



## AGENDA

### SALT SPRING ISLAND HOUSING ACTION PROGRAM TASK FORCE

Date: Thursday, September 1, 2022  
Time: 10:00 AM  
Location: Salt Spring Island Baptist Church - Lower Hall, 520 Lower Ganges Road

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|---|----------------------|
| <b>1. AGENDA</b>  | <b>10:00 - 10:05</b> |
| 1.1. Approval of Agenda   |                      |
| <b>2. MINUTES OF PREVIOUS MEETINGS</b>                                  | <b>10:05 – 10:10</b> |
| 2.1. Draft minutes of the August 4, 2022 – HAPTF Meeting – For adoption | Page 2               |
| <b>3. ADMINISTRATIVE UPDATE</b>   | <b>10:10 – 10:15</b> |
| 3.1. Task Force Resolutions   | Page 4               |
| <b>4. OTHER BUSINESS</b>  | <b>10:15 – 12:00</b> |
| 4.1. Strategic Action Matrix  | Page 12              |
| 4.2. Tiny Homes report  | Page 22              |
| 4.3. Housing Action Program Task Force Summary of Recommendations       | Page 76              |
| <b>5. ADJOURNMENT</b>   |                      |



# Salt Spring Island Housing Action Program Task Force Minutes of a Regular Meeting

**Date of Meeting:** Thursday, August 4, 2022

**Location:** Baptist Church, Lower Level Meeting Room  
520 Lower Ganges Road, Salt Spring Island

**Members Present:** Rhonan Heitzmann, Chair  
Yvonne Saunders  
Nejmah Guermoudi  
Jessica Terezakis  
Daniel Wood  
Bryce Chapman

**Regrets:** Stanley Shapiro  
Maïkan Bordeleau  
Kerrie Proulx, Vice Chair

**Absent:** Frejya Skye

**Staff Present:** Rob Pingle, Recorder

**Others Present:** None

These minutes follow the order of the agenda although the sequence may have varied.

The meeting was called to order at 10:14 a.m. Chair Heitzmann welcomed the task force members and humbly stated gratitude to live and work in Coast Salish First Nations treaty and traditional territory.

## 1. AGENDA

By general consent, the agenda was adopted as presented.

## 2. MINUTES OF PREVIOUS MEETINGS

### 2.1 Draft Minutes of the July 7, 2022 Meeting

By general consent, the minutes of the July 7, 2022 Housing Action Program Task Force meeting were adopted.

## 3. ADMINISTRATIVE UPDATE

DRAFT

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### **3.1 Task Force Resolutions**

There was discussion about future meetings. There will be no meetings until November due to the local government election period.

## **4. OTHER BUSINESS**

### **4.1 Strategic Action Matrix**

There was discussion about how to present the work the Task Force has done on the matrix.

There was discussion about the Options for Affordable Housing report published by the Islands Trust in 2003 that reflects the work the Task Force is currently engaged in.

There was discussion about researching the best practices of the introduction of Tiny Homes in other jurisdictions and how they could be used for the Tiny Home Pilot Project proposed on Salt Spring Island.

There was discussion about researching the best practices of the introduction of Eco-Village Housing in other jurisdictions and how they could be used to create a pilot project on Salt Spring Island if a land owner proponent could be found.

There was discussion about the Public Hearing process for Proposed Bylaw No. 530.

## **5. ADJOURNMENT**

The meeting was adjourned at 11:40 a.m.

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Rhonan Heitzmann, Chair

### **CERTIFIED CORRECT:**

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Rob Pingle, Recorder

# Housing Action Program Task Force Resolutions

Number	Meeting Date	Resolution	Work Flow	Date Completed
32	2-Jun-22	It was MOVED and SECONDED, That the Salt Spring Island Housing Action Program Task Force requests staff to research the percentage of uptake for accessory dwelling units introduced in similar jurisdictions.		
31	2-Jun-22	It was MOVED and SECONDED, That the Salt Spring Island Housing Action Program Task Force recommends to the Salt Spring Island Local Trust Committee that the proposed Bylaw No. 530 proceed, subject to the following recommendations: <input type="checkbox"/> That it be introduced to all zones. <input type="checkbox"/> That there be no minimum lot size restriction for detached accessory dwelling units.	Contemplated for Bylaw 530 second reading amendments	12-Jul-22
30	7-Apr-22	It was MOVED and SECONDED, That the Housing Action Program Task Force recommend to the Salt Spring Island Local Trust Committee that a letter be drafted to Hon. Selina Robinson Minister of Finance to include Salt Spring in the speculation and vacancy tax.	Inlcuded in Minutes received by the LTC	17-May-22

# Housing Action Program Task Force Resolutions

Number	Meeting Date	Resolution	Work Flow	Date Completed
29	3-Mar-22	<p>It was MOVED and SECONDED, That in order to increase the uptake of Bylaw No. 528 so that the numbers of dwellings permitted translate to actual built and lived in affordable rental units, and to give maximum opportunity to property owners with intent to rent long term to make use of existing buildings, the Housing Action Program Task Force recommend that the Salt Spring Island Local Trust Committee:</p> <p>a. Adopt the suggested definition of Accessory Dwelling Units in the draft bylaw, recognizing that this includes suites, suites in accessory buildings and cottages. All of these types of dwellings are accessory to the principal residence and all have a comparable environmental impact;</p> <p>b. Respect the limitations on numbers of suites and cottages permitted that is described in the current Official Community Plan by limiting the total numbers of Accessory Dwelling Units to the total numbers already permitted by the suites pilot Bylaw No. 471 and the cottages pilot Bylaw No. 512, but distributing them island wide in all zones, on a first come first serve basis to property owners expressing intent to rent long term according to defined conditions such as:</p> <ul style="list-style-type: none"> <li>• Intent to rent long term;</li> <li>• Using existing unit or begin building permit within 2 years;</li> <li>• Use of alternative water supply where existing supply is a concern;</li> <li>• Adequate waste treatment;</li> </ul> <p>c. Request the resources necessary to create and maintain a registry of Accessory Dwelling Units. (Note direction from OCP section B.2.2.2.13 n. “The Local Trust Committee will consider an annual registration system in order to remain informed about the number and location of occupied suites” OCP Section B.2.2.2.14 contains a similar quote regarding cottages);</p> <p>d. Require an automatic review of the allotted quota of Accessory Dwelling Units after the release of each new provincially mandated Housing Needs Assessment (every 5 years) and increase the quota incrementally if needed.</p>	Contemplated for Bylaw 530	17-May-22

# Housing Action Program Task Force Resolutions

Number	Meeting Date	Resolution	Work Flow	Date Completed
28	3-Mar-22	<b>By general consent</b> , the task force agreed the next meeting would focus on the refining the Solutions Matrix with a goal to have a public facing document and a more detailed document for task force use.	Members to act as necessary	Ongoing
27	3-Mar-22	<b>By general consent</b> , the task force appointed Chair Heitzmann and Member Guermoudi to meet with Ganges Village Planning Task Force on March 26 or 27, 2022.	Invitation altered to include all members at the April 21, 2022 Ganges Task Force Meeting	Occurred
26	3-Mar-22	<b>By general consent</b> , the task force agreed to add “explore options regarding Temporary Use Permit (TUP) application fees” to the Solutions Matrix.	Members to address as needed	Ongoing
25	3-Mar-22	<b>It was MOVED and SECONDED</b> , That the Housing Action Program Task Force recommend to the Salt Spring Island Local Trust Committee that proposed Bylaw No. 526 proceed, subject to the following recommendations: <ul style="list-style-type: none"> <li>• Align the bylaw with the Agricultural Land Commission (ALC) permissions and do not add additional restrictions;</li> <li>• Remove the need for a covenant and only require proof of farm status for the secondary dwelling;</li> <li>• Amend the definition of sleeping unit to include temporary accommodation structures such as recreational vehicles (RV’s), tiny homes, yurts, domes and glamping tents.</li> </ul>	Included in staff report to LTC	12-Jul-22
24	16-Feb-22	<b>By general consent</b> , the task force agreed to have a motion prepared that supports Accessory Dwelling Units in all zones with a mechanism to provide a cap to provide feedback for the next meeting.	Members to act as necessary	In progress
23	15-Dec-21	<b>By general consent</b> , staff are requested to provide the list of applicants who have applied to the Housing Action Planning Task Force.	For privacy reasons staff cannot provide this information.	3-Feb-22
22	2-Dec-21	<b>It was MOVED and SECONDED</b> , That the Housing Action Program Task Force appoint Member Bordeleau to research the obstacles to approving tiny homes as lawful dwellings.	Member to report as required	Ongoing

# Housing Action Program Task Force Resolutions

Number	Meeting Date	Resolution	Work Flow	Date Completed
21	2-Dec-21	<b>By general consent</b> , the Draft Bylaw No. 527 – Fees Bylaw - Staff Memorandum was accepted for information and would be kept in mind when the Task Force reviews the Official Community Plan.	Members to act as necessary	Ongoing
20	17-Nov-21	<b>By general consent</b> , the Housing Action Program Task Force agreed to email feedback regarding the public engagement plan including red flags and suggestions to Planner Garbo and that the Task Force would prefer to not to take up more in person meeting time.	Members to act as necessary	Due to budget issues this has been delayed
19	17-Nov-21	<b>By general consent</b> , the Housing Action Program Task Force agreed Chair Heitzmann would talk to RPM Cermak and Planner Garbo regarding the consensus of the Task Force is that the draft public engagement plan is too complex and the Task Force would prefer to simplify the plan and encourage staff to lean on community groups for public engagement. The Task Force request staff to provide clarity on communication channels the Task Force can use.	Complete	3-Feb-22
18	17-Nov-21	<b>By general consent</b> , the Housing Action Program Task Force agreed to invite RPM Cermak to attend the next meeting to discuss implementation of accessory dwelling units and impacts to staff workload.	RPM Cermak to attend a meeting in 2022	3-Feb-22
17	17-Nov-21	<b>By general consent</b> , the Housing Action Program Task Force agreed that Member Chapman, Member Proulx and Member Terezakis will meet to draft a vision statement that focuses on permitting accessory dwelling units on all areas of Salt Spring Island, to be presented to staff and at the December LTC meeting. The statement could be communicated on various communication channels. Member Bordeleau volunteered to help with economics such as cost and benefit per square foot.	Members to report as required	Ongoing

# Housing Action Program Task Force Resolutions

Number	Meeting Date	Resolution	Work Flow	Date Completed
16	4-Nov-21	That the Housing Action Program Task Force requests staff to start the Coffee with a Planner Program.	Library Meeting room reserved from 1-2:30pm on Jan 6 & 20, Feb 3 & 17, Mar 3 & 17, Apr 7 & 21. Zoom meetings to be scheduled for 2nd and last Thursdays. Meetings to be promoted to the public.	Complete
15	4-Nov-21	That the Housing Action Program Task Force recommend the Salt Spring Local Trust Committee proceed with the proposed Tiny Homes Village Pilot Project.	Staff preparing to refer to agencies and FN for comment on project criteria	In progress
14	7-Oct-21	The Housing Action Program Task Force request staff to follow up on the request to find a more neutral meeting place.	PTA reviewed possibilities and spoke with Task Force about them	20-Oct-21
13	7-Oct-21	The Housing Action Program Task Force request the Salt Spring Island Local Trust Committee to add the creation of an inter-jurisdictional Housing Authority to the scope of the Housing Action Program Project Charter as recommended by the Housing Working Group report phase two.	The LTC passed a resolution to send this to the Trust Council Financial Planning Committee.	9-Nov-21
12	7-Oct-21	The Housing Action Program Task Force recommend the Salt Spring Island Local Trust Committee endorse Trustee Patrick's resolution regarding a business case for a SSI Housing Authority including the following recommendations: · Invite the Capital Regional District Housing Corporation to participate in the process; · Consider how other communities in BC such as Whistler as an example of a community that has been successful in providing affordable housing for workers; · Document the process and identify successes and challenges.	LTC addressed the issue at their public meeting	9-Nov-21



# Housing Action Program Task Force Resolutions

Number	Meeting Date	Resolution	Work Flow	Date Completed
11	7-Oct-21	<b>By general consent</b> , the Housing Action Program Task Force request staff to look into the Norton Road property regarding affordable housing potential.	Property has Zone Variation – R6(c) (26) Despite Section 9.9.1 – Permitted Uses of Land, Buildings and Structures - of this bylaw, the only principal uses permitted within lands zoned R6(c) are: (a) not more than 26 affordable housing dwelling units which may be single or duplexes; (b) one single-family dwelling; (c) non-commercial outdoor active recreation; (d) public service uses.	25-Oct-21
10	7-Oct-21	<b>By general consent</b> , the Housing Action Program Task Force agreed to add Short-Term Vacation Rental (STVR) data to the next meeting agenda. Member Proulx will share data regarding STVR impacts in other communities.	Members to report as required/ staff recommended to pause until report from UBCM	Ongoing
9	7-Oct-21	To request staff to provide data regarding how many potential densities were provided as a result of the Secondary Suites Bylaw and the Affordable Housing - Cottages Bylaw and how many housing units have actually been permitted and added to the housing pool.	Staff provided information to members by email	25-Oct-21
8	16-Sep-21	That the Housing Action Program Task Force recommend to the Salt Spring Island Local Trust Committee that the draft Bylaw No. 526 proceed with a recommendation that the LTC explore options to make more agricultural housing available.	Staff to take to LTC at relvant meeting for further bylaw consideration	12-Jul-22

# Housing Action Program Task Force Resolutions

Number	Meeting Date	Resolution	Work Flow	Date Completed
7	19-Aug-21	That the Housing Action Program Task Force recommend the Salt Spring Island Local Trust Committee update Secondary Suites Bylaw No 461 as follows: • permit secondary suites in all zoning districts or districts chosen by the Salt Spring Island Local Trust Committee; • allow secondary suites in accessory buildings; • protect water for secondary suites and mandate that an alternative supply must be used where water concerns exist; • update water requirements to align with Island Health regulations for multi family dwellings; and • require a Housing Agreement to specify that the secondary suite is to be used for long-term use.	Staff report to LTC	9-Nov-21
6	19-Aug-21	That the Housing Action Program Task Force recommend the Salt Spring Island Local Trust Committee to direct staff to develop procedures to expedite affordable housing, supportive housing and social housing projects in support of the Salt Spring Island Official Community Plan policy that prioritizes affordable housing rezoning applications.	Staff report to LTC referred to RPC	9-Nov-21
5	19-Aug-21	That the Housing Action Program Task Force recommend the Salt Spring Island Local Trust Committee update the existing standing resolution regarding unlawful dwellings (items a, b, c and d) to be more specific as follows: a. does not meet health and safety regulations; b. sewage is not being disposed of in an approved septic or sewage disposal system; c. septic or sewage disposals are being used in excess of capacity or ability as a result of unlawful dwellings d. there is contamination of wells or other drinking water sources;	Staff report to LTC	9-Nov-21
4	19-Aug-21	That the Housing Action Program Task Force recommend the Salt Spring Island Local Trust Committee update the existing standing resolution regarding unlawful dwellings to include until sustainable housing solutions are implemented.	Staff report to LTC	9-Nov-21

# Housing Action Program Task Force Resolutions

Number	Meeting Date	Resolution	Work Flow	Date Completed
3	19-Aug-21	That the Housing Action Program Task Force recommend the Salt Spring Island Local Trust Committee defer enforcement on long term use of commercial and seasonal accommodation.	Staff report to LTC	9-Nov-21
2	19-Aug-21	That the Housing Action Program Task Force accept the volunteer role of Member Guer mou di and Member Terezakis to be the keepers of the Strategic Priorities Matrix document, to integrate ideas and keep the document up to date.	Members to report as required	Ongoing
1	19-Aug-21	That the Housing Action Program Task Force request staff to schedule meetings as follows: The next regular meeting will be held on September 16, 2021. The following regular meetings will be held on the first Thursday of each month at 10:00 a.m. (beginning in October 2021.) A second monthly meeting will be scheduled on the third Wednesday of each month at 5:00 p.m. (beginning October 20, 2021).	PTA to schedule meetings	1-Oct-21

# Housing Action Program: Strategic Priorities Matrix v.3

Note to viewer. This table is an updated, cleaned up version of our previous effort. **This is still a draft for discussion.** The items listed are ideas presented by members and still need to be discussed as a group and do not necessarily represent our consensus, though it does represent our discussions. Last Update: August 25th 2022

Recommendation	Comments
<b>Values, objectives and vision</b>	
A Healthy, Sustainable and Diverse community that balances needs of people, environment and economy in a healthy and sustainable way	
Building and living with <b>minimal net environmental impact per capita</b>	
Who do we need to live here to sustain our community? How do we achieve this balance?	
There is a spectrum of housing needs requiring a spectrum of housing solutions- Affordable housing is 30 % of household income (CMHC)- (higher earning households also struggle to find adequate housing...but needs might be met by increase of supply of market housing while lower income households might need purpose built, government subsidized housing due to cost of building.)	
Community resilience depends less on importing workforce, encouraging those who can grow food, build shelter, and live with a low impact. Need to facilitate homesteaders and do it yourself solutions for affordability and resiliency.	
Plan for 7 generations	
<b>Key Ideas for Implementation</b>	
Permit seasonal accommodation (hotel, resorts) for long-term use	Recommended - LTC passed a standing resolution that permits this use temporarily (until the standing resolution is rescinded) <b>Does this need to be recommended as a permanent measure?</b>
<p><b>Accessory Dwelling Units</b></p> <p><b>Original recommendation:</b>  <b>Update secondary Suite bylaw to:</b>                      -Permit secondary suited in all zoning districts                      - Allow Secondary suites in accessory buildings- (ADUs)                      - Protect water for Secondary suites-</p> <p>Mandate that <b>where water concerns exist</b> an alternative supply must be used.                      -Update water requirement to align with Island Health 200 L per person per day based on 2 people per BR.</p>	<p>Recommended</p> <p><b>- LTC proposed Bylaw 530, which proposes to permit Accessory Dwelling Units</b> in more zones and lots and within accessory buildings... Public Hearing was Aug.18th (will be considered for 3rd reading at upcoming LTC Meeting... Sept?)</p> <p>-Task force recommended all zones and no minimum lot size to enhance the potential uptake</p> <p>-the current proposal <b>does</b> now allow smaller lot sizes under 1.2 Ha. to have ADUs with a smaller floor area (56m2)</p> <p>-All zones are not yet included due to OCP limitations.</p> <p>Task force can recommend further changes once an OCP update has occurred....for example:                      - Including all zones (Except DPAs )                      - Explicitly allowing moveable “tiny homes”</p>

	- Allowing Strata Titles for single family dwelling and the suite on one property to encourage home ownership.
See section on “Secondary Suites and Cottages “- Page 10 of “Options for Affordable Housing:New Solutions to the Housing Crisis in the Islands Trust Area” - Normandy Daniels-2003	
Update Land Use Bylaws to conform to new ALC regulations	underway at LTC- Bylaw 526
<b>Homeplate Zoning</b> - allow for flexibility of dwelling type and size within maximum total floor area (eg. 500m2) in exchange for land covenant on at least 50 % of property allowing only eco forestry, and another 20-30% allowing eco-forestry, permaculture or organic farming	<ul style="list-style-type: none"> <li>- in 2003 trust report by N. Daniels these were referred to as “Cluster Housing and Cottage Housing”</li> <li>- adequate water and waste management a prerequisite.</li> <li>- zoning model that would be applied for case by case but with defined requirements for approval giving certainty to the applicant prior to application.</li> <li>- would benefit co-op and co-housing initiatives</li> <li>- <b>3 ha minimum lot size?</b></li> </ul>
<b>Eco-village Zoning</b> - subdividable properties could concentrate the floor area of potential lots into a concentrated area according to the <b>Homeplate zoning principle</b> as a strata development with flexible dwelling types and sizes. (EG if a 50 hectare lot could be traditionally subdivided into 10 x 5 ha. parcels, instead allow for 10 x 500m2 = 5000m2 total floor area of dwelling space concentrated into a single limited portion of the property, protecting at least 50% of property for eco forestry only and another 20-30% allowing eco-forestry, permaculture or organic farming. Full protection of most sensitive Ecosystems.	<p>This limits the negative impact of subdivision, allows for creation of small villages, concentrated close to common infrastructure. while preserving forest cover of at least 50 to 80 % of land and encouraging ecological farming practices.</p> <ul style="list-style-type: none"> <li>-integrate Eco Density Bonus principles</li> <li>-A Map should be developed to identify which parcels might be eligible for this (ie subdividable) and DPAs.</li> </ul>
See section on “Cluster and Cottage Housing “- Page 12 of “Options for Affordable Housing:New Solutions to the Housing Crisis in the Islands Trust Area” - Normandy Daniels-2003	
Cite BC housing ADU report	
<b>Eco Density Bonus</b> - Awarding extra dwelling space for ecological building techniques and systems	Create a prescriptive list ie - Solar Panels, rain water harvesting, ecological building materials, grey water recycling, net zero energy, solar hot water...
<b>Flexible Housing Zoning</b> Adopt the Mayne Island Flexible Housing bylaw lot size to floor area ratio schedule. Allow and encourage proponents who can prove adequate water and fit these ratio requirements to apply for rezoning with prescriptive certainty.	<p>Include Mayne Island bylaw in Appendix Schedule:</p> <p>(a) On lots having an <b>area less than 0.6 ha (1.5 acres)</b> hectares, <b>one additional dwelling</b> is permitted if the total combined square footage of all dwellings does not exceed <b>232 m2 (2500 square feet)</b>.</p> <p>(b) On lots having an area of <b>0.6 ha (1.5 acres) or greater, and not exceeding 1.2hectares (3 acres), two dwellings and a cottage are permitted</b> if the total combined square footage of all dwellings and cottages does not exceed <b>325m2 (3500 square feet)</b>.</p>

	<p>(c) On lots having an area of <b>1.2 ha (3 acres) or greater, and not exceeding 4 hectares</b> (10 acres), three dwellings and a cottage are permitted if the total combined square footage of all dwellings and cottages does not exceed 436 m<sup>2</sup> (4750 square feet).</p> <p>(d) A building permit</p>
<p><b>Tiny Homes</b></p> <p>- need to define tiny homes as small <b>moveable</b> homes under <b>40m<sup>2</sup></b> (as opposed to small homes with fixed foundations- should be defined differently, eg:“micro cottage”)</p> <p>-LTC should support a pilot project for a “tiny home village” where the model is provision of serviced pad rentals with some common services such as common meeting area, laundry, etc. (Brinkworthy Model)</p>	<p>-popular and important option for housing. allows people to build equity into the home without the cost of land... can be moved so they can relocate.</p> <p>-allows property owners to rent out a “pad” for a tiny home without needing to spend the capital to build a suite or cottage.</p> <p>- need to support this type of housing with a “building code light” concerning basic structural integrity, electrical and fire safety.</p> <p>See report by member Maikan Bordelau for more in depth discussion (include as Appendix)</p>
<p><b>Vacation Rentals-</b></p> <p>-Update BnB requirements to allow for smaller low impact accommodation such as glamping/ small sleeping cabins /tiny homes</p> <p>- Create BnB Licencing system In conjunction with CRD- so it is easier to regulate vacation rentals and reduce conflict with full time residences.</p>	<p>This will reduce competition with spaces that could be suitable for long term tenants, by allowing a different option for tourist income.</p> <p>include proposal by member Freyja Skye in appendix</p>
<p><b>Density Transfer Mechanism-</b> Update to be <b>viable</b> so that “densities” are transferred out of large landlocked undeveloped areas and added closer to villages and infrastructure.</p> <ul style="list-style-type: none"> <li>- needs to be commercially viable to developers in order to work</li> <li>- The community amenity is preserving undeveloped large properties as forest. no further amenity should be required.</li> </ul>	<p>-develop a map that shows large subdividable parcels.</p> <p>-could work in conjunction with efforts to provide tax credits for forest reserves (Carbon Credits) as incentive</p>
<p><b>Housing Authority</b> -Plan for the creation of Intergovernmental Agency in conjunction with CRD, BC Gov, Water Districts to implement and facilitate Housing projects</p>	
<p><b>Commercial zoning</b> in village centers to allow residential accommodation and allow up to 4 stories (<b>or maximum height of xx..m?</b>)</p>	
<p><b>Homesteading-</b></p> <p>Updating Bylaws and Policies to support and protect homesteading practices and self-reliance. (e.g.</p> <ul style="list-style-type: none"> <li>- Permission to build accessory building prior to principal building.</li> <li>- camping or other temporary structure other than commercial RV while building should be permitted</li> </ul> <p>-TUP for <b>basic homesteading practices?</b> should not be required.)</p>	<p><b>Proponent member needs to define “basic homesteading practices</b></p>

Identifying properties that are close to village Centers that are suitable for increased density for affordable housing	create Map
Create a hub (common building )to support transient workers and van dwellers , washroom shower, ability to charge phones and devices etc. (identify zoning)	Inter jurisdictional, IT can't do this alone, only provide zoning
Look at updating definitions section, particularly adding "affordable housing" CMHC definition? Housing Needs Spectrum	
remove "seasonal" from definition of cottages (related to bylaw 512 and OCP)	Will be part of the ADU bylaw 530
<b>ADVOCACY</b> <b>(LTC has the right and responsibility to work with other levels of government)</b>	
Creation of Intergovernmental Housing Authority	
Advocate for property tax credit for long term rentals	
Advocate for inclusion in speculation and vacancy tax	
Advocate for return of fixed term lease in Tenancy Act in rural areas	
Landlord tenant matching service /Registry support landlords to find good tenants and vice versa-Registry and mediating service	
Creation of a Land Bank	
<b>PILOT PROJECTS/INCENTIVES</b>	
Tiny Homes Strata Subdivision	underway- Concern for the task force that the pilot project is not really "Tiny Homes" but more "micro cottages". We need a pilot project to truly support Tiny homes, (Brinkworthy Model)
Green building design -Incentives for ecological building -Eco building Density Bonus	
Eco village Zoning/ Homeplate zoning pilot project - allow for multiple smaller dwellings within max total footprint in exchange for land covenant and/or Ecological building/ development plan.	
Advocate for property tax credit for long term rentals	
Advocate for inclusion in speculation and vacancy tax	
Collaborate with CRD Building Inspectors to develop OPEN SOURCE blueprints for waste and water systems, tiny homes or cottages that will easily pass inspection.	
Develop an integrated MAP for affordable housing proponents, and safeguards to ensure success from the beginning.	

DEVELOP SUPPORTING POLICIES	
Prioritize affordable housing rezoning application	underway
Not enforce non-conforming dwellings (likely standing-resolution as interim solutions)	recommended and implemented by LTC as a standing resolution
Avoid over regulation, if there are regulations at the level of another agency, defer to them to decrease bureaucratic hurdles and inconsistencies; ie CRD, Island Health, ALC	
<b>“Housing Authority” Tasks, roles, responsibilities</b>	
Plan and build housing of various types for more affordable housing, from duplex to 4plex to multi family projects	
Develop projects on community owned land such as SD64/CRD property on Drake rd, Multi family zoned properties near ganges currently owned by CRD parks. Be ready to obtain suitable land opportunities such as the the channel ridge village development, Bracket Springs, Norton Road project	
Receive funds from potential tax revenue from vacation rentals and STV tax	
Landlord tenant matching service /Registry support landlords to find good tenants and vice versa- Registry and mediating service	
Support efforts and projects of non profit organizations	
Support community Land Trust (like those in San Juan Islands.)	
Create a Land Bank	
Work with all levels of government to solve barriers like water supply for Housing projects, Road safety, etc.	
<b>See section on “Land Banks and Community Land Trusts “- Page 8 of “Options for Affordable Housing:New Solutions to the Housing Crisis in the Islands Trust Area” - Normandy Daniels-2003</b>	
	Quote from 2003 report here
<b>Inter Jurisdictional Issues</b>	
Islands Trust, CRD, SSI Water districts, BC Gov.	
Plan for the creation of Intergovernmental Housing Authority in conjunction with CRD, BC Gov, Water Districts	
Building Code Light -exceptions for small or experimental ecological construction. - List of approved alternative proposals. -Basic Health and Safety oriented -Hire a Building Inspector with experience in ecological building techniques	



Advocate for property tax credit for long-term rentals	
Financial incentive (tax rebate) for Homeowners to change from B&B to permanent rental.	
Licensing system for vacation rentals	
Collaborate with CRD Building Inspectors to develop OPEN SOURCE blueprints for waste and water systems, tiny homes or cottages that will easily pass inspection.	
-Grey water use and management systems- OCP?	
Create a hub to support transient workers and van dwellers (identify suitable place/Community land?)	
Landlord and tenant matching- social dynamics. support system for this type of community service. Must reach landlords and make it feasible, streamlined and engaging.	
Prioritize water for Affordable housing projects near village centers - Example- work with water districts and BC government to obtain grants to fix infrastructure leaks to save volume of water required for desired projects like SD64/CRD property on Drake rd.	

**Water Issues**

Rainwater Harvesting - promote and support	
Water centric planning for multi family/ ecovillages	
Harmonize requirements for ADUs to align with Island Health regs for multifamily dwellings ( 225 L/person/day)	
Work with NSSWW to allow for affordable housing projects- (eg. Grants to fix leaks to save required volume?)	
Increase conservation of existing users and repair infrastructure leaks to save water to be allocated to housing projects	
Island Wide water utility responsible for all water related issues for the community, including supply,storage, monitoring, infrastructure, safety. (including surface water, ground water, rain water and desalinization	

**Data points needed**

How many people are currently housed in Accessory dwelling units or non conforming housing of some kind?	
How many people commute to SSI to fulfill regular jobs	
Carrying capacity target based on Net Impact per Capita- What % of types and sizes of dwellings to support a healthy, diverse community and environment?	
How many smaller / secondary dwellings needed to house the workforce need to service the island as it builds out? 5 year increments?	How many active employees are needed per sector? Can we quantify the total working population needed to support existing services, businesses and agencies?
Map of development potential under current zoning - how many subdividable and undeveloped properties?	
<b>UPDATE OCP</b> <b>(This section has not been updated recently and needs extensive updates and analysis)</b>	Task force has chosen to concentrate on developing ideas, then work to identify changes needed in OCP to support the ideas proposed. It will be necessary for a professional planner or consultant to assist, in order to thoroughly capture all the points necessary for change.
Review and amend Part A, Sec A.6 Climate Change and Energy Efficiency as it relates to: <ul style="list-style-type: none"> <li>environmental protection</li> <li>sustainable design</li> <li>housing development</li> </ul>	
Review and amend Part B, Sec B.2 Residential Land Use Objectives and Policies on: <ul style="list-style-type: none"> <li>affordable housing</li> <li>permitting seasonal accommodation (hotel, resorts) for long-term use</li> <li>Creative-Place Making</li> </ul>	
Develop new section to address: <ul style="list-style-type: none"> <li>First Nations Reconciliation,</li> <li>heritage and archeological Protection</li> </ul>	
Review and amend Part C, Transportation Servicing Objectives and Policies to address <ul style="list-style-type: none"> <li>Multimodal Transportation</li> <li>Accessibility</li> </ul>	
Review and amend Part D, Administration	
Update OCP to allow for the full time use of “seasonal “cottages Island wide (protecting water as suggested for suites above)	
Identify suitable properties for multi -family close to Village centers and Infrastructure	
Soft cap on house size- where houses over certain footprint must conform to high ecological building standard and property development plan	

Where water concerns exist mandate alternative supply must be shown for secondary dwellings and update volume requirement for secondary dwellings to align with Island health requirement of 200L per person per day - 2 people per bedroom.	
Support for people with special needs in the community	
Review and amend PartA,6 Climate change and Energy Efficiency relating to: Sustainable design Environmental protection Housing development	
Review and amend PartB,2 Residential Land Use Objectives and Policies on Affordable housing Permitting seasonal accommodation (hotel, resorts for long term use. Creative place making	
Review and amend Part C Transportation objectives and policies to address Multimodal transportation.	
As the ADU's approach the quota threshold, revisit to examine if adjustment is needed and take into account regular housing needs assessments (Every five years). - Honour incremental growth - update OCP to reflect this strategy	
Strata Titles for ADU's and/or flexible density?	
Retrofitting a single family dwelling property to accommodate multiple families/small dwellings - flexible density-OCP?	
Water-centric planning - Build where the water is to be sustainable as a whole island community	
Bus routes can be routed to where density is appropriate - Existing routes does not need to be a condition for density	
<b>OTHER IDEAS</b>	
<b>How to incentivize Affordable entry level Home ownership to allow families to start earning equity with their housing payments?</b> co-op models? community owned housing for ownership? Community Land Trust/ Land Bank?	to be discussed further
<b>First Nations Reconciliation</b> -We have not had an opportunity to fully discuss how to	To be discussed further

<p>engage with First Nations, or what role we have as an advisory committee if any?</p> <p>- It has been noted that we hope our suggestions to improve the affordability and flexibility of housing options will benefit First Nations people wanting to develop housing</p> <p>-It has been noted that First Nations also need land for housing</p> <p>-it has been noted that engagement with First Nations is complex as there are multiple claims on the Area of Salt Spring Island and all parties should be engaged equally.</p>	

**Visions and objectives notes from Meror and James, who have left the group**

<p>1. Housing is comprised of Market, Affordable (30% of income), Social (those with low income who only need housing), Supportive (housing plus support - mentally or physically challenged, assisted living). The objective is that <b>no one is left behind</b>. All sectors need to be addressed in a healthy community, beginning with those who have been here the longest.</p> <p>2. The IT was put in place to preserve and protect the self-reliance and agronomy that dominated the Islands at the time of Trust inception. <b>We need to regain that self-reliance and the Trust needs to help</b>. This is particularly poignant in housing.</p> <p>3. It is common that the government and perceptual constructs that are put in place to deal with a particular problem at a particular time, become the constraints to solving today's problems. <b>We are handcuffed by our own creations</b>. We desperately need our current governance to recognize the constraints they place on the greater good, and to be active in making them go away. Saying we can't consider something because it is outside our domain (eg. it's the Building Code, or that's Island Health, or that's CRD, etc) honors the constraints of the system that got us into this mess. It is difficult to fathom that we created a system that we can't get out of.</p> <p>4. We need to <b>consider the long-term implications of what we do</b>. Looking in the rear-view mirror when planning is entirely inappropriate when facing down climate change. In every decision we need to <b>be cognisant of the future</b></p>	
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**we are creating.**

5. We need to **think in a different way** than what led to our housing problem, and we need to **be bold**.

Germany is considering banning single family residences. Lithuania has extremely minimal but effective building code requirements. France has tightly constrained, rural villages surrounded by pastoral protected land. New Zealand requires that all building materials last a minimum of 50 years. Adelaide has one city block where only rammed earth buildings are allowed, thereby stimulating innovation.

6. All buildings must be a gift to our descendants, and not disposable toxic waste. **All new building must be creating a green asset for the future.** Our tolerance for building brown assets is now inappropriate.

7. The bottom rung of the housing ladder needs to be put back into place. **The bottom rung can be extremely small, as long as it is warm, dry, durable, and healthy.** Security of home is psychologically more important than square footage. Living in a secure, tiny, beautiful, healthy, durable home can have way more dignity than living in a toxic, disposable mansion.

8. The notion that private landholders will do better for the environment than government protected land, is naïve at best. There is too much evidence here on SSI to dispute that.

9. A primary objective should be that **as many people as possible can live, work, and play without a car.** At best we should be moving all new people into SSI townships, and we need to distinguish the townships. Barely palatable is densifying along the bus routes, and limiting those bus routes eg buses are good but more bus routes is not better (LA thought more highways would solve the traffic problem).

10. A related objective is that as many people as possible should have **housing that is self-reliant** eg. it is independent with regards power, water, and sewage.

11. We need to actively trade rural land for building rights in town areas. Density transfers need to be made appealing enough by IT that developers will actually do this. Blaming lack of proponents is lame. Make it work for them and they will come. And we need to rethink the rural nature of our townships.

12. We desperately need a housing authority to co-ordinate the myriad governing bodies such that we can make progress on housing, in the way we on SSI want it.

Recognize that families need long-term tenure and a stability that Band-Aid rentals do not solve. I can't imagine any of us or a family wishing to live in some ancillary building with perhaps safety and health issues.

Should Tiny Homes be Allowed/Encouraged on Saltspring?  
*A subjective study for the Housing Action Program Taskforce (HAPTF)*  
by member Maïkan Bordeleau  
August 22 2022

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*Acknowledgement*

As a member of a taskforce created by the Islands Trust (IT), I defer to their land acknowledgement:

*I am humbly thankful to live and work in the treaty lands and territories of the BOKÉĆEN, K'ómoks, Lək'wəŋən, Lyackson, MÁLEXEŁ, Qualicum, Quw'utsun Tribes, scəwáθən məsteyəx<sup>w</sup>, Scia'new, səililwətaʔ, SEMYOME, shíshálh, Skwxwú7mesh, Snaw-naw-as, Snuneymuxw, Spune'luxutth, STÁUTW, Stz'uminus, łaʔəmen, toq qaymıx<sup>w</sup>, Ts'uubaa-asatx, Wei Wai Kum, We Wai Kai, WJOŁEŁP, WSIKEM, Xeláltxw, Xwémalhkwxu/ʔop qaymıx<sup>w</sup>, and x<sup>w</sup>məθk<sup>w</sup>əyəm.*

*Abbreviations used*

A	amp/ampere
ADU	accessory dwelling unit
ANSI	American National Standards Institute
BCBC	British Columbia Building Code
BCHLCS	British Columbia Housing, Licensing and Consumer Services

BCPC	British Columbia Plumbing Code
CRD	Capital Regional District
CSA	Canadian Standards Association
CVRD	Cowichan Valley Regional District
CW	cold water
DU	dwelling unit
EHO	Environmental Health Office
FN	First Nations
FS	Functional Statement
H	home / house
HAPTF	Housing Action Program Taskforce
HPA	Homeowner Protection Act
HPO	Homeowner Protection Office
HW	hot water
ICBC	Insurance Corporation of British Columbia
IH	Island Health
IT	Islands Trust
LRB	Licensed Residential Builder
LTC	Local Trust Committee
LUB	Land Use Bylaw
MH	manufactured/mobile home
MLA	Member of the Legislative Assembly
NBC	National Building Code
NECB	National Energy Code for Canada for Buildings
NSSWD	North Saltspring Water District
OCP	Official Community Plan
OD	on demand
OECD	Organisation for Economic Co-operation and Development
P.Eng	Professional Engineer
ROWP	Registered Onsite Wastewater Practitioner
RTB	Residential Tenancy Branch
RV	recreational vehicle
SSIWPA	Saltspring Island Watershed Protection Alliance
TC	Transport Canada
TH	tiny home / tiny house
TUP	Temporary Use Permit
VOC	volatile organic compound

## Part 1: Mandate

In April 2021, under authority of the IT, the HAPTF was created to recommend solutions to the urgent lack of affordable housing on Saltspring, with its threats to essential services, businesses, and more. In Dec 2021 I was delegated by the HAPTF to check with elected and planning officials at all levels of government, plus other agencies, concerned with the potential siting, building, and living-in of tiny homes (THs) on Saltspring, as a path to safe, affordable, durable, attractive housing that is an asset to the community.

I disclosed to the HAPTF my occupation as a builder and spoke with IT HAPTF liaison, Acting Regional Planning Manager Louisa Garbo, on respecting conflict of interest rules. I didn't get paid to do this or any HAPTF work, and have sunk in approximately 9300\$ of my own money and time because of the urgency of this issue here and applicability of solutions to BC/Canada.

I read documents and websites as background to make sure I was focussing on what is wanted and achievable, giving priority to:

- IT Saltspring Island Local Trust Committee (LTC) Official Community Plan (OCP), Bylaw 434, Schedule A, Volume 1: Land Use and Servicing Objectives  
<https://islandstrust.bc.ca/document/salt-spring-island-ocp-bylaw-no-434-2/>
- IT Land Use Bylaw (LUB) 355  
[https://islandstrust.bc.ca/wp-content/uploads/2021/02/bl-355\\_lub\\_2020-09.pdf](https://islandstrust.bc.ca/wp-content/uploads/2021/02/bl-355_lub_2020-09.pdf)
- BC Ministry of Community Development *A Guide to Green Choices: Ideas & Practical Advice for Land Use Decisions in BC Communities*  
[https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/local-governments/planning-land-use/guide\\_green\\_choices.pdf](https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/local-governments/planning-land-use/guide_green_choices.pdf)
- BC Building Code (BCBC), Volumes 1 and 2  
<https://free.bcpublications.ca/civix/content/public/bcbc2018/?xsl=/templates/browse.xsl&xsl=/templates/browse.xsl>

I also looked at:

- Canadian Standards Association (CSA) standard A277-16 on certification of prefabricated buildings  
[https://www.csagroup.org/store/product/A277-16/?gclid=CjwKCAjwkMeUBhBuEiwA4hpgqEHKFYdElZMuNjIObt4-eo1MKFBKBHHD0XapGvPcpOplQ88ECZd4yFBoCrv4QAvD\\_BwE](https://www.csagroup.org/store/product/A277-16/?gclid=CjwKCAjwkMeUBhBuEiwA4hpgqEHKFYdElZMuNjIObt4-eo1MKFBKBHHD0XapGvPcpOplQ88ECZd4yFBoCrv4QAvD_BwE)
- CSA standard Z240 MH on manufactured homes (MHs)  
[https://www.csagroup.org/store/product/Z240%20MH%20SERIES-16/?gclid=CjwKCAjwkMeUBhBuEiwA4hpgqEFqMs8CZfxqv3ATzVXQ\\_Fuhqt8nosQCtwLdf5H2yoUfo78rArUU7VxoCLKQQAvD\\_BwE](https://www.csagroup.org/store/product/Z240%20MH%20SERIES-16/?gclid=CjwKCAjwkMeUBhBuEiwA4hpgqEFqMs8CZfxqv3ATzVXQ_Fuhqt8nosQCtwLdf5H2yoUfo78rArUU7VxoCLKQQAvD_BwE)
- BC Housing Licensing and Consumer Services (BCHLCS) Regulatory Bulletin 29 on application of the Homeowners Protection Act (HPA) to MHs

*Tiny Homes report ~ Maïkan Bordeleau for HAPTF*



- BC Plumbing Code

<https://free.bcpublications.ca/civix/content/public/bcpc2018/?xsl=/templates/browse.xsl&xsl=/templates/browse.xsl>

- Canadian Electrical Code, Part I

[https://www.csagroup.org/store/product/CSA%20C22.1%3A21/?gclid=Cj0KCQjwgO2XBhCaARIsANrW2X3m8D619JgJRv3QK2-jKH2NmGoYsqy0fb\\_6lef98dFbzqMPZcaK5ZYaAkPLEALw\\_wcB](https://www.csagroup.org/store/product/CSA%20C22.1%3A21/?gclid=Cj0KCQjwgO2XBhCaARIsANrW2X3m8D619JgJRv3QK2-jKH2NmGoYsqy0fb_6lef98dFbzqMPZcaK5ZYaAkPLEALw_wcB)

I focussed on two ways THs could help solve Saltspring's affordable housing crisis:

- THs as accessory dwelling units (ADUs)
- a TH village

The idea with this report is to make it easier to build, and build lastingly safe and useful units, if and when we do decide as a community that THs are a net benefit.

The characteristics of a TH I used are:

- ≤ 500 sqft, maximum width 12', maximum trailered length 53'
- single-storey, partial lofts allowed, maximum trailered height 13'6"
- on trailer or trailerable onto flat-deck
- pad space and nearby use area 25x45'

This is distinct from a cottage, micro-home, garage suite, etc on foundation following existing building/land use patterns similar to those of a house (H). It's motivated by the shortage of stable/affordable home ownership/rental options, that could be helped by ease of siting/servicing/building/maintaining.

The main technical and regulatory requirements focused on are:

- building code
  - land use
- plus on-grid and off-grid services:
- power (hydro, solar, etc)
  - water (municipal, well, rainwater) for drinking/cooking vs washing/processing
  - waste (sewer, septic, composting) for greywater/blackwater

I spoke with:

- Islands Trust (IT) Trustee Laura Patrick
- IT Regional Planning Manager Stefan Cermak
- IT Planner Jason Youmans
- IT Planner Louisa Garbo (now Acting Regional Planning Manager)

- IT Planner Geordie Gordon
- Capital Regional District (CRD) Manager of Building Inspection Mike Taylor
- CRD Director for Saltspring Gary Holman
- CRD Engineering Manager for Saltspring Dean Olafson
- CRD Building Inspection Office for Saltspring staff
- British Columbia (BC) Member of the Legislative Assembly (MLA) for Saanich-Gulf Islands Adam Olsen
- BC Housing Licensing and Consumer Services (BCHLCS) Compliance Analyst Andrew Chand
- BCHLCS Compliance Manager Mandeep Johal
- Island Health (IH), Health Protection and Environmental Services, Environmental Health Officer for Saltspring Laura McKelvey
- Saltspring Island Watershed Protection Alliance (SSIWPA) Coordinator Shannon Cowan
- TRAX Developments wastewater Engineer Ian Ralston

I also reached out to

- IT Trustee Peter Grove
- CRD Senior Manager for Saltspring Karla Campbell
- CRD General Manager of Integrated Water Services Ted Robbins

Many thanks to each staff person and elected official who took time for us and to Manager Garbo, Planning Team Assistant Rob Pingle, Trustee Patrick, and fellow HAPTF members who've been essential to the whole process.

I tried to write this in plain English so Saltspring residents can get the most out of it.

## *Part 2: Impact data and analysis*

### *2.1 What does the OCP say that is relevant to THs?*

*Subjective notes in italics.*

#### **A.4 Community objectives**

- A.4.1.4d Obligation to select alternative with least human/environmental impact
- A.4.6.3 Support living-wage, year-round employment especially for young people

## A.5 Island environment

A.5.1.6 Sustainable land use by reduced per person impact

A.5.2.14 Manage soil removal

A.5.2.20 Protect and maintain rural character by facilitating live-in farm help

## A.6 Climate change and energy efficiency

A.6.1.5 Minimize greenhouse gas emissions in construction and operation

A.6.2.21 Energy and water conservation per person

## A.8 Island heritage

A.8.2 Respect of FN sites via smaller-scale dwellings not requiring excavation

## B.2 Residential land use

B.2.1 Housing quantity assurance

B.2.1.1.1 Support mix of housing types

B.2.2.1.1 Provide opportunities for creation of affordable/rental/special needs housing

*Via new construction or integrating/upgrading such housing that already exists but may not yet fully conform*

B.2.2.2.3c Means of sewage disposal

B.2.2.2.3d Energy and water efficient building design

B.2.2.2.8 Small, affordable homes in villages

B.2.2.2.9 Effective # of people housed vs. # of square feet of housing

B.2.2.2.10 Flexible dwelling units

B.2.2.2.15 Secondary suites

B.2.2.2.16a Seasonal cottages lower use in affordable units

B.2.2.2.21 Small care cottages alongside dwellings

B.2.3.1.2 Clusters of density balancing big open spaces

B.2.3.1.3 Reduce dependence on private cars

B.2.3.1.5 Minimize energy/resource use

## B.4 Community land use

B.4.3 Health services land uses

## B.5 Village land use

B5.1.2.2 Housing density

B5.2.2.3 Affordable/special needs housing in Ganges Village

B5.4.2.3 Affordable/special needs housing in Channel Ridge Village

## B.6 Resource land use

### B.6.2.1.1 Support farming

*Implies farm worker affordable housing*

### B.6.2.1.8 Ensure water for agriculture

*Consistent with reduced per-capita water use*

### B.6.2.2.12 Higher density for community owned land for farming/farm product processing

## B.8 Conservation land use

### B.8.1.1.2 Continued allowance of residential development

*Implies prioritizing small/low impact units*

## C.1 General infrastructure and servicing

### C.1.2 Develop infrastructure

*Implies saving resources (e.g. rainwater) and mobilizing existing resources (e.g. safe non-conforming dwelling units) as above or equal to building new resources (e.g. water treatment, new construction)*

## C.2 Transportation servicing

### C.2.1.1.1 Compatibility with contained density approach vs sprawl approach

## C.3 Potable water quality and supply

### C.3.2.1.1 Water demand of development

### C.3.2.1.4 Encourage conservation methods

### C.3.2.28 Groundwater conservation

*All consistent with lower per person consumption*

## C.4 Waste management

### C.4.1.1.2 Domestic waste reduction

### C.4.2.1.1 Liquid waste management

### C.4.2.3.1 Lands outside sewer service area

*All consistent with lower per person waste production*

## C.5 Power and telecom

### C.5.1.1.3 Reduce public expense of utilities

*Consistent with lower per person power use and partial/total reliance on point source generation in off-grid sites*

## D Administration

### D.9 Definitions

*May be useful to develop definitions now for THs, on-site safe power generation, rainwater catchment, accelerated on-site safe composting, etc. to facilitate discussion*

### *2.2 What does insurance risk say about THs?*

Based on online data, I believe I can give a good starting picture of claims most commonly made for houses (Hs), but not % of policies claimed on or % of claims approved. Inadequate data are available for TH insurance, which unlike H insurance is not yet a widely available product or commonly held by residents.

Aggregate data on claims made and paid by number (not value), with sources in brackets and referenced at the end of this section, are:

	% of all claims	% of all paid claims
Water	31-49 (N2, N3, N6)	47-48 (N1, N2)
Fire	4-16 (N2, N3)	31 (N2)
Theft	6-18 (N2, N3, N6)	7 (N2)
Hail	11 (N3), significant (N1, N6)	n/a
Wind + Treefall	6-25 (N3, N5), significant (N1)	n/a
Liability	2 (N6)	n/a

One source gives wind and hail as #1 claim source, 11200 USD average claim; fire/lightning 79800 USD. (N6)

Common claims reported qualitatively in one source: loose/damaged washing machine hose, tub/shower grout/edge leak, toilet issue, fridge leak, roof damage, chimney/hearth fire, water heater leak, electrical fire, cooking/candle fire, garage door opener theft. (N4)

Water damage represents the biggest payout in home insurance. Leaks, improper toilet/bath drainage, corroded pipes, aged fixtures, roof leakage, floods, damaged plumbing cited. (N1)

Another set of studies says average claim (not clear if payout) cost 7200 CAD in 2002 and 15500 CAD in 2012, a 110% increase. (N2)

BC has the most expensive water claims in Canada. Increased 150% from 2002-2015. Most expensive type of claim (not necessarily biggest total price tag) is basement flooding. Prevention measures named are: yard inspection/prevent slope toward house, clear perimeter drains/gutters, inspect basement, have backwater valve in basement. (N5)

Wind damage prevention measures named are: check window seals, inspect roof, prune nearby trees, avoid parking under windfall hazards, secure outdoor items. (N5)

Fire prevention measures named are: get chimney inspected, check extension cords, inspect dryer, candle care, stove watch, check small appliances. (N5)

Observation was made that future claims may not mimic the past because of climate change, aging/inadequate infrastructure, lifestyle changes, construction issues, human behaviour. (N2)

Based on this, a subjective analysis of insurance risk associated with THs and Hs was made, below. Notes:

- In some cases RVs are distinguished from THs;
- Given that THs may need to prove themselves to regulators/insurers/etc, however much a perceptual issue that may be, a conservative bias was applied, giving Hs the edge over THs in ambiguous cases;
- Words used for incidence are, from highest to lowest: always, often, sometimes, rarely, never.

	Per square foot <i>In general, for insurance risk: H &lt; TH where both have equal facilities (rare) H &gt; TH where TH has fewer facilities (often) H &lt; TH where H has fewer facilities (rare) ∴ H ≥ TH</i>	Per person <i>In general, for insurance risk: H ~ TH where both have equal facilities (rare) H &gt; TH where TH has fewer facilities (often) H &lt; TH where H has fewer facilities (rare) ∴ H &gt; TH</i>	BCBC Functional Statements that may apply
Water			F46, 52, 60-63, 70, 96

Loose/ damaged washing machine hose	TH rarely has, H often has ∴ H > TH	H > TH	
Tub/shower grout/caulk leak	TH rarely has tub, H often has ∴ H ≥ TH	H ≥ TH	
Toilet issue	TH often has no flush toilet, H usually has ∴ H > TH	H > TH	
Fridge leak	TH often has smaller, more cheaply-made fridge ∴ H ~ TH	H ~ TH	
Roof damage	TH often has metal roof, H often shingle, metal or other. RV's are prone to leaky rooves. ∴ H ~ TH, H < RV	H ~ TH	
Water heater leak	TH often has tankless water heater, H often tank ∴ H > TH	H > TH	
Corroded pipes	TH often newer, PEx-based plumbing, H often PEx/copper, rarely iron/stainless steel ∴ H > TH	H > TH	
Aged fixtures	TH often newer, cheaper fixtures ∴ H ≥ TH	H ~ TH	
Damaged plumbing	Damage in principle equally likely ∴ H ~ TH	H ~ TH	
Flood/ basement	TH never has basement, H often does ∴ H > TH	H > TH	
<b>Fire</b>			F01-06, 31
Chimney/ hearth problem	TH often has wood stove, rarely has fireplace, H sometimes has wood stove, rarely has fireplace. TH sometimes narrower pipe diameter than H. In principle equal likelihood of pipe bends accumulating creosote. In principle equal likelihood of single vs double walled stovepipe. ∴ H ≤ TH	H ~ TH	
Electrical	TH often has newer electrical, RV often has electrical comparable in age to H with thinner walls, cheaper wire. TH rarely have rats & chewed wires, H sometimes do. H has more wires/devices per capita than TH. ∴ H ≥ TH, H < RV	H > TH	

Cooking/ candle	TH often has propane stove, sometimes electrical, rarely butane, H often has natural gas, often electrical, sometimes propane. TH rarely has oven, H often does. Candle use in principle comparable. ∴ H ~ TH	H ~ TH	
<i>Theft</i>			F34-35
Garage door entry	TH never has garage, H sometimes does. ∴ H > TH	H > TH	
<i>Wind + Treefall</i>	Comparable in principle, likelihood related to square footage. ∴ H ~ TH	H > TH	F22
<i>Hail</i>	Comparable in principle, likelihood related to square footage. ∴ H ~ TH	H > TH	
<i>Pests</i>	TH rarely has rats, H sometimes does. Looking only at building materials damage not health safety here. ∴ H > TH	H > TH	F42
<i>Mold</i>	Incidence comparable in principle. RV prone to mold issues because single-pane windows and leaky rooves more common. Looking only at building materials damage not health safety here. ∴ H ~ TH, H < RV	H ~ TH	F40-41, 46, 50, 63

References:

(N1) <https://rates.ca/resources/most-common-insurance-claims-canada>. Insurance industry group.

(N2) <https://www.cia-ica.ca/docs/default-source/2014/214020e.pdf>. Insurance industry group.

(N3) <https://insureye.com/home-insurance-claims-in-canada-2017-study-tips-for-you/>. Appears to be insurance industry media.

(N4) <https://www.hubinternational.com/blog/2021/01/common-homeowners-insurance-claims/>. Insurance company.

(N5) <https://www.seafirstinsurance.com/blog/biggest-home-insurance-claims-fall-winter-and-how-to-prevent-them/>. Insurance company.

(N6) <https://www.familyhandyman.com/article/most-common-homeowners-insurance-claims/>. Appears to be insurance industry media.

The full list of Functional Statements (FS's) in BCBC Division A 3.2 is:

- F01 To minimize the risk of accidental ignition.
- F02 To limit the severity and effects of fire or explosions.
- F03 To retard the effects of fire on areas beyond its point of origin.
- F04 To retard failure or collapse due to the effects of fire.
- F05 To retard the effects of fire on emergency egress facilities.



- F06 To retard the effects of fire on facilities for notification, suppression and emergency response.
- F10 To facilitate the timely movement of persons to a safe place in an emergency.
- F11 To notify persons, in a timely manner, of the need to take action in an emergency.
- F12 To facilitate emergency response.
- F13 To notify emergency responders, in a timely manner, of the need to take action in an emergency.
- F20 To support and withstand expected loads and forces.
- F21 To limit or accommodate dimensional change.
- F22 To limit movement under expected loads and forces.
- F23 To maintain equipment in place during structural movement.
- F30 To minimize the risk of injury to persons as a result of tripping, slipping, falling, contact, drowning or collision.
- F31 To minimize the risk of injury to persons as a result of contact with hot surfaces or substances.
- F32 To minimize the risk of injury to persons as a result of contact with energized equipment.
- F33 To limit the level of sound of a fire alarm system.
- F34 To resist or discourage unwanted access or entry.
- F35 To facilitate the identification of potential intruders.
- F36 To minimize the risk that persons will be trapped in confined spaces.
- F40 To limit the level of contaminants.
- F41 To minimize the risk of generation of contaminants.
- F42 To resist the entry of vermin and insects.
- F43 To minimize the risk of release of hazardous substances.
- F44 To limit the spread of hazardous substances beyond their point of release.
- F46 To minimize the risk of contamination of potable water.
- F50 To provide air suitable for breathing.
- F51 To maintain appropriate air and surface temperatures.
- F52 To maintain appropriate relative humidity.
- F53 To maintain appropriate indoor/outdoor air pressure differences.
- F54 To limit drafts.
- F55 To resist the transfer of air through environmental separators.
- F56 To limit the transmission of airborne sound into a dwelling unit from spaces elsewhere in the building.
- F60 To control the accumulation and pressure of water on and in the ground.
- F61 To resist the ingress of precipitation, water or moisture from the exterior or from the ground.
- F62 To facilitate the dissipation of water and moisture from the building.

- F63 To limit moisture condensation.
- F70 To provide potable water.
- F71 To provide facilities for personal hygiene.
- F72 To provide facilities for the sanitary disposal of human and domestic wastes.
- F73 To facilitate access to and in the building and its facilities by persons with disabilities.
- F74 To facilitate the use of the building's facilities by persons with disabilities.
- F75 To minimize obstacles for future modification to provide access.
- F80 To resist deterioration resulting from expected service conditions.
- F81 To minimize the risk of malfunction, interference, damage, tampering, lack of use or misuse.
- F82 To minimize the risk of inadequate performance due to improper maintenance or lack of maintenance.
- F90 To limit the amount of uncontrolled air leakage through the building envelope.
- F91 To limit the amount of uncontrolled air leakage through system components.
- F92 To limit the amount of uncontrolled thermal transfer through the building envelope.
- F93 To limit the amount of uncontrolled thermal transfer through system components.
- F95 To limit the unnecessary demand and/or consumption of energy for heating and cooling.
- F96 To limit the unnecessary demand and/or consumption of energy for service water heating.
- F98 To limit the inefficiency of equipment.
- F99 To limit the inefficiency of systems.
- F100 To limit the unnecessary rejection of reusable waste energy.

### *2.3 What does health and safety say about THs?*

The CRD Building Inspection Office for Salt Spring's data on building inspection fails is computerized on the Prospero system for 2016-present. Search request pending. For pre-2016, at-cost manual search of paper archives, request not made.

Based on available online data on common safety faults of permitted inspected housing, I believe the following subjective qualitative analysis of safety risk associated with THs and Hs is possible. There are surely things that I've missed; this is a starting point for discussion.

## Notes:

- RVs distinguished from THs in some cases;
- Conservative bias applied, giving Hs the edge over THs in ambiguous cases;
- The achievable risk level is anecdotal but verified via my work building/surveying THs and building/renovating Hs;
- Words used for incidence are: always, often, sometimes, rarely, never.

	Per square foot <i>In general, for safety risk: H &lt; TH where both have equal facilities (rare) H &gt; TH where TH has fewer facilities (often) H &lt; TH where H has fewer facilities (rare) ∴ H ≥ TH</i>	Per person <i>In general, for safety risk: H ~ TH where both have equal facilities (rare) H &gt; TH where TH has fewer facilities (often) H &lt; TH where H has fewer facilities (rare) ∴ H &gt; TH</i>	Risk level easily achieved in new TH construction	BCBC Functional Statements that may apply
Asbestos/ needle fibre insulation (respiratory hazard) (S1, S2, S5)	TH rarely have drywall with asbestos-era fibres, H often do TH often have fiberglass/rockwool insulation, H often do as well ∴ H > TH	H > TH	~ 0 No drywall used, fiberglass/rockwool/wool between ply and vapour barrier, all protrusions sealed by hand.	F40, 43-44, 46, 50
Lead paint (neurologic and multiple organ hazard) (S1, S2, S5)	TH often have no drywall, rarely have lead paint, H often have drywall, sometimes have lead paint ∴ H > TH	H > TH	0	F40, 46, 50
Pests (viral hazard) (S1, S2, S5)	TH rarely have pests in part because no foundation, H often do ∴ H > TH	H > TH	~ 0 Subfloor made of wood with no gaps >0.25", all gaps sealed by hand.	F42

<b>Mold (respiratory/immune hazard) (S2, S5)</b>	<p>TH rarely have single-pane windows, H often D Incidence of weatherproofing membrane failure hard to assess TH often have metal rooves, H sometimes D Incidence of inadequate shower ventilation hard to asses ∴ H &gt; TH</p>	<p>H &gt; TH</p>	<p>~ 0 Membranes applied with no unsealed perforations, windows sufficient for cross-breeze, cedar or other mold-proof material in shower, shower fan, lifetime warranty metal roofing, roofing screws with non-protodegrading gaskets..</p>	<p>F40-41, 46, 50, 63</p>
<b>Excess cold (S2, S3, S7)</b>	<p>Comparable in principle ∴ H ~ TH</p>	<p>H ~ TH</p>	<p>~ 0 Easy to adequately heat a small space affordably.</p>	<p>F51, 54-55, 90-93, 95</p>
<b>Excess heat (S2, S3)</b>	<p>Comparable in principle ∴ H ~ TH</p>	<p>H ~ TH</p>	<p>~ 0 Windows sufficient for cross-breeze.</p>	<p>F51, 55, 90-93, 95</p>
<b>Biocides in building materials, offgassing (S2)</b>	<p>Comparable in principle ∴ H ~ TH</p>	<p>H ~ TH</p>	<p>~ 0 Natural alternatives to synthetics available at comparable price-point for flooring, wall finishing etc.</p>	<p>F40, 43-44, 46, 50</p>
<b>Carbon monoxide (fatal respiratory hazard) (S2, S5)</b>	<p>TH often have wood stove, H sometimes do. TH often have gas cooking, H often do. Wood burning (complex hydrocarbon) much higher risk than simple hydrocarbons methane/propane/etc. ∴ H &lt; TH</p>	<p>H &lt; TH</p>	<p>0-low WETT-certified wood stove or gas heating install or electric/heat pump heating. Proper gas range or electric.</p>	<p>F40-41, 43-44, 50</p>
<b>Radon (cancer hazard) (S2, S5)</b>	<p>TH always have open venting between ground and living space, H often have basement enclosure. ∴ H &gt; TH</p>	<p>H &gt; TH</p>	<p>0</p>	<p>F40, 43-44</p>

Fuel gas (respiratory/ fire hazard) (S2)	THs and Hs often have gas cooking. ∴ H ~ TH	H ~ TH	~ 0 Certified gas heating install or electric/heat pump heating. Proper gas range or electric.	F01, 40-41, 43-44, 50
Volatile organic compounds (cancer/ reproductive hazard) (S2)	Comparable in principle. THs often have better ventilation than Hs. ∴ H ~ TH	H ~ TH	~ 0 Avoid VOC-containing paints, stains, laminates etc.	F40, 43-44, 46, 50
Crowding (S2)	THs often give less sqft/person in Canadian context ∴ H < TH	H < TH	Significant May lead to people abandoning, in a Canadian context. Use open design.	
Entry by intruders (S2)	Comparable in principle. Difficult to assess. TH often perceived of as less secure. H often perceived of as having more valuables. TH unit can be stolen without proper trailer locks. ∴ H ≤ TH	H ≤ TH	~ 0 Use proper trailer and building locks.	F34-35
Poor quality lighting (S2)	Comparable in principle. ∴ H ~ TH	H ~ TH	~ 0 Bright, dimmable units affordable to buy and install.	
Noise (S2)	TH harder to escape noise from within building because smaller area. Comparable exposure to outside noise in principle. TH can be move to more remote location. ∴ H ≤ TH	H ≤ TH	low Include partitions with noise abatement.	F33, 56
Food safety (S2)	Comparable in principle. ∴ H ~ TH	H ~ TH	variable Depends on occupant.	

Sanitation/ drainage (S2)	Comparable in principle if properly plumbed. THs easier than Hs to plumb without permit or inspection. THs often have shorter pipe runs, fewer joints, fewer fixtures than Hs. THs often rely on existing septic/sewer of a H. ∴ H ~ TH	H ~ TH	~ 0 Minimize toxics output by separating black and grey water.	F40, 46, 72
Drinking water contamination (S2)	Comparable in principle if properly plumbed. THs easier than Hs to plumb without permit or inspection. THs often have newer piping than Hs. ∴ H ~ TH	H ~ TH	~ 0 to/within home variable at source	F46
Bath falls (S2)	Comparable in principle per bathtub. THs rarely have bath, Hs sometimes do. ∴ H ≥ TH	H ≥ TH	low Include safety handholds and anti-slip mat.	F30
Falls on level (S2, S5)	Comparable in principle. ∴ H ~ TH	H ~ TH	variable	F30
Falls on stairs (S2, S5)	THs often are single level, sometimes have loft. Loft access often steep stairs or ladder. Hs often have multiple levels linked by stairs. ∴ H ~ TH with loft, H > TH with no loft	H ~ TH with loft, H > TH with no loft	low Minimize by safe build.	F30
Falls from balconies/landings/windows (S2, S5)	THs rarely have balcony/landing, Hs sometimes do. TH often have more windows per sqft than Hs. TH windows often closer on average to ground than Hs. ∴ H ≥ TH	H ≥ TH	low Minimize by safe build.	F30
Electrical hazards (outdated wiring, ungrounded devices, lacking GFCI protection, double-tapped circuit breakers) (S2, S3, S5, S6, S7)	THs easier than Hs to wire (includes fixtures) without permit/inspection. THs often have newer wiring than Hs. THs often have shorter wire runs, fewer junctions, fewer fixtures, lower loads than Hs. THs often rely on existing electrical of a H. ∴ H ~ TH	H ≥ TH	~ 0 Service TH by code-compliant supply not extension cord.	F01, 32

Fire, explosion (S2)	Comparable in principle. Electrical fire risks same as above. THs often have fuel for cooking, heating and water heating, Hs often do for cooking and heating, sometimes do for water heating. TH heaters often lower power than for Hs. TH heaters sometimes less well made than for Hs. ∴ H ~ TH	$H \geq TH$	low Proper electrical/fuel install. Keep updated fire extinguisher. Improve with sprinkler system. Use higher quality appliances.	F01-06, 31
Flames/hot surfaces (S2)	Comparable in principle. THs often have more heat sources per sqft than Hs. ∴ H ≤ TH	$H \sim TH$	low Use higher quality appliances.	F31
Collision/entrapment (S2, S5)	THs often have more built-ins and less free floor space per sqft than Hs. THs often have shorter path to exit than Hs. THs often have lighter weight built-in structures than Hs because of driveability need. ∴ H ≤ TH for collision, H > TH for entrapment	$H \leq TH$ for collision, $H > TH$ for entrapment	low Minimize by more open design, avoid sharp corners.	F20, 30, 36
Strain-causing ergonomics (S2)	THs often have tighter spaces than Hs. THs and Hs often custom-designable for owner. ∴ H ≤ TH	$H \leq TH$	low Tailor to occupant.	
Structural collapse/falling items (S2, S4, S5)	THs easier than Hs to build without permit/inspection. THs often simpler, lighter, fewer stories, fewer personal effects than Hs. ∴ H ≥ TH	$H > TH$	~ 0 for collapse low for falling items Provide anchored, closable storage.	F20, 30
Poor air quality (S5, S6, S7, S8)	THs often have more cross-breeze than Hs, TH always have lower sqft than Hs. ∴ H > TH	$H > TH$	~ 0	F50-53
Windows that don't open (S5)	Comparable in principle. THs often have newer windows than Hs. ∴ H ≥ TH	$H \geq TH$	~ 0	F50, 61
Flooring problems (S8)	Comparable in principle. THs often have lower risk of water damage than Hs due to plumbing as discussed above. ∴ H ≥ TH	$H \geq TH$	~ 0	F30

THs as ADUs facilitate caregiver siting to support aging in place. I wasn't able to find figures to qualify/quantify that benefit and have not yet had time to quantify the potential savings in care facility/travel/etc cost, time, stress, etc.

Trailered vehicles are endorsed by BC Government for occupancy in the event of an earthquake.

<https://www2.gov.bc.ca/gov/content/safety/emergency-management/preparedbc/know-your-hazards/earthquakes-tsunamis/earthquakes>

References:

(S1) <https://fairbairninspections.com/safety-issues-older-homes-vancouver-bc/>. Inspection company.

(S2) <https://www.staffordbc.gov.uk/housing-health-and-safety-rating-system-the-29-hazards>. Municipal government.

(S3) <https://www.hgtv.com/lifestyle/clean-and-organize/common-problems-found-during-home-inspections#:~:text=1,related%20and%20require%20immediate%20attention>. General public media.

(S4) <https://makeitright.ca/holmes-advice/buying-selling-your-home/top-10-common-construction-defects-in-new-homes/>. Construction industry media.

(S5) <https://homeinspectioninsider.com/common-safety-issues-found-during-home-inspections/>. Inspection industry media.

(S6) <https://icaschool.com/2019/12/16/the-five-most-common-defects-found-during-home-inspections/>. Inspection company.

(S7) <https://www.nachi.org/ten-problems-hhenews.htm>. Home inspectors' trade association.

(S8) <https://www.brickunderground.com/blog/2013/08/new-construction-is-back-so-are-their-construction-problems>. Real estate media, not clear any industry ties.

2.4 What does the environment say about THs?

This section studies the per-person water/waste/power/other impact versus DU size.

2.4.1 Water

	gal/day/person in TH, anecdotal	gal/day/person in H, US EPA data	% reduction
Total water (I1, I2, I3, I4, I6, I7)	5-20	60-100	67-95



Uses reported in via Water Research Foundation study as toilet 24%, shower 20%, faucet 20%, washing machine 16%, leaks 13%, bath 3%, dishwasher 2% (17).

In other words, >50% of demand on potable water infrastructure could be eliminated by separating streams for potable and non-potable use, not currently permitted, see sections 3.3-3.4 for discussion.

Water-efficient amenities for THs, generally also applicable to Hs, included, among others: kitchen sink, bathroom sink, tankless water heater, ventless washer/dryer combo, water meter, composting/incinerating toilet, low-flush toilet, low-volume shower head, wash water to toilet diversion (11, 13).

Rainwater collection capacity (gal) = roof single-slope area (sqft) x rainfall depth (in) x 0.623 according to one source, with consumption level of 15 gal/day requiring 0.13 in/day rain (16). Environment Canada data for Saltspring (1981-2010) meet this without storage for the months October-March; on average through the year, meet 80% of this without storage, which means that with storage in principle it can be met (112).

The need for water conservation is expressed by OCP A.4.1.4, A.5.1.6, A.5.2.14, A.6.2.21, B.2.2.2.3, B.2.3.1.5, B.6.2.1.8, C.3.2.1.1, C.3.2.1.14, C.3.2.2.8, C.4.2.1.1 and BCBC FS F98-99.

### *2.4.2 Waste from TH construction*

I haven't yet found enough data to do a meta-analysis.

Data from National Association of Home Builders cited 8000 lb waste per new 2000 sqft house. A single-TH anecdotal example of 400 lb was found (16).

Though this has no statistical power, I believe there is significant ideas-value in showing this photo of the waste generated from the construction of a typical TH waterproof shell including subfloor, walls (framing, membrane, rainscreen, doors, windows), roof (framing, membrane, roofing, skylights), excluding siding, electrical, plumbing, insulation, vapour barrier, wall finishing, heating/ventilation, flooring, partitions, cabinetry, appliances, etc. Volumes not weights, from near to far: 8 ft<sup>3</sup> burnables (wood, cardboard, paper), 6 ft<sup>3</sup> recyclables (metal, hard plastic, soft plastic), 2 ft<sup>3</sup> landfill. Petrochemicals consumption <0.1% by mass though some hidden in materials transportation chain. Volatile organic compound (VOC), heavy metal and silicate containing products consumption <0.01% by mass, though some VOCs hidden in plywood

manufacture. Water consumption 0L. Power consumption approximately 2hrs/day active tool time, maximum tool consumption 1.8kW, maximum power 32.4kWh, current tariff 0.161254/kWh, total cost \$5.25. From teaching near Halifax NS, photo waivers obtained from participants.

<https://www.nspower.ca/about-us/electricity/rates-tariffs/domestic-service-tariff#:~:text=16.215%20%C2%A2%20per%20kilowatt%20hour>



THs eliminate the need for foundation excavation, with possible disturbance of FN sites; on-grid units may still require dug in power, water and waste lines.

The need for waste reduction is consistent with OCP A.4.1.4d, A.5.1.6, A.5.2.1.4, A.6.1.5, A.8.2, B.2.3.1.5, B.8.1.1.2, C.3.2.1.1, and BCBC FS F41, 43, 96, 99.

### *2.4.3 Waste from TH living*

I haven't yet found broad enough data here. Anecdotal data from my customers suggests >80% reduction in per-person trash and recyclables.

In principle, 99.8% of toxics volume and treatment demand/cost/liability can be safely/affordably reduced by grey-/blackwater separation with composting.

*Tiny Homes report ~ Maïkan Bordeleau for HAPTF*

This in turn maximizes the potential for water conservation by greywater recycling. The economic savings are well studied (I18). Greywater output in gal/day/person is in principle correlated to the above water consumption figures. Toilet output estimated as 16-20 gal/day/person, black solids output estimated as 0.13 kg at 4.0 kg/gal. (I13, I15, I16).

In one cross-cultural agronomy survey, wastewater composting and crop rotation are identified as requirements of being able to continuously inhabit fixed land without dependence on resources (food, waste processing, etc). (I17)

In keeping with OCP B.2.3.1.3 on reduced dependence on private cars and C.2.1.1.1 on containing sprawl, siting a TH village near transit would ease commuter pollution and congestion.

Carbon emissions from a TH reported by one source as 560 lb/TH for heating, 290 lb/TH for cooling vs 8000 and 4000 respectively for H, not per person. (I6)

#### 2.4.4 Power

	kWh/day/person in TH, anecdotal	kWh/day/person in H, US EIA data	% reduction
Total power (I6, I8, I9)	800-900	10800-13000	92-94

Additional verifiable data are needed.

A study of maximizing energy efficiency of TH design, compared to homes not specifically designed for energy efficiency, found 88% reduction in energy use. (I10)

Comment has been made that many RV/TH pads don't provide 240V service required for some appliances (ovens, dryers, etc). (I6)

The OCP supports renewable energy sources and energy conservation by A.6.1.3, A.6.1.5, B.2.3.1.5, C.5.1.1.3, with conservation addressed by BCBC FS F95, 96, 99, 100.

#### References:

- (I1) [https://www.tinyhousebasics.com/tiny\\_house\\_water\\_usage/](https://www.tinyhousebasics.com/tiny_house_water_usage/). Single tiny home builder/blogger.
- (I2) <https://earthmorning.org/2017/03/22/water-usage-in-the-tiny-house/>. Single tiny home builder/blogger.
- (I3) <https://tinyhousebuild.com/intro-to-tiny-house-plumbing/>. Tiny home building company.
- (I4) <https://thetinylife.com/tiny-house-water/>. Single tiny home builder/blogger.

*Tiny Homes report ~ Maïkan Bordeleau for HAPTF*

- (15) <https://www.tinyhomebuilders.com/help/tiny-house-utilities>. Tiny home building company.
- (16) <https://storymaps.arcgis.com/stories/94ea9e75c4a3446ebbf08bd69379b8ab>. Political ecology student thesis, not clear if undergraduate or graduate.
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- (18) <https://waterwisegroup.com/greywater-education/tiny-houses-greywater-systems/>. Greywater systems company.
- (19) <https://tinyhouseblog.com/tiny-house/how-to-make-your-tiny-home-even-more-sustainable/>. Tiny home blogger.
- (110) <https://meridian.allenpress.com/jgb/article-abstract/16/4/111/476457/ENERGY-AND-WATER-PERFORMANCE-OF-AN-OFF-GRID-TINY?redirectedFrom=fulltext>. Journal of Green Building article on a single pilot ecological tiny home.
- (111) <https://www.bchousing.org/research-centre/library/housing-forms-designs/tiny-homes>, page 34. Provincial government agency.
- (112) [https://climate.weather.gc.ca/climate\\_normals/results\\_1981\\_2010\\_e.html?searchType=stnName&xtStationName=saltspring&searchMethod=contains&txtCentralLatMin=0&txtCentralLatSec=0&txtCentralLongMin=0&txtCentralLongSec=0&stnID=93&dispBack=0](https://climate.weather.gc.ca/climate_normals/results_1981_2010_e.html?searchType=stnName&xtStationName=saltspring&searchMethod=contains&txtCentralLatMin=0&txtCentralLatSec=0&txtCentralLongMin=0&txtCentralLongSec=0&stnID=93&dispBack=0). Federal government ministry.
- (113) <https://www.mcgill.ca/waterislife/waterathome/how-much-are-we-using>, <https://www.waterrf.org/research/projects/residential-end-uses-water-version-2>. Residential water uses by application, academic and non-profit metadata.
- (114) <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/residential-water-use.html>. Residential water consumption amount, federal governmental data.
- (115) [https://www.researchgate.net/publication/254226069\\_Costs\\_for\\_water\\_supply\\_treatment\\_end-use\\_and\\_reclamation](https://www.researchgate.net/publication/254226069_Costs_for_water_supply_treatment_end-use_and_reclamation). Cost of potable water supply and wastewater treatment, academic study example.
- (116) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4500995>, [https://www.eawag.ch/fileadmin/Domain1/Abteilungen/sandec/publikationen/EWM/FS\\_Quantification\\_Characterisation/synthetic\\_human\\_faeces.pdf](https://www.eawag.ch/fileadmin/Domain1/Abteilungen/sandec/publikationen/EWM/FS_Quantification_Characterisation/synthetic_human_faeces.pdf). Blackwater output, academic study example.
- (117) <https://www.gutenberg.org/ebooks/5350>. Academic book by federal government researcher.
- (118) [https://wedocs.unep.org/bitstream/handle/20.500.11822/7465/-Economic\\_Valuation\\_of\\_Wastewater\\_The\\_Cost\\_of\\_Action\\_and\\_the\\_Cost\\_of\\_No\\_Action-2015Wastewater\\_Evaluation\\_Report\\_Mail.pdf?sequence=3&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/7465/-Economic_Valuation_of_Wastewater_The_Cost_of_Action_and_the_Cost_of_No_Action-2015Wastewater_Evaluation_Report_Mail.pdf?sequence=3&isAllowed=y).
- (119) <https://blog.constellation.com/2017/08/21/what-is-tiny-house-living/>. Energy supply contractor.

## *Part 3: Jurisdiction and pathways*

This breakdown of what is who's jurisdiction is based on my conversations with regulators, elected officials, and technicians, summarized in Appendix A. Care has been taken but there may be errors which are my responsibility, not theirs. Apologies for any errors, please bring them to my attention, and I will correct them.

### *3.1 Building Code*

Building code application is mainly CRD's jurisdiction, with provincial and federal oversight.

The BCBC exists in part to help make sure buildings are built safe for owners, dwellers, users, neighbours, and community. Government oversees the credentialing of building designers, builders and allied trades (mostly BCHLCS), the permitting of construction, and its inspection (mostly CRD).

It covers all buildings on foundation, from 1-room wood cabins to houses to concrete apartment towers on the residential side, to commercial, industrial and public assembly (e.g. stadium) buildings. The following occupancy groups are given in BCBC Division A 1.3.3.2:

- A, assembly
- B, care/treatment/detention
- C, residential
- D, business/personal services
- E, mercantile (retail)
- F1, high hazard industrial
- F2, medium hazard industrial
- F3, low hazard industrial

Manufactured/mobile homes (MHs, houses on towable wheelless frame), recreational vehicles (RVs, houses with drive train) and THs (houses on towable wheeled trailer) are not subject to the BCBC. MH and RV building quality are covered by CSA codes A277 and Z240 respectively. RV and TH mobile trains are covered by Transport Canada (TC) and Insurance Corporation of British Columbia (ICBC) codes. What remains to be covered is the building quality portion of THs.

Solutions that have come up so far for Saltspring in my conversations with all of the authorities named in Part 1 of this paper are:

- a) subject THs to the BCBC
- b) create simplified provisions for THs within the BCBC (as alternative solutions, each linked to an Objective and a Functional Statement)
- c) create a simplified building code for THs, based on the BCBC
- d) subject THs to CSA A277

A subjective, qualitative analysis of the BCBC was done to assess solutions a) and b). Again this is a starting point and I defer to BCBC experts. Solution c) is addressed in Part 4. Solution d) is addressed in Part 6.

	BCBC section applies easily as-is to THs	BCBC section not relevant to THs	BCBC section could have an alternate equivalent for THs
Estimated % of BCBC by # of pages	65-80%	15-30%	0-5%

Examples of sections not relevant to THs are given here. Note that Division B Part 2 is reserved.

Section	Comments
Division A Part 1 1.1.1.1e additions to buildings 1.1.1.1l building relocation 1.1.1.1o heritage buildings 1.3.3.2b assembly, care, detention, industrial etc use 1.3.3.2c buildings over 600 m <sup>2</sup> or 3 storeys 1.3.3.3b business and personal services 1.3.3.3c mercantile 1.3.3.3d industrial 1.3.3.4 fire separation  Notes to Division A Part 1 sloping site, farm building, public corridor, service room, storage garage, suite, treatment facility	relocation from foundation           THs are 1-room, stand-alone
Division A Part 2 2.2.1.1 OS2.6 collapse of the excavation 2.2.1.1 OH3 noise from adjacent spaces in the building 2.2.1.1 OP3 adjacent buildings fire 2.2.1.1 OP4 adjacent buildings structural damage	
Division A Part 3 3.2.1.1 F60 control of water pressure on and in the ground	
Division B Part 1	
Division B Part 2 - reserved	
Division B Part 3 3.1.2.1 groups A, B, D, E, F non-residential occupancies 3.1.2.3 arenas 3.1.2.4 police stations	

<p>3.1.2.6 assembly occupancy  3.1.2.7 storage of combustible fibres  3.1.2.8 daycares  3.1.3 multiple occupancy  3.1.4.2(2) walk-in freezer or cooler  3.1.4.4 non-metallic raceways  3.1.4.6 heavy timber construction alternative  3.1.4.7 heavy timber construction</p> <p>3.1.5.7 factory-assembled panels  3.1.5.11 combustible stairs in dwelling units  3.1.5.16 combustible partition elements  3.1.5.17 storage lockers  3.1.5.18 combustible ducts  3.1.5.22 elevators  3.1.5.23 non-metallic raceways  3.1.6 tents and air-supported structures  3.1.8 fire separations and closures  3.1.9 penetrations in fire separations  3.1.10 firewalls  3.1.11 fire blocks in concealed spaces  3.1.13.6 corridors  3.1.13.7 high buildings  3.1.13.9 underground walkways  3.1.13.10 exterior exit passageway  3.1.13.11 elevators  3.1.6.1 fabric canopies and marquees  3.1.17 occupant load for all but residential occupancies</p> <p>3.2.1.1 multi-storey construction  3.2.1.2 storage garage  3.2.1.3 roof considered as a wall  3.2.1.4 floor over basement  3.2.1.5 fire containment in basement  3.2.1.6 mezzanine  3.2.2.3 non-1-room buildings  3.2.2.4-8 multiple major occupancies  3.2.2.9 crawl spaces  3.2.2.11 balconies  3.2.2.12 exterior passageways  3.2.2.14 rooftop enclosure  3.2.2.15 storeys below ground  3.2.2.16 heavy timber roof  3.2.2.17 arena  3.2.2.18 automatic sprinkler system required  3.2.2.19 impeded egress zones  3.2.2.20-52 and 54-90 non-residential occupancies, multi-storey residential occupancies, non-combustible residential occupancies  3.2.3.1 limiting distance and area of unprotected openings  3.2.3.3 wall enclosing attic or roof space  3.2.3.4 party wall  3.2.3.6 combustible projection  3.2.3.14 wall exposed to another wall  3.2.3.15 wall exposed to adjoining roof  3.2.3.18 covered vehicular passageway</p>	<p>THs frames use dimensional lumber/steel</p> <p>THs have no adjacent area for fire to spread to</p>
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<p>3.2.3.19 walkway between buildings          3.2.3.20 underground walkway          3.2.3.21 storage and process equipment          3.2.3.22 service lines under building          3.2.4.1-19 and 21-22 fire alarm and detection systems except stand-alone smoke alarm          3.2.5.2 basements          3.2.5.8-11 multi-storey buildings          3.2.5.12-15 sprinkler systems          3.2.6 high buildings          3.2.7.3-6 and 8-9 emergency lighting and power          3.2.7.7 engine/turbine gas shutoff          3.2.8 mezzanines and openings through floor assemblies          3.2.9 integrated fire protection and life safety systems          3.3.1.4 public corridor separations          3.3.1.9 corridors          3.1.1.10 aisles          3.1.1.15 exterior passageways          3.3.1.21 janitor rooms          3.3.1.22 common laundry rooms          3.3.1.24 signs in service spaces          3.3.1.25 welding and cutting          3.3.2 assembly occupancy          3.3.3 care, treatment or detention occupancies          3.3.4.3 storage rooms          3.3.4.4(2-5) multi-storey buildings          3.3.4.5 public corridor          3.3.5 industrial occupancy          3.3.6 hazardous areas          3.4.1.7 slide escapes          3.4.2.2 mezzanines          3.4.3.2 exits for non-single-room dwellings          3.4.4.2 ladder exits          3.4.4.3 exterior passageways          3.4.5 exit signs          3.4.6.15 revolving doors          3.4.6.17 bank and mercantile floor areas          3.4.6.19 floor numbering          3.4.7 fire escapes          3.5 vertical transportation          3.6 service facilities          3.7.3 medical gas piping systems          3.8.3 buildings required to be accessible          3.8.5 adaptable dwelling units</p>	<p>can be applied voluntarily to THs</p>
<p><b>Division B Part 4</b>          4.1.1.3(4) falsework, scaffolding and formwork          4.1.5 loads, provisions other than for single-room residential building          4.1.7 wind load, most provisions          4.1.8 earthquake load, most provisions and wall framing types</p>	<p>THs are generally not dynamically sensitive, complex-rooved, etc. THs are buffered by suspension/tires</p>



<p>4.2 foundations  4.3.2 masonry  4.3.3 concrete  4.4.1 air-supported structures  4.4.2 parking structures</p>	
<p><b>Division B Part 5</b>  5.1.4.1(4d) protection from ground moisture  5.7.1.2 protection from ground moisture  5.7.3.4 dampproofing in buildings connected to ground</p>	
<p><b>Division B Part 6</b>  6.2.1.7 asbestos in HVAC systems</p> <p>6.2.3 solid fuel storage  6.3.1.2 crawl spaces and attic or roof spaces  6.3.1.3 non-single-room residential buildings  6.3.1.4 storage garages  6.3.1.7 commercial cooking equipment  6.3.2 air duct systems  6.3.3.2 masonry or concrete chimneys  6.3.4 ventilation for laboratories  6.6 refrigeration and cooling systems  6.7.2 storage bins  6.8 equipment access  6.9.1.3 commercial cooking equipment  6.9.2 dampers and ductwork</p>	<p>THs generally have no HVAC system</p>
<p><b>Division B Part 7</b></p>	
<p><b>Division B Part 8</b>  8.2.2 excavation  8.2.3 use of streets or public property  8.2.4 vehicular traffic  8.2.5.4 chutes for waste material</p>	
<p><b>Division B Part 9</b>  9.3.1 concrete  9.3.2.9 termite and decay protection</p> <p>9.4.4 foundation conditions  9.5.4 hallways  9.5.5.2 doorways to public water-closet rooms  9.5.5.3 doorways to washrooms  9.8.1.2 stairs, ramps, landings, handrails and guards in garages  9.8.1.4 escalators and moving walkways  9.8.6 landings  9.8.8.4 guards for floors and ramps in garages  9.8.9.2 exterior concrete stairs  9.8.10 cantilevered precast concrete steps  9.9.4.7 stairways in 2 storey, group D or E buildings  9.9.5.2 occupancies in corridors  9.9.5.3 obstructions in public corridors  9.9.5.8 service rooms  9.9.6.5 direction of door swing</p>	<p>Portion of requirements that concerns lumber close to ground</p> <p>Off a hallway</p> <p>Applies to corridors, single dwelling units (DUs) excluded</p>

<p>9.9.7.2 means of egress from suites  9.9.7.3 dead-end corridors  9.9.7.4 number and spacing of egress doors  9.9.8.5 exiting through a lobby  9.9.8.6 mezzanine means of egress  9.9.9.3 shared egress facilities  9.9.11 signs  9.9.12 lighting  9.10.1.3 items under part 3 jurisdiction  9.10.1.4 items under part 6 jurisdiction</p> <p>9.10.2.2 custodial, convalescent and residential care homes  9.10.2.3 group A, division 2, low occupant load  9.10.2.4 major occupancies above other major occupancies  9.10.2.5 buildings containing more than one major occupancy  9.10.4 building size determination  9.10.8.2 fire-resistance ratings in sprinklered buildings  9.10.8.5 service rooms  9.10.8.6 mezzanines  9.10.8.7 roofs supporting an occupancy  9.10.8.8 floors of exterior passageways  9.10.8.9 crawl spaces  9.10.9 fire separations between rooms and spaces within buildings  9.10.10 service rooms  9.10.13.15 doors between garages and dwelling units  9.10.15 spatial separation between houses  9.10.17.4 exterior exit passageways  9.10.17.5 walls in public corridors  9.10.17.7 corridors containing an occupancy  9.10.18 alarm and detection systems  9.10.20.2 access to basements  9.10.21 fire protection for construction camps  9.11.1 protection from airborne noise</p> <p>9.12 excavation  9.13 dampproofing, waterproofing and soil gas control  9.14 drainage  9.15 footings and foundations  9.16 floors-on-ground  9.17 columns  9.18 crawl spaces  9.20 masonry and insulating concrete form walls  9.21 masonry and concrete chimneys and flues  9.22 fireplaces  9.23.6 anchorages  9.23.7 sill plates  9.26.4.4 intersection of shingle roofs and masonry  9.26.4.6 intersection of built-up roofs and masonry  9.26.6 underlay beneath shingles</p> <p>9.26.7 asphalt shingles on slopes of 1 in 3 or greater  9.26.8 asphalt shingles on slopes of less than 1 in 3  9.26.11 built-up roofs</p>	<p>Single DU excluded</p> <p>Single DU excluded  DU excluded  Tents, basements, etc  Kitchens with commercial equipment</p> <p>Mezzanines, garages, etc.</p> <p>DU excluded</p> <p>10 occupants or more</p> <p>Building with non-DU portion</p> <p>Frame to foundation</p> <p>Weight/road-stability of asphalt shingles is prohibitive in THs</p>
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<p>9.26.12 selvage roofing  9.26.14 glass-reinforced polyester roofing  9.26.15 hot applied rubberized asphalt roofing  9.26.16 polyvinyl chloride sheet roofing  9.26.17 concrete roof tiles  9.28 stucco  9.29.4 plastering  9.31.2.2 corrosion protection</p> <p>9.32.3.7 heated crawl space ventilation  9.33.6 air duct systems  9.34.2.4 basements  9.34.2.5 storage rooms  9.34.2.6 garages and carports  9.34.2.7 public and service areas  9.34.3 emergency lighting  9.35 garages and carports  9.36.2.8 thermal characteristics of building assemblies below-grade or in contact with the ground  9.36.7 secondary suites  Notes to division B part 9 for cement, soils, foundations, combination rooms, basements, window wells, commercial cooking equipment, mezzanines, garages, adjoining constructions, soil gas, ground, concrete, footings, columns, attics, masonry, foundations, ducts, public corridors,</p>	<p>Metal pipes in contact with cinders/corrosives</p> <p>DU excluded</p>
<b>Division B Part 10</b>	
<b>Division B Appendix C</b>	
<p><b>Division B Appendix D</b>  D-2.1 masonry and concrete walls  D-2.2 reinforced and prestressed concrete floor and roof slabs  D-2.4 solid wood walls, floors and roofs  D-2.5 solid plaster partitions  D-2.6 protected steel columns  D-2.7 individually protected steel beams  D-2.8 reinforced concrete columns  D-2.9 reinforced concrete beams  D-2.10 prestressed concrete beams</p>	
<b>Division C Part 1</b>	
<p><b>Division C Part 2</b>  2.2.4.6 foundation drawings</p>	

Examples of sections that could have an alternative solution, applying that term and spirit used by the BCBC in Division C 2.3, to THs, are:

Section	Comments
Division A Part 2 2.2.1.1 OE1 energy efficiency and non-excessive water use	given >>60% per person reduction of energy and water use by people living in THs vs houses, THs can be allowed up to at least 60% less efficient design than code and still produce net positive environmental protection
Division A Part 3 3.2.1.1 F100 limit waste energy	See 2.2.1.1 OE1
Division B Part 3 3.1.5.3 combustible roofing  3.4.2.4 least distance between exits	THs prefer lightweight roofing such as metal or fiberglass, could be required not to have shingles or other flammables without significant impact to owner or renter THs can have multiple doorways as required by code, distance between them generally less than provided for by code, with no added danger
Division B Part 4 4.1.1.4-5 structural drawings and related documents by registered professional	TH is much simpler and lower liability than larger/more complex dwellings, safety could be assured by alternate means, see comments below table
Division B Part 9 9.5.3 ceiling heights  9.8.2.2 height over stairs  9.19.2 access to roof or attic from within  9.26.3 slope of roofed surfaces  9.36.2.6 thermal characteristics of above-ground opaque building assemblies 9.36.2.7 thermal characteristics of fenestration, doors and skylights 9.36.2.9 airtightness  9.36.6 energy step code	TH maximum traileered height of 13'6" without permit limits head-room under loft to ~6'4" for tallest foreseeable occupant, ~3'6" in loft allowing storage or bed where occupant can sit up but not stand. This can easily be made safe and allowed See comment to 9.5.3, loft height limitation implies limited height over stairs that can still be allowed as safe Single-storey TH roof easy to access from outside Profiled metal roofing required at 1:4 or steeper, TH headroom requirements imply need for 1:12 or 2:12 both of which can easily be leak-free See comment to 2.2.1.1 OE1 See comment to 2.2.1.1 OE1 See comment to 2.2.1.1 OE1. Lack of breathability can be a health liability See comment to 2.2.1.1 OE1

<b>Division B Part 10</b> 10.2 energy efficiency	See comment to 2.2.1.1 OE1. ANSI 90.1 doesn't apply, leaving NECB or step code as options. Modification of criteria from per m <sup>2</sup> to per person could accommodate the reasoning in comment to 2.2.1.1 OE1
<b>Division C Part 2</b> 2.2 administration involving registered professionals 2.3 alternative solutions	See comments to 4.1.1.4-5

### 3.2 Land use

Land use is mainly IT's jurisdiction for non-FN lands.

THs can be lived in via a Temporary Use Permit (TUP) for 2 years, twice-renewable, in many zones on Saltspring.

THs may or may not be approvable as ADUs without an OCP amendment, depending on current land use designation. Actions requiring OCP review must allow time for FN collaboration. Current process is via Indian Act band councils. Final approval rests with the BC Ministry of Housing. Process can be costly/length if often successful. TH permission as ADUs is not included in proposed IT Bylaw 530.

A TH village may or may not require the IT create a new zoning designation by OCP amendment, depending on the building uses. It would have to be close to a public transit route.

The closest existing designation may be MH park R-3(a), used at Brinkworthy Place. The nearest ecovillage type designation found was R-4 in the Cowichan Valley Regional District (CVRD), applied to O.U.R. Ecovillage. Dragonfly Commons may be more representative of a micro-home (on foundation) village.

The understanding I received is that THs would not add to the liability that Hs in general represent to the IT.

FN consultation is also imperative for excavation in a micro-home village setting.

Mayne Island has recently approved a flexible housing model allowing 1-2 ADUs on land with a house if the total area used is within allowance.

<https://webfiles.islandstrust.bc.ca/islands/local-trust-areas/mayne/current-projects/Housing%20Review/2.%20Staff%20Reports/Staff%20Report%20-%202021-09-27.pdf>

### *3.3 Potable water*

THs could be approved (IH, CRD, local water districts, and IT jurisdiction) subject to the same requirements as for Hs. The IT's jurisdiction is only when there is a restricted use for year-round residence via a housing agreement, depending on property size and intended use.

<https://www.crd.bc.ca/service/drinking-water/billing-accounts/information-by-area>

IH requires availability of 220 L/person/day for multi-family developments. In a subdivision situation, IT requires 1600 L/house/day and 1200 L/suite/day.

Given THs' >65% per person reduction in potable water use to levels significantly below the average daily use requirement, they may be approvable in some sites where a H would not due to water issues. Inclusion of rainwater catchment could further reduce the need. Guidelines are at:

[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/dwog\\_part\\_b\\_-\\_14\\_rainwater\\_harvested\\_for\\_potable\\_use.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/dwog_part_b_-_14_rainwater_harvested_for_potable_use.pdf)

Provision for rainwater in a single-family setting can be made, again given the use of THs off-grid. CRD requires engineer approval if it is to be used for potable water. Multi-family rainwater systems (e.g. for a TH village) are more complex to approve, with 5 BC ministries concerned, but theoretically possible.

[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/dwog\\_part\\_b\\_-\\_14\\_rainwater\\_harvested\\_for\\_potable\\_use.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/dwog_part_b_-_14_rainwater_harvested_for_potable_use.pdf)

### *3.4 Process water*

See 3.3.

Non-potable process water is not currently allowed by IH. It would reduce the waste of potable water on non-potable applications which are the majority, easing demand on treatment and delivery infrastructure as for example rainwater could be used for laundry, bathing and irrigation.

Guidelines for non-potable rainwater harvest from SSIWPA are:

[https://www.ssiwpa.org/wp-content/uploads/Public-Library/SSIWPA-Projects-Reports-and-Presentations/Communications-Materials/SSIWPA\\_rainwaterHarvesting\\_FinalSeptember2020\\_Web.pdf](https://www.ssiwpa.org/wp-content/uploads/Public-Library/SSIWPA-Projects-Reports-and-Presentations/Communications-Materials/SSIWPA_rainwaterHarvesting_FinalSeptember2020_Web.pdf)

### *3.5 Blackwater*

THs could be approved (IH and CRD jurisdiction) subject to the same requirements as for Hs. Multi-family systems have to conform to additional provisions of the Environmental Management Act, Municipal Wastewater Regulation.

<https://www.islandhealth.ca/learn-about-health/environment/sewerage-subdivision>

Given their >60% per person reduction in wastewater generation, THs may be approvable in some sites where a H would not due to septic issues. Inclusion of greywater/blackwater separation could further reduce need/liability.

Greywater-blackwater separation and blackwater composting can be acceptable via an ROWP/P.Eng-approved system depending on the soil situation and other factors. This again would facilitate providing housing off-grid. Composting toilets have sometimes been approved as an alternative solution under BCBC.

### *3.6 Greywater*

See 3.5.

Recycling of greywater (IH jurisdiction) could further reduce demand on water allotment and septic, ensuring greater water supply for farming and so compound island autonomy/sustainability.

It has been studied by the CRD:

[https://www.crd.bc.ca/docs/default-source/water-pdf/november-2004---greywater-reuse-study-report-cover-page-\(novatec-consultants-inc-\).pdf](https://www.crd.bc.ca/docs/default-source/water-pdf/november-2004---greywater-reuse-study-report-cover-page-(novatec-consultants-inc-).pdf)

### *3.7 Power*

Power is BC Hydro's jurisdiction if grid-tied, CRD's for off-grid wiring.

THs could be approved subject to the same requirements as for houses. However, given their >80% per person reduction in power consumption, they

could safely function in on-grid sites where an additional house would not due to amperage issues, and off-grid sites where a house would be costly or difficult to supply on- or off-grid..

### *3.8 Design and construction*

Design and construction are largely BCHLCS's jurisdiction for worker credentials and CRD's for execution.

CRD Bylaw 3741 requires foundationed buildings to be built by an HPO-certified Licensed Residential Builder (LRB) or Owner Builder. LRB classes are developer, general contractor, and envelope renovator.

<https://www.bchousing.org/licensing-consumer-services/builder-licensing/become-licensed-residential-builder>

<https://www.bchousing.org/licensing-consumer-services/owner-builder/how-to-become-owner-builder>

Potential time and money saving solutions are discussed in Part 6.

### *3.9 Community standards and good-neighbourliness*

THs residents would follow the same IT standards for noise, cleanliness, etc as for house residents. Given the newness of THs for some people, TH residents can be strongly encouraged to hold above-average standards, to demonstrate the acceptability and normalcy of this housing form.

### *3.10 Landowner-renter agreement*

For THs as ADUs, a pad and services rental agreement is outside the jurisdiction of the BC Residential Tenancy Branch (RTB) and past practice of the IT. A voluntary, private agreement model could be followed to protect renter, owner, neighbours, and community.

For THs in a village setting, an IT Housing Agreement Bylaw could be developed as for existing clusters of homes (Atkins, Crofton, Rainbow, etc.).



## *Part 4: Starting framework for tiny home construction*

Section 3.1 comes from my discussion with regulators at all levels of government, asking, roughly speaking “how could THs not be approvable?” This section, Part 4, asks “how could THs be approvable” as safe/durable. It’s based on my experience as one non-licensed builder versed in the building, electrical and plumbing codes as well as ICBC and TC rules, having built 16 THs to date and being aware of the condition of Saltspring’s housing by renovating Hs here as well.

Everything in Part 4 should be read as “in my experience”, not claiming any authority beyond that. It should be checked/amended by other anecdotal and statistical evidence.

I tried to keep this section to-the-point by focussing on points not covered by the BCBC and points where THs follow the spirit but not the letter of a BCBC provision, so discussion is needed.

BCBC Functional Statements (see section 2.2 of this report) and Objectives to limit danger (immediately below, from Division A 2.2.1.1) must be cited in requesting approval of alternative solutions.

### **OS1 Fire Safety**

- 1.1 fire or explosion occurring
- 1.2 fire or explosion impacting areas beyond its point of origin
- 1.3 collapse of physical elements due to a fire or explosion
- 1.4 fire safety systems failing to function as expected
- 1.5 persons being delayed or impeded from moving to a safe place during a fire emergency

### **OS2 Structural Safety**

- 2.1 loads bearing on the building elements that exceed their loadbearing capacity
- 2.2 loads bearing on the building that exceed the loadbearing properties of the supporting medium
- 2.3 damage to or deterioration of building elements
- 2.4 vibration or deflection of building elements
- 2.5 instability of the building or part thereof
- 2.6 collapse of the excavation

### **OS3 Safety in Use**

- 3.1 tripping, slipping, falling, contact, drowning or collision
- 3.2 contact with hot surfaces or substances
- 3.3 contact with energized equipment
- 3.4 exposure to hazardous substances
- 3.5 exposure to high levels of sound from fire alarm systems
- 3.6 persons becoming trapped in confined spaces
- 3.7 persons being delayed in or impeded from moving to a safe place during an emergency

#### OS4 Resistance to Unwanted Entry

- 4.1 intruders being able to force their way through locked doors or windows
- 4.2 occupants being unable to identify potential intruders as such

#### OS5 Safety at Construction and Demolition Sites

- 5.1 objects projected onto public ways
- 5.2 vehicular accidents on public ways
- 5.3 damage to or obstruction of public ways
- 5.4 water accumulated in excavations
- 5.5 entry into the site
- 5.6 exposure to hazardous substances and activities
- 5.7 loads bearing on a covered way that exceed its loadbearing capacity
- 5.8 collapse of the excavation
- 5.9 persons being delayed in or impeded from moving to a safe place during an emergency

#### OH1 Indoor Conditions

- 1.1 inadequate indoor air quality
- 1.2 inadequate thermal comfort
- 1.3 contact with moisture

#### OH2 Sanitation

- 2.1 exposure to human or domestic waste
- 2.2 consumption of contaminated water
- 2.3 inadequate facilities for personal hygiene
- 2.4 contact with contaminated surfaces
- 2.5 contact with vermin and insects

#### OH3 Noise Protection

#### OH4 Vibration and Deflection Limitation

#### OH5 Hazardous Substances Containment

## OA1 Accessible Path of Travel

## OA2 Accessible Facilities

### OP1 Fire Protection of the Building

- 1.1 fire or explosion occurring
- 1.2 fire or explosion impacting areas beyond its point of origin
- 1.3 collapse of physical elements due to a fire or explosion
- 1.4 fire safety systems failing to function as expected

### OP2 Structural Sufficiency of the Building

- 2.1 loads bearing on the building elements that exceed their loadbearing capacity
- 2.2 loads bearing on the building that exceed the loadbearing properties of the supporting medium
- 2.3 damage to or deterioration of building elements
- 2.4 vibration or deflection of building elements
- 2.5 instability of the building or part thereof
- 2.6 instability or movement of the supporting medium

### OP3 Protection of Adjacent Buildings from Fire

### OP4 Protection of Adjacent Buildings from Structural Damage

## OE1 Energy Efficiency and Water Use

### *4.1 Trailer*

The easiest path to guaranteed safety is to require using a new or used ICBC/TC approved flat-deck trailer with suitable weight capacity. This covers structural integrity, functionality, brakes, breakaway switch, lighting, protrusions, hazardous material components and other parameters.

A width of 8'6" and height of 13'6" can be towed without additional permit and may be more suitable for people who have to move often or have a tighter budget. Living space width is typically 7'6".

A width of 10'6" and height of 14'6" can be towed with a single-use permit, currently low cost, and may be more suitable for people who own or long-term-lease land or a pad spot on land. The added 27% living space width (9'6") makes a big difference in quality of life and long-term adoption.

425lb per ft of length at 8'6" wide is adequate with a margin of safety, and fits the commonly available combinations of frame, leaf spring, axle, tire, jack and tow vehicle capacity. So for example 6800lb for a 16ft TH or 11900lb for a 28ft TH.

It's also possible to build a safe, durable TH from a used, inspection-passed travel trailer, however this may be more complicated regulation-wise.

#### *4.2 Anchorage, subfloor, and flooring*

Conventional-type construction of joists, insulation, sheathing, fasteners of appropriate length/gauge, with an underlay of sheathing plus sealant acting as a barrier to the exterior, is easy to secure to a trailer using RSS's/grade 8 lags. Anchorage to frame may require additional fastening points be welded to trailer frame. On balance, acceptable. Meets OP2, OS2, OE1, F20, 22, 80, 99.

Sound abatement from floors above or below is not an issue in THs.

Non-slip matting or similar should be provided at entries/exits as THs lack the interior mud room/vestibule possible in a house, and often don't have an exterior one either, though one could be acceptable as long as it meets the regular requirements for covered decks and is securely/reversibly fastened.

#### *4.3 Walls*

Conventional construction of studs/headers/headers, sheathing, membranes, rainscreen/siding, insulation, etc is easy to anchor to subfloor. Multi-stud corners should be used to resist racking strain caused by driving.

Use of 2x4s in place of BCBC-required 2x6s adds 4" (~5% for a 8'6" TH) living space width. Given Section 2.4.4 data on greatly reduced power demands of THs, this makes for minimal absolute (not %) loss of heat and comfort even with batt-type (~R3-3.5/inch) insulation. The builder could still use rigid-type insulation (~R6/inch) or solar heat gain calculation, to achieve BCBC-equivalent thermal performance, at significant added cost however as in the latter case the designer would have to be an engineer or architect with national credentials for energy auditing. 2x4 is compatible with the electrical and plumbing codes and was building code-compliant previously. Meets OS2, F20, 22, 80, 99.

Paneling with drywall in a moving vehicle may reveal cracks fairly quickly. Ok as finished surface for infrequent movers but not frequent ones. Wood paneling

overtop is durable and can be attractive. Given the generally one-room nature of a TH it could be discussed whether wood without drywall as a fire-spread measure could be acceptable, reducing labour and a material with significant health impact to installers and environmental impact even in a post-asbestos era.

Siding fastening has to be robust given road speeds e.g. coated screws rather than or in addition to nails, and minimum three-stud corners should be used for the same reason

#### *4.4 Roof*

Conventional construction of rafters/crossmembers, sheathing, membranes, insulation, air gap/venting, etc is easy.

Metal roofing is well suited to THs, has lifetime guarantee, low cost per lifespan, moderate environmental impact. Low slope skylights can be flashed leak-free as long as higher end tape (e.g. 3M 8067, other) and sealant (e.g. lifetime guarantee metal roofing sealant) are used and roofing screw gaskets are checked and replaced periodically if rubber rather than neoprene is used. I've found leaks common with bituminous tapes, which also have more toxic components. The ability to have low slope is important for headroom in a loft and maximum storage space elsewhere.

#### *4.5 Doors, windows, and exits*

Same construction as for conventional, again encourage higher quality flashing.

Similar to the discussion of 2x6s vs 2x4s for walls, 3-pane windows' increase in insulation value is small in proportion to the added cost. Given the minimal heat use of a TH, 2-pane is adequate for heat/mold/etc and could resume being to-code.

Similarly, THs can be allowed to have a greater % of wall space as windows than Hs. The added light and air-exchange is important for physical and mental health when living in a small space. The fire-prevention aspect of limiting window space can be met by siting THs at sufficient distance from other buildings.

My read of BCBC Division B 9.9.7.4, 9.9.8.2 is that only 1 exterior door is required in single-storey DU. However it's easy to include a 2nd one or patio/double door across the way from the 1st one, leading to a securely/removably fastened deck, which greatly improves quality of life by adding width while parked, less easily than an RV with a retractable bump-out, but acceptable especially for infrequent movers and provided the usual deck safety and other codes are respected.

#### *4.6 Wiring rough-in, AC and DC*

Same as for conventional. Encourage running an independent set of wires for solar/wind/tidal/microhydro-DC power so walls don't have to be opened up later, again given that THs may be more likely than Hs to be off-grid, even if TH is originally to be grid-tied.

On a property, TH functions like an outbuilding, with subpanel and self-contained electrical. The difference is instead of being hardwired to the main house or property electrical feed (e.g. via a 15/30A circuit), the property has a dedicated 15/30A wet location grade outlet/cover nearby, to-code hardwired to the main feed, and the TH has an RV-type plug that goes to the outlet from its subpanel.

#### *4.7 Plumbing rough-in*

Same indoors as for conventional.

Main potable feed from property via to-code-buried pipe, portion exposed to frost gets heat tape and insulation, to shutoff, to high-grade quick-connect either directly to frost-free hosebib to interior, or to tee to interior plus exterior HW-OD (whose outlet leads to a second hosebib). HW pressure relief required as usual for safety and HW drainage required to protect exterior unit in case of freeze. Heated/insulated cabinet can protect further. For off-grid sites, gas-fired on-demand (OD) units are common.

Inside, running pipes on wall surface rather than in walls makes it much easier to detect and repair leaks and bursts, reducing the risk of water damage (electrical hazard, mold, rot, etc.) which is a top home insurance risk. It requires a bit more care from the occupant but could be considered acceptable. This fulfills BCPC 2.13.2 and BCBC F82 on maintenance, BCBC OH1.3 on limiting moisture and OE1 on water conservation. To meet BCPC 2.3.5.5 pipe would be rigid (e.g. copper) or flexible (e.g. PEX) plus wood or other removable rigid cover;

supported (BCPC 2.3.4); and HW would be insulated to prevent heat loss and human contact with a hot surface, BCBC F31.

With greywater separation, sink(s) and tub/shower empty to conventional wastepipe exiting the TH to a shutoff to a holding tank (e.g. underneath the TH) with level sensor and corresponding meter/alarm inside the TH (as with an RV), to another shutoff with secure disconnect, to which when parked additional piping is connected to send the water to treatment/septic/sewer. In principle with a careful occupant not using the TH to travel long distances, the greywater tank may never be needed. If there is either no toilet or a dry/composting toilet, no blackwater pipe needed. If there is a flush toilet, wastepipe can exit TH to shutoff, to holding tank with sensor/meter/alarm, to shutoff with secure disconnect, to which when parked connection to septic/sewer is made. If grey-/blackwater are not separated, venting is same as for pure blackwater.

#### *4.8 Gasfitting and wood stoves*

Similar to conventional. Gas must have a high-quality connect/disconnect. Chimney must be flashed in a way that ceiling opening is easy to waterproof when chimney is removed for transport because of height restrictions.

This is where I believe hiring of a specialized professional gasfitter/WETT tech to inspect pre-operation is essential.

#### *4.9 Interior walls*

Similar to conventional. Bathrooms can be allowed to have a pocket door rather than swing door given the premium on swing space.

#### *4.10 Lofts*

Similar to conventional. Given the short span involved, 2x4 framing 16 OC integrated with wall studs, plus ply or wood paneled surface is safe in practice and acceptable. A loft is not considered a mezzanine, see for example Building Code Appeal Board Decision #1782.

<https://www2.gov.bc.ca/gov/content/industry/construction-industry/building-codes-standards/building-code-appeal-board/building-code-appeal-board-decisions/bcab-1782>

## 4.11 Cabinetry and furniture

Similar to conventional. Shelves with lips and RV-type locking drawers/doors are encouraged for frequent movers.

## Part 5: Starting framework for tiny home siting

### 5.1 On private land with no house

A landowner could be permitted to live in or rent out a TH on their land, without a H, as long as the necessary on- or off-grid services are present.

The number of THs could be limited to 1 (principal dwelling), 2 (principal + ADU), or multiple if a Mayne Island-style home-plate allowance was made for the main building's square footage to be distributed among a few smaller buildings, with the majority of land set aside in conservation, and setbacks/code provisions for building spacing/other requirements respected.

One person interviewed gave the following numbers: 350000\$ lot, requires 3 THs to achieve return of 4% allowing landowner to break even with inflation while providing housing.

Anecdotally, I've seen TH pad fees of 300-800\$/month on Saltspring, and believe 350-450\$/month, services included, is appropriate to a good long-term tenant who adds safety to the property.

### 5.2 On private land with house

A landowner could be permitted to rent out a TH on their land, with a H, as long as the necessary on- or off-grid services are present, if allowed by ADU bylaw at the IT level.

Comment was received that insurance to replacement value of H/TH should not be required as with townhouses/condos, as it can escalate premiums to a point it's not worth it for landowner to provide housing and TH renter/owner can't afford.



### 5.3 TH village

A TH village could be sited on private or public land. An appropriate zoning would have to be used or created. On public land FN consultation is especially important. Siting not in Ganges Village would respect NSSWD's water moratorium there.

2 wagon-wheel type models were studied:

- collection of autonomous THs with or without a central building for social/service (e.g. laundry) purposes
- collection of THs that are essential bedrooms/living spaces without services, plus a central building for social/service (e.g. cooking, bathing, laundry, waste sorting, etc) purposes

Limiting water/power/waste services to a central building would reduce cost of construction and ease permitting under existing rules. In that scenario residents wouldn't technically be allowed to keep fridge/microwave/etc type amenities in their THs.

In addition to ecovillage-type zoning (see section 3.2 above), a home-plate type zoning of 20% of land in buildings with 80% in conservation, was mentioned as a possibility by one person interviewed. Likewise linking an ecovillage to social enterprise e.g. farm/other activity that helps pay off land/buildings while compounding benefit to community.

## Part 6: Recommendations

The need for affordable housing is supported by:

- OCP sections A.4.6.3, A.5.2.20, B.2.2.2.3, B.3.3.1.5, B.5.2.2.3, B.5.4.2.3, B6.2.1.1, B.8.1.1.2
  - BC Ministry of Community Development, Ideas and Practical Advice for Land Use Decisions in BC Communities (see Part 1 above)
  - Canadian Charter of Rights and Freedoms, Article 7
- <https://laws-lois.justice.gc.ca/eng/const/page-12.html#:~:text=Guarantee%20of%20Rights%20and%20Freedoms&text=1%20The%20Canadian%20Charter%20of,a%20free%20and%20democratic%20society>

The compatibility of THs with the OCP is addressed:

- in general, by A.4.1.4, A.5.1.6, A.5.2.20, A.6.1.5, A.6.2.21, B.2.2.1, B.2.2.2, B.3.3.1.5
- in a TH village, by B.2.3.1.2, B.5.1.2.2, C.2.1.1.1

THs are a unique class of asset that allow people to enter the home ownership market and ratchet up their equity, in a context where a majority of Canadians are significantly indebted and would be unable to pay life necessities if income were cut off for 3 months, and nearly half of renters pay more than the recommended amount for sustainable survival. House affordability is at its lowest level in 30 years in Canada. 2019 data found Canada has the 3rd highest housing cost overburden rate (share of private tenants spending more than 40% of their income on rent) among the 37 Organisation for Economic Co-operation and Development (OECD) countries, generally among the world's wealthiest.

<https://www.canada.ca/en/financial-consumer-agency/programs/research/canadian-financial-capability-survey-2019.html>. Government of Canada data.

<https://www.theglobeandmail.com/globe-investor/personal-finance/household-finances/survey-finds-27-of-canadians-have-one-month-or-less-in-emergency-savings/article20465833/>.

Globe and Mail mass media.

<https://rates.ca/resources/44-percent-of-canadians-overspend-on-rent>. Rates.ca insurance industry media.

<https://www.bankofcanada.ca/rates/indicators/capacity-and-inflation-pressure/real-estate-market-definitions/>. Bank of Canada data.

<https://www.oecd.org/housing/data/affordable-housing-database/housing-conditions.htm>. OECD data.

From my limited data set, TH owners have been able to live in their units and either resell them for more than they paid/invested, on top of having saved rent (difference between room rent and pad fee) by living in them, or rent them out for income once they are able to rent a home, buy land, or otherwise scale up their home finances.

Because of their technical simplicity THs are among the fastest, most affordable, easiest to guarantee safe/durable, lowest environmental impact way to build and offer housing which is in turn affordable. This can help solve the housing crisis, help landowners pay their mortgages via TH rents (where they own the TH) and pad fees (where the renter brings their own TH), and further help landowners and the local economy by facilitating tourist accommodation in the case of a housing surplus.

The autonomy they provide is consistent with greater mental health, pride/dignity, etc. THs make it possible for people of lower incomes to be able to build or have built for them a custom home, ergonomic for their body and lifestyle, in a way often reserved for high income households. They facilitate on-site caregiving, security, groundskeeping, gardening/farming and other support to the main house owner/occupant, improving their quality of life and

*Tiny Homes report ~ Maïkan Bordeleau for HAPTF*

saving them money.

THs require no excavation or disruption of FN sites, no foundation with associated time/cost/ongoing risk of water damage. They eliminate the majority of residential consumption of water/power/waste/other infrastructure and environmental capacity. TH manufacture/operation allows the use and spread of human and environmental toxics (VOC, heavy metal, silicate, microplastic, etc) to be reduced to near-zero. THs can be above-average attractive to the point of being a tourist attraction. The technical expertise to site/build/service them on Saltspring can be exported to other communities for the benefit of our economy and others' housing crisis solution. The list goes on.

Existing data indicate that in terms of square footage, water, waste, power, construction waste/noise, etc, 1 TH  $\neq$  1 H but rather 1 TH  $\leq$  0.3 H for the purposes of density and environmental impact.

In principle, THs and Hs should be under the same burden of proof to demonstrate water and other resource conservation. The stakes are higher with Hs because of size and average number of occupants. Some grace could be given to existing/older Hs/THs. Incentive for them to upgrade could also be given, in the case where the initial capital cost is a challenge even if leads to savings. Essentially public or private actors would be encouraging conservation for the greater good.

There are risks if THs are sited, built or occupied unsafely. Permitted and inspected Hs also have risks that the insurance claim analysis (see section 2.2 above) indicates are greater per person, even with THs being less regulated and insurance not guaranteeing protection via claim approval in case of accident/deterioration/etc. Some risk can be limited by having standards for TH construction, voluntary or mandatory.

TH compliance with code could be incentive-driven/voluntary or disincentive-driven/mandatory. For example, there could be a mechanism for anyone wanting to build a TH to purchase the BCBC and write an automatically graded exam on simplified provisions that apply to THs, plus on land use under the relevant LUB, plus community standards of good-neighbourliness, upkeep, ecological conservation on par with what is required of houses. Alternately, there could be a mechanism for them to purchase a TH building/land use/community-values guide and write an exam. A voluntary inspection system

superior to house aftercare could be instituted, with the program paying for itself through user affordable application fees.

In either case a major incentive for compliance would be the likelihood of more landowners, and higher quality properties, willing to rent to them because of the assurance provided, favouring stability and wellness.

I believe the incentive approach better preserves the ability of residents to afford and build/have built a TH and in this way help solve the housing crisis, with spinoff benefit for community service and engagement. One government person interviewed went so far as to say the BCBC is an impediment to THs, not vice versa.

Factory-building of THs by solution d) (see section 3.1 above) would I believe defeat the purpose of keeping costs down and the technology democratically accessible, without again being a guarantee of safety after x number of years, so I don't recommend pursuing it.

There is a real risk of THs as a class of housing being gentrified, that is, made inaccessible for building, purchase or siting due to regulations increasing cost, delay or other obstacles such as through mandatory hiring of exclusive professionals. I strongly believe they can be just as safe if not safer, due to their newness and simplicity, than Hs when built by non-professionals, with affordable voluntary inspection of wiring, plumbing, gasfitting, heating, etc.

I see little practical/ethical reason why a BC'er/Canadian needing to build themselves a small one-storey home in one of the most unaffordable housing markets in the world should be forced to endure the delay/cost of hiring an elite professional required for, and more efficiently allocated to, say, a 5-storey concrete apartment tower with parking garage underneath, a fire hall, or a food processing facility. Certain administrative provisions (e.g. no personal offgrid appliance resembling a kitchen and allowing food to be preserved/reheated in a central-build-with-services model of TH village) can see their protective spirit misapplied in a way that is counter to common sense and chartered rights, in this case for example to eat when hungry.

We need not be reminded that this country denied women the right to own property and vote, and still has an Indian Act for people who aren't from India, and which among other things enacted the residential schools, claiming to do so in those people's interest, while truly doing so for self-interest.

*Tiny Homes report ~ Maïkan Bordeleau for HAPTF*

These and other people were good enough to do labour and provide conditions necessary for the successful development of the community, without owning a part of it, with basic security and upward mobility. With our current threat of ferries, schools, hospital/care, groceries, and other essential services weakening or being lost for lack of affordable worker housing, Saltspring is not that far away from becoming unsustainable.

Conversely, Saltspring can innovate a solution to a practical problem being felt across the country if extra hard here, namely the housing crisis, while gaining exportable expertise in green/affordable building technology plus sustainable land use/resource management.

FNs must be consulted, not by taking as a representative only one person or organization, especially one made/chosen by non-FN people. I'm being careful in what I say as this is a sensitive issue and it's not my place to speak on much of this; however I have collaborated with FNs for 10+ years on land/resource/health/cultural autonomy/wellbeing. Each community is complex. The elected council created by Canada and generally recognized by it, the provinces, and resource companies; traditional leadership; and band members subscribing to neither, whether they live on the Indian Act-created reserves or off; all need to be worked with.

The proof that the average person can safely build themselves a TH exists in the fact that thousands of ordinary people in BC already have, in fact it is how this land was settled, both by indigenous and non-indigenous people. If anything, today, the knowhow is more widespread and better tools/materials are more accessible than ever before. People must have the option to build a small/tiny home for themselves in a timely, affordable, accessible, environmentally responsible way. There will still be plenty large/small/tiny homes for professionals to earn a living from building.

The ability to do this specifically on a trailer that will function for decades, is also essential. Landowners and renters are always adapting to life circumstances, market prices, and other forces. For the renting population in particular THs afford a security they have never had to move safely and easily with all their possessions on short notice, whether for personal circumstances, land sale, natural disaster, or other reason, and to build equity while saving on rent mid-/long-term. This feeds a safe community and developing economy.

At 67%+ per-capita reduction in water, waste, power and other essentials consumptions, adding THs does not make a significant dent in Saltspring's environmental carrying capacity. It makes less of a dent than adding new houses which continues to be done and is also a chartered right and economic benefit. And if it became a trend for people to move from houses into THs, with the houses used for care facility/small business/etc, THs would actually rebuild Saltspring environmental reserves. Given that THs are an easier solution to off-grid sites, and safe/effective rainwater/solar/composting systems exist, even less system water and power can be used.

In the odd case where there is a severe problem with the building, it's easy to move leaving no environmental or visual impact, a standard superior to that applied to houses.

THs are popular with owners and renters, high- and low-income, residents and tourists, indigenous and non-indigenous, and the environment. They are a rare win-win-win with minor lose's.

It's crucial to respect the needs and concerns of all people on Saltspring. For example, THs could be allowed at a metered pace within existing allowances safeguarding community character and resources. Some people may not like THs and that's ok. Some people may not like large homes or boat homes. Some prefer shopping centres, some prefer small stores. And so on. It's about a resilient community and environment that will keep us healthy for the next seven generations, as the proverb says.

Thank you for your consideration of these facts and opinions, and any improvements to this beginning framework. Let's craft this together so that it comes in a good way for all here and potentially other communities.

### *Appendix A: Tiny home legislation and organizations*

This list is not exhaustive. For each section, listings are given in the order: BC, rest of Canada, USA. Other countries not surveyed.

#### *A.1 Municipalities and provinces studying or having approved THs as ADUs*

Cumberland BC

<https://cumberland.ca/wp-content/uploads/2017/02/2017-02-15-HAH-Committee-agenda.pdf>

*Tiny Homes report ~ Maïkan Bordeleau for HAPTF*

Fraser-Fort George BC

<https://www.rdffg.bc.ca/uploads/1564/Regional-Report-Issue19.pdf>

Nanaimo BC

<https://www.therecord.com/ts/news/canada/2022/02/07/tiny-houses-need-a-separate-building-code-resolution-says.html>

Squamish BC

<https://squamish.ca/business-and-development/home-land-and-property-development/tiny-homes/>

Vancouver BC

<https://canada-info.ca/en/vancouver-councillors-across-spectrum-support-tiny-homes-urgent-homelessness-fixes/>

Calgary AB

<https://www.calgary.ca/pda/pd/residential-building-and-development/tiny-homes.html>

Edmonton AB

<https://www.edmonton.ca/public-files/assets/document?path=PDF/TinyHomesInformationSheetDec122019.pdf>

Fredericton NB

<https://www.cbc.ca/news/canada/new-brunswick/12-neighbours-marcel-lebrun-tiny-homes-fredericton-affordable-housing-1.6174811>

Halifax NS

<https://www.shapeyourcityhalifax.ca/allowing-secondary-suites-as-a-permitted-use>

Kenora ON

<https://www.kenoraminerandnews.com/news/local-news/kacl-experiments-with-tiny-home-technology>

Kingston ON

[https://www.cityofkingston.ca/apps/councilpriorities/housing\\_secondarysuites.html](https://www.cityofkingston.ca/apps/councilpriorities/housing_secondarysuites.html)

New Brunswick

<https://snbsc-planning.com/cct/non-traditional-building/>

## *A.2 TH villages planned, in progress, or completed*

Maple Ridge BC

<https://www.mapleridgenews.com/news/tiny-house-community-planned-in-maple-ridge/>,  
<https://www.mapleridge.ca/DocumentCenter/View/16309/October-3-2017-Rental-Housing-DGS-update-PDF>

Terrace BC

<https://tinyhousetalk.com/tiny-house-community-in-canada/>

Vernon BC/First Nations

<http://www.vernonfirstnationsfriendshipcentre.com/tiny-homes-project-update/>

Victoria BC

<https://victoriahomelessness.ca/tinyhomes/>, <https://aryze.ca/projects/tinyhomes>

Calgary AB

<https://www.intelligentliving.co/canada-now-has-village-tiny-homes-for-homeless-veterans/>

Fredericton NB

<https://globalnews.ca/news/8597882/n-b-tiny-home-community-settles-its-first-residents/>

*Tiny Homes report ~ Maïkan Bordeleau for HAPTF*

Halton-Mississauga-Dalton ON

<https://habitathm.ca/news-habitat-halton-mississauga-dufferin-announces-innovative-new-tiny-home-pilot/>

Keewatin ON

<https://www.facebook.com/pages/category/Local-business/Lake-of-the-Woods-Tiny-Home-Village-1560061014261695/>

Mont-Ham QC

<https://www.aupieddumontham.com/>

Okotoks AB

<https://www.cbc.ca/news/canada/calgary/small-homes-okotoks-community-first-in-canada-1.5155979>

Shawinigan QC

<https://www.domainelecampagnard.com/>

Toronto ON

[https://localwiki.org/toronto/Tiny\\_Town](https://localwiki.org/toronto/Tiny_Town)

Winnipeg MB

<https://winnipeg.ctvnews.ca/the-village-project-tiny-homes-complex-looks-to-shelter-homeless-people-downtown-1.5317659>

Austin TX

<https://mlf.org/community-first/>

Detroit MI

<https://casscommunity.org/tinyhomes/>

Lemon Cove CA

<https://lemoncovevillagervpark.com/>

Long Beach CA

<https://tinyhouseexpedition.com/resource-directory/>

Madison WI

<https://tinyhouseblog.com/humanitarian/madison-tiny-house-village-homeless/>

Mt Hood OR

<https://www.mthoodtinyhouse.com/>

Newfield NY

<https://www.secondwindcottages.org/>

Ogilvie MN

<https://www.thesanctuaryminnesota.com/>

Olympia WA

<http://www.quixotecommunities.org/>

Orlando FL

<http://www.orlandolakefrontth.com/>

Salida CO

<https://searchtinyhousevillages.com/villages/co-river-view-at-cleora/>

San Diego CA

<https://tinyhouseblock.com/>

Spur TX

<http://www.spurfreedom.org/how-to-move-to-spur/>



### *A.3 TH organizations*

Small Housing BC

<http://www.smallhousingbc.org/>

Tiny Homes Society

<https://www.tinyhomessociety.org/>

Tiny House Advocates of Vancouver Island

<https://thavi.ca/>

Tiny House Collective

<https://www.facebook.com/bctinyhousecollective/>

Homes for Heroes Foundation

<https://homesforheroesfoundation.ca/>

The Tiny Life

<https://thetinylife.com/canada-tiny-house-builders-guide/>

Tiny Home Alliance

<https://www.tinyhomealliance.ca/>

Tiny Homes in Canada

<https://tinyhomesincanada.ca/>

Tiny-House.ca

<https://bc.community.tiny-house.ca/en/>

Tiny House listings

<https://tinyhouselistingscanada.com/province/bc/>

American Tiny House Association

<https://americantinyhouseassociation.org/>

Small House Society

<https://smallhousesociety.net/>

Tiny Home Industry Association

<https://tinyhomeindustryassociation.org/>

Tiny House Alliance

<https://www.tinyhouseallianceusa.org/>

Tiny House Expedition

<https://tinyhouseexpedition.com/resource-directory/>

Tiny Society

<https://www.tinysociety.co/>

Tiny Town Association

<https://tinytownassociation.com/>

United Tiny House Association

<https://unitedtinyhouse.com/>

from *Country Living Magazine*



from *Nelson Tiny Homes*



*Tiny Homes report ~ Maïkan Bordeleau for HAPTF*

*Tiny home village, Mt Hood OR*



*Small home cluster, St. John's NL*



Salt Spring Island  
Housing Action Program Task Force  
**Summary of Recommendations**

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### **Recommendation**

The Salt Spring Island Local Trust receives this Housing Action Program Task Force (HAPTF) report dated August 30, 2022, reviews the diverse housing recommendations and posts them publicly on the Islands Trust website for community discussion.

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### **Purpose**

To provide the LTC with recommendations for diverse, affordable, and sustainable housing options for the Salt Spring Island Community and alleviate the strains of the housing crisis.

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### **Background**

Under the [Terms of Reference](#), the HAPTF is a citizen-led, staff-facilitated working group mandated to provide advice and recommendations to the LTC to help achieve better housing affordability, diversity in the types of housing options, and environmental sustainability as it relates to the locations, sizes, and designs of housing development. The HAPTF recognizes that the housing challenges on the island are impacting many aspects of community life, including access to essential services, viability for business, and a lack of diversity, equity, and inclusion. As the [National Housing Strategy Act](#) outlines, we recognize that adequate housing is essential to individual dignity and well-being and to building sustainable and inclusive communities. Moreover, we recognize adequate housing as a fundamental human right affirmed in [international law](#). Our goal is to support improved housing outcomes for residents of Salt Spring Island, particularly those in greatest need. Accordingly, we have identified five (5) core recommendations for consideration, which focus primarily on land use planning as the remit of the Islands Trust. In addition, the recommendations identify priorities and initiatives to further the community's housing objectives identified in the [Official Community Plan](#), which takes into account key

principles of a human rights-based approach to housing and the need to develop zoning that allows many different types of housing and accommodates a diverse population (p. 23). The recommendations have been identified based on a review of evidence and relevant reports, including but not limited to:

- [BC Housing 2021 Accessory Dwelling Units Case Studies.pdf](#)
- [CRD 2020 Housing Needs Assessment SSI.pdf](#)
- [IT 2003 Options for Affordable Housing.pdf](#)
- [IT 2005 Community Housing Background Report.pdf](#)
- [IT 2010 Community Housing Tool Kit.pdf](#)
- [IT 2010 Seniors Housing Strategy.pdf](#)
- [IT 2011 Affordable Housing Guide Final.pdf](#)
- [IT 2016 Community Housing Report.pdf](#)
- [IT 2019 Baseline Affordable Housing Report.pdf](#)
- [IT 2020 Housing Working Group Report.pdf](#)

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## Housing Recommendations

### 1. **Recommendation: Increase interagency collaboration and advocacy for affordable housing**

*Rationale: To promote a coordinated, whole-government approach to and advocacy for housing solutions.*

- 1.1. Consider establishing an interagency Housing Authority, whereby indigenous, provincial, territorial, and local governments (e.g., CRD, water districts) collaborate and work together on housing issues and identify the improvements each government agency can advance.
- 1.2. LTC should consider addressing and managing barriers to affordable housing strategies through partnerships with the government and civil society to support education and information campaigns about the benefits of affordable housing, improve community engagement, and mobilize community leaders. For example, see [Civida toolkits](#) on community engagement, public campaigns, and reducing community opposition.

- 1.3. Collaborative processes described in 1.1 and 1.2 should ensure the ongoing inclusion and engagement of civil society, stakeholders, vulnerable groups, and persons with lived experience of housing need, as well as those with lived experience of homelessness and persons who reflect the diversity of the Salt Spring community. Also, consider engaging persons who have expertise in human rights.
- 1.4. Better data and research: consider monitoring the implementation of housing strategies and pilot projects to assess their impact on persons who are members of vulnerable groups and with lived experience of housing need or homelessness. Further, monitor progress in meeting the housing objectives (i.e., diverse housing types)— and in achieving the desired outcomes (i.e., socio-economic diversity)— set out in the Official Community Plan and relevant housing strategies; and fund research on systemic housing issues, including barriers faced by persons with lived experience of housing need or homelessness, as recommended in the [National Housing Strategy Act](#).

**2. Recommendation: Support gentle and moderate density in appropriate areas**

*Rationale: to ensure the land use code better reflects the aspirations and values inscribed in our Official Community Plan, including supporting a diverse mix of housing types that foster a diverse population across the socioeconomic spectrum, including seniors, people with disabilities, workers, and those with low and median incomes. A [2022 housing survey of Salt Spring Island residents](#) conducted by the Islands Trust suggests that 84% of respondents approve of legalizing secondary suites in accessory dwellings, and 8% disagree that they should be legalized (figure 1).*

**Secondary suites should be permitted in an accessory structure**



Source: Salt Spring Islands Trust Housing Survey Phase I (2022) • Created with Datawrapper

Figure 1. Survey of housing needs on Salt Spring Island

- 2.1. Consider allowing secondary suites and accessory dwelling units (ADUs) in all residential zones if provided for long-term rental or family use (not short-term rental).
- 2.2. Consider reducing the required lot size for building a detached accessory dwelling unit. However, other existing zoning restraints remain (i.e., wastewater and potable water requirements).
  - 2.2.1. Mandate that where water concerns exist, an alternative supply must be used.
  - 2.2.2. Recommend that wastewater systems be monitored.
- 2.3. Consider updating the potable water requirement to align with the Island Health Multi-family building requirement of approximately 220 L per person per day.
- 2.4. Consider enabling the strata conversion of detached accessory dwelling units based on specific conditions identified in the [BC Housing ADU Report](#) as a potentially effective *practice of interest* for small to medium-sized BC communities.

### **3. Recommendation: Enable alternative housing types**

*Rationale: Encourage alternative types of land tenure to reduce land costs and respond to demands for alternatives to traditional housing from the community.*

- 3.1. Consider enabling low-cost, alternative housing types, such as tiny homes, both stationary and mobile. As recommended in the [Southern Gulf Islands Housing Strategy](#), this might include advocacy supporting regulatory change to enable the building and financing of small dwellings (under 600ft) and the Provincial Government to reconcile the B.C. Building Code to give people more diverse housing options and evaluate opportunities for alternative building approvals (see also the HAPTF report on tiny homes P.22-75 [2022-09-01 Task Force Agenda Package.pdf](#) ).
- 3.2. Invite, support, and facilitate private property owners to apply for pilot project rezoning to accommodate tiny home villages, tiny home mobile parks, and new forms of land tenure (i.e., leasing pads). For example, the LTC could consider supporting a pilot project for a tiny home village where the model provides serviced pad rentals with shared services.

### **4. Recommendation: Reduce Environmental Impact per Capita through Homeplate, Ecovillage, and Flexible Zoning as well as Ecological Building credits and Transferring Density closer to village centers**

- 4.1. **Homeplate Zoning Model.** Consider allowing for flexibility of dwelling type and size within maximum total floor area (e.g., 500m<sup>2</sup>) in exchange for a land covenant on at least 50 % of the property, allowing only eco forestry and another 20-30% allowing eco-forestry, permaculture, or organic farming.
- 4.2. **Ecovillage Zoning Model.** Consider allowing existing Subdividable Properties to be developed according to the Homeplate Zoning principle as a strata development with flexible dwelling types and sizes while placing large portions of property in a conservation covenant. For example, a 50-hectare lot could be traditionally subdivided into 10 x 5 ha. Parcels. Instead allow for 10 x 500m<sup>2</sup> = 5000m<sup>2</sup> total floor area of dwelling space concentrated into a single limited portion of the property, protecting at least 50% of the property for eco forestry or conservation only and another 30% allowing eco-forestry, permaculture, or organic farming. Incorporate the ecological building principles of the Eco-Density Bonus and maintain full protection of the most sensitive ecosystems through DPAs.
- 4.3. **Eco-Density Bonus.** Consider encouraging ecological and energy and efficient water homes by allowing a provision to add dwelling space if the owner builds to a higher ecological standard (e.g., solar panels, rainwater harvesting, ecological building materials, grey water recycling, net zero energy, solar hot water, etc.). These provisions will help reduce the operating costs and ecological impacts of dwellings.
- 4.4. **Flexible Zoning Model.** Consider a zoning model that will allow additional dwellings within a maximum total combined square footage of all dwellings, including the principal dwelling, according to the lot size to floor area ratio schedule outlined in the Mayne Island Flexible Housing bylaw. Allows proponents who can prove adequate water and fit these ratio requirements to apply for rezoning with prescriptive certainty. (link to Mayne Island LTC Staff report: [2022-06-27 Staff Report.pdf](#)).
- 4.5. **Density Transfer Mechanism.** Consider updating to be viable so that “densities” are transferred out of large landlocked undeveloped areas and added closer to villages and infrastructure. It needs to be commercially viable for developers to work. The community amenity is preserving undeveloped large properties such as forests. No



additional amenities should be required. This could be combined with other incentives for forest preservation, such as carbon storage credits.

- 4.6. **Commercial Zoning.** Encourage a “lights on” community in village centers where people can live, work and play within walking distance by allowing residential accommodation above commercial properties up to 4 stories.

**5. Recommendation: Decrease current and future housing loss due to short-term vacation rental activity**

*Rationale: The proliferation of unregulated short-term rentals worsens both housing availability and affordability system-wide.*

- 5.1. Establish a regulatory and enforcement system for short-term vacation rentals, including setting specific goals, ensuring simple, easy-to-understand regulations, and, most critically, establishing a system for licensing operators (e.g., in conjunction with CRD).
- 5.2. Consider updating bylaw requirements for seasonal, short-term accommodation, such as glamping (see pages 13-16: [2022-07-07 Task Force Agenda Package.pdf](#))