

SETTING UP A DRAWING SET ON VECTORWORKS

Getting started:

- open a blank document
- file / **page setup** / printer setup (probably A3 landscape)
- file / document settings / **units** (mm [1], sq m [0.001], cubic m [0.001])
- vectorworks / preferences
 - o under 'edit', turn off '**offset duplications**'
 - o under 'display', select whether or not you want to '**zoom line thickness**'
- **snapping** (if palette not showing, turn it on under windows / palettes)
 - o make sure 'snap to grid' is turned off
 - o double click on one of the snapping palette buttons to get to settings
 - under 'smart point', make sure **extension lines** are turned on
 - under 'smart edge', make sure 'snap to extension lines' is selected

Drawing accurately:

- utilise the **snap settings** properly to ensure you are drawing accurately
- hold down the shift key to snap to horizontal/vertical
- always enter the distances numerically when you are drawing or moving things
 - o eg: to draw an accurate horizontal line:
 - select the line tool
 - click to start drawing the line
 - hit '**tab**' to bring up the coordinates
 - enter the horizontal distance ('x' value)
 - enter either the angle or '0' for 'y' value, or just hold down shift
 - click to complete the line
- **never nudge or approximate** – this will make your drawings inaccurate and make it more difficult and slower to draw

Setting up classes, layers/storeys, and sheets

- **classes** are the smallest components – use these to categorise different elements within a layer
 - o eg: within the 'floor' layer, you might have classes for 'joists', 'bearers' and 'flooring' (the sheet material or floorboards on top of the joists)
- **layers** divide up different parts of your building/model, usually vertically
 - o eg: your model might be divided into:
 - 'site'
 - 'foundations' (could be combined with 'floor/subfloor')
 - 'floor' (or 'subfloor')– anything below the ground floor finished floor level (FFL)
 - 'ground floor storey' – anything between ground floor FFL and first floor FFL
 - 'first floor storey' – anything above first floor FFL
 - 'roof'
 - o you can set up layers just as 'design layers', or you can set up '**storeys**'
 - storeys allow you to set the FFL for each storey, so when you are working on that storey the 'z' height of the model corresponds to the FFL level – this means you don't have to add the ground floor height onto any first floor heights

- you can set up layers within each storey, for example the ground floor storey might have 'walls' and 'ceiling'
 - to keep it simple you can just create one layer for each storey
- **sheet layers** are the page layout for each sheet you will print
 - you should not have any drawing or model components directly on the sheet layer
 - the scale of the sheet layer is 1:1 (real world page dimensions)
 - your title block should be on your sheet layer
 - drawings are brought onto the sheet layer via '**viewports**'
 - to create a viewport, draw a box (no fill or line) around the area on the design layer that you want to appear on the sheet
 - go to view / create viewport
 - select what sheet layer you want the viewport to appear on
 - select the scale you want the drawing to be at on the sheet
 - select which layers and classes you want to be visible
 - viewports can be edited by double clicking on the viewport on the sheet layer – you can then edit the crop, design layer, or annotations
 - **annotations** are like another layer within the viewport, where you can add notes or dimensions
 - the main difference between doing this on the sheet layer or within annotations is that the annotations are at the same scale as the viewport
 - I recommend using the viewport annotations for dimensions, and adding text notes on the sheet layer

Using symbols

- if you are creating multiple objects (2D or 3D) in any drawing, (eg framing members such as floor joists) you should create **symbols**
- symbols mean you only have to draw the object once, and if you need to change it you only need to change the symbol and the other 'instances' will automatically change as well
- symbols also help keep your file size manageable as they only use the memory of one object rather than every single instance
- to create a symbol:
 - draw your object
 - go to modify / create symbol
 - select 'next mouse click' to determine where the anchor or insertion point of the symbol will be (then click on that point once you hit 'ok')
 - select 'leave instance in place' – otherwise the symbol will go to the library but the one you've just drawn will disappear
- a symbol can have both a 2D and 3D component, so when you are in model view only the 3D component will be visible, and in plan projection only the 2D component – this allows you to create a 2D symbol with the appropriate line weight, fill/hatch etc.
- to edit a symbol, just double click on it