

GEN20699

## Optimizing Your AutoCAD Desktop to Go Mobile

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### Learning Objectives

1. Learn how to set up A360 Drive and AutoCAD 360
2. Learn how to sync your AutoCAD cloud settings
3. Learn how to set up projects and teams
4. Learn how to work with drawings in AutoCAD 360

### Description

Take your CAD projects on the go with the A360 Drive cloud platform and AutoCAD 360 software—the browser-based version of AutoCAD software. This course will show you how to set up your desktop installation of AutoCAD software to work with A360 Drive, and view and edit designs on the fly and in the field from a tablet or smartphone. You will learn how to access the tools from any mobile browser, sync your files across devices, upload files on the go, and edit drawings from a mobile browser—or sync them back to the desktop for closer inspection. This session features AutoCAD, A360, and AutoCAD 360. AIA Approved.

### Your AU Expert

Shaun Bryant is an Autodesk Certified Professional with 28 years of total industry experience using AutoCAD and Revit. With a skill set gained while working as a consultant, trainer, manager, and user, Shaun has a varied background, comprising of 13 years as a consultant/trainer; 3 years in sales, presales and business development; and 9 years of industry experience as a CAD manager and user. Shaun also produces bespoke training courses and manuals for clients, as well as being an established content author for [www.lynda.com](http://www.lynda.com). He is an associate member of the Learning & Performance Institute, and the author of the reputable Not Just CAD! Blog and is an author on the Autodesk small business blog, REDSHIFT, at [redshift.autodesk.com](http://redshift.autodesk.com).

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## Introduction – Why Make Your AutoCAD Desktop Mobile?

So why exactly would you want to make your AutoCAD desktop mobile, you may ask? Well, there is one simple reason; **THE CLOUD**.

Internet accessibility and bandwidth is getting better and bigger every day, and the devices are moving along with this constantly. With devices, such as the iPad Pro and the Microsoft Surface, the tech is getting so sophisticated that we will probably only need one device soon, with a wireless headset and wireless charging. Trust me, it's happening!

Autodesk have embraced this technology, developing cloud-based tools to allow the AutoCAD user to work, share and collaborate on projects quickly and easily while out on site or on the road between sites, or even just in your back yard (if of course, your internet router has that kind of range, right?).

So, this class will show you how to get up and running with the Autodesk cloud-based apps, sync your AutoCAD drawings with the cloud and collaborate with your projects and teams when you are mobile, so sit back, relax and enjoy!

## A Bit of Background

I come from a traditional drafting background. I started on the drawing board, using acetate drawing sheets and the blue nylon pencils and Rotring inkpens. My, haven't we come a long way! I now come out with the old chestnut (just like my grandfather used to), "Things were different when I were a lad".

Yep, they sure were and I am so pleased that I have kept up with the latest Autodesk software and technologies because they have allowed me to work smarter, faster and more productively. When I show my training classes the new technology, especially in the cloud, I love the look I get back. It's almost that "kid at Christmas" look when they realise that they have an amazing gift in front of them. Did you like my seasonal slant there? Just for you at AU2014.

My industry experience comes from an architectural, building and construction background, so you will understand my enthusiasm for the mobile apps from Autodesk, and the way that the cloud can be utilized on site like nothing ever has before. It sure beats holding down a large paper drawing on the bonnet (hood) of my car with house bricks on a windy day.

And, yes, I am English, by the way....(translations are available).

Enjoy the class, enjoy AU and remember **THREE** things.....

1. Please complete your AU evaluation for my class.
2. Check out my courses on [www.lynda.com](http://www.lynda.com).
3. Join **AUGI** ([www.augi.com](http://www.augi.com)).

I'll see you on the other side...

**SCB**

## Using A360 Drive

So, if you didn't know already, Autodesk provide you with 25GB of free cloud storage on your own A360 Drive. Just like Dropbox, Google Drive and all the others, it is out there. Just set up an Autodesk ID at [accounts.autodesk.com](http://accounts.autodesk.com), if you haven't done so already. Once you have done that, head on over to [a360.autodesk.com](http://a360.autodesk.com), log in and you're there.

In your A360 Drive account you get that 25GB of storage I mentioned above. You can set up cloud-based folders and either re-create your folder structure you use at work or create a whole new working folder environment if you wish. See Fig.1 below to get an idea of what your A360 Drive would look like.

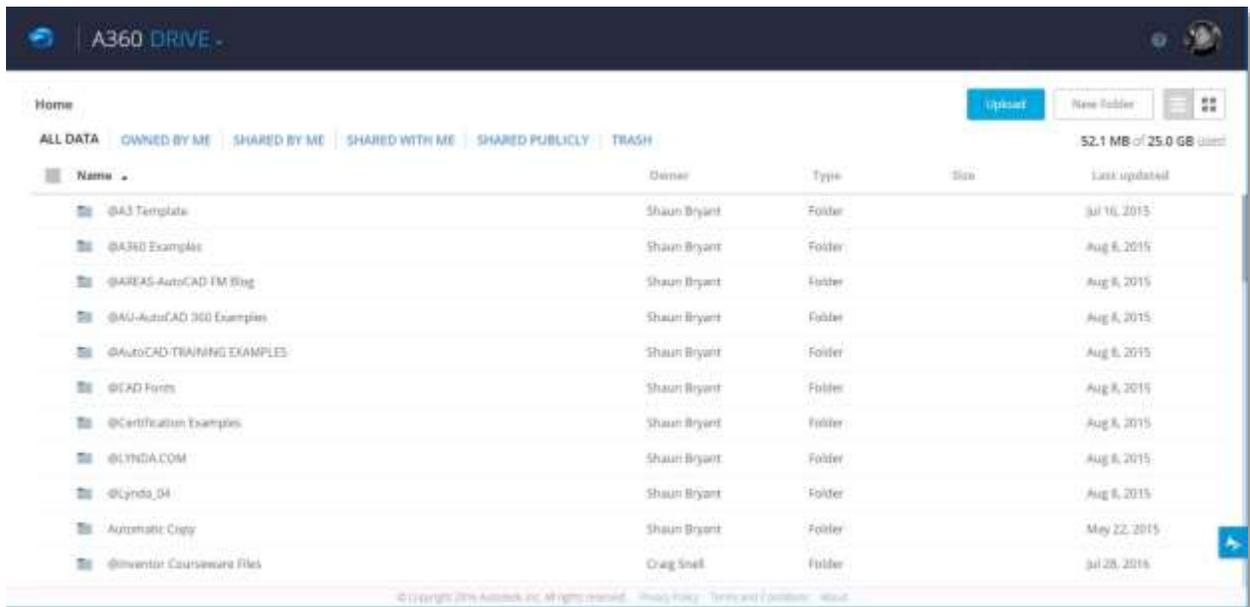


FIG. 1 - A360 ON THE APPLE APP STORE (NOTE THAT YOU NEED TO INSTALL A360 DRIVE TOO!)

## Where does AutoCAD 360 come in?

Once you have an A360 Drive account, you can log in using any device. You don't have to be at your PC or desktop any more. You can not only look at your A360 Drive contents, but you can view and edit drawings using the cloud-based version of AutoCAD, called **AutoCAD 360**.

AutoCAD 360 runs in most proprietary browsers such as Chrome and has **THREE** flavors: -

- AutoCAD 360
- AutoCAD 360 Pro
- AutoCAD 360 Pro Plus

The basic AutoCAD 360 is for viewing and measuring detail in cloud-based drawings only, whereas the other two Pro versions provide more advanced editing tools.

## Using the Benefits of AutoCAD 360

AutoCAD 360 is available (primarily) on both Apple and Android platforms. The basic version is free and you can upgrade to the Pro or Pro Plus versions at cost (prices are in UK pounds – GBP – your local pricing will appear when you go to the website).

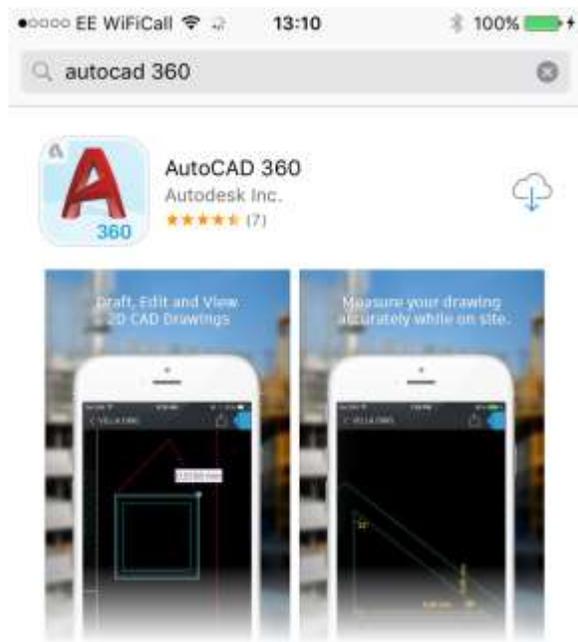
- **AutoCAD 360** - FREE
- **AutoCAD 360 Pro** - £5 per month or £45 per year.
- **AutoCAD 360 Pro Plus** - £95 per year.

### So what exactly are the benefits?

That is simple. You get a mobile version of AutoCAD. Period. Whilst a much more simplified version of AutoCAD, it gives you the ability to make your AutoCAD desktop completely mobile, using a tablet, or even just a smartphone. My personal preference is Apple products, so my iPad and iPhone both have the AutoCAD 360 app installed.

### Installing AutoCAD 360 (and A360 Drive)

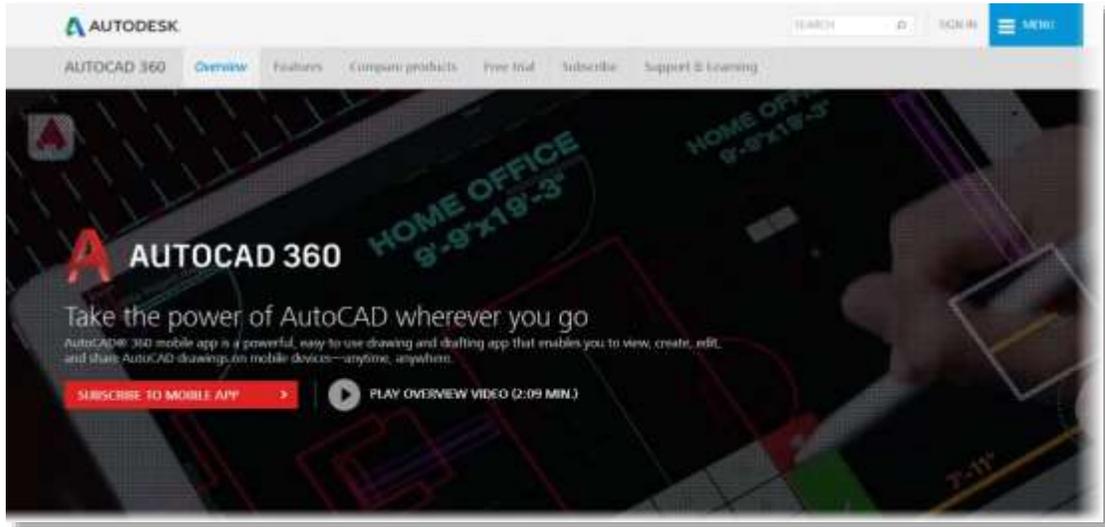
Installing AutoCAD 360 and A360 Drive on your mobile device could not be easier. Head on over to your respective app store (Apple, Android etc.) and look up “AUTODESK” in the Search page. That’s where you will find them (see Fig.2 below). Install the apps on your device.



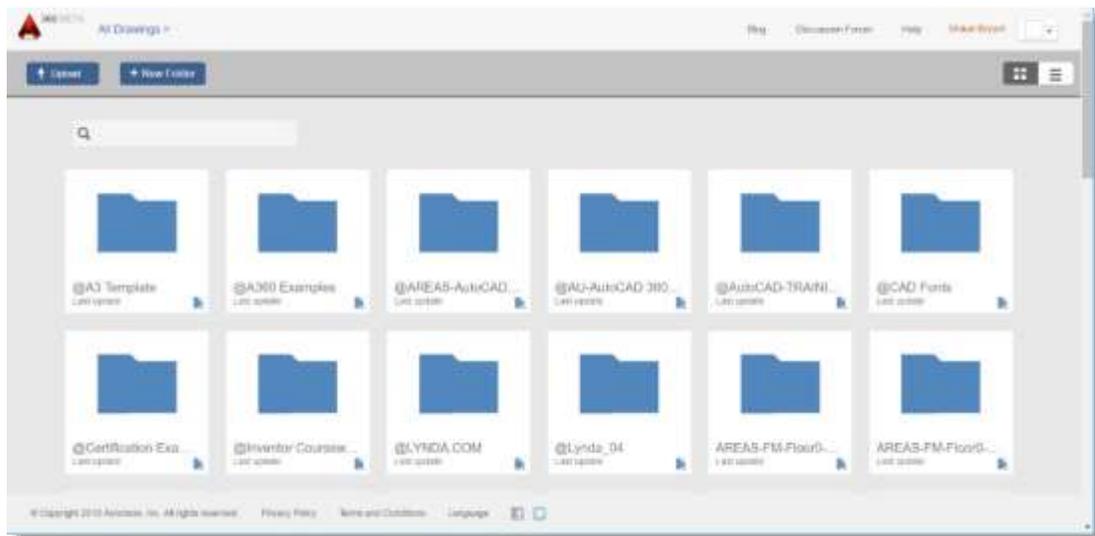
*FIG.2 - AUTOCAD 360 ON THE APPLE APP STORE (NOTE THAT YOU NEED TO INSTALL A360 DRIVE TOO!)*

Once installed on your device, you will need a login. The easiest way to set this up is to your PC and go to the AutoCAD 360 webpage and get the desktop browser version of AutoCAD 360 all set up. Very simple.

Just go to [www.autodesk.com/products/autocad-360/overview](http://www.autodesk.com/products/autocad-360/overview) and set it all up there. Click on the top right corner of the page to login or sign up if you already have an ID set up (see Fig.3 below).



*FIG.3 - AUTOCAD 360 WEBPAGE (USING GOOGLE CHROME)*



*FIG.4– WHEN LOGGED IN TO AUTOCAD 360 (USING GOOGLE CHROME)*

Once you are logged in to AutoCAD 360, you will see the cloud-based folders (see Fig.4 above) that reside in your A360 Drive (as mentioned previously) and you can then access your AutoCAD drawings via a mobile device, such as an iPad, using AutoCAD 360.

## So what are the benefits of AutoCAD 360?

The benefits are fundamental and easy to see. Using AutoCAD 360, you can, quite literally, take your AutoCAD desktop **ANYWHERE**. So, what does this give YOU, the user?

- **Mobility** - The ability to take your designs and drawings (electronically) to the building site, the shop floor, the clients office - all on a device such as a tablet which can be connected to a projector or a screen with the appropriate tech. No need for big paper drawings held down on the bonnet (hood) of your car with bricks, for example.
- **Connectivity** - AutoCAD 360 gives you the Design Feed. In the same way, you connect with your friends via social media, you can comment on the drawing with text comments, and link photographs from your mobile device to the comments. This allows you to find things visually much more easily. For example, you may be snagging in a new build property.
- **Productivity** - You can work on the drawings there and then in AutoCAD 360, and upload the changes to the cloud-based file in A360 Drive. Then, back at the office (sigh), your changes are in the file and you can then download from A360 Drive to your desktop.

## Setting up your cloud settings in AutoCAD

### 1. Online Options tab

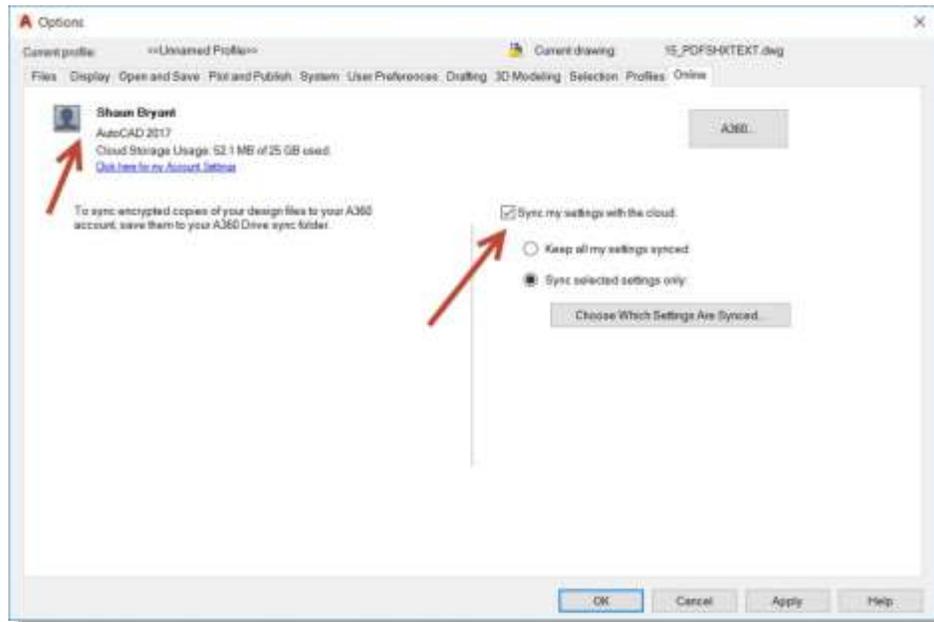


FIG.5– THE ONLINE TAB WHEN IN THE OPTIONS DIALOG BOX

When you are logged in to your A360 Drive account, and you go to your AutoCAD Options and go to the Online tab, AutoCAD tells you that you are logged in and gives you your A360 status, with information such as your cloud usage (see the left-hand side of Fig.5 above). It also gives you the chance to set your settings where they sync with your cloud-based storage in your A360 Drive account (the right-hand side of the Online tab in Fig.5 above). You can keep ALL your settings synced or sync selected settings only by clicking on the **Choose Which Settings Are Synced...** button (see Fig.6)

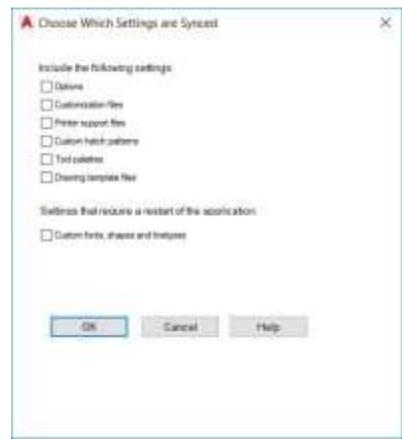


FIG.6– CHOOSE WHICH SETTINGS ARE SYNCED DIALOG BOX

## 2. A360 ribbon tab

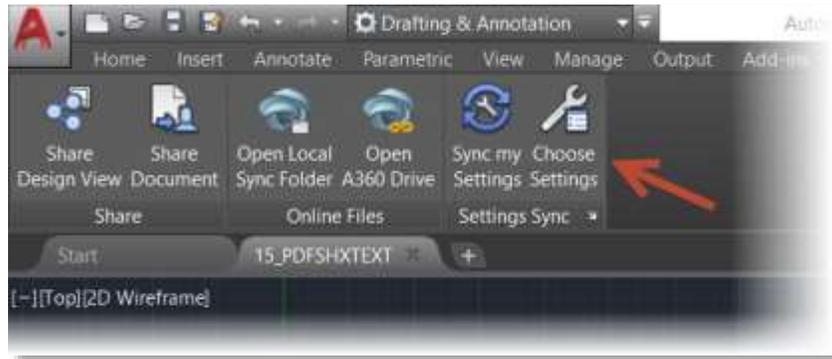


FIG.7 – THE A360 TAB IN THE AUTOCAD RIBBON

## 4. Syncing your AutoCAD settings

So, optimizing your AutoCAD desktop for the cloud has never been easier. Using the full version of AutoCAD on your desktop, you can save changes to the drawing design both locally and in A360 Drive by signing in to your A360 Drive account via AutoCAD, as explained above.

*NB: This example assumes that you have already UPLOADED your drawing of the same filename to your A360 Drive account.*

- Once you have set your sync settings in the Online tab in the Options dialog box, use your Infobar in AutoCAD (top right), sign in to your A360 Drive with your Autodesk ID, using the **Sign In** pulldown.
- Then with your AutoCAD Options set to sync the way you want; you are set to sync your changes and settings to your A360 Drive. Be aware, that A360 Drive is still classed as Autodesk 360 in AutoCAD 2015.
- Then, save your drawing in the usual way and it will be synced with the same drawing stored in the cloud.
- So now you have your drawing saved on your PC desktop **AND** in your A360 Drive account in the cloud. So now, you can leave your office! Go on, get out and enjoy the sun, but make sure you have a decent mobile connection! The cloud IS wonderful, but not much use if you can't get to it, right?
- You can then open your "mobilized" drawing in one of TWO ways: -
  - **A360 Drive** - open A360 Drive on your mobile device, sign in, find your drawing, and then open it using your installed version of AutoCAD 360. You can then view your designs easily while you are mobile.
  - **AutoCAD 360** - go straight to AutoCAD 360 on your mobile device, find your drawing in your document list and open it. You can then (depending on which version of AutoCAD 360 you have) view, measure and edit your drawing.

The cloud is your friend and gives you the flexibility to work where you **NEED** to be. Make the edits in AutoCAD 360 using the drafting tools. Make comments in the Design Feed and link photographs (taken on your mobile device) to the comments and use the GPS built in to your mobile device to track EXACTLY where you are making the changes and the comments - great when working on a large construction site or in a big factory complex on the shop floor.

Once you have made those changes, they are noted in A360 Drive against the drawing and show on the drawing when opened in AutoCAD 360.

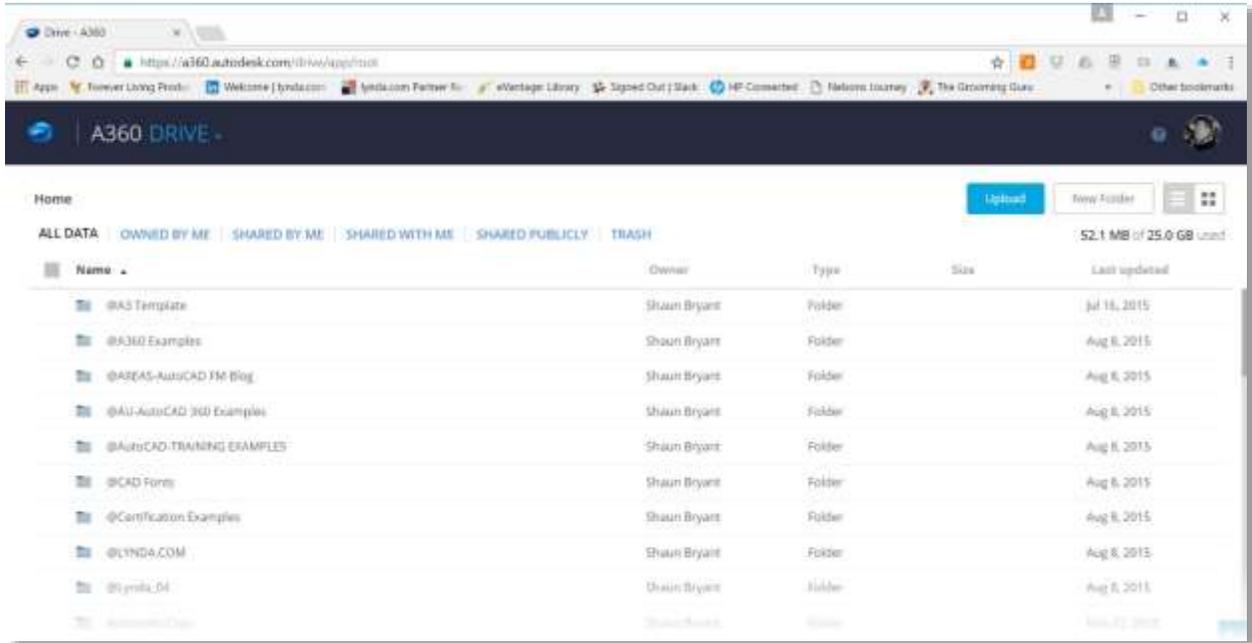
So, when you are back in the office, open A360 Drive or AutoCAD 360 on your desktop, via your browser, and download the updated drawing. All the mobile changes you made will be there.

So, there you have it.

**Desktop. Optimized. Mobilized. Expanded.**

## Using A360 Drive

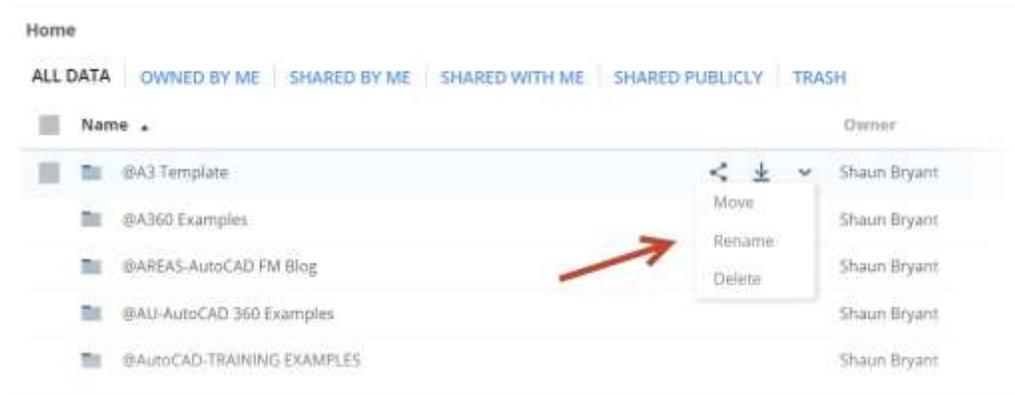
So now you are in your browser, on your A360 Drive homepage. The homepage itself gives you all the information you need at a glance.



*FIG.8– YOUR A360 DRIVE ONCE YOU HAVE LOGGED IN VIA YOUR BROWSER*

You've got the names of your files and folders, files and folders owned and shared, plus information shared with you and shared publicly and the necessary trash folder too. If you look at Fig.8 above, the screenshot shows you exactly how it looks in the Chrome browser.

If you hover over a file or folder, you will see some tools available that allow you to share download and move, rename or delete files and folders.



*FIG.9– YOUR A360 DRIVE FILE AND FOLDER MANAGEMENT TOOLS, AS HIGHLIGHTED FOR THE “@A3 TEMPLATE” FOLDER*

## Creating sub-folders

So, once you're logged in you might want to create a sub-folder structure for use with your team, or just for your own use to be organized. Trust me, being organized always helps!

Just click on the **New Folder** button, name the new folder, and a new folder will be created in your A360 Drive (see Figs. 10 & 11 below).

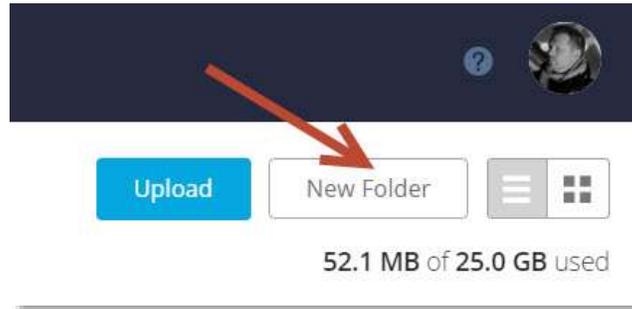


FIG. 10 – THE NEW FOLDER BUTTON (TOP RIGHT OF THE A360 DRIVE SCREEN).



FIG. 11 – THE CREATE FOLDER DIALOG BOX

Once your folder is created (like the **@AU2016 Demoset** folder shown in Fig.12 below), you can click on it to go in to it and use the **Upload** button to upload files to the new folder.



FIG. 12 – THE NEW FOLDER, @AU2016 DEMOSET, SHOWN IN A360 DRIVE

If you haven't uploaded any files yet, you will be greeted by the splash screen blow: -

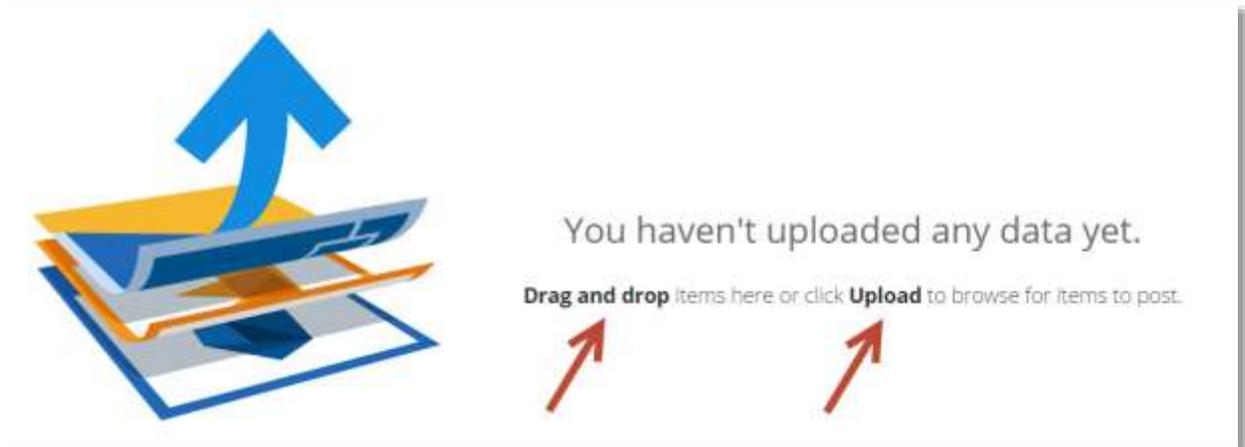


FIG. 13 – A360 DRIVE SPLASH SCREEN

## Uploading files to A360 Drive

Let's have a look at uploading a file first.

Hit the **Upload** button as shown in Fig.10 previously. You will be greeted by the usual file dialog box: -

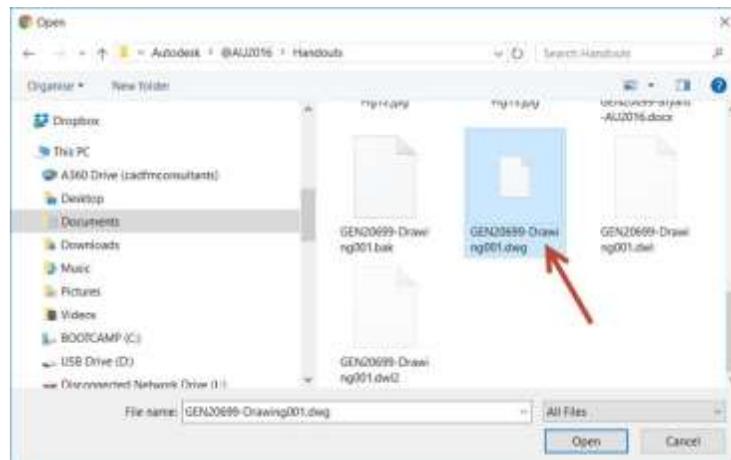


FIG. 14 – DIALOG BOX TO UPLOAD FILES TO YOUR A360 DRIVE FOLDER

Select the appropriate file (in my case the AutoCAD file **GEN20699-Drawing001.dwg**) and click on the **Open** button. Hey presto! The file is now uploaded to your A360 Drive, as shown in Fig.15 overleaf.



FIG. 15 – THE FILE SUCCESSFULLY UPLOADED TO THE A360 DRIVE FOLDER

## Dragging and dropping files to A360 Drive

In the same way, you can upload files to the A360 Drive, you can also drag and drop files in true Windows fashion. You just need both your A360 Drive browser window open and the appropriate Windows folder open, then just drag and drop the required file to the A360 Drive folder location.

I have a file **GEN20699-Drawing002.dwg** that I want to drag and drop in to my A360 Drive (see Fig.16 below).

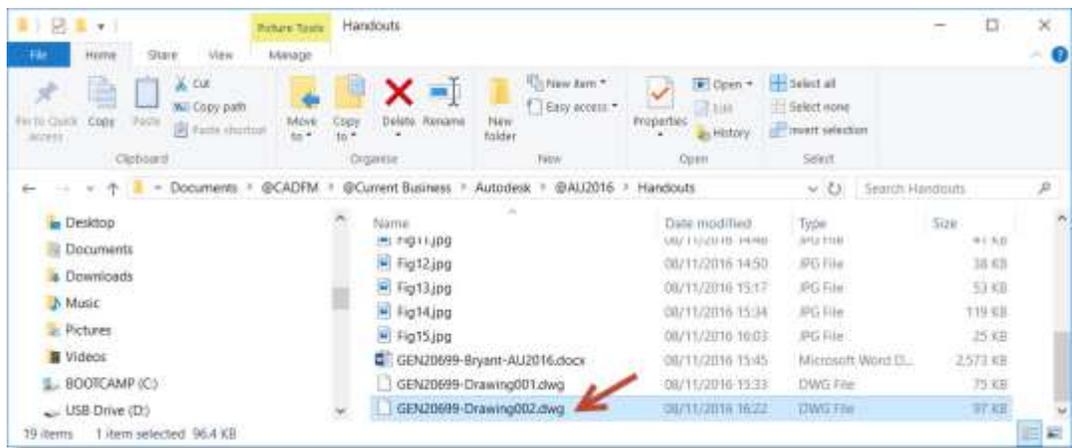
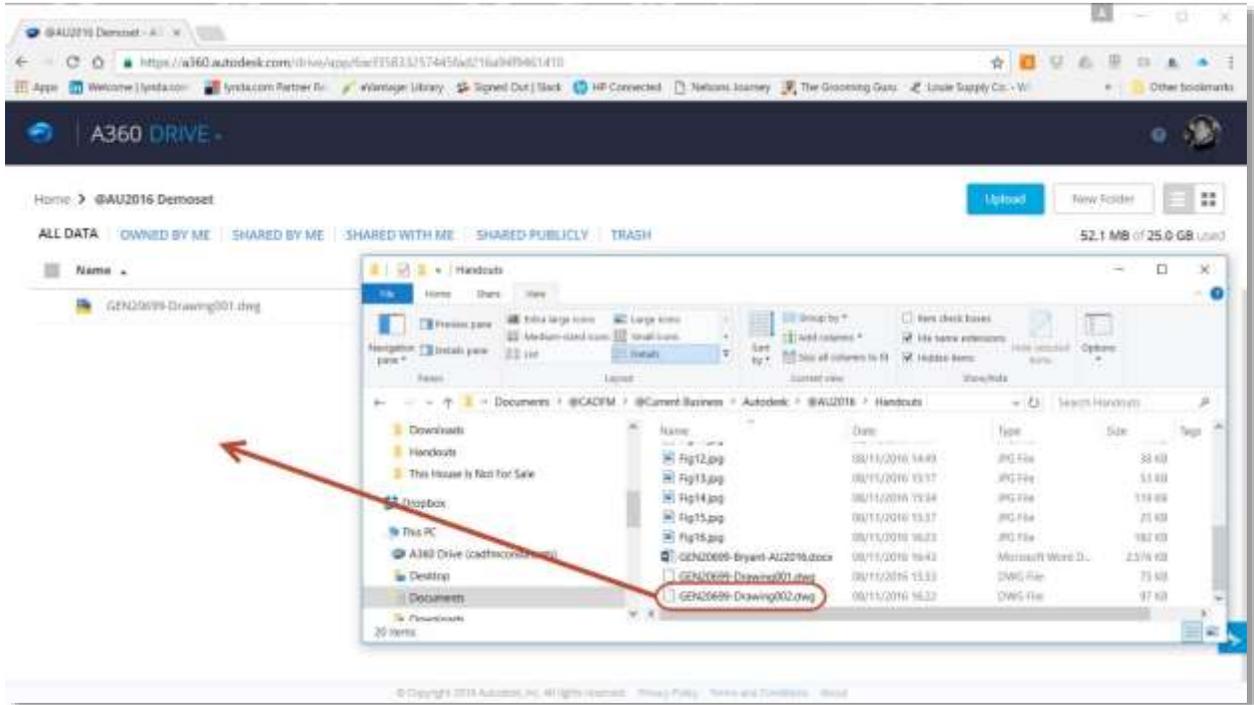


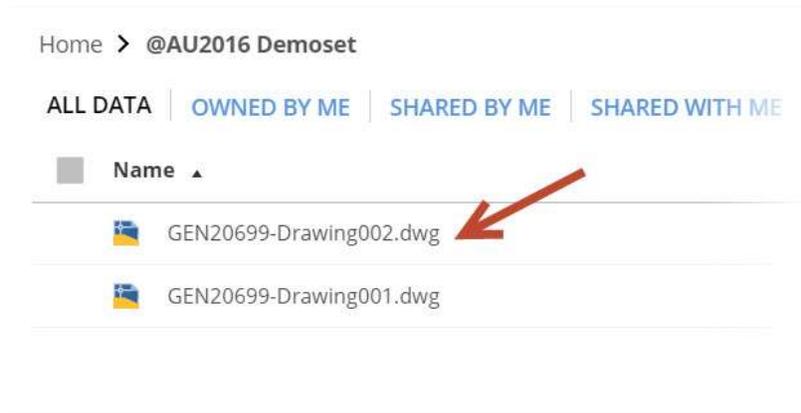
FIG. 16 – THE FILE SUCCESSFULLY UPLOADED TO THE A360 DRIVE FOLDER

I have located it in the local folder and now I want to add it to the **@AU2016 Demoset** folder in my A360 Drive. All I need to do is place my browser window and local window appropriately on my screen and the drag the file in to my A360 Drive folder. Look at Fig.17 overleaf and you will see how easy it is.



*FIG. 17 – DRAGGING THE LOCAL FILE TO THE A360 DRIVE FOLDER*

Once you have dragged it across the A360 Drive window and released the mouse button, the file will show up in your A360 Drive folder, as shown below in Fig.18.



*FIG. 18 – THE FILE IS NOW ADDED TO THE A360 DRIVE FOLDER*

**NB:** You can also select **MULTIPLE** files using both methods as well.

## Organizing your files in to sub-folders

Once you have an A360 Drive folder structure set up, you can then start looking towards sub-folders to get more organized. For example, you might want to set up a folder for each of your team or project members and only share the files in each of their folders with them, to maintain file management standards.

To do this, you can follow the traditional sub-folder setup in your main A360 Drive folder by creating new sub-folders. If you look at Fig.19 below, you can see I have created a new sub-folder with my initials, **SCB**, underneath the main **@AU2016 Demoset** folder.

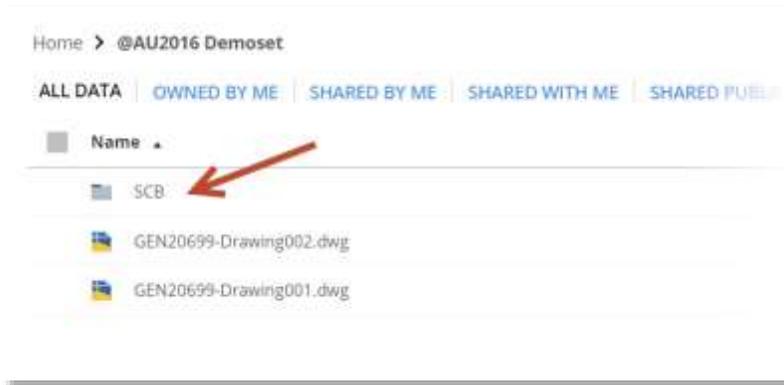


FIG.19 – THE NEW SCB SUB-FOLDER IN THE @AU2016 DEMOSET FOLDER

So now the sub-folder is created, you can add files to that folder as well as the main root folder, just as you would in a Windows file folder structure.

## Setting up Projects and Teams

A360 is great for setting up projects and teams within companies and organizations, as well as for specific projects. You can share both publicly and privately to protect confidential data, and use the Design Feed in AutoCAD to comment to design changes and revisions.

At the top left of the A360 screen, you will see a little pulldown arrow. If you click on it, you will see the three main areas you can use in A360, including A360 Drive (see Fig.20 below).



FIG.20 – THE A360 PULLDOWN MENU

You can ignore the Design Graph (BETA) for now, but you can see the A360 option. Select it and it will take you to your Projects page, that is linked to your Autodesk User ID and your A360 Drive (see Fig.21 below).

## Setting up a new Project

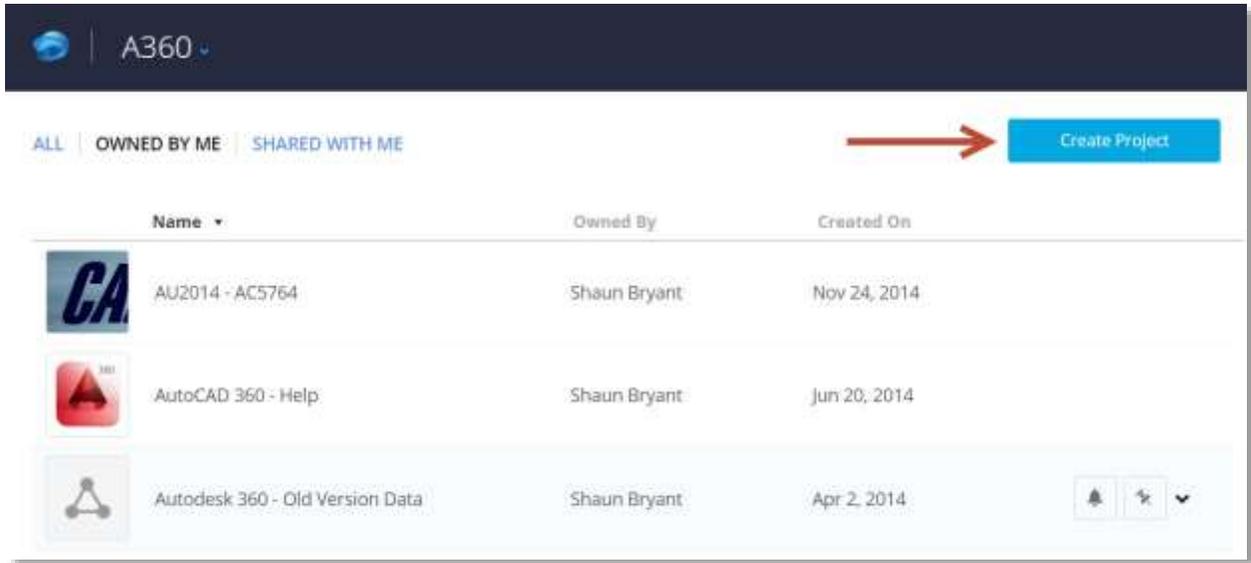


FIG.21 – A360 PROJECT PAGE WITH THE CREATE PROJECT BUTTON HIGHLIGHTED

Once a Project has been set up, you are taken to the initial screen where (like before) you can either upload or drag and drop files in to the Project and its associated sub-folders. Fig.22 below shows the areas where you can manage your project content, including linking through to cloud storage apps such as Dropbox.

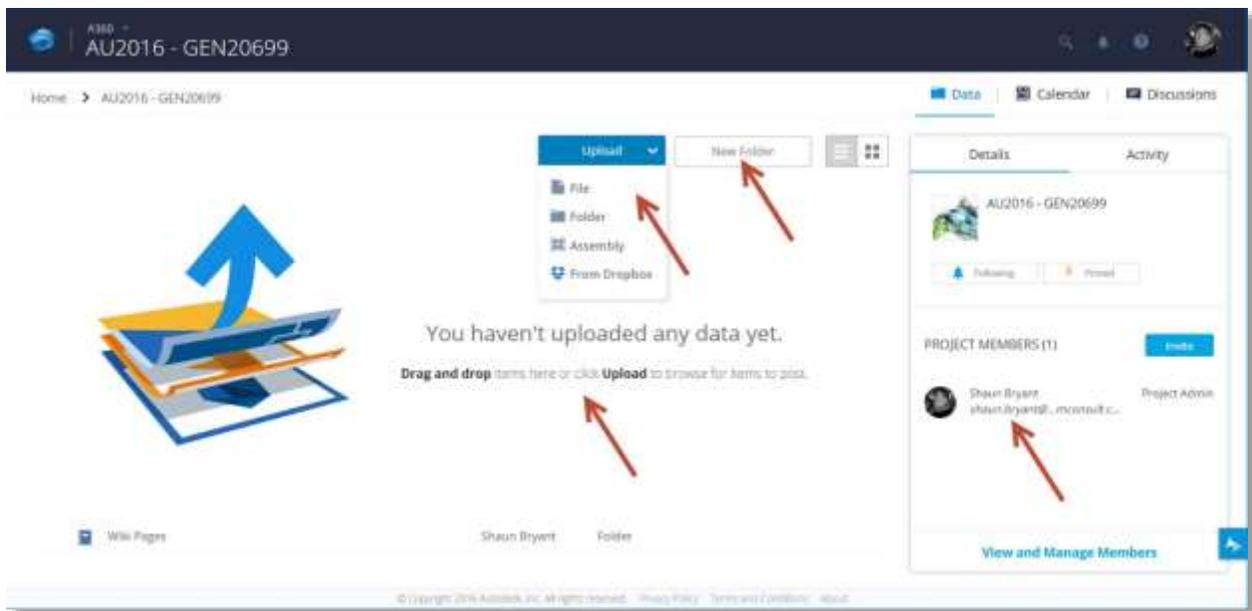


FIG.22 – THE INITIAL PROJECT SCREEN WITH MANAGEMENT TOOLS HIGHLIGHTED

## Adding Project members

You will notice on the right-hand side of the screen, the project member's area. Right now, I am the only project member and the project administrator. The **Invite** button allows you to invite project members to join the project via email. You will also notice top-right the **Data**, **Calendar** and **Discussions** tabs as well as the **Details** and **Activity** tabs in the Project member's area on the right too. These tools allow you to manage your A360 Project effectively.

Fig.22 also shows that no documents have been uploaded to the project yet. You can upload and drag and drop in the same way as mentioned previously. Fig.23 below shows both AutoCAD drawings we used earlier loaded in to the project.

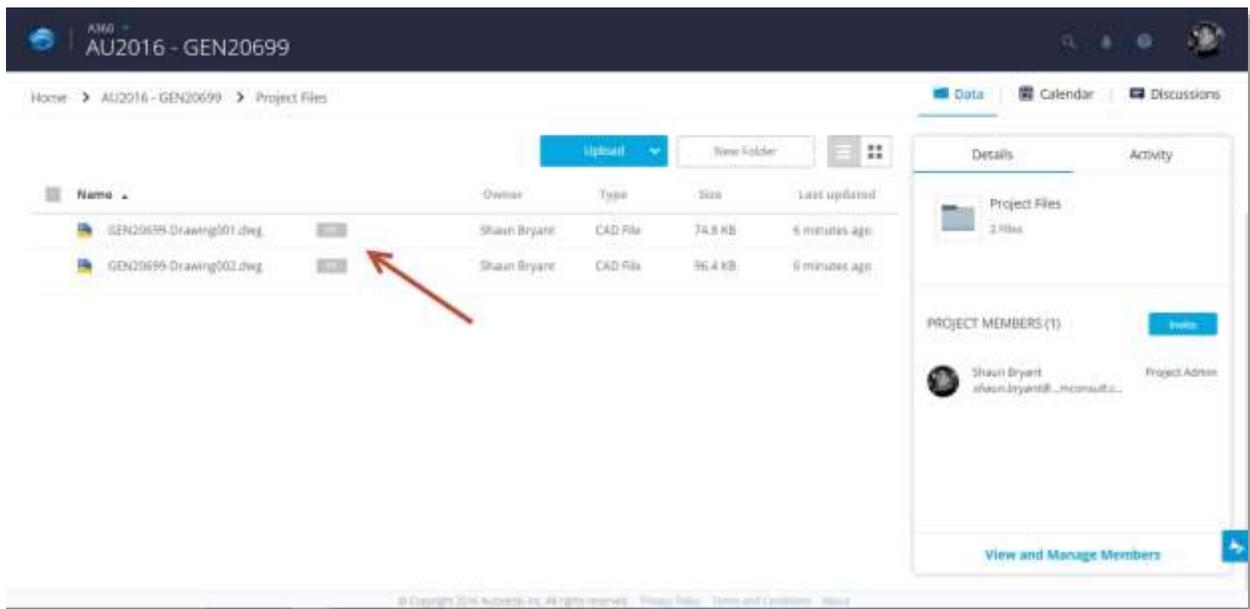


FIG.23 – DRAWINGS LOADED IN TO THE PROJECT

## Adding drawings to A360 Drive through AutoCAD

You can add A360 to your computer, table or phone. It can be downloaded free from the Autodesk website and once it is installed, it provides you with a local folder (provided you are logged in). Below is a screen shot of my *cadfmconsultants* A360 Drive local folder in File Explorer in Windows: -



FIG.24 – MY **CADFMCONSULTANTS** A360 DRIVE FOLDER

What this means is that you can save any of your files to this folder and they will automatically be loaded in to your A360 Drive folder. This includes your AutoCAD drawings and you can then set your settings in AutoCAD to sync to your A360 Drive folder as mentioned earlier.

AutoCAD also provides you with all the tools you need to work with your A360 Drive files, so that you can get them prepared and ready to go mobile. Fig.25 below shows you the tools you can use from your A360 tab in the AutoCAD ribbon: -

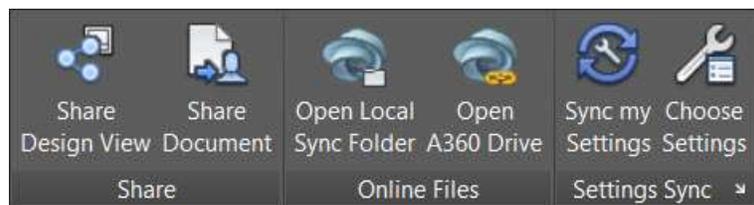


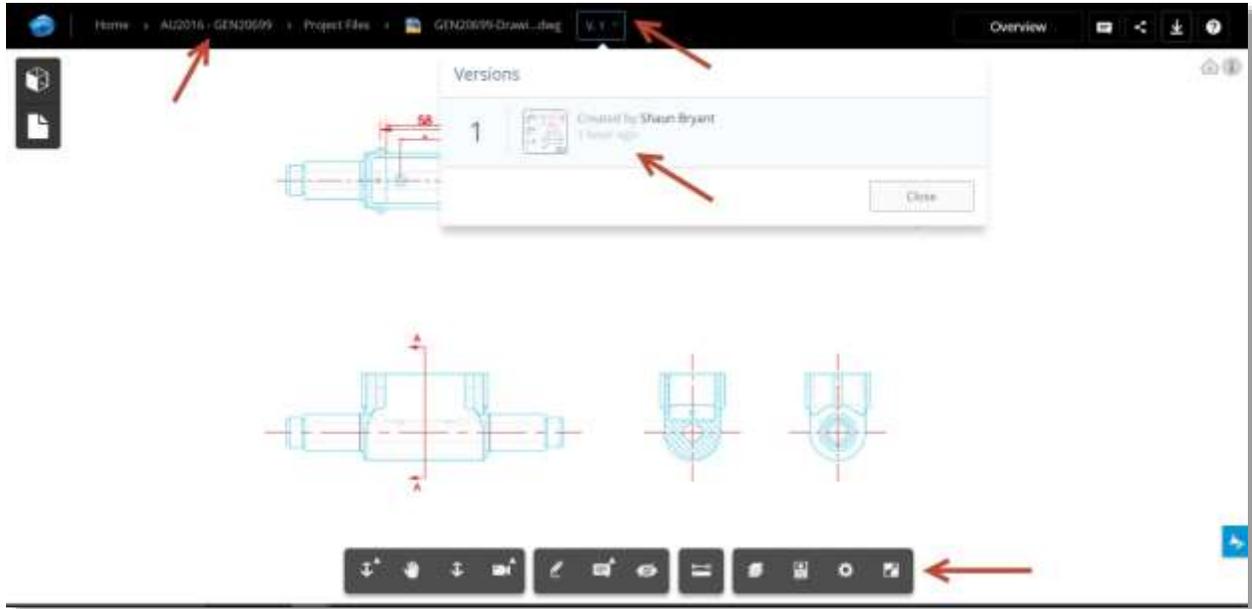
FIG.25 – THE A360 TAB IN THE AUTOCAD RIBBON

As you can see, you can work with any A360 file directly from AutoCAD, open the local sync folder and open A360 Drive in your default browser. You can also set all your sync settings here as well.

## Viewing your A360 Drive files when you are mobile

So, you are now ready to go mobile. You have set up the A360 Drive local drive on your computer. You have saved your files to your A360 Drive and/or A360 Project. You have A360 installed on your mobile device. You can leave the office, safe in the knowledge that you can now go completely mobile.

(In the next few screenshots, I am using my laptop purely for clarity of illustration. In the real world, these views would be on a tablet or mobile phone).



*FIG.26 – AN A360 FILE OPEN IN AUTOCAD 360 SHOWING VERSION NUMBER*

Fig.26 (above) shows how you can view your AutoCAD drawings via A360. As you can see, we are in the A360 Project and all I have done is clicked on the DWG file in the project folder. It automatically opens in the A360 viewer with the A360 tools available, as arrowed at the bottom of the screen (be aware that if using AutoCAD 360, functionality does depend on which subscription you have, if any). You can also check which version of the file you are using (arrowed at the top of the screen).

### **Commenting on an existing A360 drawing**

Your A360 Project team members can view drawings as well. Providing the A360 drawings are made public and shared appropriately within the project, they will have access as well. This means they can comment on the design, and any changes or revisions. All they need to do is click on the Comment icon (top right) and the Comments section will open in the A360 viewer (see Fig.27 overleaf).

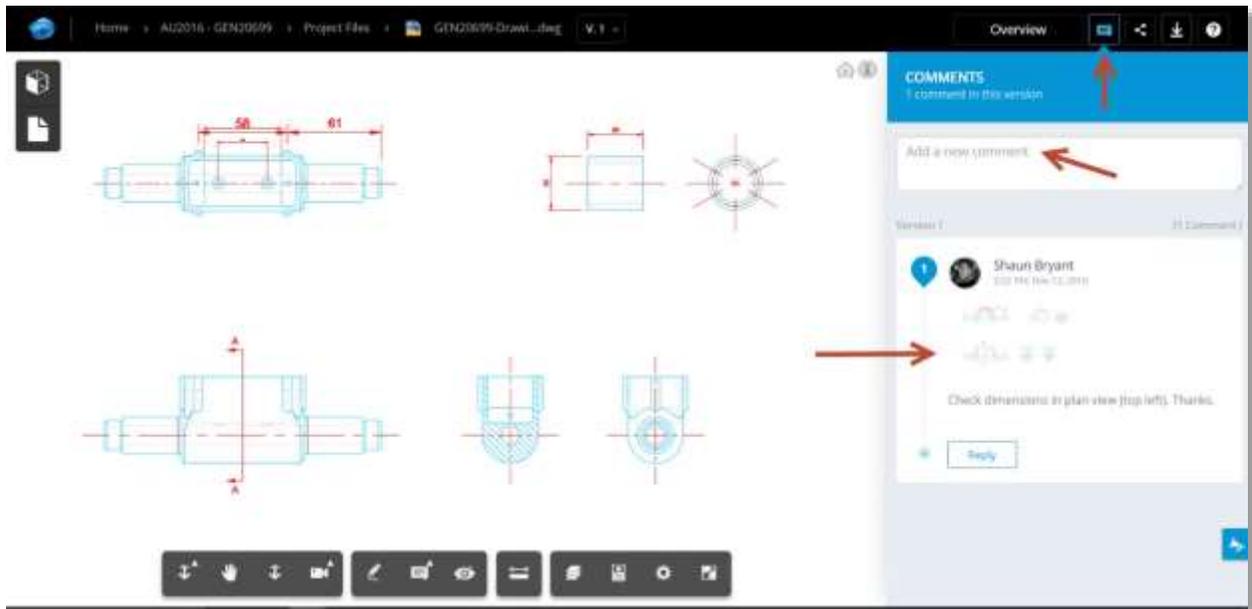


FIG.27 – A360 PROJECT VIEWER WITH A PROJECT FILE OPEN, THE COMMENTS SECTION OPEN ON THE RIGHT-HAND SIDE OF THE SCREEN AREA

**IMPORTANT NOTE:**

Be aware that A360 Project and A360 Drive are SEPARATE entities. A360 Project is a project management tool and is demonstrated as described above.

To work with the latest version of the drawing in A360 Project, it needs to be uploaded to the new version each time a new version is available (this will be described in the next section).

## Linking A360 Drive with AutoCAD 360

To make sure that you are using the correct drawing version, you should always be editing the drawing in AutoCAD 360 that is in your A360 Drive local folder. That is why the local folder is there, so that it acts in the same way as any other folder. Be aware of this and ensure that you are using A360 Drive on your A360 browser page (or on a mobile device).

Once changes are made and complete, you would then copy the drawing to A360 using the **Copy to A360** option for that file.

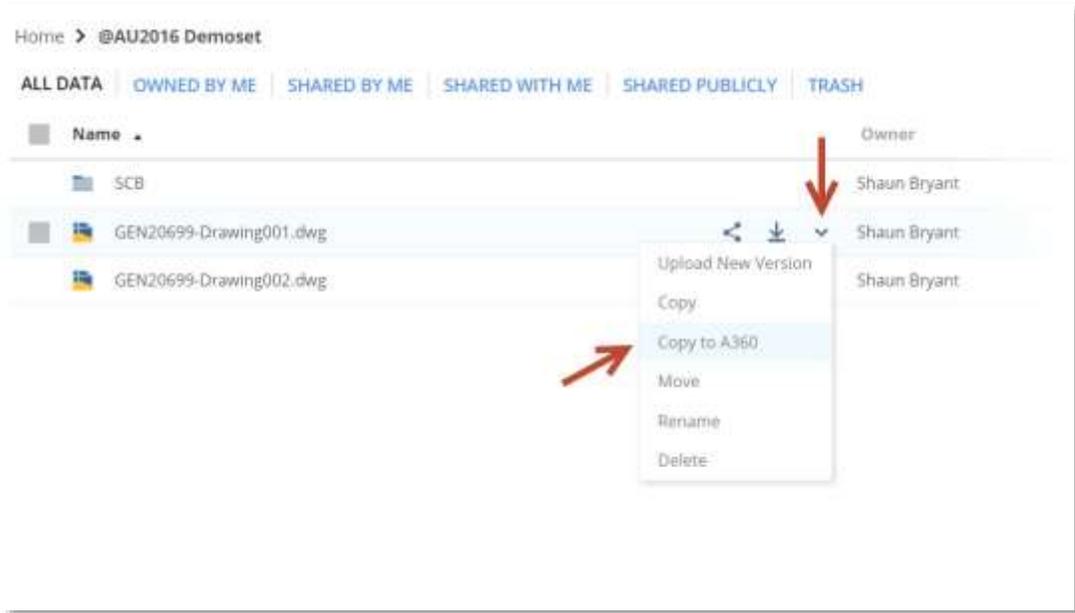


FIG.28– THE COPY TO A360 FUNCTION IN A360 DRIVE

You can open your A360 drawings in AutoCAD 360 in the same way as you would in A360 Drive; log in and open the folder. Once in the folder, select the drawing and it opens in AutoCAD 360.

### **IMPORTANT NOTE:**

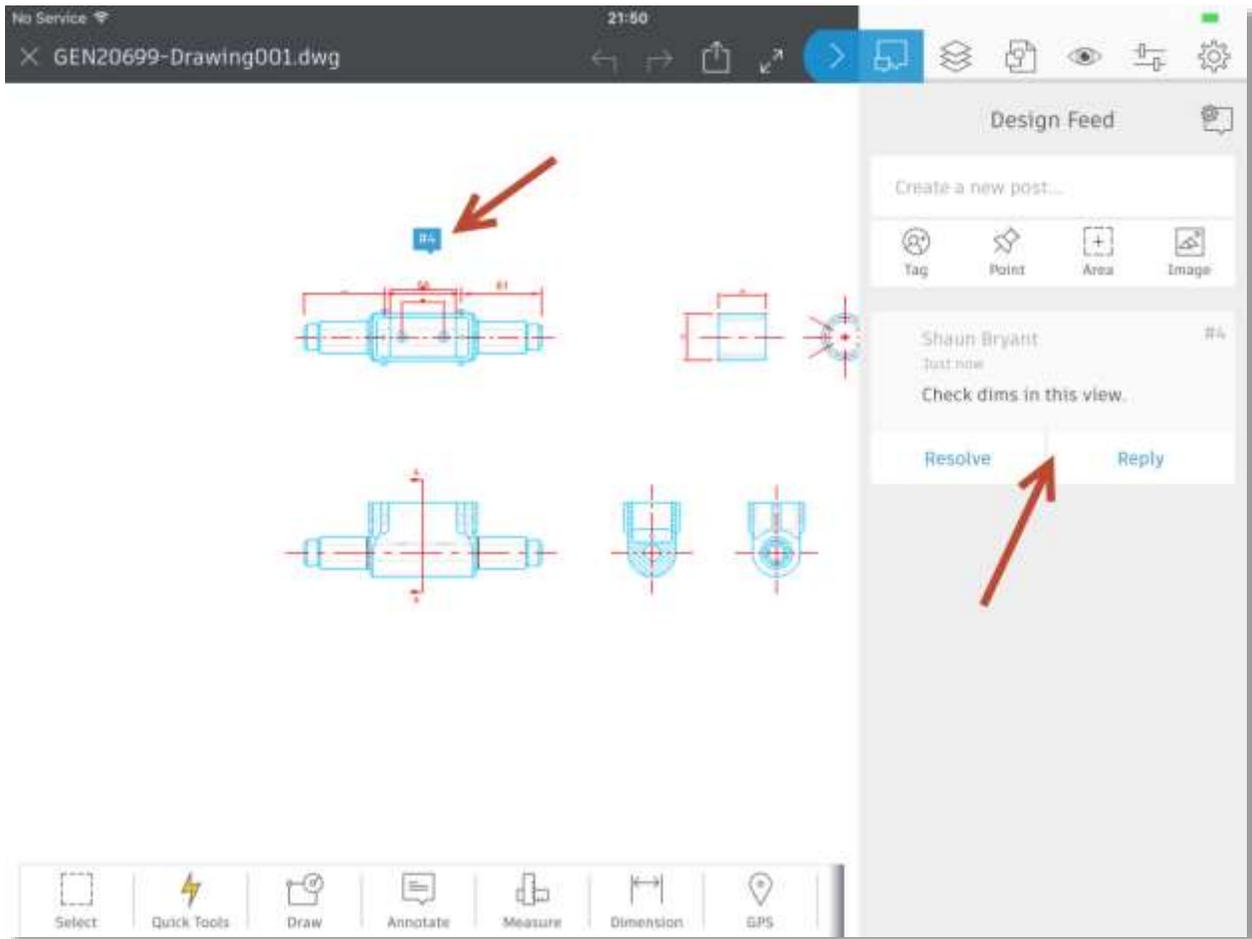
*At this moment in time, Autodesk have removed a reasonable amount of functionality from AutoCAD 360, purely for development purposes. Per the webpage where it explains why, it is to allow for development for a better, more functional AutoCAD 360.*

## Working with AutoCAD and AutoCAD 360 while mobile

One of the major benefits of working with both these products is that you can be working on a site with your tablet and making changes and commenting in the Design Feed in AutoCAD 360 and these changes and comments then show up back at base to the guys working on their desktop AutoCAD.

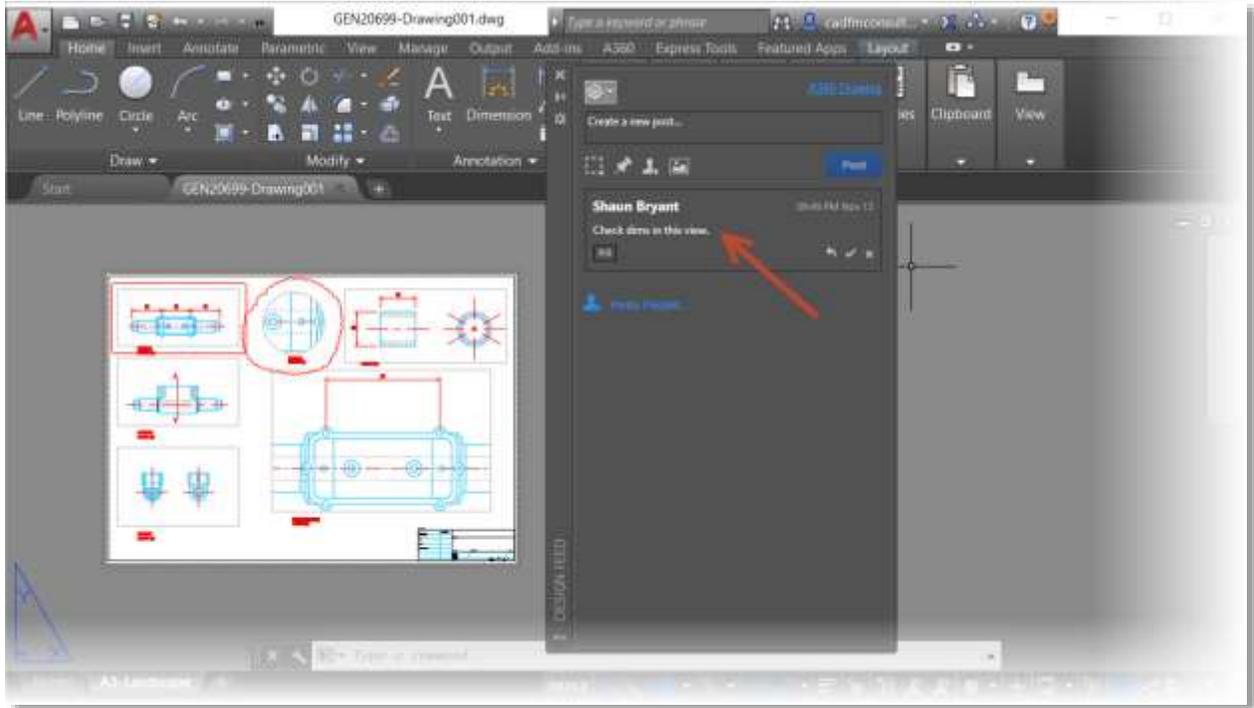
*NB: This **WILL** require internet connectivity at both ends!!*

Fig.29 below shows an iPad screenshot where the Design Feed has been updated, asking for dimensions to be checked in one of the views in the drawing.



*FIG.29 – THE DESIGN FEED IN AUTOCAD 360 ON AN IPAD*

This Design Feed entry then also appears in the Design Feed in desktop AutoCAD, proving a valuable method of collaboration between site and office. Design Feed allows you to specify a point or an area of the drawing too, and using the camera technology on mobile devices, allows pictures to be used, to add to the dialogue between site and office too. See overleaf (Fig.30) to see the Design Feed on desktop AutoCAD showing the same Design Feed comments from Fig.29 on the iPad.



*FIG.30 – DESKTOP AUTOCAD SHOWING THE DESIGN FEED*

## Utilizing tablet and smartphone technology

Technology is moving fast. Smartphones and tablets are the norm. So why not build them in to your business strategy? A360 Drive is free and so is the basic version of AutoCAD 360. Even the Pro Plus version of AutoCAD 360 is only a small amount per year, so the capital expenditure on software is minimal. You can also sign up to paid subscriptions of A360 and A360 Project for full project-based collaboration as well.

Consider this.

One tablet device with mobile and Wi-Fi built in would save you having to carry ANY drawings with you whatsoever. No more redlining with a red pen on a drawing held down on your car bonnet (hood) with bricks. It can all be done electronically there and then. Think about the cost saving here. Surely that justifies bringing smartphone and tablet technology in to your office?

Your design workflow would become much more efficient and productive, saving you on the bottom line in the long term.

What is needed is a look towards the bigger picture here. The tablet market is expanding and eventually touchscreen will be the norm. Look at the new "tablet" hybrid laptops out there, such as the iPad Pro and the Microsoft Surface, as well as all the current tablet models. Anything that runs an Apple or Android OS will run the FREE Autodesk apps; A360 Drive and AutoCAD 360.



*FIG.31 - A360 IN THE APPLE APP STORE*



*FIG.32 – AUTOCAD 360 IN THE APPLE APP STORE*

## Conclusions

AutoCAD 360 provides the following: -

- Mobility
- Sharing of design ideas
- Collaboration
- Tools like social media to allow for quick easy discussions and comments on designs and drawings

A360 Drive provides the following: -

- Cloud-based drawing and document storage up to 5GB
- Project-based collaboration via A360 and A360 Project (paid subscription)
- A design hub for your AutoCAD 360 users
- Sharing of design ideas
- Tools like social media to allow for quick easy discussions and comments on designs and drawings

**Optimize your AutoCAD desktop with A360 Drive and AutoCAD 360.....NOW.**

## Contact

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