

3.6. Karak Tourism Development

3.6.1. Objectives of Sub-project

The objectives of this sub-project are summarised as below:

- To promote tourism of Karak by
 - Improving tourist use of the heritage assets of Karak
 - Encouraging conservation of heritage assets and prevent them from deteriorating
 - Improving tourist services
- To contribute to tourism of Amman Visitor Centre
 - Enhancement of one day trip from Amman
- To contribute to the regional economy of Karak by the tourism sector
- To vitalise local community development and participation of the community

3.6.2. Castle Presentation; Museum and Pathway

(1) Design Concept

Museum

The following are the basic policies for the planning and design for the improvement of the museum:

- To provide an exhibition which can attract international visitors to the Museum
- To improve the exhibition program and system with some modern technology
- To show the heritage of Karak City as well as the Karak Castle
- To improve the management and operation system

Pathway

The basic design policy for the improvement of the inner pathway is as follows:

- To address and respect the authenticity of the site to provide appropriate access applying a minimum intervention policy
- To provide various types of routes to meet the diversified needs of the visitors

The tourist routes in the Castle can be provided for both short stay visitors and long stay visitors. It depends on the time the visitor's time available and interest in the Castle. Generally it takes between 30 minutes and 3 hours for visiting.

- To demonstrate in a chronological sequence of Islamic, Crusaders and earlier times, the story of Karak Castle.
- To provide measures for the safety and convenience of the tourists

(2) Design Solutions

The debris and soil heaped in the chamber should be removed under the responsibility of the Department of Antiquities (DOA) of MOTA.

Museum

The chamber adjacent to the existing exhibition space is converted to an additional exhibition space. An opening between the existing museum and the additional exhibition space is provided. However, as the additional exhibition space has 1-2m thick layers of soil on the floor, an additional step to connect the different floor levels between the two spaces needs to be provided in the wall.

The floor level of the entrance area to the existing exhibition space is higher than the museum space with the layers of soil, therefore, rainwater often flows into the museum space in the rainy season. In order to prevent the rainwater flow into the museum, the soil should be removed to provide a proper rainwater drainage system under the responsibility of the Department of Antiquities (DOA) of MOTA.

All the building works should be supervised by DOA according to the rigorous restoration rules for archaeological sites. However, from the structural viewpoint, these may be applied without compromise to the structural safety of the Castle.

The present stone floor paving in the main hall is maintained, but a strip of flooring is removed to accommodate an electrical trench at the sides and the middle of the hall.

The main basic materials that were used in the museum are stainless steel, glass and Karak acid etched stone. The materials that were used are modern materials to stress the difference between old and new. Stone, an old material that goes in harmony with the museum walls (in terms of colour & material) taken a modern texture.

Exhibition Plan

The exhibition in the museum is broadly divided into 2 categories; 1) History of Karak City and 2) History of Karak Castle. The detailed items of the exhibition in each category are shown below:

1) History of the Castle

- The Crusades and Karak Castle theatre.
- The attack and defence of Karak Castle and activity of the heroes.
- Structure and function of the Castle.
- Arms of the Crusaders.
- Life of the armed forces.

2) History of Karak

- The chronological sequence is presented as follows:
- The Islamic Period.
- The Byzantine Period.
- The Roman and Nabataean Period.
- The Hellenistic Period.
- The Iron Age and the Persian Period.
- The Bronze Age.
- The Stone Age.

Pathway

Since permanent pavement is prohibited, as the archaeological survey is not yet completed, the existing pavement stones are to be improved, except in the “Soldiers’ Dining Hall”.

External pathways (upper level) are mainly levelled and consolidated with a top surface of yellow natural crushed wadi gravel with stabiliser. The soil stabiliser used is a non-toxic, colourless, odourless, non-staining, concentrated organic powder that binds soil and crushed gravel together, creating a natural-appearing, firm trail surface.

Internal pathway (lower level) finishes are of loose yellow crushed wadi gravel. The levels of the internal pathway of the lower level remains as they are, with:

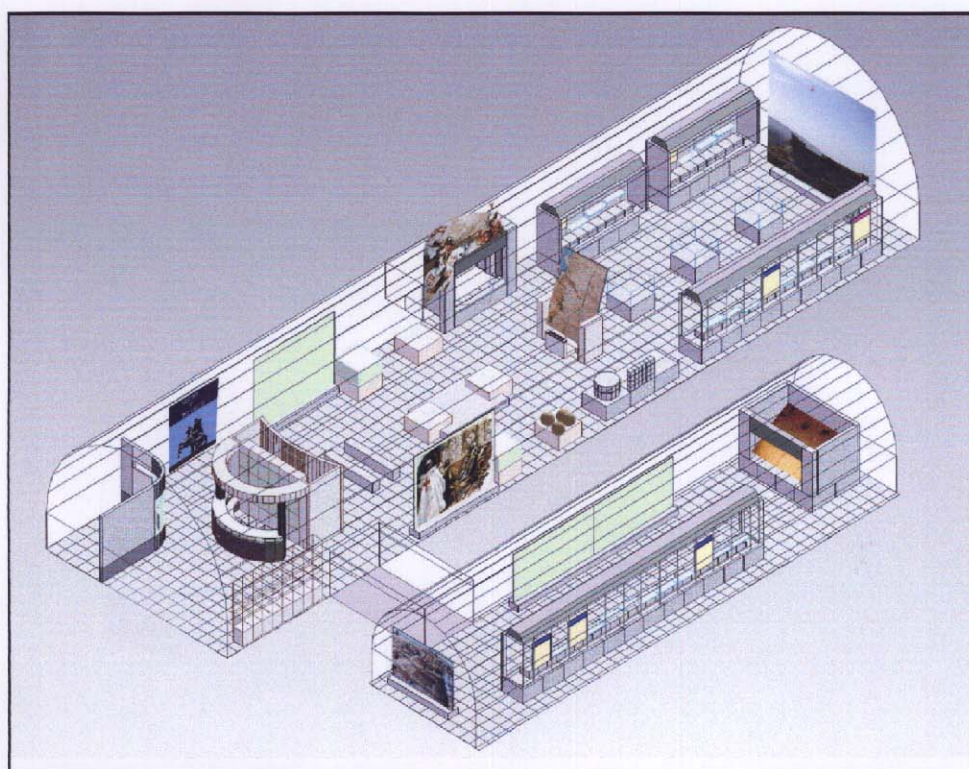
- the possibility of slight adjustment at certain parts besides the addition of a gravel layer including aluminium edging
- excavations not more than 30cm for lighting extensions

Pavement is applied in a limited area, and main measures for the improvement are levelling, removing of stones and installation of temporary stairs. Lighting is provided only for extremely dark areas, and safety measures are classified into two types, physical and indicative protection.

(3) Perspective View and List of Sub-project

As for the results of the design developed according to the planning and design policy and design concept, perspective view and/or sketches are shown in Figure 3-6-1, and a list of the project outlines is shown in Table 3-6-1.

Figure 3.6.1 **Perspective View, Sketches**



Source: JICA Study Team

Table 3.6.1 Sub-project Features of Karak Tourism Development

(1)	Improvement of Karak Castle Pathway of 1.2km long and 1.8~2.4m wide
	1) Pavement
	2) Provision of steel stairs
	3) Provision of lighting and safety measures
(2)	Improvement of Karak Castle Museum:
	1) Renovation of the existing museum (348.83m ²) and adjacent chamber (136.6m ²) to be including in the museum
	<ul style="list-style-type: none"> • Removing soil and debris in the chamber, entrance plaza of museum, and on the roofs of the chamber and pathway under the strict supervision of DOA • Water proofing for the roof of the existing museum and adjacent chamber • Renovation of adjacent chamber for the new museum space • Maintenance of the existing museum hall • Improvement of entrance area inside and outside of museum • Consolidation of the existing museum walls, if any • Improvement of rainwater drainage system
	2) Provision of Exhibition equipment and materials
(3)	Karak Visitor Centre
	To improve the interior of the existing visitor centre of 240 m ² on the 1 st floor of the existing building in front of the entrance to the Castle.
	1) Partial change of room layout
	2) Provision of additional furniture and equipment
	3) Installation of air conditioning system
(4)	Tourist Street
	To improve Al Mujamma street, King Hussein street and Al Saraya street of which total area is approximately 8,900m ² as a tourist street, main access to the Karak
	1) Improvement of street pavement of 4,700m ² with stone and partially with asphalt
	2) Improvement of sidewalk pavement of 4,200m ² with stone
	3) Provision of parking area of 250m ² (4 tourist buses)
	4) Provision of street furniture
	5) Provision of underground water supply and sewage lines including house connections
(5)	Karak Observation Points
	In order to provide tourists the best spots to get beautiful outside view of the Karak Castle it is planned to construct two observation points; 1) Upper Observation Point and 2) Lower Observation Point each of which site area is 3,672m ² and 2,418m ² respectively.
	1) Upper Observation Point
	<ul style="list-style-type: none"> • Observation building of 207.18m² of floor area in total • Parking area of 170m² (1 bus and 12 cars) • Retaining walls • Landscaping
	2) Lower Observation Point
	<ul style="list-style-type: none"> • Observation building of 97.56m² of floor area in total • Parking area of 250m² (2 bus and 10 cars) • Landscaping

Source: JICA Study Team

3.6.3. Tourist Street

(1) Design Concept

Planning policy

The design aims at maintaining the vitality of Al Malik Hussein Street and makes it more attractive and appealing to the pedestrian tourist.

The basic planning and design policy is summarized as below:

- 1) To reinforce pedestrian linkage among the Castle and the intersection (Statue of Salahdin) leading to Aljami Alumari.
- 2) To recommend building guidelines for the protection of streetscape such as height, extension, new projects, landscape, maintenance and restoration measures in order to ensure the comprehensiveness of the project and sustainability of the Tourist Street, as an attraction.
- 3) To coordinate with the Projects by the World Bank as well as the improvement of the Castle Presentation.
- 4) To contribute to the residents along the streets as well as the economy of the Karak City.

The design policy aims at realising and enhancing the urban character of the Tourist Street, which would serve as a model for urban continuity in Downtown Karak.

Design policy

The basic design policy is summarised as below:

- To utilise the local materials as much as possible for the improvement of the pavement in order to raise the design identification of the street
- To maintain a car access to each house/shop
- To maintain existing slopes of and steps on the sidewalk as much as possible in order to keep the current situation and reduce readjusting works between the sidewalks and houses/shops
- To take a design of traditional lamps for the street lighting fixtures
- To provide at least two languages: Arabic and English for signboards
- To provide appropriate street furniture and signage.

(2) Design solutions

Street Layout

Al-Malik Hussein Street (from Majamma' to Salahdin Square) and Saraya street are designated for pedestrians only and Al-Mujamma' Street is to provide for parking facilities. Emergency and service traffic during limited hours are allowed.

Collapsible bollards are located at street intersections to prevent car traffic and allow the passage of emergency vehicles.

Due to the constraints of the existing threshold and drainage issues the sidewalks are maintained and widened. The sidewalk expands in areas deemed important: in front of historic buildings, and in front of existing shops requiring a large sidewalk area. The rhythm

created by the expansion and contraction of the sidewalk is in tune with the casual rhythm of the existing fabric.

To determine the street visually, the Statue of Salahdin is relocated to a central location and a plaza is developed around it. The plaza is intended to serve as a meeting place for tourists and provides both outdoor seating and shade and visually opens up towards El-Jaimi Alumari.

Pavement Design

The streets of Karak are originally paved with Ma'an stone, a local stone from Ma'an city which is very close to Karak City. It is hard, durable and of beige colour.

The stone paving is recommended as Karak basalt stone for pavement and white Ma'an stones for sidewalks.

Mujamma' Street is to allow for traffic as well as parking. Hence the pavement is of asphalt and the sidewalks is of stone tile.

Planting Design

In determining the location and type of planting for the tourist street the following factors are considered:

- 1) Historical references
- 2) Visual continuity
- 3) Maintenance requirements

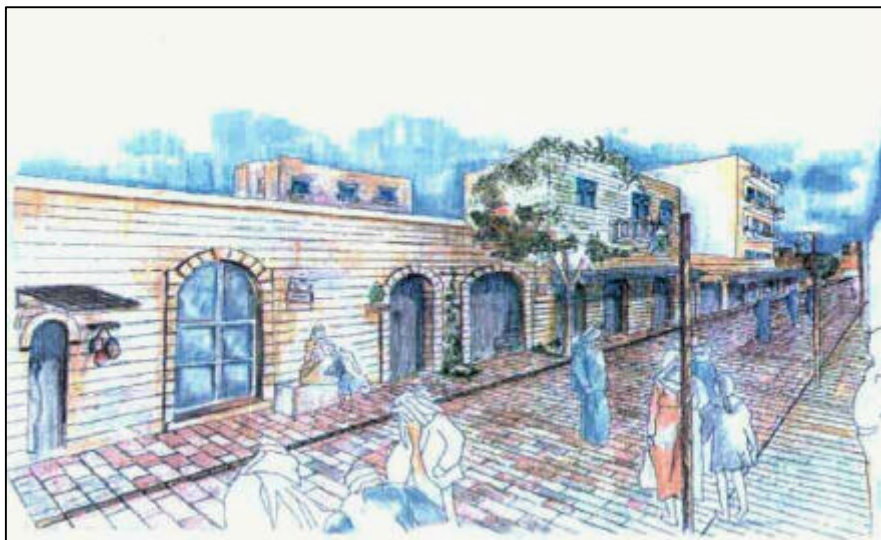
Street Furniture

Two types of street furniture are designed:

- 1) A traditional style light for buildings of early this century.
- 2) A more contemporary style for the design of bollards, outdoor seats, tree grates, and planters, where applicable.

A perspective sketch is shown in Figure 3.6.2.

Figure 3.6.2 Perspective View, Sketches



Source: JICA Study Team

3.6.4. Castle Observation Points

(1) Design concept

Planning Policy

The planning and design policy for the observation points aims to locate the points in places that are easily accessible to visitors and overlooks the surrounding areas in such a manner that provides visitors with views and panorama outlook that are both educational and exciting. They must be least imposing on the site and characterized with a simple design.

- To obtain the best view of Karak Castle and Karak Old City with the possibility of viewing a laser show on the castle wall.
- To be easily accessible from the main road leading to Karak from the Dead Sea and the desert highway.

(2) Design solutions

1) Upper Observation Points

- The audience space is located on the axis to the Castle.
- The location of the parking area is determined taking into consideration levels of the access road.
- The cafeteria is located in the area where the castle can be well observed.

2) Lower Observation Points

- The front road is scheduled to be widened, the layout of the facility has been made in the area set back from the road.
- The facility layout is designed to provide views of the Castle in the eastern direction and the Dead Sea to the west.
- The development size of the Lower Observation Points is smaller than the Upper Observation Points.

3) Pavement and Retaining Wall Design

- Pavement to be with stone tiles.
- Retaining wall height is designed not to exceed 2 meters with stone facing.

4) Sign and Symbols / Outdoor Furniture

Outdoor furniture and signage system are designed according to traditional prototypes in form and material. The following items are to be used:

- Light fixtures
- Benches
- Waste baskets
- Signs

5) Outdoor Lighting / Electrical Plan

Lighting

Landscape will be lit by using lighting poles with 70W high-pressure lamps, 1 meter high Bollards and suitable fitting to landscape.

Control of lighting will be carried out through photocell.

Power Distribution

Each shop and store will have its own DB. The whole plant will have a main distribution panel to which all DB's will be connected.

Each shop will be fitted with suitable no. of power outlets and lighting points.

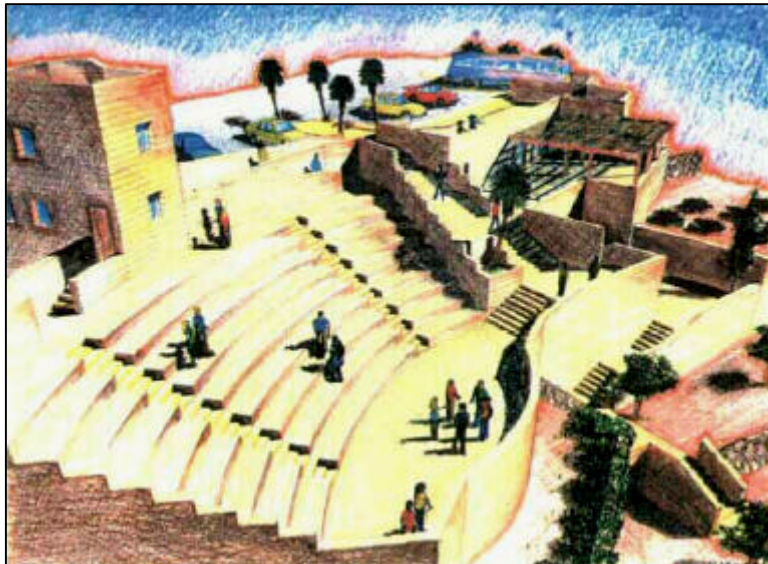
Each shop and store will be fitted with telephone outlets.

6) Structure Plan

This is a very small building, which is to be constructed at the scenic observation points. The total area of Lower Observation Points is 97.56 m² and the total area of Upper Observation Points is 207.18m². The roof of Upper Observation Points is to be used as a terrace.

A perspective sketch is shown in Figure 3.6.3.

Figure 3.6.3 Perspective View, Sketches



Source: JICA Study Team

3.6.5. Visitor Centre

(1) Design concept

Planning and design policy

Because the scope of work for this work-component is reduced from full restoration works of the Building to minor improvement of the visitor centre and its related works, the planning policy aims to enhance the ambience and operation functions of the existing visitor centre, in order to provide better orientation and educational information on the Karak region and its historical significance in a comfortable environment for both tourists and local people, including children.

The following are the design policies for the improvement of the visitor centre:

- Maintain and respect the existing architectural structure and finishing of the Building which are historically significant.
- Minimise the intrusion onto the Building caused by any utility installation and improvement works.
- Utilise and enhance the existing special allocation in the visitor centre.
- Improve the safety and comfort of people in the visitor centre.
- Improve the accessibility to the relevant information on tourism and historical education by introducing alternative media.
- Repairing architectural, mechanical and electrical problems, which may cause serious damage to the Building in the future.

(2) Design solutions

General Layout

The existing room layout is slightly changed by creating a new multipurpose hall, which can accommodate 60 persons, in the east wing of the building. Consequently, the existing offices and reception are relocated to the west wing, which has better facilities and wider span.

The narrow kitchen is relocated next to the toilet to create more space for it, and the existing kitchen is converted to a new storage.

Display Design

The display design accommodates exhibits according to the affordability of space in which things are displayed. Particular attention is paid to the sequence of exhibits and the provision of quality lighting.

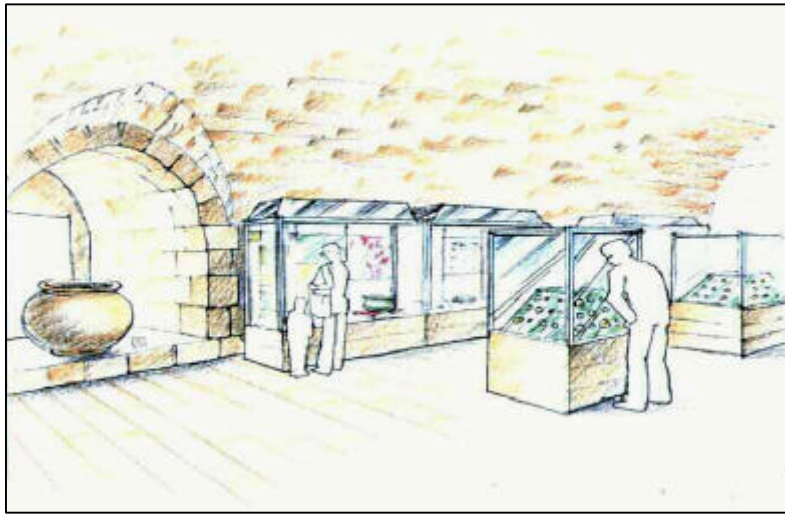
Utilities and Building Facilities

One of the utilities needed in the visitor centre is to provide a heating and cooling system as well as toilets for foreign tourists. This is expected to encourage people to spend more time inside the building and as a result learn more about its content, both during the summer and winter seasons.

3.6.6. Perspective View and List of Sub-project

As for the results of the design developed according to the planning and design policy and design concept, perspective view and/or sketches are shown in Figure 3.6.4, and a list of the project outlines is shown in Table 3.6.1.

Figure 3.6.4 Perspective View, Sketches



Source: JICA Study Team

3.6.7. Construction Plan

Since the site of the sub-project is in the city of Karak, the construction plan should be carefully established by the contractor and accepted by PMU and agencies concerned. The following are major points to be taken into consideration in the construction plan.

There are no particular problems regarding the construction plan except the following, since the utility supply and disposal are available from the municipal services:

Castle presentation

- To take care regarding the archaeology of the castle, since the castle is sensitive, and establish a coordination system with DOA

Tourist Street and visitor centre

- To take care not to disturb the daily activities of the residents and shop owners along the street and trails by the construction,
- To locate the temporary facility site, such as for material stock yard(s), site office, etc., in an area that will not disturb the daily activities,
- To take care not to disturb the pedestrian and vehicles traffic.

Observation Points

- To ensure safety of the visitors, especially at the upper observation points, which have steep slopes.

Environmental considerations

Environmental factors should be taken into considerations in preparing the construction plan. Table 3.6.2 shows the results of the environmental study made on the sub-project.

Table 3.6.2 Potential Impacts and Proposed Mitigation Measures

	Actions	Impacts	Mitigation measures
mitigation measures which are clarified in the tender document	[construction stage] - renovation works of the tourist streets	Air Pollution: - cause nuisance to the neighbouring residents by dust - disturb economic activities	- provide sheets for dust control - watering for dust control
	[construction stage] - renovation works of the visitor centre and the tourist streets	Noise & Vibration Pollution: - cause nuisance to the neighbouring residents	- provide noise protection sheets - restrict working hours
	[construction stage] - renovation works of the visitor centre and the tourist streets	Existing Infrastructure: - affect the existing signage, sewage and electric lines etc.	- alleviate effects on the existing infrastructures by clarifying the existing conditions and scope of works
	[construction stage] - renovation works of the visitor centre, the Castle and the tourist streets	Traffic & Safety: - increase conflict between vehicles and visitors	- conduct traffic control - secure detour (if necessary) - avoid rush hours
	[construction stage] - renovation works of the visitor centre, the Castle and the tourist streets	Waste Pollution: - generate a large volume of construction waste	- secure transport and disposal sites - enhance recycling of the waste
others	[operational stage] - increase number of tourists	Waste Pollution: - generate a large volume of construction waste	- place litter boxes for collecting general waste - improve the existing waste collection system
	[operational stage] - increase of tourists and cars	Traffic & Safety: - increase conflict between vehicles and visitors	- raise awareness by environmental education - improve functions of the existing parking areas - plan/ implement new traffic system to reduce the number of cars in the city centre and to secure good traffic circulation with long-term perspectives

Source: JICA Study Team

Table 3.6.3 Potential Impacts and Proposed Mitigation Measures

Impacts	Actions	Mitigation measures
Air Pollution: - cause nuisance to the neighbouring residents by dust - disturb economic activities	- renovation works of the tourist streets	- provide sheets for dust control - watering for dust control
Noise & Vibration Pollution: - cause nuisance to the neighbouring residents	- renovation works of the visitor centre and the tourist streets	- provide noise protection sheets - restrict working hours
Existing Infrastructure: - affect the existing signage, sewage and electric lines etc.	- renovation works of the visitor centre and the tourist streets	- alleviate effects on the existing infrastructure by clarifying the existing conditions and scope of works
Traffic & Safety: - increase conflict between vehicles and visitors	- renovation works of the visitor centre, the Castle and the tourist streets	- conduct traffic control - secure detour (if necessary) - avoid rush hours
Waste Pollution: - generate a large volume of construction waste	- renovation works of the visitor centre, the Castle and the tourist streets	- secure transport and disposal sites - enhance recycling of the wastes

Source: JICA Study Team

Construction method and schedule

A construction schedule, including major work items, proposed by the Study Team as an option is shown in Figure 4.1 in Chapter 4.

3.7. Historic Old Salt Development

3.7.1. Objectives of Sub-project

The objectives of this sub-project are as shown below:

- To enhance development of Historic Old Salt as an Eco-Museum
- To encourage conservation of heritage assets in Salt.
- To improve tourism services along the pedestrian circulation as a model project.
- To serve for:
 - Providing convenience to the tourists and people in Salt; and
 - Revitalizing community development and participation in Salt.

3.7.2. Historic Old Salt Museum and Visitor Centre

(1) Components

- 1) Renovation and adaptation of the Historic House of Abu Jabber into a museum
 - Restoration and cleaning of the building for Museum use and;
 - Provision of exhibition equipment and furniture.
- 2) Providing Visitor Centre in the museum:
 - Provision of interior design and tourism promotion equipment

(2) Design Concept

Design Policy

- The differentiation between old and new will abide by the design philosophy of the historic house museum.
- Proper masonry cleaning methods will be utilized for the cleaning of mainly the front facade and other facades as well.
- No sandblasting will be used under any circumstances because it inflicts adverse effects on the masonry especially in Salt where the sandstone is relatively fragile.
- Retention of existing building features as much as possible. The heritage conservation of the house will attempt to retain the authentic architectural features as much as possible (e.g., doorframes, ironwork, window frames, floor tiling, roof tiles). This will increase the authenticity of the material of the house. Repairs will attempt to replace only extremely deteriorated features.
- The house comprises thick walls and barrel vaults at the lower levels and thinner walls and wooden trusses at the upper levels (Figure 3.7.1 The Structure of the House). Therefore, and as much as possible, no underpinning should be carried out on the building, and the stability of the house should depend on the quality of historic structures with necessary structural stabilization to avoid mechanisms that might have an adverse effect on the structural stability of the building. Structural stabilization might include reinforcement in needed areas such as door lintels, balconies, and walls.
- Vertical openings or holes in the existing floors will be avoided as much as possible because existing floors at the first and second floors are composed of barrel and cross

vaults. Instead, lateral openings for utilities (e.g., electricity, water, and drainage) will be used.

Planning and Design Concept

The Museum/visitor centre is planned to function as the philosophical and physical centre of the Eco-Museum, Old Historic Salt. It will be a type of museum dedicated not only for tourists but also for the locals to explore their own community, tradition, history, and culture. This will affect conservation philosophies and spatial and zoning issues in terms of accommodation of change and differentiation between old and new.

Re-confirmation of the history and culture of Salt during the "Golden Age" period (19th and early 20th centuries: 1847-1918) and encouraging pride of citizens of Salt by conserving such old heritage as a centre of the Eco-Museum.

(3) Design Solutions

The use of the building and the renovation works are planned as shown in this section.

Floor use

The planned use of the building floors is briefly summarized in Table 3.7.1.

Table 3.7.1 Planned Floor Use of Abu Jaber Building

Floor	Use/facility	Remarks
Ground Floor	Main entrance and reception hall	Centre of the building
	Shops	Eastern portion and road side of western portion
	Visitor Centre	
	Souvenir shop	
	Library	Back side of western portion
Mechanical and services		
1 st Floor	Reception hall	Back side of central portion
	Spaces for Historical exhibition	
	Traditional coffee shop	Central portion of road side
	Administration	Beside the open terrace and the terrace
	Services	Eastern end portion, which has separate access with outside stair
2 nd Floor	Reception hall	Occupying almost all this floor
	Spaces for Cultural exhibition:	
	- Material culture	
	- Children's sector	
	- Domestic life	
3 Nos. of Court yards	western end, next to reception hall, centre of eastern portion	
Services		

Source: JICA Study team

Renovation works

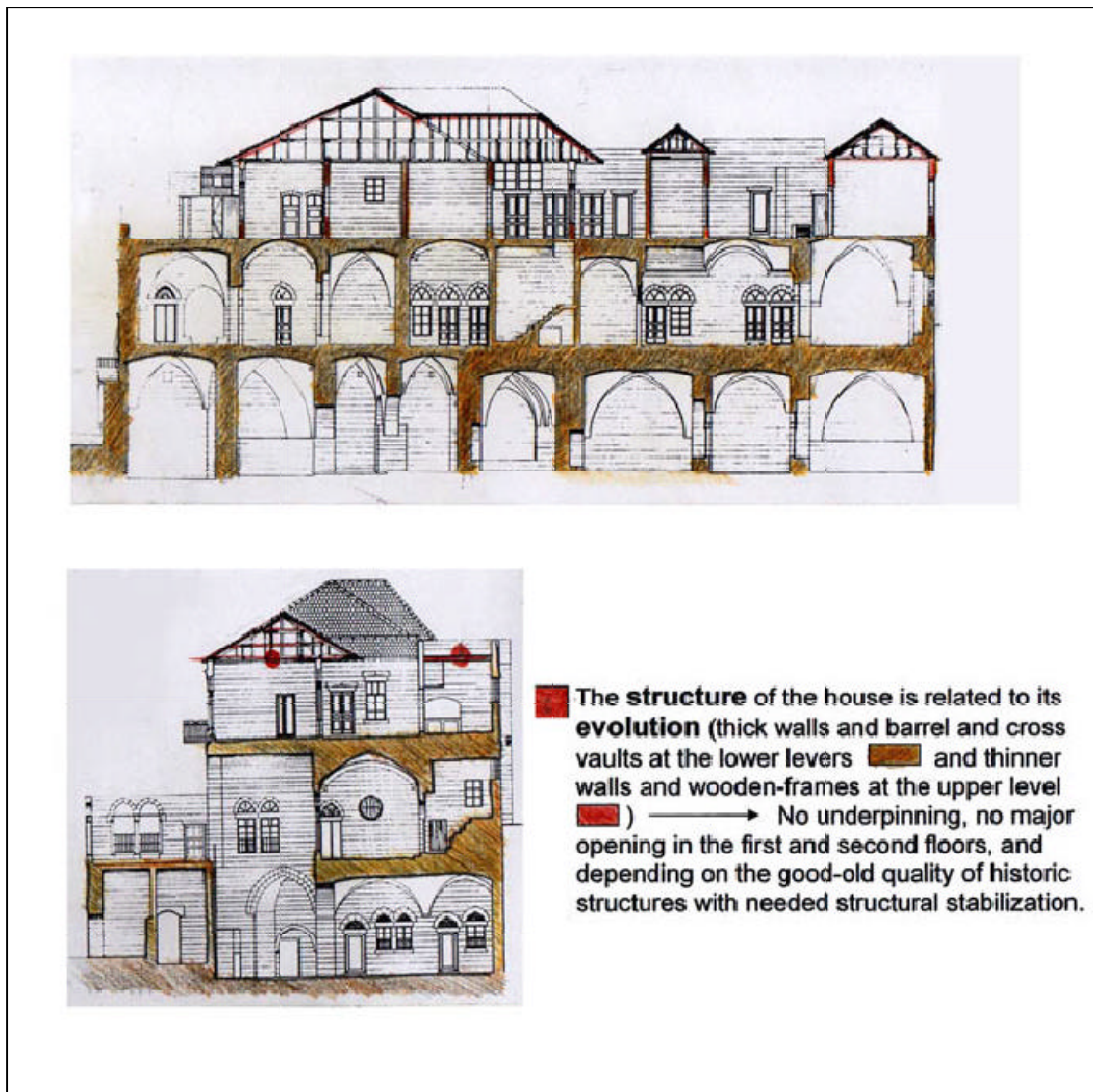
The works for the renovation of the building are as follows:

- Opening; doors and windows: renovating the existing doors and windows as much as possible, but those heavily damaged are planned to be replaced by new ones.
- Ornamental elements; grill over the openings, handrails, etc.: existing ones are renovated

as much as possible

- Walls; both external and internal: cleaning with brush is applied
- Floor tile; worn stone tiles are to be replaced, especially for the stairs
- Roof; damaged roof structures are replaced and the roof tiles are re-installed using the original materials as much as possible
- Utility networks; water supply, sewerage, electricity, telephone, etc.: all are replaced.
- Wet areas; toilet, kitchenette, etc.: the equipment and fixtures are replaced.

Figure 3.7.1 Structure of the House



Source: JICA Study Team

Exhibition Plan

The museum introduces history and culture to visitors and local citizens of Salt.

1) Historical exhibition (first floor):

The main theme is the Golden Age (the period when Salt was the centre of political, economic, business, and cultural events) in the historical section.

This would include exhibition rooms dedicated for the historiography of the Salt Municipality, genealogy, medical history, educational history, architecture and master builders, and other issues related to the Golden Age of Salt:

2) Cultural exhibition (second floor)

The Culture section is divided into several zones each around an open courtyard that will acquire the flavour of that zone (Second Floor). The three major zones include:

Material Culture (around the Folk Dance and Cloths Courtyard):

Adaptive historic rooms would include Cloths and Weaving, Festival (Wedding and Religious), Musical Instruments and Games, Pottery and Glass, Jewelry and Carpet, and Industrial Arts. One room within this section is dedicated to exhibit the living tradition of the Late King Abdullah labelled King Abdullah Historic Room.

Children's Section:

Distributed around the children's Performance Courtyard, this section includes Karakouz Iwaz and Box of Wonders room and the Hakawati Room. This section is in proximity to the central reception hall for easy control and surveillance.

Domestic Life:

The purpose of this section is to demonstrate, through several historic rooms, the traditional living quarters and features of domestic life in Salt during the Golden Age period. The section includes: Significant Houses: a room to demonstrate, by drawings and models, significant dwellings in Salt, Mouneh (food Storage) Exhibit, Bedroom, Cooking, Family Room, Madafa, and "Housh" Courtyard Living which is a open courtyard for traditional bread and other traditional demonstrations.

Visitor Centre

The Visitor and Information Centre (Ground Floor) offers information and services for tourists to understand the character of the city and provide information about attractions prior to their visit. Tourism and Museum information will be provided through exhibition of models, maps, brochures, audiovisual equipment and computers (hypermedia).

Coffee shop

It will also include a traditional coffee shop with an extension over the large terrace on the first floor overlooking the city. This coffee shop (Hakawati coffee shop) would include a traditional storyteller.

3.7.3. Tourist Trails and Public Spaces

(1) Components

1) Signage for tourists

Provision of interpretation boards and direction signs.

2) Improvement and development of small paths as a Model tourist trail with:

Heritage conservation and enhancement of the existing tourist trails by provision of new pavement and street furniture.

3) Provision of 4 Lookouts

Provision of pavement, benches and shelter in different parts of the city, but mainly in the

historic city core.

- 4) Improvement of 4 Public Spaces in As Sa'aha, Baladia plaza, Maydan Plaza and Hammam Plaza with:

Improvement of pavement, planting, street furniture and car parking connecting the major tourist trails in the historic city core.

- 5) Enhancement Measure (Selected Historic Houses)

Provision of guideline recommendations to adapt and enhance five selected historic houses within the historic city core and in close geographic relationship with the tourist trails.

(2) Design Concept

The spatial requirements differ in various trails, panorama lookouts and public spaces as a function of usual densities of people, heritage, social and environmental values. However, most areas concerned are enclosed by either buildings, walls or slopes, and it is difficult to alter the spatial arrangements.

General design concept

- To enhance differences between the transitional space and nodal space within the sequential experience in the pedestrian and tourist movement.
- To be a design principle for modulation of transitional spaces with the hierarchical ordering of nodal spaces
- To put priority on the functional aspect of a pedestrian network. In particular, visual cues determine the degree of orientation and direction to a given destination point from an origin.
- To enhance the aspect of visual cues by highlighting landmarks, historical building facades and established trees as focal points within a visual sequential experience of tourists.
- To respect the traditional design aspects; an impressive visual cue derived from intensive light and darkness of narrow paths, stairs and semi-private courtyards.
- To integrate into the design the many cultural factors that contribute to the enjoyment of outdoor spaces providing a richness of experience and a depth of meaning to all whom potentially may enjoy participation in tourist trails and public spaces.
- To provide a relaxing atmosphere for the participant (tourist or local) while enjoying the most significant event; the City of Salt.
- To provide a series of stepped terraces provided by the natural slope existing at Panorama Lookouts to maintain the opportunity to get panoramic views.
- To coordinate with traffic conditions for the planning and design of the public plazas, especially with car parking demands, since the spaces planned as the plazas are mostly used for car parking originally.

Design concept for specific items

- 1) Pavement and Step Design

Pavement in the Rummanat Stairs provides different varieties according to events taking place. At the starting point fronting the entrance of the Small Mosque, the journey

starts with soft landscaping with dense greenery.

2) Signage

Signage would provide interpretation boards that would address direction, interpretative remarks, Historic Contexts, and drawings of certain historic resources such as The Small Mosque, and The Bakery. In addition, it might include interpretative drawings and text illustrating key features on Panorama Lookouts.

3) Outdoor furniture

In general, outdoor furniture and lighting features would depend on appropriation of traditional detailing with a new spirit (e.g., adaptation of existing traditional lanterns). They include pergolas at residential entrances and nodes with seating.

(3) Design solutions

Tourist trails

The proposed Tourist Trails were identified after extensive research and field inspections. Salt Municipality and JST, jointly, participated in the selection of the tourist trails based on the previous Study Reports. The Tourist Trails stretch approximately 7 km spread between the historic city core (represented by al Ain Plaza), Suq al Hammam, and four panorama lookouts in higher locations in the city.

Within those tourist trails, Model Tourist Trails are selected in total length of 2.3 km (900 m for stone pavement and 1.4 for asphalt pavement), which are linking to the city centre in a waking distance, and act as an access for the prominent historical buildings and panorama lookouts.

The design of these trails is done according to the design concept mentioned above taking into consideration the conditions around the trails and nodes.

Public Spaces (Sahat)

The project identified four major plazas that act as turning points of pedestrian flow and link the Tourist Trails together. These four public spaces are nominated in conjunction with the Model Tourist Trails, where urgent solutions are required to ease congested car parking problems and improve public open spaces for pedestrians. These are as follows:

- Al Ain Plaza
- Al Baladyia Plaza
- Al Hammam Plaza
- Al Maydan Plaza

The design is addressed in common issues and will give an idea of the approach applied on every Plaza taking into considerations the design concept described above.

Panorama Lookouts

The project identified four panorama lookouts, two of which are situated within a short walking distance from the core (Al Ain Plaza); and two others are situated in higher locations: one near the Salt High School and the other in Kamal al Shaer Garden. The Panorama Lookouts include:

- Al Jad'a Panorama Lookout

-
- Kamal al Shaer Garden Panorama Lookout
 - Qal'a Panorama Lookout
 - Salt High School Panorama Lookout

Outdoor Lighting

The electrical power supply available in Jordan is 230/400 volts 4 wire (star) system when the power is taken from the existing distribution overhead line net work.

This condition is mainly for the electrical supply for the paved and asphalt tracks.

1) Lighting Fixtures

The lighting lay out is based on the assumption that each area of the project is treated separately. The lighting will be achieved by the following:

2) Trails and street:

By using decorative type lighting poles and decorative lanterns.

The asphalt-coated trails are served by utilizing 5-meter decorative poles of either aluminium or powder coated stove enamelled steel poles headed by 2 or 3 number of oriental lanterns of 70 watt high- pressure sodium lamps and 100watt tungsten lamps.

The proposed distance between poles is 25 meters. The trails are treated separately whether one or more control panel serves each. Feeder cable from the electrical authority into consideration and fused cut outs for each pole are provided.

3) Paved Stairs and Lookouts:

By lighting poles and oriental decorative lanterns. The tourist trails are served by utilizing 5-meter poles each loaded by 4 no serve the tourist trails, lanterns as those for asphalt trails. It is proposed to provide 1 pole/ 20 m². One control panel is considered for each. One feeding cable from the electrical authority is considered, and cables and related civil works are considered. Fuse cut out boxes for poles are provided.

The stone paved areas are served by either:

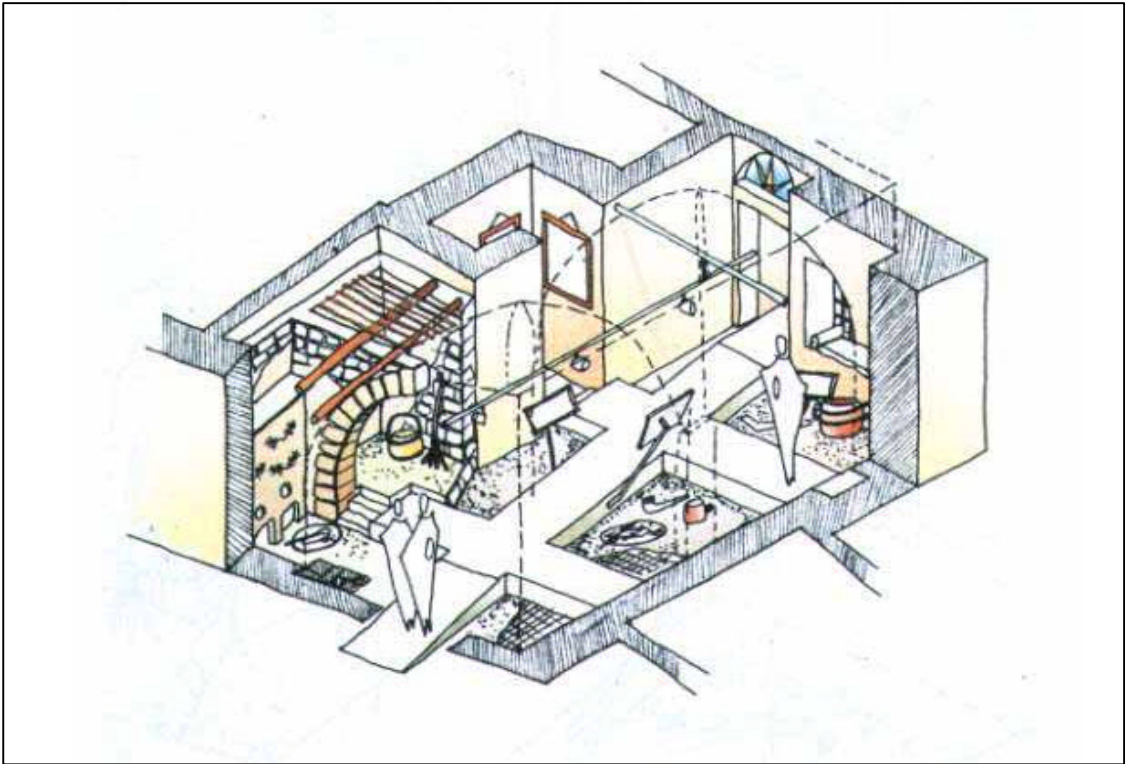
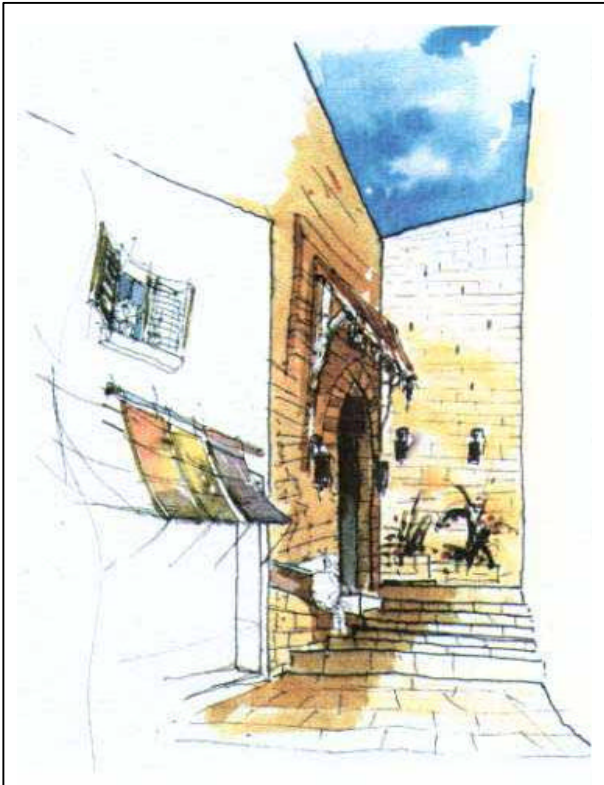
- Wall mounted bracket lanterns.
- 3 meter poles with one lantern at the top.
- 1-meter Poles.
- Ground lights where found necessary.

The proposed distance between poles and/or lanterns varies between 10-20 meters intervals.

(4) Perspective View and List of Sub-project

As for the results of the design developed according to the planning and design policy and design concept, perspective view and/or sketches are shown in Figure 3.7.2, and a list of the project outlines is shown in Table 3.7.2.

Figure 3.7.2 Perspective View, Sketches



Source: JICA Study Team

Table 3.7.2 Sub-project Particulars of Historic Old Salt Development

1. Abu Jaber Building	
1-1. Building and associated facilities Renovating the existing historical Abu Jaber Building, and to utilise it as a museum and a visitor centre.	
1)	Renovation of the building
2)	All interior finishing including mechanical and electrical works
3)	Exhibition works
4)	Other related works
1-2. The floor area and use of the floor is as follows: Total floor area :1,242m ²	
1)	Ground Floor: Information and Visitor Centre and private shops
2)	1 st Floor: Museum
	- History of Salt,
	- Administration
	- Coffee shop and Video room
3)	2 nd Floor: Museum
	- Culture of Salt

Tourist Trails	
2-1. Tourist Trails Improving the pavement including improvement of stairs of the following existing trails, 7.0 km in total.	
1)	Hadadin Stair
2)	Jadaa Trail
3)	Qalaa Trail
4)	Rummant Trail
5)	Saltzaman Trail
6)	Skafiyya Trail
7)	Hammam Trail
2-2. Panorama Lookouts Construction of new lookouts and improvement of existing lookouts of which total area is approximately 1,200 m ² . Provision of new pavement, outdoor furniture, signs, planting, public toilet, and retaining wall are included.	
1)	K. Al Slier Lookout
2)	Al Madrasha Lookout
3)	Al Jadda Lookout
4)	Al Qalaa Lookout
2-3. Public Spaces Improvement of the existing Public Space of which total area is approx. 3,850 m ² . Provision of new pavement, outdoor furniture, signs, and planting is included.	
1)	Al Saha Public Space
2)	Al Maydan Public Space
3)	Al Baladyia Space
4)	Al Hammam Public Space

Source: JICA Study Team

3.7.4. Construction Plan

Since the site of the sub-project is in the city of Salt, the construction plan should be carefully established by the contractor and accepted by PMU and agencies concerned. The following are major points to be taken into consideration in the construction plan.

There are no particular problems except the following, since the utility supply and disposal are available from the municipal services:

- To take care not to disturb the daily activities of the residents and shop owners along the street and trails by the construction,
- To locate the temporary facility site, such as for material stock yard(s), site office, etc., in an area that will not disturb the daily activities,
- To take care not to disturb the pedestrian and vehicle traffic by the construction activities since the trails are narrow and steep in places.

Environmental considerations

Environmental factors should be taken into consideration for preparing the construction plan. Table 3.7.3 shows the results of the environmental study made on the sub-project.

Table 3.7.3 Potential Impacts and Proposed Mitigation Measures

Impacts	Actions	Mitigation measures
Air Pollution: - cause nuisance to the neighbouring residents by dust - disturb economic activities	- construction work and transportation	- provide sheets for dust control - watering for dust control
Noise & Vibration Pollution: - cause nuisance of the neighbouring residents	- renovation works of the building and tourist trails	- provide noise protection sheets - restrict working hours - shorten construction period
Existing Infrastructure: - Affect the existing signage, sewage and electric lines etc.	- renovation works of the building and tourist trails	- alleviate effects on the existing infrastructure by clarifying the existing conditions and scope of works
Traffic & Safety: - cause conflict between pedestrian and vehicles - increase of traffic jam and accidents	- renovation works of the building and tourist trails	- conduct traffic control - secure detour (if necessary) - avoid rush hours
Waste Pollution: - construction debris clogs drain pipes - generate a large volume of construction wastes	- construction work	- secure transport and disposal sites - enhance recycling of the wastes

Source: JICA Study Team

Construction method and schedule

A construction schedule, including major work items, proposed by the Study Team as an option is shown in Figure 4.1 in Chapter 4.