



Report on the Christmas Lights in Dungarvan.

**Background:**

The Chief Executive, Mr. Michael Walsh asked that a review of the provision of Christmas Festive Lighting in Dungarvan be carried out and that this review would also consider the provision of Christmas Lighting in Waterford City and Tramore.

The annual provision of Christmas festive lighting includes 3 parts:

- The installation and erection of the lighting
- The Maintenance of the lighting
- The taking down of the lighting

This review will consider the following issues:

- The procurement of the Contract for the annual provision of Christmas Festive Lighting
- Maintenance and other issues experienced in 2019
- Proposals for 2020.

While the primary focus of this review will be Dungarvan there will be inclusion of experiences and mechanisms used in both Waterford City and Tramore as comparators.

**Procurement**

The Christmas Lights in Dungarvan became the responsibility of Waterford City & County Council in 2014 after the dissolution of Dungarvan Town Council who had the responsibility until then. From approximately 1990 the lights had been installed by Conroy Electrical Services on behalf of Dungarvan Town Council. I could find no record of any competitive procurement done for these works during this period.

In 2017 a public tender was issued for the Christmas lighting contract in Dungarvan. Only one supplier tendered the works (the existing contractor) and the value of the tender received was €45,400 incl. VAT.

In 2017 the contract for installation of the lighting supply in Waterford City & Tramore was due to be retendered. Until 2016 this work had been undertaken by separate contract but it was decided that from 2017 on the Christmas Lighting Installation would form part of the Public Lighting Maintenance contract (currently held by Killaree Lighting Services KLS). The value of the contract for Waterford City & Tramore in 2017 was €24,799 incl. VAT.

In 2018 the existing contract with Conroy Electrical Services was extending for 1 year, the contract value for the Christmas lighting in Dungarvan for 2018 was €40,860 incl. VAT. The value of the contract for Waterford City & Tramore in 2017 was €20,657 incl. VAT. The table below shows the contract values for 2017 & 2018:

Year	Dungarvan Contract Value	Waterford City & Tramore Contract Value
2017	€45,400 Incl. VAT	€24,799 Incl. VAT
2018	€40,860 Incl. VAT	€20,657 incl. VAT

The existing contract for Dungarvan finished in January 2019. Due to the savings achieved using the mechanism for procuring the Christmas lighting contract in Waterford City & Tramore in 2017 & 2018 (45% and 50% respectively) it was decided to procure the Christmas lighting contract via the same mechanism for Dungarvan in 2019.



Year	Dungarvan Contract Value	Waterford City & Tramore Contract Value
2019	€20,430 Incl. VAT	€ 20,657 incl. VAT

The contract value for the Christmas Lights in Dungarvan in 2019 was 50% of the costs incurred in 2018.

The overall public lighting maintenance contract was issued for public tender in 2017. The value of this contract is €1,525,779 ex VAT or €1,731,759 Incl VAT for a 3 year contract. This equates to €577,253 per annum. The total value of the Xmas lighting contract for Waterford City & County in 2019 was €41,087 Incl. VAT. This is well within the limits by which the value of a contract can be extended.

#### **Procurement Conclusion:**

The public procurement of the Christmas Lighting contract was regularised in 2017, I could not find any records of a public procurement process prior to this for Dungarvan. The use of the public lighting contract also complies with public procurement guidelines.

#### **Procurement Recommendation:**

Over the next while the public lighting contract will be advertised as part of a National contract. Therefore in 2020 the contract for Christmas lighting in Waterford City, Dungarvan and Tramore has been combined as one contract and issued for public tender accordingly.

#### **Maintenance and Other Issues Experienced in 2019**

The lighting and supporting infrastructure scheme as inherited includes 7 streets, Walton Park and features at locations around the harbour. The scheme as installed in 2019 was created organically with no overall plan and is the culmination of over 20 years addition and growth.

The installation of the Dungarvan lights commenced in October 2019 and very quickly issues arose. These issues were:

##### **1. Bulb Type & Replacement:**

The bulbs being used for most of the festoon lights are Glass 15w incandescent Bulbs and it has become very expensive and difficult to source a stock of these. As of 2018 these type of bulbs are no longer for sale in the EU, and therefore we had to try and source them from existing stock with suppliers as no new ones are being manufactured with the EU and it is not permitted to import them. As we could not get low wattage bulbs we had to get 40w ones instead, these heat up more and are therefore more susceptible to failure.

##### **2. Deterioration of Festoons**

There is approximately 1.5km of Festoon used in the lighting scheme. About 25% of this is relatively new LED (150m new festoon was installed in 2019) but the rest is much older, outdated and at end of life. A common reason for outages was due to the deterioration of the festoon as the insulation of the cables is brittle with age and separation of the bulb holders from the cable (due to heat expansion and age) allows water to enter and causes the power to trip.



Festoon is installed on the following Streets:

- i. Mary Street.
- ii. O'Connell Street
- iii. Parnell Street
- iv. Grattan Square
- v. TF Meagher Street
- vi. Davitt's Quay
- vii. Causeway & Poor Man's Seat
- viii. Sexton Street

### **Deterioration of Features**

There are 15 different features, some are fine but others have some issues:

- (1) Angels – 12 in total located on various streets around Dungarvan. 3 of these require substantial repair or replacement.
- (2) Icicles – 50 in total located on the trees in Walton Park. These are not suitable for outside use, their design is such that they easily fill with water and burn out, causing a system trip. They should not be installed in the future. These were purchased by Dungarvan & West Waterford Chamber on behalf of Dungarvan Aglow.
- (3) Projector – The projector is located on Davitt's Quay and projects an image onto the side of the Courthouse Building. The bulb blew the week before Christmas and a replacement could not be sourced in time. These were purchased by Dungarvan & West Waterford Chamber on behalf of Dungarvan Aglow.
- (4) Walton Park Tree – this is a maypole type feature with lights strung to a pole. The lights and pole require full refurbishment. These were purchased by Dungarvan & West Waterford Chamber on behalf of Dungarvan Aglow.
- (5) Walton Park Stag – large Steel Stag with LED lights. Needed minor repair to connectors but otherwise in very good shape. Purchased in 2018 by Dungarvan Aglow committee.
- (6) Walton Park Lamp Features – 18 features which attach to the lamps in Walton Park. These are ageing and 3 require repair at a cost of €900 plus Vat each. There is also concern that the some of the lamp standards will require repair as the weight and wind loading from the features have caused some of the Lampposts to lean. These were purchased by Dungarvan & West Waterford Chamber on behalf of Dungarvan Aglow.
- (7) Walton Park Swan – Swan feature in the middle of the fountain in Walton Park. No issues. These were purchased by Dungarvan & West Waterford Chamber on behalf of Dungarvan Aglow.
- (8) Boat Feature - located on the causeway. Purchased in 2018 by Dungarvan Aglow committee, only issue is supply from Poor Man's Seat.
- (9) Reindeer Feature - located at Castle, the major issue here is that there is no nearby supply therefore a 100m extension cable is required.
- (10) Snowman Feature – Located at the Sailing Club, again the issue here is there is no nearby supply so a connection from across the road is required. These were purchased by Dungarvan & West Waterford Chamber on behalf of Dungarvan Aglow.
- (11) Reindeer feature - located at The Poole (Abbeyside) , the major issue here is there is no nearby supply so it is connected to the Harbour Side festoon which is powered from the Poor Man's Seat. These were purchased by Dungarvan & West Waterford Chamber on behalf of Dungarvan Aglow.



- (12) Red Bauble – this was located in Grattan Square until 2018, after examination it was not installed in 2019. The bauble had major structural issues with metal fatigue and separation of the base from the rest of the structure and was not safe.
- (13) Crib – located in Grattan Square, no issues.
- (14) Christmas tree – located in Grattan Square, no issues
- (15) Snowman Feature – located in Grattan Square, no issues. These were purchased by Dungarvan & West Waterford Chamber on behalf of Dungarvan Aglow.

### 3. Deterioration of Supporting Infrastructure.

There are 3 elements to the supporting infrastructure for the lights; they are Power Supply, Power Distribution and the Mounting Points.

#### (a) Power Supply

There are 7 power connection points used. All are metered supplies.

- (i) Walton Park – This is working as required with no problems or work required.
- (ii) Abbeyside (Poor Man's Seat) – This has completely deteriorated and no longer works. It requires immediate replacement.
- (iii) Grattan Square (Meade's) – This one has deteriorated and requires replacement; the cabinet is rotten and accessible to the public.
- (iv) Grattan Square (Boyle Sports) – This is working as required with only minor problems but should be updated with more up to date electrics and a more secure cabinet.
- (v) Credit Union – This is working as required with only minor problems but should be updated with more up to date electrics and a more secure cabinet.
- (vi) TF Meagher Street (Court House) – This is working as required with only minor problems but should be updated with more up to date electrics and a more secure cabinet.
- (vii) Davitt's Quay (rear of Garvey's Supermarket) – This is working as required with only minor problems but should be updated with more up to date electrics and a more secure cabinet.

#### (b) Power Distribution

Power is distributed from the above points via cabling and sockets attached to the buildings. These cable and sockets have all deteriorated beyond useful life and need to be replaced. The system itself is an ad hoc collection of different cable types and connections. There are parts of the system which use indoor rated electrical cable which should not be installed externally. The biggest issue is that of age and the nature of installation, it was not all installed as a unified system and so installation has been a challenge.

Another challenge has been the supply of power to features at the Castle, the Sailing Club and the Poole. These could only be supplied via extension cable (in the case of the Castle nearly 100m of cable).

#### (c) Mounting Points

The festoon and features are suspended over the streets using a mix of rope and Catenary wire which are in turn attached to either eyebolts on building walls or poles that were installed for this purpose. Rope is unsafe and should never be used, particularly for road crossings. It is prone to sag when wet, it is more affected by heat from the electrical wire and as the festoon is not LED and therefore runs hotter due to a higher current demand there is a fire risk. The existing Catenary wire is over 5 years old and needs to be upgraded to a mix of 10mm and 6mm steel wire attached to chemically anchored bolts on buildings.

The poles that were installed in the past and do not comply with the relevant standards (*TII Specification for Road Works Series 1300 - Road Lighting Columns and Brackets*) and are totally not



suitable for the task to which they are assigned. Many of the poles are either loose in the ground or have significant bends in them from holding heavy features or festoon. These poles were installed in locations where there was no suitable building available for bolts to be installed, mainly as the surrounding buildings are domestic residences. They should be removed and other solutions for illumination sourced for these areas.

#### **Maintenance and Other Issues Experienced in 2019 – Conclusion**

The detailed report above confirms the fact the much of the infrastructure has reached its end-of-life and needs to be replaced and between this ageing of the infrastructure coupled with some not fit for purpose items a substantial amount of maintenance issues were encountered in 2019.

#### **Maintenance and Other Issues Experienced in 2019 – Recommendation**

In order to prevent a recurrence of the same volume of issues for Christmas 2020 a substantial investment is required in the infrastructure being used in Dungarvan. In this regard a detailed Bill of Quantities is prepared and the cost to replace / repair the entire lighting stock / infrastructure for Dungarvan is detailed below.

#### **Proposals 2020**

As per the above section it is evident that substantial investment is required in the Christmas Lighting infrastructure in Dungarvan.

I recommend that the new infrastructure be procured and installed for 2020, not alone will the new lighting and associated infrastructure improve the visual display but it will also achieve substantial savings through reduced maintenance and energy requirements.

The following is a breakdown of the upgrades required to the existing infrastructure:

- (a) Provision and installation of 2500m of Crystal White LED Festoon suitable for all weather outdoor use.
- (b) Provision and installation of 2500m of 6mm Catenary Wire secured with Stainless Steel Chemically Bonded Anchors to attach the above festoon.
- (c) Replacement of the metered supply Cabinets at the locations identified.
  - (i) Each Cabinet to be made with 3mm Galvanised Steel with a single skinned Power Coated Grey.
  - (ii) Each Cabinet shall consist of two sections, one for the meter and MCB and one for the plugs. Each section shall have its own Door and shall incorporate a Key lock. The door lock type and barrel number shall be provided to Waterford City & County Council.
  - (iii) Cabinets 1, 2 ,3 & 4 to be of similar dimensions of existing and Cabinet 5 to be a new cabinet.
  - (iv) The final design of all Cabinets shall be agreed in writing with Waterford City & County Council prior to construction.
- (d) Design and Replacement of all existing Electrical Supply for the desired lighting set.
  - (i) All wiring shall conform to I.S. 10101:2020 and be rated IP44 or above
  - (ii) All wiring to be attached to buildings as per drawing 2020-DUN-CL003.
  - (iii) Sockets shall be IP44 rated or above and conform to CENELEC EN 60309.
  - (iv) All Sockets shall be connected from below so as to reduce risk of water ingress.
  - (v) Design shall robust and have sufficient capacity to allow for all the lights and features to be on at one time.



- (vi) Final design to be agreed with Waterford City & County Council Prior to any works.

The above requirements were included in a City & County wide tender which was issued earlier this year. Following the tender process and an independent evaluation of the tenders submitted, the successful tender will result in an investment of €105,555.00 in the above mentioned infrastructure. The following points must be noted:

- (1) These works will be carried out for the 2020 Xmas Season.
- (2) The annual cost for the erection, maintenance and taking down of the XMAS lights in Dungarvan (also included in the above City & County wide tender) will be €41,314.00 p.a.
- (3) The following is the list of the locations included for the annual erection, maintenance and taking down in Dungarvan:

Location	Item
Grattan Square	Street Crossing Icicle Lights
Grattan Square	Christmas Tree
Grattan Square	Santa Feature
Grattan Square	Crib
Parnell Street	Features & Street Crossing Festoon Lights
O'Connell Street	Features & Street Crossing Festoon Lights
TF Meagher Street	Features & Street Crossing Festoon Lights
Mary Street	Street Crossing Festoon Lights
Walton Park	Maypole Tree
Walton Park	Lamppost Features
Walton Park	Features including Large Stag
Sexton Street	Street Crossing Festoon Lights
Davitts' Quay	Reindeer Feature
Davitts' Quay – Civic offices	Festoon on Existing Trees (5no)
Johns Castle, Davitts Quay	Snowman Feature
Dungarvan Harbour pontoons	Tree Features
The Poole, Abbeyside	Snowman feature
Causeway	Boat feature
Causeway	Festoon on Existing Large Tree

## Conclusion

The substantial capital investment required of over €105,000 in Dungarvan confirms that the existing infrastructure had reached its end of life in many cases and confirms the need for investment in the supply infrastructure required as well. As comparators the cost of the required capital upgrades in Waterford City and Tramore are €29,510.00 and €23,494.50 respectively.

Credit must be given to Conroy Electrical Services for the excellent work they have done over numerous years in providing an excellent Xmas lighting display with aging and deteriorating infrastructure.

This investment will continue the tradition of an excellent festive lighting offering in Dungarvan for many years to come.