



## THE GROUP

**BATCO HOLDING, is a privately owned investment Company and the majority shares holder of the Group and its subsidiaries.**

**BATCO Group is a family of Companies offering diverse operations in: Engineering, Civil infrastructure, Building Works, and Solid Waste Management. With more than 3,000 employees, the Group has offices that are strategically located in the MENA Region as well as Europe. The Group has completed a wide range of medium to large size Projects including EPC contracts valued at over \$2 billion USD. BATCO Group includes BATCO, FEDERICI-STIRLING and LAVAJET.**



## LINE OF BUSINESS

### ❑ **TRANSPORT**

Roads, Highways, Bridges, Viaducts and Tunnels.

### ❑ **BUILDINGS**

Residential, Educational, Industrial, Hotels, Resorts and Hospitals.

### ❑ **INFRASTRUCTURE**

Construction of Dams, Water Supply, & Sewerage Networks. Wastewater & Potable Water Treatment Plants. Sewage & Water Pumping Stations.

### ❑ **ENVIRONMENT**

Collection & street Sweeping. Construction & Operation of Landfills, Sorting & Composting Plants and other Waste Management Services.





## COMPANY OVERVIEW

### **BATCO**

is a general engineering and contracting Company that has grown from a civil and earthwork contractor in the 70's to a pioneering main contractor commissioning multi-disciplinary construction projects in a broad range of sectors. Services include

- ❑ Design
- ❑ Construction & maintenance of highways, bridges, underpasses, infrastructure, dams, tunnels and utilities
- ❑ Buildings
- ❑ Construction & Operation of sanitary Solid Waste landfills.





## FEDERICI-STIRLING

is world known contractor specialized in the construction & design works of:

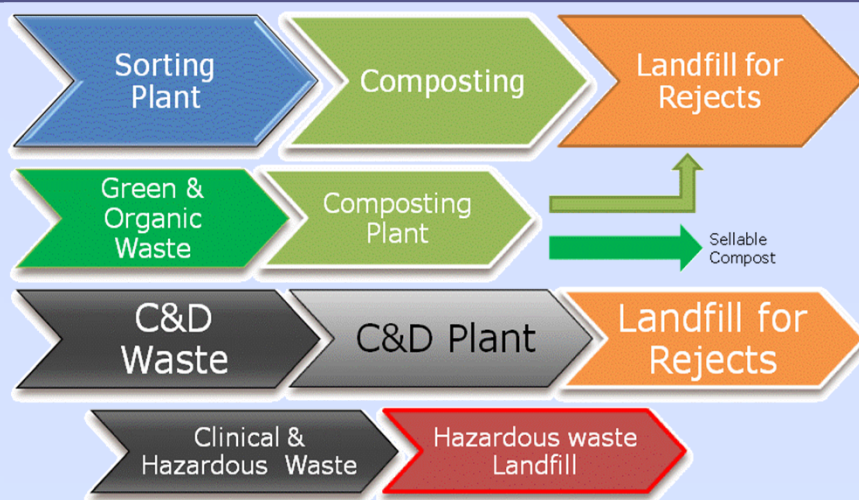
- ❑ airports
- ❑ infrastructure works including, dams & marine works
- ❑ roads, highways, bridges, underpasses, tunnels
- ❑ utilities related works





is a regional leader in Solid Waste Management Services in the MENA Region offering specialized services covering all aspects of the Integrated Solid Waste Management Programs including:

- ❑ solid waste collection and street sweeping
- ❑ Construction, O&M of municipal, hazardous and medical solid waste landfills
- ❑ Construction, O&M of sorting & compost plants







Landfills



Compost  
Plants



MSW  
Collection

DESIGN  
SUPERVISION  
CONSTRUCTION  
OPERATION



Transfer  
Stations



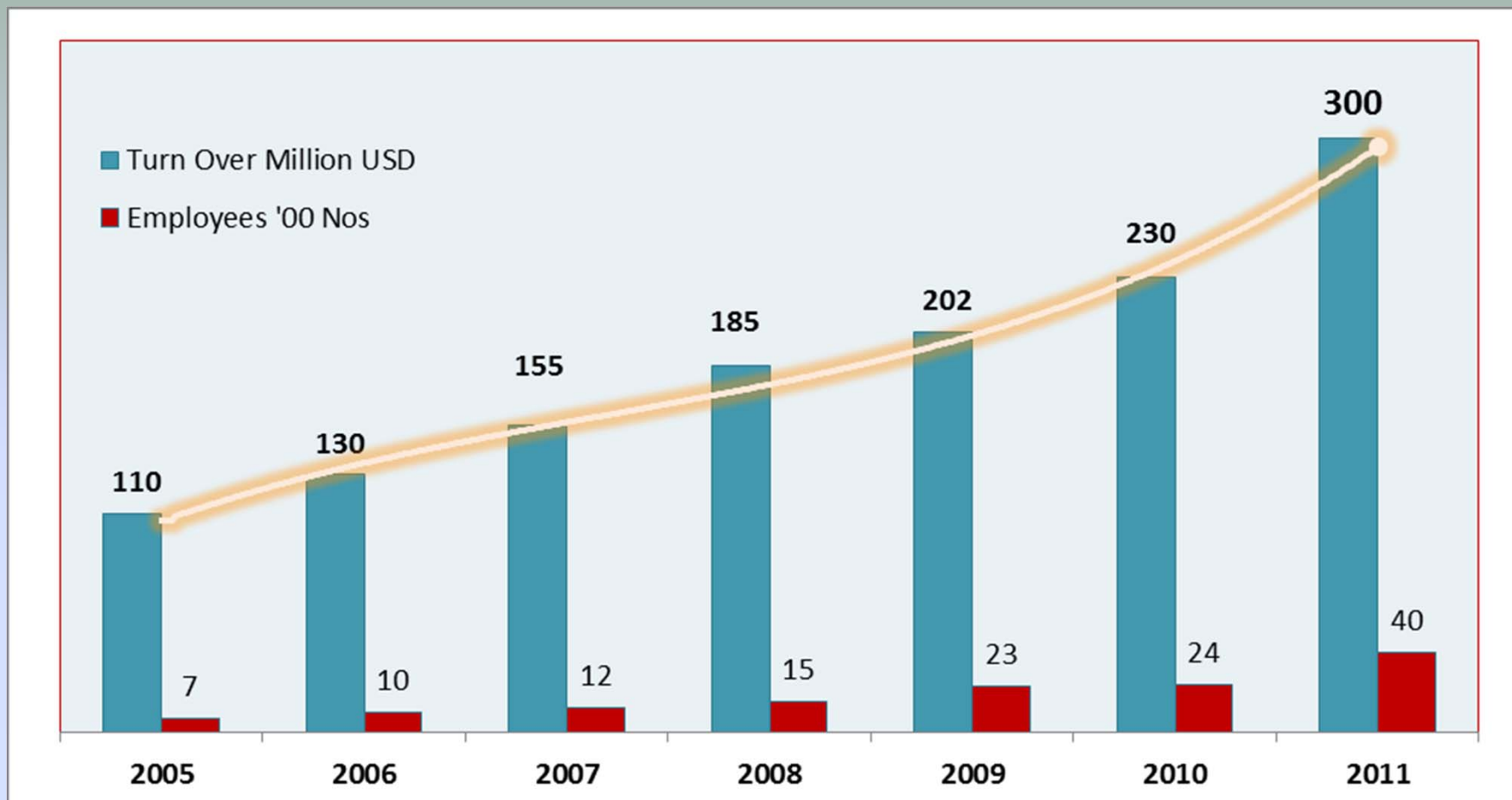
Medical &  
Hazardous  
Waste  
Treatment



Sorting  
Facilities



## BATCO GROUP



Turn Over 2011 (Signed):

310 Million USD

Value of Orders Backlog :

240 Million USD

## LOCATIONS



**LEBANON**



**UNITED ARAB OF EMIRATES**



**KINGDOM OF BAHRAIN**



**SULTANATE OF OMAN**



**ITALY**



**IVORY COAST**



# NEW PROJECTS





# New Projects

**Project:** Treatment , Protection & Stabilization Rock Slope for Dubai-Fujairah Freeway

**Location:** Dubai, UAE

**Client:** Ministry of Works – United Arab Emirates

**Value:** 40.4 Million USD

The contract is a design build and maintain contract to design and execute preventive and protective measures, repairs, remedial work and slope collapse avoidance measures to any slope along the Freeway that require slope stabilization works, with varying degrees of required attention to each slope

## Description of Works:

- ✓ Pre-design site survey & Investigation, Complete temporary site setup
- ✓ Survey and setting out work, Clearance of the site and of borrow pits
- ✓ Maintenance and protection of exiting road passing through the site
- ✓ Traffic management and roads diversion
- ✓ Reinstatement of road pavement, ditches and road facilities
- ✓ Preventive and protective measures, repairs, remedial work, slope protection
- ✓ Drainage works
- ✓ Barriers at slope end, Concrete buttresses
- ✓ Protection fences and barriers
- ✓ Rock bolts, rock dowels and anchors
- ✓ Protective mesh, Shotcrete

# New Projects

**Project:** Design & Construction of Underpasses and Flyovers along Darsait – Al Wadi Al Kabir Road  
**Location:** Oman  
**Client:** Muscat Municipality – Sultanate of Oman  
**Value:** 104 Million USD

The proposed improvement includes design and construction of underpasses and flyovers to an effort by the Muscat municipality to alleviate the traffic congestion in Muscat

## Description of Works:

- ✓ Signalized at-grade intersections,
- ✓ Widening of existing I-girder bridges including new superstructure and substructure elements, wing walls,
- ✓ Retaining walls, reinforced walls, reinforced soil walls and/or modular walls.
- ✓ Construction Flyovers, & Underpass, Pavement construction. Highway signing and road marking. Paving and curbing works.
- ✓ Street lighting including power supply.
- ✓ Landscaping and automatic irrigation (Secondary Network).
- ✓ Storm water drainage.
- ✓ Traffic control devices and signage. Concrete safety barriers and guard rails

# New Projects

**Project:** Integrated Waste Management System  
Energy from Waste Plant <sup>(1)</sup>  
**Location:** Bahrain  
**Client:** Government of Bahrain  
**Value:** 700 Million USD <sup>(2)</sup>

All waste generated in the Kingdom of Bahrain of 4,500 t/d shall be received at the facility and treated at the appropriate treatment plant in order to achieve the various objective of the tender documents and specifically the reduction of landfilled waste by an amount of not less than 90%.

## Description of works:

- ✓ Sorting Plant
- ✓ Thermal Treatment Plant
- ✓ C&D Treatment Plant
- ✓ Green Waste Compost Plant
- ✓ Organic Waste Compost Plant
- ✓ Sanitary Landfill



(1) selected as preferred bidder

(2) Batco Group Value of work 200 Million USD



# New Projects

**Project:** Solid Waste Collection, Cleaning and Street Sweeping, and On-call Services in Abu Dhabi  
**Location:** UAE  
**Client:** Center for Waste Management Abu Dhabi UAE  
**Value:** 85 Million USD

The projects includes providing services for the collection of up to 1,500 tons per day of municipal solid waste the as generated within the Abu Dhabi City. The term of the new Service Agreement continue for seven years and may be extended up to three years, for a maximum term of 5 years

## Description of works:

- Collection of MSW (1,400 t/d)
- Sweeping and cleaning of all roadways, streets and all public areas including public beaches, public parks, underpasses, public toilets, markets, bus stops, parking service areas, and properties of special importance, such as palaces and monuments;
- On-Call Services
- Public awareness and education programs and customer services
- Improvement and optimization of the existing waste collection management system.

# New Projects

**Project:** Al Dhafra Landfill & Transfer Station  
**Location:** UAE  
**Client:** Center for Waste Management Abu Dhabi UAE  
**Value:** 25 Million USD

The projects includes providing O & M services for the operation of the Al Dhafra Landfill for 5,000 t/d and transfer station for 1,700 t/d of municipal solid waste The term of the new Service Agreement for three years and may be extended up to two years, for a maximum term of 5 years

## Description of works:

- Design of the landfill extension and closure
- Upgrading of entrance and administrative facilities
- Earthworks and access roads construction
- Installation of a liner system (geo-membrane and geotextile)
- Daily operation including daily cover & compaction
- Cells construction & closure
- Client employee training
- Environmental monitoring

# New Projects

**Project:** Upgrading of Infrastructure in Tripoli City -  
Phase I - Package 1A  
**Location:** Tripoli, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Dar Al Handasah – Nazih Taleb & Partners  
**Value:** 26 Million USD

The Project consists of upgrading the City's existing services through rehabilitation or total reconstruction. The total approximate length of utilities lines is 17,000 m (excluding potable water and electrical lines).

## Description of works:

- Construction of new collectors & connection of existing & new collectors to main line  
Rehabilitation of the existing network at damaged or undersized locations.
- Construction of new collectors and related works aim for the separation of the stormwater network from the wastewater network.
- Construction of surface drainage systems, including inlets, gullies and interceptors.
- Rehabilitation of New Tripoli area including the installation of the potable water required items
- Installation of MV and LV cables and connection
- Reconstruction of the road structure: asphalt, base course, subgrade, milling and overlaying.
- Landscaping plantation, street furniture such as lighting poles, luminaries
- Testing



# New Projects

<b>Project:</b>	<b>Grade Separation at Sami Solh Avenue and Damascus Road Intersection</b>
<b>Location:</b>	<b>Beirut, Lebanon</b>
<b>Client:</b>	<b>Council for Development and Reconstruction</b>
<b>Consultant:</b>	<b>Rafik El-Khoury and Partners</b>
<b>Value:</b>	<b>15 Million USD</b>

The project consists of the construction of an underpass with two cells of an overall length of 700 m: 150 m long underpass section and 550 m long ramps at three ends of the underpass. The works also include the construction of service roads adjacent to the underpass and upgrading the existing roadway network.

## Description of works:

- Construction of reinforced concrete tunnel including excavation, diaphragm walls, foundations, and reinforced concrete walls.
- Pavement works, Storm water drainage network, Pumping & Generator room.
- Street lighting. Traffic signals. Traffic signs, road marking, barriers and sidewalks. Landscaping works. Utilities and utility relocation.

# New Projects

**Project:** Rehabilitation of Aamchit - Meyfouq Road  
**Location:** Jbeil, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Dar Al Handasah – Nazih Taleb & Partners  
**Value:** 25 Million USD

The project consists of the rehabilitation and improvement of Aamchit - Meyfouq road with an approximate length of 24 km.

## Description of works:

- Earthworks for road construction, road widening, drainage channels, culverts, bridges and walls.
- Pavement works involving both new pavement & rehabilitation of existing pavement.
- Construction of retaining walls, pipe culverts, bridges, concrete ditches and earth channels, sidewalks. Storm water drainage network.
- Protection works: slope protection, drainage ditch, grouted riprap.
- Relocation of existing utilities. Potable water networks, wastewater networks and accessories.
- Electrical and street public lighting. Signing and marking. Road safety accessories.

# ON-GOING PROJECTS



# Projects in Progress

**Project:** Outsourcing Of Solid Waste Collection & Transportation, Street Sweeping And Cleansing Services To Al Ain North Zone

**Location:** Al Ain, UAE

**Client:** Al Ain Municipality

**Consultant:** Entec

**Contract Value:** 140 Million USD

The project consists of providing waste collection, street sweeping and cleaning for the northern region of the City of Al Ain for a population of 350,000 and daily tonnage of 900 tons.

## Description of works:

- Daily waste collection (municipal, commercial, green, agricultural, and industrial wastes).
- Street sweeping and litter picking.
- Manual and mechanical street washing.
- Graffiti removal.
- Operation of a 24/24hr operation room with stand-by emergency services.
- Operation of a Customer Call Center (for complaints).
- Operation and maintenance of the service (PMV; QA; QC).
- Environmental monitoring.





# Projects in Progress

**Project:** Rehabilitation Works (Roads, Bridges) in Quriyat, 2  
**Location:** Quriyat, Sultanate of Oman  
**Client:** Muscat Municipality  
**Consultant:** Idroesse Infrastructure spa  
**Contract Value:** 49.6 Million USD

After the disaster caused by the Cyclone Gonu, the Omani Government has taken several mitigating measures including the Rehabilitation Works in Quriyat,

## Description of works:

- Excavation of valley bed and embankment for dikes and roads.
- Soil improvement by jet grouting technology
- Construction of a 180 m long bridge and two viaducts with 210 m and 91 m
- Construction of reinforced concrete retaining walls.
- Road works including water drainage, asphaltting, road lighting, safety barriers, sidewalks, road signing and marking, etc.



# Projects in Progress

**Project:** Design & Construction of Wadi Bridges & Culvert in Al Qurm  
**Location:** Muscat, Sultanate of Oman  
**Client:** Muscat Municipality  
**Consultant:** Parsons International & Company LLC  
**Contract Value:** 52.3 Million USD

This project consists of the design and construction of adequate all-weather cross-drainage provisions, upgrading of the service roads as an all-weather road, the lower-lying commercial and residential areas are to be protected by the flood protection dike.

## Description of works:

- 4 bridges (200m each) with precast post-tensioned beams & 10,000m cast-in-situ concrete piles Ø 600 mm;
- Reinforced concrete box culvert
- A 1,000 m long flood protection rock fill dike
- Reinforced concrete / reinforced soil walls.
- Excavation and embankment for roads and dikes.
- Road works, water drainage, asphaltting, lighting, safety barriers, guardrails, curbing works, road signing & marking
- Traffic and utilities diversion & protection on highways.



# Projects in Progress

**Project:** Construction of Brissa Dam & Lake  
**Location:** Danniyeh, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Dar Al Handasah – Nazih Taleb & Partners  
**Contract Value:** 18.8 Million USD

The project is located in the upper part of the Menieh-Danniyeh Caza. The construction will allow better distribution of irrigation needs with the possibility of increasing irrigation to agricultural lands. The water will be collected from the overflow quantities spring and from the hydrological catchment basin with the capacity of 130,0000 m<sup>3</sup>.

## Description of works:

- Geological investigation
- Lake excavation & clay core
- Transition fill and rock fill paving protection.
- Filter, draining & rock fill paving protection
- Design and construction of cofferdam & diversion structures
- Construction of intake & washout structure.
- Construction of overflow structure.& service roads.





# Projects in Progress

**Project:** Construction and Operation of Tripoli Landfill  
**Location:** Tripoli, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Dar Al Handasah – Nazih Taleb & Partners  
**Contract Value:** 25.3 Million USD

This project is the continuation of the Phase I of extending life of the Landfill.

## Description of works:

- Design of the landfill extension and closure.
- Earthworks, access roads, liner system,
- Construction of a reinforced earth fill wall to increase capacity,
- Construction of a peripheral leachate collection system with wells
- Extension of the wave breaker.
- Operation of landfill
- Leachate collection and treatment.
- Landfill flue gas extraction and flaring.





# Projects in Progress

**Project:** Dualization of Road: Zurub to Al-Buraimi Hospital Roundabout  
**Location:** Al Buraimi, Sultanate of Oman  
**Client:** Ministry of Transport and Communications  
**Consultant:** National Engineering Services Pakistan & Partners LLC  
**Contract Value:** 53.5 Million USD

The project includes the dualization of existing single carriageway including the construction of a 17 km dual carriageway & service roads (total length of 27 km)

## Description of works:

- Construction of a 90 m long post-tensioned three-cell box girder flyover bridge.
- Construction of two 53 m long post-tensioned four-cell box girder interchange bridges.
- Construction of four pedestrian underpasses 4 m x 4 m x 45 m.
- Road works including road stretching to approximately 1,000 m
- Construction of a road leading to UAE check post.
- Water drainage, asphalt works, signing and marking.



# Projects in Progress

**Project:** Design & Construction of Dualization of Al Kharijiyah Street  
**Location:** Muscat, Sultanate of Oman  
**Client:** Muscat Municipality  
**Consultant:** Parsons International & Company LLC  
**Contract Value:** 17.8 Million USD

This project, along with the ongoing effort made by Muscat Municipality, aims at alleviating the traffic congestion in the busy areas of Muscat City..

## Description of works:

- Construction of new signal junction & 2 bridges (55m & 45 m)
- Road works including water drainage, lighting
- Widening, camber correction, and overlaying of carriageway.
- Signalization of the existing roundabout.
- Construction of concrete lined drains.
- Public utility service & traffic diversion and protection.



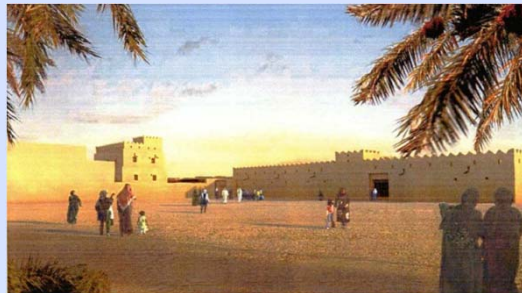
# Projects in Progress

**Project:** The Construction of the Qattara Arts Centre  
**Location:** Al Ain, United Arab Emirates  
**Client:** Abu Dhabi Authority for Culture and Heritage  
**Consultant:** Rafik El-Khoury and Partners  
**Contract Value:** 15.1 Million USD

The project is a place for the local community hand built, supporting activities where people continue to make things by hand. The project entails construction of three new structures within the confines of the existing fort plus an adjacent underground energy center.

## Description of works:

- Restoration of the existing fort structures
- Construction of a new exhibition building, public facilities, & new teaching/arts studio buildings
- Construction of new performance hall & accommodation
- Construction of underground plant room/energy center.
- Hard and soft landscaping:





# Projects in Progress

**Project:** Construction of Wadi Adai Interchange  
**Location:** Muscat, Sultanate of Oman  
**Client:** Muscat Municipality  
**Consultant:** Parsons International & Company LLC  
**Contract Value:** 48.6 Million USD

Project consists of the incorporation of a third level “trumpet” arrangement to accommodate the left-turn movements. The project is located at an urban zone with very heavy traffic.

## Description of works:

- Construction of steel gantry structure to support bridge deck formwork without interruption of traffic.
- Construction of Bridge No 2: (343m & 226m long) post-tensioned concrete two-cell box girder bridge with pile foundations.
- Road works including water drainage, asphaltting, paving and curbing, road signing and marking.
- Signalized at-grade intersection.
- Public utility service diversion and protection.





# Projects in Progress

<b>Project:</b>	<b>Protection and Stabilization of Rock Cut &amp; Fill Areas of Jabel Hafeet Road in Al Ain</b>
<b>Location:</b>	<b>Al Ain, United Arab Emirates</b>
<b>Client:</b>	<b>Al Ain Municipality</b>
<b>Consultant:</b>	<b>Ital-consult</b>
<b>Contract Value:</b>	<b>18.9 Million USD</b>

Rock scaling on areas of rock cut slopes along the road including removing loose rock from the slopes until a solid rock area is established. Cut back existing unstable rock cut slopes at top of the high areas to an agreed flatter slopes to establish solid and safe cut face. Various kind of repair and rehabilitation work for failures on the existing asphaltic pavement. Repair, reinstatement/replacement of existing footpath including new as necessary. Repair, reinstatement of existing concrete crash barrier and guard rail. Upgrading and improvement the existing storm water drainage. Repair and reinstatement of damaged road slopes including the existing protection works. Repair and reinstatement of pavement and side slopes resulting from provision of the existing and proposed services of other departments. Necessary traffic study with conclusion and recommendation for high quality service and safety on the road.

# Projects in Progress

**Project:** Construction of Boqaata Dam and Lake  
**Location:** Boqaata, Lebanon  
**Client:** Ministry of Power and Water  
**Consultant:** Gicome – Antoine Salamé & Associates and Stucky – Consultant Engineers (Switzerland)

Structural works: stairs, parapets, concrete barriers, small retaining walls and fences.

The growing needs in drinking water in Metn region currently constitute a permanent worry to the Metn Office of Water. Indeed, deficit in water in the region reached more than 50% of water needs estimated 54000 m<sup>3</sup>/day, and breaking the economic development of the region.

This region is not rich in groundwater, but several karstic sources take birth in the high mountains with highest water level in wet period and lowest water level in dry period.

These abundant waters in winter are not currently exploited. The search of new water resources for Metn region during the period of low water level consists in accumulating surplus waters behind dam.

# COMPLETED PROJECTS





## Completed Projects

**Project:** Qurum to Sarooj Road Improvements  
**Location:** Muscat, Sultanate of Oman  
**Client:** Muscat Municipality  
**Consultant:** WS Atkins International & Co.

This project consists particularly of the construction of two bridges over these lagoons. Due to the importance of the beach and mangroves area, construction activity tried to avoid pollution. As for the mangroves survival, the tidal flow is maintained by culverting the access across the tidal water.

### Description of works:

- Construction of two bridges with respectively 30m and 150m of length with precast post-tensioned concrete beams and cast-in-situ concrete piles with 600 mm of diameter and 6000 m of total length in lagoon.
- Road works including asphaltting, road lighting, concrete and steel safety barriers, paving and curbing, road signing and marking.
- Rock protection against coastal erosion & effects of sea level rise using multiple rock sizes.



# Projects in Progress

**Project:** Roads in Different Areas in Emirates (Tawaian to Dibba)  
**Location:** Fujairah, United Arab Emirates  
**Client:** Ministry of Public Works  
**Consultant:** Halcrow  
**Contract Value:**

The total length of the Tawaian to Dibba Highway is about 30 km. Thirty slopes along the highway are identified as requiring slope stabilization works.

## Description of works:

- Excavation and clearance of debris.
- Installation of rock bolts, rock dowels, wire mesh & shot Crete
- Construction of concrete buttresses. & barriers at slope toe.
- Installation of raking drains.
- Temporary traffic management and temporary road diversions.
- Reinstatement of road pavement, ditches & road facilities.



## Completed Projects

**Project:** Bahrain City Centre Interchange –  
Grade Separated Junction  
**Location:** Manama, Kingdom of Bahrain  
**Client:** Ministry of Works & Housing  
**Consultant:** Parsons – Global Services Limited

### Description of works:

- Traffic diversion on main highways.
- Construction of a cast-in-situ double-cell box girder bridge structure with a total length of 195 m and 800 mm diameter piles.
- Construction of new roads including asphaltting, street lighting, road signing and marking, water drainage, and landscaping.



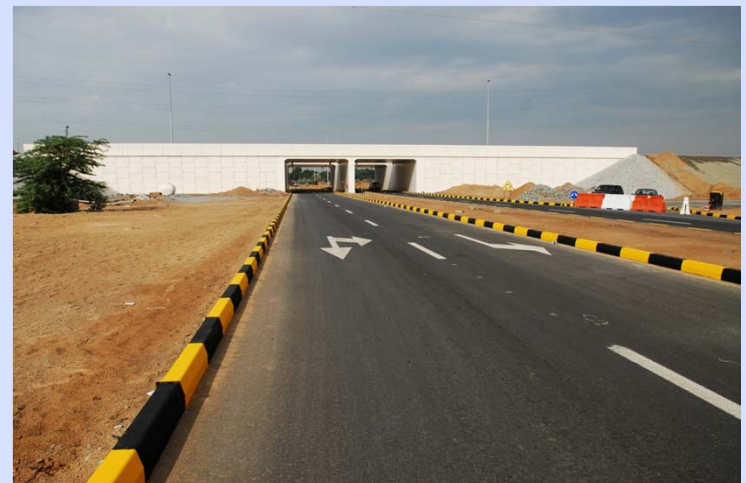


# Completed Projects

**Project:** Construction of the Outer Bypass from Umm-Al-Quwain-Dhaid Road to Sajaa-Khawaneej Rd  
**Location:** Sharjah, United Arab Emirates  
**Client:** Ministry of Public Works  
**Consultant:** Dorsh Consult

## Description of works:

- Construction of 16 km of new dual carriage way.
- Construction of 8 km of new accommodation roads.
- Construction of 3 bridge structures.
- Construction of 6 underpass structures.
- Construction of retaining walls.
- Water drainage, street lighting and landscaping.
- Diversion of existing public services and utilities.





# Completed Projects

**Project:** Rehabilitation of Silos at Beirut Port  
**Location:** Beirut, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Khatib & Alami

The works involve the rehabilitation of forty eight 50 m high silos with 8.5 m diameter and include the repair of various types of cracks, deteriorated concrete, and concrete protection from environmental factors.

## Description of works:

- Sandblasting and water jetting.
- Grinding cracks out to remove faulty materials.
- Grinding concrete surface.
- Painting the structure.
- Installation of galvanized anchor bolts with epoxy grout.
- Installation of fiber reinforced dry mix trowel finish shot Crete.
- Grinding deteriorated concrete and steel bars.
- Installation of steel bars and polymer modified concrete.



# Completed Projects

**Project:** Rehabilitation of Roads & Services in the Southern Suburb Tunnel  
**Haret Hreik – Sands**  
**Location:** Beirut, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Dar Al Handasah – Shair & Partners

Haret Hreik – Sands Tunnel constitutes a major part of an overall drainage system project designed to collect stormwater from Haret Hreik together with its surrounding sectors and discharge in the Mediterranean Sea at Ouzai Sands Beach, below the Ouzai main street. It is considered as one of the most important hydraulic infrastructure projects in Beirut, and it is the longest in Lebanon.



## Completed Projects

**Project:** Upgrading of Hayek and Saloumeh Intersections  
**Location:** Beirut, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Dar Al Handasah – Nazih Taleb & Partners

The works include the upgrading of the intersections at Hayek and Saloumeh Roundabouts through the construction of a permanent cast-in-situ post-tensioned concrete box girder bridge carrying Jisr El-Wati as well as Qalaa eastbound and northbound traffic over the Hayek Roundabout towards Sin El-Fil Boulevard and intersecting the Saloumeh – Dekwane Road. The overall length of the bridge (including embankment and opening) is approximately 560 m, with a 310 m long and 16 deck spans prestressed concrete. The project is executed at road intersections with very heavy traffic.





## Completed Projects

**Project:** Urban Transport Development Project Corridor Improvement Program – Upgrading of Hayek and Saloumeh Intersections

**Location:** Beirut, Lebanon

**Client:** Council for Development and Reconstruction

**Consultant:** Dar Al Handasah – Nazih Taleb & Partners

### Description of works:

- Archaeological investigation.
- Construction of post-tensioned concrete box girder bridge abutments, piers and retaining walls.
- Roads, asphaltting, concrete barriers, curbing and tiling,
- Street lighting, traffic signals
- Road signing and marking, landscaping.
- Utilities and utility relocation.





## Completed Projects

**Project:** Cultural Heritage and Urban Development Project  
Old City – Phase I  
**Location:** Tripoli, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Team/Bitar JV

### Description of works:

- Restoration works have been performed on more than 200 building façades (2,0000 m<sup>2</sup>) within the historic center.
- Interventions involve restoration and enhancements of façades to promote the architectural features of buildings. They also comprise reinforced concrete rehabilitation works, treatment of roofs with waterproofing membrane etc.



## Completed Projects



**Project:** Construction of Zahle Sanitary Landfill  
**Location:** Zahle, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Libanconsult – Ingénieurs Conseils

Located at 10 km from Zahle City, the Zahle Sanitary Landfill is designed for municipal solid waste.

### Description of works:

- Design of the landfill and the sorting unit including concrete works, steel structure works, and sorting mechanical equipment.
- Construction of the landfill including cells, earthworks, access roads and drainage system, clay blanket, geomembrane and geotextile liner system.
- Installation of a leachate collection network system and a leachate pond.
- Construction of a sorting plant and installation of a weighbridge.
- Construction of administration offices and all infrastructure works.



## Completed Projects

**Project:** Al Yas Island Development – Underpass YUP-2  
**Location:** Abu Dhabi, United Arab Emirates  
**Client:** Aldar  
**Consultant:** Halcrow

The project consists of the construction of an underpass with a total length of 537m including retaining walls at the underpass both sides.

### Description of works:

- Construction of a 143m long box-section with a width of 13.9m.
- Construction of two 394m long U-sections with a width of 13.9m.
- Waterproofing membrane, painting works, and wall tiling. Precast concrete side barriers.





## Completed Projects

**Project:** Water Conveyance from Antelias Grotto to Dbayeh Water Station  
**Location:** Antelias, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Kredo – Research & Engineering

Antelias Water Tunnel was a major overall of the water supply system in Greater Beirut

### Description of works:

- Construction of a 1 km long tunnel structure with a horse shoe shape cross section of 8 m<sup>2</sup>. The final finish of the tunnel is made of 30 cm concrete lining.
- Construction 50m long main vertical shaft of 2m Ø in order to access the inner grotto.
- Structural rock excavation.
- Installation of rock bolts & application of shot Crete.





## Completed Projects

**Project:** Construction and Operation of Tripoli Landfill (Phase I)  
**Location:** Tripoli, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Dar Al Handasah – Nazih Taleb & Partners

The Landfill is located in the city of Tripoli in North Lebanon and is designed to receive municipal solid waste from Tripoli Region.

### Description of works:

#### Construction activities

- Earthworks, construction of access roads and service buildings.
- Installation of a liner system (geo-membrane and geotextile).
- Installing, upgrading & extending the landfill flue gas extraction systems with I wells.
- Procurement & installation of biogas system with gas flaring unit.

#### Operation activities

- Planning and programming the operation activities.
- Control of the incoming waste collection trucks at weighbridge.
- Visual inspection of the waste.
- Daily spreading, compaction and cover of incoming wastes.
- Operation of the landfill gas extraction and treatment system.



## Completed Projects

**Project:** Extension of the National Road in Abidjan District  
**Location:** Abidjan, Ivory Coast  
**Client:** Abidjan District Administration  
**Consultant:** Abidjan District Administration

The project consists of the extension of the National Road in Abidjan including road, underpass, and bridge construction.

### Description of works:

- Road works including excavation, asphalt,, curbing and tiling, road signing and marking.
- Construction of a reinforced concrete underpass, with a U-section reinforced concrete retaining walls at the tunnel both ends.
- Construction of three prestressed concrete bridges (320 m, 470 m and 620 m of length, along with 1,000 mm diameter piles with a depth of 18 m.)
- Infrastructure works including potable water, drainage water, irrigation system, telephone networks, electrical works, and landscaping.



## Completed Projects

**Project:** Régions des Atchans  
**Location:** Abidjan, Ivory Coast  
**Client:** Abidjan District Administration  
**Consultant:** Abidjan District Administration

The project consists of the construction of a 23.5 km highway between Songon Agban and Orbaff along with adjacent service roads, three tunnels, and one underpass.

### Description of works:

- Excavation, backfill, sub-base & base course, asphalt, curbs & sidewalks, and marking.
- Construction of three tunnels of 800 m, 735 m and 550 m of length, a width of 15 m, and a maximum height of 9 m each,
- Retaining walls at the tunnels both sides, including excavation in a rocky ground with treatment of cracks by high pressure injection, drainage system, ventilation system, lighting system, reinforced concrete and finishing works.
- Construction of 650 m long underpass having a 220 m long covered part with 17 m width and height of 9 m, along with retaining 215 m long walls at tunnel ends.
- Construction of interchanges including two prestressed concrete bridges with respectively 640 m and 580 m of length, span from 35 m to 40 m and 1,200 mm diameter piles with 18 to 22 m of depth.
- Infrastructure works including potable water supply and water drainage.

## Completed Projects

**Project:** Maritime Institute of Batroun – Rehab & Construction of Annex Building  
**Location:** Batroun, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Ghassan Chaccour Office

The project comprises the Maritime Institute of Batroun rehabilitation works covering a total built-up area of 12,000 m<sup>2</sup>, as well as the construction of a new building with a total built-up area of 1,800 m<sup>2</sup>.

### Description of works:

- Marine works including the construction of a retaining wall and a breakwater sea wall.
- Consolidation and reparation of the existing reinforced concrete structure.
- Plastering, tiling, and other finishing works.
- Repair of plumbing, electrical installations, floor tiles, joinery, & waterproofing.
- Construction of a new building & associated internal & external works.





## Completed Projects

**Project:** Rehabilitation of the Vocational School of Douma  
**Location:** Douma, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Ghassan Chaccour Office

The project includes school rehabilitation works covering a total built-up area of 7,000 m<sup>2</sup>.

### Description of works:

- Concrete repair of the existing structure.
- Sandblasting of the existing stone façades.
- Removal and replacement of the internal and external cement plasters.
- External and internal painting.
- Repair of plumbing, electrical installations, floor tiles, joinery, and waterproofing membrane.
- External works.



## Completed Projects

<b>Project:</b>	<b>Rehabilitation of the School of Bsharri</b>
<b>Location:</b>	<b>Bsharri, Lebanon</b>
<b>Client:</b>	<b>Council for Development and Reconstruction</b>
<b>Consultant:</b>	<b>Raymond Chidiac Office</b>

The project comprises the school rehabilitation works covering a total built-up area of 5,000m<sup>2</sup>, as well as the construction of a new building with a total built-up area of 800 m<sup>2</sup>

### **Description of works:**

- Removal and replacement of internal and external cement plasters.
- External and internal painting.
- Repair of plumbing, electrical installations, floor tiles, and joinery.
- Construction of a new building including all associated works.
- External works.

## Completed Projects

**Project:** Residential Buildings, Industrial & Commercial Centers  
**Location:** Lebanon  
**Client:** Private Sector

These projects consist of the construction of residential, industrial, and commercial buildings.

### Description of works:

- Residential building in Adma with a total built-up area of 3,000 m<sup>2</sup>..
- Residential buildings in Kornet Chehwan with a total built-up area of 14,500 m<sup>2</sup>..
- Residential building in Sahel Alma with 5 blocks and a total built-up area of 12,500 m<sup>2</sup>..
- Residential building in Hazmieh with 7 stories and a total built-up area of 1,500 m<sup>2</sup>.
- Residential building in Awkar : 2 basements and 6 stories and a total built-up area of 2,100 m<sup>2</sup>.





# New Projects

**Project:** Construction of Boqaata Dam and Lake  
**Location:** Boqaata, Lebanon  
**Client:** Ministry of Power and Water  
**Consultant:** Gicome – Antoine Salamé & Associaes and Stucky – Consultant Engineers (Switzerland)

Among the prospected sites in the region, Boqaata Dam, by its location and its characteristics, has a special interest in the accumulation of water.

This project is, indeed, to accumulate a volume of 6 million m<sup>3</sup> of water during winter period, which should be routed during the period of low water level to Bhaness tanks after treatment, and then distributed to Metn region located below 1000 m level.

During the wet period, derived from the Jouaizat source waters should be derived to Bhaness tanks and distributed at different locations of Metn region.

Boqaata Dam is a project which complements the master plan for the distribution of water derived from Nabeh Jouaizat to Metn region.

## Completed Projects

<b>Project:</b>	<b>Yammouneh Irrigation Scheme</b>
<b>Location:</b>	<b>Baalbek, Lebanon</b>
<b>Client:</b>	<b>Council for Development and Reconstruction</b>
<b>Consultant:</b>	<b>Dar Al Handasah – Nazih Taleb &amp; Partners</b>

The project includes the rehabilitation, upgrading, and construction of an irrigation scheme for the area of Yammouneh and the surrounding villages.

### **Description of works:**

- Construction of a 1,200 m long reinforced concrete chute and a cross section of 6 m<sup>2</sup>, and four reinforced concrete distributors.
- Construction of a gravel trap at Yammouneh springs with gabion protection.
- Rehabilitation of the 40 km existing main canal.
- Construction of a reinforced concrete secondary canal system, a 150 km cast-in-place and 80 km precast units.
- Construction of a water park near Chlifa Distributor.

## Completed Projects

<b>Project:</b>	<b>Additional Works on Danniyeh Irrigation Scheme</b>
<b>Location:</b>	<b>Danniyeh, Lebanon</b>
<b>Client:</b>	<b>Council for Development and Reconstruction</b>
<b>Consultant:</b>	<b>Dar Al Handasah – Nazih Taleb &amp; Partners</b>

The project comprises the rehabilitation and the reconstruction of 50 km of existing irrigation network canals in the Danniyeh region.

### **Description of works:**

- Construction of two reinforced concrete distributors.
- Rehabilitation of the 20 km long existing main canals.
- Rehabilitation of the 30 km long existing secondary canals.
- Construction of 3 km long dry stone walls.



## Completed Projects

<b>Project:</b>	<b>Water Supply Works in North Area, Lot 2</b>
<b>Location:</b>	<b>Lebanon</b>
<b>Client:</b>	<b>Council for Development and Reconstruction</b>
<b>Consultant:</b>	<b>Gibb-KA-KCIC</b>

The project includes the upgrading of the northern regions water system.

### **Description of works:**

- Construction of Bourj Abou Haidar Water Pumping Station including supplying and installation of pumps with associated electromechanical works.
- Construction of Dbayeh Water Pumping Station including pipe works and valves with associated electromechanical works.
- Construction of Achrafieh Pumping Station including pipe works and valves with associated electromechanical works.
- Drilling and equipping 2 wells in Zaatreh and Zoghzoghi.
- Construction of transformer room, drilling and equipping 3 wells, and laying of 2 km pipeline connecting to the Damour Reservoir.
- Pipe work connections in Hamra.

## Completed Projects

**Project:** Mejdlayah Landfill Fires Control  
**Location:** Zgharta, Lebanon  
**Client:** Council for Development and Reconstruction  
**Consultant:** Council for Development and Reconstruction

The project consists of controlling and stopping the fire in the landfill of Mejdlayah.

### Description of works:

- Mobilization of emergency resources (manpower and heavy mobile equipment).
- Execution of trenches to isolate the fire zone.
- Extinguishing on-going fires.
- Shaping and leveling landfill.
- Installation of final earth cover fills.

## Completed Projects

**Project:** Construction of Mrah Sreij - Bakhoun - Taran Road – Rehabilitation of Taran - Hazmieh Bridge Road

**Location:** Danniyeh, Lebanon

**Client:** Council for Development and Reconstruction

**Consultant:** Conser Consulting Engineers

The works include the construction of the Mrah-Sreij-Bakhoun-Taran Road and the rehabilitation of the Taran-Hazmieh Bridge Road in the North Lebanon Region.

### Description of works:

- Construction of the 100 m long Nahr Al Bared Bridge with 10 m of width, along with 5 spans of 20 m each, and 24.5 m pier maximum height.
- Construction of Mrah Sreij overpass with one span of 20.5 m and a voided slab bridge deck with 7.3 m of width.
- Construction of a 10 m long and 8.5 m high Haklit Underpass with 12.1 m of width, along with a 5 m thick soil cover.





# Completed Projects

<b>Project:</b>	<b>Kesrouane Coastal Area Water Supply Project – Highway Section</b>
<b>Location:</b>	<b>Kesrouane, Lebanon</b>
<b>Client:</b>	<b>Council for Development and Reconstruction</b>
<b>Consultant:</b>	<b>Dar Al Handasah – Nazih Taleb &amp; Partners</b>

The project includes all works required for the construction of 8 km long GRP pipes with 1,000 mm of diameter along Nahr Ibrahim – Tabarja Highway.

## **Description of works:**

- Road diversion and safety measures.
- Trench excavation and backfilling with 5 m of width and 3 m of depth, and pipe laying with all the associated accessories.
- Road reinstatement.

## Completed Projects

**Project:** Reconstruction of Akkar Bridges  
**Location:** Akkar, Lebanon  
**Client:** Ministry of Transport & Council for Development & CDR  
**Consultant:** Dar Al Handasah – Nazih Taleb & Partners

The project consists of the reconstruction of six bridges in North Lebanon. These bridges have been either seriously damaged or completely destroyed by the Israeli attacks during the July 2006 War; they are located in different regions of Akkar: Mazraet Baldeh, Adweh, Halba, Arka and Kuwaykhat.

### Description of works:

- Demolition of damaged concrete bridge structures.
- Reconstruction of four cast-in-situ reinforced concrete bridges and two precast pre-stressed concrete girder bridges including all associated works.
- Reinstatement of damaged existing utilities and roads.



# Certificates

Certificate EG08/01277 QA

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The management system of

**LAVAJET**

P. O. Box: 64542, Al Ain City, Abu Dhabi, UAE.



has been assessed and certified as meeting the requirements of

**ISO 9001:2000**

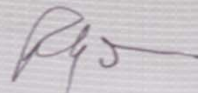
For the following activities

**"Waste collection, streets sweeping & cleaning services"**

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2000 requirements may be obtained by consulting the organization

This certificate is valid from 31<sup>st</sup> March 2008 until 13<sup>th</sup> March 2011  
Issue 1. Certified since March 2008

Authorized by



SGS United Kingdom Ltd - Systems & Services Certification  
Rosemoor Business Park, Ebbw Vale, Gwent, NP23 5JN, UK  
t +44 (0)151 350-6666 f +44 (0)151 350-6600 www.sgs.com

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Certificate CH09/1951

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The management system of

**LAVAJET**

P.O. Box: 64542, Al Ain City, Abu Dhabi, UAE.

has been assessed and certified as meeting the requirements of

**OHSAS 18001:2007**

For the following activities

**Waste Collection, Streets Sweeping & Cleaning Services**

This certificate is valid from 24<sup>th</sup> December 2009 until 24<sup>th</sup> December 2012  
and remains valid subject to satisfactory surveillance audits.  
Recertification audit due before 11<sup>th</sup> October 2012  
Issue 1. Certified since 24<sup>th</sup> December 2009.



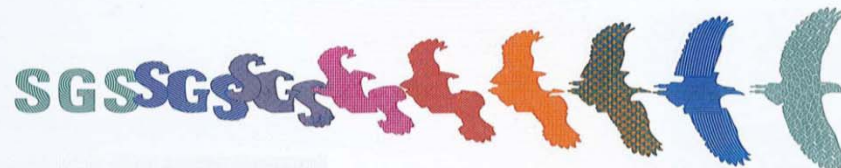
Authorised by



Accreditation No. 017

SGS Gulf Ltd. Systems & Services Certification  
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Certificate AE09/2036

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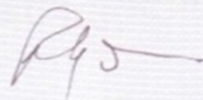
**ISO 14001:2004**

For the following activities

**Waste Collection, Streets Sweeping & Cleaning Services**

This certificate is valid from 04<sup>th</sup> March 2009 until 04<sup>th</sup> March 2012 and remains valid subject to satisfactory surveillance audits.  
Re certification audit due before 20<sup>th</sup> January 2012  
Issue 1. Certified since 04<sup>th</sup> March 2009

Authorised by



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### CERTIFICATE OF APPROVAL

This is to certify that the Quality Management System of:

**BATCO**

**"Badawi Azour Trading and Contracting S.A.R.L."**

**Beirut**

**Lebanon**

has been approved by Lloyd's Register Quality Assurance  
to the following Quality Management System Standards:

**BS EN ISO 9001:2008**

**ISO 9001:2008**

The Quality Management System is applicable to:

**Construction Management**

Approval  
Certificate No: MEA6006772

Original Approval: 22 November 2009

Current Certificate: 22 November 2009

Certificate Expiry: 21 November 2012

*K. Hidayat*

Issued by: Lloyd's Register EMEA - Jordan for and on  
behalf of Lloyd's Register Quality Assurance Limited



This document is subject to the provision on the reverse  
71 Fenchurch Street, London EC3M 4BS United Kingdom. Registration number 1879370  
This approval is carried out in accordance with the LRQA assessment and certification procedures and monitored by LRQA.  
The use of the UKAS Accreditation Mark indicates Accreditation in respect of those activities covered by the Accreditation Certificate Number 001  
Marked Version 12