ARCHLine.XP 18 Review

PREAMBLE

This review was commissioned by CAD international as part of an extensive investigation by them into which software they would promote and support in Australia and New Zealand. I have no association with the company other than as an independent contractor paid to provide an informed review. It is not within the scope of my commission to make a final recommendation but rather to provide a factual base from which CAD international can build a decision.

My qualifications are that of architectural building designer familiar with the operations of both Revit and ArchiCAD which I use every day. I am not a computer expert and can not offer an opinion on technicalities but rather on observation from hands-on usage.

My observations are constrained by my complete lack of prior knowledge of the ARCHLineXP software. It is important to note that with additional time some of my comments and observations may be disputed by someone more familiar with the workings of the product.

In addition to the user experience of the software I have added comments about support, training materials, potential market and pricing and product origins as this may assist when making a product decision.

FIRST IMPRESSIONS

Before being approached by CAD International I had not heard of ARCHLine.XP. My initial research into the product background led to where the company development team are based, in Budapest, Hungary, only 2km away from where ArchiCAD is developed which I though was interesting. It would appear that one of the largest resellers of the software is based in Italy and that the software has primarily been used for commercial interior fit-out projects, a wide variety of architectural project types from small homes to medium commercial high-rise, historic building restoration, kitchen/bathroom design and interior design.

At first glance it looks to be similar to both ArchiCAD and Revit combined, but with a few more specialised features for the industries I mentioned above. It lacks specialised features for structural steel and concrete detailing and for mechanical services such as HVAC, so one may assume this is not being used by those in engineering?

Prior to using ARCHLine.XP I watched 2 videos, *"ARCHLine.XP 2018 Features" and "ARCHLine.XP Gateway to BIM 1",* both are good foundations and definitely aided me whilst using this new program. I also opened up an existing project file so I could familiarise myself with the interface and was surprised at the programs speed whilst navigating in 3D which is ''class leading'' in my experience.

Overall in use ARCHLine.XP felt closer to Revit than ArchiCAD with the use of automated dimension lines for spacing objects easily, flipping walls/doors (F5 in ALXP Vs Space Bar in Revit), filtering and selecting objects and editing within the 3D window was very easy and, in some tools, easier than 2D

again like Revit. However, ARCHLine.XP's drawings presentation, material selections, usage of layers, layer combinations and 3D presentation styles/views are closer to ArchiCAD methodology.

Whilst I think users of Revit or ArchiCAD would feel comfortable with ARCHLine.XP reasonably quickly, it would mostly be appreciated by new users to BIM there would be no 'unlearning' to be done and toolset appears simpler.

There is scope for further testing as outlined in my last email and the initial findings for the annotation tools and libraries/objects within ARCHLine.XP XP are preliminary only. There would also be value in me watching the remaining *"Gateway to BIM"* videos to further grasp ARCHLine.XP's feature set. I look forward to discussing this with you further once you have reviewed these initial findings.

USER INTERFACE

RIBBON TOOL BAR

This is now common with applications and is a new addition to ARCHLine.XP this year. I found this easy to navigate during my usage. I was also interested to see that ARCHLineXP has a mobile Tablet mode that allows for simple finger gesture control and drawing manipulation without a mouse. Whilst I can see the potential of this feature I did not try it personally as I don't have a Windows based touch screen device.

PET PALLET

When you click objects a PET pallet comes up, similar to ArchiCAD but everyday options like move, rotate and mirror reside within an arrow icon. This took me a little getting used to. I do like that the PET pallet stays next to where you clicked, rather than ArchiCAD's moving PET pallet which is sometimes hard to find or does/doesn't move as you need it.

VIEWS, FULL SCREEN OR TILED VS TABBED

I also liked the versatility in viewing plans, elevations, 3D windows, etc as either full screen views or as window tiles which is similar to Revit, whereas ArchiCAD only offers full views and a tabbed view manager similar to internet browsers. I think there is room for improvement in switching from one view to another more quickly – I may need to investigate this further.

TOOL TIPS and SHORTCUTS

I found that the Tool Tips were great and would be extremely important for new users. ArchiCAD doesn't offer this at all, instead relying on tips through a status bar, however Revit does and they are animated rather than static imagery. However, one simple thing that I really missed was seeing what the shortcuts were either straight away, or after a second of hovering over a toolset. The only way I could find a shortcut was to right-click and select "Keyboard Shortcut" which opens up a new dialogue box, this felt more cumbersome and time consuming than what I am used to.

It was great to be able to use the search field in the upper right to get a complete list of possible commands by simply typing in a word or phrase. Makes perfect sense for new users or when you need to find a command you don't use often.

EDITING IN 3D

Editing within the 3D window was great with easy to find nodes to lock onto, very similar to Revit and much easier then ArchiCAD's 3D interface. I think I would use the 3D view more often in this program than in ArchiCAD or Revit although I feel more comfortable working in plans, sections and elevation views (due to my training)

The various 3D displays modes are excellent, allowing for Xray, shaded, rendered, hidden line and even sketchy modes. ArchiCAD is perhaps best at the sketch mode although all three products have something worthy to choose from.

GENERAL USAGE

FILE SYSTEM

It seems that everything is saved easily within the one file similar to Revit. I prefer this system over ArchiCAD's linked library method as you're not going to lose library parts from files you've previously worked on, or transitioned from desktop to laptop for example. I have experienced renaming a folder and found later that when opening the model, half the parts were missing. ARCHLine.XP and Revit don't have this issue.

TEMPLATE SETUP / STOREY SETTINGS

I spent the time to setup my file's storey's correctly, initially however this didn't transfer to the file I created so I had to redo this again. I really liked the methodology of the Storey Settings though, as you can control globally how slabs and walls would intersect one another. This will definitely be a time saver once users become comfortable with the interface.

Walls can be setup to automatically fold over slab edges with their external finishes (render, weatherboards, etc) automatically. This is semi-automated in Revit where it's within the wall's settings, and completely manual within ArchiCAD.

You can also automatically allow slabs to intersect the wall on higher storeys. A common example is brick veneer where the bricks would continue externally but internal studwork would be intersected by the timber floor. This in theory should make sections and details quicker to complete as well.

SELECTIONS

I like that ARCHLine.XP has adopted the AutoCAD method of selection where if you drag a box to the right you have to selected the whole object for it to be selected, and to the left to just touch objects for them to be selected.

Also selecting items that overlap one another is much easier than ArchiCAD as ARCHLine.XP detects what items are where you have clicked and you can select these easily through the PET Pallet or by pressing a key to tab to the next item.

ARCHLine.XP also allows you to easily filter selections similar to Revit but you apply the filter first rather than afterwards.

COPYING OBJECTS

Copying objects worked well and it was easy to copy/move objects from floor to floor as well. ArchiCAD's implementation is the best however as it is simply CTRL-C and CTRL-V to automatically place objects in the same position. Both ARCHLine.XP and Revit rely on usage of particular options within either the ribbon or property bars to complete this action. (as far as I could tell)

OBJECT SNAPPING and HOLDING SHIFT KEY

This works very well, like ArchiCAD which is much better than Revit's application which makes parallel snapping more difficult as it doesn't support the Shift key. I find I often use this when I want to align objects vertically/horizontally that run parallel, so I can maintain my parallel line and still snap to objects above/below the line I am currently drawing. The Shift hold function in ARCHLine.XP is essentially the same as SketchUp of those that know it.

AUTO DIMENSION LINES

Dimension lines pop-up automatically for walls/doors/windows like Revit so you can simply put in an offset dimension and the doors shifts accordingly. This makes drafting much, much faster. ArchiCAD doesn't offer this at present.

TRACE REFERENCE PLANS

This was easy to apply within plan view; however, the reference is a little faint which would make it harder to use on larger projects that are quite busy. The trace reference was also a global option similar to ArchiCAD, however Revit offers view specific trace references which makes details on lower/upper floors more tangible where you can just turn on a trace reference and leave it on to complete the detail. I must admit there seemed to be some options I wasn't using here so it is possible there is a switch to make 'reference plans' view independent?

3D VISUAL STYLES

This offered familiar options for me and was very intuitive. The best feature here was the ability to underlay a floor plan within the 3D window which can't be done easily in either Revit or ArchiCAD. This is a nice presentation style.

CREATING 3D VIEWS

This is very simple and great that you get a live preview of the perspective your looking at before saving it, this is a far better tool then Revit but not quite as simple as ArchiCAD's method of being able to walk through your model and being able to save any 3D view based on your current window without the need of a camera. I did notice though that ARCHLine.XP has a full 360 degree virtual reality option for capturing rooms and uploading them to the web so you can navigate from one room to another and look around each room. Sound cool but I didn't get time to try it out.

UNCLOSED LOOPS

One little niggling point is that to finish working with unclosed loops you had to hit Enter on the keyboard rather than a single or double click of the mouse.

TEMPORARY HIDES

I need to investigate this further in ARCHLine.XP to see how it handles isolation and temporary hides. This is one of the best features in Revit, where you have the ability to "Hurry Hide" HH or

"Hurry Isolate" HI to quickly work or check details in 3D, you then "Hide Return" HR to bring your model back to normal. This is a huge time saver compared to ArchiCAD which has its own isolation methods which ultimately aren't as successful as Revit's implementation.

note: Ability is available ArchlineXP with different execution method.

BUILDING TOOLS (3D)

WALLS

Would be good to have Australian composite walls built into software as the existing wall types wouldn't be used at all. Creating a new wall type was familiar to other programs but it wasn't as obvious how to copy from a similar type to make a new style so I copied over an existing one instead.

note: they have just sent me a wide array of Australian/NZ wall types 'out of the box' after I sent them a request yesterday!

DOORS/WINDOWS

The in-built library is very good and offers most types of doors and windows that I would use daily. This is far better than Revit's implementation of families and possibly as extensive as ArchiCAD's offering. I did find that using the architrave options not as flexible as ArchiCAD. I also liked that you could easily place windows/doors to the left, right or centre of walls by hitting F5 to cycle between each.

ROOF

This is phenomenal and ''class leading''. I've never seen anything this accurate and easy to complete. The auto generated complex roof system forms a completed roof including complex frame and ridge tiles instantly and offers a large variety of roof styles. I find roof design can be time consuming in Revit and ArchiCAD and was blown away with the ease and flexibility of this tool once I understood the simple approach it uses. I thought Chief Architect (which I have seen but not used) was good at roofing but this is even better IMO.

STAIRS and BALUSTRADES

The stair tool was simple to use and again would be great for first time users. I didn't know how to adjust the going/riser ratio which didn't appear editable, (but of course it must be) It would have been nice to have locking options like the other settings for this. IMO it would be easier if all the settings were unlocked initially as I was trying to increase my going size and it wouldn't allow me to do this until I unlocked the stairs length which I usually work out as I am drawing up the stair, not before. I did like the automatic cut-out slab feature within the stair options too.

Being able to control every tread and shape all aspects of the stairs is also refreshing. This is doable in both Revit and ArchiCAD but not with such ease.

Being unfamiliar with the way of the software I found stairs and balustrades quite challenging until I received some well-placed support from the guys in Hungary. And then it was easy. I feel overall that it would be good to have more concise videos that show the use of each of the tools in designs that

more resemble what I do on a daily basis. Being a European software, the examples aren't always what I can relate to (Personal opinion of course) and this will of course change over time if you guys adopt this product.

ANNOTATION TOOLS (2D)

HATCH STYLES

There weren't as many hatches to choose from and again I would normally use different styles in Australia. Also, it wasn't intuitive to create new hatch styles or to even edit an existing hatch. Also, I couldn't manage to apply surface hatches to slabs which is how I normally apply hatches in Revit and ArchiCAD.

(editors note: We have since learned how!)

DIMENSIONS

This is another area were ARCHLine.XP XP excels by generating all dimensions at one time, this includes separate dimension lines for:

• The whole wall

• To include external window/door penetrations

• Internal wall dimensions.

In my opinion this is ''class leading'' and a far quicker method then both Revit and ArchiCAD.

LIBRARIES and OBJECTS

MATERIALS LIBRARY

This is much more user friendly to use on the outset than either Revit or ArchiCAD as materials are grouped by usage and are displayed with a large graphical preview thumbnail, whereas both Revit ArchiCAD's materials are in one large list together and don't offer good previews of their finishes at all. There seemed to be more useful materials that came as default to ARCHLine.XP and this would be much easier to use for first time users to CAD software. I would still want to add more materials to suit what I use but this seems very easy to accomplish.

PROJECT SETUP and TOPOGRAPHY

STOREY LEVELS

Upon starting a new file, you are presented with a setup screen "Project Properties", where you can set the type of project, GPS location, project north and the storey/level settings. I've attempted to do this on the outset three times now, and each time the level settings aren't saved. I guess this is a systems or permissions problem? I haven't gone to tech support about this as yet.

PROJECT NORTH and GEOL OCATIONS

These are simple to setup and I was able to complete both tasks quickly within the "Project Properties" setup. Geolocation simply uses Google to setup your project location. Whilst project

north requires you to enter the degrees offset from your imported survey drawings, however it is a little odd that 0 degrees starts on the right of a circle when this would traditionally be 90 degrees.

(editor's note: this depends on whether or not you are using survey coordinates or global coordinates etc)

IMPORTING DWG FILE S

I simply dragged and dropped the DWG survey into my project. I placed this on an AHD (Australian Height Datum) storey beneath my Ground Floor FFL which I do in Revit, whereas I place this on a worksheet in ArchiCAD. ARCHLine.XP by default recognises DWG measurements as 1mm and presents you with an option to update this upon import to 1000mm as surveyors work in meters in Australia. This worked well but is an additional step as both ArchiCAD and Revit seem to import DWG's taking their units of measurement into account and are automatically scaled. I always check that the scale is correct and I haven't needed to rescale DWG's in either program. Perhaps ARCHLine.XP could make the default import unit of measurement 1000mm to alleviate this minor step.

There is also an option to import within model or paper space. I think that this is a similar terminology used within AutoCAD which I have used for 3 years but haven't now in over a decade so I couldn't remember how paper space was handled so it might be a good idea to put a little tool-tip here to advise how each is handled.

BUILDING TOPOGRAPHY/ SITE MESH

This is an area of ARCHLine.XP which I found quite curious to navigate and control initially for both building and adjusting which led me to doubt my topography. I find it less intuitive than ArchiCAD and Revit as it seems more complicated. I have included a screenshot of the menu system to the right with the options available.

Whilst trialling different options I ended up using the last option "Device one corner point" to make spot levels. ARCHLine.XP also doesn't rely on edges to make a mesh and instead it gradually builds the site whilst you add levels to it, this is quite different to both ArchiCAD and Revit.

For comparison, in ArchiCAD and Revit I simply make my 4 corner points of the mesh, adjust the corner heights and then either add contours or spot levels depending on what the surveyor's provided, it's very simply and easy to adjust later by dragging nodes in 2D or 3D. It's also easy to delete spot levels or gradients all together if needed. I had to do this yesterday on a site where the surveyor had clearly labelled the contours incorrectly.

ADDING ELEMENTS TO TOPOGRAPHY/SITE MESH

Both the "Create Zone" and "Create Plateau" tools are great inclusions to the terrain toolset and are similar to Revit. ArchiCAD doesn't offer either of these options, there's a work around for "Plateau's" but not for "Zones" and it's one of the features I miss most from Revit. Zone's are most commonly used for parts of your site that still follow the site's gradients but are different materials such as driveways and pathways. Plateau's are building pads ideally used for sub-floor levels or foundations and create a slab that cuts away the topography above.

EXISTING MODEL UP

IMPORT IMAGE FOR EXISTING FLOORPLAN

I was able to simply drag and drop the real estate floorplan into the file and I really liked that you could set the white area to transparent in the context menu. In ArchiCAD you can enter the correct value or do this graphically by selecting the start and end point, then move your mouse to the length you want it to be. ARCHLine.XP worked similarly but instead wanted to know the exact length which makes this 1 step process 2 steps as you need to ensure the length prior to using this tool.

WALLS

Setting up new composite wall types isn't as intuitive as I would expect, given that most other parts of the software I felt more at home with. To me it feels like the menu for creating and copying new wall types is hidden under sub-menus. Also at first, I found adjusting wall lengths to be cumbersome and would constantly find I broke the connection with other walls or shortened the wrong end of the wall.

It helps if you watch the videos! 😊

I have since discovered I'd been doing it all wrong! And if I hadn't ben so hell bent on trying to do it the way I do it in Revit and ArchiCAD I would have discovered this was equally as good if not better once you are used to it.

SLABS

The "slab by walls" feature works very well and is similar to Revit. I also found it easier to make new composite slab types after going through this with the wall tools. However, it appears not all slabs are created equally, with both slabs pictured here being input by default at different heights. Usually by default in other applications slabs are installed from the top surface down as this is your FFL "Finished Floor Level" and you offset from this as needed for split level homes for example, but ARCHLine.XP offsets some floor types on insertion.

Composite floor types can also be altered individually in thickness as well which is unusual. Composite wall/floor thicknesses are set in stone for both ArchiCAD and Revit. You can however edit simple single layer walls/floors thicknesses in all applications which makes sense as you are usually setting a nominal allowance at the design stage of projects, whereas composite wall/floor types are used when you know the set parameters/constraints.

DOORS

The doors work well but are less technical with only broad dimensions detailed only, rather than egress dimensions which is what I always need especially when doing door schedules. It would be great to get some feedback on this.

I couldn't copy doors or nudge doors with the cursor arrows, however you can do this for other elements in ARCHLine.XP. The filing for the door types is also a bit misleading, at first, I was going to criticize ARCHLine.XP for not including doors for sliding stackers, or bi-folds as these are very common for entertaining areas however these are filed under internal doors.

The feature I liked the most was the "Door by two points" this is good for non-standard doors and is a time saver. Great for detailing existing conditions or for cupboard doors that are quite often unique sizes.

WINDOWS

At first glance I thought that the window offering was extensive, which on one hand it is and offers many unique shapes and many with integrated blinds. However, there were a lot of basic window configurations and settings that don't seem to be included or I don't know how to build them? ARCHLine.XP's programming team really needs to look to ArchiCAD as a benchmark and try to update their window offering to be a lot more comprehensive. Ultimately, I would like to only see 1 window type offered with favourites built from that as it offers the customisation to suite any need you have.

(note: Any window or opening type can be created in the software using the 'Wizard'. This option was not discovered initially. To address this criticism the ARCHLineXP team will create any set of windows for you to include in your library free of charge)

ROOF PART II

In my previous review I found the roof tool to be amasing so I was looking forward to learning more about this tool. At first, I was frustrated as I went straight to create roofs with the roof shapes option as I thought this would save time but I became frustrated as I needed an open gable at the front and a hip roof at the back and this couldn't be done when you start with an open gable roof initially. So I watched the fantastic "Design Roof" webinar and that answered all my initial questions and alleviated all frustrations.

The only area that's lacking at this time is steel deck roofs with no default options available. The tiled roofs are amazing so it would be great to see similar for steel roofs including profiles for sheets, ridges and valleys. Yes you can change the roof texture to a simple image of a steel roof, however there are no in-built textures within ARCHLine.XP (this should be added) and you also need to turn off the ridge and valley tiles but then you lose all of the additional surface detailing from the tiled roof offering which may look odd if you have both tile and steel roofs within the same project, again this is very common for house extensions.

Whilst I was reviewing whether to use the complete roof or not I needed to reduce the framing so they didn't continue under the eaves for the gables. You can do this with the option "distance between roof and purlin ends" however you need to set this up for each roof frame part individually.

GUTTERS

The gutter tool worked well and is in the middle of the pack, it's better than ArhiCAD but Revit's best in class due to its ease of use, all you need to do is select the gutter profile and click in the 3D window where you would like it to be placed and you're done. ARCHLine.XP is similar to this but a line for the gutter's length is required first.

CREATING PAGE LAYOUTS OVERVIEW

I found the initial creation of page layouts to be simple to create via the Documentation ribbon where the Plot Layout options are located. There are 10 title blocks included within the software which is a nice starting point for customer to create their own templates from. However, it would be

nice if the default title blocks were labelled according to the intended page usage as many were too large for an A3 layout. Drawings can be added simply by dragging and dropping them onto the sheet, however there are a few areas where this could be improved including:

• Allow editing of drawings directly within the page layout. This is a great timesaver and one of my favourite features in Revit as you can directly edit your model within the page layout by simply double clicking the element you wish to edit. ArchiCAD can also do this but it's extremely slow to a point where its unusable, however they do also offer the option of going directly to that view, via a right mouse click menu system, to make edits which I do use quite a lot as well.

• Auto titling of drawings with options to have drawing scale included, both Revit and ArchiCAD offer this. The first page I created was for floor plans and I wanted to create another page for elevations, I expected this to create an entirely new page layout, but instead ARCHLine.XP added another page similar to a Power Point presentation, which neither Revit or ArchiCAD does so this caught me by surprise. Brilliant.

RENOVATION REMODELLING

Initially I reviewed the "Terraced House" project showcased on ARCHLine.XP's website and was surprised to find that this file only included new structures. I couldn't find any items that were either existing or demolished. I then reviewed some of ARCHLine.XPs other articles, "Home Extension with ARCHLine.XP" and "Historical Building Renovation Using CAD" but neither project showed existing or demolition plans, so I assume the plans only showed proposed works. Project files weren't available either otherwise I would have reviewed them as well.

I was aware of ARCHLine.XP 18's new "Drawing Comparison" feature so I reviewed this for suitability. Whilst this tool displays changes to plans I believe that this is better suited to document design changes presented to clients or builders. This tool works quite well for this purpose as its intent is to quickly communicates simple changes graphically.

However, I wouldn't feel comfortable using this tool to document drawings to councils with existing, demolition, and proposed plans as they are too complex with too many variables for this tool to work well. In the example on the following page I have the existing and proposed plans with the comparison underneath and it's quite limited in how items can be displayed.

Both ArchiCAD and Revit have a completely different but adequate way to handle the different ways we need to display the same objects in different plan types such as New, Proposed, To Be Demolished, As Constructed etc. I was not able to work out how best to achieve this in ARCHLineXP so look forward to getting a response from the guys in Budapest. In the mean time I will look for video on the topic.

CONCLUSION

Even though I was only able to spend a few days working through the software and watch the training and webinar videos, I have been able to get a reasonable understanding of how ARCHLine.XP operates and its potential in the Australia/NZ market.

I found switching from ArchiCAD and Revit methods to ARCHLine.XP methods fairly easy, although I must admit it is probably easier for new users than seasoned Revit or ArchiCAD users. With a few

more keyboard shortcuts I would say it wouldn't take me very long to work faster that I do now with the programs I already use.

If the ARCHLine.XP developers continue with the same level of support that they showed to me then you will have no trouble getting them to customise the software for our needs in Australia and NZ quickly. I was very impressed when they literally supplied me with all the Australian/NZ wall types I needed over night!

There is no doubt this is a very powerful tool and one that will suit anyone who would otherwise be looking to buy Revit or ArchiCAD or simply upgrade from older style software like AutoCAD. It clearly has quite a following in Europe. I haven't explored all aspects of the software such as Shadows and Rendering but the videos show these to be advanced.

Compatibility is a big issue in Architecture and projects and was very impressed with the collaboration tools and file exchange abilities. I was able to exchange models between all three programs and also import some SketchUp files from the 3D warehouse too. This saves a great deal of time.

I would question the suitability of the Windows supplied with the as this would be a critical point. It needs more standard windows to be supplied and metal roofing to be supported as a roof type.

Technically I feel ARCHLineXP is possibly superior to both Revit and ArchiCAD but without the refinement of customised 'tweaking' I have come to expect from these two programs. It certainly has more options for interior design, cabinets and tiling than either ArchiCAD or Revit and the cohesive filing system is also a bonus. The built-in renderer is ok but I prefer to export to Lumion

I would have no hesitation using any of the three programs on a full-time basis as they all have their pros and cons. Price will be a factor for people like myself as a smaller operator. If the three products were all the same price then I can see I would be more than happy to use ARCHLine.XP as I believe I would be able to produce more in less time, however it may take me more than this to switch from what I have become so familiar with.

If you would like me to look more in depth or at any of the features I haven't touched on then let me know.

(Additional relevant information and edits by N Varley are included in this report to help the reader with sections not completed or addressed by the original author Adam Feigl).