

The Construction Industry Council

Knowledge Analysis

Guidance on the Knowledge and Understanding in Professional, Managerial and Technical roles in the Built Environment

January 2011



About the Construction Industry Council (CIC) and ConstructionSkills

The Construction Industry Council (CIC) represents the views of the industry (from a professional, managerial and technical viewpoint) in ConstructionSkills – the Sector Skills Council for construction. ConstructionSkills is a partnership between CIC, CITB-ConstructionSkills and CITB ConstructionSkills Northern Ireland.

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The Aim of this Guidance

The aim of this piece is to provide a tool for education and training providers along with awarding bodies to identify the prevalence or relative commonality of knowledge needs across the higher levels of the built environment sector. The areas of knowledge and understanding are analysed in relation to sector Labour Market Information (LMI) and occupational requirements.

This is based on the analysis of the knowledge areas found at the higher level generic National Occupational Standards (NOS) for Professional, Managerial and Technical Roles in the Built Environment.

The Principle

National Occupational Standards represent a benchmark of industry specified best practice of performance and underpinning knowledge and understanding and provide a powerful multi-purpose tool for the sector.

NOS have been developed as part of national education and skills policy, for industry people, by industry people - employers, practitioners and professional bodies.

They are designed to improve the performance of industry by enhancing the performance of people in the workplace. NOS help to inform training, and vocational education about industry needs. They are updated to keep pace with changing sector requirements.

The analysis presented has not been designed to replace or dictate built environment curricula. The analysis is merely a way of giving a structured picture of the higher level learning needs from the basis of formally expressed sector employment requirements and to help inform the development of learning programmes.

This document is best read in conjunction with the **Educator's Toolkit**, a separate piece of guidance developed by CIC which provides fuller information about curriculum development.

Project Methodology

The process was developed in 2009 and initially involved detailed scrutiny of all the 291 NOS covering the separate functions, range statements and performance criteria as applicable. Broad topic headings derived from NOS analysis were progressively identified and revisited to ensure that any variations in areas of knowledge and understanding were encompassed.

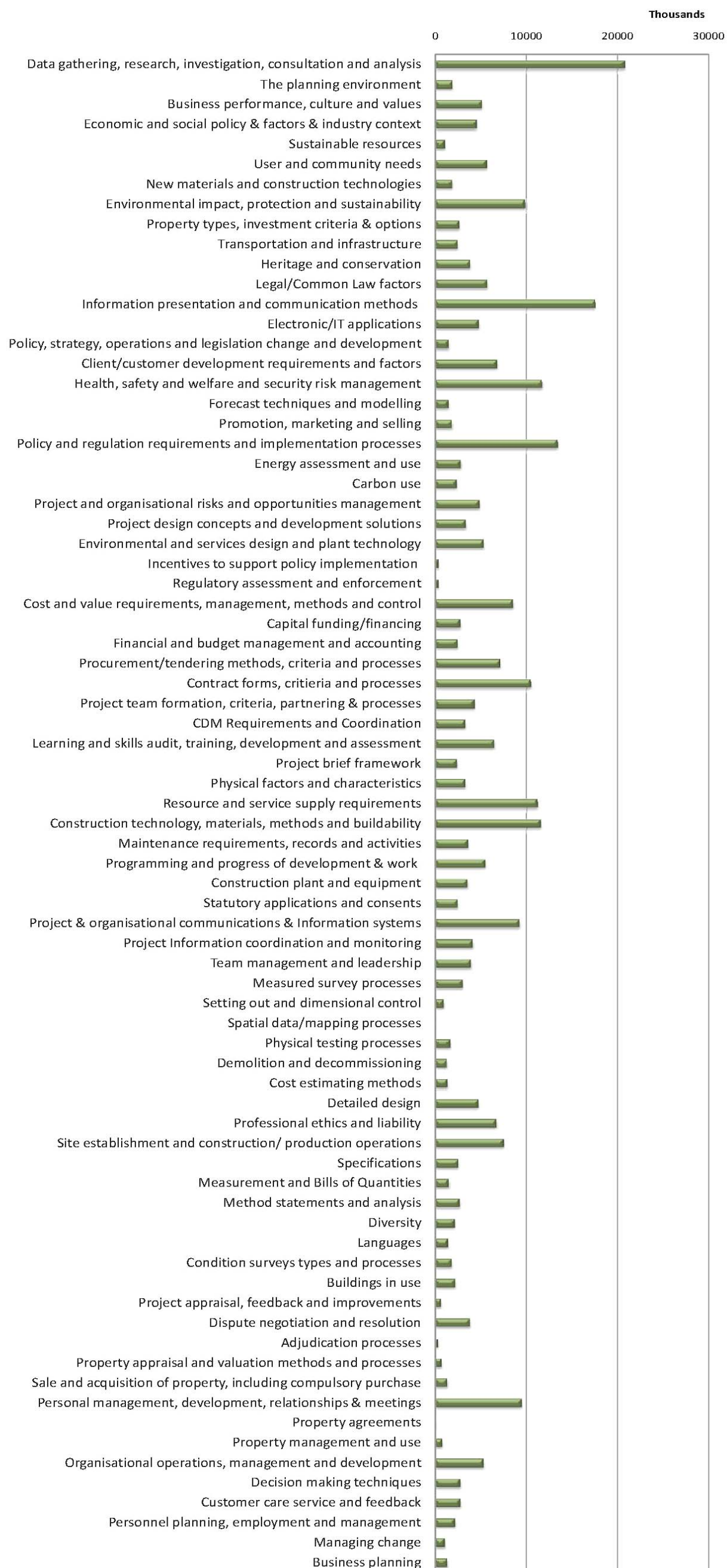
For each instance where the knowledge has occurred in the NOS, this was recorded as either 'key', where the subject appears as a 'range header' or "related" where the subject appears as an individual range item to indicate its relative significance.

The identified 'key' and 'related' categories of knowledge were converted to weighted values (it was concluded that a ratio of 3:1 was appropriate to differentiate the relative importance of key: related knowledge. Similarly, the 'Mandatory' and 'Optional' categorisation for particular occupational groups use of the NOS was also converted, for particular groups, to weighted values (it was concluded that a ratio of 1.0:0.5 was appropriate to differentiate between the relative importance Mandatory : Occupational functions.

Labour Market Information (LMI) for each of the main occupational groups was analysed and added to the spreadsheet analysis.

The 'Prevalence' score (the commonality of need in relation to size of occupational groups) across the sector was calculated by inter-relating the LMI (the numbers working in the sector) for each Occupational group with the weighted value of each standard. The overall total has been divided by 1000 to give a more manageable figure. The results are displayed as a **Profile Chart** (see next page) showing the relative importance of each topic area.

The Profile Chart



The diagram to the left places each topic/ knowledge area in which they appear in CIC's Professional, Managerial and Technical NOS.

The analysis reveals high levels of commonality across the sector for many tasks demonstrating the overlap of roles and responsibilities that can occur between disciplines along with the need for collaboration and team work on so many of the learning areas involved.

The highest levels of prevalence can be seen in the:

- **Data gathering, research, investigation, consultation and analysis .**
- **Information presentation and communication methods.**
- **Policy and regulation requirement and implementation**
- **Contract forms, criteria and processes.**
- **Resource and service supply requirements**
- **Construction technology, materials, methods and buildability.**

The standards represent required industry practice. The learning areas that result from the standards and analysis, therefore providing a guide to the significance of that area of learning within the curriculum.

This analysis covers all the higher level occupations in the built environment sector. It is possible to:

- Develop separate profiles for individual occupations or groups of occupations.
- Update this guidance as industry practice, NOS and LMI change overtime.

Construction Industry Council

26 Store Street

London

WC1E 7BT

www.cic.org.uk

www.cicskills.org.uk

t. +44 (0)207 399 7400

f. +44 (0)207 399 7425

For more information contact

David Cracknell

Director of Skills and Lifelong Learning

dcracknell.cic.org.uk

