About TII

Transport Infrastructure Ireland (TII) is responsible for managing and improving the country’s national road and light rail networks.

About TII Publications

TII maintains an online suite of technical publications, which is managed through the TII Publications website. The contents of TII Publications is clearly split into ‘Standards’ and ‘Technical’ documentation. All documentation for implementation on TII schemes is collectively referred to as TII Publications (Standards), and all other documentation within the system is collectively referred to as TII Publications (Technical).

Document Attributes

Each document within TII Publications has a range of attributes associated with it, which allows for efficient access and retrieval of the document from the website. These attributes are also contained on the inside cover of each current document, for reference.

<table>
<thead>
<tr>
<th>TII Publication Title</th>
<th>Requirements for Measuring and Pricing of Fencing and Environmental Noise Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>TII Publication Number</td>
<td>CC-RMP-00300</td>
</tr>
<tr>
<td>Activity</td>
<td>Construction &amp; Commissioning (CC)</td>
</tr>
<tr>
<td>Document Set</td>
<td>Standards</td>
</tr>
<tr>
<td>Stream</td>
<td>Requirements for Measuring and Pricing (RMP)</td>
</tr>
<tr>
<td>Publication Date</td>
<td>January 2019</td>
</tr>
<tr>
<td>Document Number</td>
<td>00300</td>
</tr>
<tr>
<td>Historical Reference</td>
<td>Series MM 300</td>
</tr>
</tbody>
</table>

TII Publications Website

This document is part of the TII publications system all of which is available free of charge at [http://www.tiipublications.ie](http://www.tiipublications.ie). For more information on the TII Publications system or to access further TII Publications documentation, please refer to the TII Publications website.

TII Authorisation and Contact Details

This document has been authorised by the Director of Professional Services, Transport Infrastructure Ireland. For any further guidance on the TII Publications system, please contact the following:

Contact: Standards and Research Section, Transport Infrastructure Ireland
Postal Address: Parkgate Business Centre, Parkgate Street, Dublin 8, D08 DK10
Telephone: +353 1 646 3600
Email: infoPUBS@tii.ie
TII Publications

Activity: Construction & Commissioning (CC)
Stream: Requirements for Measuring and Pricing (RMP)
TII Publication Title: Requirements for Measuring and Pricing of Fencing and Environmental Noise Barriers
TII Publication Number: CC-RMP-00300
Publication Date: January 2019
Set: Standards

Contents

1. Fencing and Environmental Noise Barriers ................................................................. 1
2. References ....................................................................................................................... 6
Updates to TII Publications resulting in changes to
Requirements for Measuring and Pricing of Fencing and Environmental Noise Barriers CC-RMP-00300

Date: January 2019
Page No: 2-5
Section No: 4-17

Amendment Details:
Minor grammatical, punctuation and referencing errors amended.
Contents Table

1. Fencing and Environmental Noise Barriers ................................................................. 1

2. References ..................................................................................................................... 6
   2.1 TII Publications (Standards) References ................................................................. 6
1. Fencing and Environmental Noise Barriers

Fencing, Gates and Stiles

Units 1 The units of measurement shall be:
(i) fencing........ linear metre.
(ii) concrete footing to timber posts........ number.
(iii) gates, stiles........ number.

Measurement 2 Where a particular type of temporary fencing is specified in Appendix 3/1 by the Employer's Representative and shown on the drawings in the Contract it shall be measured. All other temporary fencing required by the Contractor in the discharge of his obligations under the Contract shall not be measured.

The measurement of fencing shall be the developed length along the centre line of the fence. The measurement of height of fencing shall be that stated in the Contract for the type of fence.

The measurement of width of gates shall be the distance between the outer edges of the stiles; the outer edges of hanging stiles in the case of double gates.

The measurement of height of gates shall be the distance between the upper surface of the top rail and the underside of the bottom rail.

Concrete footing to timber posts shall only be measured for those locations stated in Appendices 1/15 or 3/1 of the Specification.

Itemisation 3 Separate items shall be provided for fencing in accordance with Section 3 of CC-RMP-00010 paragraphs 3 and 4 and the following:

<table>
<thead>
<tr>
<th>Group</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
</tr>
<tr>
<td>II</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>III</td>
<td>1</td>
</tr>
</tbody>
</table>

Fencing 4 The items for fencing shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item Coverage
(a) excavation of acceptable material (as CC-RMP-00600 paragraphs 17 and 18);
(b) excavation of unacceptable material (as CC-RMP-00600 paragraph 19);
(c) excavation in Hard Material (as CC-RMP-00600 paragraph 23);
(d) trimming ground on the line of the fencing;
(e) in situ concrete (as CC-RMP-01700 paragraph 4);
(f) formwork (as CC-RMP-01700 paragraph 14);
(g) reinforcement (as CC-RMP-01700 paragraph 25);
(h) backfilling and compaction;
(i) disposal of material (as CC-RMP-00600 paragraph 39);
(j) preservation of timber;
(k) adjustment of fencing to a flowing alignment including additional length posts;
(l) fittings;
(m) joining to existing fencing, gates, hedges and walls;
(n) protective system (as CC-RMP-01900 paragraph 5);
(o) inspection and maintenance of fencing and gates;
(p) erection and removal of temporary fencing and gates;
(q) additional posts and rails over ditches;
(r) maintenance of access for owners, tenants and occupiers of adjoining land and patrolling gaps or openings;
(s) epoxy resin compound and mastic filler to posts fixed in sockets.

Concrete Footing to Timber Posts

The items for concrete footing to timber posts shall in accordance with the Preambles to Bill of Quantities General Directions include for:

**Item Coverage**

(a) excavation of acceptable material (as CC-RMP-00600 paragraphs 17 and 18);
(b) excavation of unacceptable material (as CC-RMP-00600 paragraph 19);
(c) excavation in Hard Material (as CC-RMP-00600 paragraph 23);
(d) in situ concrete (as CC-RMP-01700 paragraph 4);
(e) formwork (as CC-RMP-01700 paragraph 14);
(f) reinforcement (as CC-RMP-01700 paragraph 25);
(g) backfilling and compaction;
(h) disposal of material (as CC-RMP-00600 paragraph 39).

Gates and Stiles

The items for gates and stiles shall in accordance with the Preambles to Bill of Quantities General Directions include for:

**Item Coverage**

(a) excavation of acceptable material (as CC-RMP-00600 paragraphs 17 and 18);
(b) excavation of unacceptable material (as CC-RMP-00600 paragraph 19);
(c) excavation in Hard Material (as CC-RMP-00600 paragraph 23);
(d) trimming ground at entrance;
(e) in situ concrete (as CC-RMP-01700 paragraph 4);
(f) formwork (as CC-RMP-01700 paragraph 14);
(g) reinforcement (as CC-RMP-01700 paragraph 25);
(h) backfilling and compaction;
(i) disposal of material (as CC-RMP-00600 paragraph 39);
(j) preservation of timber;
(k) protective system (as CC-RMP-01900 paragraph 4);
(l) posts, fittings and furniture;
(m) joining to existing fencing, hedges and walls;
(n) in the case of new gates and stiles in existing fencing, hedges or walls, forming openings and making good;
(o) stock-proofing.

Remove from Store and Re-erect Fencing, Gates and Stiles

Units
The units of measurement shall be:
(i) remove from store and re-erect fencing ....... linear metre.
(ii) concrete footing to timber posts ....... number.
(iii) remove from store and re-erect gates and stiles ....... number.

Measurement
The measurement of re-erected fencing shall be the developed length along the centre line of the re-erected fencing. The measurement of height of fencing shall be that stated in the Contract for the type of fence.

The measurement of width of gates shall be the distance between the outer edges of the stiles; the outer edges of hanging stiles in the case of double gates.

The measurement of height of gates shall be the distance between the upper surface of the top rail and the underside of the bottom rail.

Concrete footing to timber posts shall only be measured for those locations stated in Appendices 1/15 or 3/1 of the Specification.

Itemisation
Separate items shall be provided for re-erected fencing, gates and stiles in accordance with Section 3 of CC-RMP-00010 paragraphs 3 and 4 and the following:

<table>
<thead>
<tr>
<th>Group</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1 Each type of re-erected fencing</td>
</tr>
<tr>
<td></td>
<td>2 Concrete footing to timber posts of each type of re-erected fencing</td>
</tr>
<tr>
<td></td>
<td>3 Each type of re-erected gate</td>
</tr>
<tr>
<td></td>
<td>4 Each type of re-erected stile</td>
</tr>
<tr>
<td>II</td>
<td>1 Re-erected fencing of different heights</td>
</tr>
<tr>
<td></td>
<td>2 Re-erected gates of different heights and widths</td>
</tr>
<tr>
<td>III</td>
<td>1 Re-erected painted fencing, gates or stiles</td>
</tr>
</tbody>
</table>

Remove from Store and Re-erect Fencing
The items for remove from store and re-erect fencing shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item Coverage
(a) loading, transporting from store, unloading and positioning for reerection;
(b) replacing items damaged during the foregoing operations;
(c) modification and new materials;
(d) painting existing painted items;
(e) fencing (as this document paragraph 4).
Concrete Footing to Timber Posts

Item Coverage
(a) concrete footing to timber posts (as this document paragraph 5).

Remove from Store and Re-erect Gates and Stiles

Item Coverage
(a) loading, transporting from store, unloading and positioning for re-erection;
(b) replacing items damaged during the foregoing operations;
(c) modification and new materials;
(d) painting existing painted items;
(e) gates and stiles (as this document paragraph 6).

Walls and Environmental Noise Barriers

Units
The unit of measurement shall be:
(i) walls ........... linear metre.
(ii) environmental noise barriers ........... linear metre.

Measurement
The measurement shall be the developed length along the centre line of the top of the wall or the environmental noise barrier.
The measurement of height of wall or environmental noise barrier shall be that stated in the Contract for the type of wall or environmental noise barrier.

Itemisation
Separate items shall be provided for walls and environmental noise barriers in accordance with Section 3 of CC-RMP-00010 paragraphs 3 and 4 and the following:

<table>
<thead>
<tr>
<th>Group</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Each type wall</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>II</td>
<td>Each type of environmental barrier</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>III</td>
<td>Walls of different heights</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>IV</td>
<td>Barriers of different heights</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>V</td>
<td>Curved on plan</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>VI</td>
<td>With battered face</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>V</td>
<td>Different finishes</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>VI</td>
<td>Different infills</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Walls
The items for walls shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item Coverage
(a) excavation of acceptable material (as CC-RMP-00600 paragraph 17 and 18);
(b) excavation of unacceptable material (as CC-RMP-00600 paragraph 19);
(c) excavation in Hard Material (as CC-RMP-00600 paragraph 23);
(d) in situ concrete (as CC-RMP-01700 paragraph 4);
(e) formwork (as CC-RMP-01700 paragraph 14);
(f) reinforcement (as CC-RMP-01700 paragraph 25);
(g) backfilling and compaction;
(h) disposal of material (as CC-RMP-00600 paragraph 39);
(i) preservation of timber;
(j) sample panels;
(k) protective system (as CC-RMP-01900 paragraph 5);
(l) forming pockets and casting in sockets;
(m) fixing to structures and other elements;
(n) accesses;
(o) gabion walling and mattresses (as CC-RMP-00600 paragraph 112);
(p) crib-walling (as CC-RMP-00600 paragraph 116);
(q) pre-cast members, slabs, segmental units, hinges, specially moulded blocks, copings, capping units, plinths, culverts and facing units (as CC-RMP-01700 paragraph 9).

Environmental Noise Barriers

17 The items for environmental noise barriers shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item Coverage

(a) excavation of acceptable material (as CC-RMP-00600 paragraph 17 and 18);
(b) excavation of unacceptable material (as CC-RMP-00600 paragraph 19);
(c) excavation in Hard Material (as CC-RMP-00600 paragraph 23);
(d) in situ concrete (as CC-RMP-01700 paragraph 4);
(e) formwork (as CC-RMP-01700 paragraph 14);
(f) reinforcement (as CC-RMP-01700 paragraph 25);
(g) backfilling and compaction;
(h) disposal of material (as CC-RMP-00600 paragraph 39);
(i) preservation of timber;
(j) trimming ground on the line of the environmental noise barrier;
(k) burying the bottom of the environmental noise barrier or gravel board;
(l) sample panels including safety barriers;
(m) gates, fittings and furniture;
(n) adjustment of the environmental barrier to a flowing alignment;
(o) protective system (as CC-RMP-01900 paragraph 5);
(p) forming pockets and casting in sockets;
(q) fixing to structures and other elements:
(r) accesses;
(s) filling.
2. References

2.1 TII Publications (Standards) References

CC-RMP-00010 Introduction to the Requirements for Measuring and Pricing

CC-RMP-00600 Requirements for Measuring and Pricing of Earthworks

CC-RMP-01700 Requirements for Measuring and Pricing of Structural Concrete

CC-RMP-01900 Requirements for Measuring and Pricing of Protection of Steelwork against Corrosion