

Design Review Update: Clarifications and Modifications

Design Review Process

More Efficient Design Review Process –

So far, we have engaged in the design review of 115 homes at the Ecovillage, which has helped us to refine our process and confirm our interpretation of certain subjective elements of the design guidelines. The reviews, for the most part, have been positive and fairly efficient to undertake. However, for some designs, we have ended up spending a disproportionate amount of time working with purchasers or designers to arrive at an acceptable outcome.

As you can appreciate with our small team, we must spend our time carefully as there is so much to be done. Accordingly, we are slightly modifying the design review process to motivate the designers to thoroughly review the design guidelines so that when we receive a proposed concept design, it is largely compliant with our requirements. Otherwise, we end up spending lots of time going back and forth to bring a house design into line with the Building Design Guidelines, and we simply don't have time.

Please note the following processes as you work towards formal approval of your design:

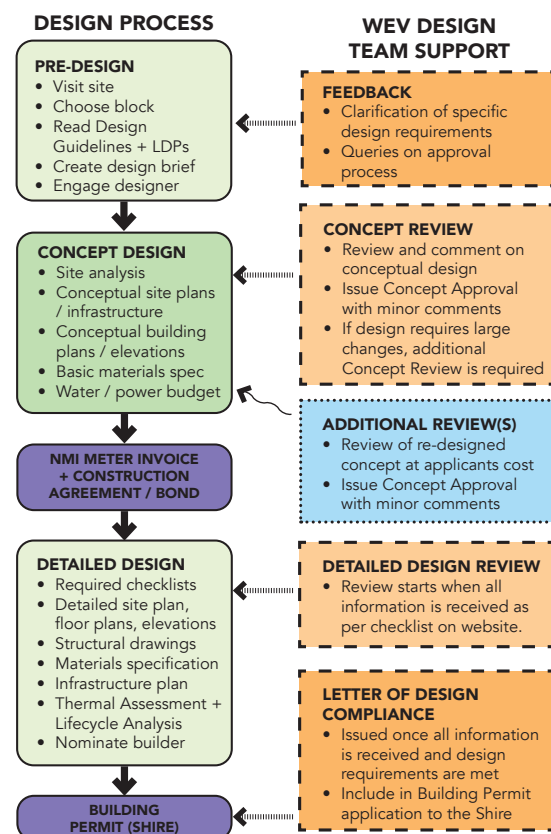
1. Concept Review

Conceptual designs are to be submitted to the Witchcliffe Ecovillage design team for review to establish that the key principals are being met and the proposed design is consistent with provisions of the Local Development Plan and the objectives of the Witchcliffe Ecovillage Sustainable Building Design Guidelines. This review process needs to be completed prior to submitting any plans to the Shire.

Prior to starting the design process, we recommend a thorough review of the relevant documents, example plans, and checklists. Please ask any clarification questions before committing to any particular design outcome, as this saves everyone time and energy.

Conceptual design submission requirements:

- Site analysis
- Sketch site plans
- Sketch building plans, cross-sections and elevations
- Proposed power systems
- Location of tanks
- Carparking location



- Exterior material selection
- Landscaping and fencing concept plans

The WEV Design Team will undertake a concept review once all of the required drawings and information are provided. We will respond with a detailed email response identifying any design suggestions or areas of concern. If the proposal is substantially consistent with the design intention for the site (as outlined in the applicable provisions), we will issue a Concept Approval email along with any minor comments to incorporate into your Detailed Documentation.

If the conceptual design requires substantial modification due to non-compliance with the Local Development Plan or Building Design Guidelines, it will need to be revised accordingly and then reassessed by the WEV Design Team before the Concept Approval can be issued. **These additional concept reviews (if required) will cost the applicant \$300 per review.**

Once Concept Approval is achieved, we recommend initiating the invoicing process for the NMI meter and signing the Construction Agreement and paying the associated bond, as these items can take up to FOUR weeks to process and we wouldn't want them holding up the lodgement of the Building Permit to the Shire.

2. Detailed Design Review + Approval

Following the Concept Approval, the proponent will refine the design and prepare construction documentation and detailed materials specifications. Once these are completed, there is a second design review process with the Witchcliffe Ecovillage design team to verify compliance with some of the more detailed requirements of the Design Guidelines. This is a checklist assessment process; the onus is on the proponent to provide all details required and demonstrate compliance with the BDG's.

Detailed Design submissions shall comprise:

- Building Design Guidelines compliance schedule/checklist
- Detailed site and infrastructure plan, including finished floor levels and key site levels to explain the site drainage strategy
- Detail building floor plans, roof plan, elevations & cross-sections
- Carparking plans & specification
- Landscape plans & specification, including fencing
- Services including water storage & location, photovoltaic system and location
- Structural engineering drawings
- Building materials specifications
- Fixtures and fittings schedule
- Schedule of external materials and colours
- Thermal Assessment (NatHERS) Certificate
- Life Cycle Assessment Summary & Certificate
- Builders' Waste Management Plan
- Executed Construction Management Agreement and payment of Security Bond

Once the WEV design team deem the application compliant with our requirements, a formal **Letter of Design Compliance** will be issued to the proponent. This letter should be submitted to the Shire with the other documentation required for Building Permit.

3. Building Permit (Shire)

A Building Permit is required for all structures (residential, commercial or industrial) including but not limited to new works, alterations, additions, swimming pools, spas (below and above ground), pool safety barriers / fence for pools & spas, patios, retaining walls and sheds.

Building Permits must be obtained prior to the commencement of any building work. To obtain a Building Permit, an application form (BA01 or BA02, see below) together with one copy of all plans and specifications must be submitted to Augusta-Margaret River Shire Building Services.

Submission requirements can be found on the Department of Commerce website <http://www.commerce.wa.gov.au/building-commission/building-approval-forms-0>.

To speed up the approval process, applicants can engage a private building surveyor to certify plans prior to lodging with the Shire for approval.

- Certified applications - BA01 - approval timeframe 10 business days
- Uncertified applications – BA02 - approval timeframe 25 business days

Timing Expectations

The WEV team is small and tasked with oversight of a large and complex project to deliver. As such, our ability to respond varies depending on workload and staff availability. In general, please allow 2-4 weeks for Concept Review, and 2-4 weeks for Formal Approval. We will try to turn design reviews around quickly, but at times things stretch out due to the number of designs in the queue and other factors. Please be patient with us, we are doing the best we can.

You can do your bit to speed up the process by

1. Adhering to the requirements of the BDG's; and
2. Providing all information required at concept design and formal review applications. We will no longer assess incomplete applications.

Stage 4

We have started to receive proposed designs for lots in **Stage 4**, and we are happy to consider and respond to design concepts for those lots. However, as we have not yet received the final as-constructed drawings from our civil contractor, you won't be able to get a detailed site survey completed. As such, **no Formal Approvals** will be assessed or granted until this process is completed. We expect the as con drawings to have been reviewed by the time titles are issued.

NMI Meter

For the microgrid communications in each cluster to work effectively, every house must have an identical NMI meter. WEV has bulk purchased high-quality SATEC meters and is passing the savings onto lot purchasers. As part of our Formal Approval process, each lot owner must purchase their NMI meter for their house. Because this invoicing process can take up to **4 weeks**, please prompt us to initiate the invoicing process after Concept Approval; the NMI meter must be paid for prior to receiving Formal Approval, and the early invoicing will ensure no delays in the process.

Construction Agreement and Bond Payment

Each lot owner must sign a Construction Agreement which is then co-signed by Mike Hulme, Director of Sustainable Settlements, as the representative of the Strata. This agreement states that the lot owner will be responsible for any damage to the common property or the adjacent public road verge

caused by any contractor engaged by the owner. The generic agreements can be downloaded from the WEV website and we can also issue in DocuSign for electronic signing. The owner must also pay a \$1,000 bond which is kept in escrow in the Strata bank account. Once construction of the home is completed, the owner can request a Bond Inspection and if no damage is identified, the bond is returned. If damage is identified, the cost of rectification is then taken out of the bond and the balance returned to the owner. This agreement must be signed and the bond paid prior to the owner receiving Formal Approval for the house design. To ensure no delays, this process should be commenced upon receipt of Concept Approval (at the same time as commencing invoicing for the NMI meter).

Lot Levels and Finished Floor Levels (FFL)

The philosophy of the Ecovillage around site levels is to work with the natural topography rather than benching / flattening lots like most subdivisions. This has allowed us to minimise retaining walls and, in many cases, better integrate designs with surrounding lots and community gardens.

However, we have run into challenges on some lots where houses are close together and there is substantial fall in the topography, or where residents choose to build up their site relative to others. This has caused some conflict between neighbours and additional and often unnecessary costs for retaining walls. The issue is particularly pronounced with the Groupie and Cottage Lots where buildings can be as little as 2m apart (side to side).

We also have the challenge of ensuring that all homes are safe in the event of a large flood (1:100 year event). In response to builders in Stage 1 struggling to interpret the finished floor level requirements of the BDG's, we engaged our civil engineer to set minimum finished floor levels (FFLs) for habitable space on every lot in Stages 3-5. This generally works fine on the larger lots that are relatively flat. However, on blocks that slope away from the street, setting one FFL that is higher than the street to avoid flooding can leave the building very elevated compared to the surrounding lots and community space, and create the need for retaining and/or battering the surrounding land.

The BDG's set a maximum height for a single retaining wall at 500mm. On sloping lots, we recommend stepping the building down the slope to minimise retaining. On steep lots, this may be challenging or impractical. If this is the case, please identify the proposed site solution (including levels, retaining and proposed drainage routes) at Concept Stage so we can discuss this with you prior to finalising the design concept.

Architectural Character

We have written about the intended architectural character of the Ecovillage in Section 2.3 of the Building Design Guidelines, and then attempted to implement this through the requirements and recommendations in the balance of the document. In general, we are trying to achieve an aesthetic that will stand the test of time.

As such, we have referred back to the vernacular, largely agricultural buildings of the region that have been relevant for many decades if not centuries. In doing so, we have eschewed the architectural 'fashions of the day,' relying instead on traditional patterns and proportions. While this approach may not be exciting for a designer looking to exuberantly express their inventiveness in the building form, it tends to create a visually cohesive community where the variety and delight comes in small creative details, and personal touches.

Design Trends

Given this, we'd like to provide our views on a few prevailing design trends relative to our Building Design Guideline provisions:



Figure 1: example of Nordic barn style

Nordic-Barn – This style seems to be popping up everywhere. Essentially, it is a simple gable roofed building with no side eaves, minimalist detailing, and the gable eaves are extended vertically to the ground. We are not supporting this aesthetic: we believe it will date quickly, it doesn't easily incorporate guttering (essential for water capture) or window shading on the long sides (important in Australian summer), and it is not in keeping with our intended vernacular character.



Figure 3: symmetrical but with different wall plate heights.

Asymmetrical Gable Roofs – Our Building Design Guidelines state that gable roofs must be at least 30 degrees in pitch and 'generally symmetrical' (Section 5.3). Over time we've clarified what 'generally symmetrical' means: we will accept gable roofs with different wall plate heights (Figure 2) but not gable roofs with different pitches (Figure 3).



Figure 2: asymmetrical with different roof pitches.

Precedents

We are trying our best to be consistent in our design reviews and application of judgement relative to the design guideline provisions we've put in place. Occasionally, things slip through the cracks and design elements get approved that, in hindsight, we'd like to amend. Now that there are so many homes under construction or completed, it may be tempting to try to find examples from other builds to justify a design proposal that is inconsistent with our intended character or allowed materials. Please be aware that we are not bound by precedent; if something was approved previously that we feel in hindsight shouldn't have been, why would we repeat the mistake? In addition, occasionally builders will build the home in a way that is inconsistent with the approved design, which is disappointing. All this to say, please respect the vision we've laid out in the design guidelines and try to work within the design parameters that we have set for the Ecovillage.

Building Colours

Our Design Guidelines state that painted exterior walls should be predominately light or mid-tone with some allowance for feature elements of brighter colour or darker tone. These contrasting colours are best applied to trim and other elements such as fascia boards, window frames, architraves, and balustrades. Dark timber finishes are allowed (eg. Shou Sugi Ban) as well as untreated hardwood weatherboards.

In practice, we are accepting of dark walls as long as they are real timber (no timber grained Hardie cladding), as this aesthetic has a strong linkage to the local Group Settlement homes of the area and buildings such as Druid's Hall, and will fade and weather over time, revealing the grain and integrity of the natural material.

Over time we have become more scientific in determining the range of acceptable paint colours for the exterior of buildings. The below chart shows a standard array of colour tone from the graphics

industry. We have set the darkest acceptable exterior paint tone at #4 (assuming it isn't timber cladding) – anything #3 or darker may be acceptable for trim or feature elements but not as a predominant colour for the house. Obviously, this example is greyscale but the theory can be applied across other colour tones.



Fencing

The standard dividing fencing in the Ecovillage is a simple timber post and wire configuration, and many residents have extended this type of fencing around the front and back of their homes. Others, however, have proposed more detailed and creative solutions. We provide guidance about maximum fencing heights and minimum visual permeability in the Local Development Plans, and direction on acceptable materials in Section 3.10 of the Building Design Guidelines. To date, we have not been requiring this information to be submitted as part of your design approval process. However, given the large impact of fencing on the aesthetics and sociability of the cluster, we will now be requiring drawings that set out the proposed fence design as part of the Detailed Design Approval process.

Other Matters

Construction Inspections

We will no longer be undertaking mid-construction building inspections, for several reasons. First, we do not have sufficient staff resources to undertake this task, and it is really something that the resident themselves (or someone hired by the resident) should do to ensure the build quality. Second, we've found that the builders rarely communicate with us with sufficient notice to be on site at the appropriate moment to do the inspections, so they were occurring only sporadically in the first place. Ultimately, as much as we'd love to assist the residents, especially those who haven't built before, ensuring that the construction is in accordance with the designs is well beyond our purview and resources.

Wall Insulation

With an eye toward mitigating the enormous rise in building costs, we have sought further consultation with industry experts and determined that the additional cost in building homes with R3.0 wall insulation is not justified by the minor increment of thermal improvement. Thus, we are amending our requirements in the Building Design Guidelines to reflect the current National Construction Code minimum of R2.8. All buildings are still required to meet the overall NatHERS minimum star rating that applies to your Cluster (7 stars for Stages 1-2, 8 stars for Stages 3-5).

Design Reviews over the holiday period

The WEV office is closing for a month from 16 December 2022 to 16 January 2023. Any plans submitted for review after we close will not be assessed until the WEV office reopens in the new year.