



Bonneagar Iompair Éireann
Transport Infrastructure Ireland

TII Publications



Requirements for Measuring and Pricing of Waterproofing for Structures

CC-RMP-02000

October 2016

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.

TII Publication Title	<i>Requirements for Measuring and Pricing of Waterproofing for Structures</i>
TII Publication Number	<i>CC-RMP-02000</i>

Activity	<i>Construction & Commissioning (CC)</i>	Document Set	<i>Standards</i>
Stream	<i>Requirements for Measuring and Pricing (RMP)</i>	Publication Date	<i>October 2016</i>
Document Number	<i>02000</i>	Historical Reference	<i>Series MM 2000</i>

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>. 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 Waterproofing for Structures
TII Publication Number:	CC-RMP-02000
Publication Date:	October 2016
Set:	Standards

Contents

1. Waterproofing for Structures	1
2. References	4

1. Waterproofing for Structures

Waterproofing

- Units** **1** The unit of measurement shall be:
- (i) waterproofing.....square metre.
- Measurement** **2** The measurement shall be the area of surface covered by the waterproofing. No deduction shall be made for openings of 1 square metre or less.
- Itemisation** **3** Separate items shall be provided for waterproofing for structures in accordance with Section 3 of CC-RMP-00010, paragraphs 3 and 4 and the following:
- | Group | Feature | |
|--------------|----------------|---|
| I | 1 | Waterproofing |
| II | 1 | Different types |
| III | 1 | More than 300mm wide horizontal or at any inclination up to and including 30° to the horizontal |
| | 2 | More than 300mm wide at any inclination more than 30° up to and including 90° to the horizontal |
| | 3 | 300mm wide of less at any inclination |
| | 4 | Domed |
- Waterproofing** **4** The items for waterproofing shall in accordance with the Preambles to Bill of Quantities General Directions include for:
- Item Coverage**
- (a) preparing, cleaning and drying;
 - (b) priming and bonding agents;
 - (c) laying to cambers, falls and crowns;
 - (d) protective layers;
 - (e) additional protection;
 - (f) levelling courses;
 - (g) formwork (CC-RMP-01700 paragraph 14);
 - (h) additional basecourse or wearing course required as a result of the Contractors choice of waterproofing;
 - (i) nibs, angle fillets, external angles, mitres, stops and the like;
 - (j) sealing and making good at edges and chases, around interruptions and projections and up to abutting surfaces including cleaning and priming;
 - (k) cutting out and rectifying imperfections;
 - (l) joints and laps;
 - (m) preparation and supply of data sheets;
 - (n) preparing surfaces at gullies and the like;
 - (o) masking and other measures to protect adjacent untreated areas;

- (p) complying with any special requirements in respect of ambient conditions and for intervals between successive operations and applications.

Surface Impregnation and Coatings of Concrete

Unit	5	The unit of measurement shall be: (i) surface impregnation of concrete.....square metre. (ii) surface impregnation of coatings and concrete.....square metre.																		
Measurement	6	The measurement shall be the area of the surface to be impregnated of any width or at any inclination. No deduction shall be made for openings of 1 square metre or less. For plain surfaces the measurement shall be the area over the face of individual fillets, chamfers, splays, drips, rebates, recesses, grooves and the like of 100mm total girth or less when measured overall the faces of the concrete. For patterned surfaces the measurement shall be the flat undeveloped area and measured over the face of individual fillets, chamfers, splays, drips, rebates, recesses, grooves and the like, not forming part of the pattern and 100mm total girth or less when measured overall the faces of the concrete. Surfaces shall be measured once only, irrespective of the number of applications specified in the treatment.																		
Itemisation	7	Separate items shall be provided for surface impregnation of concrete in accordance with Section 3 of CC-RMP-00010, II paragraph 3 and 4 and the following: <table border="0" style="margin-left: 20px;"> <thead> <tr> <th style="text-align: left;">Group</th> <th style="text-align: left;">Feature</th> <th></th> </tr> </thead> <tbody> <tr> <td>I</td> <td>1</td> <td>Surface impregnation</td> </tr> <tr> <td></td> <td>2</td> <td>Surface impregnation and coatings of concrete</td> </tr> <tr> <td>II</td> <td>1</td> <td>Patterned surfaces</td> </tr> <tr> <td></td> <td>2</td> <td>Plain surfaces</td> </tr> <tr> <td>III</td> <td>1</td> <td>Different types of systems</td> </tr> </tbody> </table>	Group	Feature		I	1	Surface impregnation		2	Surface impregnation and coatings of concrete	II	1	Patterned surfaces		2	Plain surfaces	III	1	Different types of systems
Group	Feature																			
I	1	Surface impregnation																		
	2	Surface impregnation and coatings of concrete																		
II	1	Patterned surfaces																		
	2	Plain surfaces																		
III	1	Different types of systems																		
Surface Impregnation of Concrete and Surface Impregnation of Coatings and Concrete	8	The items for surface impregnation of concrete and surface impregnation and coatings of concrete shall in accordance with the Preambles to Bill of Quantities General Directions include for (a) preparing, cleaning and drying; (b) priming and bonding agents; (c) laying to cambers, falls and crowns; (d) protective layers; (e) protection from precipitation and spray; (f) masking and other measures to protect adjacent untreated materials; (g) disposal of materials (CC-RMP-00600 paragraph 39); (h) facilities and assistance for the Employer's inspection; (i) complying with any special requirements in respect of ambient conditions and for intervals between successive operations and applications; (j) preparation and supply of data sheets; (k) trial control panels; (l) removal of graffiti;																		

- (m) additional protection;
- (n) levelling courses;
- (o) formwork (CC-RMP-01700 paragraph 14);
- (p) additional basecourse or wearing course required as a result of the Contractor's choice of waterproofing;
- (q) nibs, angle fillets, external angles, mitres, stops and the like;
- (r) sealing and making good at edges and chases, around interruptions and projections and up to abutting surfaces including cleaning and priming.

Removal of Existing Waterproofing


Units	9	The unit of measurement shall be: (i) removal of existing waterproofingsquare metre																		
Measurement	10	The measurement of removal of existing waterproofing shall be the area of surface covered by the existing waterproofing. No deduction shall be made for openings of 1 square metre or less.																		
Itemisation	11	Separate items shall be provided for removal of existing waterproofing in accordance with Section 3 of CC-RMP-00010, paragraphs 3 and 4 and the following: <table border="0" style="margin-left: 20px;"> <thead> <tr> <th style="text-align: left;">Group</th> <th style="text-align: left;">Feature</th> <th></th> </tr> </thead> <tbody> <tr> <td>I</td> <td>1</td> <td>Removal of existing waterproofing</td> </tr> <tr> <td>II</td> <td>1</td> <td>More than 300mm wide horizontal or at any inclination up and including 30° to the horizontal</td> </tr> <tr> <td></td> <td>2</td> <td>More than 300mm wide at any inclination more than 30° up to and including 90° to the horizontal</td> </tr> <tr> <td></td> <td>3</td> <td>300mm wide or less at any inclination</td> </tr> <tr> <td></td> <td>4</td> <td>Domed</td> </tr> </tbody> </table>	Group	Feature		I	1	Removal of existing waterproofing	II	1	More than 300mm wide horizontal or at any inclination up and including 30° to the horizontal		2	More than 300mm wide at any inclination more than 30° up to and including 90° to the horizontal		3	300mm wide or less at any inclination		4	Domed
Group	Feature																			
I	1	Removal of existing waterproofing																		
II	1	More than 300mm wide horizontal or at any inclination up and including 30° to the horizontal																		
	2	More than 300mm wide at any inclination more than 30° up to and including 90° to the horizontal																		
	3	300mm wide or less at any inclination																		
	4	Domed																		
Removal of Existing Waterproofing	12	The items for removal of existing waterproofing shall in accordance with the Preamble to Bill of Quantities General Directions include for: <table border="0" style="margin-left: 20px;"> <tr> <td style="vertical-align: top;">Item coverage</td> <td>(a) marking out the areas of waterproofing to be removed;</td> </tr> <tr> <td></td> <td>(b) removal of protective layer;</td> </tr> <tr> <td></td> <td>(c) removal of primer;</td> </tr> <tr> <td></td> <td>(d) preparation of existing surfaces to receive new waterproofing;</td> </tr> <tr> <td></td> <td>(e) disposal of materials (CC-RMP-00600 paragraph 39);</td> </tr> <tr> <td></td> <td>(f) trials and approval tests;</td> </tr> <tr> <td></td> <td>(g) measures to prevent damage to existing surfaces.</td> </tr> </table>	Item coverage	(a) marking out the areas of waterproofing to be removed;		(b) removal of protective layer;		(c) removal of primer;		(d) preparation of existing surfaces to receive new waterproofing;		(e) disposal of materials (CC-RMP-00600 paragraph 39);		(f) trials and approval tests;		(g) measures to prevent damage to existing surfaces.				
Item coverage	(a) marking out the areas of waterproofing to be removed;																			
	(b) removal of protective layer;																			
	(c) removal of primer;																			
	(d) preparation of existing surfaces to receive new waterproofing;																			
	(e) disposal of materials (CC-RMP-00600 paragraph 39);																			
	(f) trials and approval tests;																			
	(g) measures to prevent damage to existing surfaces.																			

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 |





 Ionad Ghnó Gheata na Páirce,
Stráid Gheata na Páirce,
Baile Átha Cliath 8, D08 DK10, Éire

 Parkgate Business Centre,
Parkgate Street,
Dublin 8, D08 DK10, Ireland

 www.tii.ie

 info@tii.ie

 +353 (01) 646 3600

 +353 (01) 646 3601