March 1, 2021

Bow Valley Climate Action Submission regarding the Area Structure Plan for Three Sisters Village

Bow Valley Climate Action (BVCA) takes the position that the proposed Area Structure Plan (ASP) for Three Sisters Village should better align with the Town's Climate Action Plan. We have detailed specific recommendations in this document below. BVCA also urges the Town of Canmore to review and amend its Land Use Bylaw to better align all development within the Town, including that proposed by Three Sisters Mountain Village, to meet the goals in the Town's Climate Action Plan.

The Three Sisters Village ASP, combined with the ASP for Smith Creek, is the biggest test to date of the Town of Canmore's Climate Action Plan (CAP) and its declaration of a climate emergency. Not only are these the largest development proposals this community has seen, they are the first ASPs to be reviewed after the adoption of the CAP. We need to get this right. Bow Valley Climate Action (BVCA) believes that the right course of action for the Town is to ensure that if these developments are approved that they represent a positive step forward in putting Canmore amongst those communities that are leading on climate action. That will require amendments to the ASPs. BVCA has been engaged throughout the community consultation stage in suggesting amendments, and although the applicant has made some positive changes to address our concerns, the ASPs still require further amendments. Before outlining our specific suggestions, it is important to address two other approaches to climate change issues, suggested by some in the community, that we believe are not sufficient responses to these ASPs.

Some would argue that policies at the federal and provincial level are sufficient to address climate change and that the municipality has few available legislative tools to have a significant effect. In fact, the applicant (TSMV) seems to make that argument in these ASPs: that building code changes and other federal and provincial policies will do most, if not all of the heavy lifting in moving Canmore towards more energy efficient buildings and more sustainable modes of energy generation and transportation. But there are many tools available to a municipality, including the terms of its ASPs, and when the Town of Canmore adopted its 2018 CAP it was clearly signaling its intent to be a leader, and to take action alongside and in conjunction with actions taken at the federal and provincial level.

Others in the community are suggesting that these ASPs should be simply rejected, because they would result in an increase in local greenhouse gas emissions. But that could be said of almost all development in the town. Greenhouse gas emissions are unlike local air quality or water quality issues in that their impact is global, not local. It is widely understood within the climate science community that actions which simply move emissions from one jurisdiction to another are not effective in combatting climate change. When Canmore adopted the CAP it did so based on the assumption that there would be rapid population increase in the town. To reduce those population targets as a means of meeting its greenhouse gas targets would be an illegitimate approach to climate action. Whatever population is displaced from Canmore would be relocated elsewhere, along with their emissions (which might be higher or lower in those other communities). NIMBY (not in my back yard) may be a response to local air and water quality issues but it is not a principled response to climate change. When it comes to climate change, the world is our back yard.

It is now more than two years since Town Council unanimously adopted the Climate Action Plan, but it has yet to establish a review process for ASPs and development permits that would require applicants to demonstrate consistency with the CAP. The TSMV ASPs represent a very large proportion of all future development potential for the Town of Canmore. It is therefore imperative that the Town establish an effective review process for climate change mitigation before significant building occurs in these developments. It is important to emphasize that BVCA takes the position that any such new requirements must apply to all new developments, not just to TSMV. BVCA will be urging the Town to strengthen its regulatory authority to influence the climate change mitigation aspects of such applications and also intends to intervene at the subdivision and development approval stages of the TSMV projects and other significant development proposals.

BVCA asked TSMV to make several changes to the July 2020 draft ASPs to make them more consistent with the stated objectives of the CAP. We list those five requests below (highlighted in bold print), along with a description of the extent to which the final ASPs appear to address our concerns, and our recommendations for further action by the Town of Canmore:

1. **80% of new homes in the two developments to be built to a net zero or near net zero standard by 2030.**
    - The final ASPs do not commit to this overall objective for the developments.
    - The final ASPs do include a new commitment to “orienting the street network to consider solar exposure…” which will be of significant importance for net zero or near net zero buildings.
    - The ASPs do provide greater detail on how density bonuses will be used to provide incentives for townhouses, multi-residential buildings and commercial buildings to achieve two possible levels of energy efficiency (20%-90% more efficient than Alberta Building Code; and net zero energy).
    - It is highly unlikely that the 2030 targets will be met with the measures being proposed, even in combination with changes in federal and provincial

regulations. Similar or perhaps even greater shortfalls will likely occur with other developments undertaken in Canmore in the coming decade.
- There are strong financial reasons to build net zero or near net zero buildings – the additional costs for energy efficiency measures at initial construction are much lower than those to retrofit existing buildings, and are off-set by the ongoing operational savings of lower heating costs.

Recommendation: The Town of Canmore must develop additional regulations, policies and incentives that achieve greater energy efficiency in buildings to apply to all development within the town before substantial development occurs on the TSMV lands.

2. **Every home to have an energy label.**
   - The final ASPs do not address this issue directly.
   - They do provide that to be eligible for the energy efficiency density bonuses a building would require certification by a qualified Energy Advisor consultant at Development Permit.

Recommendation: The applicant, as land owner, should make it one of the terms of sale for parcels of land that the purchaser require an energy label on every home, and this should be included in the ASPs.

3. **A thorough analysis of the potential application of district heating options.**
   - The final ASPs do not commit to such an analysis.
   - They do stipulate that public utilities should be designed to facilitate energy conservation, efficiency and to enable the integration of alternative energy resources "which may include the blending of renewable energy and thermal technologies". We do not believe this to be a sufficient commitment to the CAP objective.
   - Given the scale and duration of these development plans, there is an opportunity to evaluate whether there is an appropriate district heating solution for these developments.

Recommendation: Include a commitment within the ASPs for the land owner and the Town of Canmore to jointly undertake a detailed investigation of district heating options for the new developments.

4. **30% of the energy used by buildings in the two new developments comes from renewable sources.**
   - The final ASPs do not commit to achieving this objective.
   - The proposed density bonuses do provide incentives for buildings which use on-site renewable energy systems to offset at least 25% of the buildings total energy and GHG emissions, and further incentives for achieving higher levels of efficiency.
   - The final ASPs also provide that all residential buildings shall be "solar-ready".

Recommendation: The first phases of the TSMV developments must be monitored at specific intervals for the degree of success of the density bonuses in achieving the target levels of renewable energy use, and further measures should be undertaken if targets are not being met.

5. **All neighbourhoods capable of supporting EV charging. While this requirement of the CAP is not particularly specific, BVCA recommends including in the ASP a commitment that the homes and multi-family units in the two developments be EV ready (i.e. pre-wire homes and multi-family unit parking spaces with dedicated 240V power supply for Level 2 charging), and that the development include several publicly available charging stations.**
    - The ASPs stipulate that multi-residential developments will be encouraged to provide some shared parking stalls with EV charging stations, and that density bonuses will be provided for making up to 15% of total vehicle stalls "EV ready" (Stage 1) and higher bonuses if up to 30% are EV ready (Stage 2). This is a very low level of commitment given the expected future demand for EVs.

Recommendation: Include in the ASP a commitment that the electrical distribution network, townhomes, multi-family units and visitor accommodation in the two developments be EV ready, which would include sizing **all** of the following components to accommodate Level 2 EV charging:

- adequate transformers and sizing of secondary cables;
- sufficient electrical panel sizing;
- pre-installed EV charging infrastructure in parking spaces and parkades (at least install conduit and a dedicated circuit); and,
- that the development include a mix of Level 2 and Level 3 publicly accessible charging stations.

Constructing the shallow utility network (cables and transformers) to accommodate Level 2 charging in all homes will also accommodate more widespread adoption of solar PV, as both require larger gauge secondary cables to run from the transformer to the home.

For comparative purposes, the City of Burnaby and City of Richmond in B.C. require that every required parking space (single-family and multi-family residential) has an energized Level 2 outlet. The City of Vancouver requires that every multi-family housing parking space has an energized Level 2 outlet and every single-family home has one energized Level 2 outlet. These are requirements, and are not achieved through incentives such as density bonuses.

Additional Issues

Green building technologies: It should also be noted that the final ASPs contain a new provision that one of the "Key Design Principles" of the developments shall be "use of green building technologies". It will be important at the Development Permit stage to

ensure that this provision is fully implemented, and that up-to-date green building technologies are used in building construction.

Density bonusing as an incentive for climate action: TSMV has proposed using density bonusing to incentivize numerous energy efficiency, renewable energy and electric vehicle objectives. BVCA would like to see the addition of language in the ASPs that specifies that the density bonusing system should evolve as regulations evolve, so that it is incentivizing action that goes above and beyond what is required by municipal, provincial and/or federal regulations. The density bonusing system should be created and adapted in a way that it is relative to the performance standards and regulations that are in effect at the time of subdivision or development.

Climate change impacts of undermining mitigation: TSMV intends to mitigate undermining hazards, in part, by capping some shafts and portals with a cementitious paste material. Production of cement is a major contributor to greenhouse gas emissions. However, TSMV has indicated that the amount of materials is "relatively small volumes" and that a relatively small proportion of the paste material is cement (the remainder being waste cementitious material, fly ash and aggregates).

Recommendation: TSMV must be required to provide a reasonable estimate of the volume of cement required and the greenhouse gas emissions from that volume of cement production. The Town can then decide if the GGH emissions are significant and if so, how these emissions can be mitigated or offset within the development.