

NRA ADDENDUM TO

BD 87/05

MAINTENANCE PAINTING OF STEELWORK

Standard BD 87/05 – Maintenance Painting of Steelwork – is applicable in Ireland with the following amendments:

GENERAL

Maintaining Agent shall be defined as the organisation responsible for the maintenance of a structure, typically the Local Authority, the National Roads Authority or their appointed agent. Many of the duties of the Maintaining Agent are typically contracted out to a separate Specialist Inspector, Design Organisation or the Painting Contractor as appropriate.

At several locations:

- For: “highway”
- Read: “road”
- For: “Overseeing Organisation”
- Read: “National Roads Authority”
- For: “Specification for Highway Works (MCHW)”
- Read: “NRA Specification for Road Works”

SPECIFIC

Chapter 1, Introduction

1. Page 1/1, Paragraph 1.3, first sentence:
Delete “Overseeing Organisation’s Specification for Highway Works, Manual of Contract Documents for Highway Works Volume 1 Series 5000 (MCHW 1.5000).” and replace with:
“National Roads Authority’s Specification for Road Works, Manual of Contract Documents for Road Works Volume 1 Series 1900 (MCDRW 1.1900).”
2. Page 1/1, Paragraph 1.3, line 12:
For: “(MCHW 1.100).”
Read: “(MCDRW 1.100).”
3. Page 1/1, Paragraph 1.6:
Delete Paragraph 1.6 and replace with:
“Not Used.”
4. Page 1/1, Paragraph 1.9, lines 5:
insert “and Painting Contractor” after “Maintaining Agent”
5. Page 1/2, Paragraph 1.10, line 11:
insert “and Painting Contractor” after “Maintaining Agent”
6. Page 1/2, Paragraph 1.10, lines 19& 20:
Delete “See for example, Reference 8 (Chapter 4)”
7. Page 1/2, delete Paragraph 1.11 and replace with:
“Consideration must be given to work restriction or special requirements for work to structures built on or over internationally protected sites (designated under European or Irish Laws) such as those described in the NRA Environmental Assessment and Construction Guidelines (EACG).”
8. Page 1/2, delete Paragraph 1.12 and replace with:
“As part of the Maintaining Agent and Painting Contractor’s risk assessment, the views of the Environmental Health Officer, the Health and Safety Authority, the appropriate Fisheries Board and other interested parties, must be considered. Practical guidance is given in ‘The Control of Substances Hazardous to Health Regulations 2002. Approved codes of practice and guidance’ published by the Health and Safety Executive (UK). Additionally, the information given in Series NG 1900 (MCRW 2.1900), must be considered when choosing a particular method or type of system to use.”

Chapter 2, Basic Consideration

9. Page 2/2, Paragraph 2.6,

For: “including the road delay user costs as outlined in the Economic Assessment of Road Maintenance Section 1 The QUADRO Manual (DMRB 14) and rail access or train delay costs.”

Read: “including the road delay user costs and rail access or train delay costs. Consequently, for use of this Standard in Ireland, the Maintaining Agent and/or his Design Organisation shall agree the most appropriate economic parameters with the National Roads Authority”

10. Page 2/2, Paragraph 2.7, line 7:

insert “and/or his Design Organisation” after “Maintaining Agent”

11. Page 2/2, Paragraph 2.12:

For: “Appendix 50/1 Form HA/P1 (Maintenance) Paint System Sheet, parts 1 to 9 in accordance with NG 5008 (MCHW 2.5000)”

Read: “Appendix 19/6 Form BE/P1 (Maintenance) Paint System Sheet, parts 1 to 9 in accordance with NG 1977 (MCDRW 2.1900)”

12. Page 2/3, Paragraph 2.14:

For: “Series NG 5000 (MCHW 2.5000)”

Read: “Series NG 1900 (MCDRW 2.1900)”

13. Page 2/3, Paragraph 2.15, first sentence:

For: “Appendix 50/1 Form HA/P1 (Maintenance) Paint System Sheet, parts 1 to 9, before any feasibility trials are undertaken (See Clause 5008 (MCHW 1.5000) and NG 5008 (MCHW 2.5000)).”

Read: “Appendix 19/6 Form BE/P1 (Maintenance) Paint System Sheet, parts 1 to 9, before any feasibility trials are undertaken (See Clause 1977 (MCDRW 1.1900) and NG 1977 (MCDRW 2.1900)).”

14. Page 2/3, Paragraph 2.16:

For: “All paints for each representative area must have a current British Board of Agrément HAPAS Roads and Bridges Certificates or equivalent. Copies of British Board of Agrément HAPAS Roads and Bridges Certificates for these paint products that have gained approval can be downloaded from the BBA website: www.bbacerts.co.uk.”

Read: “All paints for each representative area must have a current NSAI Agrément Certificate or equivalent.”

15. Page 2/4, Paragraph 2.25:

For: “Form HA/P4 ‘Purchaser’s Conditions of Order of Paint’

Read: “Form BE/P4 ‘Purchaser’s Conditions of Order of Paint’

16. Page 2/4, delete Paragraph 2.26 and replace with:

“Paint colour shall be agreed with the National Roads Authority.”

Chapter 3, Painting Inspection Firms

17. Page 3/6, Paragraph 3.7:

For: “‘The Control of Substances Hazardous to Health Regulations 2002. Approved codes of practice and guidance’.”

Read: “‘The Control of Substances Hazardous to Health Regulations 2002. Approved codes of practice and guidance’ published by the Health and Safety Executive (UK).”

Chapter 4, References

18. Page 4/1, Chapter 4 delete text and replace with the following:

4. REFERENCES

1. Design Manual for Roads and Bridges:

Volume 2, Section 4 Paints and Other Protective Coatings

BD 35 – Quality Assurance Scheme for Paints and Similar Protective Coatings (NRA DMRB 2.4.1)

Volume 3, Section 1 Inspection

BD 63 – Inspection of Highway Structures (NRA DMRB 3.1.4)

BA 63 – Inspection of Highway Structures (NRA DMRB 3.1.5)

Volume 3, Section 2 Inspection

BD 62 – As Built, Operational and Maintenance Records for Highway Structures (NRA DMRB 3.2.1)

2. Manual of Contract Documents for Road Works:

Volume 1: Specification for Road Works (MCDRW 1)

Volume 2: Notes for Guidance on the Specification for Road Works (MCDRW 2)

Volume 4: Method of Measurement for Road Works (MCDRW 4)

3. Irish and Other Standards

BS 2015: Glossary of paint and related terms

IS EN ISO 1513: Paints and varnishes. Examination and preparation of test samples

BS 4800: Schedule of paint colours for building purposes

IS EN ISO 8503-1: Preparation of steel substrates before application of paints and related products. Surface roughness characteristics of blast cleaned steel substrates – part 1. Specifications and definitions for ISO surface profile comparators for the assessment of abrasive blast-cleaned surfaces

IS EN ISO 4618: Paints and varnishes. Terms and conditions.

IS EN 22063: Metallic and other inorganic coatings. Thermal spraying. Zinc, aluminium and their alloys

IS EN ISO 12944-1: Paints and varnishes. Corrosion protection of steel substrates by protective paint systems. General introduction.

IS EN ISO 12944-7: Paints and varnishes. Corrosion protection of steel structures by protective paint systems. Execution and supervision of paintwork.

4. Regulations

Safety, Health and Welfare at Work Chemical Agents Regulations, 2001

Control of Substances Hazardous to Health Regulation 2002 (HSE)

The Control of Lead at Work Regulations 2002 (HSE)

5. Acts

Safety, Health and Welfare at Work Act (2005)

The Control of Lead at Work Regulations 2002 (HSE)

6. Miscellaneous

The Control of Substances Hazardous to Health Regulations 2002. Approved codes of practice and guidance. Fourth Edition – (HSE)

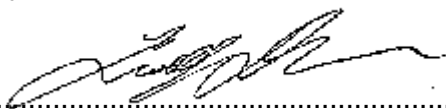
2010 Code of Practice - for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001

Chapter 5, Enquiries

19. Page 5/1, Chapter 5 delete text and replace with the following:

5. REFERENCES

All technical enquiries or comments on this Standard should be sent in writing to:
Head of Engineering
National Roads Authority
St Martin's House
Waterloo Road
Dublin 4



T. AHEARN
Head of Engineering

Chapter 6, Annex A, Form BE/P4

Page A/1, replace Form HA/P4 in BD 87/05 with Form BE/P4 (below).

Form BE/P4

PURCHASER'S CONDITIONS OF ORDER FOR PAINT

A.1. The paint(s) described below, subject to our Order No dated must comply with (paint manufacturer's name) a current IAB/BBA HAPAS Road and Bridges Certificates or equivalent and must have the properties stated in Form BE/P2 Paint Data Sheet completed by.....(paint manufacturer's name) or having been agreed in accordance to Departure..... (ID number). (Purchaser to complete under each heading of list.)

Item No.	Registered Desc.	Method of Application	Value of	X% (see A2.iic)
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A.2. In addition the following requirements must apply:

i. Keeping properties:

When stored in its original sealed container at a temperature between 5°C and 27°C, the paint must retain the original properties for 12 months from date of despatch. During this time the paint must not show hard settling, skinning or tendency to gel when tested in accordance with IS EN ISO 1513.

ii. Application properties:

a. Except for two-pack chemically cured and moisture cured paints, paint(s) must be capable of being applied satisfactorily on suitably prepared surfaces at steel and ambient temperatures above 5°C. Two-pack chemically cured and moisture cured paint(s) must be capable of being applied satisfactorily on suitable prepared surfaces at steel and ambient temperatures advised by the paint's manufacturer. Paints must be overcoatable within the time stated in Form BE/P2 referred to in Paragraph 1.

b. The paint(s) must be supplied ready for use at a viscosity entirely suitable for the method of application.

c. Sag resistance.

There must be no sagging of paints when applied at 130% of the specified maximum wet film thickness.

iii. Dry film properties:

The paint(s) must be capable of being applied by a competent operator, in accordance with the Data Sheet(s), such that:

a. Each coat must be generally free from surface defects, particularly cratering, pinholing, rivelling, sagging, bittiness, dry spray or excessive brush marks and cissing, as defined in BS 2015 and IS EN ISO 4618.

b. Each coat must have a uniform and even appearance and have satisfactory adhesion, checked in

accordance with IS EN ISO 4624, ASTM D4541-09 or IS EN 2063 Annex A method 1, before overcoating with the next coat in the system.

- c. Unless otherwise agreed, each coat of paint when applied at the minimum dry film thickness of the range stipulated in the Form HA/P2 must visually obliterate the substrate or the previous coat in a contrasting colour.
- d. Colour and gloss of the finish

The finish coat of paint applied to the structure shall must match a coated reference panel provided by the paint manufacturer. The panel must be tinplate 150mm x 100mm.

A.3. Containers

- i. Paint must be supplied in tins up to 25 litre capacity with completely removable lids.
- ii. The tins must be marked on the side. The marking must include the following:
 - Name of manufacturer
 - Registered description of the material (inc purpose, e.g. whether primer, undercoat or finish and also the colour)
 - Item No
 - Paint manufacturer's reference No
 - Batch No
 - Date of manufacture (as such or in coded form which must be communicated to the purchaser)

For (purchasing authority)

Signature:

Date:

Chapter 7, Annex B, Duties of Painting Inspectors

20. Page B/1, Paragraph B.1.2:
For: “assessments carried out in accordance with regulation 6 of the Control of Substances Hazardous to Health Regulations 2002 or regulation 6 of the Control of Substances Hazardous to Health Regulations (Northern Ireland) 2003, as appropriate to the Overseeing Organisation”
Read: “assessments carried out in accordance with regulation 4 of the Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001 (S.I. 619).”
Page B/1, Paragraph B.3.1:
For: “British harmonised standards”
Read: “Irish harmonised standards”
21. Page B/1, Paragraph B.4.3:
For: “to liaise with or notify the Health and Safety Executive, Environmental Health Officer, Water Authority or any other interested party”
Read: “to liaise with or notify the Health and Safety Authority, the Environmental Health Officer, the appropriate Fisheries Board or any other interested party”
22. Page B/1, Paragraph B.4.8:
For: “that the Form HA/P1 (Maintenance) Paint System Sheet has been accepted and that the Inspector and Contractor have identical copies of Forms HA/P2 Paint Data Sheets”
Read: “that the Form BE/P1 (Maintenance) Paint System Sheet has been accepted and that the Inspector and Contractor have identical copies of Forms BE/P2 Paint Data Sheets”
23. Page B/4, Paragraph B.7.2, Section vii a:
For: “for types of paints in series 5000 (MCHW 1.5000) sub-Clause 5012.13”
Read: “for types of paints in series 1900 (MCDRW 1.1900) sub-Clause 1981.13”
24. Page B/4, Paragraph B.7.3, Section i b:
For: “ASTM D4400-99”
Read: “ASTM D4400-99(2007)”
25. Page B/4, delete Paragraph B.7.3, Section iii, and replace with:
“Immediately after the ‘A’ samples are dispatched by the Contractor, record the despatch date in the complete Form BE/P3, Paint Sample Despatch List and send one copy to the testing authority and, together with Form BE/P1 (Maintenance) Paint System Sheet, one copy to the National Roads Authority. The Inspector must retain one copy of each Form BE/P3 as inspection records.”
26. Page B/5, Paragraph B.7.3, Section vi:
For: “given on Form HA/P3.”
Read: “given on Form BE/P3.”
27. Page B/5, delete Paragraph B.7.3, Section vii, and replace with:

“Immediately after the ‘B’ samples are dispatched by the Contractor, record the despatch date in the complete Form BE/P3 and send one copy to the testing authority, one copy to the National Roads Authority and retain one copy for the Inspector’s records.”

28. Page B/5, Paragraph B.8.10:

For: “Keep record copies of all Forms HA/P1 and HA/P3 sheets.”

Read: “Keep record copies of all Forms BE/P1 and BE/P3 sheets.”

29. Page B/5, delete Paragraph B.8.12 and replace with:

“On completion of the Works, forward one copy of the complete Form BE/P5, Maintenance Painting Scheme Summary Sheet, together with Form(s) BE/P1 to the National Roads Authority and, where required, one copy to the Maintaining Agent.

30. Page B/6, Paragraph B.9.2, Section ii:

For: “conforming to ISO 8503 Part 1.”

Read: “conforming to IS EN ISO 8503 Part 1”

Chapter 8, Annex C, Form BE/P5

31. Page C/1, replace Form HA/P5 in BD 87/05 with Form BE/P5 (below).

Form BE/P5

MAINTENANCE PAINTING SCHEME SUMMARY SHEET

[On completion of the Works, Inspector to forward one copy of completed Form BE/P5 with Forms BE/P1 to: National Roads Authority, Waterloo Road, Dublin 4.]

Contract Title.....
Structure No/Name.....

1. Date of original construction, where known.....
2. Date of last major repaint, where known.....
3. Category of failure of previous
Coating system (see definitions in NRA addendum to BD 87).....please tick

I	II	III	IV
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Details of previous protective system, where known:

Description	Item No.
Metal coat:.....
1 st Paint coat:.....
2 nd Paint coat:.....
3 rd Paint coat:.....
4 th Paint coat:.....
5 th Paint coat:.....
6 th Paint coat:.....

Total minimum dft of paint system **microns**

No. of stripe coats.....

5. Protective system for this Contract Type.....
6. Date of paint survey, where known.....
7. Date of feasibility trial, where known.....
8. Have 'A' or 'B' paint samples been sent for testing for this contract? **Yes** **No**

9. Has maintenance painting been major, i.e. affecting greater than 10% of the surface area of the steelwork?
10. If yes, has minor maintenance painting been undertaken since the last major repaint or, where this is the first major repaint since completion of construction?
11. Has work in the maintenance painting contract been carried out as part of a hybrid maintenance scheme, i.e. in conjunction with other highway or structure maintenance?
- If yes, please give a brief description of the other work.
12. Have carriageway/lane restrictions been specially required to carry out work in the maintenance painting contract?
13. Has work in the maintenance painting contract been carried out at night?
14. If you have any constructive comments to make regarding the maintenance painting specification, either general or in relation to work in this contract, please include them on a separate sheet and forward to the National Roads Authority with this form.

Inspecting Firm.....

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T AHERN
Head of Engineering