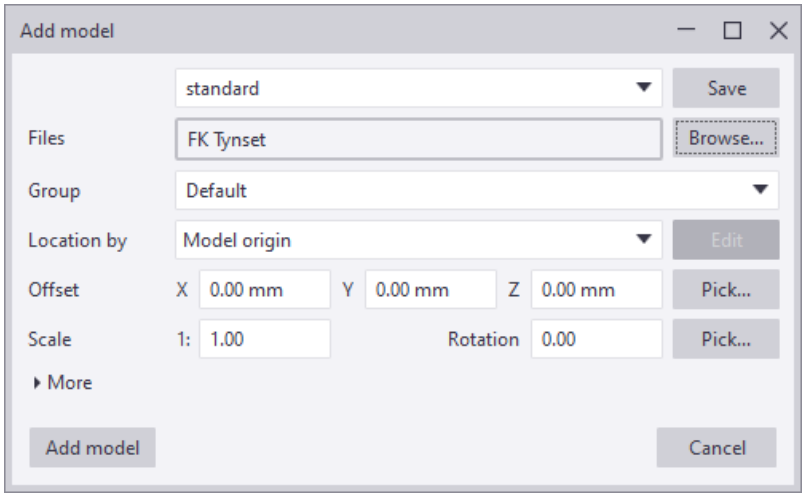
# Using base points when working with IFCs

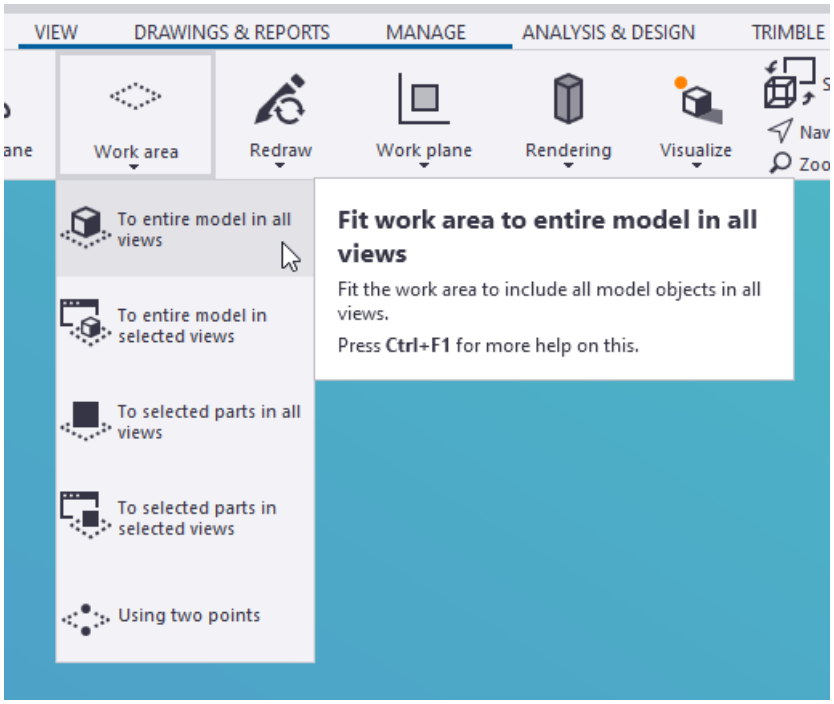
1. Add base reference model. Most often this will be an IFC from ARK or RIB.

```
Location by: Model origin
```



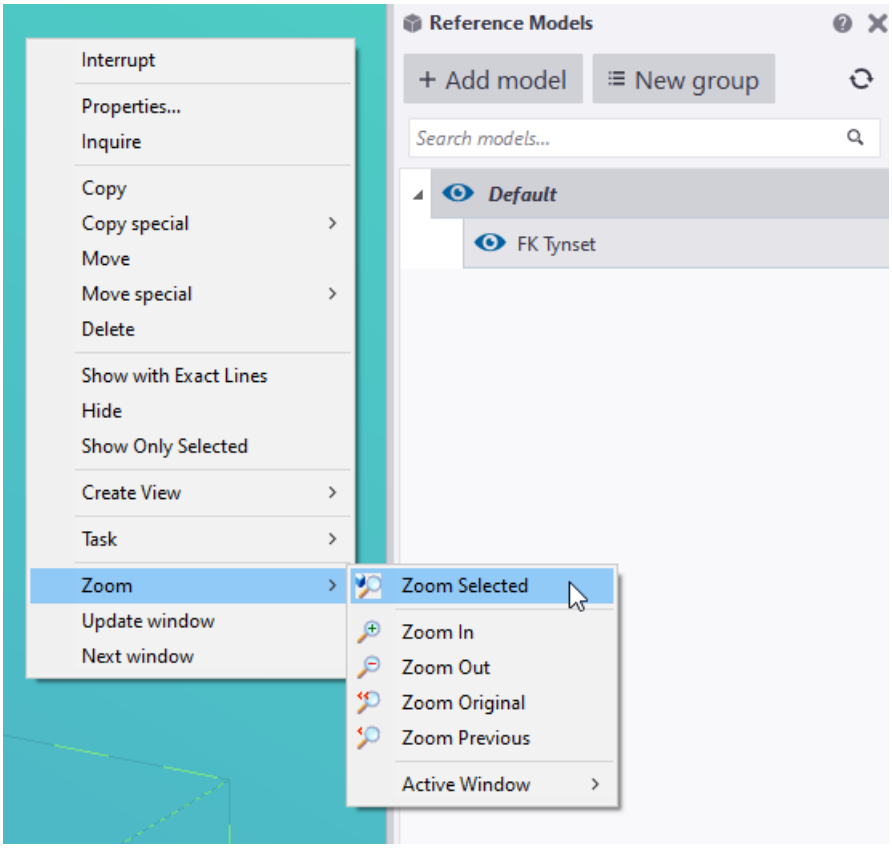

2. If the IFC is not visible in the model, fit the work area.

```
View > Work area > To entire model in all/selected views
```

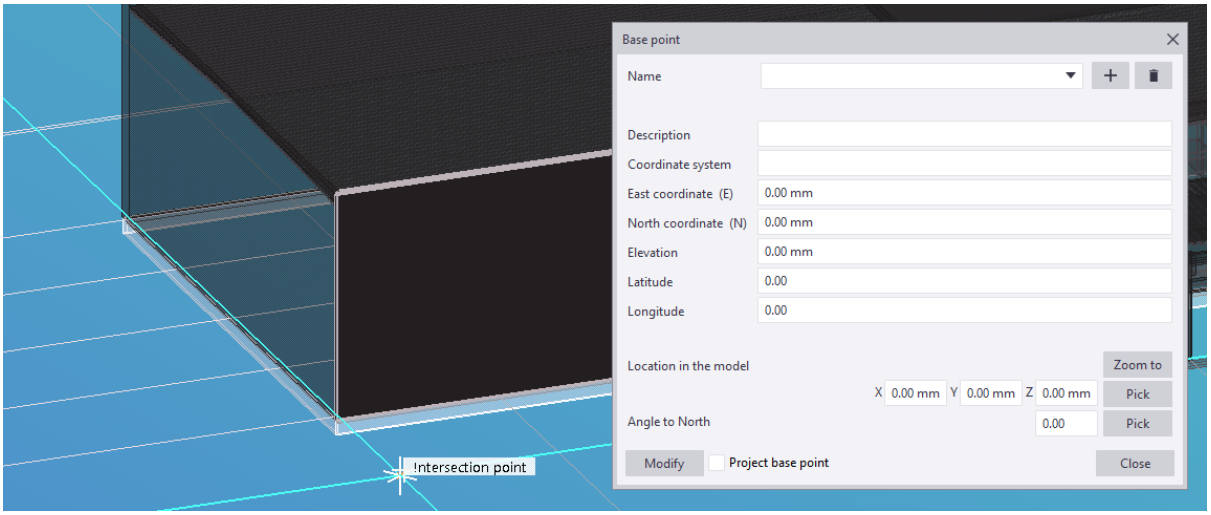


3. If the IFC is placed far from the model origin, it may be necessary to zoom to it.

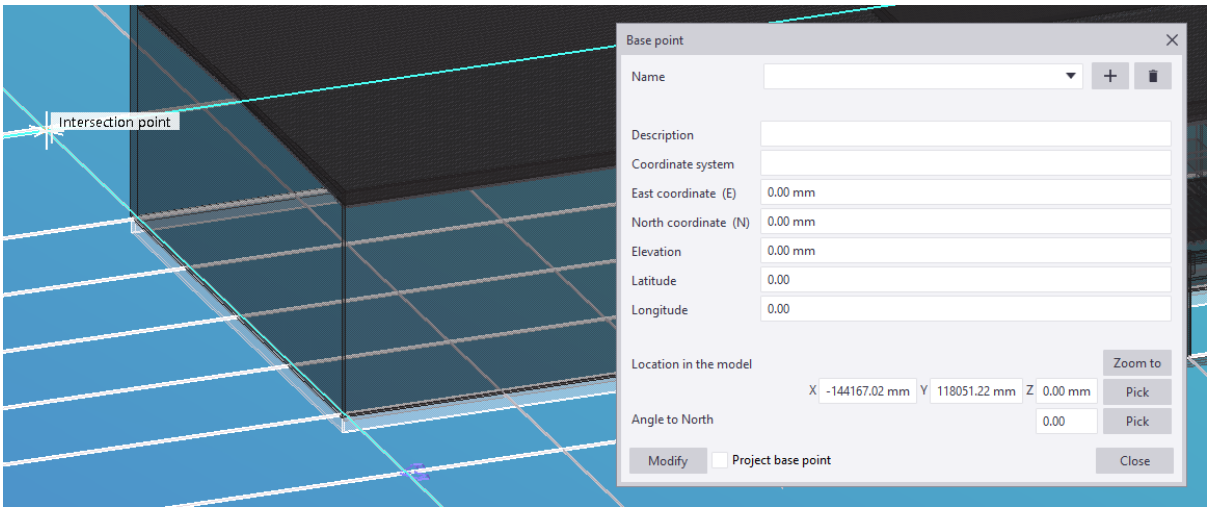
`Select ifc in the list, Right button > Zoom > Zoom Selected`



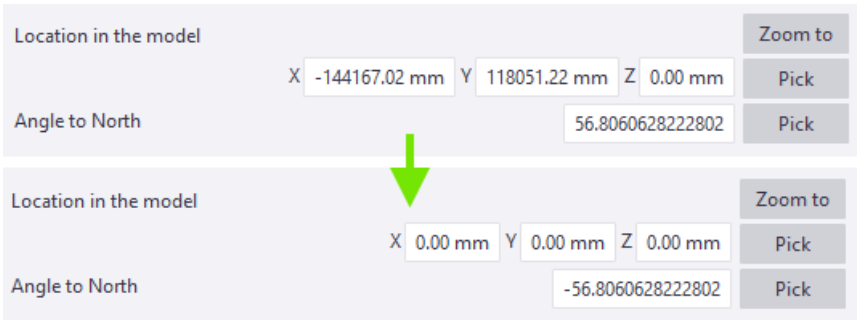

4. Open `Menu > Project properties > Base points`.
Click `Pick` button for `Location in the model` then click the project origin, which should be defined by the architect and included in the ifc. If the project origin is not defined, or if it makes more sense, any other point can be chosen as well.
Here we use a grid intersection close to the part of the building that we will design.



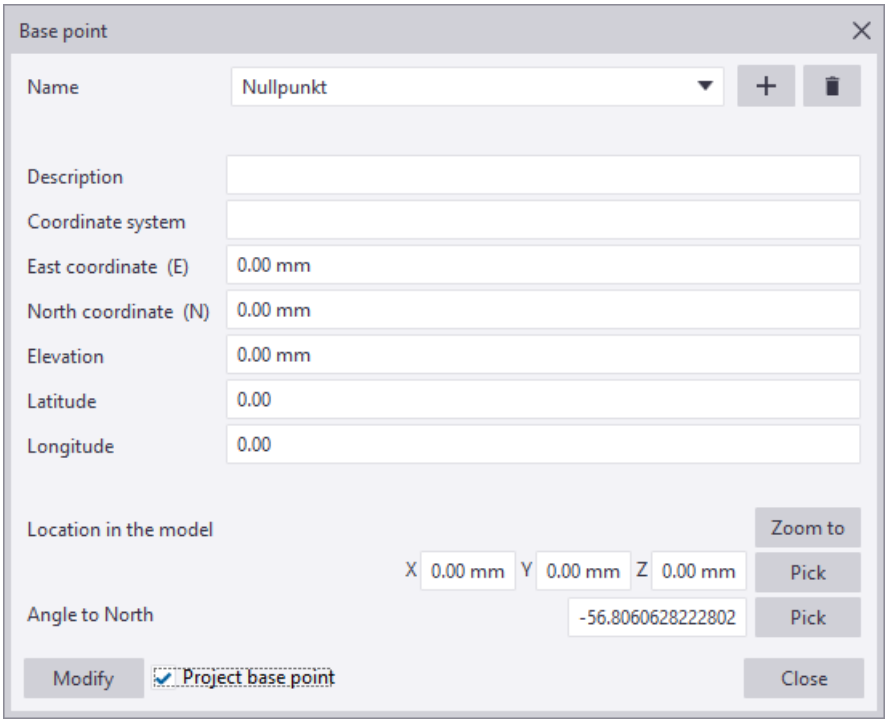
5. Now click `Pick` button for `Angle to North`.
   Select a point in the north direction from the previously chosen location. The line created by these two points will later become aligned with the direction of the Y axis.




6. Set `X`, `Y` and `Z` offsets to 0 and invert the `Angle to North`.



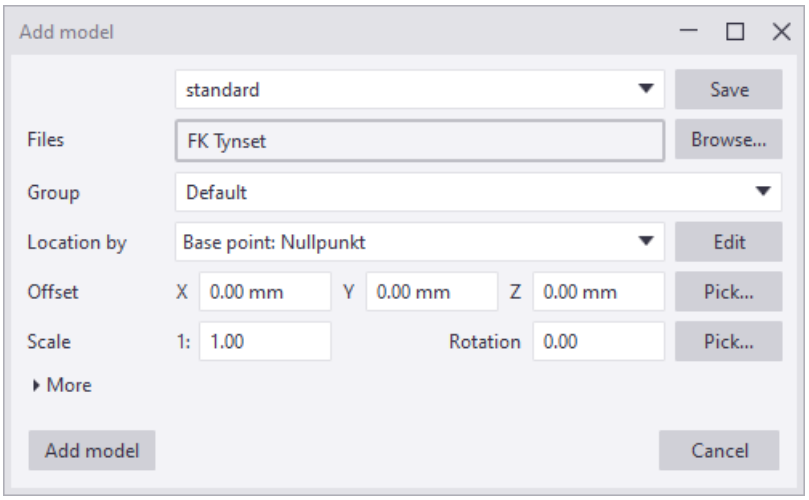

7. Fill in the `Name` of the base point, check `Project base point` and click `Modify`.



8. Add the same IFC again, this time located by the created base point.

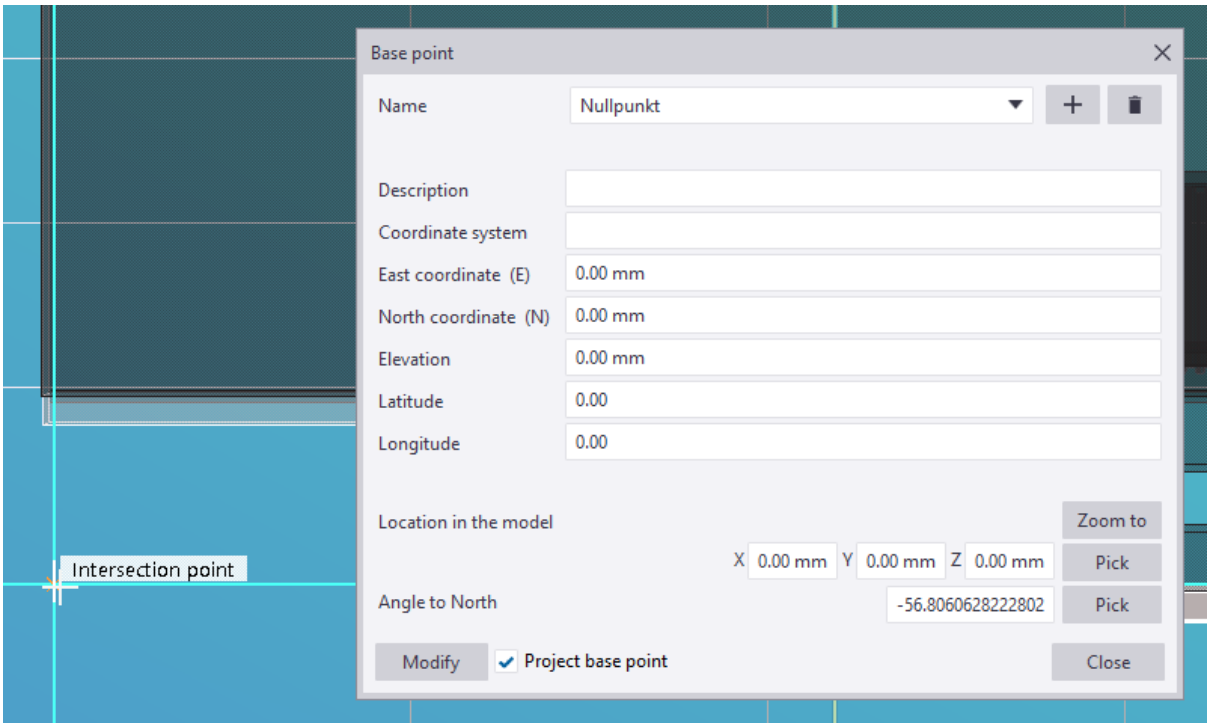
   `Location by: Base point: …`

   Now the north direction should be aligned with the Y axis.

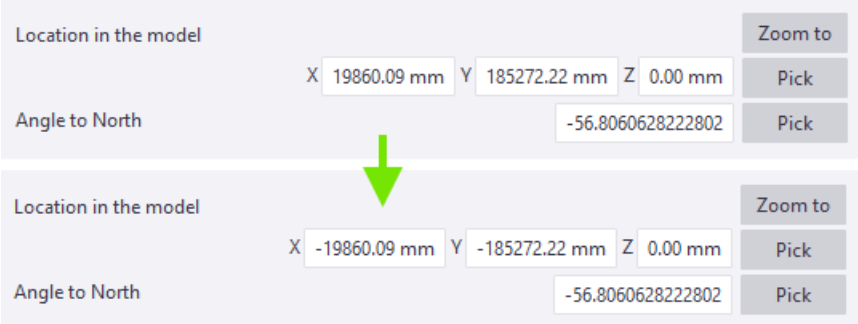



9. If the IFC is again not visible in the model, repeat steps 2 and 3.

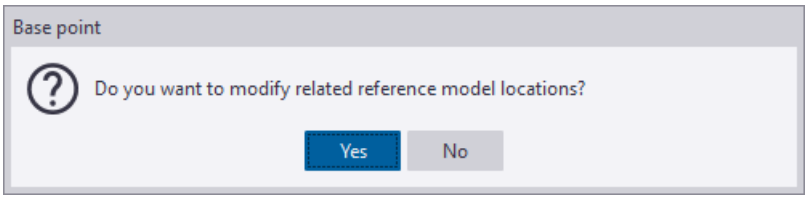
10. Click `Pick` button for `Location in the model` and select the same point as in step 4, this time in the second IFC, rotated according to the base point.



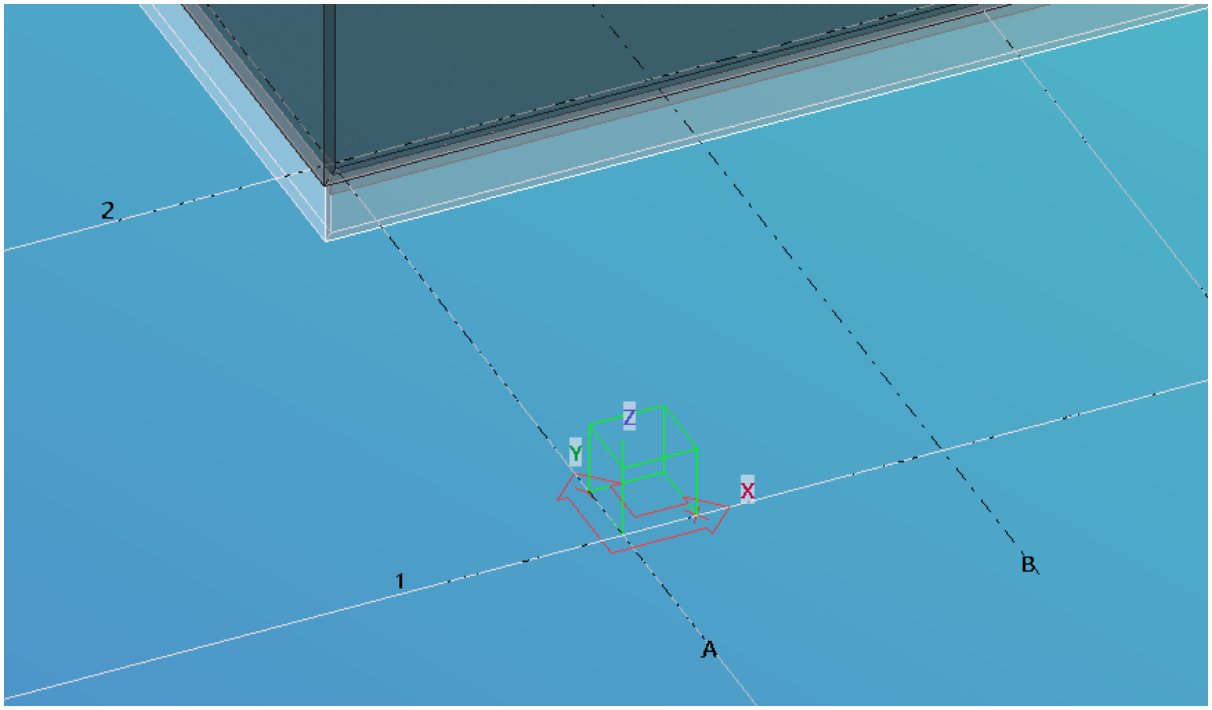
11. Invert the `X` and `Y` offsets. Adjust the `Z` offset if necessary.



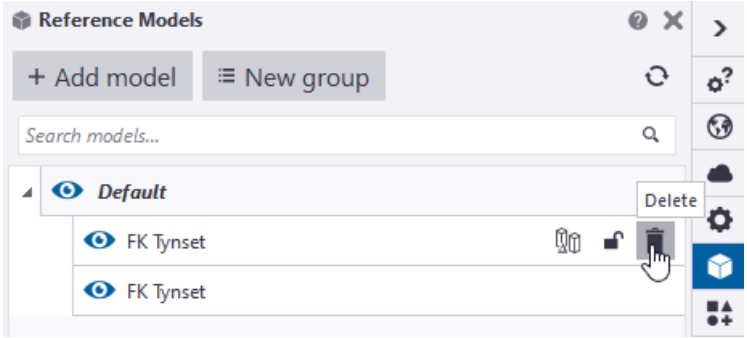

12. Click `Modify` and then `Yes` to confirm adjustment of the IFC location.



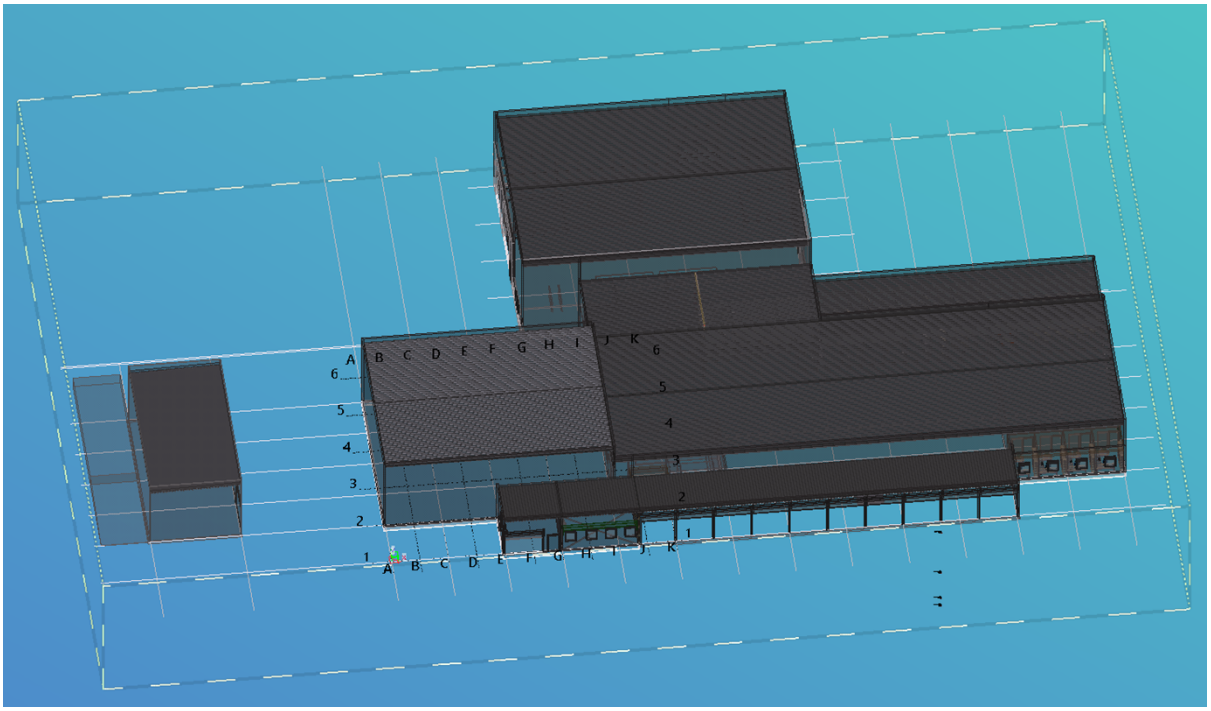

13. The IFC should now be placed in the model origin and aligned with the axes.




14. Remove the original IFC, keeping only the one located by the base point.



15. Repeat step 2 to reduce previously extended work area to the now aligned IFC.



16. Insert additional IFCs using the created base point.
    If they are not placed correctly, more base points may be created as necessary.

17. When exporting IFCs use the same base point as well.

```
Location by: Base point: …
```