



THE CORPORATION OF THE
DISTRICT OF SUMMERLAND
REQUEST FOR DECISION

DATE: August 8, 2023
TO: Graham Statt, Chief Administrative Officer
FROM: Odessa Cohen, Sustainability Coordinator
SUBJECT: Overview of Eco-Village Sustainability Frameworks

FILE: 0540-24

STAFF RECOMMENDATION:

That Council pass the following resolution:

THAT Council direct the use of 1) the LEED-Neighborhood Development (ND) for building and neighborhood design, and 2) the Envision Sustainable Infrastructure Framework for the infrastructure design, in the development of the Eco-Village.

STRATEGIC PRIORITY:

To Build an Adaptable and Affordable Community

PURPOSE:

To provide an overview of four (4) sustainable community and infrastructure frameworks for consideration of being used to support the development of the Eco-Village.

DISCUSSION:

The review of the sustainability frameworks was reviewed against to the values of the Eco-Village, which are identified in the Conceptual Plan, and approved and finalized on April 25 2022. The project values are:

- First Nations Values and Perspectives
- Natural asset management through landscape integration of design
- Community Spaces
- Recreation and active transportation
- Mixed Housing
- Low-Carbon Resilience (LCR) approach

Staff also noted any regional or local examples of the framework being applied to infrastructure or community projects, and considered the availability of professionals or experts familiar with the plans based on these projects that could be accessible during the implementation of the framework.

LEED-Neighborhood Design

LEED-Neighborhood Development (ND) addresses both building and neighborhood design through the development on the landscape and in the built form. Buildings that are registered with LEED can achieve one of several tiers, certified, silver, gold or platinum, depending on how many total credits are earned through the ranking systems. LEED-ND credit categories are:

- Smart Location and Linkage
- Neighborhood pattern and design
- Green Infrastructure and Buildings
- Innovation and Design Process
- Regional Priority Credits

The range of credits in the LEED-ND ranking system support many of the Eco-Village conceptual plan values, with the exception of addressing First Nation perspectives, and application of a low-carbon resilience approach. While adaptation and mitigation are addressed on their own through building and landscape credit categories, they are not applied with consideration for impacts on one another, which would reduce possible conflicts when used.

The framework does not provide any credits for working with or considering local First Nations. Therefore, the District and Developer will need to ensure those connections and integrations are made where appropriate. The First Nation perspectives to date have been primarily addressed through assessments conducted by the Penticton Indian Band for the proposed development.

Because LEED is well recognized in Canada, professional expertise is more widely available, with possibilities to work with urban designers or individual contractors that have been certified as LEED professionals. The LEED-Neighborhood Design ranking system primarily has urban examples, such as Dockside Green in Victoria, which has achieved a Platinum certification for its Neighborhood Development Plan. Limited rural examples may require additional consultation with staff to ensure the framework can be applied to emphasize the rural context of the area.

LEED-ND on its own addresses gaps seen in its other frameworks by addressing environmental impacts at the building and landscape level. However, there are still components of the framework that do not address all the conceptual plan values, and therefore the District and Developers will need to fill the gaps through innovative approaches to design and development.

One Planet Living

The One Planet Living (OPL) framework was developed by a not-for-profit firm called Bioregional out of the UK. The first iteration of the One Planet Living framework was applied to a project called BedZED Eco-Village which was developed in 2002 and is still in operation. The development of this neighborhood provides a mixed-use sustainable community with residential, commercial, and community spaces, all while limiting emissions, increasing efficiency and establishing integrated community development.

The OPL framework encourages the development of an Action Plan to guide and assist developers in developing actions for the 10 Principles to a project (See Figure 1). For each principle there are suggested indicators and key performance indicators. If endorsement of the Action Plan is pursued, it is expected to be comprehensive enough to promote the goals of each of the principles through a set of actions and indicators, with prescribed monitoring and reporting.

Compared to the Project Values, OPL’s framework and associated principles only meet some of the values. Primarily the LCR and First Nations approach are not addressed adequately in the principles, with only high level housing considerations.

Unfortunately, there are very few Canadian examples of this framework, with headquarters based in the UK, and limited expertise in Canada, as is recognition of the framework itself. Further, while the 10 principles do cover a broad area of sustainability, they provided minimal guidance and are non-prescriptive. For a project of this scale having more prescriptive guidance is helpful. Combined with the limited recognition and regional examples, this framework may be difficult to apply in an effective manner.

Envision Sustainable Infrastructure Framework

Envision is a prescriptive framework with optional verification of the work done, primarily used as a self-assessment tool by developers for infrastructure projects. There are 64 possible credits across 5 categories:

1. Quality of Life
2. Leadership
3. Resource Allocation
4. Natural World
5. Climate and Resilience

The framework as a whole is only applicable to projects that *do not* have human habitation, such as roads, sewers, water treatment plants, and district energy systems for example. This limits the extent for which the framework can be applied, but also provides an approach to the area of community development not currently addressed in the other frameworks reviewed. Utility and infrastructure has rarely if at all been addressed as part of sustainability frameworks scope.

The framework provides a life cycle approach to development, where the credits in each category can be used to understand and plan for short and long term sustainability, compatibility and longevity of a project in relation to the community it is being developed in. While accreditation or certification is not provided for this framework, an optional verification process can be conducted by a third party, which provides public recognition for achieving a level of sustainability and resilience for the project.

In relation to the Project Values, Envision uses a mitigation hierarchy approach across some of the 5 categories, which supports avoidance of impacts (physical, natural, social) as the primary approach, followed by actions that progressively work to reduce impacts. Further, the framework is designed to direct actions to be complimentary to one another, rather than counterintuitive, which is a component of the low carbon resilience approach in the Project Values. First Nations

 Health and happiness	Encouraging active, social, meaningful lives to promote good health and wellbeing
 Equity and local economy	Creating safe, equitable places to live and work which support local prosperity and international fair trade
 Culture and community	Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living
 Land and nature	Protecting and restoring land for the benefit of people and wildlife
 Sustainable water	Using water efficiently, protecting local water resources and reducing flooding and drought
 Local and sustainable food	Promoting sustainable humane farming and healthy diets high in local, seasonal organic food and vegetable protein
 Travel and transport	Reducing the need to travel, encouraging walking, cycling and low carbon transport
 Materials and products	Using materials from sustainable sources and promoting products which help people reduce consumption
 Zero waste	Reducing consumption, reusing and recycling to achieve zero waste and zero pollution
 Zero carbon energy	Making buildings and manufacturing energy efficient and supplying all energy with renewables

Figure 1: 10 Principles of the One Planet Living Framework

perspectives are not addressed in this framework, therefore the District and Developer will need to coordinate to work where appropriate with those governments and groups.

Overall, the Envision framework provides a prescriptive approach for sustainability and resilience at the infrastructure level of community development. Due to the limitations of the framework for human occupied spaces, this framework would work best if applied with another that accounts for human occupied spaces.

The Living Community Challenge

The Living Community Challenge framework emerged from the program's original concept of the Living Building Challenge, which provided a sustainable framework specifically for buildings. This program seeks to do what the original program did for buildings for neighborhoods, towns and cities. The framework consists of seven (7) prescriptive performance areas or Petals, Place, Water, Energy, Health and Happiness, Materials, Equity, and Beauty. Each has a sub-category called imperatives, for a total of 20, which focus on a specific sphere of the Petal, to guide development and design of the community.

The framework presents a prescriptive approach to neighborhood design, while similar in nature to that of LEED-ND, it does not provide guidance for housing. There is greater focus around the community aspects of a neighborhood such as community and public spaces, recreation and active transportation, and landscape integration. It also provides guidance for resilient community design and development, and renewable energy goals, but these are not connected through an LCR approach.

Unfortunately, the Living Community Challenge website has noted they are no longer accepting applications and registrations, but the materials and guidelines are available for guidance for those interested in the approach. Therefore, the review was still conducted as a non-accreditation or certified framework, which is similar to Envision and OPL framework.

While the framework is comprehensive and is noted as being one of the more rigorous frameworks available, its closure of registration makes certification and recognition not possible and limiting resources for staff and developers to access if using this framework, and the lack of prescriptive housing criteria does not meet all the necessary Eco-Village values.

BACKGROUND:

On April 25th 2022 Council approved the conceptual plan for the Eco-Village. In the approval of the Strategic Priorities for the new term of 2022-2026, the Eco-Village project was re-affirmed as a strategic priority for Council. Staff have continued to work on background research and project planning for the Eco-Village, with a review of potential sustainability frameworks as part of this. The chosen frameworks will ultimately be used to guide staff in the development of the land use zoning for the Eco-Village, and to direct the future developer on intended project objectives at the landscape and building scale.

LEGISLATION and POLICY:

- N/A

FINANCIAL IMPLICATIONS:

The District of Summerland will not be incurring any costs associated with the registration or implementation of the recommended frameworks. Any costs associated with framework registration, application, or review are to be taken on by the future developer.

Reviewed by Financial Services:



SUPPORTING DOCUMENTS:

1. Eco-Village Framework Overview Power Point

CONCLUSION:

In conclusion staff are recommending that Council apply 1) the Envision framework for the development of utilities and public infrastructure, and 2) the LEED-ND for the development of the residential buildings and overall community design process of the Eco-Village project.

OPTIONS:

1. Move the motion as recommended by staff.
2. Refer to staff for other options.

Respectfully submitted,



Odessa Cohen
Sustainability Coordinator

Endorsed by,



Graham Statt
Chief Administrative
Officer

Presentation: Yes No