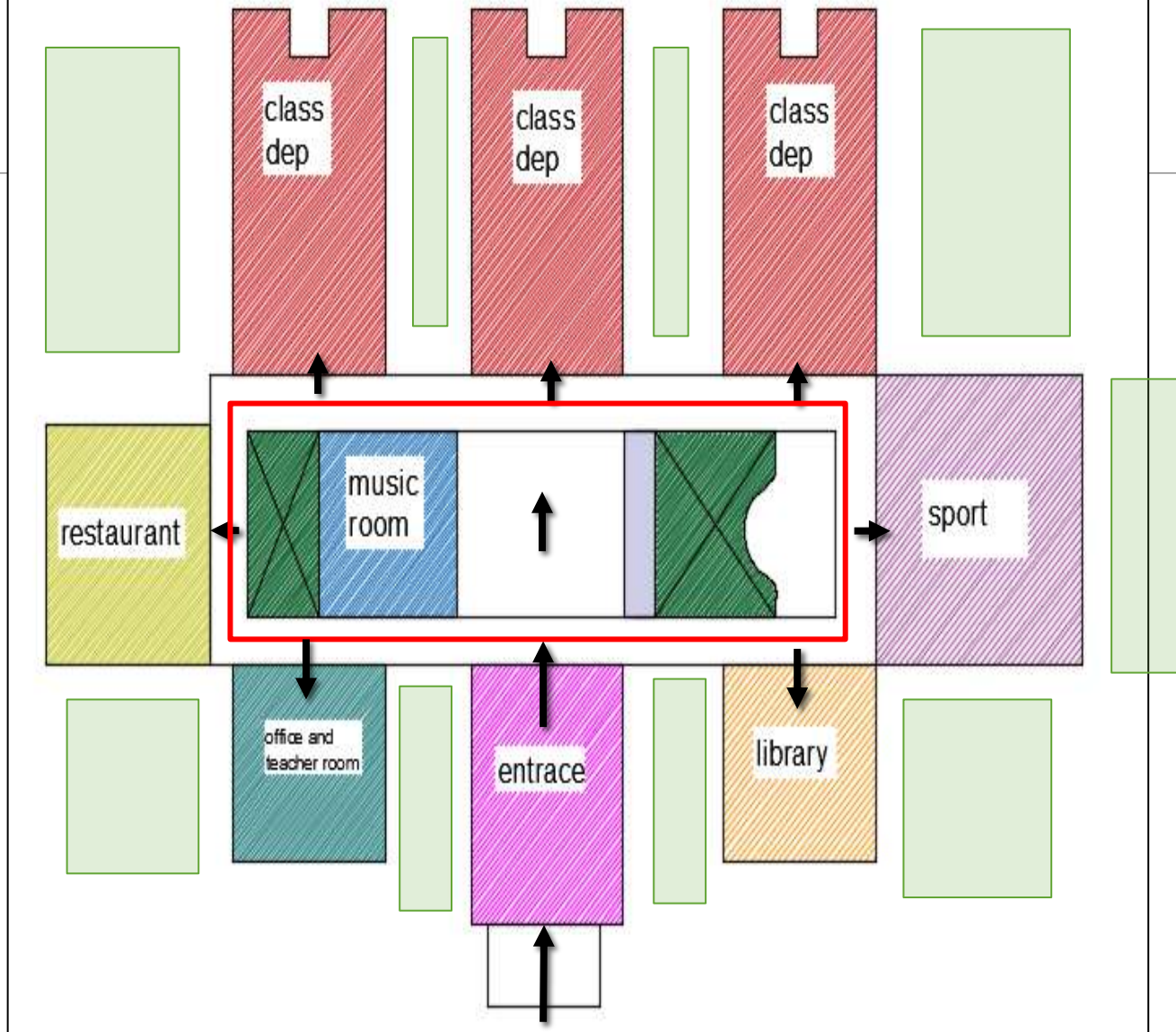
World class concert halls: 1

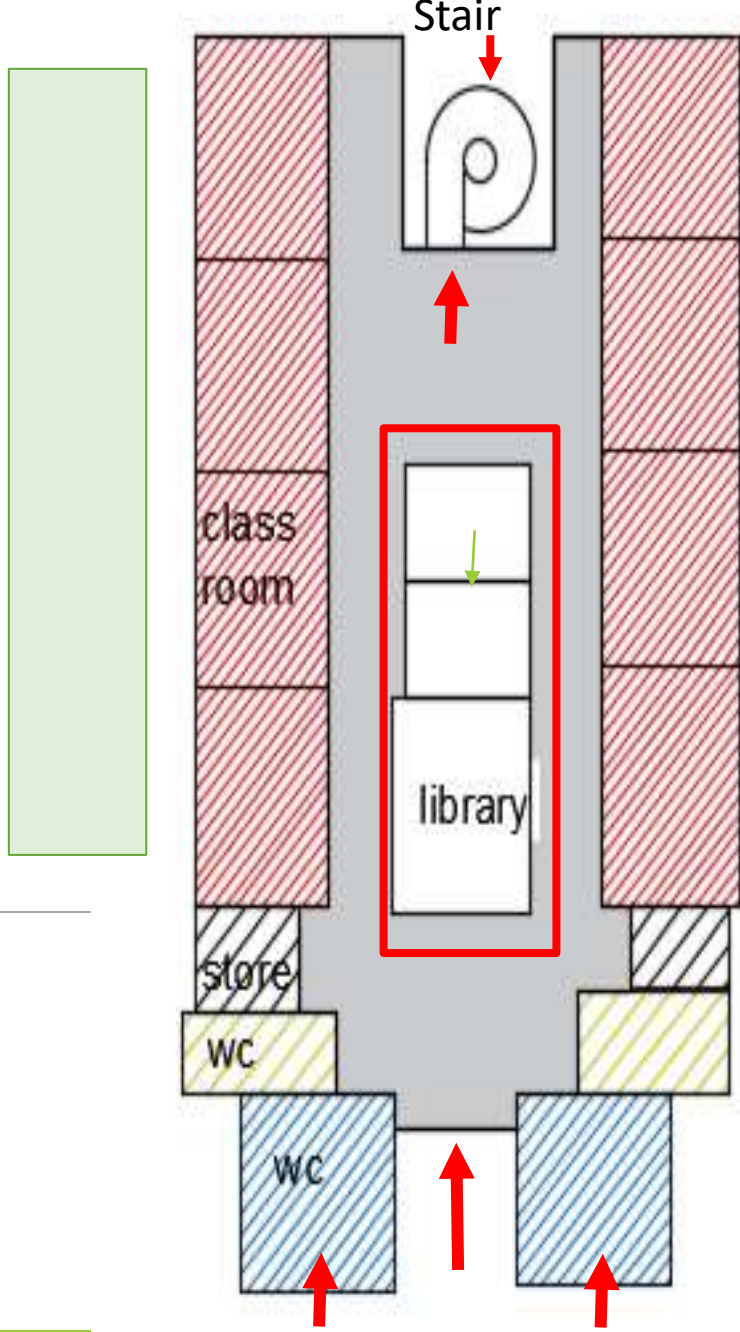
Number of staff apartments: 68

The component of the school complexes



School schematic plan





Classrooms department

1-1-LAYOUT AND FORM



- 1. This school have the regular shape that near to rectangular**
- 2. The school also include a separate building, playground and cafeteria, concert hall, Dormitory buildings**
- 3. the green area is around the building**
- 4. The entrance of the school is located in the locale street**
- 5. Consisted of two small parking for teachers and busses of student**

1-1-open spaces

Open space is any open piece of land that is undeveloped (has no buildings or other built structures) and is accessible to the public. Open space can include: Green space (land that is partly or completely covered with grass, trees, shrubs, or other vegetation).

*This school have two courtyards inside the building it is used for lighting and gathering space for student and inside the court theirs green area



1-3-Green spaces

- an area of grass, trees, or other vegetation set apart for recreational or aesthetic purposes in an otherwise urban environment.
- This school have the good ratio of green area _____
- This green are divided around the building
- Inside the garden there have different type of tree and flowers and some of the tree are large in size
- Garden and outdoor play areas: 8,000 m2



The Table below Show the satisfaction Design factors in the selected Schools

factors	Sub-Factors	Good Satisfaction Design	Neutra l	Not Good Satisfaction Design	Detail, photo , Description, Schematic Drawings
1- Site	1-1- Layout and form	●			
	1-2 -Open Spaces		●		
	1-3 -Green Spaces		●		
	1-4-School Building orientation	●			
	1-5- using any natural resources as active energy			●	
	1-6- others				

1-4-School building orientation



School building conservation

factors	Sub-Factors	Good Satisfaction Design	Neutral	Not Good Satisfaction Design	Detail, photo , Description ,Schematic drawings
2- School building Conservation	2-1- Passive heating		●		
	2-2 –Passive cooling			●	
	2-3 –Natural ventilation			●	
	2-4-Horizontal and vertical gardening		●		
	2-5- others				

1-5-Using natural resources as active energy

1- passive solar energy (natural heating & cooling): they used A Simple Direct Gain System and Clerestory

2- Natural ventilation

4- Day lighting



School building conservation

1. Passive heating

Solar energy : they get benefit from the sun radiation by adding windows in the top of the a rounding walls and the ceiling .



2. Heating generator: using the electrical heating generator which are organized the system in the ceiling (split).



cooling : they use concrete screen in front of windows of the building which provides shading and a barrier for sun radiation that reducing temperature in summer, also splits are used for this purpose.

They built courtyards in side of the building which make the school more healthy and bring light to in side and also this courtyards are used for cooling purpose.



Elevation:



material

factors	Sub-Factors	Good Satisfaction Design	Neutra l	Not Good Satisfaction Design	Detail, photo , Description ,Schematic drawings
3- Material Conservation	3-1- Use of recycled Materials		●		
	3-2 –Use of Non-conventional materials		●		
	3-3-Type of glass used in openings				used double glass and simple
	3-4-others				



Precast concert for shading



Glass for window



Maribel



Space frame



For wall used(block,morter,chipsem cement,paint)

Glass

Using normal material of glass with best construction for windows which barrier for sound and heat transition that make building more calm and stable condition.

They use glass in the courtyard that provide interesting and natural view in side building for students.



Water conservation

factors	Sub-Factors	Good Satisfaction Design	Neutral	Not Good Satisfaction Design	Detail, photo, Description ,Schematic drawings
4- water Conservation	4-1- Rain water collection and reuse them			●	
	4-2 –Gray water collection and reuse them			●	
	4-3-Reduce toilet water			●	
	4-4-others				



Fire escape:



Outdoor activity



Outdoor activity



Used a sustainability materials for tent shading



Using green wall in parking instance of concrete

Conclusion

In general this school building in using green is not bad but not sustainable because they bring a little benefit of natural resources such as water wind and sun radiation.