

DARLINGTON BOROUGH COUNCIL

INTERIM HIGHWAY MAINTENANCE PLAN

May 2005

1. Introduction

- 1.1. This Interim Plan sets out the existing practices and standards in relation to the maintenance of roads, footways, cycleways and verges in Darlington. It identifies the levels of service provision that we normally aim to provide. However, it should be noted that there may be occasions when it is appropriate to depart from these standards where circumstances dictate. Future reviews of the Highway Maintenance Plan (HMP) will take account of whether any departures require amendment to policy.
- 1.2. In July 2001, a new Code of Practice for Maintenance Management was published. Endorsed by the (then) Department of the Environment, Transport & Regions, the Local Government Association, County Surveyors Society and many other national bodies, it provides guidance on highway maintenance good practice, standards of service and performance monitoring. It promoted a best value culture and placed particular emphasis on improving dialogue with the local community. It also recognised that authorities will have differing needs, resources and priorities, and that they may develop maintenance regimes which best suit their particular circumstances. As with other highway authorities, Darlington Borough Council embraced the new Code, reviewed its practices, and implemented changes where necessary.
- 1.3. Essentially, in relation to roads, footways, cycleways and verges, our standards and practices follow the guidance in the Code. Any differences of significance are described in this Interim Plan.
- 1.4. The practices and standards described in this plan have either developed over a number of years or are a response to more recent events such as changes in legislation or national guidelines.
- 1.5. Later this year Central Government have indicated that an updated Code of Practice for Highway Maintenance will be published. This will form the basis of Darlington's HMP. However, rather than wait for the full HMP, it is important that the Council's highway maintenance practices and standards are documented in an interim plan in order to facilitate the efficient and effective maintenance of the highway network and to maximise the Council's ability to address and, where necessary, defend insurance cases in the courts.

2. Road Network

- 2.1. The highway Act 1980 requires the Council to maintain a schedule of the highway network. This contains details on the route number, name, description and total mileage and is updated for changes on a regular basis. Routes are numbered using the following classification:
 - A Principal Classified
 - B Classified important
 - C Classified
 - Unc Unclassified
- 2.2. The Council is not responsible for the management or maintenance of Trunk Roads, this is the task of the Highways Agency.
- 2.3. In total therefore, the Council is responsible for the management of Class A, B, C and Unc roads. The A roads are designated the Principal roads and, collectively, B, C and Unc roads comprise the Non-Principal part of the network. Capital funding

for road maintenance made available by government through the Local Transport Plan is on the basis of the Principal and Non-Principal roads. The lengths of road in Darlington under each classification are as follows:

| Classification | Total (Kms) |
|------------------------------|--------------------|
| Principal | 59 |
| Non-Principal made up of: | 473 |
| B Class | 29 |
| C Class | 108 |
| Unclassified | 336 |
| Total All Roads | 532 |

Table 1 – Length of Road Network by Classification

3. Carriageway & Footway Hierarchy

- 3.1. The roads making up the highway network have differing roles depending on their relative importance as communication links and the levels of traffic flow, as indicated in Table 2. The role of footways and cycleways will not necessarily reflect road hierarchy, for example, a footway or cycleway adjoining a strategic road may have very little pedestrian or cycle use and therefore a lower category. It is important that roads, footways and cycle tracks are maintained according to their functional importance. This is necessary to ensure a defence to show that the various elements forming the highway are kept in reasonable repair taking into account the type of traffic using it and standard of maintenance undertaken appropriate to its use and level of public safety. The principle of maintaining the highway according to its importance is given legal sanction by Section 58 of the Highways Act 1980.
- 3.2. The hierarchy for roads and footways currently used is based on the 2001 Code of Good Practice. It is updated on a regular basis to take account of changes in road lengths and traffic types & volumes. The hierarchy has been used in setting survey and inspection regimes.

3.3. Carriageway Hierarchy

As mentioned above, the carriageway hierarchy is mentioned in Table 2.

| Cat No | Hierarchy Description | Type of Road General Description | Detailed Description | Responsibility |
|---------------|------------------------------|---|--|--|
| 1 | Motorway | Limited access motorway regulations apply | Routes for fast moving long distance traffic. Fully grade separated and restrictions on use. | Highways Agency – A1(M) |
| 2 | Strategic Route | Trunk and some Principal 'A' roads between Primary Destinations | Routes for fast moving long distance traffic with little frontage access or pedestrian traffic. Speed limits are usually in excess of 40 mph and there are few junctions. Pedestrian crossings are either segregated or controlled and parked vehicles are generally prohibited. | Highways Agency – TRA66 Darlington BC – A67 A68 A167 A1150 |
| 3a | Main Distributor | Major Urban Network and Inter-Primary Links. Short-medium distance traffic | Routes between Strategic Routes and linking urban centres to the strategic network with limited frontage access. In urban areas speed limits are usually 40 mph or less, parking may be restricted at peak times and there are positive measures for pedestrian safety. | Darlington BC – not defined |
| 3b | Secondary Distributor | Classified Roads (B and C Class) and unclassified urban bus routes carrying local traffic with frontage access and frequent junctions | In rural areas these roads link the larger villages and HGV generators to the Strategic and Main Distributor Network. In built-up areas these roads have 30 mph speed limits and very high levels of pedestrian activity with some crossing facilities including zebra crossings. On street parking is generally unrestricted except for safety reasons. | Darlington BC – not defined |
| 4a | Link Road | Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions | In rural areas these roads link the smaller villages to the distributor roads. They are of varying width and not always capable of carrying two-way traffic. In urban areas they are residential or industrial inter-connecting roads with 30 mph speed limits random pedestrian movements and uncontrolled parking. | Darlington BC – not defined |
| 4b | Local Access Road | Roads serving limited numbers of properties carrying only access traffic | In rural areas these roads serve small settlements and provide access to individual properties and land. They are often only single lane width and unsuitable for HGVs. In urban areas they are often residential loop roads or culs de sac. | Darlington BC – not defined |

Table 2 – Carriageway Hierarchy

3.4. Footway Hierarchy

3.4.1. Footway maintenance standards, as with carriageway maintenance standards, will not necessarily be reflected by the road classification, this being determined by pedestrian usage and not the importance of the road in the network. Local factors such as the age and distribution of the population, the proximity of schools, or other establishments attracting higher than normal numbers of pedestrians to the area should also be taken into account. The four broad maintenance categories set out in the Code for footways have been adopted.

| Cat No | Hierarchy Description | Detailed Description | Comments |
|--------|-------------------------|--|--------------------|
| 1a | Prestige Walking Zone | Prestige Areas in towns and cities with exceptionally high usage, such as Princess Street in Edinburgh and Oxford Street in London. | None in Darlington |
| 1 | Primary Walking Route | Busy urban shopping and business areas and main pedestrian routes linking interchanges between different modes of transport, such as railways and underground stations, and bus stops etc. | Town Centre area |
| 2 | Secondary Walking Route | Medium usage routes through local areas feeding into primary routes, local shopping centres, large schools and industrial centres etc. | Not defined ❶ |
| 3 | Link Footway | Linking local access footways through urban areas and busy rural footways. | Not defined ❶ |
| 4 | Local Access Footway | Footways associated with low usage, short estate roads to the main routes and culs de sac. | Not defined ❶ |

❶ Have not been defined in this document but have been identified in the UKPMS database

Table 3 – Footway Hierarchy

3.5. The assignment of a footway to a particular category within the hierarchy is a matter for local discretion. However, the following issues have been taken into consideration.

- Pedestrian volume
- Usage and proposed usage
- Accident and other risk assessment
- Age and type of footway (eg old flagged footways may require more frequent inspection than newly laid)
- Character and traffic use of adjoining carriageway

3.6. The footway hierarchy also has regard to the network of 'housing footways', serving housing estates which are unadopted as public highways but maintained to the same standards as the adopted footway network using the same inspection regime.

3.7. Cycle Hierarchy

3.7.1. The following are the categories of cycle facility used by the Council and as set out in the 2001 Code of Practice.

| Category | Description |
|----------|--|
| A | Cycle lane forming part of the carriageway, commonly 1.5 metre strip adjacent to the nearside kerb. Cycle gaps at road closure point (exemptions for cycle access). |
| B | Cycle track, a route for cyclists not contiguous with the public footway or carriageway. Shared cycle/pedestrian paths, either segregated by a white line or other physical segregation, or unsegregated. |
| C | Cycle trails, leisure routes through open spaces. These are not necessarily the responsibility of the highway authority. |

Table 4 – Cycle Hierarchy

3.8. Hierarchies are dynamic and need to respond to changes in network characteristics and use. Accordingly the maintenance policies, practices and standards will also be updated to reflect the actual use of the network.

4. Highway Maintenance Works

4.1. It is generally recognised that there are six types of highway maintenance as indicated below and as set out in the 2001 Code:

- Reactive – responding to inspections, complaints or emergencies.
- Routine – regular consistent schedule for patching, cleaning, landscape, maintenance and other activities.
- Programmed – flexibly planned schemes primarily of resurfacing, reconditioning or reconstruction
- Regulatory – inspecting and regulating the activities of others.
- Winter Service.
- Weather and other emergencies.

4.2. This Interim Plan deals with the first three types. Within each type there are various categories of maintenance which contribute to the maintenance objectives of safety, serviceability and sustainability. These are summarised below:

4.2.1. Reactive

- All elements – sign and make safe for safety purposes.
- All elements – provide initial temporary repair for safety purposes.
- All elements – provide permanent repair for safety purposes.

4.2.2. Routine

- Carriageways, footways and cycleways – minor works and patching.
- Drainage Systems – cleansing and repair.
- Embankments and cuttings – stability.
- Landscaped areas and trees – management.
- Fences and barriers – repair.
- Traffic signs and bollards – cleansing and repair.
- Road markings and studs – replacement.
- Lighting installations – cleansing and repair.
- Bridges and Structures – cleansing and minor works.

4.2.3. Programmed

- Carriageways – minor works, resurfacing or reconstruction.
- Footways – minor works, resurfacing or reconstruction.
- Cycleways – minor works, resurfacing or reconstruction.

5. Survey and Inspection

The Council carries out two principal types of highway surveys as follows:

- Condition Surveys
- Safety Surveys

5.1. Condition Surveys

5.1.1. Coarse Visual Inspection (CVI)

The Coarse Visual Inspection or CVI, is intended to be a coarse, rapid survey, usually carried out from a slow-moving vehicle, that allows a large part of a highway authority's road network to be assessed each year.

CVI is the standard survey used to produce the Best Value Performance Indicators on the condition of local authorities' roads as required by the government, and which allows comparisons to be made between authorities on the basis of the overall condition of their carriageways.

A CVI survey is normally undertaken from a slow moving vehicle, using the 'simple' cross-section position method, where the carriageway is assessed as a whole, and kerbs, footways and cycle tracks are separately inspected for the left and the right of the carriageway.

5.1.2. Detailed Visual Inspection (DVI)

The Detailed Visual Inspection or DVI, is a more comprehensive survey than the CVI, with defects identified by a larger number of more detailed classifications. The DVI is a walked survey and is typically targeted at lengths already identified as defective and potentially in need of treatment

either by the CVI, or from some other sources of information.

The DVI records measured areas or lengths for a wider range of more closely defined defects (than for CVI), aggregated within short sub-sections, 20 metres in length by default. The defects collected for DVI are generally defined to a greater level of detail than CVI. In order to ensure broad consistency between the two surveys a single CVI defect is normally equivalent to a number of DVI defects.

It is intended that DVI is used where more detailed information is required to support and validate treatment decisions and scheme identification, supplementing CVI data; it may also be used on a cyclical basis for parts of the network where a more detailed routine visual assessment is required, or where drive surveys are not possible, ie on category 1 & 2 footways.

5.1.3. **Scanner Surveys**

Scanner Surveys (TTS) are high-speed surface condition surveys, by machines using laser beams. TTS is based on the Highways Agency TRACS Contract and adapted to be suitable for the local Principal Road Network. Concerns at the reliability of the manual CVI surveys gave rise to the proposals that they should be replaced by TTS for generating BVPIs on local roads in England. TTS will cover the range of defects that are relevant for network management purposes as well as the generation of BVPIs. TTS will collect the following data:

- 3-Dimensional Spatial Co-ordinates
- Road Geometry
- Survey Speed
- Longitudinal Profile
- Wheelpath Rutting
- Texture Profile
- Cracking

It is intended that traffic speed surveys will be further developed for use on local roads over the coming years with the intention of surveying the non-principal classified network from 2005/06 and unclassified road network from 2007/08.

5.1.4. **Sideway-force Coefficient Routine Investigation Machine (SCRIM)**

Sideway-force Coefficient Routine Investigation Machine (SCRIM) was introduced in the early 1970's to provide a method of measuring the wet skidding resistance of the running surface on road networks. The normal testing speed for the machine is 50 Km/h and skidding resistance values for the nearside wheel track only (usually the location of the lowest skidding resistance) are generally recorded as the average for each 10m section.

The principle of the machine is that a test wheel, mounted mid-machine in line with the nearside wheel track and angled at 20° to the direction of travel, is applied to the road surface under a known load. A controlled jet of water wets the road surface immediately in front of the test wheel, so that when the vehicle moves forward, the test wheel, whilst rotating freely in its own plane (thus allowing uniform wear on its test wheel tyre), slides in the forward direction on a wet road surface. The force generated by the

resistance to sliding is related to the wet skidding resistance of the road surface and measurement of this sideways component allows the sideways-force coefficient (SFC) to be calculated.

5.1.5. Deflectograph

The Deflectograph is used to assess the structural condition of flexible and flexible composite carriageways. It works on the principle that as a loaded wheel passes over the carriageway, the carriageway deflects and the size of the deflection is related to the strength of the pavement layers, foundation layers and sub-grade.

The Deflectograph is an automated deflection measurement system. It is a fully self-contained lorry-mounted system, whereby measurements of deflection are taken at approximately 4m intervals in both wheelpaths while the machine is in motion.

5.1.6. Safety Inspections

Safety inspections are required to support the Council's duty of care to users of the highway to ensure safe passage. The inspections are designed to identify hazardous defects, which create a danger or serious inconvenience to the public and therefore require immediate or urgent attention. The accurate and proper careful recording of conditions observed play a very important role in providing evidence that the highway authority has undertaken its statutory obligation to ensure that the highway is maintained in a safe condition. Inspections will be undertaken on the following basis:

- Details of existing frequencies as shown in the following table.

| Feature | Category | Ref | Frequency |
|----------|-------------------------|------|-----------|
| Roads | Strategic Route | 2 | 1 month |
| | Main Distributor | 3(a) | 1 month |
| | Secondary Distributor | 3(b) | 1 month |
| | Link Road | 4(a) | 3 months |
| | Local Access | 4(b) | 3 months |
| Footways | Primary Walking Route | 1 | 1 month |
| | Secondary Walking Route | 2 | 3 months |
| | Link Footway | 3 | 3 months |
| | Local Access Footway | 4 | 3 months |

Table 5 – Existing Frequencies

Note: Newly adopted footways and roads are inspected on an annual basis until they have been adopted for 10 years or their condition deteriorates and a more frequent inspection regime to the frequencies given above is appropriate.

- Hazardous defects in the road or footway will be defined using the guidance published by the Audit Commission on 'highway authorities definition of damage to roads' and included as Figure 4 in the Kindred Association's Report on Highways Liability Claims – The Issues (1998). These details are used as the basis for recognising a hazardous defect requiring prompt attention (Appendix 1 attached).

- Information about inspections will be accurately and properly recorded in a system, which can be audited and provides for the preparation of works orders for the urgent repair of hazardous defects.
- Appropriately trained staff will undertake inspections.

Defects to roads and footways can be reported by members of the public in a number of ways:

- By telephoning 01325 388799 (24 hours, seven days)
- By Emailing highways@darlington.gov.uk (24 hours, seven days)
- In writing to –
Development & Environment Department
Hopetown House
Brinkburn Road
Darlington
DL3 6ED
- In person at the Town Hall or Hopetown House

During safety inspections, all observed defects that provide for any degree of risk to users are recorded, irrespective of the likely level of response. The degree of deficiency in highway elements will be crucial in determining the nature and speed of response. Although some general guidance can be given on the likely risk associated with particular defects, on site judgement will always need to take account of particular circumstances. For example, the degree of risk from a pothole depends upon not merely its depth but also its surface area and location.

The Code of Practice defined defects in two categories, which correspond with those adopted in England by the Highways Agency in respect of trunk roads:

- Category 1 – Those that require prompt attention because they represent an immediate or imminent hazard or because there is a risk of short-term structural deterioration. This definition is consistent with the requirements for identifying defects in England under BVPI 105.
- Category 2 – All other defects.

Category 1 defects should be corrected or made safe at the time of Inspection, if reasonably practicable. In this context, making safe may constitute displaying warning notices, coning off or fencing off to protect the public from the defect. If it is not possible to correct or make safe the defect at the time of inspection, which will generally be the case, repairs of a permanent or temporary nature should be carried out as soon as possible and in any case within a period of 24 hours. Permanent repair should be carried out within 28 days.

Category 2 defects should be repaired within planned programmes of work, with priority depending on the degree of deficiency, traffic and site characteristics. These priorities should be considered, together with access requirements, other works upon the road network, traffic levels, and the need to minimise traffic management, in compiling the programmes of work.