



**An Roinn Iompair  
Turasóireachta agus Spóirt**

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**Department of Transport,  
Tourism and Sport**

**Investing In Our Transport Future: A Strategic Framework for Investment in  
Land Transport**

**Background Paper Sixteen**

**Future Roads Needs**

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## **SFILT Paper on Future Road Needs**

The paper sets out the current position on a number of issues (both funding and policy) which relate to national, regional and local roads. The main issues are categorised under the following headings:

1. Cost of Maintaining the Road Network
2. Surveys on the Condition of the Road Network
3. NRA Strategic Review of National Roads 2010 to 2025
4. M50 Demand Management Report
5. Proposed changes to Grant Allocations in respect of Regional & Local Roads
6. Conclusion

### **1. Cost of Maintaining the Road Network**

The current estimate of the cost of maintaining the network is of the order of €550 million to €600 million per annum for regional and local roads, including local authority expenditure. This does not include for addressing any backlog of work which is probably of the order of €2.7 billion to €3.0 billion.

The NRA estimates that €255 million (excluding work done by PPPs) is needed per annum for national roads and that this will increase to €350 million in the early 2020s as motorway surfaces need renewal.

Approximate lengths for various road categories:

<b>Category</b>	<b>Approximate Length (km)</b>	<b>Percentage of Network</b>
National Primary	2,750	2.8
National Secondary	2,750	2.8
Regional	13,000	13.3
Local Primary	25,000	25.5
Local Secondary	33,000	33.7
Local Tertiary	21,500	21.9
<b>Total</b>	<b>98,000</b>	<b>100.0</b>

It is estimated that the national road network carries 45% of all traffic. It is also estimated that the regional road network carries 30% of all traffic. It should be noted that the latter figure is based on older data (2001). This means that 75% of all traffic is carried on 19% of the network.

## **2. Surveys on Condition Road Network**

The NRA has condition surveys carried out on national roads on an annual basis. The full length of the network in one direction is surveyed in the first year with the full network in the opposite direction of travel being surveyed in the second year. The direction of travel alternates in each subsequent year. The main parameters which are surveyed are:

- SCRIM which is an indication of micro-texture
- Texture Depth which is an indication of macro-texture
- IRI (International Roughness Index) which is an indication of comfort level when travelling along a road
- Left Rut Depth

The NRA are close to completing a standard template for reporting on the condition of the national road network. Based on the standard template they intend to issue annual updates to the DTTAS which will show if the state of the network is improving, standing still or deteriorating.

In 2011 a similar type of survey was carried out on all regional roads. In addition a visual rating was assigned to each 100 metre section of regional road and this was useful since it is likely to be a visual rating that will be used to reflect the condition of local roads as part of the MapRoad pavement management system. The 2011 Condition Study gave for the first time an assessment of the complete regional road network. The two previous condition studies were carried out on all regional and local roads (RLRs) but were sample surveys with about 9% of the RLR network being surveyed. On those occasions the percentage of the regional road network which was surveyed was approximately 15%.

The parameters which were measured in the 2004 and 2011 surveys on regional roads are given below:

2004 survey: Visual Rating & IRI on 15% of network

2011 survey: Visual Rating, IRI, SCRIM, Texture Depth, Left Rut Depth on 100% of the regional road network.

In both surveys sections of regional road were assigned to one of the following categories:

**Routine Maintenance:** No specific treatment is required except normal maintenance of a routine nature (e.g. verge cutting, drain cleaning, renewal of markings etc.).

**Restoration of Skid Resistance:** This covers the application of a surface treatment (usually surface dressing) to restore adequate skid resistance.

**Surface Restoration:** This covers the improvement of transverse and longitudinal drainage, pothole patching, restoration of road width and strengthening of road edges as well as localised surface dressing of the repaired areas.

**Road Reconstruction:** This covers the reconstruction of existing road pavements, overlaying of existing road pavements with bound or unbound materials and completing with a surface course. It also includes for the raising of road levels to prevent flooding and the provision of drainage.

The following table sets out the percentages of regional roads which were assigned to each of these categories in 2004 and 2011. It also shows that the road reconstruction category percentage has reduced between 2004 and 2011. However the percentage of regional road requiring surface dressing treatment has increased.

	<b>Remedial Work Type Percentages</b>			
<b>Year</b>	<b>Routine Maintenance</b>	<b>Restore Skid Resistance</b>	<b>Surface Restoration</b>	<b>Road Reconstruction</b>
<b>2004</b>	25	29	22	24
<b>2011</b>	22	39	24	15

### **3. NRA Strategic Review of National Roads 2010 to 2025**

This document was issued by the NRA in November 2010. It sets out the current position in relation to national roads and identifies what is required in terms of network development in the future. It points out that many of the future roads will be single carriageway roads rather than motorways or dual-carriageways as has been the case in respect of the Major Inter Urban routes. The report is divided into sections as follows:

- Section A describes the economic and transport context for national roads
- Section B sets out the current status of the network and what needs to be done to bring the remainder of the network up to an acceptable standard.

- Section C addresses the management of the network including asset management, network rehabilitation, network operations, traffic management, service areas and planning control.
- Section D presents the basic information and analysis for investment planning in national roads. The multi-annual funding plan, PPP and tolling, and the NRA's prioritisation policy are presented.
- Section E presents conclusions and sets out the NRA's plan for national roads for 2010 to 2016 and also longer term planning post 2016.

#### **4. M50 Demand Management Report**

Between 2006 and 2010 significant capacity enhancement works were carried out on the M50 at a cost of almost €1 billion. These works included the removal of the M50 Westlink Toll Barriers, the provision of additional traffic lanes along much to the M50 and the installation of free-flow junctions at the busiest interchanges.

An element of the planning approval secured for these works required the publication of a scheme of specific demand management measures:

*“Condition 7 – A scheme of specific demand management measures for the M50 motorway corridor shall be published by the relevant road authorities not later than three years after the M50 Motorway Upgrade Scheme has been completed.”*

The upgrade scheme was completed in September 2010 and therefore the publication is due in September 2013.

The report prepared on behalf of the NRA and the 4 Dublin Local Authorities will examine options to maintain traffic levels at the optimum and to defer congestion for as long as possible. There are no plans to develop the M50 any further apart from very small initiatives so the report will examine options which will include:

- Traffic Control (to include incident detection, variable speed limits and travel information systems)

- Fiscal Measures (to include road pricing – based on shorter and more expensive multi-point tolling, access charging, destination car park charges)
- Smarter Travel (land use policies, travel planning, IT and workforce mobility issues)

The NRA intends to provide a draft report to the Department by the end of April 2013 and to have the report finalised by the deadline set by An Bord Pleanála. It is probable that one of the main recommendations will be to move to multi-point tolling on the M50.

## **5. Proposed changes to Grant Allocations in respect of Regional & Local Roads**

### **5.1 Background**

A Memorandum was brought to Government in February 2013 drawing attention to the need, due to the substantial cutbacks in funding, to prioritise the protection of the existing regional and local network and to end grant aid for new road improvement and development projects with effect from 2014.

While local authorities have statutory responsibility for maintaining and improving roads from their own resources with supplementary grant aid from the Exchequer, in practice local authorities have been relying on grant aid from the DTTAS to fund the bulk of roads expenditure. The overall ratio of funding in 2011 was 72% from the DTTAS and 28% from local authorities. There is considerable variation between authorities with their contributions ranging from as low as 7% to as high as 56% in 2011.

DTTAS funding for regional and local roads peaked in 2007 at €608 million and has fallen to €349 million in 2013. Funding for national roads also peaked in 2007 with capital and current expenditure (but excluding operational payments & administration) totalling €1,768 million. The equivalent amount for national roads in 2013 is €318 million. The estimated amount (€300 million) available in 2014 for regional and local roads will equate to what was allocated for them in 1999 while national roads will be at 1997 allocation figures (this is before any account is taken of construction price increases).

The road network in Ireland is very extensive by comparison to other European countries and therefore costly to maintain – the network at 98,000 kilometres is 2.5 times the EU average (in terms of kilometres per head of population).

## **5.2 Regional and Local Road Maintenance**

In order to protect the road network it is necessary to carry out the following works on an annual basis:

- (a) General maintenance and repairs including drainage works. Such works are usually carried out by county councils under their Discretionary Grant.
- (b) Provide a surface seal (surface dressing) on at least 5% of the rural road network (this corresponds to approximately 4,400 km). In 2013 only 53% of this target will be achieved under the Restoration Maintenance Grant.
- (c) Strengthen at least 5% of the rural road network (approximately 4,400 km). In 2013 only 38% of this target will be achieved under the Restoration Improvement Grant.

Since 2009 when €150m was cut from the regional and local road grants the required lengths for maintenance & rehabilitation have not been achieved. Lower funding followed by two severe winters has taken its toll on the road network. While the effects of underfunding in maintenance may not show up for a few years it eventually does so and at that stage roads can deteriorate quite rapidly and can be very expensive to repair. We are now at that point, hence there is a need to focus all available monies on road surfaces and foundations (road pavements) and not to cater for road widening, road realignment or the construction of new roads.

## **5.3 Improving Efficiencies in the Management of Regional & Local Roads**

In order to maximise efficiencies in respect of road works the Department has capped overheads which may be charged against grants, allows no mark-up on machinery yard plant or on items from stores and tracks unit rates and outputs. It has introduced a pavement management system (MapRoad) which continues to be developed in order to:

- (a) provide an on-line road opening system which will be common to all local authorities
- (b) provide a link to the financial 'Aggresso' system
- (c) streamline processes including approvals and the recording of outputs



(d) support audit and review requirements

(e) act as a shared service for local authorities, the Department and the National Roads Authority

#### **5.4 Implications of Cuts**

Funding available in 2013 is €28 million less than last year. In order to manage this cut, there have been significant cuts across various grant categories, including restoration improvement and restoration maintenance which impact directly on the maintenance of the network. Expenditure under the strategic and specific grant headings has been maintained at a certain level in order to honour commitments already in place.

As regards the outlook for 2014, the projected funding allocation will be approximately half of the 2007 grant allocation. In order to achieve grant reductions in recent years two programmes have been substantially reduced: strategic grants from €87 million to €23 million and specific grants from over €100 million to €32 million.

On the basis of current budget projections it has been decided that the specific grant and strategic grant programmes will have to be terminated with effect from 2014 in order to maximise the funding available for repair and strengthening work. Since some of the works done under specific grants are very important bridge repair works, it will be necessary to replace the specific grant stream of funding with a much smaller bridge repair programme. A small contingency fund will be kept for a very limited number of high priority 'specials'.

In addition on the current spending side, the urban block grants will also end with effect from 2014 (except for Dublin, Cork and Galway).

While in different circumstances it might be preferable for the Department to concentrate its grants on network improvement and development schemes, the reason for prioritising funding of repair and renewal work is the fact that outputs are so far short of the levels required to maintain the network.

Appendix 1 sets out some typical Strategic schemes for which funding will be discontinued in the future. The stage at which the listed projects will be halted is also set out. There are a total of 17 Strategic projects in 2013, of which 10 are at design stage, 2 are at land acquisition stage, 4 are at construction stage and 1 relates to a final payment.

Appendix 2 sets the types of Specific Grant projects which it will not be possible to fund in the future. **It should be noted that commitments have been given in respect of the projects listed and that these will be honoured.** Overall in 2013 a total of 219 Specific grant applications were received and 145 projects were approved (of which 47 were small bridge repair works and which cost about €2.7 million). It is noted that increasingly, in recent years local authorities have been submitting Specific Grant projects which would facilitate industry and also new schools.

## 6. Conclusions

- It is clear that the monies required to maintain the regional & local road network is less than what is currently available. This has led to the decision to restructure the grants and to start no new specific & strategic grant schemes from 2014 onwards.
- Priority should be given to maintaining the national & regional road network which carries 75% of all traffic
- The Demand Management report for the M50 is likely to recommend multi-point tolling on the M50 in order to avoid congestion in the future
- Should extra monies become available the first priority should be the maintenance of the existing road network. Subsequent priorities should include the following:
  - safety related improvement schemes
  - schemes which address significant bottlenecks
  - schemes which facilitate foreign direct investment & local industry
  - schemes which facilitate education, forestry, fisheries, urban regeneration and tourism.

## Appendix 1

**Strategic schemes for which funding is not available to progress the schemes beyond the stages set out below:**

- Coonagh / Knockalisheen scheme in Moyross, Limerick which supports regeneration. Land will be purchased but construction cannot be funded.
- Improved Millennium Park access in Naas through the construction of a new interchange on the M7. It would improve access to allow for full development of Kerry Group site and also other industries in this business park - design will be completed but construction cannot be funded. It does not affect the current development phase by Kerry Group which was previously announced.
- Athenry Northern Ring road which supports an IDA Industrial Park – current phase of the ring road is being completed but further phases will be put on hold.
- Cork Science & Innovation Park which aims to create a hub for high end jobs (promoted by Cork County Council in conjunction with CIT and UCC) – design will be completed but construction cannot be funded.

## Appendix 2

Types of Specific Grant schemes which it will not be possible to fund in the future (**however those listed below are all committed & will be honoured**):

- Project to upgrade the Borris Road in Portlaoise to provide an adequate carriageway, footpaths & cycle tracks on this road serving 2 recently opened secondary schools.
- Garrycastle Bridge in Athlone to improve access across the railway to the IDA Industrial Park & to the ESB and also the Athlone Institute of Technology.

- Pottery Road project in Dun Laoghaire to facilitate expansion at the Amgen Plant.
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- Hollyhill Road project in Cork to facilitate expansion at Apple.
- Killala Streets Improvement works (Co. Mayo) – scheme to improve access to fishing port and the fish processing factory and to allow vehicles to avoid town centre.
- Kenmare Eastern Relief road (Co. Kerry) – scheme to facilitate industry and tourism by relieving traffic congestion.