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PAM

**PERTUBUHAN AKITEK MALAYSIA
MALAYSIAN INSTITUTE OF ARCHITECTS**

**CERTIFICATION OF COMPLETION UNDER
STAGE 2(C) – INCLUSION OF WINDOW
AND DOOR FRAMES**

PAM Practice Notes

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Introduction - “the question”.

The PAM Professional Practice Bureau has of late, been receiving a number of queries of a similar nature. Generally, the queries can be summarized into the following:

“Are window and door frames required to be installed into walls before an architect certifies completion of stage 2(c)^c under the Sales and Purchase Agreements prescribed under the Housing Development (Control and Licensing) Regulations 2015^a?”

Although PAM's Practice Notes are principally written for its practicing members, the above issue impacts their clients, the construction team, purchasers of residential homes and financial institutions. With that in mind, this Practice note is also written to help explain the issue to a wider audience. For those unfamiliar with the underlying background, please refer to the explanatory notes at the bottom*

“The short answer”

The *short answer* would be for *all architects to just strictly follow the description of stage 2(c) as found in the Schedules under the Housing Development (Control and Licensing) Regulations 2015^b.*

Nevertheless, based on the realities of the construction process, a further (and more practical) answer can also be found in the **Lembaga Arkitek Malaysia's General Circular 2/2017^e.**

Although this Circular is divided into sections for “Land and Building” (i.e., landed properties) and “Sub-Divided Building” (i.e.; stratified properties), the answers for both sections are generally the same.

For the certification of the completion of stage 2(c) which is the **completion of the walls of the said Building** (under Schedule G) or **said parcel** (under Schedule H) **with door and window frames placed in position**, the answer that the Circular gives can be simplified as follows:

- All **timber door and window frames** (where there are **no sub-frames** specified) are **REQUIRED TO BE PLACED IN POSITION** (installed) for certification of this stage.
- All **metal door and window frames** (whether with or without sub-frames) OR **timber door and window frames** (with sub-frames) **NEED NOT BE PLACED IN POSITION** for certification of this stage.
- The above is subject though to clauses 6 (for Schedule G) and 7 (for Schedule H) of their respective Supplementary Notes within the General Circular which are as follows:

“For stage 2(c), the Architect shall ensure that the openings are properly formed to receive the metal frames and completed with lintols (where applicable) before this is certified.”

It is also important to note the following with regards to the above General Circular:

- Although entitled as a “Guideline”, it requires all architects to “abide strictly” with the requirements laid out in the Circular, i.e.; compliance with this “Guideline” is mandatory.
- As far as we are aware, it is the guiding document used by the Ministry of Housing, Local Government and Urban Well-being (“KPKT”)^d in defining stage completion under Schedules G and H and in adjudicating disputes which may arise.
- Although adopted by the KPKT, *architects should also be aware that the Circular does not have the same legal force as any of the gazetted Housing Regulations nor is it excluded from any future, legal challenges by interested parties such as purchasers or developers.*

Having been given simple and practical answers, are there any other considerations that architects need to be mindful of when certifying the above stage? To arrive at some of these considerations, it is always worthwhile to understand the rationale behind the Circular and for that, we need to take a peek back into the past.

“A bit of history”

When *mass housing* began in Malaysia, it was predominantly based on reinforced concrete (r.c.) framing, in-fill walls of brickwork with timber door and window frames. Metal window frames (welded steel) were also available, but they were in the minority and the dominance of this construction system carried on well into the period when legislation was first introduced to regulate the housing industry.

With brick or block walls and timber frames generally, the most *cost-effective* method of constructing the wall with openings is to place the frames in their desired position and build the wall (inclusive of any lintols above) around the frames. Apart from ensuring a better fit between the wall and frame, frames had to be built in as the most common method of securing them into the wall was by using *fish-tail ties* (affixed to the sides of the frames) which were laid and bedded into the horizontal joints of the surrounding brick/block work. Upon completion of the wall with these frames in place, the wall would be ready for commencement of the succeeding trades such as the installation of concealed wiring and plumbing, followed by the application of wall finishes.

The next development was the widespread arrival of aluminium window frames, either with an anodized or powder coated finish. Aluminium frames can generally be constructed with greater accuracy and are dimensionally stable, but the window sections then were of a very light gauge with their surface finish being prone to damage during construction - protective plastic wrapping at that stage was uncommon. To get around this problem of damage during construction, sub-frames were introduced to form the openings within the brick/blockwork and provide a basis for fixing the frame *after* completion of the wall.

Due to the rising cost/shortage of skilled bricklayers and plasterers, brick and block walls began to be replaced by concrete, either cast in-situ (with mainly system formwork) or in the form of pre-cast panels. For buildings with *shear walls*, an obvious benefit was the combining of the structure with the dividing walls together (i.e.; the merging together of stages 2(b) with 2(c)). Apart from having *flatter walls*, openings could be formed with even greater accuracy. A better wall finish meant even *thinner*, applied wall finishes (i.e., skim coat rather than plastering) and this in turn, led to the omission of having to install sub-frames.

The stages of completion under Schedule G and H along with any of LAM's Guidelines on certification as such, should be read in the context of the above.

“So, what else should an architect consider?”

Apart from the wall having to be constructed out of the specified materials, it should also be constructed as *specified*. Please be reminded that the above-mentioned LAM General Circular requires that any openings found within the wall have to be *properly formed* and Architects will need to use their professional judgement to decide on when these openings are indeed, *properly formed*.

“It may NOT be needed BUT is it required?”

Although the LAM Circular notes that metal frames *need not* be placed in position for the certification of stage 2(c), this does not necessarily mean that they shouldn't be in place when the wall is completed. A quick perusal of the profiles for a few *off-the-shelf*, pressed metal door frames would indicate that the *best* method of installing such frames is to *build them into the wall*, when the wall is being constructed (just as you would for a timber frame).

“Designs which are fit for purpose or designs for speedy certification?”

When designing any components to a building, the architect's prime concern should always be that the whole *assembly of components* (i.e.; in this case, the wall, window and door frames) are economically viable, aesthetically suitable and *fit for purpose*. Whilst an important consideration, speedy certification of stage completion should not be at the expense of any of the above.

“Team effort requires talking to the Team”

Like every other part of the construction process, it goes without saying that seemingly simple tasks such as completing a wall for a home requires a lot of different people, i.e.; you need a team.

As the designer of the wall, certifier of stage completion and contract administrator, architects have no choice but to be the leader for the above team. If you intend getting the best out of your team and if you intend minimizing arguments or misunderstanding over the wall construction and certification, run through the construction and certification process both at the design stage and again during construction, i.e.; if in your professional opinion, a door or window frame is required to be installed during the wall construction, discuss this with your client during the design stage and if they agree, don't forget to discuss this with the contractor and inspectors of works during construction.

“The future?”

Schedules G and H are *standard* documents which are meant to be used for the whole housing industry, ranging from low-cost housing to luxury apartments. In trying to be as accessible as possible, both Schedules were based on the most widely used construction systems employed at the time. This does not preclude the use of other construction systems; the Supplementary Notes to the Circular already advise that the use of other structural systems (other than the r.c. based one as per stage 2(b)) may be adopted subject to approval by the relevant Ministry.

The wording for stage 2(c) is perhaps a bit more flexible as the existing schedules would seem to work for masonry, r.c. or even stud walls and in looking at certification of this stage for walls *other than in brick or blockwork*, architects are reminded to keep in mind the above considerations. It must also be noted that door and window frames in the real world are confined to not only timber and metal; upvc frames have been available for a long while now.

Nevertheless, should there be architects and developers adventurous enough to explore new materials for walls, door and window frames for the benefit of the housing industry, they should be encouraged to do so subject to their seeking the necessary approvals and maintaining the *spirit* behind the Schedules and General Circular.

CONCLUSION

In trying to fulfill our role as architects, we are required to comply with legislation which has been enacted to safeguard others but just as it is important to know what these rules are, it is also important to know why and how they came about. Architects as such, need to be aware of and understand the letter of such laws but it is equally important that they also understand the *spirit* behind these laws as well.

* Explanatory Notes.

- a. The sale of any “housing development” as defined under the Housing Development (Control and Licensing) Act 1966 (Act 118) is required to use the Sale and Purchase Agreements (SPA) as provided under the Housing Development (Control and Licensing) Regulations 2015.
- b. For the sale of Land and Building, the SPA is commonly referred to as “Schedule G” and for the sale of stratified housing, it is referred to as “Schedule H”.
- c. Under the above schedules, payment of the purchase price for the property is split up into stages which correspond to the construction process with payment being subject to the issuance of *stage completion certificates* by the Architect. This system of phased payment based on an architect's certification is meant to assist developers in financing their housing projects whilst ensuring that purchasers get what they paid for or are not billed for work which has yet to occur.
- d. The body tasked with policing this process of stage certification is the Ministry of Housing, Local Government and Urban-Wellbeing (generally known as “KPKT”) with the definition of completion for the respective stages being contained within a document produced by the Board of Architects Malaysia (LAM).
- e. The above-mentioned document is the LAM's **General Circular No. 2/2017**, with the heading of **“Guidelines to the Third Schedule Clause 4(1)] of the Standard Sale and Purchase Agreement for Land And Building [Schedule G of the Housing Development (Control & Licensing) Regulations 1989] Guidelines to the Third Schedule Clause 4(1)] of the Standard Sale and Purchase Agreement for Sub-Divided Building [Schedule H of the Housing Development (Control & Licensing) Regulations 1989] “**