

Comments on proposed planning reforms, 2022

15/06/2022

Thankyou for giving me the opportunity to comment on the proposed planning reforms. My concerns are as follows:

Shadow diagrams for exempt declarations

Planning (Exempt Development) Regulation 2022

Part 1.3, 1.15, b (3)



This photo was taken on the 1st of June. It was 7°C, 2:48pm and still 3 weeks before the shortest day of the year. My neighbour's main, north facing, living room window is now fully shaded by a new development to the north. Although the development projected almost 4m outside of the Solar Envelope it was approved anyway. I suspect the decision was influenced by shadow diagrams prepared by the developer.

Now it appears to me (and hopefully I am wrong) that the proposed changes to the Planning Regulation are aiming to undermine the Solar Envelope and use shadow diagrams as an alternative way of assessing what is reasonable.

Under the proposed changes someone doing a new house or addition will need to provide shadow diagrams if their proposal is sticking out past the Solar Envelope. The proposal won't be shown to the neighbours and the Planning Authority would make their decision on whether the amount of overshadowing is reasonable without the neighbour to the south being able to comment or check the accuracy of the shadow diagrams or explain their own future plans.

This is concerning because:

Shadow diagrams are easily fudged and/or easy to get wrong. Shadow diagrams require a lot of time to prepare and then a lot of time to analyse to make sure they are correct. Experience has shown that in some cases if the occupants to the south don't report errors, shadow diagrams remain uncorrected. This is even the case with major errors such as labelling a March shadow diagram as June. The extra time for planning staff to properly analyse shadow diagrams, then ask for incorrect ones to be resubmitted, then re-analyse them again and again is not making the new planning system more streamlined.

Right of review. If shadow diagrams are used, neighbours to the south should be given a right of ACAT review for qualitative decisions on overshadowing as mistakes or poor judgments can have such a big effect on them personally. Giving the developer right of review and not the southern neighbour will lead to unbalanced decision making.

Shadow diagrams will only be used to analyse the current conditions on the block to the south.

Too bad if you are only in the planning stage of a new passive solar house as this won't get taken into account. Shadow diagrams are being used to analyse what is on the southern block now, not what is going to be there in the future. If someone buys a block of land that has a house facing the wrong way with a view to a future development the planning authority will be unable to know this. In my view this first in best dressed mentality is bad planning.

Certainty. People investing their life savings on land and buildings need certainty about the degree of overshadowing they may experience in the future or be allowed to cause with their development. Shadow diagrams won't provide this.

Consistency and transparency of decision making. Currently shadow diagrams are being inconsistently assessed. Sometimes development applications get rejected when they have one small corner of the roof projecting 0.3m outside the solar envelope with very minor impact on the neighbour's yard, whereas other development applications have been approved that project between 2 and 4 metres vertically outside the solar envelope for the majority of the length of a 26m long building with serious overshadowing of windows to main living areas of the building to the south. This makes it very hard as an architect trying to provide advice to clients, whether they be developers wanting to push the boundaries or whether they are people wanting to build a passive solar house. The Planning Authority may have its own set of unwritten rules regarding different zones and situations but these should be made transparent and put down in writing so we all know where we stand.

There is no information on what form the shadow diagrams will take, how many need to be done, and how it will be decided what a reasonable amount of shade is. Shadow diagrams can provide a quantitative assessment if the comparison is made between the maximum amount of shade under the Solar Envelope with the amount of shade provided by the proposal but they require the analysis of all months of winter and all hours between 9am and 3pm not just 9, 12 and 3. However, this would be impractical for most developments and would not be meeting the aim of simplifying the planning system. Note that 12pm shadows are deceptive in regards to overall shading as 12 is the

only hour of the day where shading is being caused by solar fence. All other times shade is being caused by the ridge and parapet conditions. The hours of 10, 11, 1 and 2 tend to be the worst for overshadowing, however historically shadow diagrams have been done at 9, 12 & 3. There is precedence in NSW that says 3 hours of sun is reasonable when assessing shadow diagrams. Will this become the ACT norm? I hope not.

Need for sun. Even with 2° warming, energy for winter heating is going to be the Achilles heel in Canberra's renewable grid. Summer cooling is easy to achieve with solar panels, an air conditioner and a reasonably insulated building; when it is hot solar panels are churning out the energy. However, even with 2° global warming, most Canberra houses will still require much more winter heating than summer cooling, and this heating will be at times when renewable electricity sources are scarce. Solar access to houses, solar panels and yards should remain a priority for heating, electricity production, food production as well as the wellbeing of the occupants.

There is no information whether tree shadows are to be included. Including trees as existing shadow would result in people growing evergreen trees on their side of the fence to put themselves in an advantageous position before doing a development. They would argue their building isn't creating any more shadow than what already exists.

Improvements to the existing Solar Envelope. A better way to create certainty and a fair access to sun is to quantify it with a better designed solar envelope. The existing solar envelope certainly needs adjusting.

- It doesn't differentiate between those blocks zoned for two storey development and those zoned for three storey
- It is inconsistent between 'new' and 'old' suburbs
- It puts too much emphasis on the one hour a day of shadow cast by the fence instead of the shadow cast by the ridge/parapet. This means developments get pushed too far to the north resulting in poor solar outcomes for the new development and encouraging overshadowing trees to be planted on the south.
- It needs to be more flexible to deal with sloping blocks and the odd corner that pokes out

Perhaps a more flexible envelope can be achieved by quantifying the maximum amount of m² of vertical projection allowed outside the Solar Envelope per block. This numerical quantification would be much simpler and less expensive compared to shadow diagrams. This would be especially so for people doing small additions, carports, garages or landscape structures who do not have a 3d computer model and a survey of their neighbour's property. This is very relevant if the proposal to prevent 3m exempt structures on the boundary goes ahead.

Rather than legitimising shadow diagrams as the measure of what is reasonable, the existing solar envelope should be improved. It would be better to have a more generous solar envelope than get into the uncertainties and complexities of shadow diagrams.

Permitted Construction Tolerances.

Planning (General) Regulation 2022

Schedule 2, Part 2.2.

This is not simple, is all very confusing and needs fixing. This is how I understand what is being proposed in the Planning (General) Regulation 2022:

If a building is given Development Approval with a part sticking out past the Solar Envelope then that part is allowed to have an additional 340mm added to it both horizontally and vertically. So if a part of a building was, for example, sticking 600mm out of the envelope it could be built an additional 340mm higher meaning it would stick 940mm out. If it was then moved towards the boundary by 340mm it would stick even further out.

However, if a part of a building has Development Approval that is 1mm within the Solar Envelope than that part of the building only can go up another 1mm until it hits the envelope. This is problematic if this part is attached to the previous part as is the case when a corner of roof gets approved sticking past the envelope. If the entire roof gets moved up 340mm only the part that originally was outside the envelope is compliant, part of the other section of roof that was only 1mm or so out will become non-compliant. This is too complicated and leads to some serious misunderstandings during construction.

With Exemption Declarations, the same sort of thing happens, but to confuse matters, there is a confusingly worded clause which limits the amount that can stick out past the envelope. If the Exemption Declaration approves something to be 100mm outside the envelope it can move up another 240mm, if it is 200mm out it can move up another 140mm, if it is 340mm it can move up another 50mm and if it is 500mm it can move up another 50mm.

Another issue is that people are designing the tolerances in from the start but not showing them in the DA drawings sent for approval. This means that they don't show up in solar envelope or shadow diagram analysis. When 340mm of vertical tolerance is added to 340mm of horizontal tolerance, at certain times of day it can cause an additional 500mm of vertical shadow on the southern neighbour's window. This could be the difference between half a window of sun or no sun at all.

By giving everything a 50mm vertical and 50mm horizontal tolerance outside the Solar Envelope or in addition to a projection outside the Solar Envelope that has been approved by a DA or Exempt Declaration, the Planning System will be a lot simpler without the problems mentioned above.

External Shades exempt from Development Approval.

Planning (Exempt Development) Regulation 2022

Part 1.4, Division 1.4.1, 1.24.- External Shades.

There has been confusion about what external shades are. Are they eaves or eave like structures? Are they big shade sail structures? If so they have the potential for massive overshadowing. The definition in 1.24 could be argued either way and there have been instances where developments have added on large southern eaves that were not shown in the original development approval. To avoid ambiguity the following clause will help: -No external shades to project beyond any relevant solar building envelope.

Annual amount of expected greenhouse gas emissions

Section 26 Planning (General) Regulation 2022.

- What are the modelling assumptions and maths that is used to determine this?
- Is 250T independent of development size, type and occupancy rates?

To encourage buildings that have less impact on the grid at times when renewable energy is in short supply we should be:

- modelling using a grid factor for a 100% renewable grid not a grid factor for NSW's ~80% coal/gas grid.
- netting energy balances hourly. Energy produced by solar panels in summer should not be netted over the year to offset winter heating requirements.

I hope you take these concerns into consideration,

Yours sincerely,

Robbie Gibson

Green House Architects.

0431914664