

Dublin Tunnel Newsletter

January 2019 – December 2019

Introduction

2019 marked the fifth successful year of the Operation and Maintenance of Tunnels and Traffic Control Centre contract awarded to Egis Road and Tunnel Operations (ERTO) by Transport Infrastructure Ireland (TII). ERTO are proud to continue delivering the safe operation and maintenance of the Dublin Tunnel along with the Motorway Traffic Control Centre and the Average Speed Enforcement Office. Our success is only possible due to the hard work and dedicated staff providing 24/7 service year-round.

2019 saw the buoyant economy reflected in increased activity generating a 4.1% uplift in year-on-year traffic levels. The total vehicle throughput for 2019 was 8,758,004 vehicles. Some 45 scheduled overnight Tunnel closures allowed ERTO to complete its comprehensive preventative and reactive maintenance schedule delivering the highest levels of safety and tunnel availability.

The MTCC provides a 24-hour control centre for users of the national motorway network, providing assistance and co-ordinating incident response. There were 9,732 incidents recorded and managed on the network in 2019 by the MTCC Team.

Egis Road and Tunnel Operation Management

Dublin Tunnel Traffic Volumes

Key Metrics

The total volume of transactions through the tunnel since the opening to the end of December 2019 now stands at 79,970,062. The monthly traffic increased by an average of 4.1% from 2018.

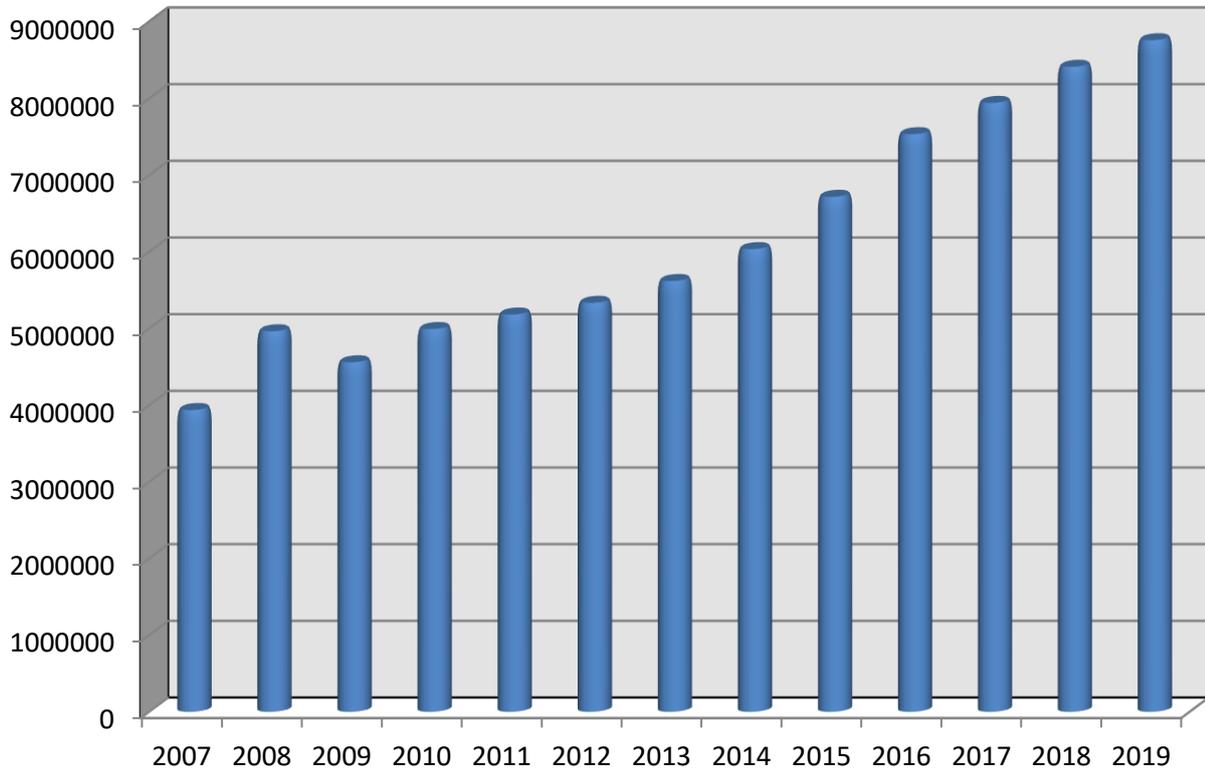
Traffic movements

Traffic volumes tend to follow daily profiles contrasting between the weekdays and weekends. Peaks occur on certain days when motorists use the tunnel to access sporting events, entertainment venues or when normal flows are interrupted by an incident on the adjoining network. The highest traffic volume in a single month since the tunnel opened in 2006 was recorded in October 2019 when 783,109 journeys were recorded. The highest daily figure occurred on Thursday the 13th of June 2019 when 32,668 transactions were recorded. This was due in part to Elton John performing at the 3 Arena and Fleetwood Mac playing at the RDS. The lowest number of vehicles to pass through the tunnel was recorded on the 25th of December at 2,730.



The combined Team are dedicated to continuous improvement of safety and performance in both the Tunnel and the wider Motorway network.

Annual Traffic 2007 - 2019



Abnormal Loads, Accidents, Over-heights, Breakdowns and Rescues

Over-height vehicles, accidents, abnormal loads and breakdowns require constant diligence and vigilance from the operational staff to mitigate potential disruption. This demanding workload is managed by the ERTO team who are committed to providing the highest quality of service to all tunnel users. The Team’s priority is to ensure the safety of tunnel users at all times. ERTO staff continually strive to maintain maximum availability of the tunnel to keep Dublin city, Dublin Port and the other links to the adjoining network flowing smoothly. In 2019, managing 5,912 over-height vehicle detections caused disruption and decreased accessibility to the tunnel. ERTO staff escorted and supervised 451 abnormal loads through the tunnel, off-peak. During the year, patrollers and vehicle recovery services intervened and assisted with 292 breakdowns including buses, HGV’s, and light vehicles. An average recovery time of 38 minutes greatly minimized disruption to tunnel users.

Project Management Office (PMO)

ERTO PMO have undertaken 64 projects from scope development to implementation stage in 2019, deploying best in class technologies to ensure the efficient and safe use of the Tunnel for our customers. Projects were undertaken with minimal impact to the public and have resulted in increased safety improvements and availability of the Tunnel for all road users.

The PMO had significant involvement in the design and construction of Transport Infrastructure Ireland’s (TII) flagship motorway operation control centre. The extension was constructed adjacent to the current Dublin Tunnel Control Centre and was undertaken with no impact to the Tunnel or motorway operations. The new centre will be fully Operational in Q2 2020.



The new 52-screen video wall within the motorway traffic control centre (MTCC) will monitor and manage approx. 65 million vehicle journeys a year.

The communications upgrade is providing a new network with a high capacity, resilient and reliable communications which will facilitate essential planned upgrades and the deployment of new modern tunnel systems.

A number of safety improvements were carried out including the enhancement of emergency phone locations and LED lighting that highlight emergency call niches in the Dublin Tunnel (DT) improving visibility.



The replacement of new automatic coin machines (ACMs) began in December 2019. This will provide additional payment methods, including contactless payments improving the efficiency of the Toll Plaza for Tunnel users.



ISO / OHSAS Certification

Demonstrating its commitment to upholding the highest industry standards, ERTO maintained its certification, awarded by the National Standards Authority of Ireland (NSAI), for:

- Quality (ISO 9001:2015)
- Environmental (ISO 14001:2015)
- Occupational Health & Safety (ISO 45001:2018)
- Asset Management (ISO 55001:2014)
- Information Security (ISO 27001:2013)



Environment

The air quality metrics for the Dublin Tunnel bores remained consistently within the limits set forth in applicable regulations in terms of environmental safety and emissions. There were no reportable environmental incidents in 2019.

Tunnel Safety

To ensure the safest possible service is provided, all aspects of the tunnel infrastructure, operation, maintenance and training are reviewed on a continual basis. Throughout the year, a programme of reviews, training and emergency exercises were completed with close co-operation and involvement from the Emergency Services, the Tunnel Safety Officer and other stakeholders. ERTO provide 24/7 live traffic monitoring to ensure safe passage through the tunnel.

Training and Exercises

ERTO are constantly developing our Operational Staff, Maintenance Technicians and Engineers skills and capabilities through both in-house and external training courses, some of which include, Certification in Industrial Automation, Traffic Management, Train the Trainer, Fire Warden Training and Management Tools. Throughout Q4 2019, Dublin Tunnel was the preferred location for extensive interagency planning and co-ordination meetings and exercises.

Traffic flows, motorway network, tunnel availability and haulier parking hubs were all tested for flexibility and safety solutions. Safety exercises and new firefighting equipment were planned and actioned throughout the year. Control room Operators have accessed academic best practice training to develop their skills and reflect a continuous improvement environment.

Tunnel Maintenance

Closures and Contractors

ERTO employs a number of local contractors for routine maintenance works and capital renewals. In 2019, ERTO carried out 45 tunnel and 62 bore closures for planned maintenance, Dublin Fire Brigade training exercises and to facilitate capital renewals projects.

Asset Management

ERTO manage the operation and reliability of the Dublin Tunnel asset portfolio on behalf of Transport Infrastructure Ireland (TII) using a comprehensive asset management system. This system includes detailed Annual Asset Management Plans with clearly defined Asset Management Strategies and Objectives in conjunction with a comprehensive 36-month Forward Capital Works Programme.



The core elements of the asset management system utilise detailed annual inspection reports such as the System Asset Group Status Reports, General Inspection Reports, Cleaning Reports, Special Inspection Reports and a 4-year Principal Inspection across the 12 asset systems. ERTO are continuously researching ways of completing their O&M obligations using a lean, strategic approach and this is assisted through the introduction of Lean Management tools.

Continuous Improvements

Reflecting a culture of continuous improvement, ERTO have introduced several inhouse improvement schemes such as new Over Height Detection systems, installation of electric vehicle charging points, installation of UPS onto pumping station control systems and an upgrade of lighting to LED. To manage excessive manual handling by employees, ERTO have designed and installed a new cash transit system in the Toll Plaza which includes motorised trolleys and tables which are height adjustable.

ERTO strive to benefit from technological advances in systems and making every effort to future proof systems. As Egis is an international company, ERTO has access to an extensive knowledge base and pool of system experts from all over the world. We also benefit from having directly employed system experts, transitioning ERTO into O&M experts at the forefront of asset management and 'Heavy Maintenance' as we work with TII to provide a world class service to road and tunnel users.

Collaboration

During the last 12 months ERTO have been involved in the following conferences, exhibitions and schemes;

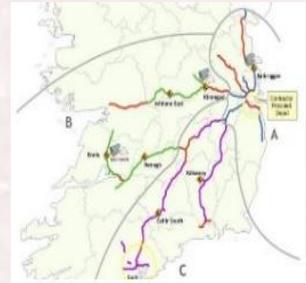
- MEETA Asset Management Conference with Engineer's Ireland;
- Presentation on Asset Management at the XXVIth Work Road Congress;
- Citywest Engineering Summit;
- Solas Programme & ETB Electrical Apprenticeship Scheme;
- Hosted the French Ambassador to Ireland, Mr. Stéphane Crouzat. during a planned maintenance closure to demonstrate the activities undertaken by ERTO in order to 'keep Dublin moving'.

Motorway Traffic Control Centre (MTCC)

The MTCC monitor and coordinate incident response across the national Motorway network. In 2019 the Team responded to 9,191 incidents (not including weather plans which would add a further 541 responses) reported on the network. When a road user contacts, the MTCC respond by arranging assistance for the caller and bringing the matter to a safe conclusion. The MTCC is available on a 24/7/365 basis to the public should they require help and assistance on the motorway network.



There were 3,634 emergency roadside telephone calls directed to the Control Room in 2019. These calls can often involve people in a distressed state having broken down or been involved in an incident which requires emergency intervention. Motorists often use these phones to report accidents or debris, in the safe knowledge that they are a direct line to someone who can respond immediately based on their exact location and the nature of the incident. Currently, there are 1,444 emergency roadside telephones on the motorway network.



MTCC coverage

The MTCC control a network of CCTV cameras providing extensive real-time coverage of the busiest parts of the network. This allows for constant monitoring, helping to respond to and subsequently clear incidents as quickly as possible.

Variable Message Signs (VMS) are located on all major roads. The MTCC controls these signs to inform motorists of possible delays, due to collision, breakdown, roadworks etc. This helps to save motorists time by assisting them to make informed decisions in planning their journey, or to be observant of possible obstructions that may be in their path.



VMS

There are 111 VMS on the network. The signs are utilised to inform motorists of incidents and support An Garda Síochána with safety campaigns in an effort to reduce fatalities on the network.



The MTCC also manages the operation of the Average Speed Enforcement Office (ASEO). This system is the first of its kind in Ireland and is run in cooperation with TII and An Garda Síochána. The system monitors a driver's average speed while travelling through the Dublin Tunnel. If a driver violates the 80 km/h speed limit, strict enforcement penalties will apply. The system has proved to be a great success and there has been marked improvement in driver behaviour and speed limit compliance since the system went live.

The MTCC conducted a customer satisfaction survey between May and November 2019, asking questions pertaining to driving through the tunnel and using services managed by the MTCC such as motorways ERTs and VMS. Over 4,635 surveys were taken providing valuable feedback. The survey was of great benefit to MTCC Operations' as it provided insights into drivers' experience using tunnels and the wider motorway network. The survey also provided positive reinforcement to the operators and encouraged staff to continue to aid and assist motorists to the same high standard achieved daily.

