



# UNICLASS: as it lives and breathes

**Sarah Delany**

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## Overview

- Introduction – why did we create a classification system?
- **The Tables** – how they are structured and their content.
- **The Tables and the BIM process** – what table can be used at what stage.
- **Terminology** – matching construction industry language.
- **How the tables are coded** – the numbering system demystified.
- **The consultation** – who we have consulted with.
- **Managing the changes** – how you can see what we have done as the tables develop.



# Introduction

## UK Government requirement

- To develop a classification to aid the adoption of BIM.
- To use ISO 12006-2 as the structure.

## New classification

- To allow project information to be structured to a recognised standard.
- To be comprehensive for all stages in a project life cycle.
- To be applicable to building and infrastructure sectors.
- To be dynamic, managed and maintained.
- To be up to date and relevant.

## Uniclass 2015

- Promote use of the appropriate information at the appropriate stage of the project.
- Use consistent terminology.
- Link logically from one table to another.
- Be numbered consistently.

## Construction industry

Building sector, including:

- Architecture
- Structural engineering
- Mechanical & Electrical services
- Landscape architecture

## Construction industry

Infrastructure sector, including:

- Road
- Rail
- Airports
- Water
- Power
- Environment



# The tables

## 'Classes' of Information

Complexes	Co
Activities	Ac
Spaces/ Location	SL
Entities	En
Elements/ Functions	EF
Systems	Ss
Products	Pr
Form of Information	FI
Tools and equipment	TE
Project management	PM

## Group headings

Complexes, Entities, Spaces/ location and Activities tables

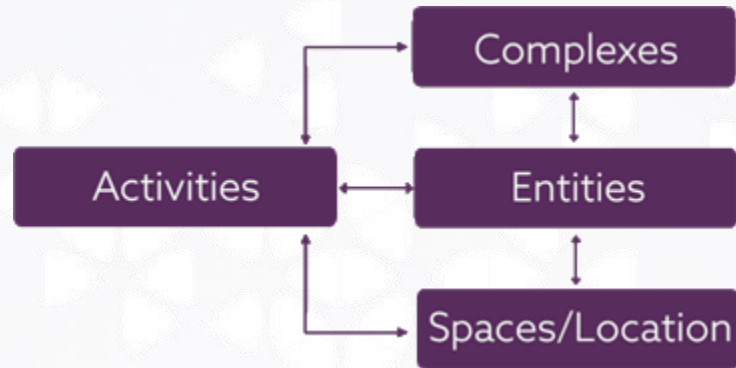
10 Preparation and repair	20 Administrative, commercial and protective services	25 Cultural, educational, scientific and information	30 Industrial	32 Water and land management	35 Medical, health, welfare and sanitary	40 Recreational	42 Sport and activity	45 Residential
50 Waste disposal	55 Piped supply	60 Heating, cooling and refrigeration	65 Ventilation and air conditioning	70 Electrical power generation and distribution	75 Communications, security, safety and protection	80 Transport	85 Operation and maintenance	90 Circulation and storage

## Group headings

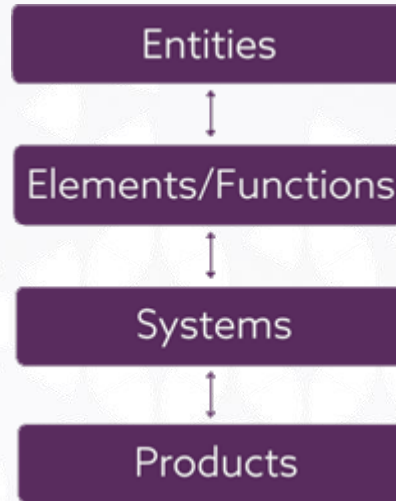
Elements/ functions and Systems tables

15 Preparatory	20 Structural	25 Wall and barrier	30 Roof, floor and paving	32 Damp-proofing, waterproofing and plaster finishing	35 Stair and ramp	37 Tunnel, shaft, vessel and tower	40 Signage, fittings, furnishings and equipment	45 Flora and fauna
50 Waste disposal	55 Piped supply	60 Heating, cooling and refrigeration	65 Ventilation and air conditioning	70 Electrical power and lighting	75 Communications, security, safety and protection	80 Transport	85 Process engineering	90 Soft facility management

## Table links




## Table links





- TECHNICAL SUPPORT

Share:  

# CLASSIFICATION

First published 8th April 2015, last updated 2nd July 2015.



Sarah Delany  
Technical Author at  
NBS

Uniclass2015 is a unified classification for the UK industry covering all construction sectors. It contains consistent tables classifying items of all scale from a facility such as a railway down through to products such as a CCTV camera in a railway station. Sarah Delany, Technical Author at NBS, introduces Uniclass2015 in this article.

[View and download the classification tables.](#)

As part of the BIM Toolkit project, NBS are working on the next version of the Uniclass classification scheme. Originally released in 1997, Uniclass allows project information to be structured to a recognised standard. This original version has now been heavily revised, to make it more suitable for use with modern construction industry practice, and to make it compatible with BIM now and in the future.

As a key deliverable of the BIM Toolkit project, NBS have worked with experts from

Uniclass 2015 is a dynamic classification for the construction industry.

Tell us what you think

Request changes



### VIEW AND DOWNLOAD THE CLASSIFICATION TABLES

Search Uniclass2015:

Filter by:

- Complexes
- All tables
- Complexes
- Entities
- Activities
- Spaces/locations
- Elements
- Systems
- Products
- CAD

Results 1 to 8 of 8

Code	Title
Co_20_60_02	Air force complexes
Co_25_50_58	Open air museums
Co_25_50_59	Open air sculpture parks
Co_35_10_02	Air ambulance complexes
Co_40_05_30	Fairground complexes
Co_65	Ventilation and air conditioning complexes
Co_80_05_02	Airports and airfields
Co_80_20_13	Chairlift way complexes

Results 1 to 8 of 8

#### DOWNLOAD THE TABLES:

- [Co Complexes](#)
- [En Entities](#)
- [Ac Activities](#)
- [SL Spaces/ locations](#)





### VIEW AND DOWNLOAD THE CLASSIFICATION TABLES

Search Uniclass2015:

Filter by:

- Spaces/locations ▾
- All tables
- Complexes
- Entities
- Activities
- Spaces/locations**
- Elements
- Systems
- Products
- CAD

Results 1 to 10 of 22

Code	Title
SL_20_45_29	Fuel filling station air and water points
SL_20_50_36	Hair and beauty salons
SL_30_60_13	Clothes drying and airing rooms
SL_40_05_42	Indoor fairground spaces
SL_40_05_60	Outdoor fairground spaces
SL_40_05_88	Temporary outdoor fairgrounds
SL_80_05_04	Aircraft fuelling spaces
SL_80_05_05	Aircraft manoeuvring bu
SL_80_05_06	Aircraft standing areas
SL_80_05_07	Aircraft storage spaces

Results 1 to 10 of 22

### DOWNLOAD THE TABLES:

- [Co Complexes](#)
- [En Entities](#)



### VIEW AND DOWNLOAD THE CLASSIFICATION TABLES

Search Uniclass2015:

Filter by:

- Elements
- All tables
- Complexes
- Entities
- Activities
- Spaces/locations
- Elements**
- Systems
- Products
- CAD

Results 1 to 2 of 2

Code	Title
Ee_25	Wall and barrier elements
Ee_25_55	Barriers

Results 1 to 2 of 2

#### DOWNLOAD THE TABLES:

- Co Complexes
- En Entities
- Ac Activities
- SL Spaces/ locations
- Ee Elements
- Ss Systems
- Pr Products
- Zz CAD



### VIEW AND DOWNLOAD THE CLASSIFICATION TABLES

Search Uniclass2015:

Filter by:

- Systems
- All tables
- Complexes
- Entities
- Activities
- Spaces/locations
- Elements
- Systems**
- Products
- CAD

Results 1 to 2 of 2

Code	Title
Ss_25_16_08	Blast barrier systems
Ss_25_16_08_44	Jet blast deflection systems

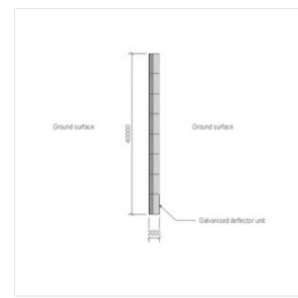
Results 1 to 2 of 2

Prev

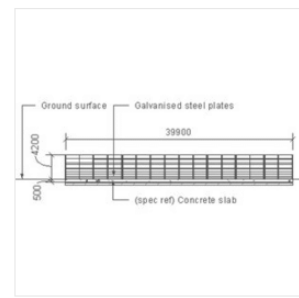
### DOWNLOAD THE TABLES:

- [Co Complexes](#)
- [En Entities](#)
- [Ac Activities](#)
- [SL Spaces/ locations](#)
- [Ee Elements](#)
- [Ss Systems](#)
- [Pr Products](#)
- [Zz CAD](#)

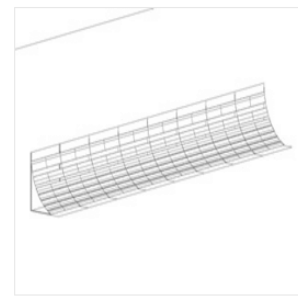
Plan



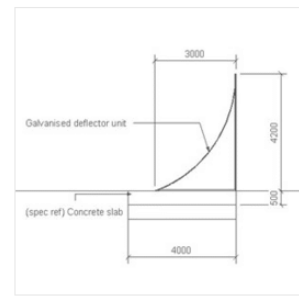
Elevation



Model



2D Section



### VIEW AND DOWNLOAD THE CLASSIFICATION TABLES

Search Uniclass2015:

Filter by:

- Products
- All tables
- Complexes
- Entities
- Activities
- Spaces/locations
- Elements
- Systems
- Products**
- CAD

Results 1 to 6 of 6

Code	Title
Pr_20_31_35_33	Granulated blast furnace slag
Pr_20_31_35_34	Ground granulated blast furnace slag
Pr_20_31_35_60	Partially ground granulated blast furnace slag
Pr_25_71_57_44	Jet blast deflectors
Pr_40_70_31_06	Blast chiller cabinets
Pr_40_70_31_08	Blast freezer cabinets

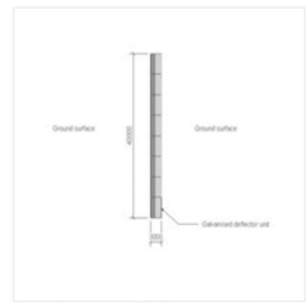
Results 1 to 6 of 6

Prev

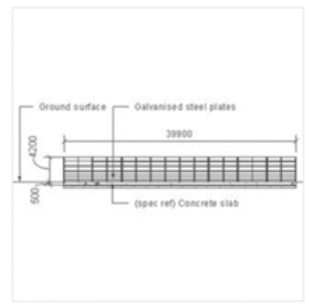
### DOWNLOAD THE TABLES:

- [Co Complexes](#)
- [En Entities](#)
- [Ac Activities](#)
- [SL Spaces/ locations](#)
- [Ee Elements](#)
- [Ss Systems](#)

Plan



Elevation



Model



2D Section





# The tables in the BIM process

Stage	Description	Tables
0	Strategy	Complexes; Activities
1	Brief	Complexes; Entities; Activities
2	Concept	Entities; Activities; Spaces/ locations; Elements/ functions
3	Definition	Spaces/ locations; Elements/ functions; Systems
4	Design	Systems; Products
5	Build and commission	Systems; Products
6	Hand over and close out	Systems; Products
7	Operation and end of life	Complexes; Entities; Activities; Spaces/ locations; Elements/ functions; Systems; Products



# Terminology

## Terminology and language

Terminology has been the major hurdle to understanding the classification throughout the construction industry.

We have developed a library of synonyms to help search for terms



Title	Classifications	Synonyms
Cellular plastics underlays <a href="#">Edit...</a>	Uniclass2015: Pr_35_57_11_11 Cellular plastics underlays; <a href="#">Edit...</a>	cellular plastics carpet underlays; polymeric foam underlays; polyurethane underlays; <a href="#">Edit...</a>
Cellular rubber underlays <a href="#">Edit...</a>	Uniclass2015: Pr_35_57_11_13 Cellular rubber underlays; <a href="#">Edit...</a>	cellular rubber carpet underlays; vulcanized rubber foam underlays; vulcanised rubber foam underlays; <a href="#">Edit...</a>
Combined fibrous or non-fibrous underlays <a href="#">Edit...</a>	Uniclass2015: Pr_35_57_11_15 Combined fibrous or non; <a href="#">Edit...</a>	combined fibrous or non-fibrous carpet underlays; <a href="#">Edit...</a>
Cork underlayment <a href="#">Edit...</a>	Uniclass2015: Pr_35_57_11_36 Hessian-faced cork underlays; <a href="#">Edit...</a>	hessian-faced cork linoleum underlayment; <a href="#">Edit...</a>
Impregnated fibrous underlays <a href="#">Edit...</a>	Uniclass2015: Pr_35_57_11_40 Impregnated fibrous underlays; <a href="#">Edit...</a>	impregnated fibrous carpet underlays; <a href="#">Edit...</a>
Needled felt underlays <a href="#">Edit...</a>	Uniclass2015: Pr_35_57_11_56 Needled felt underlays; <a href="#">Edit...</a>	needled felt carpet underlays; <a href="#">Edit...</a>
Rubber crumb underlays <a href="#">Edit...</a>	Uniclass2015: Pr_35_57_11_74 Rubber crumb underlays; <a href="#">Edit...</a>	vulcanized rubber crumb carpet underlays; vulcanised rubber crumb carpet underlays; <a href="#">Edit...</a>

# How the tables are coded

## Coding

In order to make the tables flexible enough to accommodate as many objects as possible the format chosen involves either four or five pairs of characters.

The initial pair identify which table is being used and are alpha characters.

For example:

- Co      **Complexes**
- En      **Entities**
- Ss      **Systems**
- Pr      **Products**

## Coding

The tables with four pairs of characters are those which do not require a great level of granularity.

These are:

- Co      **Complexes**
- En      **Entities**
- SL      **Spaces/ location**
- Ac      **Activities**

The Systems and Products tables require a greater level of granularity in order to accommodate all the items so have five pairs of characters.

The Elements table is alone in having only three pairs of characters.

## Coding

The four following pairs represent groups, sub-groups, sections and objects. By selecting pairs of numbers it allows up to 99 items in each group of codes and this facilitates the inclusion of objects for all the sectors required.

## Coding

For example:

### System:

#### **Ss\_50\_75\_98\_96 Wastewater tank flushing systems**

- Group Ss\_50 Disposal systems
- Sub-group Ss\_50\_75 Wastewater storage, treatment and disposal systems
- Section Ss\_50\_75\_98 Wastewater tank systems

### System:

#### **Ss\_30\_10\_30\_85 Timber roof framing systems**

- Group Ss\_30 Roof, floor and paving systems
- Sub-group Ss\_30\_10\_Pitched, arched and domed roof structure systems
- Section Ss\_30\_10\_30 Framed roof structure systems

## Coding

For example:

### Products:

- Group
- Sub group
- Section

**Pr\_60\_45\_24\_72 Rotary reaction trickling filter distributor arms and syphons**

Pr\_60 Services source products

Pr\_60\_45 Wastewater filtration and treatment products

Pr\_60\_45\_24 Distributor products

### Products:

- Group
- Sub group
- Section

**Pr\_20\_85\_90\_37 Hardwood trussed rafters**

Pr\_20 Structure and general products

Pr\_20\_85 Support and restraint products

Pr\_20\_85\_90 Trusses and lattice frames

## Coding

At certain levels of coding the order of objects becomes alphabetical and this allows a method of coding that permits the addition of a new object in a logical place.

- 65\_54\_94\_23 Direct spring operated pressure relief valves
- 65\_54\_94\_24 Double orifice air valves
- 65\_54\_94\_26 Eccentric plug valves
- 65\_54\_94\_30 Flexible rubber check valves
- 65\_54\_94\_31 Free discharge valves
- 65\_54\_94\_39 Hydrostatic bellmouth valves
- 65\_54\_94\_45 Knife gate valves





# Consultation

## Consultation

Major professional bodies in the construction industry:

- RIBA
- RICS
- ICE
- CIBSE
- UKCG (now Build UK)
- BIFM
- CIOB

## Consultation

Government departments:

- Highways England
- Environment Agency
- Ministry of Defence
- HS2
- Transport for London
- Radioactive Waste Management

## Consultation

Other organisations:

- Manchester City Council
- University of Birmingham
- Royal HaskoningDHV
- Vectorworks

## Consultation

- We need your input.
- Let us know if you can't find what you are looking for.
- Ask for a new code.
- This is a dynamic classification system.



# Managing the changes

## Managing change

- When we publish a new version you get a detailed list of what has changed.
  - [Classification article](#)

## Table update

### DOWNLOAD THE TABLES:

The current status of the classification tables is listed below.

Table	Status and revision information
<a href="#">Co - Complexes</a>	<a href="#">v1.0, Published January 2016</a>
<a href="#">En - Entities</a>	<a href="#">v1.0, Published January 2016</a>
<a href="#">Ac - Activities</a>	<a href="#">v1.0, Published January 2016</a>
<a href="#">SL - Spaces/ locations</a>	<a href="#">v1.1, Published April 2016</a>
<a href="#">EF - Elements/ functions</a>	<a href="#">v1.1, Published January 2016</a>
<a href="#">Ss - Systems</a>	<a href="#">v1.3, Published April 2016</a>
<a href="#">Pr - Products</a>	<a href="#">v1.3, Published April 2016</a>
<a href="#">Zz- CAD</a>	<a href="#">v1.0, Published July 2015</a>



## Details of change

### Uniclass 2015 Ss – Systems table v1.3

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4 April 2016

#### General changes

In consultation with Highways England, the Environment Agency and Transport for London and in response to requests for new codes, the Systems table has been amended as detailed below.

A major area of change has seen the Retaining wall codes moved from the 15 Group to the 20 Structures group as these are permanent constructions not preparatory works. In addition to this the group description for 15 has been changed to Earthworks systems and the sub groups and sections rationalized. Systems for demolition and deconstruction have been included in the Activities table and are removed from the Systems table.

#### Particular changes

v1.2 Code	v1.3 Code	Code description	Notes
15		Earthworks systems	System renamed from "Preparatory systems". Preparatory systems renamed "Preparation and repair" and included in Activities table as Ac_10.
15_10		Groundworks and earthworks	Custom subgroup



UNICLASS: as it lives and breathes

# Questions and discussion

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