

Local Authority Public Lighting Energy Efficiency Project

SMART- SPACE

Online Webinar

1st April 2021

Presented by: Brian Ahern BEng

The Road Management Office (RMO) Public Lighting Unit

ELENA
European Local
Energy Assistance



**European
Investment
Bank**



Rialtas
na hÉireann
Government
of Ireland

Tionscadal Éireann
Project Ireland
2040



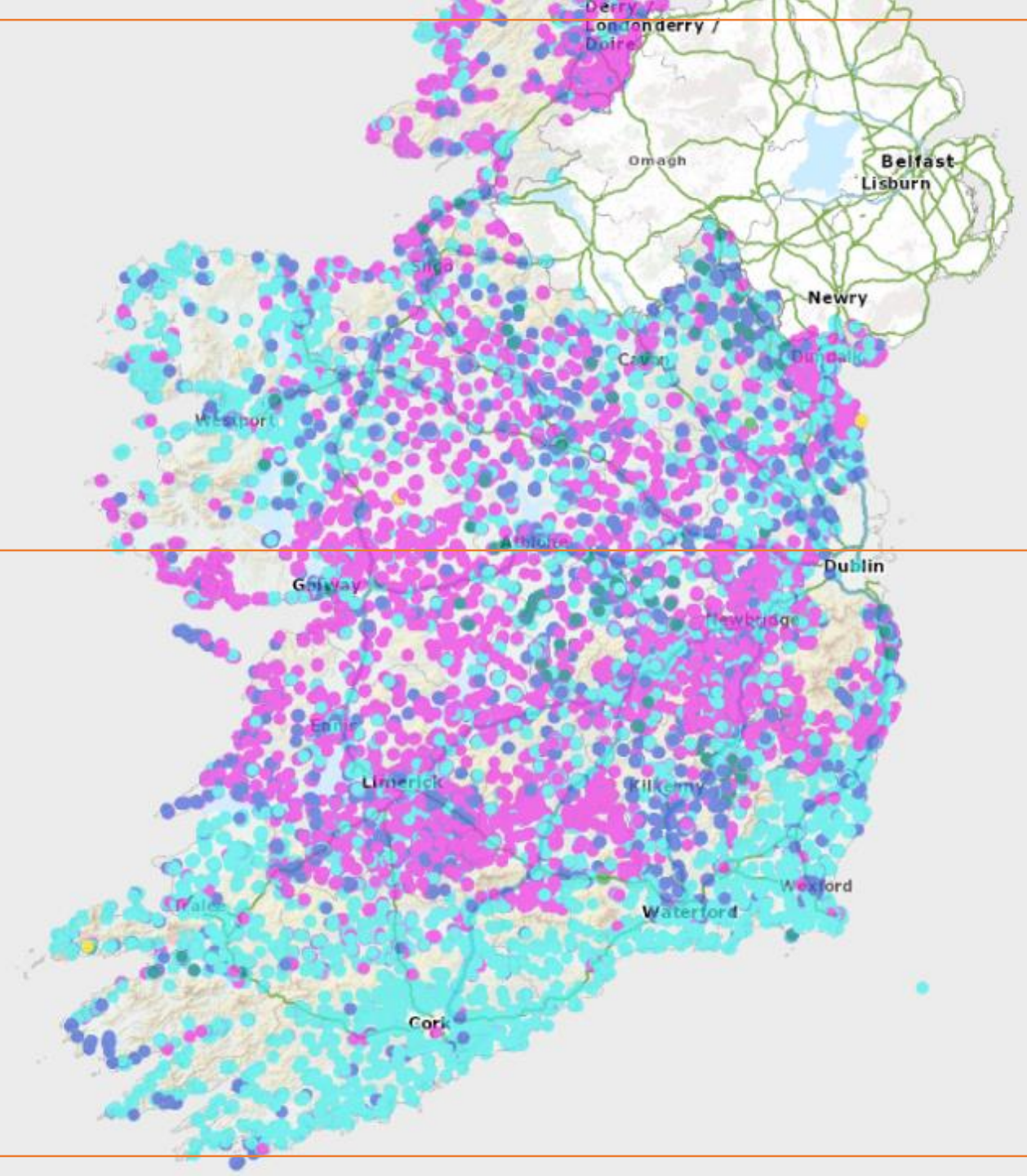
Do Chomhairle: ag lasadh ár bpobal –
ag cosaint ár n-aeráid
Your Council: lighting our community –
protecting our climate

Public Lighting (Pre-LED retrofitting)

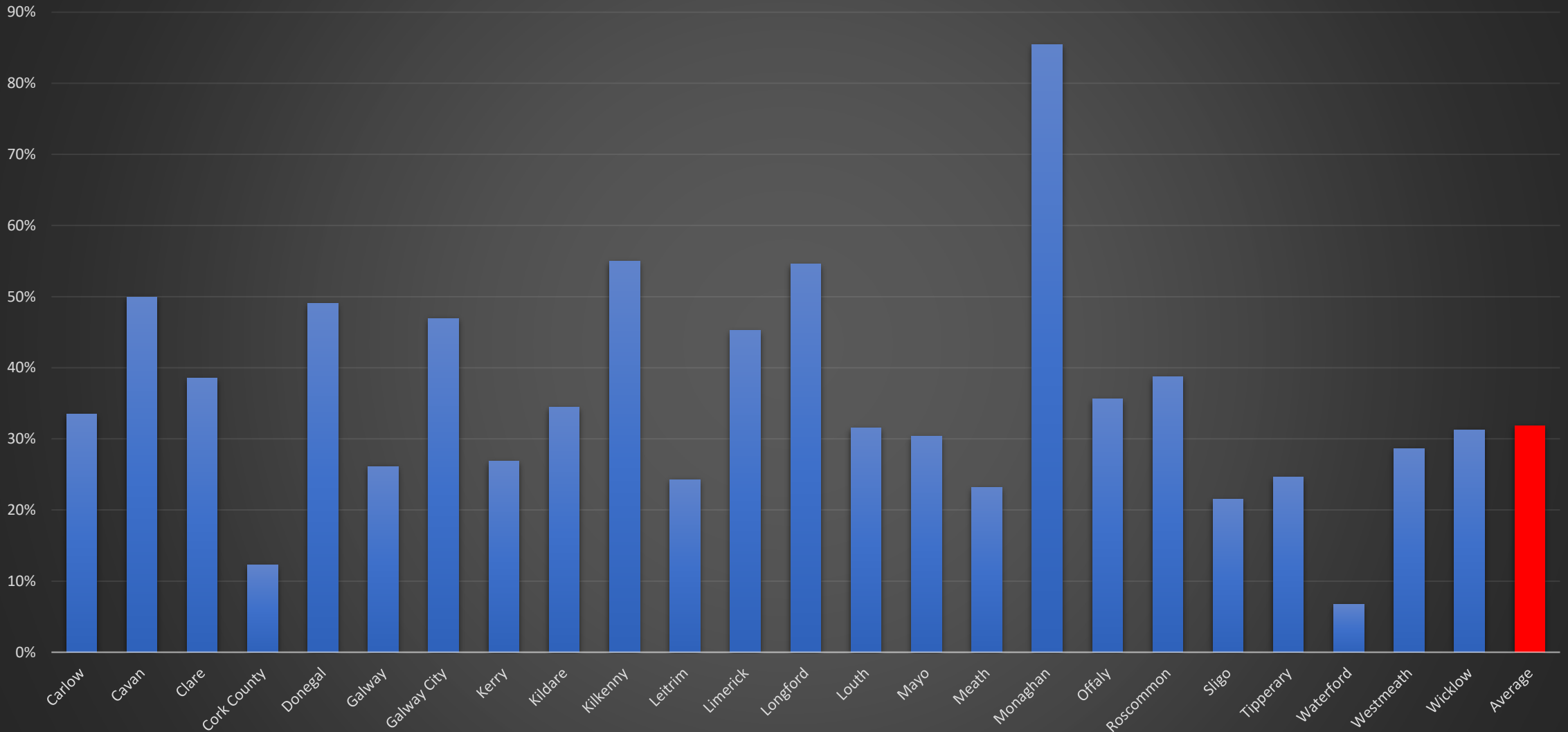
- **490,000+** Public Lights
 - **58,800 kW** installed capacity
 - **244 GWh/Year** electricity consumed
 - Nationally once LED retrofit completed LA's will have saved at least **122 GWh/year** (50% eff)
-



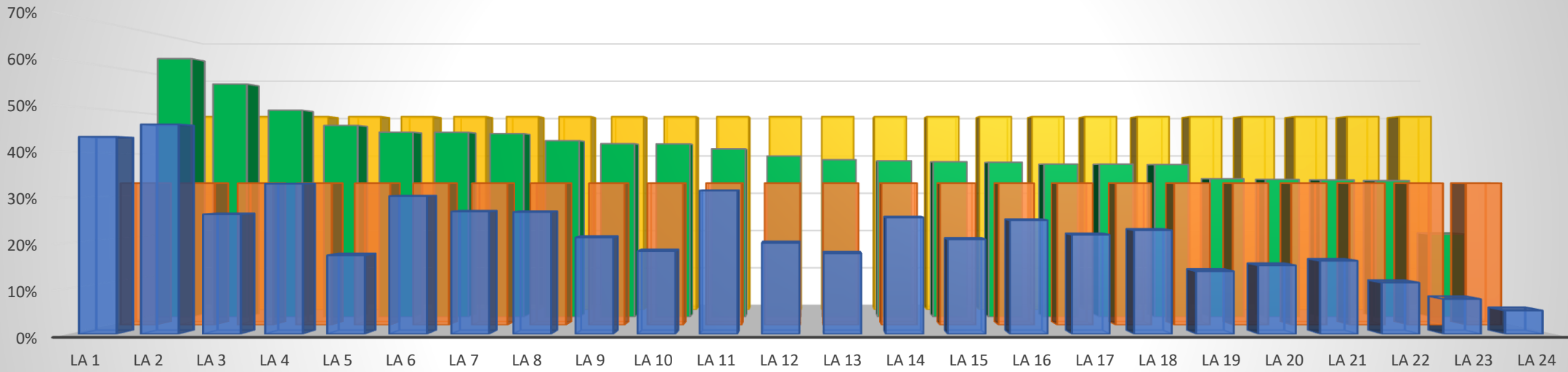
Breakdown by Light Type



Percentage LED



LA Energy Efficiency Targets



■ Current Efficiency
 ■ Target Efficiency
 ■ Efficiency Post Retrofit
 ■ 2030 Targets

Dedicated Resource to Drive Project



Road Management Office

Shared Service between LA's – Donegal County Council Lead LA



Public Lighting Unit set up 2017

Develop a Business Case for a Public Lighting retrofitting Project



Team

Daragh Quill

Brian Ahern

Brian Bourke



Summary of Project Inventory

- 21 Local Authorities Participating in the Project
- Approx. 250,000 PL's to be retrofitted
 - 78,000 Southern Region
 - 80,000 Eastern region
 - 70,000 North West Region
- Installed Capacity **31,500 kW** to be retrofitted

Contract Structure

Design and Build Project

NEC4 Option C Contract (Target Cost)

Minimum Energy Efficiency target 55%

Bonus for overachieving energy efficiency

Using EEOS for additional support once programme of works agreed

First tender back 18th December 2020

Starting Retrofitting June/July 2021

Summary of Project?



A collaboration of 21 Local Authorities to retrofit their Public Lighting inventory to LED high efficiency lights



Total estimated CAPEX of approx. **€150m**



Once completed project will save LA's **€200 million** in energy and maintenance cost savings over the 20 year project horizon.



Save around **25,00 tonnes CO²** per year



Save **72,000 MWh/year** in final energy per year (min 55% energy efficiency)

Project Technical Specification



No Centra Management System (CMS)



CMS Ready with NEMA 7 Pin



The LED Driver shall also have Dual Direction Communication in DALI protocols to allow for future remote monitoring of the installation.

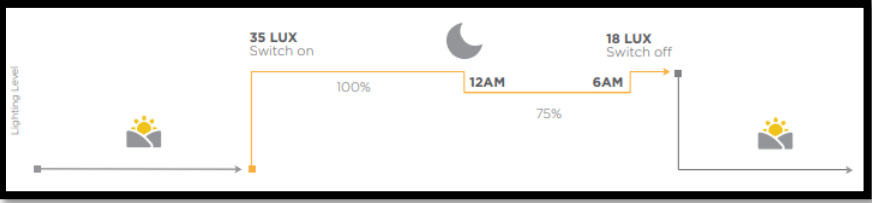
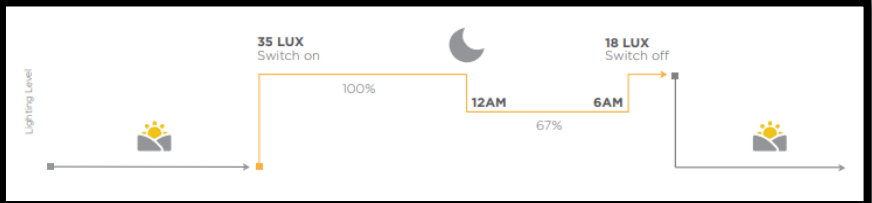
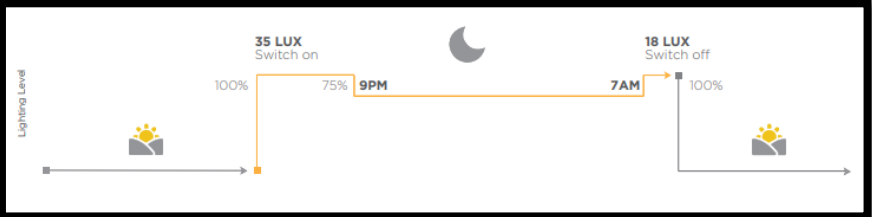
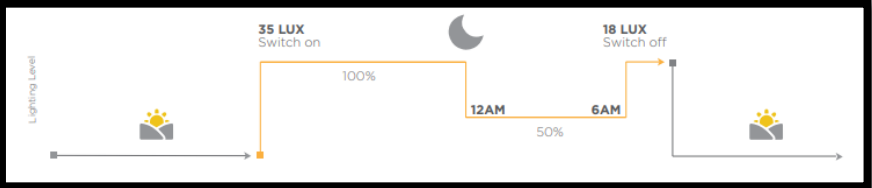


The driver shall be pre-programmed and capable of being re-programmable via pre-wired 5-core cables or wireless technology (such as Bluetooth) or another solution subject to acceptance of the *Project Manager* and later integrated with the CMS to allow for the system to alter its control functions.



Project Colour Temperature

Project will be installing warm temperature lights **(up to 3300k)**

Location	Project Dimming and Trimming Profile	
National Road Networks	As per the TII- DN-LHT-03038 document	
City/town centres, main roads	Profile U14 25% reduction at midnight	
Residential Estates and Rural Residential Settlements	Profile U15 33% reduction at midnight	
Carparks	Profile U17 25% reduction at 9pm	
Park areas, pedestrian areas	Profile U16 50% reduction at midnight	

Tools

Layers

- Lights
 - TH
 - MMAAC
 - LA
 - Private
 - PPP
 - De-energised
 - Unknown
- Height
- InterfaceBox
- IsMetered
- Materials
- Owner
- Sources
- SwitchingProfiles
- Type

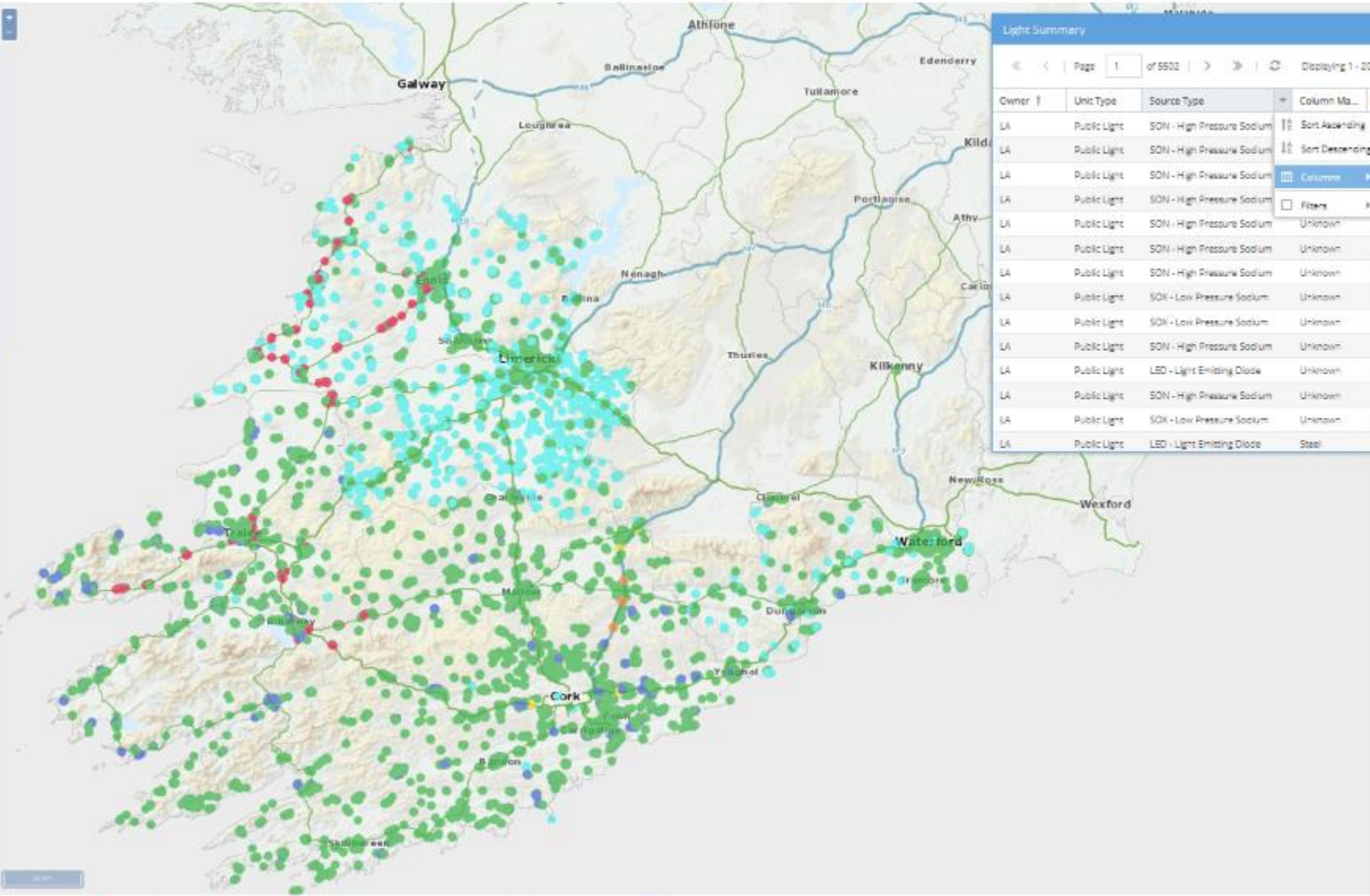
- Lights (Clustered)
- StreetView
- Road Schedule
- Base Layers
 - OSi (premium)
 - OpenStreetMap
 - Grey Background

Map Tools

Public Lighting

Gazetteers

Search a location: Townland:



Light Summary

Page 1 of 5502 | Displaying 1 - 20 of 110029 | Page Records?

Owner	Unit Type	Source Type	Column Ma...	Road Class	Billable Wat...	Meter Ref. ...	Region
LA	Public Light	SON - High Pressure Sodium	Sort Ascending	<input type="checkbox"/>	Equipment Id	10305563130	Southern Region
LA	Public Light	SON - High Pressure Sodium	Sort Descending	<input type="checkbox"/>	Legacy Equipment Id	10305563130	Southern Region
LA	Public Light	SON - High Pressure Sodium	Column	<input type="checkbox"/>	Unit Number	10305563130	Southern Region
LA	Public Light	SON - High Pressure Sodium	Filters	<input type="checkbox"/>	Bracket Count	10290204886	Southern Region
LA	Public Light	SON - High Pressure Sodium	Unknown	<input type="checkbox"/>	Luminaire Count	10290205558	Southern Region
LA	Public Light	SON - High Pressure Sodium	Unknown	<input checked="" type="checkbox"/>	Owner	10305041406	Southern Region
LA	Public Light	SON - High Pressure Sodium	Unknown	<input checked="" type="checkbox"/>	Unit Type	10305041406	Southern Region
LA	Public Light	SON - Low Pressure Sodium	Unknown	<input checked="" type="checkbox"/>	Source Type	10301592639	Southern Region
LA	Public Light	SON - Low Pressure Sodium	Unknown	<input type="checkbox"/>	Switching Profile	10290210182	Southern Region
LA	Public Light	SON - High Pressure Sodium	Unknown	<input type="checkbox"/>	Metered?	10290205913	Southern Region
LA	Public Light	LED - Light Emitting Diode	Unknown	<input type="checkbox"/>	Interface Box?	10290210182	Southern Region
LA	Public Light	SON - High Pressure Sodium	Unknown	<input type="checkbox"/>	Safety Alert Pole?	10290205357	Southern Region
LA	Public Light	SON - Low Pressure Sodium	Unknown	<input type="checkbox"/>	Neonix Pole?	10290205357	Southern Region
LA	Public Light	LED - Light Emitting Diode	Steel	<input checked="" type="checkbox"/>	Is Valid?	1029021997	Southern Region

- Column Material
- Column Height
- Mounting Height
- Road Class
- Road Code
- Street Name
- National Road Name
- Max. Speed
- Note
- Billable Wattage
- Nominal Wattage
- Meter Ref. No.
- QADPRN
- TLDRN
- Local Authority
- Municipal District
- Region
- X
- Y
- Last Updated By
- Last Updated Date

← Create Service Pillar DISCARD ✓

Location * Location Not selected

Road Number Location Not selected

Road Name Location Not selected

Body Manufacturer
Please Select

Body Material *
Please Select

Internal Compartment Condition
 No selected value SELECT ONE VALUE

cut Out Condition
 No selected value SELECT ONE VALUE

Wiring Condition
 No selected value SELECT ONE VALUE

Backboard Condition
 No selected value SELECT ONE VALUE

Electricity Phase

Photos
OPEN GALARY

Manage lights
MANAGE LIGHTS

← Condition Rating ✕

Survey Date 01.04.2020

Survey Date Diogo Carvalho

TMPRN 123456789

Photos
OPEN GALARY

Foundation
● 5 - Very Poor SELECT ONE VALUE

Flange Plate Gussets Bolts
10.04.2020
● 1 - Excellent New Condition Rate SELECT ONE VALUE
● Poor

Column Base
● 5 - Very Poor SELECT ONE VALUE

Column Shoulder
10.04.2020
● 1 - Excellent New Condition Rate

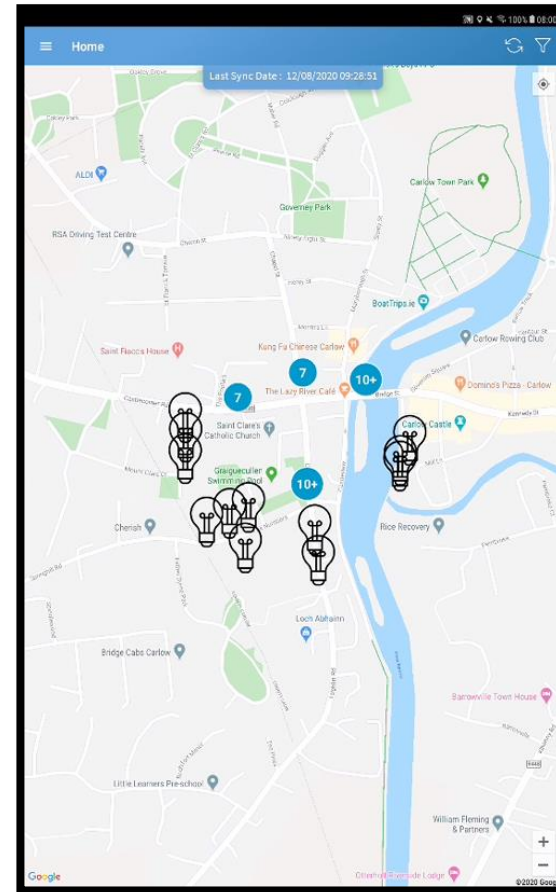
Column Shaft
● 5 - Very Poor SELECT ONE VALUE

Door
10.04.2020
● 1 - Excellent New Condition Rate

Door Surround Seal Lock
● 5 - Very Poor SELECT ONE VALUE

Shoulder
10.04.2020
● 1 - Excellent New Condition Rate

Bracketry
● 5 - Very Poor SELECT ONE VALUE



Home Last Sync Date : 12/08/2020 09:28:51

Choose an action for the selected Service Pillar

- Inventory Data
- Manage lights
- Inspection(Review)
- Gallery
- Delete

CANCEL

**ELENA
European Local
Energy Assistance**



ELENA Support

- Project is receiving **€1.9 million** is Project Assistance funding



Climate Action Fund

28 November 2018

On completion of the Assessment Stage of the First Call for Applications for support under the Climate Action Fund, the following seven projects have been approved as eligible for support by the Minister for Communications, Climate Action and Environment, Richard Bruton T.D.

These projects will now proceed to the Validation Stage of the process. Projects that do not satisfactorily complete this stage will not progress to be supported by the Climate Action Fund.

Organisation / Lead Applicant	Project Name	Maximum Support Approved
ESB eCars	ESB Electric Vehicle High Power Charging Infrastructure Development Project	€10,000,000
Gas Networks Ireland	GRAZE Gas – Green Renewable Agricultural Zero Emissions Gas	€8,474,340
Irish Rail	Hybrid Drive for Inter City Railcar (ICR 22000) fleet	€15,000,000
Dublin City Council	Dublin District Heating System	€20,000,000
South Dublin County Council	The South Dublin County Council District Heating Scheme	€1,447,952
Road Management Office	Local Authority Public Lighting Energy Efficiency Project	€17,470,000
3 Counties Energy Agency CLG	Driving HGV Efficiently into Brexit	€1,373,400
Total		€76,765,692



Climate Action Fund Receiving €17.47m grant assistance from CAF

Thank You

Brian Ahern A/Senior Executive Engineer

Road Management Office

contact@rmo.ie

Any Questions?

