



Appendix 1 Project Brief for:
Tallaght Stadium Floodlighting Upgrade

South Dublin County Council,
County Hall Tallaght,
Dublin 24,
Ireland
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1.0 Introduction

South Dublin County Council (SDCC) came into existence on the 1st of January 1994. It has an area of 222.74 square kilometres. South Dublin has a population of 301,075 according to the 2022 census. The heraldic crest for South Dublin reads "This We Hold In Trust" in both English and Irish, while incorporating elements relating to the history, geography and present-day infrastructure of the area. It is bounded by Dublin city (15 km to the northeast), the Dublin Mountains and County Wicklow to the south, the River Liffey to the north separating it from Fingal and County Kildare to the west.

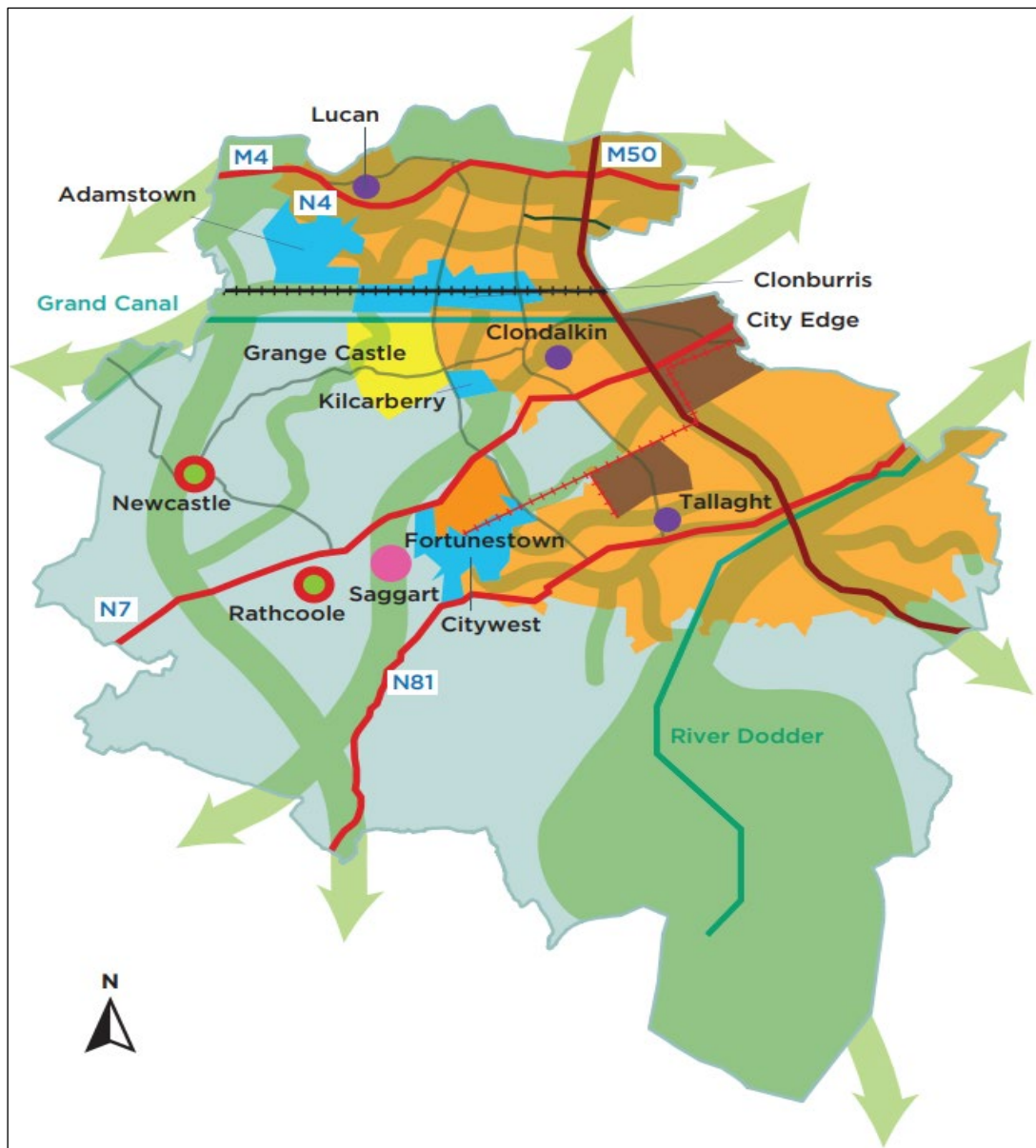


Figure 1: South Dublin County Council Administrative Area (Source: South Dublin County Development Plan 2022 – 2028).

2.0 Project Overview

Tallaght Stadium intends to replace the existing floodlighting installation with a modern, energy-efficient LED sports lighting system capable of achieving UEFA Category B lighting standards for professional football, broadcasting requirements, and future operational needs. The project will enhance lighting quality, reduce maintenance requirements, improve energy efficiency, and provide a resilient power supply arrangement through a mains-fed system supported by an automatic standby generator.

It is key to note that the current floodlighting system is powered from the electrical mains supply, with the new installation requiring a study which provides SDCC with the most economic and environmentally friendly way to power the LED floodlighting system. In any case, there is a requirement to provide back-up power of an adequate capacity assessed HVO Generator(s), incorporating an Automatic Transfer Switch (ATS) to ensure continuity of supply during interruptions to mains supply. The lighting system must achieve instant restrike capability, eliminating the warm-up delays associated with the existing discharge lighting system.

Project scope is inclusive of all of the above and tenderers will outline their proposal for installation of the updated lighting system, along with backup power arrangements, all necessary electrical infrastructure and all associated site works. The contracted party will be required to procure and assign an experienced Electrical Engineer, with 7 years' experience of comparative projects, to assess, design and oversee the successful delivery of this project.

The contracted party will also procure and assign an experienced Project Manager, with 10 years experience of comparative projects, to assess, design and oversee the successful delivery of the project.

3.0 Future Stadium Development Considerations

Tallaght Stadium is currently progressing a wider stadium masterplanning exercise which will consider future development, expansion, and enhancement of the venue over the coming years. As such, the proposed floodlighting solution shall not only satisfy the immediate operational and UEFA Category B requirements but shall also consider the long-term development strategy for the Stadium.

Tenderers shall demonstrate how the proposed lighting infrastructure can be retained, reused, relocated, reconfigured, or integrated into future stadium developments where practicable. Particular consideration shall be given to the adaptability of lighting columns, mounting arrangements, cabling infrastructure, controls, and associated equipment to minimise future replacement costs and maximise asset life.

The Employer's preference is for a future-proofed solution that provides flexibility for potential stadium expansion or redevelopment works and avoids the need for wholesale replacement of relatively new lighting assets as the Stadium evolves.

This gives bidders a clear signal that they should think beyond the immediate project and consider the whole-life value of the installation.

4.0 Project Objectives

The project aims to:

- Replace all existing halogen/HID floodlighting equipment with a high-performance LED system and all associated site works.
- Replace existing generator with an appropriate capacity HVO generator, all required electrical infrastructure and all associated site works.
- Achieve UEFA Category B lighting standards suitable for domestic and European competition requirements.
- Provide improved lighting uniformity and visibility for players, officials, supporters, and broadcasters.
- Reduce energy consumption and carbon emissions.
- Minimise long-term maintenance costs through the installation of long-life LED luminaires.
- Introduce dimming and lighting control capability for match, training, and event modes.
- Ensure seamless operation on both mains electricity and generator supply.
- Future-proof the stadium for enhanced broadcast requirements and potential entertainment lighting applications

5.0 Scope of Works

The proposed works shall include:

Review and Design of New LED floodlighting and HVO Generator

- Scope of works report providing details of new system.
- Electrical Engineers report on powering LED Floodlighting.
- Detailed Design and Construction Management Report.

Removal of Existing System

- Safe isolation of existing lighting circuits.
- Removal and disposal of existing floodlight fittings.
- Removal of existing ballasts, capacitors, and associated control gear.
- Removal of existing brackets and crossarms where required.
- Removal of existing electrical infrastructure associated with current backup power arrangements.
- Removal of existing backup generator.

Installation of LED Light System, HVO Generator and all associated Site Works

- Installation of new LED driver assemblies.
- Installation of replacement lighting crossarms and support structures.
- Installation of LED sports floodlights on existing floodlight towers.
- Installation of supplementary LED lighting clusters to improve uniformity and achieve UEFA B compliance.

- Reuse of existing power cabling and switching equipment where inspection confirms suitability.
- Installation of electrical infrastructure associated with proposed backup power arrangements.
- Installation of adequate capacity HVO backup generator.
- Earthing and bonding upgrades as required.
- Integration of central lighting controls with multiple operating modes.
- Testing, commissioning, and certification of completed installation.

6.0 Indicative Lighting Performance Specification

The system shall be designed to achieve a minimum UEFA Category B standard and provide:

Requirement	Target Performance
Playing Surface	105m x 68m
Average Horizontal Illuminance	Approx. 1,880 lux
Minimum Horizontal Illuminance	Approx. 1,700 lux
Uniformity (Min/Average)	Approx. 0.90
Vertical Illuminance (Broadcast)	1,100 to 1,470 lux average
Glare Rating	Average 43
Colour Temperature	5700K
Colour Rendering Index	Minimum CRI 80
Instant On/Off Operation	Required
Dimming Capability	High / Medium / Low Modes
Design Life	Greater than 120,000 hours (L90)
Warranty	Minimum 10 years inclusive labour and materials

The proposed design consists of approximately 156 LED luminaires with an installed lighting load of approximately 213kW.

The above performance criteria and technical requirements outlined within this specification are intended as a minimum indicative baseline only. The Tenderer shall be responsible for verifying all applicable UEFA Stadium Infrastructure Regulations and lighting requirements relevant to UEFA Category B compliance at the time of design, supply, installation, and commissioning.

The Tenderer shall demonstrate, through detailed lighting calculations, product data, design submissions, and commissioning records, that the proposed solution fully achieves and maintains UEFA Category B standards. Where any discrepancy exists between this specification and current UEFA requirements, the more onerous requirement shall apply, and the Tenderer shall incorporate all measures necessary to achieve compliance at no additional cost to the council.

7.0 Electrical and Generator Compatibility Requirements

Primary Supply

- Existing ESB mains electrical supply can remain the principal source of power but the delivery of the Electrical engineers Report may effect this.
- Existing distribution infrastructure to be assessed and upgraded, as necessary.
- All switchgear and protection devices to comply with current Irish electrical standards.

Standby Generator and Switch

A new standby generation system shall be incorporated with the following minimum requirements in which the LED lighting system must be compatible with:

Generator Specification

- Generator Rating: Capacity to be determined as per Electrical Engineer assessment.
- Fuel Type: Hydrotreated Vegetable Oil (HVO)
- Output Voltage: Compatible with stadium electrical infrastructure
- Frequency: 50Hz
- Weatherproof acoustic enclosure
- Minimum fuel autonomy suitable for full match operation
- Remote monitoring capability

Automatic Transfer System

- Fully automatic mains failure detection.
- Automatic Transfer Switch (ATS).
- Automatic generator start upon mains failure.
- Return-to-mains functionality with programmable delays.
- No manual intervention required.

Lighting Compatibility

The LED lighting system and associated control gear must:

- Operate correctly from either mains supply or generator supply.
- Tolerate normal generator voltage and frequency variations.
- Prevent flicker during generator operation.
- Ensure broadcast-quality lighting when operating under backup power.
- Maintain full output during mains failure events.
- Be fully compatible with soft-start and inrush management requirements.

8.0 Lighting Control System

The lighting control system should provide:

Operational Modes

- UEFA Match Mode
- League Match Mode
- Training Mode
- Maintenance Mode
- Emergency Lighting Mode

Additional Features

- Scheduled control capability
- Remote operation access
- Energy-use monitoring
- Event lighting integration capability
- Future provision for entertainment lighting and colour changing systems if required at a later stage.

9.0 Installation Strategy

Due to Tallaght Stadium's operational requirements, installation activities must be carefully planned around football fixtures, events, and stadium usage. An operational need for phased installation may apply.

Key Installation Principles

- No disruption to scheduled fixtures.
- Existing lighting to remain operational until replacement sections are commissioned.
- High-risk access activities to be undertaken only during stadium downtime.
- Matchday blackout restrictions to be agreed with stadium management.
- Works to be coordinated with Shamrock Rovers FC fixture schedules and other stadium events.

Indicative Installation Sequence

Phase 1 – Design & Preconstruction

- Detailed surveys.
- Structural inspections.
- Electrical assessment.
- Generator integration design.
- Procurement of equipment.

Phase 2 – Tower Lighting Upgrade

- Progressive replacement of floodlights tower-by-tower.
- Installation during non-match periods.
- Retention of sufficient lighting capacity throughout works.

Phase 3 – Commissioning & Certification

- Lux level testing.
- Generator operation testing.
- Emergency transfer testing.
- UEFA compliance verification.
- Final client training.

10.0 Indicative Programme

Activity	Duration
Design & Surveys	4 Weeks
Procurement	8 Weeks
Generator Installation	16 Weeks
LED Installation	16 Weeks
Testing & Certification	20 Weeks
Total Project Duration	5 Months

Programme duration will remain subject to equipment lead times and fixture scheduling windows. Major installation activities should preferably be undertaken between home fixtures to minimise disruption. Optimal installation timeframe is between November 2026 and February 2027, during the off-season window.

Expected Benefits

- UEFA Category B compliant floodlighting.
- Improved player and spectator experience.
- Enhanced broadcast quality.
- Reduced maintenance requirements.
- Lower operational energy costs.
- Reduced carbon footprint.
- Instant restrike and improved reliability.
- Full resilience through automatic generator backup.
- Future-ready infrastructure for stadium growth and event requirements

Project Budget

Based on current budgetary proposals, the anticipated project cost for the full UEFA B compliant LED upgrade is in the region of: €950,000 excluding VAT.