Bentley Education

OpenBuildings Designer for Lab Computers at DEC Schools

Unlike many other applications you may be familiar with, Bentley Systems OpenBuildings Designer is a highly configurable application which requires careful installation of several components.

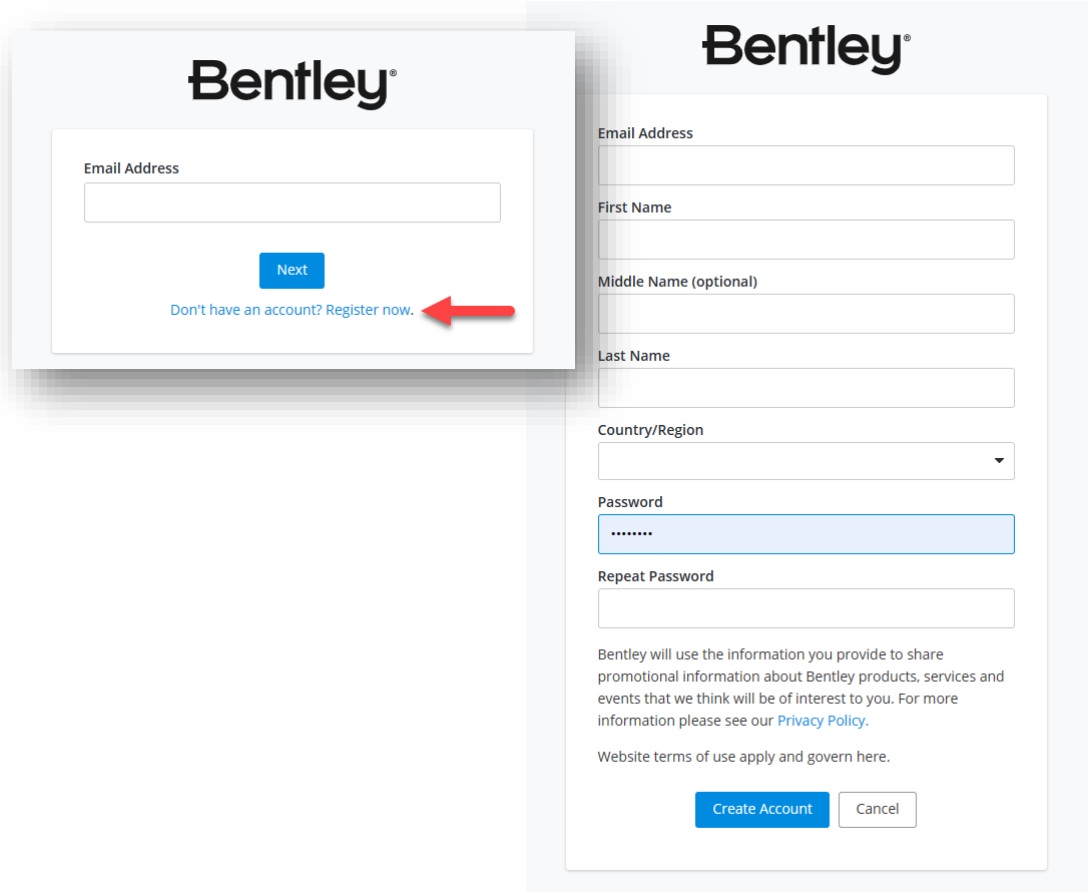
This document should guide you through the process of;

1. Register or Log in on the Bentley Education Portal
2. Download OpenBuildings Designer
3. Installing the OpenBuildings Designer with the ISO19650 Dataset
4. Installing the DEC workspace

If you need assistance please contact : educationsupport@bentley.com

1 Register or Log in on the Bentley Education Portal

- Go to education.bentley.com
- Click on “Log In” at the top right of the page
  If you already have log in credentials then skip the registration instructions.
  Otherwise if you don’t have a Bentley account click “Register Now”
  Fill out your registered school email, First and Last Name, Country and a Password

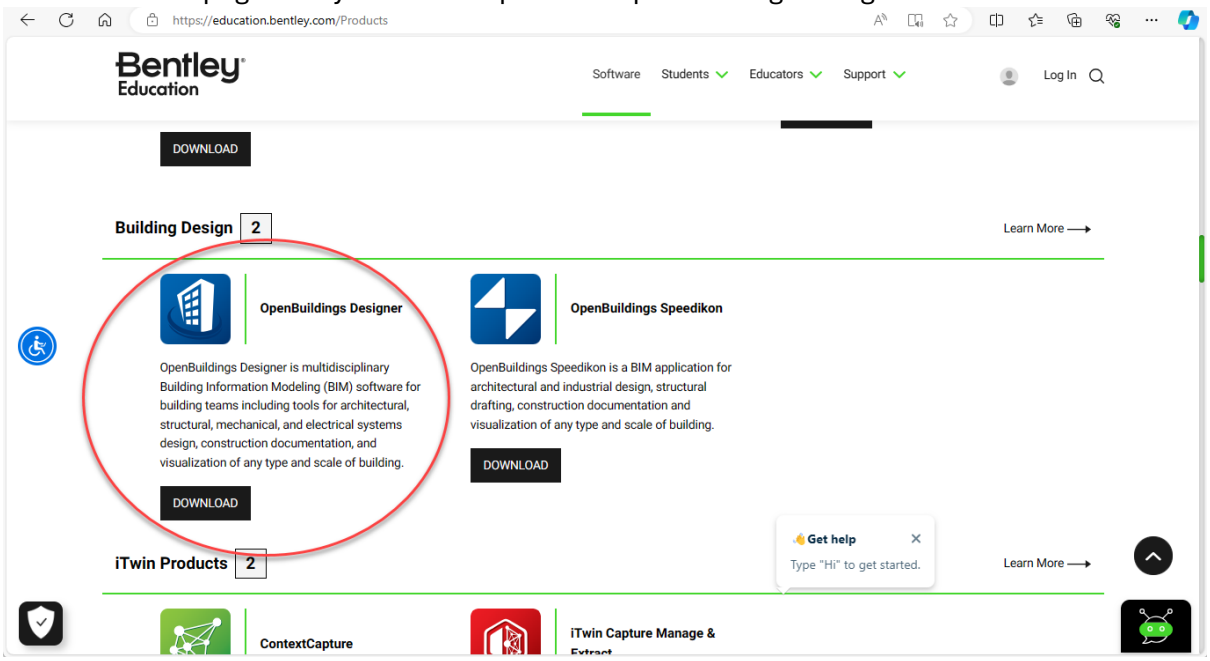


- Click “Create Account”, and you will be prompted to verify the account with a code that is emailed to your email address.
- You will now be able to log in to the Education portal and see you name at the top right of the web page.
- Here you need to complete all the required fields (marked with an asterisk) under the “My Profile” section.
- Note that you will need to include “Architecture” as one of your “Areas of Interest” to access OpenBuildings Designer

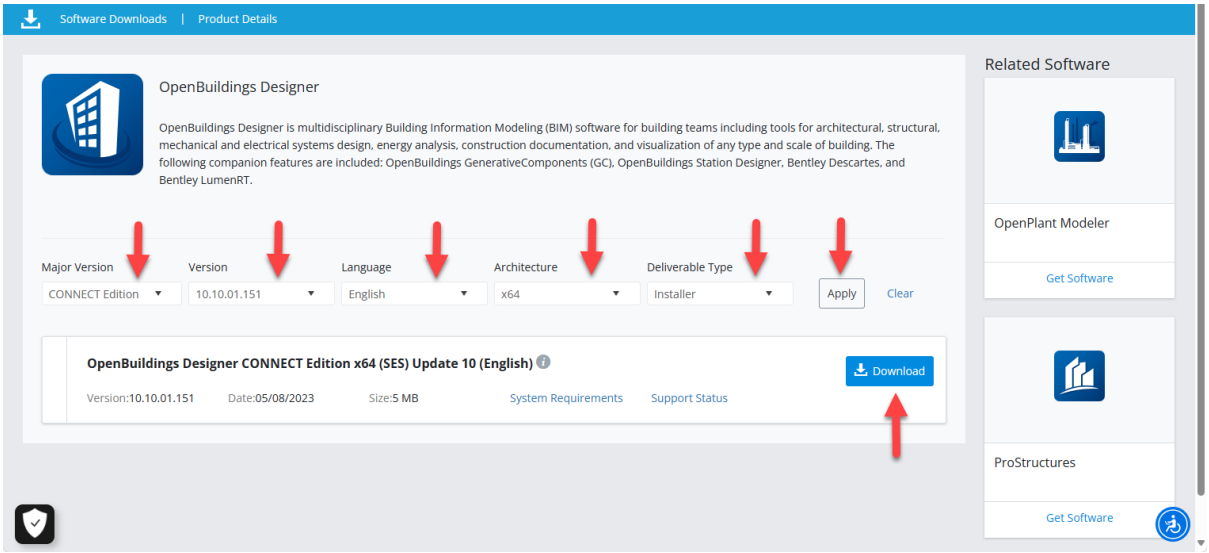
The Bentley Communities website has articles detailing how to register and update your profile on the Bentley Education portal:
How do I register on Bentley Education Portal and access software downloads?
How do I update my profile On Bentley Education Portal?
Along with a quick start video that outline the process:
Downloading Bentley software for students and educators

2 Download OpenBuildings Designer

Once you are successfully registered and can log into the Education portal, you can click on “Software” and scroll down the page until you see the option for OpenBuildings Designer



In the Software downloads page select the version, language and installer and hit apply.
Confirm it’s the version you want, and hit the download button



This will download a small installer application to your Downloads folder.
In this case:

Setup_OpenBuildingsDesignerx64_10.10.01.151.exe

Note:
After the download is completed you may be prompted to “Open“ the file directly from the web browser notification popup. Do not do this – see the next section for installation.

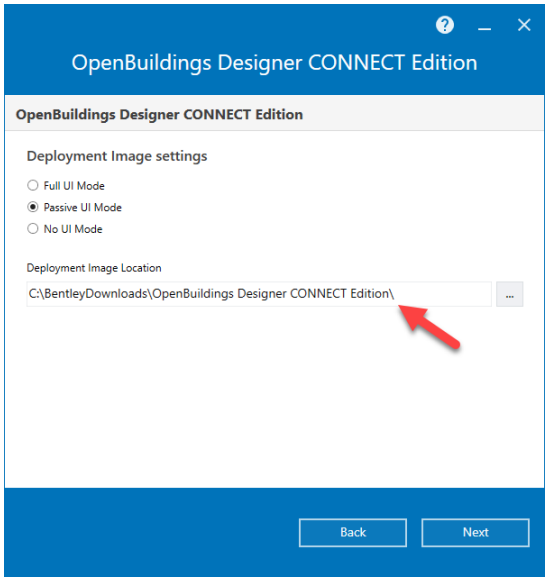
3 Installing the OpenBuildings Designer with the ISO19650 Dataset

You have two options to install OpenBuildings Designer using this downloaded installer.

a. As **one off local installation** directly on the PC
   This is simple to do, but requires the bulkier parts of the installation to be downloaded on the fly during installation each time it is run on each PC.
   To install directly:
   - Navigate to folder of the downloaded installer file
   - Right click on the file and select “Run as Administrator”
     This is required as OpenBuildings Designer needs access to some folders that may be limited by User Access Control, and will cause a bad installation.
   - Follow the installation wizard instructions on the next page…

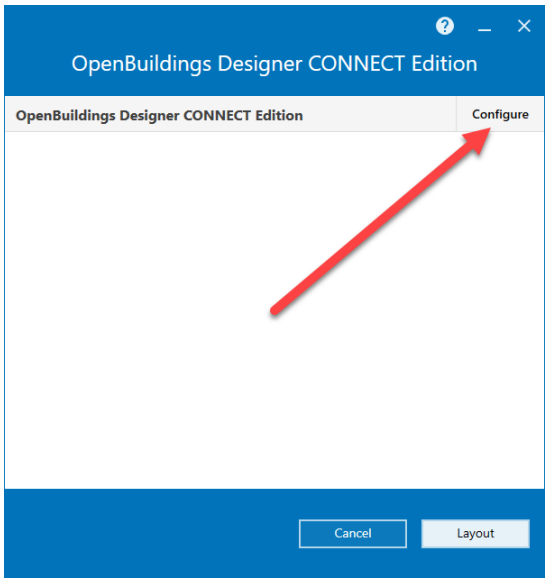
b. As a **package for deployment** over several PCs
   This option downloads the bulkier parts of the installation as a package that you can place on a shared drive. You can then quickly deploy to multiple PCs from this package.
   To create the package:
   - Create a folder called **C:\BentleyDownloads**
   - Copy the installer into this location.
   - Click the Start button, type "cmd" or "Command Prompt" into the search bar then right-click "Command Prompt" and select "Run as Administrator."
   - In the Command Prompt dialog, use the command:
     C:BentleyDownloads\Setup_OpenBuildingsDesignerx64_10.10.01.151.exe /layout

     It is the **/layout** modifier that tells the installer to download components without installing them. The download location can modified in the additional page supplied in the installation wizard. If you miss this, or choose to use the default location, you can move the downloaded package folder to a shared location later on.



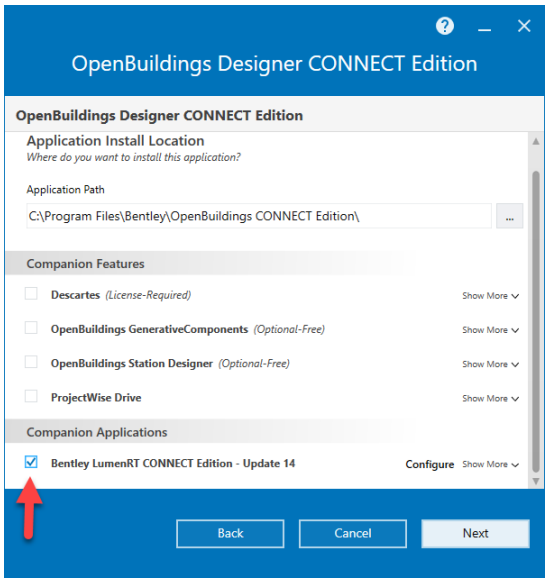
     You can install onto many PCs from this package by running the package file:
     Setup_OpenBuildingsDesignerx64_10.10.01.151.exe
     Again, this should be done with full admin rights on the local PC.

When you run the installer, you need to work through all the Installation Wizard pages.



In the opening page:

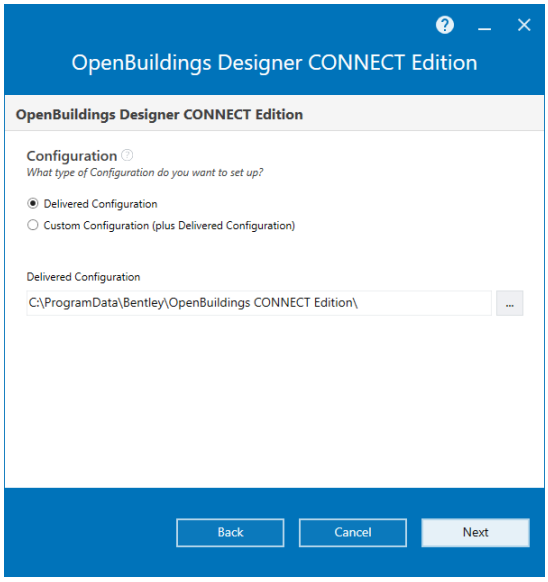
Hit the “Configure” button to make sure we have the right installation options set.



The next page shows the location of the application.

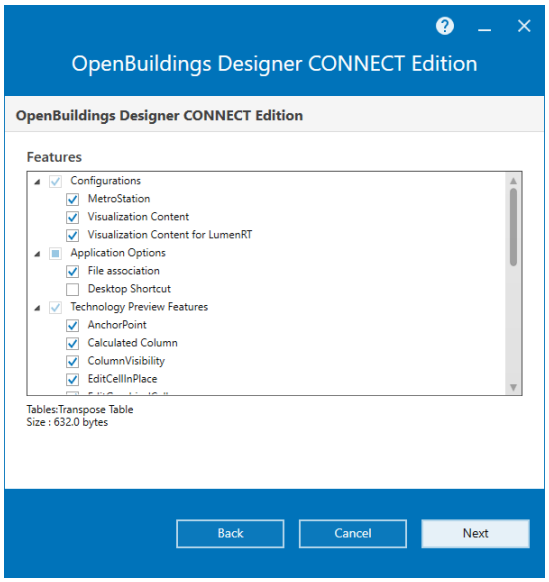
This is the Windows default for 64bit applications and should be leave as defaulted.

It is worth including LumenRT (Designer mode) as a companion application. It is a real time rendering and VR tool that does not need an additional licensing.

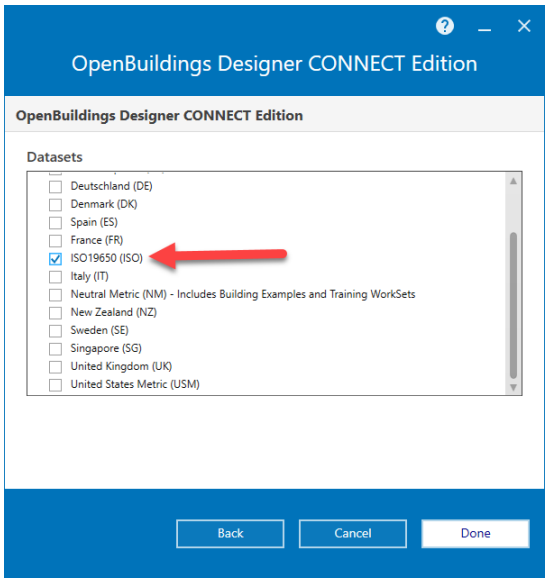


The next page shows the location of the local configuration

A configuration tells the application how to behave – leave this as defaulted.



The next page shows the installed components – leave as defaulted



The next page shows the regional Datasets to be include.

If you wish you can untick the default US Dataset
to save space,

However, you must tick the option for ISO19650 (ISO)
as the DEC course is based on these ISO standards
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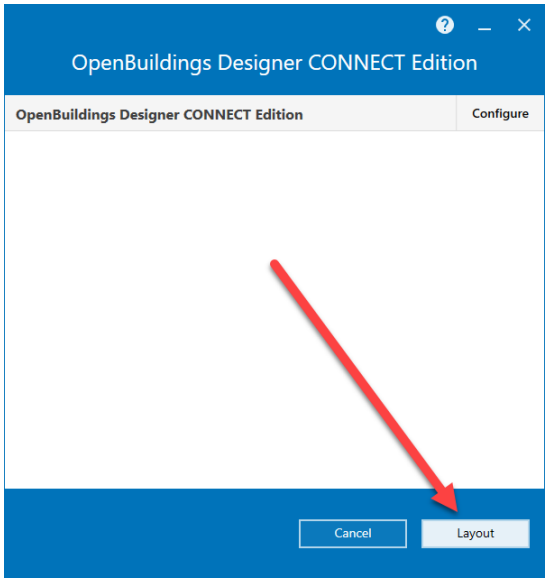
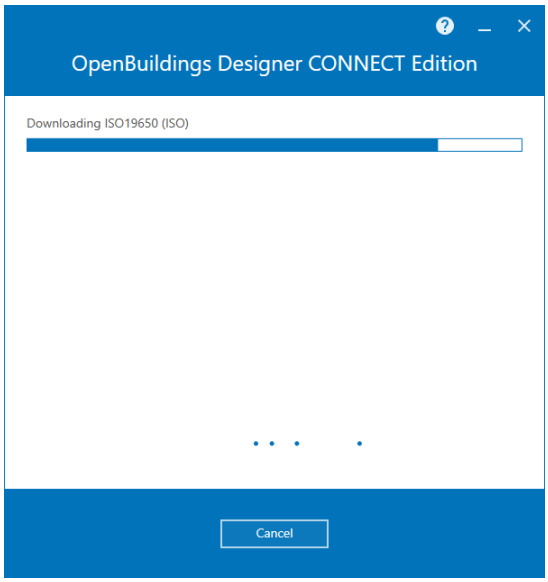


When you click Done you will be taken back to the first page.

For an single installation can click “Install”

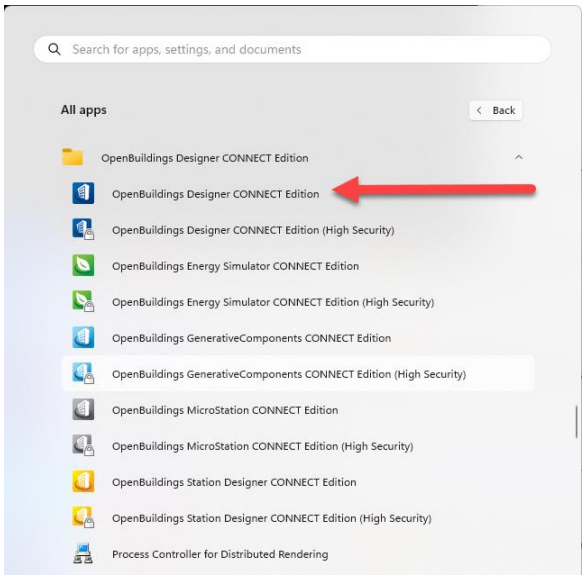
If you are creating a package, click “Layout”



You will now see progress bars for Download and/or Installation.

This can take some time depending on your internet speed

Once download/install is complete, the final page will let you know if anything has gone wrong, otherwise to close out of the installation, Click “Finish”



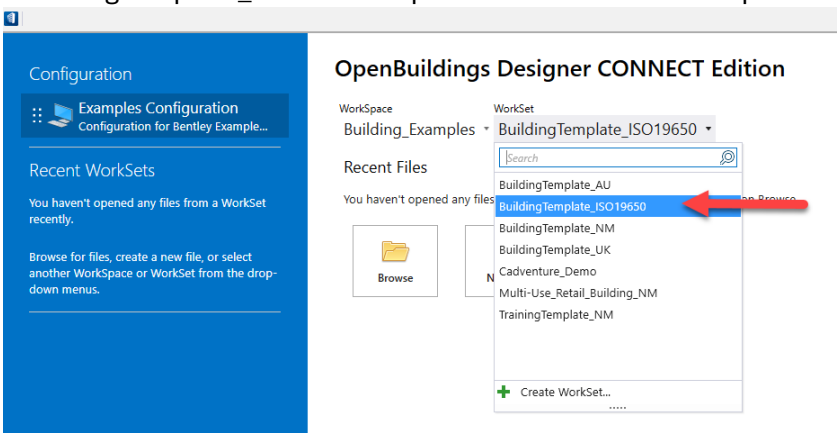
You should now test OpenBuildings Designer is working properly by opening it.

It will be listed in your Windows Apps under OpenBuildings Designer CONNECT Edition.

The dark blue Icon (the one without the Padlock) should be used to open the tool for the DEC course, and can be placed on the Windows Start menu, Toolbar or Desktop for easy startup.

The other icons fire up the same application in different modes.

You should see “Building_Examples” option in the “WorkSpace” drop down and “BuildingTemplate_ISO19650” option in the “WorkSet” dropdown



The last stage is to modify the configuration by installing the DEC WorkSpace.

4 How to install the DEC Workspace

The DEC workspace of relies on the ISO19650 Dataset.
This should already have been included as part of the OpenBuildings Designer installation as noted in the previous instructions. If it is missing you can run a repair/reinstall from Windows Control Panel on OpenBuildings Designer and use the installation wizard to add the Dataset.

The DEC workspace include files and resources for DEC level 1, 2, & 3 that match the 1day Teacher Training class and accompanying training documents and videos.
It's content has been designed with a focus on sustainable materials, and simplifying the complexity new users face when learning the basics of using OpenBuildings Designer.

Download

Click on the below link to download the DEC.zip file from Bentley Communities.

https://epuseruploadprodcdnendpoint.azureedge.net/CDN_Content/Students/DEC/DEC%20Workspace.zip

Install

Unzip or extract the contents onto each PC running OpenBuildings Designer.
Depending on your installed version of OpenBuildings Designer version, the target folder for this workspace is either.

C:\ProgramData\Bentley\OpenBuildings CONNECT Edition\Configuration\WorkSpaces

Or

C:\ProgramData\Bentley\OpenBuildings 2023\Configuration\WorkSpaces

You will have done this correctly if you can see
the file:

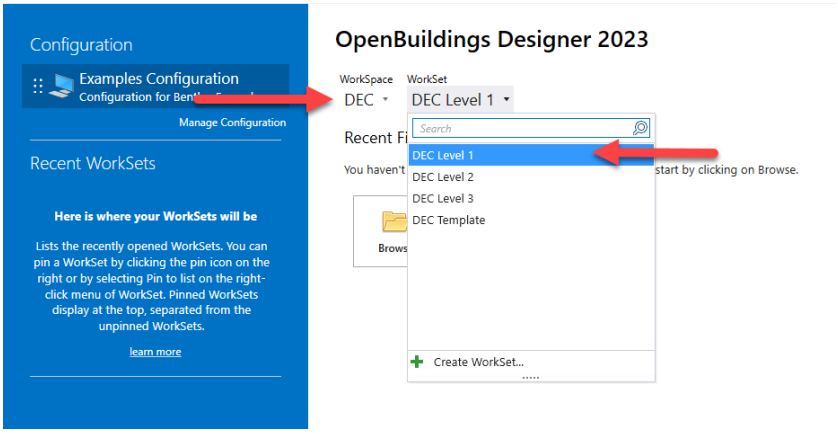
..\Configuration\Workspaces\DEC.cfg

and the folders:

..\Configuration\Workspaces\DEC\Standards
..\Configuration\Workspaces\DEC\WorkSets

Test

To test The workspace is correctly installed, restart OpenBuildings Designer.
You should see "DEC" option in the "WorkSpace" drop down and
"DEC Level 1", "DEC Level 2", "DEC Level 3" options in the "WorkSet" dropdown



Workspace Overview

While the DEC WorkSpace relies on the ISO19650 Dataset for a lot of the applications background standards, components, datagroup, etc. it tries to be self-sufficient for all the custom components created specifically to support the sustainability aspects of the DEC teaching program.

It is designed to sit on and work locally with OpenBuildings Designer on a stand-alone PC and is largely controlled by:
..\WorkSpaces\DEC\Standards\WorkSpaceStandards.cfg

For those schools who wish to provide this workspace a common resource on a shared server drive sitting on the same local LAN as the PCs, an example configuration file for redirecting OpenBuildings Designer is included:
..\WorkSpaces\ConfigurationSetup.copycfg
This file is inactive as is, and depending on each schools requirements and IT infrastructure it will need to be expertly edited to achieve the right outcome.

Cloud based storage solutions like Google Drive, OneDrive, etc. cannot be accommodated, Although it is possible for users to work on a local PC folder that is synced to the cloud for backup.

WorkSets

There are 3x DEC WorkSets, and 1x Template WorkSet.
Each Workset uses the same folder structure but has different content.
..\WorkSpaces\DEC\WorkSets\DEC Level 1

..\01_Recieved	- This is intended to be where incoming info is gathered
..\02_Models	- This is intended to be where the 3D models a stored
..\03_Drawings	- This is where 2D drawings can be stored
..\06_Output	- This is intended of exported render, spreadsheets, etc.
..\08_Standards	- This is for the project specific CAD resources (eg cell libraries)

DEC Level 1 and DEC Level 2 contains prebuilt, staged, training course material that is primarily used in the "Teacher Training" sessions – ie. where Cadventure trains the teachers how to use the software.
DEC Level 1 deals with the fundamentals and Architectural workflows to build a small building.
DEC Level 2 deals with more advanced Structural, MEP workflows in a larger building

Inevitably this same material is what the teachers will recycle to teach their own classes as they do not have time to build their own content.

DEC Level 3 has an example that might be used to demonstrate more advanced modelling

The Template WorkSet is a blank set of folders can be copied for each student that use the same PC to have their own area to work in.
Note that there is an accompanying WorkSet .cfg configuration file for each WorkSet folder structure, this tells OpenBuildings Designer that there is a WorkSet to list in the interface.
When creating a copy of the Template folder structure for a new student eg. ../DEC_HPotter2024
Then copy one of the DEC WorkSet .cfg files and rename it to match the folder name reg. DEC_HPotter.cfg
When you nest restart OpenBuilding Designer you should see it listed in the interface in the WorkSets dropdown.