



ANNUAL REPORT 2019

NSAI TECHNICAL COMMITTEE – NSAI/TC 015

NATIONAL EUROCODES CONSULTATIVE
COMMITTEE

Contents

1	Chairman's Statement	3
2	Introduction	3
3	Scope of TC.....	4
4	Structure and Membership.....	5
4.1	Structure	5
4.2	Members.....	5
5	Summary of 2019 Activities.....	6
5.1	National	6
5.1.1	Meetings.....	6
5.2	International	6
5.2.1	Meetings.....	6
5.2.2	International Work.....	7
5.2.3	International Standards Reviewed	7
5.2.4	International Voting Results	7
5.3	Regulatory Development/Update	8
6	Irish Publications/Reviews	9
6.1	Publications.....	9
6.2	Reviews.....	9
7	Work programme for 2020 onwards.....	9
8	Additional Information	10

1 Chairman's Statement

The Eurocodes, an aspiration through the 1990's and 2000's, are now an established part of Structural Engineering design and construction both here in Ireland and throughout Europe including the UK. They are part of the harmonised standards complying with European Mandates and the Construction Products Regulations. They are referred to in the Technical Guidance Document (TGD) A of the Building Regulations and are the prima facie method of design compliance with those regulations. These standards are also used in many other parts of the world outside the EU, either directly or indirectly as a basis for the codes of different countries. Current UK policy is that they will retain using the Eurocodes after Brexit.

The current standards include Basis of Design, Actions on Structures and Geotechnical design as material independent standards while there are material standards for the most common building materials, concrete, steel, composite design, masonry, timber and aluminium.

In addition, horizontal groups, dealing with bridges and fire, connect across the Eurocode standards so that equivalent levels of safety apply right across the board.

The European committee for standardization's Technical Committee, CEN/TC 250 'Structural Eurocodes', and its sub-committees were tasked with revising the current Eurocodes standards to develop more user-friendly codes while also incorporating new performance requirements, design methods and advances in materials technology. This is resulting in a considerable change in the Eurocodes standards with codes such as EN1990, 'Basis of Design', being substantially re-written and updated which will affect the European construction industry as a whole. Further to this, new documents in the areas of Actions on structures, Geotechnical design, the assessment of existing structures and glass used as a structural material are also being developed.

The development of the 2nd generation of Eurocodes as mandated by the EC is now well underway. 2019 saw the CEN/TC 250 'Structural Eurocodes' mandated work reach two significant milestones. Firstly, by becoming one of the largest standardisation projects funded by the EC and EFTA with the total amount of funding provided to CEN/TC 250 to complete the work currently standing at €11.8 million. Secondly by achieving the launch of the first formal enquiry draft of prEN 1996-1-1 – Common rules for reinforced and unreinforced masonry structures as part of the revision on schedule.

The work of our Technical Committee, and its sub-committees is steadily increasing, monitoring the work of CEN/TC 250, along with other CEN technical committees involved in developing execution standards for construction. New volunteers are always welcome to apply to take part in our work.

I would like to thank all the members and convenors for their diligent efforts in this work to date, and I would also like to acknowledge the great support we receive from the NSAI.

Jim Mansfield

Chairman TC015

2 Introduction

The Eurocodes are a set of harmonised structural design codes for building and civil engineering works specifying how structural design should be conducted within the European Union and EFTA countries. The National Eurocodes Consultative Committee (NSAI/TC 015) was established in 2013 to monitor work being carried out on Eurocodes at European level. Since its establishment, the work of the committee has increased year on year. 2019 saw the EC mandated project to develop the 2nd generation of Eurocodes continue its steady progress, with the progression of Phases 2, 3 & 4, and the launch of the formal enquiry of prEN 1996-1-1 – Design of masonry structures.



The industry currently has 35 experts involved in international work

3 Scope of TC

NSAI/TC 015 is responsible for monitoring the work of CEN/TC 250 and how the 'Structural Eurocodes' design standards are to be implemented in Ireland. In order to do this, there are 8 sub-committees under the remit of NSAI/TC 015, each with its own specific section of the Eurocode to monitor. The Eurocodes Consultative Committee and its subcommittees also develop and update Eurocode National Annexes for Ireland which allow for a national choice or nationally determined parameter (NDP), where such choices/parameters are left open in the Eurocodes (i.e. in the areas of safety of works and environmental conditions).

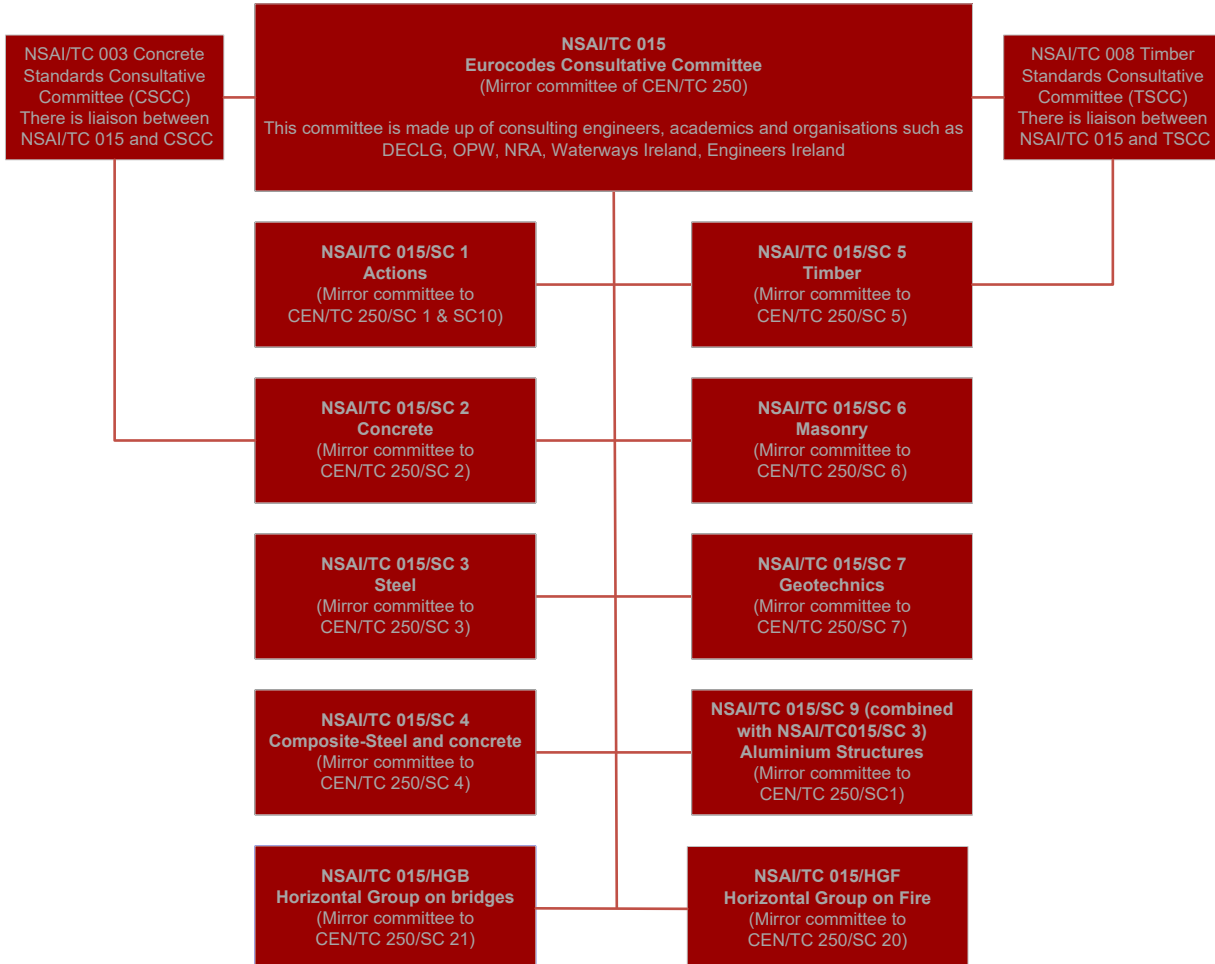
The committee and its subcommittees mirror the following international committees:

Committee Name	Committee Title
CEN/TC 250	Structural Eurocodes
CEN/TC 250 WG1	Policy, procedures and links with other standards
CEN/TC 250/SC 10	EN 1990 Basis of structural design
CEN/TC 250/SC 1	Eurocode 1: Actions on Structures
CEN/TC 250/SC 2	Eurocode 2: Design of concrete structures
CEN/TC 250/SC 3	Eurocode 3: Design of steel structures
CEN/TC 135	Execution of steel structures and aluminium structures
CEN/TC 250/SC 4	Eurocode 4: Design of composite steel and concrete structures
CEN/TC 250/SC 5	Eurocode 5: Design of timber structures
CEN/TC 250/SC 6	Eurocode 6: Design of masonry structures
CEN/TC 250/SC 7	Eurocode 7: Geotechnical design
ISO/TC 182	Geotechnics
CEN/TC 250/SC 9	Eurocode 9: Design of aluminium structures
CEN/TC 250 Horizontal Group Bridges	
CEN/TC 250 Horizontal Group Fire	

4 Structure and Membership

4.1 Structure

The Figure below illustrates the structure of the Committee:



4.2 Members

2019 saw a number of new members join and contribute to the committee. The current members are listed below:

Organisation	Name	Role
Kavanagh Mansfield & Partners	Jim Mansfield	NSAI/TC 015 Committee Chair & NSAI/TC 015 SC1 Chair
Trinity College Dublin	Brian Broderick	National committee member
TII	Fergal Cahill	National committee member & NSAI/TC 015 HBG Chair
Cork Institute of Technology	Donogh Coleman	National committee member
DHPLG	Simon Dolphin	National committee member
Engineers Ireland	Ken D'Arcy	National committee member
O'Connor Sutton Cronin	Paul Devine	National committee member & NSAI/TC 015 SC4 Chair
AGL	Eric Farrell	National committee member & NSAI/TC 015 SC7 Chair
Private Consultant	Malcolm Jacob	National committee member & NSAI/TC 015 SC5 Chair

Private Consultant	Michael P Lyons	National committee member & NSAI/TC 015 HGF Chair
ARUP	Reamonn Mac Reamoinn	National committee member
Cork Institute of Technology	Ted McKenna	National committee member
Dublin Institute of Technology	Henry Mullen	National committee member & NSAI/TC 015 SC2 Chair
ARUP	Pat Moore	National committee member
Trinity College Dublin	Alan O'Connor	National committee member
Trinity College Dublin	Trevor Orr	National committee member
VCL	Eddie Phelan	National committee member
Cork Institute of Technology	Kieran Ruane	National committee member
Private Consultant	Colin Short	National committee member & NSAI/TC 015 SC3 Chair
Banagher Precast Concrete	Eamon Stack	National committee member
OPW	Kieran Walsh	National committee member
DHPLG	John Wickham	National committee member

5 Summary of 2019 Activities

5.1 National

Amendments to the NA to I.S. EN 1993-1-4 Design of steel structures - General rules - supplementary rules for stainless steel and the NA to I.S. EN 1993-1-6:2007 A1:2017: Design of Steel Structures - Strength and Stability of Shell Structures were published in 2019. An amendment to the NA to I.S. EN 1991-1-3 was also progressed in 2019 and will be launched for public comment in 2020.

As the development of the 2nd generation of Eurocodes (under mandate M/515) progressed the activity at national committee and sub-committee level remained high monitoring the developments of the new Eurocode drafts. This was reflected in the increased level of attendance at International meetings by committee members which is further detailed in section 5.2.

Work at national level will increase further in 2020 with the launch of 5 further formal enquiry drafts and the circulation of the final phase 2 drafts for comment.

Work on hosting the CEN/TC 250/SC 5 – Design of timber structures meeting in Ireland in March 2020 commenced.

5.1.1 Meetings

Committee members attended the following national TC 015 meeting in the NSAI:

Meeting	Date
13th Meeting of NSAI/TC 015	27 th November 2019

Further to the meeting of TC 015 in November there were an additional 11 meetings of the subcommittees under TC 15. The meetings of these subcommittees are summarised in section 5.2.3.

5.2 International

As the development of the 2nd generation Eurocode drafts progress at pace the number of international meetings being attend by Irish experts has also increased, from 13 in 2018 to 17 in 2019. Attendance at these meetings is co-sponsored by the Department of Housing, Planning and Local Government and the NSAI.

5.2.1 Meetings

Committee members attended the following international meetings:

Committee name	Location	Date
TC 250 SC1	Paris	February 2019
TC 250 SC5	Oslo	March 2019
TC 250 SC3	Stockholm	March 2019
TC 250 SC2 WG1	Copenhagen	March 2019
BSI B525/1	London	April 2019
TC 135	Bratislava	April 2019
TC 250 SC7	London	May 2019
TC 250 SC2 & WG1	Berlin	June 2019
TC 250 SC1	Berlin	June 2019
TC 250 SC5 WG 9	Paris	June 2019
TC 250 SC 7 TG 3	Brussels	September 2019
TC 250 SC2 WG1	Berlin	September 2019
TC 250 SC5	Tallinn	September 2019
TC 250 SC7 TG 5	Dusseldorf	October 2019
TC 250 SC3	Berlin	October 2019
TC 135	Copenhagen	November 2019
TC 250 SC2 & WG1	Berlin	November 2019

5.2.2 International Work

NSAI/TC 015 committee members have been monitoring the development of the 2nd generation Eurocode drafts closely with a significant number of members attending international meetings to discuss the drafts and present Ireland's position while also reporting back to the National committee and its sub-committees on developments and raise potential issues with these drafts. The work of the committee and sub-committees in this regard is of particular importance as CEN/TC 250 look to reduce the number of National Choices/Nationally Determined Parameters (NDPs) in the 2nd generation of Eurocodes which will have a significant impact upon the National Annexes which accompany the Eurocodes.

NSAI TC015 National Committee members Trevor Orr and Alan O'Connor are also actively involved in the development of the 2nd generation Eurocode standards. Alan O'Connor is the Project Team Leader of CEN/TC 250 WG6 T2 focusing on incorporating robustness rules into material related Eurocode parts while also being a project team member of CEN/TC 250 WG2 T2 to develop general rules for assessment of existing structures, which is due to be issued as a Technical Specification in 2020.

Trevor Orr is a member of the Eurocode 7 M/515 Phase 2 Project Team 4 which is tasked with developing text on the topics of foundations, slopes, and ground improvement for inclusion in a new Geotechnical Design Eurocode standard, EN1997-3.

5.2.3 International Standards Reviewed

A number of 'Informal Enquiry' draft Eurocode standards (working drafts) were circulated to the committee members to review over the course of 2019. There was a significant number of sub-committee meetings held in to discuss and achieve consensus on the comments on these drafts.

SC1 – Actions on structures, met to discuss and review the drafts of the climatic (snow, wind & thermal) actions codes with a focus on the work required to develop and revise the national annex to EN1991-1-4 Wind actions.

SC 7 – Geotechnical design, met on four occasions to discuss the draft of a new Eurocode EN1997-3 and submit comments on it.

SC3 – Steel, also held meetings and focused on the formal enquiry draft of the harmonised standard for steel fabrication - prEN 1090-1. Comments on this draft were submitted and the draft disapproved by SC 3.

5.2.4 International Voting Results

Reference	Vote Result	Closed on
CBN 2018-4 Structural design and interfaces with product sta	Approved	19/01/2019
New work item prEN 1996-1-1	Approved	19/01/2019
New work item proposal EN 1996-3	Abstention	27/01/2019
New work item proposal prEN 1996-2	Abstention	27/01/2019
NWIP prEN 1996-1-2	Abstention	27/01/2019
Re-appointment of CEN/TC 250/SC 11 Chairperson	Approved	27/01/2019
prEN 1090-1	Disapproved	29/01/2019
EN 1992-1-2:2004/FprA1	Abstention	30/01/2019
New work item prEN 1990	Approved	05/02/2019
Participation of Institute for Standardization of Moldova	Approved	17/02/2019
New work item prEN 1993-1-10	Approved	24/02/2019
New work item prEN 1993-1-11	Approved	24/02/2019
New work item prEN 1993-1-2	Approved	24/02/2019
New work item prEN 1993-1-3	Approved	24/02/2019
New work item prEN 1993-1-4	Approved	24/02/2019
New work item prEN 1993-1-5	Approved	24/02/2019
New work item prEN 1993-1-9	Approved	24/02/2019
New work item prEN 1993-2	Approved	24/02/2019
Reappointment of CEN/TC 250/SC 10 Chairperson	Approved	24/02/2019
EN 1993-1-5:2006/prA2	Approved	01/05/2019
Reappointment of CEN/TC 250/SC 6 Chairperson	Approved	23/05/2019
Appointment of CEN/TC 250/SC 3 Liaison to CEN/TC 135/WG 2	Approved	28/05/2019
Reappointment Gerhard Breitschaft as CEN/TC 250 Vice Chair	Approved	09/06/2019
Appointment of CEN/TC 250/SC 7 Chairman	Approved	15/06/2019
Adoption PWI prEN 1995-1-1	Approved	26/06/2019
Adoption PWI prEN 1995-1-2	Approved	26/06/2019
Adoption PWI prEN 1995-2	Approved	26/06/2019
Appointment of CEN/TC 250/WG 1 Convenor	Approved	05/07/2019
Safety amendment to EN 1993-1-4:2006/A1:2015	Approved	08/07/2019
New work item proposal prEN 1997-1	Approved	29/07/2019
New work item proposal prEN 1997-2	Approved	29/07/2019
New work item proposal prEN 1997-3	Approved	29/07/2019
Reappointment of CEN/TC 250/SC 1 Chairperson	Approved	17/10/2019
Activating preliminary work item 00250210	Approved	27/10/2019
Activating preliminary work item 00250211	Approved	27/10/2019
Activating preliminary work item 00250212	Approved	27/10/2019
New work item proposal prEN 1999-1-1	Approved	27/10/2019
New work item proposal prEN 1999-1-2	Approved	27/10/2019
New work item proposal prEN 1999-1-3	Approved	27/10/2019
New work item proposal prEN 1999-1-4	Approved	27/10/2019
New work item proposal prEN 1999-1-5	Approved	27/10/2019
Appointment of CEN/TC 250/SC 3 liaisons to CEN TCs	Approved	22/11/2019
Reappointment of CEN/TC 250/SC 3 Chairperson	Approved	22/11/2019
Activating preliminary work item 00250214	Approved	11/12/2019

5.3 Regulatory Development/Update

As the work carried out by the committee in 2019 predominantly related to the review of the 'Informal Enquiry' drafts (working drafts) of the 2nd generation Eurocodes there was no impact on Irish Building Regulations in 2019. It should be

noted that it is currently estimated that publication of the new codes will not commence until 2022, at which point the building regulations technical guidance documents may need to be updated or amended. The date of withdrawal of the current Eurocodes has yet to be set and this will also have a bearing on when the building regulations will be updated.

6 Irish Publications/Reviews

6.1 Publications

The committee published amendments to the Irish National Annexes of the following Eurocodes:

I.S. EN 1994-1-4: Design of steel structures. General rules - supplementary rules for stainless steel; and,

I.S. EN 1993-1-6:2007 A1:2017: Design of Steel Structures. General rules -strength and stability of shell structures.

6.2 Reviews

The committee reviewed a large number of 'Informal Enquiry' drafts which were issued during the course of 2019, see 5.2.3.

7 Work programme for 2020 onwards

2020 will see NSAI/TC 015 members continue their dedicated work of monitoring and reviewing 'Informal Enquiry' drafts of the 2nd generation Eurocodes as they become available.

However, 2020 will also see the NSAI TC 015 committee work gather pace as the launch of formal enquiry drafts of five Eurocode parts will take place with the launch of prEN 1990 – Basis of design scheduled for September 2020. This enquiry draft is the most critical draft of the whole Eurocode suite as it is the core document on which all structural design is based.

The anticipated revision of the current National Annexes due to NDPs and recommended values being changed, NDPs being removed, and the introduction of new Eurocode parts required the development of a National Annex work program which commenced in 2019. The development of this work programme will be completed in 2020 and will form the basis of a business case which will be submitted to the NSAI Board of directors to approve the substantial body of work required to revise the Eurocode National Annexes that will continue for approximately 5 to 6 years. The draft publication plan below details the enquiry drafts and approximate dates of issue between 2019 and 2021 and illustrates the volume of documents being released which will require review, the establishment of a national position and the submission of comments, demonstrating the significant workload ahead for the NSAI's Eurocode committee.

Date of issue for CEN enquiry	Number of drafts issued	CEN Enquiry & Formal vote draft
19/10/2019	1	prEN 1996-1-1
09/01/2020	1	FprCEN TS 17440
01/03/2020	2	prEN 1993-1-1
		prEN 1993-1-8
01/09/2020	2	prEN 1990 (Package 1)
		prEN 1991-1-2
01/03/2021	2	prEN 1990 (Package 2 - Annex A2 on bridges)
		prEN 1996-1-2
01/09/2021	16	prEN 1991-1-8
		prEN 1991-4
		prEN 1992-1-1
		prEN 1992-1-2
		prEN 1993-1-13
		prEN 1993-1-14
		prEN 1993-1-2
		prEN 1993-1-3

		prEN 1993-1-5
		prEN 1993-1-6
		prEN 1993-1-7
		prEN 1999-1-1
		prEN 1999-1-2
		prEN 1999-1-3
		prEN 1999-1-4
		prEN 1999-1-5

Further development of amendments/corrigendums to the following Eurocode National Annexes will also take place during 2020:

I.S. EN 1991-1-3: Actions on structures. General actions - snow loads;

I.S. EN 1992-1-1: Design of concrete structure – General rules; and,

I.S. EN 1993-3-1: Design of steel structures. Towers, masts and chimneys – towers and masts

Finally, the NSAI will host the 36th meeting of CEN/TC 250/SC 5 – Design of Timber structures in Kilkenny between the 9th and 13th March 2020. This too is a significant undertaking for NSAI as over 80 delegates will attend 18 meetings during the weeklong event.

8 Additional Information

A number of Engineers Ireland CPD accredited training courses on various Eurocode parts, presented by NSAI/TC 015 committee members were held in 2019 with more due to take place in 2020, along with a potential Eurocode seminar for engineers and those involved in BCAR.