

SCHEDULE OF ITEMS INCLUDED IN COSTS TO BE PAID BY THE TOLL  
COMPANY IN ACCORDANCE WITH CLAUSE 3.09

1. DESIGN AND SUPERVISION COSTS

- (a) The Council's direct costs and expenses in connection with the design and supervision of road works for all stages of design and construction.
- (b) Ove Arup & Partners fees, costs and expenses in connection with the design and supervision of:
  - The Liffey Valley Bridge
  - Luttrestown Road Bridge
  - Carpenterstown Road Bridge
  - Castleknock Road Bridge
- (c) All other design and supervision costs necessary for the satisfactory completion of the works.

2. OTHER COSTS

- (a) Site Investigation Costs.
- (b) Advertising Costs for the Motorway Scheme.
- (c) Archaeological Fees.

SCHEDULE OF MAINTENANCE TO BE UNDERTAKEN BY THE TOLL COMPANY IN  
ACCORDANCE WITH CLAUSE 5.B:

1. The Toll Company shall be responsible for maintaining all of the Toll Road and/or the Works in accordance with Clause 5.B except for the following:-
  - (a) The realigned Luttrellstown, Carpenterstown and Castleknock Roads.
  - (b) The pedestrian way along the existing Navan Road.
  - (c) Certain items in respect of the Castleknock Road Bridge which are detailed in Section 3.0 below.

Maintenance in relation to 1(a), 1(b), and 1(c) above is the responsibility of the Council.

2. The scope of maintenance items shall include:-

A. CIVIL WORKS:

(1) BOUNDARY WALLS, FENCES AND GATES:

Routine maintenance to be carried out once per year; accidental damage or damage due to vandalism to be repaired as it arises.

(2) DRAINAGE SYSTEMS (SURFACE AND FOUL):

All road gullies to be cleared when necessary; all piping and manhole silt traps to be cleared as required.

(3) CARRIAGEWAY PAVEMENT AND KERBS:

At five yearly intervals (or at such frequency as shall be determined by the Chief Engineer (Roads Department) of the Council), the properties of the pavement shall be measured by mechanical means as follows:-

- (3) (i) Skid Resistance - by SCRIM.
- (ii) Irregularity of the surface - by Bump Integrator.
- (ii) Pavement strength - by Dynaflect.

This measurement work may be carried out by An Foras Forbartha or such other body as may be acceptable to the Council. The carrying out of any remedial works which are recommended on the basis of such measurement shall be the responsibility of the Toll Company.

(4) ROAD MARKING, TRAFFIC SIGNING AND SAFETY FENCING:

Inspection to be carried out every year; routine maintenance to be carried out on an ongoing basis including replacement, repair of accidental damage etc. and all traffic signs to be washed at least twice a year or as required.

(5) PUBLIC LIGHTING AND HAZARD LIGHTING:

Inspection to be carried out every three months; routine maintenance to be carried out on an ongoing basis including bulb replacement etc.

(6) LANDSCAPING, SIDE SLOPES, VERGES, MEDIANS AND EMBANKMENTS:

Grass to be cut as required throughout the growing season; selective weed killer to be applied once per year in late spring; hedges and shrubs to be trimmed in March or October each year; run off damage to embankments and cuttings to be repaired as and when it arises.

(7) ACCIDENTS AND ACCIDENT DAMAGE:

All such damage shall be repaired as and when it arises.

(8) ROAD SWEEPING:

All carriageway pavements to be swept by mechanical sweeper (of sort approved by Dublin County Council) every fortnight.

B. ROUTINE MAINTENANCE INSPECTIONS STRUCTURES:

(i) LIFFEY VALLEY BRIDGE

| <u>ELEMENT</u> | <u>ACTION</u>  | <u>FREQUENCY</u>   |
|----------------|--|--|
| Abutments      | Inspect weep holes, drainage channels etc. to ensure that they are not blocked.                                | At least once a year. The inspection should preferably be just after the start of the wetter part of the year (October). |
|                | Inspect bearings for dirt on the slides, damage to the slides, damage to the seals and rusting. Note position. | Once a year.   |
|                | Maintain doors.  | Once a year.   |
|                | Check landscaping for signs of erosion especially under the deck shadow.                                       | Once a year.   |

| <u>ELEMENT</u>         | <u>ACTION</u>  | <u>FREQUENCY</u>  |
|------------------------|--|---|
| <u>Piers</u>           | Inspect drain down-pipes.  | As Abutments  |
|                        | Inspect metalwork of internal ladders etc. for rusting. Maintain doors.                                      |   |
|                        | Inspect bearings as above, note position.  | As Abutments  |
|                        | Examine lower part of pier for accidental damage from farm vehicles.   | Once a year   |
| <u>Super-structure</u> | Inspect expansion joint for damage, looseness and embedded stones.   | Once a year preferably in Spring.                               |
|                        | Inspect gullies and rod out pipe-work.   | Twice a year or more. Clear road gullies at least once a month. |
|                        | Check internal pipework for damage/leaks. Note any signs of active leakage inside the deck. Check weepholes. | Once a year.  |
|                        | Inspect the parapet railings for loose bolts damage etc.   | Once a year.  |

(ii) LUTTRELLSTOWN, CARPENTERSTOWN & CASTLEKNOCK BRIDGES

| <u>ELEMENT</u> | <u>ACTION</u>  | <u>FREQUENCY</u>   |
|----------------|--|--|
| Abutments      | Inspect weepholes, drainage channels etc. to ensure they are not blocked.  | At least once a year. The inspection should preferably be just after the start of the wetter part of the year (October). |
|                | Castleknock Bridge. Inspect bearings for dirt on the slides, damage to the seals and rusting. Maintain doors. Note position. | Once a year.   |

| <u>ELEMENT</u>                 | <u>ACTION</u>  | <u>FREQUENCY</u>  |
|--------------------------------|--|---|
|                                | Carpenterstown<br>Bridge and<br>Luttrellstown<br>Bridge. Inspect<br>bearings for dirt &<br>debris.                             | Once a year   |
| <u>PIERS</u>                   |  |   |
| <u>(CASTLEKNOCK<br/>BRIDGE</u> | Inspect drain down-<br>pipes.  | As Abutments  |
|                                | Inspect bearings as<br>above, note position  | As Abutments  |
|                                | Examine lower part of<br>pier for accidental<br>damage from vehicles   | Once a year.  |
| <u>Super-<br/>structure</u>    | Inspect expansion<br>joints for damage,<br>looseness & embedded<br>stones.   | Once a year<br>preferably in Spring.                                  |
|                                | Inspect gullies and<br>rod out pipework.   | Twice a year or more.<br>Clear road gullies<br>at least once a month. |
|                                | Check internal pipe-<br>work for damage,<br>leaks. Note any signs<br>of active leaking<br>inside the deck. Check<br>weepholes. | Once a year.  |
|                                | Inspect the parapet<br>railings for loose<br>bolts, damage etc.  | Once a year.  |

In the case of all four bridges, with the exception of the drainage system which will tend to be the most likely source of deterioration, most routine inspections can be carried out on a yearly basis.

In addition to the above, the following should also be carried out generally.

(iii) GENERAL:

1. LIGHTING: Inspection every 3 months routine maintenance otherwise, i.e. bulb replacement etc.

- |    |                         |   |
|----|-------------------------|---|
| 2. | Safety Barriers & Signs | Inspection every 3 months, routine maintenance otherwise (repair of accidental damage etc.)   |
| 3. | Road Markings           | Renew every 2 years.  |
| 4. | Embankments & slopes    | Cut grass as required throughout the growing season. Apply selective weed-killer once a year in late Spring. Trim hedges - March or October. Repair runoff damage to embankment and cuttings as and when it arises. |
| 5. | Fencing & Gates         | Routine maintenance once a year. Repair any vandal or accidental damage as it arises.   |

C. MAJOR STRUCTURAL INSPECTIONS:

The superstructures and piers will be subject to the normal slow deterioration of concrete structures so an inspection of all visible concrete surfaces every three years must be carried out. All defects shall be noted, photographed and recorded and repairs judged by Dublin County Council to be necessary shall be carried out immediately.

If there is an accident or any other incident which might affect any of the four bridges a full inspection of the structure shall take place.

The first major structural inspection shall take place not earlier than three months from the issuing of a certificate of virtual completion for each structure and not later than four months from the issuing of such certificate. For major structural inspections the use of suitable gantries and scaffolding or other supports for inspecting personnel will be necessary, and shall be provided and erected as required.

3. ITEMS OF MAINTENANCE WHICH ARE THE RESPONSIBILITY OF THE COUNCIL:

A. CASTLEKNOCK ROAD BRIDGE (PART 2):

- (1) Safety barrier and signs: To be inspected every three months; routine maintenance to be carried out on an on-going basis (i.e. repair of accidental damage etc.).

3. (2) Road Markings: Inspection to be carried out once per year; routine maintenance to be carried out on an ongoing basis including replacement, repair of accidental damage etc.
- (3) Drainage: All road gullies to be cleared once per month; all bridge piping to be cleared every six months (September and March).
- (4) Fencing and gates: Routine maintenance to be carried out once per year; accidental damage or damage arising from vandalism to be repaired as it occurs.