2019 APPLICATION – GREEN TRANSPORT OF THE YEAR

ALWAYS STRIVING FOR INNOVATION IN OUR FLEET – INCLUDING A BRAND NEW, PATENTED LIFTING SYSTEM, DESIGNED TO REDUCE JOURNEYS, CUT EMISSIONS AND LESSEN TRAFFIC CONGESTION.

Dillon Waste is an award winning family run waste management company based at The Kerries, Tralee, Co. Kerry, established over 50 years ago by Garry Dillon.

Dillon Waste's fleet of vehicles include 3-compartment wheelie bin vehicle, rear-end loader vehicle, rigid curtainsider, walking floor trailers, hook lorries and skip lorries to provide a comprehensive range of services for our customers. These services include collection of wheelie bins, hire of skips and roll on/roll offs, collection of cardboard and plastic bales, collections from local authority transfer stations and bring bank sites.

SUSTAINABILITY OF OPERATIONS

Due to the location of the business in Kerry and their rural customer base, Dillons have reviewed all collection methods and have come up with unique innovations in reducing CO2 emissions.

As part of this submission, we focus on the following projects which have delivered sustainable results in the last 12 months:

- Split compartment commercial wheelie-bin truck with a patented Bin-Lifter capable of lifting any size bin into a split compartment collection vehicle;
- Interchangeable RoRo and REL truck;
- Extendable Skip Truck Floor mechanism;
- Demountable double-decker curtainsider vehicle for the collection of multiple waste streams at one time.

CUSTOMER BASE

Each customer is encouraged to separate their recycling and bio-degradable waste from their residual waste, thus reducing their costs and increasing the diversion of recycling and bio-degradable waste from landfill.

FUTURE PLANS

We believe these innovations will be hugely beneficial for waste collection activities not only in Ireland but across Europe. We have proved the substantial CO2 savings and this will help drive efficiencies with both environmental and cost benefits into the future.

> INCREASING THE DIVERSION OF RECYCLING AND BIO-DEGRADABLE WASTE FROM LANDFILL

LEADING THE WAY..OUR GREAT TEAM

The project of delivering these innovations was led by our staff from the start as they could see the possibility of improving operations and reducing fuel consumption by designing a new method of collecting.

They took great pride in not only coming up with the concepts but also being given the opportunity to use them as part of their operations.

The designs were created in-house and this led to prototypes which were manufactured by our staff on-site. Once the prototypes were engineered and tested, our staff led the implementation of the new equipment on our existing collection service.

INNOVATION

SEE THE VIDEO HERE:

A PIONEERING, MOVEABLE HIGH LEVEL LIFTER, THAT ACCOMMODATES MULTIPLE FORMATS AND CUTS JOURNEYS

In January 2017, Dillon Waste applied for a patent for the design of a moveable high level lifter which can collect 1100 ltr bins for both general waste and mixed dry recycling in the one collection. This patent was awarded in 2019 for Ireland and UK and is currently pending for Europe.

The challenge: At present, 1100 ltr bins can only be collected separately on a single compartment truck or a 70/30 divided truck. On a 70/30 divided truck, there is one set of double lifters on the 70% side and a single lifter on the 30% side. The double lifter can empty 1100 litre bins. The single lifter cannot empty these bins. This single lifter can only empty the smaller 360/240/140 litre bin. These bins are not large enough for commercial use.

1100 ltr bins are most commonly used by commercial customers for both mixed municipal waste (MMW) and mixed dry recycling (MDR). This means that two trucks are required to visit each commercial site to collect both types of material separately.

Reduction of over 23% in truck time and man-hours on the road since introducing the Sliding Lifter Truck ...reducing our carbon footprint.

The solution: To overcome this issue, we took an existing bin truck with a 50/50 split body and high-level lifters. This truck is used to empty domestic bins and collect the two different waste streams (MMW & MDR) at the one time. We designed a frame with a hinged flap which a standard high-level bin lift can be mounted to. This frame can move from side to side on the rear of truck.

When the lifter is moved to the right side of the truck, the flap moves to the **left** side. This allows a commercial 1100 ltr bin with waste type A to be tipped into compartment # 1.

When the lifter is moved to the left side of the truck, the flap moves to the **right** side. This allows a commercial 1100 ltr bin with waste type B to be tipped into compartment # 2.

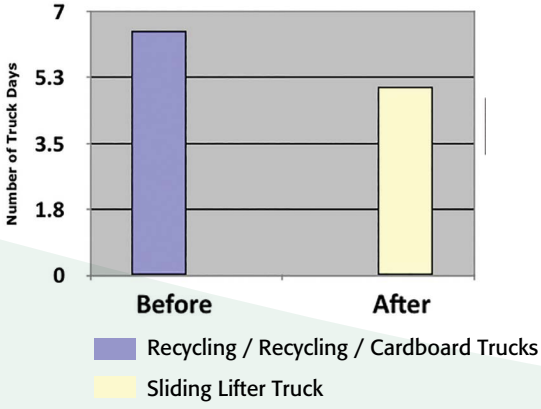
In early 2018, as the prototype was working according to expectations, a new split body truck with two back doors was purchased. It was decided to fit the lifers to a split body truck with two back doors to avoid cross-contamination of the recycling material when emptying both waste types at the waste transfer station.

This new truck was fitted with the sliding lifters and in June 2018, was put into operation in our sister company, Mr Binman, in Limerick with full CE certification which has resulted in the following benefits:

- **Reduction of 24 man hours per week**
- **Reduction in carbon footprint**
- **Increase in profitability on the route**
- **Increase in customer satisfaction (e.g. less truck movements on their sites)**

Benefit to the industry: We believe that this model would be hugely beneficial to other waste collection companies, especially those that may currently service rural areas, helping to reduce costs and carbon footprint.

We have seen a reduction of over 23% in truck time and man-hours on the road since introducing the Sliding Lifter Truck into operation thus reducing our carbon footprint.



FLEET UPGRADES

IN 2019, DILLON WASTE PURCHASED
TWO ARTIC LORRIES
A LEGRAS WALKING FLOOR TRAILER
AND A HOOK LORRY.

DEMOUNTABLE DOUBLE-DECKER CURTAINSIDER
Dillon Waste designed & fabricated a demountable double-decker curtainsider with tail-lift for the collection of FSM bins and bales of cardboard & plastic film. This allowed us to collect 3 products in one site visit thus reducing our on-road transport costs and our carbon footprint.

FLEET UPGRADES
CONTINUED

INTERCHANGEABLE VEHICLES

1. We modified an articulated lorry to be interchangeable so that it can be used for pulling artic trailers as well as being transferred into a skip truck when required.

2. We also converted a hook lorry and REL truck to be interchangeable between the same chassis and cab. Switchovers are completed when required according to demand.

SKIP TRUCK WITH EXTENDABLE FLOOR

1. We constructed an extendable floor on the skip gear to allow us to carry 2 skips for longer journeys thus reducing our carbon footprint.

SEE THE VIDEO HERE:

CONCLUSIONS

Prior to the extendable floor on skip trucks, we were doing an average of 4.5 jobs/transport trips per day and since the implementation of the new extendable floor, this has increased to 6 jobs/transport trips per day. So an increase in efficiency of 33% has been delivered along with the savings on fuel, labour and carbon emissions.

Just with the reduced transport trips and efficiency gains of this project, we delivered an improvement of 33% on our carbon emissions which is a saving of 15,000 kilos of CO2 emissions every year.

At Dillons, we all take great pride in our operations and we have proven how innovation can lead to a more sustainable future for everyone.

We have proven how we can reduce our carbon footprint and how we can deliver efficencies to the waste collection industry so with our patented technology, we would look to help others to choose greener transport operations also.