



elssGroup

OCEANARIUM & AQUARIUM SPECIALISTS

PUSHING THE BOUNDARIES OF INNOVATION...

SPECIALIST DESIGN | PROJECT MANAGEMENT | LSS AUTOMATION

LSS EQUIPMENT SUPPLY | DATA LOGGING | COMMISSIONING & SUPPORT





Introduction

It is with the greatest of pleasure that we introduce our company, ELSS to you...

ELSS Engineering Ltd was established in the UK in 2005. Since its inception, the ELSS Group has expanded in size, scope of services and products provided. With offices now located in the UK, Middle East, Asia & the USA, we are strategically placed to provide our clients with the high level of service we strive to deliver.

We pride ourselves as being a 'Client Driven' company, therefore it is no surprise that we continue to see repeat business. Many of the customers from the early days in 2005 still use our services almost fourteen years later.

Please visit **www.elssgroup.com** and see how the ELSS Group can greatly enhance your project needs.

elssGroup

Pushing the Boundaries of Innovation



The ELSS Group are an extremely talented group of professionals deriving from Mechanical, Electrical, Biological and Aquarium Construction industries.

We have a plethora of experience delivering Aquatic projects globally. With an extensive list of services ranging from Life Support Design, Install, Commissioning, through to complete Turnkey Packages, inclusive of Fish and Animal stocking along with Operations, we have the in-house capability to successfully take any project from initial concept through to the finished article.

Examples of our work and services can be found in virtually in all corners of the globe. We are extremely proud to have served our clients in six of the Earths Continents. We truly understand the roles required when working with different nationalities and cultures, and the care required when designing projects for live Animals.

Our team is truly international, and as with our clients, most have been with us from 2005.





Capability Statement

ELSS are fully capable and insured to provide the following services:

Specialist Design and Consultancy:

- Concept Design Packages
- LSS Design & Engineering
- Equipment Specification & Selections
- Full Detailed Design & Tender Packages

Turnkey Projects including:

- LSS Design & Installation
- Exhibit Lighting Design & Installation
- Waterproofing, Rockwork & Theming
- Acrylic Design & Installation

Aquarium Operations including:

- Fish Supply and introduction
- Daily Animal Husbandry
- LSS Operations & Servicing
- Remote Support





A note to our clients

The opportunity to participate in shaping the character of your projects captures the imagination not only of our firm's leadership, but our entire organization. We regard all projects with such importance that it is already clear to us that good will not be good enough. In a word, we believe your project needs to be GREAT. And so we begin our reflection on the challenges of these assignments.

The most important philosophy we have is to 'Lead not Follow'. With the proliferation of marine parks and aquariums globally, numerous of which we have contributed to, it is essential that what we develop 'stands out' from all the others in the marketplace. Because of our vast experience, we can confidently take these projects to levels of innovation that will make the attraction a 'must see' destination and experience for tourists and visitors alike.

We know many of the most important decisions are made in the beginning, which is one of the reasons great master planning and conceptual design thinking is so critical to the successful translation of your ideas into a functioning reality. But we also fully recognize that great work can only be done by a great team. The team at ELSS have accumulated a plethora of experience over the years that at ease will take your initial concept ideas, however basic they may be, and develop them into a world class completed attraction

Past ELSS Projects

- **Orca Ocean** - Loro Parque - Tenerife - Spain - July 2005
- **Sealife Loch Lomond Shores Aquarium** - Scotland - August 2005
- **Scarborough University Research Lab** - UK - August 2005
- **Mardan Palace Hotel Aquariums** - Antalya - Turkey - July 2006
- **Siam Park** - Tenerife - Spain - January 2007
- **Crocosauros Cove** - Darwin - Australia - January 2008
- **Sarum Chase (Private Aquarium)** - London - UK - July 2008
- **Istanbul Aquarium Complex** - Turkey - July 2008
- **Private Residence** - Baku - Azerbaijan - July 2008
- **Penguin Exhibit** - Melbourne Aquarium - Australia - August 2008
- **Bluereef Aquarium** - Bristol - England - December 2008
- **Grand Aquarium** - Hong Kong Ocean Park - Hong Kong - March 2009
- **Macau Casino** - Jellyfish Automation System - China - April 2009
- **Tinnakilly Water Treatment Plant** - Wicklow - Ireland - May 2009
- **Melbourne Childrens Hospital Aquarium** - Australia - May 2009
- **Morocco Mall Aquarium** - Casablanca Morocco - August 2009
- **Sealife Centre** - Blankenberge - Belgium - September 2009
- **St Barthelemy** - French Caribbean - October 2009
- **Beach House** - Kuwait - February 2010
- **Sealife Chessington** - UK - February 2010
- **Den Bla Aquarium** - Copenhagen - Denmark - December 2010
- **Private Residence Aquarium** - Moscow - Russia - January 2011
- **Tbilisi Business Centre Aquariums** - Georgia - October 2012
- **Oceanarium & Water Theme Park** - India - November 2012
- **Sambill Mall Aquariums** - Dominican Republic - December 2012
- **Resorts World Sentosa** - Singapore - October 2013



- **Chengdu Aquarium** - China - December 2013
- **Sealife Minnesota** - USA - December 2013
- **Chester Zoo Islands Project** - UK - April 2014
- **Acquario Cera** - Fortaleza Brazil - April 2014
- **Malmo Aquarium** - Sweden - May 2014
- **Dubai Science Museum Project** - Middle East - October 2014
- **Blue Planet Aquarium** - Ellesmere Port - UK - November 2014
- **Loughs Agency** - Derry - Northern Ireland - December 2014
- **Living Coasts** - Torquay Devon - UK - March 2015
- **Anglesey Sea Zoo** - Wales - UK - August 2015
- **Sea Life Chan Fang Ocean World** - Shanghai - China - October 2015
- **Maui Ocean Centre** - Hawaii - December 2015
- **Resorts World Sentosa** - Singapore - China - January 2016

- **Morocco Mall Aquarium** - Casablanca - North Africa - January 2016
- **Sea Life Melbourne Aquarium** - Australia - January 2016
- **Sea Life California** - USA - January 2016
- **Penguinarium** - Mall of Egypt - Cairo - Egypt - April 2016
- **Penguinarium** - Mall of Oman - Muscat - Oman - April 2016
- **Bali Safari & Marine Park** - Bali - Indonesia - 2017
- **Mall of Dilmunia** - Aquarium Kingdom of Bahrain - 2017
- **Sololaki Rise Cylinder Aquarium** - Tbilisi - Georgia - 2017
- **Jakarta Aquarium** - Indonesia - 2017
- **Penguinarium** - Mall of Saudi - 2017
- **Aquarium** - Marriot Hotel - 2017
- **Aquarium of Mauritius** - Port Louis - Mauritius - 2018
- **Sealion Exhibit** - Belgium - 2018





Mall of Dilmunia

Aquarium Kingdom of Bahrain - 2017

- LSS Design, Supply, Install & Commission
- Aquarium and Holding Tanks Waterproofing
- Rockwork, Theming, Corals Design, supply & Installation
- Specialist Exhibit Lighting Design, Supply, Installation & Commissioning
- Complete Fish Supply
- 5 Years Operations



Mall of Egypt Penguinarium

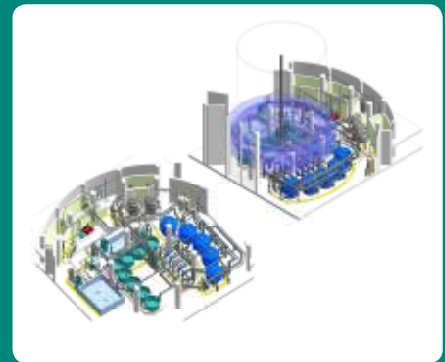
Cairo, Egypt - 2016

- LSS Design, Supply, Install & Commission
- Aquarium and Holding Tanks Waterproofing
- Acrylic Design, Supply & Installation

Sololaki Rise Cylinder Aquarium

Tbilisi, Georgia - 2017

- 12m Diameter by 12m High Cylinder Aquarium
- LSS Design, Supply, Install & Commission
- LSS Automation Design, Manufacturing, Supply & Commissioning
- Project Management



Bali Safari & Marine Park

Bali, Indonesia - 2017

- LSS Automation & Electrical Design Package
- Aquarium and Holding Tanks Waterproofing
- LSS Automation Design, Manufacturing, Supply & Commissioning
- On-Site Electrical Installation and Training



Mall of Oman Penguinarium

Muscat, Oman - 2018

- LSS Design, Supply, Install & Commission
- Aquarium and Holding Tanks Waterproofing
- Acrylic Design, Supply & Installation



Sealion Exhibit

Belgium - 2018

- LSS Design, Supply, Install & Commission
- Project Management
- Training & Handover



Aquarium of Mauritius

Port Louis, Mauritius - 2018

- LSS Design, Supply, Install & Commission for several exhibits
- LSS Automation Design, Manufacturing, Supply & Commissioning



Tbilis Aquarium

Prime Minister Residence, Georgia - 2013

- LSS Automation & Electrical Design Package
- Aquarium and Holding Tanks Waterproofing
- LSS Automation Design, Manufacturing, Supply & Commissioning
- On-Site Electrical Installation and Training

Case Study

Mardan Palace Aquariums, Antalya - Turkey



ELSS was contracted as the main LSS Sub-Contractor for 5 Aquariums, 2 Quarantine Systems and 1 complete Central Services Filtration for this impressive hotel complex in Antalya, Turkey.

Four of these Exhibits, each have a water volume of 400,000ltrs and housing species from the Red Sea, Caribbean, Pacific and Mediterranean Oceans, were designed as part of an exclusive Restaurant.

ELSS produced the complete design LSS package, including 50 sheets of various drawings from single line schematics to full equipment loadings for Structural Engineering purposes. Full Protein Skimming, using our in-house designed and manufactured pressurised Foam Fractionators was utilised for this extremely prestigious project.

ELSS also were awarded the Operations Contact post commissioning, proving once again that we are a lot more than an Aquarium LSS company.

The overall project was completed at a cost of \$1billion and remains the most luxurious hotel in the region

- Full LSS Design
- Supply, Install & Commissioning



Case Study

Bluereef Aquarium, Bristol

ELSS were the lead designers/installers for the exhibits for the Bristol Aquarium. The project involved the conversion of a very complex building that had been purpose designed as Wildwalk, an exhibition experience of the natural world, into an aquarium for Deep Sea Leisure plc.

The complex design of the original building enforced a collective discipline on the whole team to ensure we were able to provide a quality visitor attraction that was also able to be serviced efficiently and to high curatorial standards.

ELSS had to think flexibly in the design stages of the project to ensure we could engineer systems and plant areas that would service the 38 exhibits and meet the client's strict budgetary requirements.

Some plant areas were much smaller than the ideal and through careful engineering; we were able to locate large systems in the spaces available that provide high quality life support to the exhibits. The whole process was undertaken with the minimum of problems, to a high quality, and any delays to the schedule.

- Full LSS Design
- Supply, Install & Commissioning



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