

# NTA Sustainable Transport Measures Grants Final Outturn Report 2015



# **NTA Sustainable Transport Measures Grants**

## **Final Outturn Report 2015**

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## **Background to Grant Programme:**

As part of its remit to support the delivery of an integrated transport system, the Authority operates a Sustainable Transport Measures Grants (STMG) programme providing funding to local authorities and public transport agencies for the implementation of various projects contributing to the Authority's remit.

The STMG Programme emphasis is on improving the transport offer to those choosing alternatives to the private car. The funding has become an important driver of change within the Greater Dublin Area. With the collaboration of the local authorities and agencies, and with support for the project through public and stakeholder consultation, the programme is delivering significant infrastructural change, including:

- Bridges;
- Cycle Corridors;
- Significant junctions and roundabouts;
- Bus infrastructure improvements; and
- City Centre Traffic Management changes.

The STMG programme continues to fund important local projects supporting permeability, safety, access to schools and public transport.

In 2015, the STMG Programme was made available to a number of new agencies (primarily third level institutions) that were already partners in the Authority's Smarter Travel Workplaces and Campus Programme. The inclusion of these agencies provided an opportunity for the Authority to fund specific infrastructural projects that had been identified as key support measures to the behavioural change programmes already underway, including cycle parking, bus facilities and new permeability schemes.

## **Financial Outturn:**

### **2015 funding envelope**

The Authority provided funding of **€26.02M** in 2015 to the various projects in the STMG programme. This compares with project funding of €30.53M in 2014.

The STMG programme has supported 120 projects in 2015, compared with 201 in 2014 and 279 in 2013. The average annual drawdown per project continues to rise, indicating the Authority's developing focus on larger scale schemes. The average in 2015 was just under €217,000 per project, compared to roughly €152,000 in 2014 and €117,000 in 2013.

### **Contractual commitments 2015**

The 2015 funding programme was part of the national Capital Investment Framework 2012-2016. The multi-annual funding has allowed the NTA to commit to funding larger projects over a number of years. Under the Project Management Guidelines, where possible, these projects have been broken into discrete phases (design only, construction only, etc.), which has helped distribute funding costs into specific calendar years.

The multi-annual nature of the programme is now well-established, with 100 projects being carried forward from 2014 into 2015.

### Breakdown by scheme type

The Authority has divided its Sustainable Transport Measures Grants into five broad sub-programmes. These are:

1. Cycling/Walking Programme, supporting physical improvements to tackle particular barriers to walking and cycling and to improve the walking and cycling environment, with particular emphasis on access to town centres, public transport nodes and education;
2. Bus Network Programme, targeted at providing bus journey time savings, improvements to bus reliability throughout the whole bus network and passenger information/facilities;
3. Traffic Management Programme, targeted at appropriate schemes to improve the effectiveness of traffic movement in balance with other modes of transport;
4. Safety Programme, aimed at providing a safe travel environment for all road users, especially more vulnerable road users (pedestrians and cyclists); and
5. Other Projects (signage schemes, traffic studies, Intelligent Transport Systems, Goods-focused projects, etc.).

#### Notes:

- Walking and cycling projects continued to attract the largest share of the overall funding allocation. In 2015 this rose to over two thirds of the total drawdown under the programme.
- While the percentage for dedicated Safety schemes is comparatively low, it should be noted that the Principles of Sustainable Safety inform the design of all schemes within the programme.

Total	Bus	Walking / Cycling	Traffic Management	Safety	Other
€26.02M	€3.76M	€17.7M	€3.12M	€0.67M	€0.77M
100%	14.47%	68.05%	11.98%	2.57%	2.95%

Table 1 Financial Outturn by scheme type 2015

Total	Bus	Walking / Cycling	Traffic Management	Safety	Other
€30.53M	€6.7M	€15.69M	€6.91M	€0.63M	€0.6M
100%	21.94%	51.39%	22.63%	2.06%	1.97%

Table 2 Financial Outturn by scheme type 2014

Total	Bus	Walking / Cycling	Traffic Management	Safety	Other
€32.72M	€5.04M	€17.49M	€8.79M	€0.1M	€1.3M
100%	15.4%	53.5%	26.9%	0.3%	4.0%

Table 3 Financial Outturn by scheme type 2013

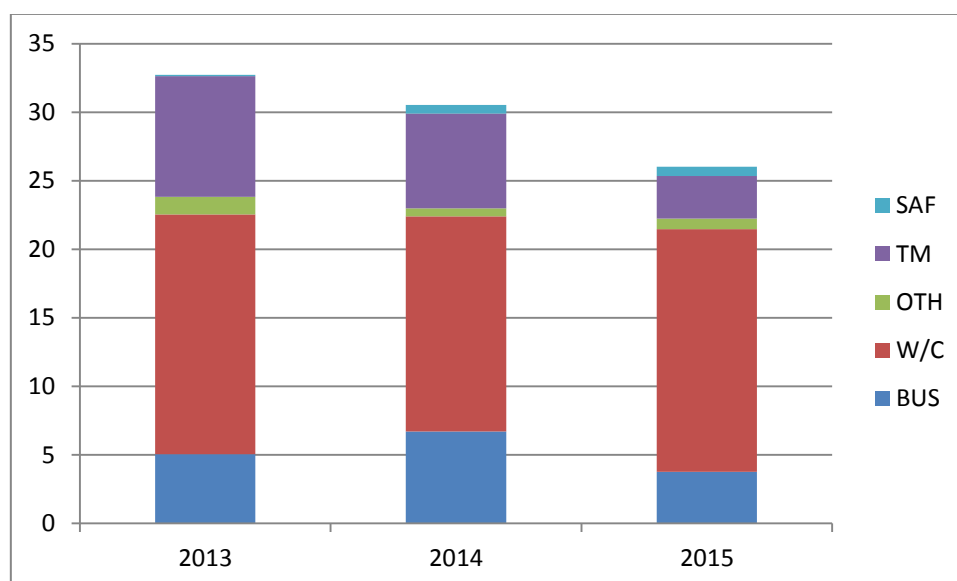
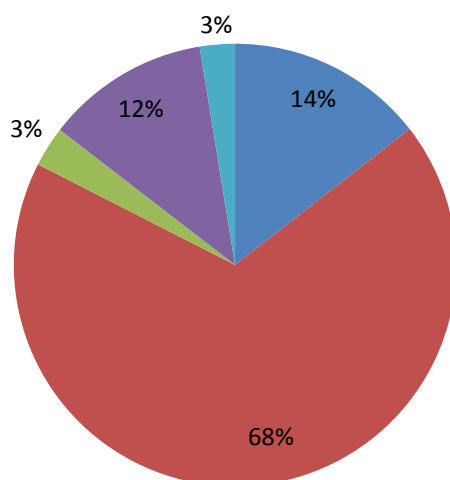


Figure 1: Comparison from 2013 to 2015



## Financial Outturn by Scheme Type 2015 (€26.02M)

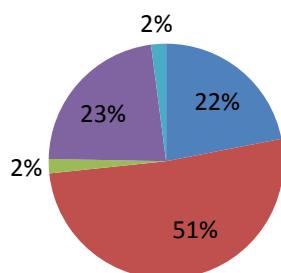
Bus Walking / Cycling Other Traffic Management Safety



For comparison:

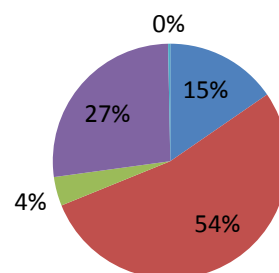
## Financial Outturn by Scheme Type 2014 (€30.53m)

Bus Walking / Cycling Other Traffic Management Safety



## Financial Outturn by Scheme Type 2013 (€32.72m)

Bus Walking / Cycling Other Traffic Management Safety



### Breakdown by scale of project

The Project Management Guidelines (see below) identify project requirements commensurate with the scale of overall project cost, divided into three categories as follows:

- projects under €500,000;
- projects between €500,000 and €5 million; and
- projects between €5 million and €20 million.

Project Value	Under €500,000	between €0.5 million and €5 million	over €5 million
<b>No. of projects</b>	61	48	11

Table 4 2015 Breakdown by scale of project finance

Project Value	Under €500,000	between €0.5 million and €5 million	over €5 million
<b>No. of projects</b>	186	15	0

Table 5 2014 Breakdown by scale of project finance

For comparison:

Project Value	Under €500,000	between €0.5 million and €5 million	over €5 million
<b>No. of projects</b>	259	18	2

Table 6 2013 Breakdown by scale of project finance



### Breakdown by County

The funding is concentrated within the urban areas of the GDA, where there is greater opportunity to present effective transport alternatives to the population. Over 43% of the total was drawn down in Dublin City, over 36% in the rest of County Dublin, with the remaining 20% spent in the three outer counties. The funding levels generally reflect the population and employment distribution within the Greater Dublin Area.

The significant investment in Dublin City Council schemes benefits the residents of the area as well as commuters travelling from the various other Local Authorities. The delivery in the other Local Authorities is broadly in line with the 5 year frameworks (see p.11, below) both in terms of the type of projects being chosen and the scale of the delivery.

The breakdown of outturn by county is shown in the table below.

County	Dublin City Council (DCC)	Dun Laoghaire Rathdown County Council (DLRCC)	Fingal County Council (FCC)	Kildare County Council (KCC)	Meath County Council (MCC)	South Dublin County Council (SDCC)	Wicklow County Council (WCC)	Campus
<b>Financial Outturn</b>	€11.23M	€4.63M	€0.9M	€1.12M	€2.69M	€3.79M	€1.56M	€0.11M
<b>100%</b>	43.16%	17.78%	3.47%	4.32%	10.33%	14.57%	5.96%	0.42%

Table 7 2015 Financial Outturn breakdown by County

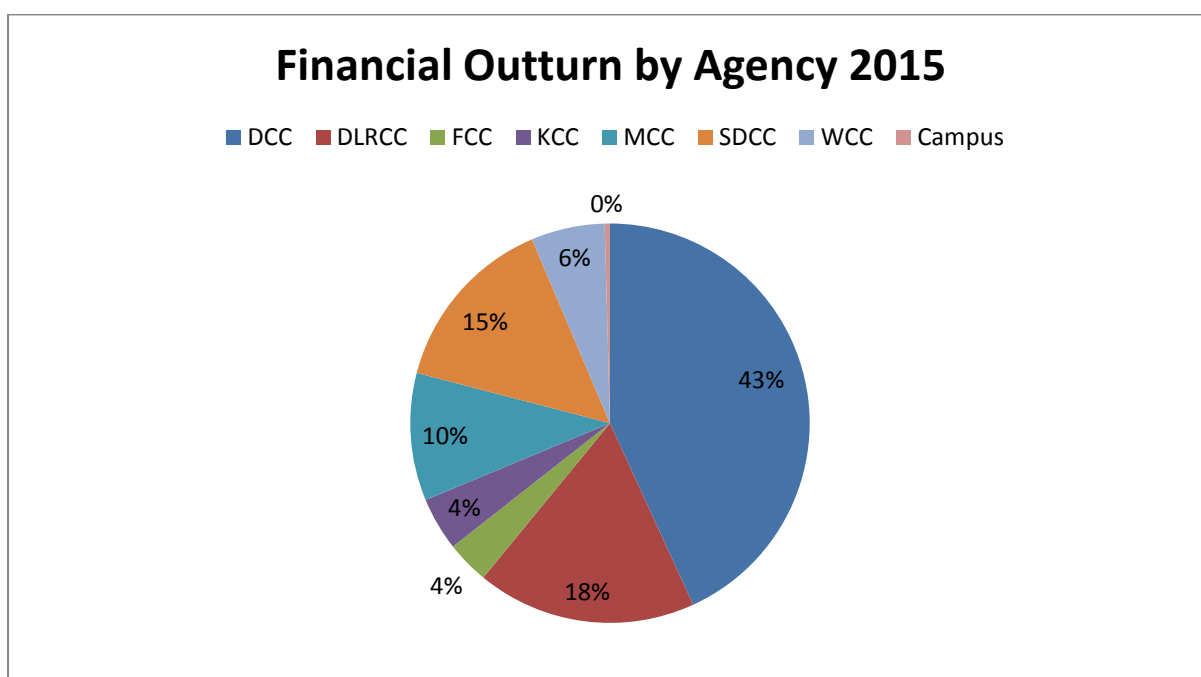
For comparison:

County	Dublin City Council (DCC)	Dun Laoghaire Rathdown County Council (DLRCC)	Fingal County Council (FCC)	Kildare County Council (KCC)	Meath County Council (MCC)	South Dublin County Council (SDCC)	Wicklow County Council (WCC)
<b>Financial Outturn</b>	€14.83M	€2.62M	€3.19M	€1.5M	€2.19M	€4.23M	€1.97M
<b>100%</b>	48.58%	8.58%	10.45%	4.91%	7.17%	13.92%	6.45%

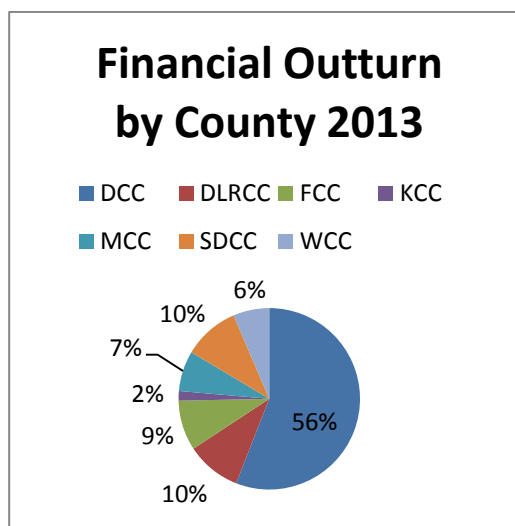
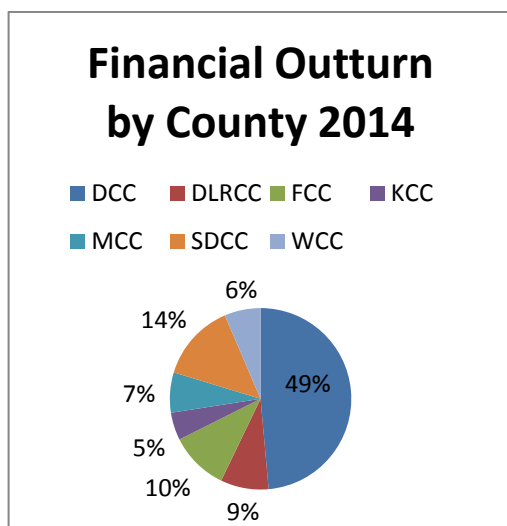
Table 8 2014 Financial Outturn breakdown by County

County	Dublin City Council (DCC)	Dun Laoghaire Rathdown County Council (DLRCC)	Fingal County Council (FCC)	Kildare County Council (KCC)	Meath County Council (MCC)	South Dublin County Council (SDCC)	Wicklow County Council (WCC)
Financial Outturn	€18.31M	€3.2M	€2.92M	€0.56M	€2.35M	€3.27M	€2.1M
100%	56%	10%	9%	2%	7%	10%	6%

Table 9 2013 Financial Outturn breakdown by County



For comparison:



## **NTA Administration:**

### **Multi-annual funding and 5 Year Investment Frameworks**

In keeping with the national approach of planning expenditure on a multi-year basis for greater efficiency and effectiveness, the Authority has moved away from calendar-year-focused projects, towards a multi-annual programme. This move to multi-annual planning has helped to reduce the historic pressure on funding provision that frequently occurs at year end.

Multi-annual funding has also provided a more coherent basis on which to plan and implement projects. In 2012 the NTA produced five-year investment frameworks with Local Authorities. These frameworks continued to inform dialogue with the Local Authorities and guide the selection of projects to be funded within a particular year, under the STMG programme.

These five-year investment frameworks are `live` documents that will be revised and updated as required, as new projects are identified, objectives are refined and particular priorities become evident. Accordingly, while they do provide an overall guiding framework, they are intended to be sufficiently flexible to accommodate developments and changes as they arise in each county.

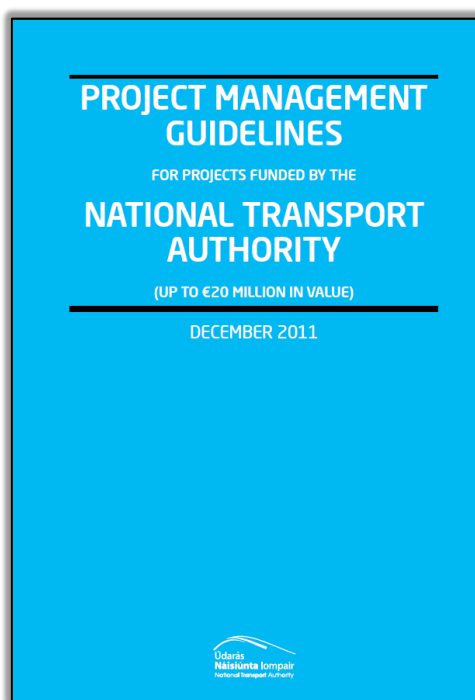
### **Project Reporting System (PRS)**

A Project Reporting System (PRS), which was implemented in the first part of 2012, continues to provide a dependable system for inter-agency payments to be claimed, reviewed and processed online, and provides management tools to oversee project expenditure progress.

The PRS processed all Authority payments for the 2015 funding year. This system streamlined the administration of the grants to the benefit of both those claiming funding and to the Authority itself.

### Project Management Guidelines

In December 2011, the Authority introduced Project Management Guidelines for projects funded by the Authority. These Guidelines provide a framework for, and a phased approach to, the development, management and delivery of transport projects of all types funded by the National Transport Authority up to a capital value of €20 million.



The Guidelines have helped to achieve an appropriate consistency of approach across projects undertaken by agencies in receipt of grants, and to provide the Authority with the degree of transparency and certainty that is appropriate for a Sanctioning Authority accountable for decisions involving agencies' use of public funds.

In addition, they allow for an appropriate level of reporting commensurate with risk and cost, as different procedures apply for projects less than €0.5m in value, for projects between €0.5m and €5m, and for projects between €5m and €20m.

In 2015, minor revisions to internal NTA project management procedures were implemented. The *Approval Point Request Form*, which was introduced in late 2014, has provided greater certainty for all parties in the structured delivery of projects.

### Cost Estimating Database:

In 2015, the Authority implemented a Cost Estimating Database for the use of all parties involved in project delivery. The database, which is based on the outturn costs of previous STMG projects, is a user-friendly tool for accurate outturn cost estimation of a project. The clarity provided by the database, from the initial allocation phase to final post-construction

close-out, has facilitated a more streamlined approach to funding and greater certainty for all parties involved.

### Cycle Network Projects

In December 2013, the Authority published a *Cycle Network Plan for the Greater Dublin Area*. This plan was developed in order to provide a framework for investment in significant cycle infrastructure projects across the region, both within individual counties and across administrative boundaries.

The STMG Programme is now the primary source of funding for the delivery of priority routes within that cycle network. In 2015, a number of regional strategic cycle routes were progressed by the Authority with the involvement of multiple local authorities. These included:

- **Royal Canal Greenway**  
This project is a key element of the Dublin-Galway National Cycle Route, running through Dublin City, Fingal County and Kildare County Council areas.
- **Grand Canal Greenway**  
While cycling provision on certain sections of the Grand Canal corridor had been enhanced in recent years, there remains a lack of continuity both within the Dublin City area and further west through South Dublin and Kildare. A number of discrete projects are designed to address these barriers.
- **Dodder Greenway**  
The development of this greenway route presents a significant opportunity to enhance the cycling offer in the region, connecting the south Docklands in Dublin City, via Dun Laoghaire-Rathdown County Council at Milltown, to Tallaght in South Dublin and onwards to Bohernabreena. The route will provide increased leisure and recreation opportunities as well as cycling connections.
- **East Coast Trail (S2S Route) / Rock Road Corridor Study**  
In late 2014 the Authority appointed consultants to carry out an Options Report and Feasibility Study for two routes connecting Dun Laoghaire-Rathdown County to Dublin City along the coast. The Final Report was completed in late 2015.

## **Appendix A**

### **2015 Programme Metrics Summary**

	Footpath (m)	Shared footpath-cycle track (m)	Greenway (m)	Cycle lane/track (m)	Bus Lane (m)	Traffic Calming (m)	Bus Stop (no.)	Junction Treated (no.)	Roundabout (no.)	Cycle Parking (no. of racks)	Isolated crossing (pedestrian/toucan) (no.)	Bridge (no.)
Dublin City Council	480	10		610	800		2	1		5	4	
Dun Laoghaire Rathdown County Council	2800	240		2800			5	7		20	5	
Fingal County Council												
Kildare County Council	845						3	6		15	4	
Meath County Council	2030			1300			1	4			4	
South Dublin County Council	100	1670			200			6	1		7	
Wicklow County Council	988	150						2	2	5	5	1
Dublin City University							2			95		
Dublin Institute of Technology										40		
University College Dublin												
<b>Totals</b>	<b>7243</b>	<b>2070</b>		<b>4710</b>	<b>1000</b>		<b>13</b>	<b>26</b>	<b>3</b>	<b>180</b>	<b>29</b>	<b>1</b>



**Additional relevant metrics:**

**Dublin City Council:**

- 200 No. taxi rank spaces and signage
- Resurfaced junction, Charlemont Bridge

**Dun Laoghaire-Rathdown County Council:**

- Bus lane markings on N11 (13630 m.)
- Cycle logos countywide (22 No.)

**Kildare County Council:**

- Public lighting, Naas Bus Hub

**Wicklow County Council:**

- 1 No. entrance treated
- Public lighting
- 1 No. speed table with bollards and signage

**St James's Hospital:**

- Banner stands; campus travel maps

## **Appendix B**

### **Case Studies from 2015 Programme**

#### **Dublin City Council:**

- Swords Road QBC (Cat and Cage)
- Pedestrian Crossing at Charlemont Bridge
- Dorset Street Improvements

#### **Dublin City University:**

- Bus Terminus
- Cycle Parking (Phase 1)

#### **Dun Laoghaire-Rathdown County Council:**

- Frascati Road/Temple Hill Route Improvement Scheme
- Bus Stop Modification Works – N11 Booterstown Stop northbound
- Toucan Crossing, Stillorgan Park Road

#### **Kildare County Council:**

- Bus Hub, Market Square, Naas
- Caragh Village Footpath

#### **Meath County Council:**

- Main Street Refurbishment Scheme, Ashbourne

#### **South Dublin County Council:**

- N4 Cycle Route (Primary Route 6, Chapelizod to Palmerstown)

#### **Wicklow County Council:**

- Killincarrig 'Double Roundabout'
- Three Trouts Bridge

**Dublin City Council – Swords Road QBC (Cat and Cage)      €3,410,688 (in years 2015 & 2016)**

Since the Swords Road Quality Bus Corridor opened over 15 years ago there was a pinch point in Drumcondra, caused by the irregular alignment of the boundary wall of St. Patrick's College opposite the Cat & Cage pub. The pub stands forward of the prevailing building line on the east side of the road and the college boundary wall projected towards the road. This caused a reduction of up to 5.2 metres, compared with the general width of Swords Road north and south of the pinch point. As a result of this narrowing, bus lanes both north- and south-bound were terminated on either side of the pinch point, which gave rise to significant delay for buses and contributed to traffic congestion in Drumcondra village.



View north, before works, showing projecting wall (left) and Cat & Cage (right)

To address this issue, the Authority provided funding to Dublin City Council to implement a package of measures including:

- setting back the college boundary wall;
- relocation of services above and below ground;
- a new pedestrian crossing to serve the new pedestrian entrance to St. Patrick's College, with a further additional pedestrian crossing at the Skylon Hotel;
- provision of bus lanes north- and south-bound and new bus stops; and
- upgraded facilities for cyclists and pedestrians.

This resulted in continuous bus, cycling and pedestrian facilities on this key radial transport corridor through Drumcondra village, which serves north county Dublin and Dublin Airport.



View north, after works, showing realigned wall and continuous bus lanes

As a result of the works, benefits have accrued to all modes of transport, including:

- Significant time savings and improved reliability for buses;
- A safer and more legible environment for pedestrians and cyclists; and
- Improved flow of general traffic.



View south, showing new crossing and carriageway layout



## Dublin City Council – Pedestrian Crossing at Charlemont Bridge – €146,774

The junction of Ranelagh Road/Charlemont Street (north-south) and Canal Road/Grand Parade (east-west) is a key component of the walking and cycling networks in south Dublin city. As demonstrated by Dublin City Council's annual Canal Cordon Count, Ranelagh Road carries significant numbers of pedestrians and cyclists to and from the city over Charlemont Bridge every day. The orbital route along the southern bank of the Grand Canal also carries high volumes of pedestrians and cyclists.

As pedestrian facilities at this junction were not adequate to cater for the existing demand, the council developed a scheme to provide full pedestrian crossings (including provision for Mobility-Impaired/Disabled users) on three of the four arms of the junction, with minor junction layout alterations for cyclists approaching from the west.



View north before works (Canal Road to left, Charlemont Bridge ahead)

Since the scheme was completed, the impact on vehicular traffic has been minimal, and legibility and safety for all users has improved. The key outcome was the significant enhancement of a previously sub-standard pedestrian environment, despite the relatively small scale of the works.



View from east with new cycle lane



New crossing of Grand Parade

## **Dublin City Council – Dorset Street Improvements – €412,346**

Dorset Street is an important route in the Dublin city centre transport network. In recent years the carriageway surface had deteriorated to such an extent that it was deemed to have reached the end of its life. The safety of cyclists and the comfort of bus users could no longer be ensured or enhanced by means of localised surface repairs, so a programme of resurfacing and, where necessary, reconstruction was implemented along the corridor in 2015, including resetting sunken utility covers and road marking renewal.

This has resulted in improvements to both the Quality of Service for cycling and the journey experience for bus passengers, and has protected this important sustainable transport asset.



Dorset Street carriageway showing poor state of repair



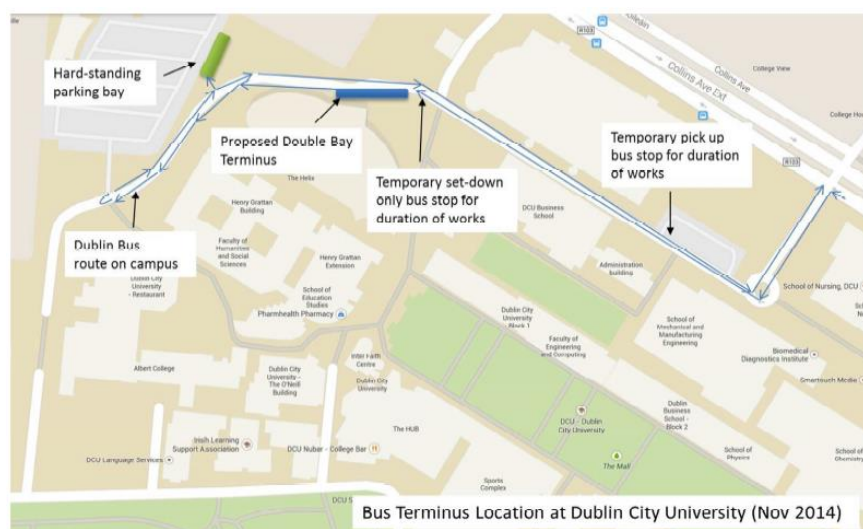
New carriageway surface and road markings

## Dublin City University – Bus Terminus – €66,684

The main DCU campus in Glasnevin attracts over 14,000 people daily. The sole means of public transport access is bus, primarily the Dublin Bus network on the surrounding road network. In order to enhance public transport accessibility to the campus, DCU applied to the Authority to construct an on-campus bus terminus to cater for a re-routed Dublin Bus service.



This terminus consisted of a double bus bay, a shelter, new hard standing and Real Time Passenger Information signage. It is located on the internal campus circulation road adjacent to the Helix building, which is regularly used for events attracting a public audience, and within a short walk of many of the busiest campus buildings. This location reduces the walk time by roughly five minutes for the majority of users.



Bus terminus location within campus (Collins Avenue to north)



## **Dublin City University – Cycle Parking (Phase 1) – €30,713**

A Travel Survey conducted by DCU in November 2013 identified that 10% of daily arrivals at the main Glasnevin campus were by bicycle. Cycle parking facilities on this campus, which were not generally of a high quality, were over-subscribed (only 375 spaces existed in 2014), with the result that casual cycle parking was widespread across the campus. In addition, bicycle theft had been identified as a significant deterrent to cycling.

As almost 50% of the survey respondents lived within 5km of the campus, cycling was seen as a key element of the university mobility plan. In addition, improved parking facilities were identified by non-cyclists as critical factors in influencing their decision to consider cycling instead of their current mode of transport.

DCU applied to the Authority for funding to upgrade the existing cycle parking and to construct new cycle parking at a number of locations around the main campus. All parking would be Sheffield stands located close to building entrances and other key trip attractors.



New cycle parking at building entrance

DCU has reported that the expanded cycle parking facilities have been full since they were installed. The university is currently constructing Phase 2 of its cycle parking programme across the three discrete university campuses in Dublin 9.



Casual parking on main DCU campus prior to cycle parking upgrade

## **Dun Laoghaire-Rathdown County Council – Frascati Road/Temple Hill Route Improvement Scheme – €5,048,261**

The Frascati Road-Temple Hill corridor is an important radial route for a range of transport modes, connecting a large sector of south-east Co. Dublin to the city centre and the Dublin 2/4 business district. This scheme, which comprises four major junctions – Mount Merrion Avenue, Newtown Avenue, Monkstown Road and Newtownpark Avenue – and a range of smaller junctions and all intermediate links, consisted of the end-to-end upgrade of facilities for pedestrians, cyclists, buses and general traffic, including:

- Provision of continuous cycle lane/track along both sides of the road along the full length of the scheme;
- Modifications to all existing signalised junctions along the route including drainage, kerbing, lighting, signals and surfacing;
- Planing and replacement of the existing surface course along the route with some sections of new carriageway construction where existing islands/medians have been amended.
- New and upgraded road markings and new signage along the carriageway; and
- Landscaping works in the central median and back of footpaths.



Frascati Road, after works, facing west (Rock Hill and Blackrock Park on right)



Frascati Road, after works, facing north (George's Avenue on left)

The route is now a high-quality sustainable transport corridor designed to cater for current demand and future growth in cycling.



Revised Frascati Road-Carysfort Avenue junction, facing south



Revised layout on Newtownpark Avenue, at Stradbroke Road-Temple Hill junction



## **Dun Laoghaire Rathdown County Council – Bus Stop Modification Works – N11 Booterstown Stop northbound – €79,530**

Cycling facilities on the N11 have been upgraded with the support of the Authority in recent years. As part of this investment programme, improvements to certain bus stops to comply with the guidance in the National Cycle Manual were carried out in 2015.

The design of the northbound bus stop opposite Booterstown Avenue was considered sub-optimal for buses and cyclists. Previously, the bus stop had been embayed, which caused an interruption to the parallel cycle track. It was redesigned as an inline bus stop with a continuous cycle track running alongside. This improved legibility of the route for cyclists, improved sight lines for bus drivers, and reduced the risk of conflict between cyclists and both buses and bus passengers.



Bus bay prior to works



Inline bus stop with continuous cycle track and passenger set-down area

**Dun Laoghaire Rathdown County Council – Toucan Crossing, Stillorgan Park Road –  
€71,082**

An uncontrolled crossing existed at this point on Stillorgan Park Avenue for a number of years. Owing to its location in a suburban residential area with a number of schools in the vicinity, including a training centre for adults with special needs, the upgrade of the crossing to a fully signalised toucan crossing was approved by the Authority. As well as providing a safer crossing for pedestrians and cyclists, the raised table calms downhill traffic approaching the mini-roundabout from Stillorgan village.



Uncontrolled crossing, prior to construction works



Signalised toucan crossing with raised table

## **Kildare County Council – Bus Hub, Market Square, Naas – €541,177**

Co-fund with Kildare County Council. Substantially Complete 2015 (€450,099 in 2015).

Market Square in Naas represents a high frequency bus stop location with over one hundred buses stopping in the square every day. The objective of this scheme was to improve access to public transport facilities and specifically to:

- Provide safe and attractive infrastructure to encourage greater use of sustainable travel modes for trips to work, education and for recreation;
- Provide for improved bus set down facilities and waiting environment for public transport users;
- Make the best use of the available space to accommodate the needs of bus uses, pedestrians, cyclists, loading, taxi and parking bay activities, as well as general through traffic; and
- Improve the public realm of the area to an appropriate standard in keeping with the character of the Naas Town Centre and its location within an Architectural Conservation Area.



Northbound bus stop, Market Square/Main Street, Naas



Southbound bus stop, Market Square/Main Street, Naas



The new scheme includes:

- Redesigned bus stopping areas
- Improved waiting areas
- Upgraded pedestrian crossings
- New bus shelters
- Real time passenger information signs
- Seating, planting, cycle stands
- Transport/tourism information panels
- Paving and street furniture improvements

Kildare County Council co-funded the scheme. In particular, Kildare County Council funded the non-transport elements of the scheme including planting, lighting and other public realm improvements.



Market Square, looking south

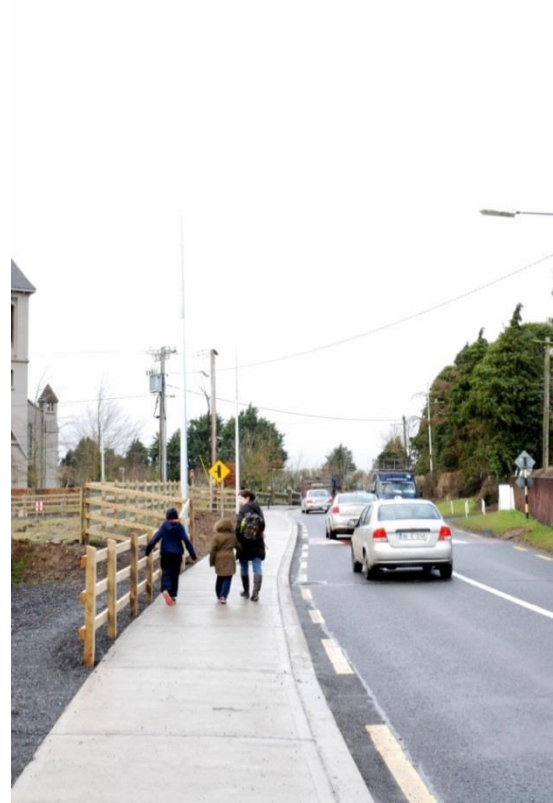


### **Kildare County Council – Footpath, Caragh Village– €107,010**

This scheme provided for the realignment of a junction layout to improve pedestrian access to the local church, school, playing fields and commercial premises. The project includes 200 metres of new footpath. This scheme is a minor project and is an example of a safety scheme funded under the Sustainable Transport Measures Grants Programme.



Before



After

The project provides a safe route to the local school and church.

## **Meath County Council – Main Street Refurbishment Scheme, Ashbourne – €3,465,792**

The urban form of Ashbourne, which is the second largest town in Co. Meath, is defined by a linear main street. A number of residential estates are connected to the main street. The residents of these estates rely on the main street for the majority of their journeys to education, employment, retail and public transport, so the Council developed a major refurbishment project to provide better facilities for all modes of transport along this key spine route.

The refurbishment works involved the construction of facilities for cyclists and pedestrians, junction modifications, a new road surface and bus stop facilities. The scheme runs from Dunnes Stores in the north of the town centre southwards as far as the schools and housing area at the Deerpark junction.



New cycle facilities and bus stop on approach to Ashbourne town centre

Works Carried out include:

- New cycle lanes on Frederick Street and Bridge Street;
- New pedestrian crossing on Frederick Street;
- New upgraded traffic signals at Frederick Street;
- New bus shelters at existing bus stops on Frederick Street;
- Full footpath reconstruction with new high quality paving and kerbs;
- Footpath widening on Frederick Street;
- Dished footpaths and tactile paving at crossing locations;
- Reduced traffic lane widths (3m wide lanes) to encourage low traffic speeds;
- New carriageway surface course;
- New designated parking bays, including mobility-impaired spaces, taxi bay, and loading bay;
- New landscaping and street furniture;
- New public lighting; and
- Existing overhead services diverted underground.





Before

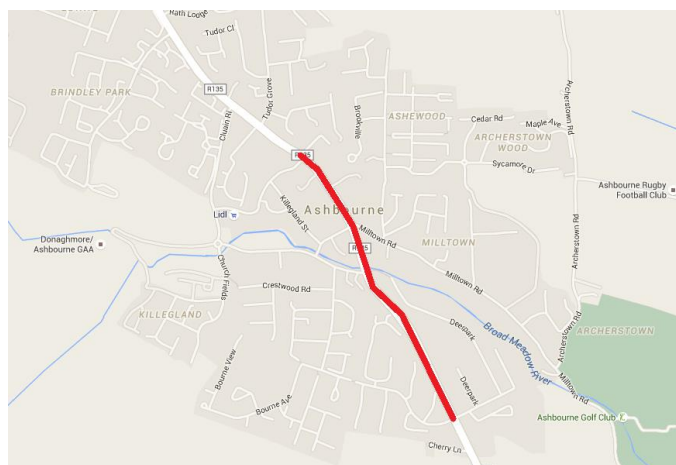


After

Bus stop on Frederick Street



New cycle tracks Ashbourne town centre



Extent of scheme

## **South Dublin County Council – N4 Cycle Route (Primary Route 6, Chapelizod to Palmerstown) – €677,920**

Cycling between Lucan and Chapelizod/Dublin city centre previously required the use of the N4, which was a relatively hostile environment for most cyclists. Cycling in the opposite direction, from the city towards Lucan, was equally hostile, and there was no direct connection between Chapelizod and Lucan as the eastbound slip road from the N4 was one-way for a section.

As the route between Lucan and Chapelizod had been identified in the *GDA Cycle Network Plan* (NTA, 2013) as a primary cycle route, the Council and the Authority developed a scheme to provide a short section of shared two-way cycle track and footpath along the N4 slip road. This facility was connected to existing bus lanes and cycle lanes to the east and to the Old Lucan Road through Palmerstown village to the west. In addition to providing the shared track and upgrading the surface of the truncated Old Lucan Road adjacent to Stewart's Hospital, a limestone wall and appropriate landscaping were provided on the boundary of the hospital.



Shared 2 way cycle/pedestrian facilities



Entrance to Stewart's Hospital



## Wicklow County Council – Killincarrig ‘Double Roundabout’ – €333,137

The ‘double roundabout’ at Killincarrig, Co. Wicklow, is an important junction in the road network between Delgany and Greystones and caters for a range of transport modes. The layout presented difficulties for pedestrians and cyclists due primarily to the speed of traffic through the junction. In addition, despite its design as two linked roundabouts, priority for vehicles was not clear and this lack of legibility led to a greater risk of conflict for all users. In light of these issues, the scheme was funded by the Authority as a Safety scheme.



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Original site layout

A number of options were examined, including changing the junctions from roundabouts to T-junctions. However, it was agreed that revised roundabouts were the appropriate solution, using the Principles of Sustainable Safety tailored to the specific needs of the site. This resulted in the centre islands of the roundabouts, which previously had been painted circles, being upgraded to fully constructed islands, with narrow carriageways, new pedestrian crossings and wide, shared areas for walking and cycling completing the scheme layout.

The construction of the centre islands of the roundabouts was particularly challenging due to the geometry and slope of the location. The design of the islands includes an over-run area to accommodate large vehicles and buses, constructed of pre-cast modular units that were proposed by the Council and installed in November 2015. On a recent site visit, it was apparent that driver behaviour has significantly improved. Double decker buses, coaches, refuse trucks, rigid trucks and articulated lorries had no issues negotiating the roundabouts.



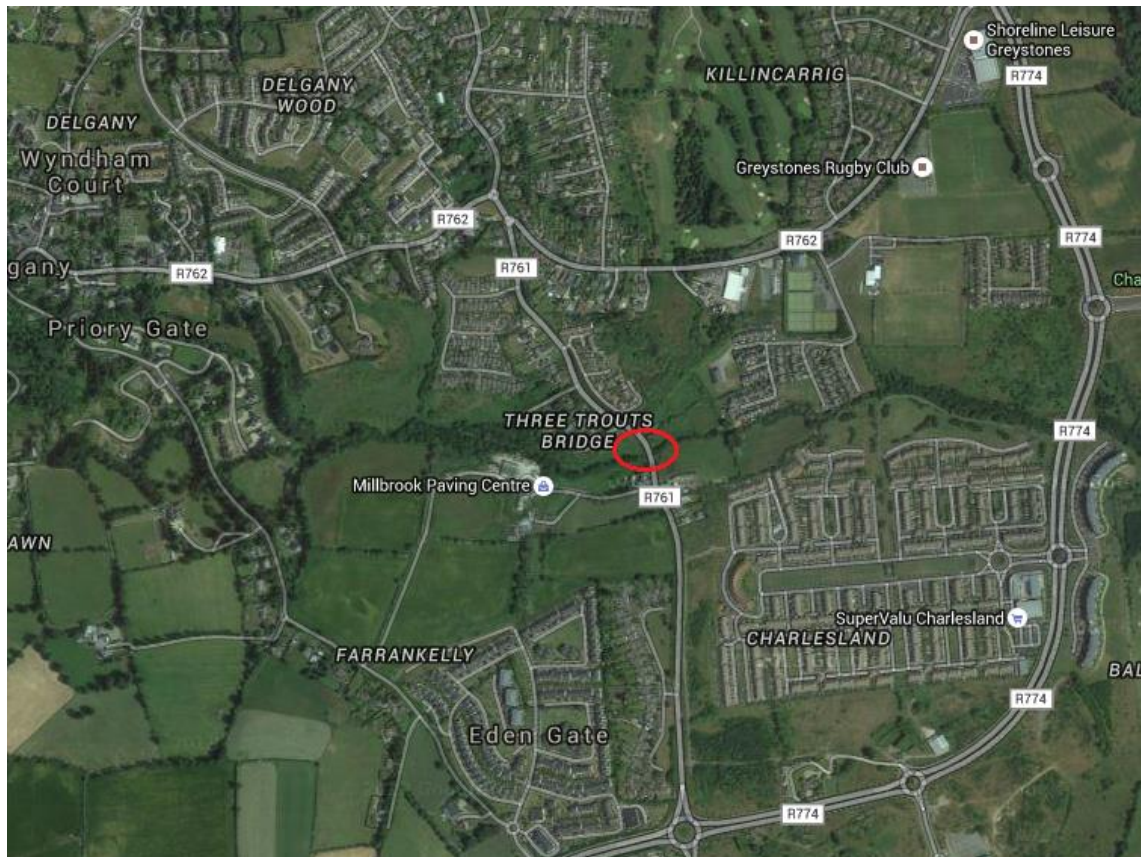


New full construction centre island with modular over-run area (northern roundabout)

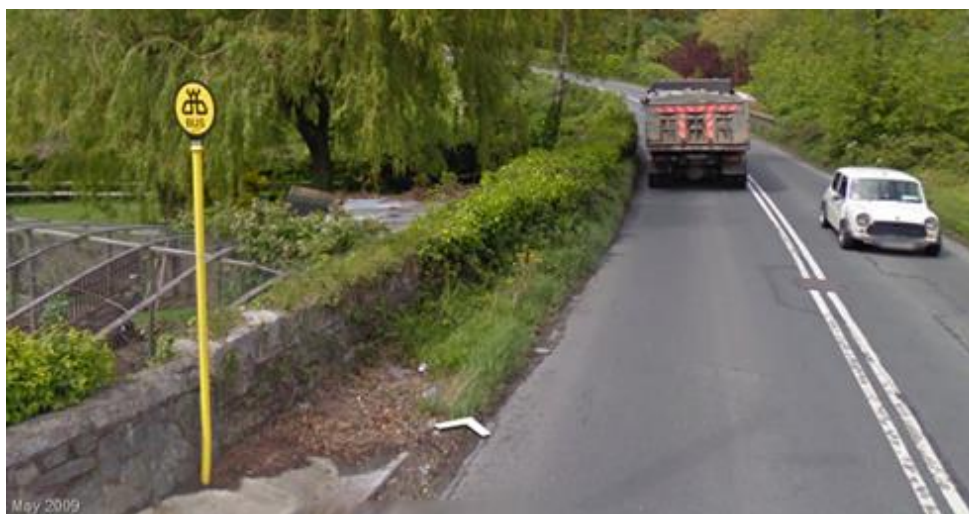


## Wicklow County Council – Three Trouts Bridge – €851,298 (2015 - €438,931)

Despite its relatively rural setting, Three Trouts Bridge to the south of Greystones is a critical link in the local pedestrian network, providing access between residential areas and to bus stops. Prior to the development of this scheme the bridge carried one lane of traffic in each direction; but the footpaths to the north and south terminated at either side of the bridge. The project comprises a new bridge structure adjoining the existing bridge over the Three Trouts Stream and upgraded footpath links on the approaches.



© Google



R761 with bus stop and no footpath, prior to works





New footpath and parapet wall over the bridge

The new structure was a significant construction challenge due to the nature of the site. The new structure is a pre-cast beam with concrete abutments to the east side of the original bridge. Substantial reinforcements to the embankments were also required.



Significant earthworks and construction to accommodate new bridge deck

# **Appendix C**

## **List of Projects**

Agency	Project Name	2015 Outturn
DCC	Marlborough St Bridge - Gordon Rowland	637,871
	Royal Canal Premium Cycle Route Phase 2 - Sheriff Street to North Strand Road	160,420
	Newcomen Bridge Cycle Project (Widening)	142,531
	Royal Canal Premium Cycle Route Phase 3 - North Strand Road to Phibsborough Road	55,056
	Liffey Cycle Route	75,990
	S2S Cycle/Walkway Scheme - Bull Road to Causeway Road	2,332,900
	The Point Junction Improvement Scheme	43,582
	Swords Road Phase 1 (Cat & Cage)	1,314,149
	Grand Canal Premium Cycle Route – Blackhorse to Portobello	64,968
	Heuston to Chapelizod Greenway	95,107
	Thomas Street / James' Street QBC	231,778
	Clontarf to City Centre Cycle Scheme	153,683
	Dodder cyclist and pedestrian improvements	182,688
	City Centre High Density Cycle Parking Strategy	94,953
	St. Stephen's Green Area Traffic Management	956,254
	Lincoln Place, Merrion Street and Westland Row Area Traffic Management	236,221
	Pearse Street and College Street Area Traffic Management	181,865
	Camden Street, Wexford Street and Aungier Street Area Traffic Management	249,870
	AVL Bus Priority Team Salaries & IT	230,411
	Royal Canal Cycle and Pedestrian Route - Phibsboro to Ashtown	100,626
	Cycle Parking	50,210
	MID_Pedestrian Improvements - Winetavern Street at Christchurch (in front of The Arch)	4,036
	Chapelizod Bypass Bus Lane Widening - NTA Design Section Initially	1,300,752
	MID/Pedestrian Improvements - Charlemont Bridge at Canal Road	120,896
	Rialto Area Improvement Scheme	7,002
	Custom House Quay Contra Flow Bus Lane	32,946
	Strategic Traffic Study	120,842
	Cycle Network Design - Sandyford to City Centre Cycle Scheme (Clonskeagh to City Centre section)	250,000
	North City Centre Area Traffic Management.	1,502
	Carriageway Reconstruction and Overlay Project for Buses and Cyclists - Santry at Omni Park	287,475
	Safety Improvements to Grand Canal Cycle Scheme (Grand Canal St. to Portobello)	9,250
	Kilmainham Gaol Environs	729,756
	South Campshires Cycle Facilities	5,900

	DPTIM Civil Interventions	190,676
	10 City Centre to Terenure bus and cycle scheme	1,123
	Fibre Optic Garda HQ Link	71,407
	Dorset Street Improvements to the carriageway of the northbound (outbound) shared bus and cycle lane	412,346
	Cycle Safety measures (Multiple Locations)	89,846
	2015 Taxi Bye Law Review Implementation	1,435
	<b>DCC TOTAL</b>	<b>11,228,323</b>
DCU	Bus terminus, cycle parking and permeability study	66,684
	Cycle Parking	30,713
	<b>DCU TOTAL</b>	<b>97,397</b>
DIT	Funding for new and improved bike parking facility at DIT Kevin Street	4,234
	<b>DIT TOTAL</b>	<b>4,234</b>
DLRCC	Braemor Road Improvement Scheme	77,134
	Seapoint Avenue Cycle Link	14,836
	Wyattville Road improvements	6,027
	Frascati Road, Blackrock	4,046,015
	N11-Johnstown Road Junction improvements	36,315
	Stillorgan Park Cycle Route Improvements	71,082
	N11-Stillorgan Park Road to Brewery Road	25,377
	N11-Brewery Road to Foxrock (Whites Cross Works and Galloping Green)	21,086
	Blackrock to City Centre Cycle Scheme (Blackrock to Booterstown)	7,420
	Sandyford to City Centre Cycle Scheme (Sandyford to Clonskeagh)	31,480
	N11 QoS cycle works, Bus Stop Modifications, Surfacing works and Cycle Counters.	228,288
	Cycle Logo Markings	2,934
	Cycle Parking	4,178
	Pedestrian Crossing on Dundrum Road	53,371
	<b>DLRCC TOTAL</b>	<b>4,625,543</b>
FCC	Donabate Station to Malahide Station	8,855
	Holywell Distributor Road	700,000
	Ongar Cycle Network	75,685
	Royal Canal Cycle Route (Ashtown-12th Lock)	99,893
	S2S Extension Sutton to Malahide	17,351
	<b>FCC TOTAL</b>	<b>901,784</b>

KCC	Bus, Main Street, Naas	450,099
	Maynooth Rail Station to NUIM Corridor	256,657
	Dublin Road Corridor, Naas	35,693
	Royal Canal Cycling (Fingal Border to Maynooth)	18,704
	GDA Cycle Network Design within Kildare towns, Scheme No1, No. 2, No.3	78,250
	Footpath Caragh Village	47,478
	Footpath Athgarvin Road Newbridge	76,997
	Improve Access to Confey School, Leixlip	15,762
	Castledermot -Footpath	101,880
	Bus Shelter Improvement Works	39,036
	Junction upgrade Kill (Entrance Earl's Court)	3,075
	<b>KCC TOTAL</b>	<b>1,123,631</b>
MCC	Drogheda - Navan -Trim Cycleway	20,000
	Navan: Cantilevered bridge provision for cyclists and pedestrians	61,290
	Ashbourne: Main Street Refurbishment Scheme	1,960,000
	GDA Cycle Network Design, Scheme 1 - Proudstown Road to Trim Road - Navan	24,523
	GDA Cycle Network Design, Scheme 2 - Fairgreen to Johnstown - Navan	9,743
	GDA Cycle Network Design, Scheme 3 - Ratoath Town Network	91,575
	Bus Facilities - Navan	111,198
	Pedestrian Crossing, Duleek	6,851
	Pedestrian Permeability Schemes -Trim	6,730
	Town Centre Improvements - Kells	16
	Traffic Calming - Trim	370
	Pedestrian Crossing, Summerhill	1,351
	Footpath, Dunderry	9,482
	Navan Town Centre Traffic Management	96,824
	Donnycarney Safety crossing	77,995
	Laytown footpath	11,063
	Trim safety footpath	49,509
	Dunboyne Cycle Network	73,601
	School Safety Scheme on Cockhill Road Stamullen, Co. Meath	74,999
	<b>MCC TOTAL</b>	<b>2,687,120</b>
SDCC	Tallaght to Templeogue cycle route	1,942,928
	Dodder Regional cycle route	58,956
	Tallaght to Ballyboden walking and cycling route	19,340
	St Enda's/Grange Road to Loretto Park/Nutgrove Permeability Project	157,331
	Willsbrook Road Cycle Facilities, Lucan	559,737



	N81 cycling, walking and bus facilities (N82 to Fortunestown Road)	42,958
	Pedestrian and cycle bridge at Dodder Valley (ref. Tallaght to Ballyboden route)	56,985
	Walkinstown Roundabout Trial of proposed interventions	104,424
	Monastery road walking route	239,170
	Tallaght to Liffey Valley Cycle Scheme	100,112
	N4 to City Centre Cycle Scheme (Celbridge Road Junction to Palmerstown)	441,567
	Green School cluster works - Ballyboden	36,146
	Sustainable Transport Improvements Newcastle/Hillcrest	29,773
	<b>SDCC TOTAL</b>	<b>3,789,427</b>
UCD	N11 Nova pedestrian and Cycle Access	8,610
	<b>UCD TOTAL</b>	<b>8,610</b>
WCC	Glendalough Traffic Control Measures	13,960
	Three Trouts Footpath Improvements	438,931
	Boghall Road Cycle Route	148,090
	Strand Road Cycle Track	325,885
	Bray DART Interchange	25,186
	PAR to Station Pedestrian Access	21,741
	PAR to Fitzwilliam Square Cycle Route	93,000
	Main Street/Vale Road/Wexford Road Junction	120,579
	Beech Road Footbridge	37,792
	Double Roundabout Junction Killincarrig	40,000
	Enniskerry Traffic Plan	23,861
	Killarney Road Cycle Route (CN1)	46,603
	Vevay Road Cycle Route (CN2)	30,092
	Ashford School Improvements	70,000
	Footpath to GAA Grounds Kilcoole	115,000
	<b>WCC TOTAL</b>	<b>1,550,720</b>
	<b>TOTAL STMG DRAWDOWN 2015</b>	<b>26,016,789</b>