

ROAD SAFETY
AUDITS

ROAD SAFETY
ASSESSMENTS

TRAFFIC IMPACT
STUDIES

TRAFFIC
DIVERSION
PLANS

TEMPORARY
TRAFFIC
MANAGEMENT

TRAFFIC
MODELLING

TRAFFIC
SIGNAL DESIGN

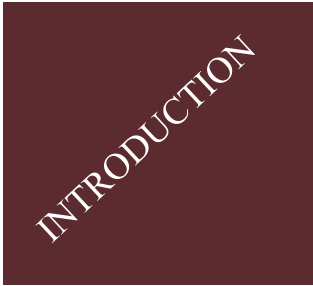
ROAD DESIGN



QATAR

Company Information Pack





A Brief History

Duffy Chartered Engineers (DCE) was formed in Ireland in 1992, gradually expanding to become the successful multi-disciplinary Engineering Consultancy it is today.

In 2009, DCE opened a Registered Office in Abu Dhabi. Having consolidated our position in the UAE, and as part of our policy of continual expansion in the Middle East, DCE opened an office in Doha, Qatar in 2011. Our Middle East offices trade as Duffy Consulting Engineers.

DCE has successfully completed many projects across Ireland, the UK, the UAE and Qatar. We believe that our success is as a direct result of the quality of service we provide. This opinion is supported by the fact that the majority of our current projects are return orders, originating from satisfied clients.



Our Services

DCE Qatar provides traffic engineering, civil engineering and road safety consultancy services, working closely with the other members of the design team to provide a cost effective design solution to the Client's requirements. We are happy to provide these services individually or collectively as a "one-stop shop" for our clients, where required.

Client Focus

First and foremost DCE is a client-focused organisation. Providing a high quality service to our Clients is key to our success and growth as a company.

We are committed to meeting our Client's needs and requirements promptly and efficiently. We believe our integrity and professionalism has been vital in maintaining good Client relationships. This is supported by the fact that much of our business is from repeat customers.





Project Delivery

DCE has a track record of delivering projects on time and within budget. All projects are managed and overseen by senior staff members to ensure they are carried out efficiently.

Effective time management ensures each project is delivered in a timely manner. Good organisation and planning minimises the risk of any delays.

We believe that we are competitively priced in each marketplace and offer excellent rates.



Flexibility

Our flexibility as a company has allowed us to adapt well and remain competitive in an ever changing business environment.

Our entrance into new markets and geographic regions has been successful because of our ability to adjust and integrate into new surroundings.

Because of our modest size and management structure, key decisions can be made quickly without any delay to the project.

Niche Markets

One of the success stories of DCE is our ability to identify niche markets and enter them successfully. Early examples of this included traffic and transportation engineering and road safety auditing. This ability to adapt into different engineering disciplines has led to the development of a well-trained, highly flexible and highly motivated team of employees.





Quality

DCE is fully aware of the importance of providing a consistently high standard of service. This quality is based upon systematic checking procedures and document control at all key stages of the project.

DCE complies with the principles of ISO 9001:2008. Our training and development procedures were benchmarked against best industry practice and found to be of a very high standard.



Information Technology

DCE has always embraced the most modern technology in the form of computer hardware and software with a view to providing timely and efficient engineering design services. We utilise state of the art design and detailing software complimented by an extensive suite of bespoke design spreadsheets.

All software is fully supported, licensed and updated regularly. DCE operates a policy of actively reviewing, updating and expanding our software library to suit current and future needs. Employees are regularly sent on specialist training courses to enhance their technical abilities with the use of computers and software.

Safety

DCE implements a policy to comply fully with the Safety Health and Welfare at Work (Construction) Regulations 2006 at all stages of the design. DCE also engages the services of professional health and safety consultants, as necessary. Where required, risk assessments are produced at the detailed design stage for inclusion in the Preliminary Health & Safety Plan.





RSA Accreditation

In keeping with our policy of establishing ourselves as experts in Traffic & Transportation Engineering, DCE has become accredited to carry out third party Road Safety Audits. We have qualified RSA Team Leaders and Team Members in accordance with the requirements of the UK RSA Guidelines, DMRB HD 19/03. Our staff have also obtained RSA Certificates of Competence in accordance with the requirements of EC Directive 2008/96/EC). Our staff also receive regular training to ensure that they are aware of the latest road safety concepts and initiatives.



Approved Road Safety Auditors

In Qatar, our staff are approved Road Safety Auditors (including Team Leaders and Team Members) with Ashghal and MOTC. We have completed RSA's as part of the Local Roads and Drainage Programme and the Qatar Expressway programme. We also conduct RSA's for various clients as part of the TIS procedure in Doha. Our staff have also conducted multiple Road Safety Assessments which is comparative assessment of the road safety implications of different scheme options.

DCE's experienced staff are capable of carrying out a large amount of RSA work to a high standard and in a timely fashion.



Qatar RSA Stages

DCE are qualified to carry out third party Road Safety Audits at each of the key stages:

Stage 1	Concept Design
Stage 2	Preliminary Design
Stage 3	Detailed Design
Stage 4	Pre-Opening



RSA (continued)



Qatar

In Qatar, we have undertaken RSA's for Ashghal and MOTC.

We have local knowledge and experience, based on recent experience, of Ashghal / KBR's demanding requirements for the road safety auditing of expressway projects. We have also conducted several RSA's with Ashghal / Parsons Brinkerhoff as part of the Contract 2 Local Roads and Drainage Programme. Our local presence allows us to attend meetings and site visits at short notice.

These factors combine to result in a considerable saving in program time when compared with our competitors.

UAE

In the UAE, we are pre-qualified with the Abu Dhabi and Al Ain Municipalities to carry out Road Safety Audits.

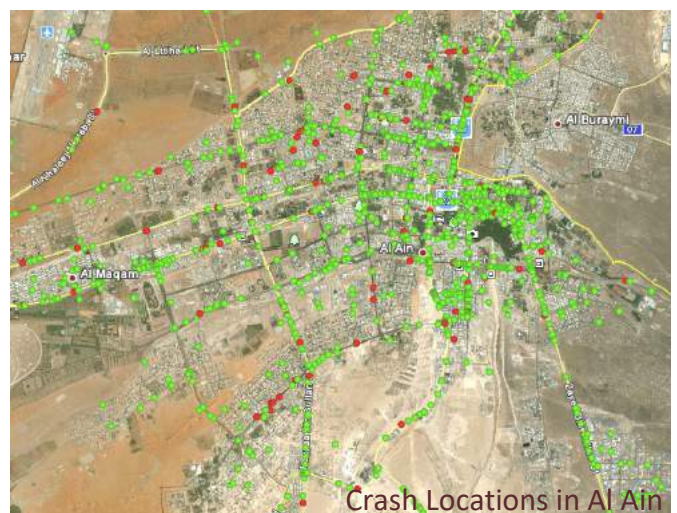
We have also undertaken Road Safety Audits on Department of Transport projects, and were responsible for delivering the Strategic Safety Plan for the Al Ain Surface Transport Master Plan.

Bahrain

In the Bahrain, we are pre-qualified with the Ministry of Public works and Ministry of Housing to carry out Road Safety Audits. DCE have undertaken multiple large scale audits in Bahrain to date.

KSA

In KSA, DCE have completed Audits for large scale residential developments as well as audits for the Riyadh Metro.



Crash Locations in Al Ain



Traffic Diversion Plans

With more and more cars on Doha's roads every month it is important to keep traffic flowing. DCE specialise in helping contractors develop the optimum and safe Traffic Diversion Plans (TDP's) to allow them to carry out their work, while also keeping the traffic flowing in the city. The plans are developed with reference to the most recent WZTMG 1.2.

We have completed TDP's as part of the Local Roads and Drainage Programme and the Qatar Expressway programme. We have also been involved in a number of projects in the UAE.

DCE's extensive road safety experience, traffic engineering capabilities and civil design experience means that we are ideally suited to develop these proposals in a quick and professional manner that will be to the standard required by the relevant authorities.



Temporary Traffic Management

Temporary Traffic Management (TTM) is utilised to guide all road users through a work zone whilst ensuring road safety and movement of traffic is managed. DCE have provided (TTM) Plans on numerous roads throughout Qatar. Where road layouts are being changed or upgraded, DCE can put a plan in place to allow for the safe movement of vehicles and non-motorised users through the proposed scheme.

Our TTM's are prepared to the standards of Ashghal's Road Safety Audit Guidelines and Procedures as well as the Work Zone Traffic Management Guidelines.





Traffic Impact Studies (TIS)

Recent years have seen a marked increase in planning authority requirements for Traffic Impact Studies for medium and large sized projects. DCE has identified Traffic & Transportation Engineering as a key niche market and has endeavoured to become a specialist in this area.

As a result we have successfully completed numerous large scale TIS in Ireland, the UK, the UAE and Qatar. DCE is pre-qualified with Ministry of Transport and Communications to carry out such studies in Qatar.



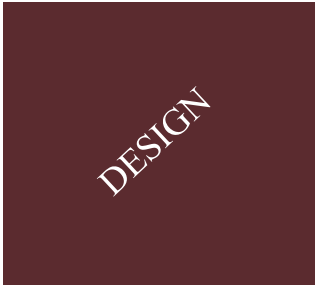
Software

To meet the requirements of its existing and potential clients, DCE has invested heavily in training and software geared towards Transportation Impact Studies (TIS). As part of a TIS, DCE can perform analysis of priority, signalized and roundabout junctions using TRL packages OSCADY, PICADY, ARCADY, TRANSYT as well as TRICS and AutoTrack. In Qatar we use SIDRA, SYNCHRO, HCS+ and VISSIM for our static analysis and micro-simulation modelling. We also use VISUM software, which allows interaction with the Qatar Traffic Model.

Traffic Modelling

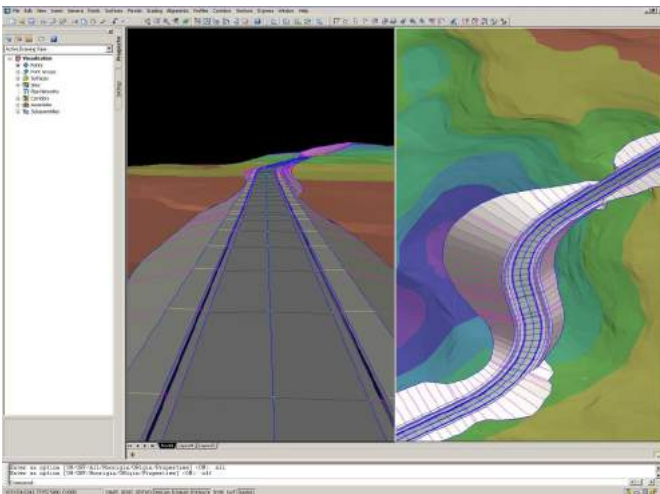
DCE also provides traffic modelling and analysis services for isolated junctions and/or networks, as per client requirements for unique situations. Our services can be tailored from one simple junction to a network of multiple junctions including interchanges.





Expertise

DCE has expertise in a wide range of civil and infrastructure projects including the design of roads and traffic signals for multiple projects in Qatar, as well as Ireland and the UAE.



3-D Modelling & Road Design

A 3-dimensional model of any site can be created using AutoCAD Civil 3-D. This allows the cost effective development of the project site, taking the existing contours of the site into account. It allows us to accurately develop the geometric road design and assists quantity surveyors by providing earthworks, piped service and pavement quantities.

Traffic Signal Design

DCE have completed several traffic signal design projects in Qatar. As part of the traffic signal design process, cabling details, ducting details, traffic pole locations, loop detector locations and signal phasing are all catered for. DCE has a team of experienced traffic engineering design that has worked small and large projects in urban and rural settings.





Successful Project Delivery

DCE has successfully worked on a number of projects in Qatar, the UAE, Bahrain and KSA, a sample of which are listed below. Further details on these and many other projects are available on request.

Road & Infrastructure Design

- 60 Residential Villas in Bida Al Mutawah, Al Gharbia, Abu Dhabi 2009
- Police Officer's Accommodation, Al Ain, Madinat Zayed & Mussafah, Abu Dhabi 2010
- Workers Hospital, (Internal Road Layout) Qatar 2015
- Barzan Military Hospital (Internal Road Layout), Qatar 2015
- Commercial Development, Access Roads, Qatar 2016

Road Safety Audits (Qatar)

- Stage 1: Assessment for Package 27, Doha 2015
- Stage 3&4: Khalifa Avenue 2015
- Stage 1: Al Wakra Main Road 2015
- Stage 2,3 &4: New Orbital Highway Contracts 1, 2,3 & 4 2015-2018
- Stage 1&2: Roads surrounding Al Bayt Stadium, Al Khor 2016
- Stage 3: Al Wakrah Bypass 2016
- Stage 2&3: Rawdat Rashid Interchange 2016
- Stage 1: Al Thumama Stadium, Doha 2016
- Stage 4: Lusail Expressway 2017
- Stage 1: Qatar Pedestrian Crossing Master Plan 2018
- Stage 3&4: People Mover System, Education City 2018
- Stage 1: Khalifa Stadium, Doha 2018
- Stage 1: Al Wakrah Stadium, Al Wakrah 2018
- Stage 3: Pedestrian Bridge, Al Mater Street 2018

Road Safety Audits (Bahrain)

- Stage 4: Al Madina Al Shamalas Islands 2018
- Stage 2&3: Salmabad Development 2018
- Stage 4: Diyar Homes Phase 2 2018
- Stage 2: Madinat Khalifa 2018
- Stage 3: Manama Beach Front 2018

Road Safety Audits (KSA)

- Stage 3: Waad Al Shamal City, Turaif 2014
- Stage 2&3: Riyadh Metro Project, Riyadh 2016

Road Safety Audits (UAE)

- Stage 2&3: Yas Village, Abu Dhabi 2018
- Stage 2&3: Street 12 in Khalifa City A, Abu Dhabi 2018
- Stage 2: External Roads and Entrances for Al Ain Hospital, Al Ain 2018



Traffic & Transportation Engineering (Qatar)

• SECP-Concourse Link, Education City (Pedestrian Modelling)	2014
• Al Khor Residential Development, Al Khor, Qatar (TIS)	2014
• Um Salal School, Um Salal, Qatar (TIS)	2015
• Fareej Commercial Building, Doha, Qatar (TIS)	2015
• Al Wakrah Souq, Al Wakrah, Qatar (TIS)	2016
• Souq Waqif Car Park, Doha, Qatar (TIS)	2016
• North Canal Crossing (Traffic Modeling)	2016
• SIDRA Medical Research Centre, Education City, Qatar (TIS)	2016
• Hypermarket, Um Salal (TIS)	2017
• FEED Zekreet Phase 2 (Traffic Modelling)	2017
• Al Azaab Markets (TIS)	2018
• Mercedes-Benz Service Centre, Industrial Area (TIS)	2018

Traffic & Transportation Engineering (KSA)

• Waad Al Shamal City (TIS)	2014
• The Avenues, Riyadh (TIS)	2018

Traffic & Transportation Engineering (UAE)

• ADNOC Business Centre, Khalidiyah (TIS)	2018
• Abu Dhabi Club for Special Needs, Olympic Swimming Pool, Abu Dhabi (TIS)	2018
• Wahat Al Zaweya, Al Ain (TIS)	2018

Traffic Signal Design (Qatar)

• Al Khor Commercial Street	2013
• N20 Interchange, Al Shamal Road	2016
• Entertainment City, Lusail	2017

Traffic Diversion Plans & Temporary Traffic Management (Qatar)

• Local Roads and Drainage Scheme in Al Aziziya Area, Doha	2014
• Doha Grand Park (Al Bidda Park), Doha	2014
• New Orbital Expressway, Doha	2015
• Lusail Expressway, Doha	2015
• Local Roads and Drainage Scheme in Industrial Area Package 6, Doha	2015
• Upgrade of North Road Corridor P059, Al Shamal Road	2015
• Khalifa Stadium Energy Centre Project, Doha, Qatar	2016
• Al Mutawakil & Al Tawwash	2016
• Junction 1 on Al Shamal Road/TTR	2017



Qatar

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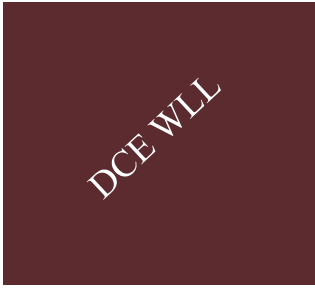
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Qatar Trade Name

Duffy Roads Consulting



Commercial Licence Number

Qatar Trade Licence No.: 88308

