



Bonneagar Iompair Éireann
Transport Infrastructure Ireland

TII Publications



Strengthening of Concrete Bridge Supports Using Fibre Reinforced Polymers

DN-STR-03017
December 2002

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). This system replaces the NRA Design Manual for Roads and Bridges (NRA DMRB) and the NRA Manual of Contract Documents for Road Works (NRA MCDRW).

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. For migration of documents from the NRA and RPA to the new system, each current document was assigned with new outer front and rear covers. Apart from the covers, and inside cover pages, the documents contain the same information as previously within the NRA or RPA systems, including historical references such as those contained within NRA DMRB and NRA MCDRW.

Document Attributes

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| TII Publication Title | <i>Strengthening of Concrete Bridge Supports Using Fibre Reinforced Polymers</i> |
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NRA DMRB and MCDRW References

For all documents that existed within the NRA DMRB or the NRA MCDRW prior to the launch of TII Publications, the NRA document reference used previously is listed above under 'historical reference'. The TII Publication Number also shown above now supersedes this historical reference. All historical references within this document are deemed to be replaced by the TII Publication Number. For the equivalent TII Publication Number for all other historical references contained within this document, please refer to the TII Publications website.

NRA ADDENDUM TO

BD 84/02

STRENGTHENING OF CONCRETE BRIDGE SUPPORTS USING FIBRE REINFORCED POLYMERS

Standard BD 84/02 – Strengthening of Concrete Bridge Supports Using Fibre Reinforced Polymers – is applicable in Ireland with the following amendments:

GENERAL

1. The Standard provides specification requirements for use in public purchasing contracts. It does not lay down legislation requirements for products and materials used in road construction in Ireland.
2. At several locations:
For: “Overseeing Organisation”
Read: “National Roads Authority”.

SPECIFIC

1. Cover, Summary, line 2:
Delete: “the BD 48 (DMRB 3.4.7)”.
2. Contents Page, Contents, 4 Enquiries:
For: “4. Enquiries”
Read: “4. References and Enquiries”.
3. Page 1/1, Paragraph 1.2, line 3:
For: “The strengthening scheme shall comply with the requirements of BD 48 (DMRB 3.4.7).”
Read: “Requirements for strengthening shall be agreed with the National Roads Authority.”
4. Page 1/4, Paragraph 1.8, line 4:
For: “by BD 24 (DMRB 1.3.1)”
Read: “by NRA BD 24 (NRA DMRB 1.3.1).”
5. Page 2/1, Paragraph 2.4, line 1:
Delete “to resist the forces specified in BD 48”.
6. Page 2/2, Paragraph 2.11, line 1:
Delete “to BD 48”.

7. Page 3/2, Paragraph 3.7, line 7:
For: "UKAS standards"
Read: "Irish National Accreditation Board standards".
8. Page 4/1, Chapter 4:
Delete heading and text and replace with:

“4. REFERENCES AND ENQUIRIES

4.1 References

BS 5400: Steel, Concrete and Composite Bridges: Part 4: 1990: Code of Practice for Design of Concrete Bridges.

Denton, S.R., and Christie, T.J.C., "Design Charts for Strengthening Circular Concrete Columns Using FRP", *in preparation*.

NRA BD 24: Design of Concrete Road Bridges and Structures: Use of BS 5400 Part 4: 1990 (NRA DMRB 1.3.1).

4.2 Enquiries

All technical enquiries or comments on this Standard should be sent in writing to:

Head of Project Management and Engineering
National Roads Authority
St Martin's House
Waterloo Road
Dublin 4"



.....
E O'CONNOR
Head of Project Management and
Engineering



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