Architectural Lighting For Residential Areas
Lighting design for residential schemes has the greatest personal impact of any architectural lighting design application. This is because of the nature of this type of environment, where the requirement to create everything from ‘open’ to ‘intimate’ settings is combined with a series of functional applications and specific needs which directly affect the user.

In lighting terms there are three human needs that must be satisfied: visual comfort, visual performance and safety. The vision is enhanced by providing a lighting strategy which will address occupant’s needs.

Our approach to lighting design is to always employ, where appropriate, the latest lighting technologies such as light emitting diodes (LEDs), smart intelligent control systems, interactive motion sensors, photocell daylight-linked controls and daylight shading systems. Lighting should be flexible, adapting to people’s changing needs while reducing carbon emissions.

It is important to create a clear lighting structure throughout an apartment interior. The completed lighting scheme should contain combinations of functional, feature and decorative lighting treatments working collectively as one overall installation. This allows the development of a strong conceptual framework, creating a clear visual connection throughout the lighting of the residential interior.
Lighting Structure

The lighting design should aim to create a positive, dynamic and welcoming illuminated environment which is responsive to this variety of different uses and activities.
The creation of a lighting scheme in any environment either for living, working or play should aim to reduce or minimise energy use. Buildings are responsible for approximately 40% of energy consumption and 36% of CO2 emissions in the EU and lighting accounts for 14% of all electricity used in the EU, of which 80% is professional use.

To help minimise energy use natural and artificial light should work in harmony. Lighting should be dimmed to appropriate levels and maximised when daylight is insufficient via the following strategies:

- Use lighting only when required
- Dimming to appropriate levels
- Daylight controls
- Occupancy detection
- Acknowledge the importance and value of energy-efficient lighting
Lighting Quality

Colour rendering is particularly important, and sources which are responsive to skin tones and revealing the true colours of artwork should form the basis of the light source specification.
**Colour**

The human eye is more susceptible to variations in light colour than any other light property and therefore, the use of ‘white’ light variations can have a notable effect on the presentation and perception of a space.
Costs may be considered in two main categories.

The first is the capital cost that relates to the purchase and installation of lighting equipment. These costs will be monitored from the commencement of conceptual design to assist quantity surveyors in their cost assessments. By considering this cost aspect early in the design process, the best quality of lighting specification can be provided for the client’s allocated budget.

The second cost aspect is the ongoing running and maintenance cost of the installation. These costs are also considered from the commencement of conceptual design, ensuring that all of the costs associated with running and operating the installation are kept to a minimum. This is achieved primarily by using high efficacy, long-life light sources which will minimise the energy usage thereby ensuring that operational costs are optimised.