

Heather L. Richendrfer
2919 Birchwood Avenue
Bellingham, WA 98225
(360) 733-5043 dance@clanheather.com
June 11, 2024

Kathy Bell
Planning and Community Development Department
City Hall
210 Lottie Street
Bellingham, WA 98225

Dear Ms. Bell:

I write to express strong reservations about the 2912 Birchwood Avenue (SUB2024-0006) development plan.

As a 37-year owner of my home directly across the street from the proposed development; I am well aware of the challenges of maintaining quality of life in a neighborhood once prized for lot size, friendly neighbors and stable zoning.

I have experienced undesirable infill, increased crime and general decline of what I value as a long-term home owner. I maintain my home, yet I have been exposed to crime on either side of my house including fires, fights, hoarding and even a 3 AM visit by the SWAT team. In fact; previous City Councilman Gene Knutson said no one should have to put up with what I do as a homeowner.

I have witnessed the changes on Maplewood Avenue including an area now overrun with apartments, trash from homeless camps and crime. As more infill occurs the result is fear for safety.

The proposed development will have an impact on nature along Birchwood Avenue. The response from the planners is vastly inadequate – a few trees and paved drives do not meet my expectations for preserving nature. The wildlife migrating through my yard are beautiful to observe as they graze, interact and play. The deer and racoons travel daily from yard through the property at 2912 Birchwood. The sizeable development will be detrimental to the animal inhabitants and decrease the quality of life for those of us enjoying the benefits of interacting with the animals. The proposed plan talks about removal of Cottonwood trees yet there are more considerations with regard to the animal and bird populations living here.

I am not in favor of more traffic or car lights shining in my windows at night. I still believe I have the right to expect the investment I made to be maintained in an environment that is similar to the time I purchased my home. Stable zoning is important.

I would much rather see single family homes on the 2912 property. The Hansey homestead and the chicken hatchery that once occupied the buildings are part of Bellingham's history. I remember touring the hatchery with my kindergarten class and interacting with Don Hansey over the years. Invading the land with unsightly townhomes does not meet expectations for a desirable neighborhood.

Additional dwelling units are detrimental to the Birchwood neighborhood. We will never regain the loss of spacious lots and beautiful lawns. So many trees have been removed that the landscape is unrecognizable from what we enjoyed for many years.

The proposal description says there are no critical areas identified on the Property or on adjoining properties. Every one of the properties in the immediate area are critical. While it is true neighboring properties in all directions are developed with single family residences; that does not mean we, the existing homeowners, want or expect change.

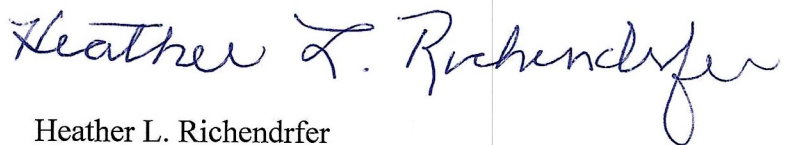
The proposal for 2912 Birchwood is far too many residences for the property. Many of us have no problem with single family homes on the land but we object to crowding and townhomes that can soon look as bad as those on Maplewood Avenue. Space for 26 parking stalls means more traffic, noise and safety concerns.

I also disagree with the proposed conditional use permit for City Sprout Farm. There are many gardens and vegetable growing endeavors by homeowners in the Birchwood neighborhood. I am not in favor of increasing traffic to the farm by adding more use as people 'come together to learn'. There have been complaints about usage of the property over the years.

The proposal states the neighborhood plan identifies neighborhood character and open space. Allowing developments like the one outlined in the plan diminishes open space and further disintegrates Birchwood's character of spacious lots and beautiful single-family dwellings. Further, the proposal does not meet comprehensive plan goals of consistent neighborhood character.

Many of my neighbors stood with me to keep previous development of 2912 Birchwood Avenue at bay. We need to protect what we value in our homes and property. Please consider our views and move away from multi-family housing to help us retain the beauty of a neighborhood currently at risk.

Sincerely,

A handwritten signature in blue ink that reads "Heather L. Richendrfer". The signature is written in a cursive style with a large, looped 'f' at the end.

Heather L. Richendrfer

Permits Applied for Include: See above.

Send written comments and requests for information to:

Name: **Kathy Bell, Planner, kbell@cob.org or 360-778-8347**
Planning and Community Development Department - City Hall
210 Lottie Street - Bellingham, WA 98225

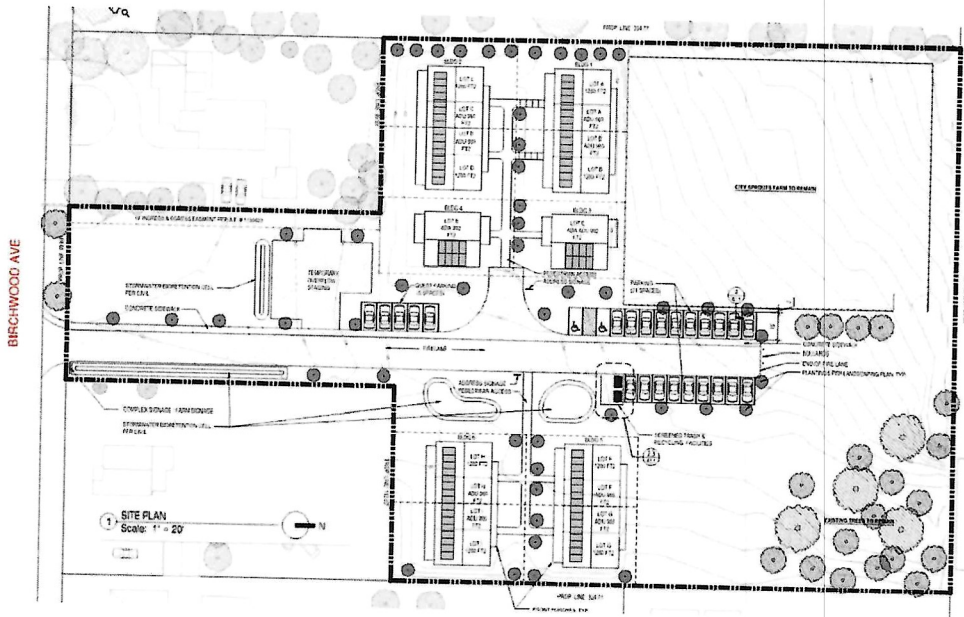
2912 Birchwood Avenue
SUB2024-0006

If you want to receive notification of the decision, please complete and return this section to the Planning and Community Development Department, City Hall, 210 Lottie Street, Bellingham, WA 98225.

Attn: Kathy Bell, Planner **Yes, I would like to know the action taken.**

Name Heather L. Richendrfer

Address 2919 Birchwood Avenue, Bellingham, WA 98225
(include City, Zip)





Whatcom Transportation Authority

June 4, 2024

Planning and Community Development Department – City Hall
Attn: Kathy Bell
210 Lottie Street
Bellingham, WA 98225

Sent via email to kbell@cob.org

RE: A proposed development of an 18-unit residential single family housing plan which will consist of 9 attached single-family residences and 9 attached ADU's located at 2912 Birchwood Ave. Local File Numbers SUB2024-0006/USE2024-0012/ADU2024-0053 thru 0061.

Thank you for allowing the Whatcom Transportation Authority (WTA) the opportunity to comment on the above referenced development proposal.

Existing WTA Services

The subject property is located just outside of WTA's ¼ mile walk shed from existing fixed route services. The nearest bus routes exist to the northeast (Route 4 on Maplewood Ave) and to the west (Route 3 on Bennett Drive). However, due to the subject property's proximity to the fixed route service, this property is located within WTA's Paratransit service boundaries. This means that future residents of the proposed development may be eligible to qualify and utilize WTA's paratransit services.

Recommendation and Rationale

The submitted Land Use Narrative states that each unit will be two stories in height except for the one ADA compliant unit which will be one story. According to the site plan, it appears that loading and unloading of paratransit vehicles could occur within the fire turn around or adjacent to the ADA parking aisle. It is recommended that these loading and unloading areas be free from obstructions and have an all-weather, hard surface. They should also provide direct access to all residential buildings.

By identifying and constructing these paratransit facilities, it will ensure that future residents are able to take advantage of WTA paratransit services if needed.

If you have any questions or concerns regarding this information, please feel free to contact me directly.

Hayden Richardson,
Transportation and Land Use Planner
(360) 788-9309
HaydenR@ridewta.com

Bell, Kathy M.

From: Kristy Hendrickson <khendrickson1313@gmail.com>
Sent: Wednesday, June 5, 2024 7:43 PM
To: Bell, Kathy M.
Subject: SUB2024-0006/USE2024-0012/ADU2024-0053 thru 0061

You don't often get email from khendrickson1313@gmail.com. [Learn why this is important](#)

CAUTION: This message originated from outside of this organization. Please exercise caution with links and attachments.

These are my comments & concern for the project at 2912 Birchwood Ave. SUB2024-0006/USE2024-0012/ADU2024-0053 thru 0061

My concern is parking. A majority of the people have at least 1 or 2 cars per family, there are not enough parking spaces. In reality it will be a hard for someone to want to buy just for that reason but that's not my problem. The problem is if they do not have sufficient parking per unit then owners, tenants & visitors will be parking on the street. There is no room to park on the street without parking partially in the road & partially on the tiny sidewalk that there is for walking. I guarantee the people in the neighborhood will be calling the police or parking enforcement constantly because it will become unsafe. There are kids in the neighborhood walking to & from home to the elementary school that is around the corner & people including myself who walk daily & ride their bikes. It would be common sense to redesign at least 2 parking spots per each unit & ADU, also add an excess parking area for visitors for the safety of the resident's & children that live in the neighborhood.

I would like to know the action taken
Thank you Kristy Hendrickson 2923 Cottonwood ave. Bellingham, WA 98225

Sent from my iPad

Kathy Bell
TO: Planning and Community
Development Department

May 3, 2024

I have lived at 2904
Birchwood Ave for 32 years.

I understand that trees
along the side of my property
will be removed for 18 units
to go in, with 8 units alongside
my property.

I choose this neighborhood
because of large lots, lots of trees,
lots of wildlife.

I understand we need low
income housing I feel 18 units
in one spot in the neighborhood
is too many. It is like the
families will be in apartment
living. no parking by their
units, 18 parking spots for 18
units with one road in and the
same road out.

I believe lesser units still
built for lower income would
feel more like owning a home
not a apartment, with more yard
better parking and not be so on top
of each other.

It will change this neighborhood
forever. The traffic is already bad in the
afternoon when school gets out.

I know the city

has to consider more
lower income housing

I hope they take in
consideration for familys who
have bought homes in the
neighborhood.

JoAnn Padgett
2904 Birchwood ave
Bham wash 98225

Permits Applied for Include:

See above.

Send written comments and requests for information to:

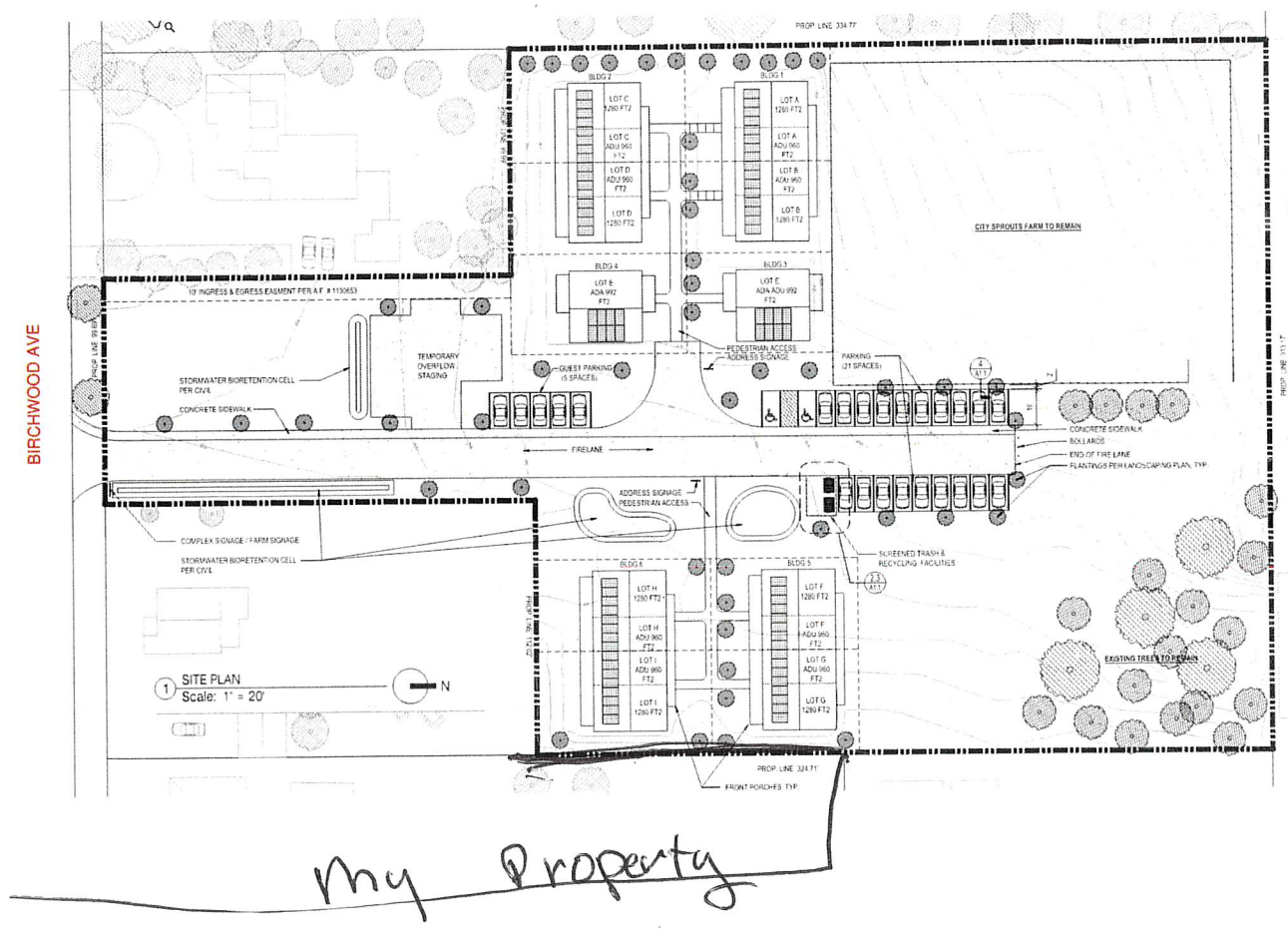
Name: **Kathy Bell, Planner, kbell@cob.org or 360-778-8347**
Planning and Community Development Department - City Hall
210 Lottie Street - Bellingham, WA 98225

**2912 Birchwood Avenue
SUB2024-0006**

If you want to receive notification of the decision, please complete and return this section to the Planning and Community Development Department, City Hall, 210 Lottie Street, Bellingham, WA 98225.

Attn: Kathy Bell, Planner **Yes, I would like to know the action taken.**

Name JOANN Padgett
Address 2904 Birchwood Ave Bellingham
(include City, Zip) wash 98225



Mary Lou White
2905 Birchwood
Bellingham, WA

Kathy Bell
Planner
Planning and Community Development Department – City Hall
210 Lottie Street – Bellingham, WA 98225

RE: Planning Application – SUB2024-0006/USE2024-0012/ADU2024-0053 Thru 0061

Hi Kathy,

I am writing to comment on the proposed development located at 2912 Birchwood Ave, application number referenced above. I would like to make you aware that in my view, the application is incomplete and misleading. As a neighbor within 180 ft of the project site, it is also my opinion the proposed project falls short of meeting Bellingham’s Comprehensive Plan goals and policies and without modification, will have a negative effect on the standard of living, health, and safety of myself and the Birchwood Neighborhood Community. My specific objections are as follows:

- 1. The project application narrative is incomplete, misleading, and does not align well with the Bellingham Comprehensive Plan:**

Subject Site / Property Description

- The proponent narrative states: “The property is located in the Birchwood Neighborhood, Area 1, and is zoned Residential, Single, Detached, and Mixed”. *The proponent’s description (Residential, Single, Detached, Mixed) without further explanation is misleading. The Birchwood Neighborhood Plan (BNP) is clear that there are separate designated zones for specific development types. The Area 1 Zone is designated for Residential Single development. The detached, mixed referenced in Area 1 is listed under Special Regulations and qualifies the mixed term as follows:* The mixed designation is intended to allow agriculture and the raising of farm animals; **provided**, that they are **not a commercial endeavor. The latter must have the approval of the Bellingham/Whatcom County health department.**

The property parcel at 2912 Birchwood Avenue is currently zoned Residential Single. Without the knowledge of many nearby residents, Kulshan Land Trust has illegally allowed City Sprouts to utilize the northwest corner as an agricultural nursery for five years (adjacent

landowners thought it was a community garden). Recently, despite the City of Bellingham informing Kulshan Land Trust that they must obtain a conditional use permit to bring the City Sprouts activities into compliance, it has taken them months to apply.

In March of 2024, Kulshan Land Trust met with the Birchwood Neighborhood Association to talk about and advocate for support of the project, including City Sprouts use of the land as a mixed agricultural nursery in the northwest corner and proposed open space in the northeast corner. As described by Kulshan, if the project was permitted it would allow City Sprout to continue operation as both a garden and commercial endeavor intended to support the neighborhood as a food source. During that meeting and during a more recent community meeting, both the Birchwood Neighborhood Board and local community members requested that Kulshan Land Trust place the northwest and north east tract in a perpetuity covenant (or something equivalent) in order to protect the property from future development. In this application, Kulshan has not guaranteed the use of the northwest corner for agriculture or open space nor protected the northeast corner into perpetuity. Anything less than doing so does not benefit the community. Specifically, using words such as “memorialize” without further legal specification, does not guarantee indefinite use of that land in a way which is beneficial to the community. In my opinion, it therefore does not represent support for equity and inclusion to the underserved population of the Birchwood neighborhood—something that is paramount in the Comprehensive Plan’s goal—nor does it support the innovative intent of the Bellingham Comprehensive Plan or the special “mixed” qualifier in the Birchwood neighborhood plan. The mixed qualifier has special provisions to provide for agricultural use which complements the single family residential A1 zoning area which historically had Victory gardens and self-sufficient single family residences. These gardens improved the health and quality of life for single family homeowners. Any mixed agricultural nursery zoning at this site (partial commercial or otherwise) which does not provide legal long-term agricultural or open space benefit to the entire community should be considered spot zoning.

- *The proponent narrative states: “There are no critical areas identified on the property or on adjoining properties.” The project site is located on top of the former Bellingham Mine operation and is classified in the Bellingham Critical Area Environmental maps as a known coal mine geological hazard area, and medium-high seismic activity area. In the Whatcom County Supreme Court case, Peters Vs. Bellingham Coal Mine (May 12th, 1933), the Bellingham Coal Mine was found to have caused subsidence on the Peters property. In a report to the Comptroller General*

of the United States, entitled Alternatives to Protect Homeowners from Damages Caused by Mine Subsidence (Feb. 1979), three of the four optimum recommendations for subsidence control are zoning, subdivision regulation, and small, box-style homes. (The fourth recommendation pertains only to mining methods.) While substantial subsidence may not be likely on the proposed project parcel, even minor subsidence can cause superficial or structural damage, which could be costly to new homeowners in an already overinflated local housing market. Kulshan Land Trust has hired a consultant to conduct a geological assessment of the site. Saying there is no Critical Area is disingenuous, misleading and inaccurate. This geological report should be available to the public and provided along with the application for public review.

Subdivision Criteria

- Community Design - the proponent narrative states: "There are no specific neighborhood character or open space policies directly applicable to the project..." *This is incorrect and misleading. For Area 1, the Neighborhood Plan claims the following qualifiers: Residential single with a lot size minimum of 20,000 sq. ft., detached, and mixed. As previously stated, the plan considers "detached and mixed" as land "[...] intended to be allowed for agriculture and the raising of farm animals; **provided**, that they are **not a commercial endeavor.**"*

Currently, the relationship between City Sprouts and the adjacent Birchwood neighbors is a positive one because of City Sprout's benefit to the health of the community. This is largely because City Sprouts is a small operation, and because City Sprouts has not been selling produce on site. However, changing this tract to "conditional mixed" with City Sprouts designated as a commercial enterprise, sets a precedence for additional commercial enterprises to exist in a zoned, residential, single-family area which is not in concurrence with the BNP mix qualifier use. Needless to say, this would not maintain the neighborhood character for this Area 1 zone, and would have an overall detrimental effect on neighboring amenities. If the existing garden is allowed to be zoned as conditionally mixed, it is paramount that it is put into a covenant (or equivalent document) that any zoning change is a special condition, and that the parcel must be maintained as a garden or open space. Furthermore, it must include that if City Sprouts chooses to close their operation, the land must remain as a garden or open space zoning. Additionally, no commercial building should be allowed on the project site now, or in the future. A similar statement should be placed in Bellingham City ordinances (or equivalent policies) that states that the Special use Mixed Zoning allowed for City Sprout's conditional use may not be used as a precedent for future zoning changes with regard to housing

developments, commercial, or agricultural development on the parcel or within the Birchwood Neighborhood.

*Lastly, the Birchwood Neighborhood Plan and Bellinham Comprehensive Plan are one in the same. As such, the Birchwood Neighborhood Community relies on the director and planning department to make fair and impartial decisions, even when the City of Bellingham has a monetary vested interest in the proposed project. There are specific policies in the Comprehensive Plan that the Neighborhood Plan relies on in order to maintain the character of the neighborhood. Particular concerns pertain to the policies under BMC 20.30.20 B2 that specifically state clustering should be allowed for retaining open space, and policies under BMC 20.29.030F which allow minor changes-only if **all** applicable laws (including Washington State Laws) are met. Allowing stacked minor-modification changes without associated chapter provisions, even if allowed under statute, disassociates the change from the original BMC ordinance or policy provisions' intent, and is equivalent to allowing a major change. This is especially true when the changes are request from multiple BMC chapters. I believe this is not the intent of the Planning Department or of the Comprehensive Plan's Goal with regard to allowing affordable housing.*

- ***The proponent states: "...both sections of the Plan discuss the contrasting development patterns (low density/rural feeling single family with higher density multifamily) which permeate the neighborhood"*** Again, this is misleading. The proponent is referencing a general description of the overall neighborhood, inclusive of all 29 areas, and implies that a high density, multifamily project and commercial agricultural endeavor with plans for additional future commercial zoning (community center) and development would maintain the Birchwood Neighborhood Character. The plan actually reads:

"The Birchwood Neighborhood is an interesting study in contrast. The neighborhood has historically been an area consisting of single family homes built on extremely large lots. It is characterized by older, well-kept homes on lots often in excess of 400 feet deep. Mature landscaping, open fields and narrow streets lend a rural atmosphere to the neighborhood. The neighborhood has seen the growth of apartment and condominium complexes located primarily along Northwest Avenue and on Maplewood Avenue.... the large lots in the Birchwood area give the neighborhood a spacious, rural feeling."

Specific to Area 1, the plan reads “This low-density residential area makes up the bulk of the Birchwood Neighborhood and gives it much of this character”

Kulshan Land Trust should not be allowed regulatory modification which would result in 9 new dwellings and 9 large ADU’s with plans for future development on 2.79 acres in this well-established neighborhood with older homes. This is based entirely on “mostly” fulfilling ordinance criteria. Having this many two-story clustered units is contradictory to maintaining the character of the Birchwood Neighborhood’s mature landscaping and smaller, single-family housing style. This could also mandate changes to the narrow street and would create a high-traffic area and on-street parking (in a high crime neighborhood) that would compromise the neighborhood’s safety, privacy, and noise levels, leading to a decrease in amenities, health and quality of life. This would be considered a public nuisance which is unlawful under RCW 7.48.130.

The character of a neighborhood does not change overnight. Multiple, incremental changes that are allowed to happen on a parcel-by-parcel basis based on just one goal (100% affordable housing), results in permanent changes to the neighborhood character and is a threat to the neighborhood health and safety. As proposed in the application, the project also contradicts health, climate change, and sustainability goals, and falls short on fulfilling the innovation intent of the Comprehensive Plan.

I, like most of my neighbors, realize that we need affordable housing, however, house cramming without consideration to the overall impact on the community should not be allowed. This parcel has jumped from 6, to 9, and then to 18 units, and Kulshan’s ultimate goal is to put even more houses on the property. Regardless of what Kulshan Land Trust may say, they have made it very clear in their actions (and in writing) that their intent is to push housing numbers on this parcel as far as they can without regard for city planning goals, critical areas, adjacent neighbors’ concerns, or even the overall health, safety, and welfare of potential affordable housing occupants. In my opinion, it also does not support Washington State’s definition of equity for all as is defined under the Washington State Constitution Article 1, Section 12 or the Universal Declaration of Human Rights Article 12 which states “No one shall be subject to arbitrary interference with his privacy, family, home[...]”.

- *The proponent’s narrative states: Fire and garbage turnaround will be incorporated into the access lane. Currently, no fire and garbage turnaround is included in the proposed plans. Additionally, the narrative*

states that 4 to 6 City Sprouts employees will park adjacent to the farm operations from April to October. This essentially means that parking is insufficient since there will not be two spots for each resident with a unit greater than 1,000 sq. ft. since City Sprouts employees will be parking in those spots.

Natural Features

- *The proponent states that there are no natural features of significance on the property, however, as previously discussed, the project site is located on top of the former Bellingham Mine operation and is classified in the Bellingham Critical Area Environmental maps as a known coal mine geological hazard area and medium-high seismic activity area (See bullet 2 under Subject Site / Property Description). The proponent then goes on to acknowledge that the property has several stands of mature “significant” cottonwood. This is misleading, because there appears to be one well established, mature stand of cottonwoods on the west side of the property with smaller younger-aged cottonwood trees scattered throughout the property. The northeast corner appears (from a distance) to be dominated by young and sampling trees (likely alder) and shrubs. Within the well-established stand of cottonwoods on the west side is at least one cottonwood that I measured at breast height (4.5ft), with a diameter at breast height (DBH) greater than 36-inches. I suspect there is at least one additional cottonwood (if not more) that are greater, or close to having a 30” DBH.*

BMC 16.60.040 defines “Significant tree” as a “tree of any species that is six inches in diameter or greater measured at breast height”. There are numerous “significant” trees located within the cottonwood stand which is located on the west side of the parcel. The proponent states “many of these trees (In reference to the cottonwood trees) present a hazard to surrounding and proposed development through their size and location” and that “due to their clustered nature, 38 of the “significant” trees are proposed for removal”

The Birchwood neighborhood has, for as long as I can remember, been associated with larger lots and mature landscaping. Cottonwoods are a keystone species in the northwest. This means they have a disproportionate ecosystem and wildlife value relative to their abundance. In essence, they help define and hold the ecosystem together. Mature trees (including deciduous cottonwood) help mediate climate change and provide ecosystem resiliency. Because they are fast growing and self-seeding cottonwood are an especially good species for climate resiliency.

Recently, it has been found that cottonwood trees add nitrogen back into the soil through nitrogen-fixing bacteria found near the leaf nodes rather than through their roots as Alder do. The nitrogen/amino acid/protein relationship is needed by all life forms. Someday in the future, we may find out that these same bacteria which have a symbiotic relationship with cottonwood are important to human health. From a cultural perspective, Native Americans used the cotton wood buds which are antimicrobial and antifungal for medicine.

Bellingham is part of the North-South Pacific Flyway. Hundreds of birds use this migration route. The proximity of the mature cottonwood trees on the subject parcel, located midway between Bellingham Bay, Squalicum Creek and Cornwall Park is advantages to numerous migrating birds, including eagles, which will nest in tall trees such as cottonwoods. This parcel, as well as most of Bellingham, has been mapped as an area for predicted future eagle breeding habitat.

*I have only been on the subject property a few times and have never looked for wildlife on the property, however, I know from looking out my window that these same trees provide critical habitat to the local deer and rabbit population. The deer have a migration route that extends from my neighbor's parcel to the east, across the road to my neighbors parcel due north. The deer stop to feed on the Mountain Ash, and then cross over to the applicant's property's southern stem. The deer then walk up the existing driveway and utilize the subject property's habitat provided by the cottonwood stands. In the spring, female deer give birth in the lower southeast corner of the parcel where the most easterly dwelling units are being proposed. **All** of my neighbors who own these parcels and who are now senior citizens, as well as myself and our children have watched this seasonal deer migration for well over thirty years. Likewise, we have watched the rabbits and squirrels play in the early morning and at dusk. We have observed children going to school, neighbors walking their dogs, and have taken many moments from our busy days to stop, admire, and chat about the squirrels, rabbits, fawn, bucks, and deer in our neighborhood. The mature cottonwood trees, along with the wildlife they support are esthetically pleasing, and greatly valued natural amenities that the neighborhood identifies with. These bits of nature improve our quality of life and bring us together in conversation and unity as a community regardless of age, monetary status, political values, or ethnicity.*

The applicant proposes to replace the cottonwood stand with new trees at a ratio of 1.3:1. However, it is unlikely that these replacement trees

will be cottonwood (a keystone species) and they will not be clustered, nor will they provide the same habitat value, be of the same age, or have the same genetic or epigenetic history as the existing stand. This matters! Utilizing the interactive iTree tool created by the USFS and partners, <https://mytree.itreetools.org/#/tree>, I was able to make an estimated equivalent comparison between the existing 36" DBH cottonwood, a typical 1.0" DBH Douglas-fir replacement tree, or ~2.5" Chinese Dogwood street tree one of the recommended species listed in BMC code (See Figure 1. below).

Figure 1.

Existing 36" Black Cottonwood	Replacement 1" Douglas-fir	Replacement 2.5" Chinese Dogwood
<p>With care and maintenance, after 20 years this tree could potentially:</p> <p>offset 9,884 miles worth of CO₂ emitted from the average gas-powered passenger vehicle,</p>  <p>absorb enough stormwater to fill 5,592 bathtubs,</p>  <p>and remove an amount of pollution from the air – in gaseous and particulate form – equivalent in weight to 83 smartphones!</p> 	<p>With care and maintenance, after 20 years this tree could potentially:</p> <p>offset 204 miles worth of CO₂ emitted from the average gas-powered passenger vehicle,</p>  <p>absorb enough stormwater to fill 131 bathtubs,</p>  <p>and remove an amount of pollution from the air – in gaseous and particulate form – equivalent in weight to 2 smartphones!</p> 	<p>With care and maintenance, after 20 years this tree could potentially:</p> <p>offset 1,643 miles worth of CO₂ emitted from the average gas-powered passenger vehicle,</p>  <p>absorb enough stormwater to fill 293 bathtubs,</p>  <p>and remove an amount of pollution from the air – in gaseous and particulate form – equivalent in weight to 12 smartphones!</p> 

Source: iTree Canopy iTree software Suite v5.X. (n.d.) Web. Accessed 6/24/2024. Note – “Benefit estimates are based on USDA Forest Service research and are meant for guidance only. Visit www.itreetools.org to learn more.”

As you can see in Figure 1, removing these mature cottonwood trees contradicts Bellingham’s Forestry Plan and contradicts Bellingham’s goals for climate resiliency.

The proposed design does not meet the performance standards for BMC 23.08.030 which state “natural features that may or may not be regulated by other code provisions, including but not limited to trees, ...habitat...geological hazard areas...should be incorporated into the overall land division design through preservation to the extent feasible.

The proposal will not serve the public interest and is inconsistent with public health, safety and welfare. While additional housing is needed the existing forest canopy aligns with the birchwood neighborhood plan which is a part of the Comprehensive Plan, provides localized temperature relief, and the health benefits associated with natural environments (physical and mental) as well improves crime reduction.

Clearing and Grading

- *The applicant states, “the subdivision is consistent with the Comprehensive Plan, Title 23 and all sections of the BMC with exception to modification request to BMC 20.29”, however, in addition to the modification request associated with BMC 20.29 the applicant also ask for modification request associated with BMC 20.28. the Birchwood Neighborhood Plan which does not have a cluster attached qualifier, and only “almost compliant” with BMC 20.30. Of particular importance is the word retain in BMC 20.30.20 B2 which reads as follows:*

*the residential single-family “cluster” designation is intended to accommodate individual dwelling units located upon a single or multiple lots. Generally the same overall density is maintained; however, cluster lots may be reduced in size and street frontage requirements in order to **retain open space** (emphasis added) or preserve environmentally sensitive areas (*Open space that is not retained is not fulfilling the intent of the code*).*

*As documented above and in the previous sections written in this letter the applicants narrative misleads and omits critical information and the subdivision as proposed is not consistent with the Comprehensive Plan, Title 23 nor “all sections of the BMC”. Furthermore, the applicant states, “the Comprehensive Plan includes many Goals and Policies encouraging urban infill, affordability, consistency with neighborhood character, open space preservation, support for urban farming, and other relevant actions. The project as designed supports or implements many of these Goals and Policies, particularly related to affordable housing.” However, BMC 20.29.010 states, “ the Growth Management Act requires the city to provide housing opportunities for **all economic segments...** (emphases*

added)". This project is highly subsidized with local tax payer dollars (through the City of Bellingham and federal taxes) and has no mandated requirement for 100% affordability with regard to the Bellingham Comprehensive Plan or BMC ordinances. If implemented as proposed (with the requested modifications), the project will burden adjacent retired or nearly retired senior citizen landowners, single mothers, and nearby widow families, who are already on fixed or marginal incomes. These families are already burdened with high taxes and high cost of living expenses. Nevertheless, in addition to subsidizing the project, taxes in the neighborhood will go up to pay for additional road infrastructure associated with increased traffic, public utility, and safety needs on Birchwood Avenue. The overall effect is that the high density, 100% affordable housing proposed will make it less likely that existing nearby homeowners will be able to maintain or own their homes in this working class neighborhood and as already stated will have a lower quality of life. Reducing home ownership or providing affordable home ownership at the expense of another's is not the intent of the Growth Management or Bellingham Comprehensive Plan policies and is inconsistent with housing affordability for all economic segments.

With regard to affordability and infill, building 6 homes on the property which is currently open space would also implement affordable housing and contribute to Bellingham's infill supply focus and could be accomplished in a manner which would enable Kulshan Land Trust to address neighboring concerns with regard to loss of amenities, safety, health and quality of life. Additionally, a low-density development would allow for greater preservation of significant natural features and align better with fulfilling the Bellingham Comprehensive Plans focus on health, sustainability, and innovation while respecting the environment and maintaining quality of life and wellness for existing residence and future Kulshan Land Trust occupants. Kulshan could use the funding they currently have as match to seek additional grant sources that would make-up the difference in cost if they still wanted to provide 100% affordability. As both a grant reviewer and recipient who has worked for a non-profit agency for over twenty-six years, I know that grant extensions and/or contingency funds are also possibilities that Kulshan Land Trust can check into if they need more time and/or funds.

Lastly, Kulshan should be required to show alternative designs with cost estimates, one of which incorporates saving the trees, garden and open space and utilizing the temporary staging area/stem for housing. At the community meeting the vast majority of the residence (I believe all but one) stated they did not want to see a community center/commercial enterprise on the property.

2. As proposed, the project will have a negative effect on the standard of living, health, and safety of myself and the Birchwood Neighborhood Community.
- *As described by Kulshan, if the project was permitted it would allow City Sprouts to continue operation as both a garden and commercial endeavor intended to support the neighborhood as a food source, however, conditional use permits have an end date and Kulshan's ultimate goal is to infill this area; thus, the garden and/or open space would not be retained. Losing this food source and open space would hurt this community which Kulshan already acknowledges is a food desert. Additionally, as a food desert it does not make sense to allow high-density affordable housing in-fill in this A1 zone which is not within ½ mile of public transit or a grocery store as defined in food desert classification.*
 - *Parking is insufficient for suggested uses (agricultural nursery and residential housing) consequently this would lead to off-site parking either now or in the future. The Birchwood Neighborhood has one of the highest crime rates in the city. Off-site parking in front of seniors, handicapped, single mothers and windows homes who live adjacent and in close-proximity to the proposed project would reduce their sense of security and cause an increase in stress. Thereby, reducing their quality of life and health. As stated above the proposed project as one entrance and exit which would have negatively effect on safety for children to walk to school or residence to walk their dogs.*
 - *Loss of significant environmental and natural features and associated amenities (see comments under Natural Features listed above). According to the City of Bellingham, WA, Street trees provide the following benefits: "...aesthetic, historic, biologic and functional benefits which contribute to the quality of life in this City. The benefits of street trees include: soil stabilization and erosion control, reduction of storm water runoff, removal of carbon dioxide from the air, visual screening, protection from severe weather, habitat for birds, enhancement of property values, and conservation of the City's aesthetic values". *Well established mature trees on this property provide all these benefits as well as greater climate change (see Figure 1 above), cultural, and residential historic benefits.**
 - *Like most of the USA, Bellingham is in an acute physical and mental health crisis, best available science indicates that being in close proximity (not just proximity) to nature increases microbiome diversity. Proximity matters, the closer the proximity, the higher the diversity. An increase in microbiome diversity is associated with better physical and mental health (please read the attached journal article). Microbiome diversity is also associated with human to animal interactions. Just as pets carry microbes from one area to another, deer, rabbits, and quarrels also transfer beneficial microbes from parcel to parcel. The transfer of*

these organisms benefit our health and environment. Additionally, it is a well known fact that just being able to view nature reduces stress and anxiety, thereby, improving health outcomes.

- In 2023 the Birchwood Neighborhood Association Board met and agreed unanimously that noise pollution is a major problem which effects the quality of life in the Birchwood Neighborhood. Allowing high-density housing which would increase evening traffic on this road would further hurt the quality of life and health for future and existing residence who are already dealing with high noise levels from the airport, train, and cement plant.*
- Increased taxes associated with high density affordable housing from the project would become an additional burden on adjacent landowners, in this working-class neighborhood, who are on fixed incomes or maxed-out due to the rising cost of living, this could result in loss of home or residential upkeep due to affordability. As stated in the narrative living in a well-kept neighborhood is important for health.*

Final notes: Kulshan states they have not had any complaints about the nursery. I have heard the following through the neighborhood grapevine:

- 1. The parcel owner to the north does not want additional traffic going through his property to access the garden area and stated he will not allow access through that parcel now or in the future as eluted in the narrative;*
- 2. A single complaint regarding an increase in petty crime increasing about the time the garden went into operation;*
- 3. A single complaint about air pollution associated with a nearby landowner who provides plants and/or flowers to City Sprouts*

Regardless of these complaints, I believe my neighbors appreciate City Sprouts efforts to help feed the community and, with the addition of legal zoning restrictions and perpetuity covenants, would support this endeavor. Likewise, I would like to support City Sprouts and Kulshan Land Trust's efforts, however, although the concept is innovative, I can't support this project as proposed due to Kulshan's persistent determination to infill to the max and provide 100% affordability housing at the expense of our climate, environment, wildlife, health, and quality of life, Kulshan's unwillingness to incorporate adjacent neighbor suggestions that do not fulfill their agenda, and Kulshan's desire for saving space for future unsupported endeavors regardless of the cost to the neighborhood. Unfortunately, to me, the most innovative thing about this application is the way Kulshan Land Trust has brilliantly manipulated the rules and sidestepped the truth in an effort to fulfill their mission. Thank you for you time and consideration in this matter.

Sincerely,

Mary Lou White

Review

Environmental and Human Microbiome for Health

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Abstract: Microorganisms are an essential part of life on the earth and can exist in association with virtually any living thing. The environmental microbiome is much more diverse than the human microbiome. It is reported that most microbes existing in the environment are difficult to culture in the laboratory. Whereas both pathogenic and beneficial microbes may be prevailing in the environment, the human body can have three categories of microbes- beneficial, pathogenic, and opportunistic pathogenic. With at least 10-fold more cells than human cells, microbes as normal flora are critical for human survival. The microbes present in the human body play a crucial role in maintaining human health, and the environmental microbiome influences the human microbiome makeup. The interaction between the environmental and human microbiome highly influences human health, however it is poorly understood. In addition, as an established infection is associated with health-seeking behavior, a large number of studies have focused on the transmission and dynamics of infectious microorganisms than the noninfectious or beneficial ones. This review will summarize how the interaction between the environmental and human microbiome affects human health and identify approaches that might be beneficial for humans to improve health by being exposed to the natural environment.

Keywords: environmental microbiome; human microbiome; health effects; pathogen; commensal; diversity; nature



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1. Introduction

Microorganisms, the oldest living organisms in the biosphere, are omnipresent, critical to the surroundings, and linked with good and ill health effects. In nature, microorganisms have an essential role in biochemical cycles, such as nitrogen, phosphorous, and carbon. Microorganisms are vital for nitrogen fixation, assimilation, mineralization, nitrification, and denitrification. Similarly, they participate in the phosphorus cycle by mineralization, assimilation, precipitation of phosphorus compounds [1] and in the carbon cycle by converting atmospheric carbon dioxide into organic material [2]. They further play a vital role in human survival by contributing more enzymes or proteins responsible for human survival than humans themselves do. It is estimated that the human body harbors more than 10 trillion living microorganisms [3], at least ten times more than the number of human cells itself [4]; the precise role of each is difficult to understand. The microbes associated with the human body are the major contributor to host metabolism by providing essential micronutrients, such as vitamins and other metabolites. For example, gut microbes produce essential micronutrients, vitamin K and enzymes, allowing humans to digest foods and absorb various essential nutrients [4]. Microbial diversity in the environment is much higher than the diversity inside humans, suggesting that a variety of new microbes are found in the environment. Despite extensive studies, a vast majority of microbes are under-discovered, and so is their effect on human health.

Given that humans are constantly exposed to various microorganisms in the environment, which comprises beneficial and pathogenic microbes, it is crucial to understand

their physiological role. The health-seeking behavior of human beings has dramatically facilitated the identification of various novel pathogenic microbes. It is evident that the disease-causing microbes have an apparent effect, obtain immediate attention, and are identified earlier than the beneficial ones. Such microbes cause illnesses that need to be cured before the infections prove to be fatal. Therefore, their identification and detailed studies to understand their nature, pathogenicity, virulence factors, and susceptibilities to existing antimicrobial agents are studied as soon as they appear and start causing problems. On the other hand, beneficial microorganisms that, in the long run, help solve issues associated with lifestyle diseases and mental well-being do not come into immediate attention.

Additionally associated with the human body are opportunistic pathogens which reside as commensals and do not cause diseases under normal circumstances. These are actively looking for opportunities to infect the host and, upon sensing conditions, such as decreased body immunity. The beneficial microbes protect against colonization of opportunistic pathogens and serve as an essential barrier to reduce human exposure to an infectious or otherwise harmful agent. Any dysbiosis in these dynamics is expected to affect the human health. In addition, beneficial microbes in the environment could act as a modulator of the microbiome inside the human body. However, based on the recent trend of increasing migration towards the developed regions, the United Nations (UN) estimates that nearly two-thirds of the world population will live in cities by 2050. Although this transition has several sound effects, it is expected to change the land use pattern and policies, transform agricultural land to build megastructures, and increase the loss or the fragmentation of green spaces in the designated urban areas, directly impacting environmental microorganisms. Exploring the relationship between the environmental and human microbiome could improve our understanding of both beneficial and disease-causing microbes.

This review will first explore the microorganisms found in the environment and inside the human body. Next, we will evaluate and discuss how these microbes can affect human health, including infections and beneficial effects. Finally, after summarizing the current evidence, this review will suggest the gaps that need to be filled.

2. Diversity of Microbes in the Environment and Human Body

Conservation, stability, and maintenance of global genetic resources and ecosystems require maintaining microbial diversity [5,6]. An analysis performed during early 2000 estimated that more than 50 bacterial phyla exist in the environment [7]. Interestingly, about half of these have not been cultured in the laboratory, indicating that microbial growth in the natural and indoor environments or laboratory is different. Microbial diversity is higher in the outdoor environment as it represents diverse species associated with animals, plants, livestock, and other factors, such as soil and air [6]. Although the number of microbial cells present in the human gut and soil is similar per gram, soil contains more diverse species than the human gut. For instance, 4×10^3 – 5×10^4 species are found in one gram of soil, and 4×10^2 species are found in one-gram feces of humans [8].

Furthermore, the soil depth also determines the density of the bacterial community, with the highest densities found above 30 cm and the lowest below 60 cm [9]. Forest soil contains higher bacterial diversity (2–5 times) than agricultural organic soil. Agricultural organic soil has higher diversity than agricultural sandy soil [10], suggesting that environmental stress and agricultural management determine the richness of microbial diversity. In addition, soil bacterial abundance varies according to carbon input, temperature, soil depth, and hydration status [11]. The abundance of microorganisms varies depending upon whether they belong to agricultural and forest soil, wetlands, grass, and desert soils [12]. Apart from that, sewage as an indicator of the human microbiome can be used broadly to obtain an idea of the microbiome of humans residing in a particular area [13–15]. In addition, the diversity of human-associated microbial community would let one know about the presence of pathogenic microbes that cause immediate infectious diseases or are associated with chronic condition, which allow us to take timely actions [16,17].

On the other hand, the indoor environment is mainly associated with human activities and non-living materials that can promote or retard microbial growth. The sources of microbes in the built environment are limited to soil, skin, pets, outside air, vagina, and gut, hence representing a lower diversity [18,19]. Likewise, microbial richness varies between body sites, individuals, and age within the human body. The well-known body sites for microbial colonization in the human body are the gut, skin, oral cavity, respiratory tract, and vagina [20].

3. Beneficial Microbes Present in the Human Body

As discussed, microbes can be both beneficial and pathogenic to humans. Microbes can be helpful in different ways, for instance, by preventing pathogen colonization, modulating the immune system, digesting nutrients, detoxifying, and producing nutrients, stimulating cellular differentiation, improving barrier function, and altering the gut–brain axis [21]. Similarly, a healthy host-microbiota relationship confers normal regulation of cardiovascular and digestive systems, resistance to pathogen colonization and supports host for defense, and anti-inflammatory, metabolic, and antioxidant potential become available [22]. Thus, microbes found in different organs of the body act in various ways to benefit the host. Table 1 shows the abundance of microorganisms based on the site in the human body and their effects on human health. It was found that a higher number of beneficial microbes are located in the gut, followed by the respiratory tract (Table 1). Actinobacteria, Bacteroidetes, Firmicutes, or Proteobacteria were the commonly found microorganisms throughout the human body [23–25].

Gut microbiome: The gut accounts for a large number of microbes that are required for the processing of ingested food. Gut bacteria, such as *Lactobacillus*, *Enterococcus*, and *Bifidobacterium* are essential for maintaining epithelial integrity, enhancing the intestinal barrier, protecting chemical-induced disruption of the epithelial barrier [26,27], and for normal development and functioning of the immune system and central nervous system [26]. Some microbes colonize immediately after birth [28,29], and many are obtained from the mother via breast milk. Therefore, the function and composition of the microbiome in an infant are greatly determined by the life events, and, more interestingly, the infant microbiome becomes comparable to the adult microbiome by the age of 2.5 years [30], suggesting that the early age is crucial for maintaining the microbial diversity. The gut microbiome is the largely studied field where relationships of the gut microbiome with human behavior and mental health have been established.

Oral microbiome: The oral cavity harbors the second most diverse microbial community (above 700 species) after the gut. However, most of them have not been cultured [22,24,31]. In analyzing the healthy oral cavity, six different bacterial phyla, namely Firmicutes, Actinobacteria, Proteobacteria, Bacteroidetes, Fusobacteria, and Saccharibacteria were identified with higher diversity in tonsils followed by tooth surface, and the least diverse microbes were found in the maxillary vestibule [24]. Common microbes in the oral cavity are Streptococcaceae, Veillonellaceae *Streptococcus mutants*, *Porphyromonas gingivalis*, *Staphylococcus*, and *Lactobacillus* [25,32]. *S. mutants* and *P. gingivalis* are pathogenic bacteria mainly responsible for dental plaque and caries, while *Lactobacillus* is the beneficial bacteria that can ferment sugar to produce lactic acid [32]. Interestingly, species associated with periodontal diseases, such as dental caries and deep dentin were not detected in healthy teeth and oral cavities [24]. This suggests that the microbial composition of the oral cavity affects oral health.

The microbiome of the respiratory tract: Normal healthy adults breathe more than 7000-L of air every day [33]. It is expected that around 2000 different microbes exist in the air. This indicates that an enormous number of microbes present in the air enter the respiratory tract as we breathe. The analysis of respiratory microbiota using genomic techniques reveals that Actinobacteria, Firmicutes, and Proteobacteria are the most common phyla found in the nasal cavity [25]. Overall, the oropharynx and nasopharynx contain diverse bacterial communities comprised of streptococcal species, such as *Neisseria* spp. *Rothia* spp.,

and anaerobes, including *Veillonella* spp., *Prevotella* spp., and *Leptotrichia* spp. [34]. The availability of bacteria in the upper respiratory tract changes according to age, host immune response, olfactory function, and smoking habits [33]. It is important to note that the upper respiratory tract works as a gatekeeper for respiratory health. The microbial composition in the upper respiratory tract resembles the lung microbiota in healthy individuals [34].

Vaginal microbiome: Lactobacilli are common bacteria found in a healthy vagina where *Lactobacillus* sp. safeguard the vaginal environment from non-indigenous and potentially pathogenic microorganisms [35]. The richness and diversity of bacteria changes according to the pregnancy status as evidenced by reduced diversity with the dominance of *Lactobacillus* followed by *Clostridiales*, *Bacteoidales*, and *Actinomycetales* [36].

Skin microbiome: Staphylococcus and Micrococcus are the most prevalent isolates in the skin. The members of the skin microbiota are characterized by their ability to metabolize amino acids, steroids, lipids, and sugars [37]. The diversity of bacteria in the skin depends upon its moisture level—moist, sebaceous, and dry areas of skin harbor different microbes. Where the least diverse microbes are found in sebaceous sites, e.g., forehead, retro auricular crease, alar crease, and the back, most diverse microbes are found in dry areas, e.g., volar forearm, different locations of the hand and the buttocks [23]. The higher diversified bacteria available in the dry skin sites might be associated with frequent exposure of these sites to the external environment [38]. However, it is still unknown how skin microbes can survive or replicate on the skin and are frequently encountered in the environment [23].

Table 1. Microorganisms found in different parts of the body and their possible effect on human health. Genera tending to fall towards pathogenic and beneficial are indicated by bold and italic, respectively. The * sign next to the genera names indicates that these beneficial microbes are also reported to cause infection; genera that are neither bold, italic, nor have * symbol are unclassified (The list regarding beneficial and pathogenic effects is not exhaustive).

Body Sites	Common Phyla	Common Genera	Positive Effects of Beneficial Genera	
Gut [39]	Actinobacteria	<i>Corynebacterium</i> *	Stimulates immune system, Gut homeostasis, Protection against gastrointestinal infection [40–44], Protective role in TNF- α induced inflammatory response [45].	
		<i>Bifidobacterium</i>		
		Atopobium		
	Firmicutes	<i>Faecalibacterium</i>		Prevention of Inflammatory bowel disease and colorectal cancer, Protection of colon, control of metabolism [46], Immune response/balancing immunity in intestine [46,47].
			<i>Clostridium</i> *	Immunity maintenance, Anti-inflammatory response [48–50].
			<i>Roseburia</i>	
		Ruminococcus		
		Dialister	<i>Lactobacillus</i>	Anti-microbial activity [51,52], Cholesterol metabolism, immunomodulation, anti-allergic effects, anti-diabetic effects [51].

Table 1. Cont.

Body Sites	Common Phyla	Common Genera	Positive Effects of Beneficial Genera
		<i>Enterococcus</i> *	
		Staphylococcus	
		Sphingobacterium	
	Bacteroidetes	<i>Bacteroides</i> *	
		Tannerella	
		Parabacteroides	
		Alistipes	
		Prevotella	
		Escherichia	
		Shigella	
	Proteobacteria	Desulfovibrio	
		Bilophila	
		Helicobacter	
	Fusobacteria	Fusobacterium	
	Verrucomicrobia	<i>Akkermansia</i> *	
		Actinomyces	
	Actinobacteria	Atopobium	
		<i>Corynebacterium</i> *	
		Rothia	
	Proteobacteria	Campylobacter	
		Haemophilus	
		Neisseria	
Oral cavity [53]		Bergeyella	
	Bacteroidetes	Capnocytophaga	
		Prevotella	
		Granulicatella	
	Firmicutes	Streptococcus	
		<i>Veillonella</i>	Lactate metabolism, NO ₂ production, Maintain oral health and general health [54]
	Saccharibacteria		
	Fusobacteria	Fusobacterium	

Table 1. Cont.

Body Sites	Common Phyla	Common Genera	Positive Effects of Beneficial Genera
Respiratory tract [25,33]	Actinobacteria	<i>Corynebacterium</i> *	Reduction in respiratory tract infections [55–57] Reduces the colonization of pathogenic bacteria [55]
		Cutibacterium	
		<i>Bifidobacterium</i>	
		Rothia	
		Dolosigranulum	
		Staphylococcus	
	Firmicutes	<i>Veillonella</i> *	
		Lachnospiraceae	
		Streptococcus	
	Bacteroidetes	Prevotella	
	Fusobacteria		
	Proteobacteria		
Vagina [58]	Actinobacteria	Gardnerella	Immunomodulation and restoration of healthy microflora in the vagina, The first line of defense against vaginal pathogens [59,60].
		Atopobium	
		Eggerthella	
	Firmicutes	Alloiococcus	
		Papillibacter	
		<i>Megasphaera</i>	
		Aerococcus	
		<i>Lactobacillus</i>	
		Streptococcus	
	Bacteroidetes	Prevotella	
	Fusobacteria		
	Skin [61]	Actinobacteria	
Corynebacterium			
Micrococcus			
Mycobacterium			
Kocuria			
Rothia			
Firmicutes		Staphylococcus	
		Streptococcus	
		<i>Lactobacillus</i>	

Table 1. Cont.

Body Sites	Common Phyla	Common Genera	Positive Effects of Beneficial Genera
		Finegoldia	
		Aerococcus	
		Anaerococcus	
	Proteobacteria	Paracoccus	
		Haematobacter	
		Sphingomonas	
		Hemophilus	
	Bacteroidetes	Flavobacterium	
		Prevotella	

4. Factors Associated with Microbial Dysbiosis and Its Impact on Human Health

The diversity of beneficial microorganisms in the human body has a crucial role in maintaining a healthy status. Conversely, lower diversity of such microbes or higher diversity of pathogenic microbes in the body is a sign of ill-health (Figure 1). A study found that women who had bacterial vaginosis had complicated vaginal infections with microbial dysbiosis and the presence of several newly recognized potential pathogenic bacterial species [64]. Similarly, changes in gut microbe composition are thought to be responsible for various diseases, including autoimmune disease, diabetes, inflammatory bowel disease, psoriatic arthritis, eczema, coeliac disease, and arterial stiffness [65,66]. An intervention study identified that the gut and skin microbial diversity greatly varied by children’s interaction with nature, such as soil and plants [67]. In addition, the diversity of microbial communities close to nature was found to be associated with an increase in immunoregulatory pathways [67].

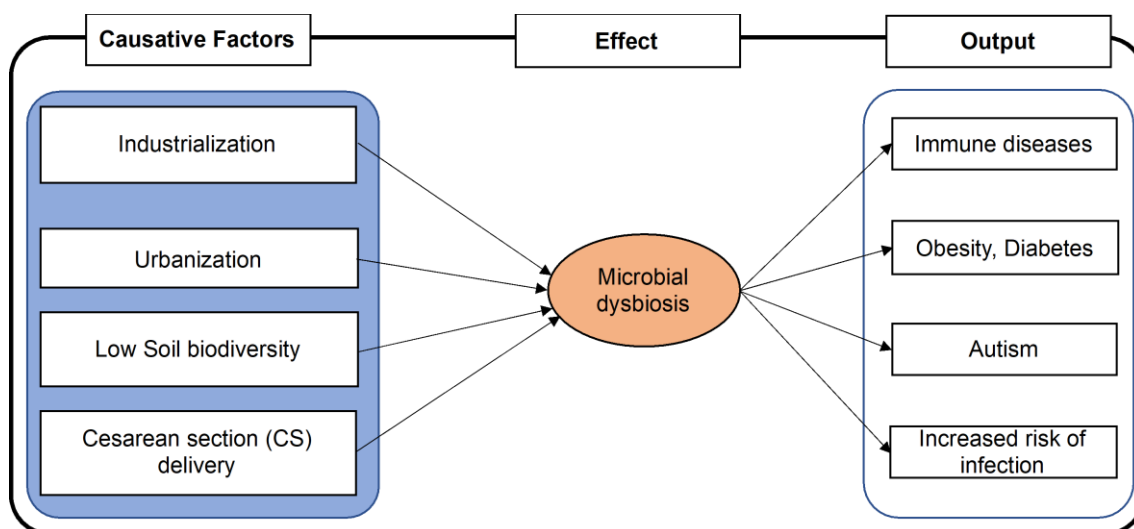


Figure 1. Factors associated with microbial dysbiosis leading to disease. A change in lifestyle and food habits associated with industrialization and urbanization, and cesarean delivery is expected to reduce humans’ microbial balance and diversity, leading to the appearance of several non-communicable diseases and ill effects in health.

Similarly, mimicking farm-like increased microbial diversity in non-farmhouses led to a reduced risk of asthma [68]. In addition, a separate study found that the gut microbiome diversity and maturation in infants provided a protective effect against asthma [69].

Moreover, the role of nutrition in maintaining the balance of the microbiome seems crucial as nutritional changes in a lifetime may lead to microbial dysbiosis and increased incidence of chronic inflammatory disease and obesity [66]. Furthermore, people with microbial dysbiosis are more sensitive to environmental changes, while those with a balanced microbiome can maintain their health even in adverse environmental conditions [70]. In the same line, individuals living in a complex, species-rich ecosystem can have more diversified and balanced microbiomes and be more resistant to the disease [71]. Thus, it is essential to have a balanced and diversified microbiota in the body.

5. Factors Associated with Microbial Diversity in the Human

Multiple factors might affect the microbial balance inside a human being. Therefore, this review will mainly focus on the six different factors possibly involved in changing the abundance, diversity, and balance of microorganisms inside or on the surface of the human body.

Living with pets: Living with pets differently affects the microbiome. For example, Kates et al. [72] identified that adults living with pets tend to have a microbiome with beneficial behavior. In contrast, Azad et al. [73] found that microbiota richness and diversity tended to be increased in infants living with pets but tended to have a higher number of pathogenic microbiomes than beneficial. However, prenatal pet exposure significantly increased microbiomes that show beneficial behavior and significantly decreased pathogenic microbiome, suggesting that prenatal pet exposure can benefit for the newborn [74].

Living with the environment: The biodiversity hypothesis explains that the frequent contact of people with the natural environment can increase the diversity in the human microbiome, promote the immune balance and protect the individual from allergy and inflammation [75]. For instance, people living in urban and rural have different degrees of exposure to microorganisms from the soil, nature, water, and biomasses used in agriculture or livestock, which is associated with a difference in their skin [38] and gut microbiome [76]. In line with this, Hanski and collaborators [77] established the relation between exposure to the environment and skin atopy. Furthermore, atopy was significantly associated with environmental biodiversity around the house, with decreased incidences among people who had flowering plants in the yards and lived nearby forest and agricultural land. Furthermore, it has been identified that children who grow up on farms in contact with livestock or those who have exposure to dogs or certain microbes early in life have reduced incidences of allergic diseases and asthma in later life [78–82]. In addition, the microbiota of individuals in long-term care facilities was much less varied than those in the community dwellers [83].

Similarly, urban green space is also positively associated with biodiversity, followed by a healthy environmental microbiome associated with a healthy human microbiome leading to immunological resilience and consequently good health and well-being. Urban green space also has other ways for good health and well-being through thermal buffering, air cleaning, social integration, calming environments, physical activity, and food gardens [84]. In summary, all these studies highlight the importance of the natural environment for the well-being of humans. World Health Organization also emphasized that “reduced contact of people with the natural environment and biodiversity, and biodiversity loss in the wider environment, leads to reduced diversity in the human microbiota, which itself can lead to immune dysfunction and disease”.

Industrialization: With rapidly progressing industrialization, more people live in industrialized urban areas of the world. These people are expected to live in crowds and have less contact with nature. This further leads to low microbial diversity related to their eating behaviors, disruption of the biological clock, use of antibiotics, the higher practice of cesarean section (CS) delivery during childbirth [85]. This, eventually, is associated with the higher prevalence of immune diseases, metabolic diseases, colorectal cancer, and autism [85]. Furthermore, urban life is also characterized by a sedentary lifestyle

and associated with reduced contact with nature, thereby changing the body's microbial community [75].

Method of delivery: During the first three days of life, infants' microbial colonization is substantially affected by the mode of delivery. This was evidenced by the absence of *Bifidobacteria* sp. among infants born by cesarean section and the presence of subject-specific microbial profile among infants born by vaginal delivery though predominant groups were *B. longum* and *B. catenulatum* [86]. Therefore, it is expected that during normal vaginal delivery, the newborn infants come in contact with maternal vaginal microbiota, which will later grow and mature in the child.

Soil biodiversity: Soil biodiversity benefits human health by providing clean water, food, and air by suppressing the disease-causing soil organism [87]. Even though environmentally healthy soil and the human gut have a roughly similar number of active microorganisms, the diversity of the human gut microbiome is mere 10% of that of soil biodiversity [8]. This indicates that human microbial diversity can further be enhanced by interacting with natural healthy soil. However, the current modern lifestyle, including agrochemical, low plant biodiversity, inappropriate soil management practices in rural areas, has decreased soil microbial diversity [8].

Age: Age affects microbial diversity. In most cases, age is positively correlated with diversity. By the age of 3, the gut microbiome's composition starts to resemble that of adults [30]. Whereas age is positively correlated with the higher microbial diversity in normal-weight children, this was negative among obese and overweight children suggesting that child weight may impair the microbial diversity [88]. Interestingly, one study found higher diversity among young adults, but the same was not found among middle-aged adults [89]. In summary, it suggests that the health condition of young adults and middle-aged adults should be considered differently.

Food consumption: Foods consumed in the form of plants, vegetables, fruits, seeds also determine human microbiota. Plants have their own microbial community in the form of either endophytic bacteria or rhizobacteria. Both kinds of plant microbiome are beneficial to plants to improve plant growth, promote resistance towards biotic and abiotic stresses, and produce metabolites with medicinal properties [90,91]. It has been found that high fruit and vegetable intake was positively associated with the abundance of *Faecalibacterium prausnitzii*, *Akkermansia muciniphila*, *Ruminococcaceae*, Clostridiales, Acidaminococcus, and *Bifidobacteria* [92,93], while negatively associated with Firmicutes [94] highlighting that diet and specific dietary components could affect microbiota composition, diversity, and activity. In addition, consumption of fermented foods is another direct source of the microbial community that changes human microbiota significantly.

Thus, the interrelationship between the environmental and human microbiome is complicated. Maintaining biodiversity seems crucial for the balanced microbial ecosystem within the human body and the environment. With the evidence of a positive association between microbiome-rich environmental surroundings and the good health of people, the focus should be paid to creating the natural environment as much as possible to prevent allergic and chronic non-communicable diseases.

6. Environment-Host Dynamics

The disease can occur according to the condition of the host environment, and the relationship between host, pathogen, microbiome, and the environment determines the disease outcome [71]. In normal conditions, the human microbiome stays in its respective place and helps the organism adapt to its surroundings, protects it from diseases, and helps in physiological functioning. Similarly, by preventing microbial dysbiosis of the ecosystem and contributing to ecological activities, the environmental microbiome promotes the ecosystem's stability and biodiversity. Thus, microbiomes of the host and the environment are interlinked and exchange bacteria on a regular basis [45]; for example, humans obtain microbes via means of food, or their interaction with the environment and environment receives microbes from humans in the form of human excreta. The entry of en-

environmental pathogenic microbiomes inside the human body allows the host-microbiome to combat the pathogenic microbiome. The human microbiome changes during the immune-compromised state, changed diet, antibiotic treatment, stress level, and changes in the external environment. The best example for the host status of the host environment can be explained by *C. difficile*, which is a well-studied microorganism responsible for colitis. In normal conditions, they are deficient in number in the gut because gut microbiota provides colonization resistance against *C. difficile*. Conditions, such as antibiotic use, diminish the number of beneficial microbiota, eventually increasing *C. difficile* growth leading to disease [95].

7. Improving Health: Living with Environment

With changes in human lifestyle and declining microbiome, it is crucial to focus on maintaining the microbiome health of the human being. The decrease in biodiversity and declination of the ecological balance has led to the Emerging Zoonotic Diseases (EZDs), which threats human, animal, and environmental health [96]. The health of humans is interrelated with the health of animals which, in turn, depends upon the food consumed and the environment shared. This comprises of incorporating One Health approach, which takes into account both pathogenic and non-pathogenic microbial transmission between humans, animals, and the environment [97] with the fact that environmental microbiome, as well as the microbiome of animals in close contact, can affect both the human microbiome and human health. For instance, a significant positive correlation between salmonella abundance in the municipal waste sample and the number of salmonellosis disease prevalence in the community [16] suggests that environmental health can predict human health. Similarly, the early life exposure of humans with pets can be a protective factor for the health in later life. However, it also depends on the health of the pets, which may affect the health of humans. Likewise, encroachment of wildlife by humans has opened up another aspect where humans are in closer contact with wild animals than before, increasing the likelihood of interaction with diverse microbial communities.

As our understanding of microbial community in the environment increases, we have become more aware of the benefits that environmental microbes can provide to our health. Evidenced by several studies is the influence of environmental microbes upon the human microbiome and ultimately human health. As the living environment dramatically affects the microbiota, a closer living with nature would facilitate the diversification and balance of microbiota inside the body (Figure 2). A multi-disciplinary understanding, joint effort, and thought system can be the possible solution to obtain optimum health for humans, animals, and the environment.

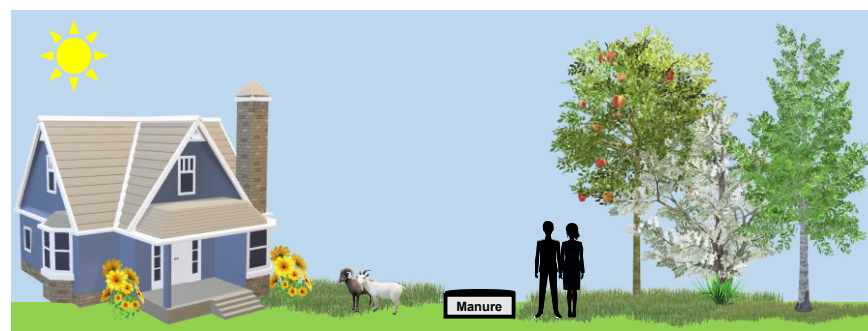


Figure 2. A schematic representation of living with the environment for a diversified and balanced microbiome. A close living with the natural environment with domestic or pet animals, diverse soil, flowering plants in the yard, and close proximity of forest can facilitate the diversification and balance of human microbiota.

8. Summary and Conclusions

The interaction between the human microbiome and environmental microbiome will shape the human microbiome diversity and composition, which in turn affects the overall human health, both physical and mental. As science in advancing toward next-generation sequencing technologies, identification and study of a large number of microorganisms in a short time is achievable. Consequently, microorganisms that are not easily cultured in laboratory-derived artificial mediums are being identified. With the identification of a large number of microorganisms, the studies for the understanding of their role in nature and human health have become important. In addition, with the changing environmental conditions and urbanization, the composition and diversity of the environmental microbiome are also changing.

Moreover, the meaning of domestic animals has been changing and confined to pet animals rather than farm animals, which used to be the case before urbanization. This has led to changes in the diversity of interaction of animals and humans. Animals have their own microbiome, and as the types of animals that interact with humans within the modern era has changed, so did the diversity and composition of the microbiome that humans are exposed to. Similarly, the dietary pattern is also equally important to have the beneficial microbial diversity evidenced by the higher diversity found among people who eat more vegetables and fruits. Hence, interacting more with farm animals, increasing the consumption of plant-type food (vegetables), including fruits, and creating a natural or farm-like environment in the homes to improve the interaction with the environmental microbiome is essential. The diversity and composition of farm animals and plants are also impacted due to changes in their diet, environment, and methods of rearing and/or breeding.

To maintain the balance between environmental and human microbiome, a multi-sectorial approach is needed, considering the inherent role of microorganisms in their natural niche. Attempts should be made to preserve the beneficial organisms present in the environment and within the host by investigating the dynamics of the relationship between the environmental microbiome and humans. In addition, industrialization with proper environmental management and maintenance of environmental surroundings as close to natural as possible and improving lifestyle pattern is the emergent need in the current global scenario.

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The attached signed petitions were attached to the letter from Mary Lou White - This letter has been deleted from each of the petitions to avoid redundancy.

Comments on Type I and IIIA Notice of Application
SUB2024-0006/USE2024-0012/ADU2024-0053 thru 061

I Andrew Bonner own property at 3205 Pinewood Ave. and would like to state my concurrence with the comments written by Mary Lou White, located at 2905 Birchwood Ave, and submitted to Kathy Bell, Bellingham City Planning and Community Development Department, regarding the proposed Type I and IIIA notice of application for project SUB2024-0006/USE2024-0012/ADU2024-0053 thru 0061.

Please check box (s) that apply.

I agree with **all** comments as written.

I agree with **only** the following bulleted concerns with the application (circle those Bullet Number (s) that are applicable:

Example: Concern 1 ~~XXXXXXXX~~: Bullet 1

Concern 1 Subject Site / Property Description: Bullet 1;

Concern 1 Subject Site / Property Description: Bullet 2;

Concern 1 Subdivision Criteria: Bullet 1;

Concern 1 Subdivision Criteria: Bullet 2;

Concern 1 Subdivision Criteria: Bullet 3;

Concern 1 Natural Features: Bullet 1;

Concern 1 Clearing and Grading: Bullet 1;

Concern 2: Bullet 1;

Concern 2: Bullet 2;

Concern 2: Bullet 3;

Concern 2: Bullet 4;

Concern 2: Bullet 5;

Concern 2: Bullet 6;

Concern 2: Final Notes

My concerns about the project are as follows (*please write your concerns below*):

RECEIVED

Comments on Type I and IIIA Notice of Application
SUB2024-0006/USE2024-0012/ADU2024-0053 thru 061

JUL 18 2024

City of Bellingham
Planning & Community Development

I Ed Hanson & Bunney Hanson own property at 2908 Birchwood Ave. and would like to state my concurrence with the comments written by Mary Lou White, located at 2905 Birchwood Ave, and submitted to Kathy Bell, Bellingham City Planning and Community Development Department, regarding the proposed Type I and IIIA notice of application for project SUB2024-006/USE2024-0012/ADU202-0053 thru 0061.

Please check box (s) that apply.

I agree with **all** comments as written.

I agree with **only** the following bulleted concerns with the application (circle those Bullet Number (s) that are applicable:

Example: Concern 1 XXXXXXXX: Bullet 1

Concern 1 Subject Site / Property Description: Bullet 1;

Concern 1 Subject Site / Property Description: Bullet 2;

Concern 1 Subdivision Criteria: Bullet 1;

Concern 1 Subdivision Criteria: Bullet 2;

Concern 1 Subdivision Criteria: Bullet 3;

Concern 1 Natural Features: Bullet 1;

Concern 1 Clearing and Grading: Bullet 1;

Concern 2: Bullet 1;

Concern 2: Bullet 2;

Concern 2: Bullet 3;

Concern 2: Bullet 4;

Concern 2: Bullet 5;

Concern 2: Bullet 6;

Concern 2: Final Notes

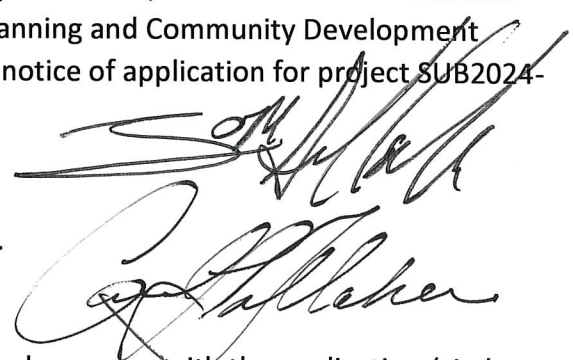
My concerns about the project are as follows (*please write your concerns below*):

JUL 18 2024

Comments on Type I and IIIA Notice of Application
SUB2024-0006/USE2024-0012/ADU2024-0053 thru 0061

City of Bellingham
Planning & Community Development

I Tom + Carol Gallaher own property at
3201 Pinewood Ave, Bellingham and would like to state
my concurrence with the comments written by Mary Lou White, located at 2905 Birchwood
Ave, and submitted to Kathy Bell, Bellingham City Planning and Community Development
Department, regarding the proposed Type I and IIIA notice of application for project SUB2024-
006/USE2024-0012/ADU202-0053 thru 0061.



Please check box (s) that apply.

I agree with **all** comments as written.

I agree with **only** the following bulleted concerns with the application (circle
those Bullet Number (s) that are applicable:

Example: Concern 1 XXXXXXXX: Bullet 1

Concern 1 Subject Site / Property Description: Bullet 1;

Concern 1 Subject Site / Property Description: Bullet 2;

Concern 1 Subdivision Criteria: Bullet 1;

Concern 1 Subdivision Criteria: Bullet 2;

Concern 1 Subdivision Criteria: Bullet 3;

Concern 1 Natural Features: Bullet 1;

Concern 1 Clearing and Grading: Bullet 1;

Concern 2: Bullet 1;

Concern 2: Bullet 2;

Concern 2: Bullet 3;

Concern 2: Bullet 4;

Concern 2: Bullet 5;

Concern 2: Bullet 6;

Concern 2: Final Notes

My concerns about the project are as follows (*please write your concerns below*):

RECEIVED

Comments on Type I and IIIA Notice of Application
SUB2024-0006/USE2024-0012/ADU2024-0053 thru 061

JUL 15 2024

City of Bellingham
Planning & Community Development

I Nancy Cook own property at 2133 Pinewood Ave Bellingham and would like to state my concurrence with the comments written by Mary Lou White, located at 2905 Birchwood Ave, and submitted to Kathy Bell, Bellingham City Planning and Community Development Department, regarding the proposed Type I and IIIA notice of application for project SUB2024-006/USE2024-0012/ADU202-0053 thru 0061.

Please check box (s) that apply.

I agree with **all** comments as written.

I agree with **only** the following bulleted concerns with the application (circle those Bullet Number (s) that are applicable:

Example: Concern 1 XXXXXXXX: Bullet 1

Concern 1 Subject Site / Property Description: Bullet 1;

Concern 1 Subject Site / Property Description: Bullet 2;

Concern 1 Subdivision Criteria: Bullet 1;

Concern 1 Subdivision Criteria: Bullet 2;

Concern 1 Subdivision Criteria: Bullet 3;

Concern 1 Natural Features: Bullet 1;

Concern 1 Clearing and Grading: Bullet 1;

Concern 2: Bullet 1;

Concern 2: Bullet 2;

Concern 2: Bullet 3;

Concern 2: Bullet 4;

Concern 2: Bullet 5;

Concern 2: Bullet 6;

Concern 2: Final Notes

My concerns about the project are as follows (*please write your concerns below*):

RECEIVED

Comments on Type I and IIIA Notice of Application
SUB2024-0006/USE2024-0012/ADU2024-0053 thru 061

JUL 15 2024

City of Bellingham
Planning & Community Development

I ALEXANDRA LIHOU own property at
3203 PINEWOOD AVE, BELLINGHAM WA and would like to state
my concurrence with the comments written by Mary Lou White, located at 2905 Birchwood
Ave, and submitted to Kathy Bell, Bellingham City Planning and Community Development
Department, regarding the proposed Type I and IIIA notice of application for project SUB2024-
006/USE2024-0012/ADU202-0053 thru 0061.

Please check box (s) that apply.

I agree with **all** comments as written.

I agree with **only** the following bulleted concerns with the application (circle
those Bullet Number (s) that are applicable:

Example: Concern 1 XXXXXXXX: Bullet 1

Concern 1 Subject Site / Property Description: Bullet 1;

Concern 1 Subject Site / Property Description: Bullet 2;

Concern 1 Subdivision Criteria: Bullet 1;

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Concern 1 Subdivision Criteria: Bullet 3;

Concern 1 Natural Features: Bullet 1;

Concern 1 Clearing and Grading: Bullet 1;

Concern 2: Bullet 1;

Concern 2: Bullet 2;

Concern 2: Bullet 3;

Concern 2: Bullet 4;

Concern 2: Bullet 5;

Concern 2: Bullet 6;

Concern 2: Final Notes

My concerns about the project are as follows (please write your concerns below):

THE MAIN CONCERN I HAVE IS THE "BUT & SWITCH"
THAT THE LAND TRUST SEEMS TO BE DOING.
NO ONE OBJECTS TO AFFORDABLE HOUSING, BUT TO
PROPOSE A PLAN TO A COMMUNITY THAT BENEFITS
ALL, THEN TO CHANGE, CHANGE & CHANGE AGAIN
THE PLAN SEEMS DECEPTIVE. THIS CURRENT PLAN
ONLY BENEFITS THE LAND TRUST & IT IMMEDIATE
OCCUPANTS, BUT AT THE SACRIFICE OF THE COMMUNITY
THAT IS TRYING TO JOIN.

Comments on Type I and IIIA Notice of Application
SUB2024-0006/USE2024-0012/ADU2024-0053 thru 061

RECEIVED

JUL 15 2024

City of Bellingham
Planning & Community Development

I Sally Jo Brown own property at 2901 Birchwood Ave, and would like to state my concurrence with the comments written by Mary Lou White, located at 2905 Birchwood Ave, and submitted to Kathy Bell, Bellingham City Planning and Community Development Department, regarding the proposed Type I and IIIA notice of application for project SUB2024-0006/USE2024-0012/ADU202-0053 thru 0061.

Please check box (s) that apply.

I agree with **all** comments as written.

I agree with **only** the following bulleted concerns with the application (circle those Bullet Number (s) that are applicable):

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Concern 1 Subdivision Criteria: Bullet 3;

Concern 1 Natural Features: Bullet 1;

Concern 1 Clearing and Grading: Bullet 1;

Concern 2: Bullet 1;

Concern 2: Bullet 2;

Concern 2: Bullet 3;

Concern 2: Bullet 4;

Concern 2: Bullet 5;

Concern 2: Bullet 6;

Concern 2: Final Notes

My concerns about the project are as follows (*please write your concerns below*):

Letter attached to signed petitions.

Mary Lou White
2905 Birchwood
Bellingham, WA

Kathy Bell
Planner
Planning and Community Development Department – City Hall
210 Lottie Street – Bellingham, WA 98225

RE: Planning Application – SUB2024-0006/USE2024-0012/ADU2024-0053 Thru 0061

Hi Kathy,

I am writing to comment on the proposed development located at 2912 Birchwood Ave, application number referenced above. I would like to make you aware that in my view, the application is incomplete and misleading. As a neighbor within 180 ft of the project site, it is also my opinion the proposed project falls short of meeting Bellingham’s Comprehensive Plan goals and policies and without modification, will have a negative effect on the standard of living, health, and safety of myself and the Birchwood Neighborhood Community. My specific objections are as follows:

- 1. The project application narrative is incomplete, misleading, and does not align well with the Bellingham Comprehensive Plan:**

Subject Site / Property Description

- The proponent narrative states: “The property is located in the Birchwood Neighborhood, Area 1, and is zoned Residential, Single, Detached, and Mixed”. *The proponent’s description (Residential, Single, Detached, Mixed) without further explanation is misleading. The Birchwood Neighborhood Plan (BNP) is clear that there are separate designated zones for specific development types. The Area 1 Zone is designated for Residential Single development. The detached, mixed referenced in Area 1 is listed under Special Regulations and qualifies the mixed term as follows:* The mixed designation is intended to allow agriculture and the raising of farm animals; **provided**, that they are **not a commercial endeavor. The latter must have the approval of the Bellingham/Whatcom County health department.**

The property parcel at 2912 Birchwood Avenue is currently zoned Residential Single. Without the knowledge of many nearby residents, Kulshan Land Trust has illegally allowed City Sprouts to utilize the northwest corner as an agricultural nursery for five years (adjacent

landowners thought it was a community garden). Recently, despite the City of Bellingham informing Kulshan Land Trust that they must obtain a conditional use permit to bring the City Sprouts activities into compliance, it has taken them months to apply.

In March of 2024, Kulshan Land Trust met with the Birchwood Neighborhood Association to talk about and advocate for support of the project, including City Sprouts use of the land as a mixed agricultural nursery in the northwest corner and proposed open space in the northeast corner. As described by Kulshan, if the project was permitted it would allow City Sprout to continue operation as both a garden and commercial endeavor intended to support the neighborhood as a food source. During that meeting and during a more recent community meeting, both the Birchwood Neighborhood Board and local community members requested that Kulshan Land Trust place the northwest and north east tract in a perpetuity covenant (or something equivalent) in order to protect the property from future development. In this application, Kulshan has not guaranteed the use of the northwest corner for agriculture or open space nor protected the northeast corner into perpetuity. Anything less than doing so does not benefit the community. Specifically, using words such as “memorialize” without further legal specification, does not guarantee indefinite use of that land in a way which is beneficial to the community. In my opinion, it therefore does not represent support for equity and inclusion to the underserved population of the Birchwood neighborhood—something that is paramount in the Comprehensive Plan’s goal—nor does it support the innovative intent of the Bellingham Comprehensive Plan or the special “mixed” qualifier in the Birchwood neighborhood plan. The mixed qualifier has special provisions to provide for agricultural use which complements the single family residential A1 zoning area which historically had Victory gardens and self-sufficient single family residences. These gardens improved the health and quality of life for single family homeowners. Any mixed agricultural nursery zoning at this site (partial commercial or otherwise) which does not provide legal long-term agricultural or open space benefit to the entire community should be considered spot zoning.

- *The proponent narrative states: “There are no critical areas identified on the property or on adjoining properties.” The project site is located on top of the former Bellingham Mine operation and is classified in the Bellingham Critical Area Environmental maps as a known coal mine geological hazard area, and medium-high seismic activity area. In the Whatcom County Supreme Court case, Peters Vs. Bellingham Coal Mine (May 12th, 1933), the Bellingham Coal Mine was found to have caused subsidence on the Peters property. In a report to the Comptroller General*

of the United States, entitled Alternatives to Protect Homeowners from Damages Caused by Mine Subsidence (Feb. 1979), three of the four optimum recommendations for subsidence control are zoning, subdivision regulation, and small, box-style homes. (The fourth recommendation pertains only to mining methods.) While substantial subsidence may not be likely on the proposed project parcel, even minor subsidence can cause superficial or structural damage, which could be costly to new homeowners in an already overinflated local housing market. Kulshan Land Trust has hired a consultant to conduct a geological assessment of the site. Saying there is no Critical Area is disingenuous, misleading and inaccurate. This geological report should be available to the public and provided along with the application for public review.

Subdivision Criteria

- Community Design - the proponent narrative states: "There are no specific neighborhood character or open space policies directly applicable to the project..." *This is incorrect and misleading. For Area 1, the Neighborhood Plan claims the following qualifiers: Residential single with a lot size minimum of 20,000 sq. ft., detached, and mixed. As previously stated, the plan considers "detached and mixed" as land "[...] intended to be allowed for agriculture and the raising of farm animals; **provided**, that they are **not a commercial endeavor.**"*

Currently, the relationship between City Sprouts and the adjacent Birchwood neighbors is a positive one because of City Sprout's benefit to the health of the community. This is largely because City Sprouts is a small operation, and because City Sprouts has not been selling produce on site. However, changing this tract to "conditional mixed" with City Sprouts designated as a commercial enterprise, sets a precedence for additional commercial enterprises to exist in a zoned, residential, single-family area which is not in concurrence with the BNP mix qualifier use. Needless to say, this would not maintain the neighborhood character for this Area 1 zone, and would have an overall detrimental effect on neighboring amenities. If the existing garden is allowed to be zoned as conditionally mixed, it is paramount that it is put into a covenant (or equivalent document) that any zoning change is a special condition, and that the parcel must be maintained as a garden or open space. Furthermore, it must include that if City Sprouts chooses to close their operation, the land must remain as a garden or open space zoning. Additionally, no commercial building should be allowed on the project site now, or in the future. A similar statement should be placed in Bellingham City ordinances (or equivalent policies) that states that the Special use Mixed Zoning allowed for City Sprout's conditional use may not be used as a precedent for future zoning changes with regard to housing

developments, commercial, or agricultural development on the parcel or within the Birchwood Neighborhood.

*Lastly, the Birchwood Neighborhood Plan and Bellinham Comprehensive Plan are one in the same. As such, the Birchwood Neighborhood Community relies on the director and planning department to make fair and impartial decisions, even when the City of Bellingham has a monetary vested interest in the proposed project. There are specific policies in the Comprehensive Plan that the Neighborhood Plan relies on in order to maintain the character of the neighborhood. Particular concerns pertain to the policies under BMC 20.30.20 B2 that specifically state clustering should be allowed for retaining open space, and policies under BMC 20.29.030F which allow minor changes-only if **all** applicable laws (including Washington State Laws) are met. Allowing stacked minor-modification changes without associated chapter provisions, even if allowed under statute, disassociates the change from the original BMC ordinance or policy provisions' intent, and is equivalent to allowing a major change. This is especially true when the changes are request from multiple BMC chapters. I believe this is not the intent of the Planning Department or of the Comprehensive Plan's Goal with regard to allowing affordable housing.*

- ***The proponent states: "...both sections of the Plan discuss the contrasting development patterns (low density/rural feeling single family with higher density multifamily) which permeate the neighborhood"*** Again, this is misleading. The proponent is referencing a general description of the overall neighborhood, inclusive of all 29 areas, and implies that a high density, multifamily project and commercial agricultural endeavor with plans for additional future commercial zoning (community center) and development would maintain the Birchwood Neighborhood Character. The plan actually reads:

"The Birchwood Neighborhood is an interesting study in contrast. The neighborhood has historically been an area consisting of single family homes built on extremely large lots. It is characterized by older, well-kept homes on lots often in excess of 400 feet deep. Mature landscaping, open fields and narrow streets lend a rural atmosphere to the neighborhood. The neighborhood has seen the growth of apartment and condominium complexes located primarily along Northwest Avenue and on Maplewood Avenue.... the large lots in the Birchwood area give the neighborhood a spacious, rural feeling."

Specific to Area 1, the plan reads “This low-density residential area makes up the bulk of the Birchwood Neighborhood and gives it much of this character”

Kulshan Land Trust should not be allowed regulatory modification which would result in 9 new dwellings and 9 large ADU’s with plans for future development on 2.79 acres in this well-established neighborhood with older homes. This is based entirely on “mostly” fulfilling ordinance criteria. Having this many two-story clustered units is contradictory to maintaining the character of the Birchwood Neighborhood’s mature landscaping and smaller, single-family housing style. This could also mandate changes to the narrow street and would create a high-traffic area and on-street parking (in a high crime neighborhood) that would compromise the neighborhood’s safety, privacy, and noise levels, leading to a decrease in amenities, health and quality of life. This would be considered a public nuisance which is unlawful under RCW 7.48.130.

The character of a neighborhood does not change overnight. Multiple, incremental changes that are allowed to happen on a parcel-by-parcel basis based on just one goal (100% affordable housing), results in permanent changes to the neighborhood character and is a threat to the neighborhood health and safety. As proposed in the application, the project also contradicts health, climate change, and sustainability goals, and falls short on fulfilling the innovation intent of the Comprehensive Plan.

I, like most of my neighbors, realize that we need affordable housing, however, house cramming without consideration to the overall impact on the community should not be allowed. This parcel has jumped from 6, to 9, and then to 18 units, and Kulshan’s ultimate goal is to put even more houses on the property. Regardless of what Kulshan Land Trust may say, they have made it very clear in their actions (and in writing) that their intent is to push housing numbers on this parcel as far as they can without regard for city planning goals, critical areas, adjacent neighbors’ concerns, or even the overall health, safety, and welfare of potential affordable housing occupants. In my opinion, it also does not support Washington State’s definition of equity for all as is defined under the Washington State Constitution Article 1, Section 12 or the Universal Declaration of Human Rights Article 12 which states “No one shall be subject to arbitrary interference with his privacy, family, home[...]”.

- *The proponent’s narrative states: Fire and garbage turnaround will be incorporated into the access lane. Currently, no fire and garbage turnaround is included in the proposed plans. Additionally, the narrative*

states that 4 to 6 City Sprouts employees will park adjacent to the farm operations from April to October. This essentially means that parking is insufficient since there will not be two spots for each resident with a unit greater than 1,000 sq. ft. since City Sprouts employees will be parking in those spots.

Natural Features

- *The proponent states that there are no natural features of significance on the property, however, as previously discussed, the project site is located on top of the former Bellingham Mine operation and is classified in the Bellingham Critical Area Environmental maps as a known coal mine geological hazard area and medium-high seismic activity area (See bullet 2 under Subject Site / Property Description). The proponent then goes on to acknowledge that the property has several stands of mature “significant” cottonwood. This is misleading, because there appears to be one well established, mature stand of cottonwoods on the west side of the property with smaller younger-aged cottonwood trees scattered throughout the property. The northeast corner appears (from a distance) to be dominated by young and sampling trees (likely alder) and shrubs. Within the well-established stand of cottonwoods on the west side is at least one cottonwood that I measured at breast height (4.5ft), with a diameter at breast height (DBH) greater than 36-inches. I suspect there is at least one additional cottonwood (if not more) that are greater, or close to having a 30” DBH.*

BMC 16.60.040 defines “Significant tree” as a “tree of any species that is six inches in diameter or greater measured at breast height”. There are numerous “significant” trees located within the cottonwood stand which is located on the west side of the parcel. The proponent states “many of these trees (In reference to the cottonwood trees) present a hazard to surrounding and proposed development through their size and location” and that “due to their clustered nature, 38 of the “significant” trees are proposed for removal”

The Birchwood neighborhood has, for as long as I can remember, been associated with larger lots and mature landscaping. Cottonwoods are a keystone species in the northwest. This means they have a disproportionate ecosystem and wildlife value relative to their abundance. In essence, they help define and hold the ecosystem together. Mature trees (including deciduous cottonwood) help mediate climate change and provide ecosystem resiliency. Because they are fast growing and self-seeding cottonwood are an especially good species for climate resiliency.

Recently, it has been found that cottonwood trees add nitrogen back into the soil through nitrogen-fixing bacteria found near the leaf nodes rather than through their roots as Alder do. The nitrogen/amino acid/protein relationship is needed by all life forms. Someday in the future, we may find out that these same bacteria which have a symbiotic relationship with cottonwood are important to human health. From a cultural perspective, Native Americans used the cotton wood buds which are antimicrobial and antifungal for medicine.



Bellingham is part of the North-South Pacific Flyway. Hundreds of birds use this migration route. The proximity of the mature cottonwood trees on the subject parcel, located midway between Bellingham Bay, Squalicum Creek and Cornwall Park is advantages to numerous migrating birds, including eagles, which will nest in tall trees such as cottonwoods. This parcel, as well as most of Bellingham, has been mapped as an area for predicted future eagle breeding habitat.

*I have only been on the subject property a few times and have never looked for wildlife on the property, however, I know from looking out my window that these same trees provide critical habitat to the local deer and rabbit population. The deer have a migration route that extends from my neighbor's parcel to the east, across the road to my neighbors parcel due north. The deer stop to feed on the Mountain Ash, and then cross over to the applicant's property's southern stem. The deer then walk up the existing driveway and utilize the subject property's habitat provided by the cottonwood stands. In the spring, female deer give birth in the lower southeast corner of the parcel where the most easterly dwelling units are being proposed. **All** of my neighbors who own these parcels and who are now senior citizens, as well as myself and our children have watched this seasonal deer migration for well over thirty years. Likewise, we have watched the rabbits and squirrels play in the early morning and at dusk. We have observed children going to school, neighbors walking their dogs, and have taken many moments from our busy days to stop, admire, and chat about the squirrels, rabbits, fawn, bucks, and deer in our neighborhood. The mature cottonwood trees, along with the wildlife they support are esthetically pleasing, and greatly valued natural amenities that the neighborhood identifies with. These bits of nature improve our quality of life and bring us together in conversation and unity as a community regardless of age, monetary status, political values, or ethnicity.*

The applicant proposes to replace the cottonwood stand with new trees at a ratio of 1.3:1. However, it is unlikely that these replacement trees

will be cottonwood (a keystone species) and they will not be clustered, nor will they provide the same habitat value, be of the same age, or have the same genetic or epigenetic history as the existing stand. This matters! Utilizing the interactive iTree tool created by the USFS and partners, <https://mytree.itreetools.org/#/tree>, I was able to make an estimated equivalent comparison between the existing 36" DBH cottonwood, a typical 1.0" DBH Douglas-fir replacement tree, or ~2.5" Chinese Dogwood street tree one of the recommended species listed in BMC code (See Figure 1. below).

Figure 1.

Existing 36" Black Cottonwood	Replacement 1" Douglas-fir	Replacement 2.5" Chinese Dogwood
<p>With care and maintenance, after 20 years this tree could potentially:</p> <p>offset 9,884 miles worth of CO₂ emitted from the average gas-powered passenger vehicle,</p>  <p>absorb enough stormwater to fill 5,592 bathtubs,</p>  <p>and remove an amount of pollution from the air – in gaseous and particulate form – equivalent in weight to 83 smartphones!</p> 	<p>With care and maintenance, after 20 years this tree could potentially:</p> <p>offset 204 miles worth of CO₂ emitted from the average gas-powered passenger vehicle,</p>  <p>absorb enough stormwater to fill 131 bathtubs,</p>  <p>and remove an amount of pollution from the air – in gaseous and particulate form – equivalent in weight to 2 smartphones!</p> 	<p>With care and maintenance, after 20 years this tree could potentially:</p> <p>offset 1,643 miles worth of CO₂ emitted from the average gas-powered passenger vehicle,</p>  <p>absorb enough stormwater to fill 293 bathtubs,</p>  <p>and remove an amount of pollution from the air – in gaseous and particulate form – equivalent in weight to 12 smartphones!</p> 

Source: iTree Canopy iTree software Suite v5.X. (n.d.) Web. Accessed 6/24/2024. Note – "Benefit estimates are based on USDA Forest Service research and are meant for guidance only. Visit www.itreetools.org to learn more."

As you can see in Figure 1, removing these mature cottonwood trees contradicts Bellingham's Forestry Plan and contradicts Bellingham's goals for climate resiliency.

The proposed design does not meet the performance standards for BMC 23.08.030 which state “natural features that may or may not be regulated by other code provisions, including but not limited to trees, ...habitat...geological hazard areas...should be incorporated into the overall land division design through preservation to the extent feasible.

The proposal will not serve the public interest and is inconsistent with public health, safety and welfare. While additional housing is needed the existing forest canopy aligns with the birchwood neighborhood plan which is a part of the Comprehensive Plan, provides localized temperature relief, and the health benefits associated with natural environments (physical and mental) as well improves crime reduction.

Clearing and Grading

- *The applicant states, “the subdivision is consistent with the Comprehensive Plan, Title 23 and all sections of the BMC with exception to modification request to BMC 20.29”, however, in addition to the modification request associated with BMC 20.29 the applicant also ask for modification request associated with BMC 20.28. the Birchwood Neighborhood Plan which does not have a cluster attached qualifier, and only “almost compliant” with BMC 20.30. Of particular importance is the word retain in BMC 20.30.20 B2 which reads as follows:*

*the residential single-family “cluster” designation is intended to accommodate individual dwelling units located upon a single or multiple lots. Generally the same overall density is maintained; however, cluster lots may be reduced in size and street frontage requirements in order to **retain open space** (emphasis added) or preserve environmentally sensitive areas (*Open space that is not retained is not fulfilling the intent of the code*).*

*As documented above and in the previous sections written in this letter the applicants narrative misleads and omits critical information and the subdivision as proposed is not consistent with the Comprehensive Plan, Title 23 nor “all sections of the BMC”. Furthermore, the applicant states, “the Comprehensive Plan includes many Goals and Policies encouraging urban infill, affordability, consistency with neighborhood character, open space preservation, support for urban farming, and other relevant actions. The project as designed supports or implements many of these Goals and Policies, particularly related to affordable housing.” However, BMC 20.29.010 states, “ the Growth Management Act requires the city to provide housing opportunities for **all economic segments...** (emphases*

added)". This project is highly subsidized with local tax payer dollars (through the City of Bellingham and federal taxes) and has no mandated requirement for 100% affordability with regard to the Bellingham Comprehensive Plan or BMC ordinances. If implemented as proposed (with the requested modifications), the project will burden adjacent retired or nearly retired senior citizen landowners, single mothers, and nearby widow families, who are already on fixed or marginal incomes. These families are already burdened with high taxes and high cost of living expenses. Nevertheless, in addition to subsidizing the project, taxes in the neighborhood will go up to pay for additional road infrastructure associated with increased traffic, public utility, and safety needs on Birchwood Avenue. The overall effect is that the high density, 100% affordable housing proposed will make it less likely that existing nearby homeowners will be able to maintain or own their homes in this working class neighborhood and as already stated will have a lower quality of life. Reducing home ownership or providing affordable home ownership at the expense of another's is not the intent of the Growth Management or Bellingham Comprehensive Plan policies and is inconsistent with housing affordability for all economic segments.

With regard to affordability and infill, building 6 homes on the property which is currently open space would also implement affordable housing and contribute to Bellingham's infill supply focus and could be accomplished in a manner which would enable Kulshan Land Trust to address neighboring concerns with regard to loss of amenities, safety, health and quality of life. Additionally, a low-density development would allow for greater preservation of significant natural features and align better with fulfilling the Bellingham Comprehensive Plans focus on health, sustainability, and innovation while respecting the environment and maintaining quality of life and wellness for existing residence and future Kulshan Land Trust occupants. Kulshan could use the funding they currently have as match to seek additional grant sources that would make-up the difference in cost if they still wanted to provide 100% affordability. As both a grant reviewer and recipient who has worked for a non-profit agency for over twenty-six years, I know that grant extensions and/or contingency funds are also possibilities that Kulshan Land Trust can check into if they need more time and/or funds.

Lastly, Kulshan should be required to show alternative designs with cost estimates, one of which incorporates saving the trees, garden and open space and utilizing the temporary staging area/stem for housing. At the community meeting the vast majority of the residence (I believe all but one) stated they did not want to see a community center/commercial enterprise on the property.

2. As proposed, the project will have a negative effect on the standard of living, health, and safety of myself and the Birchwood Neighborhood Community.
- *As described by Kulshan, if the project was permitted it would allow City Sprouts to continue operation as both a garden and commercial endeavor intended to support the neighborhood as a food source, however, conditional use permits have an end date and Kulshan's ultimate goal is to infill this area; thus, the garden and/or open space would not be retained. Losing this food source and open space would hurt this community which Kulshan already acknowledges is a food desert. Additionally, as a food desert it does not make sense to allow high-density affordable housing in-fill in this A1 zone which is not within ½ mile of public transit or a grocery store as defined in food desert classification.*
 - *Parking is insufficient for suggested uses (agricultural nursery and residential housing) consequently this would lead to off-site parking either now or in the future. The Birchwood Neighborhood has one of the highest crime rates in the city. Off-site parking in front of seniors, handicapped, single mothers and windows homes who live adjacent and in close-proximity to the proposed project would reduce their sense of security and cause an increase in stress. Thereby, reducing their quality of life and health. As stated above the proposed project as one entrance and exit which would have negatively effect on safety for children to walk to school or residence to walk their dogs.*
 - *Loss of significant environmental and natural features and associated amenities (see comments under Natural Features listed above). According to the City of Bellingham, WA, Street trees provide the following benefits: "...aesthetic, historic, biologic and functional benefits which contribute to the quality of life in this City. The benefits of street trees include: soil stabilization and erosion control, reduction of storm water runoff, removal of carbon dioxide from the air, visual screening, protection from severe weather, habitat for birds, enhancement of property values, and conservation of the City's aesthetic values". Well established mature trees on this property provide all these benefits as well as greater climate change (see Figure 1 above), cultural, and residential historic benefits.*
 - *Like most of the USA, Bellingham is in an acute physical and mental health crisis, best available science indicates that being in close proximity (not just proximity) to nature increases microbiome diversity. Proximity matters, the closer the proximity, the higher the diversity. An increase in microbiome diversity is associated with better physical and mental health (please read the attached journal article). Microbiome diversity is also associated with human to animal interactions. Just as pets carry microbes from one area to another, deer, rabbits, and quarrrels also transfer beneficial microbes from parcel to parcel. The transfer of*

these organisms benefit our health and environment. Additionally, it is a well known fact that just being able to view nature reduces stress and anxiety, thereby, improving health outcomes.

- In 2023 the Birchwood Neighborhood Association Board met and agreed unanimously that noise pollution is a major problem which effects the quality of life in the Birchwood Neighborhood. Allowing high-density housing which would increase evening traffic on this road would further hurt the quality of life and health for future and existing residence who are already dealing with high noise levels from the airport, train, and cement plant.*
- Increased taxes associated with high density affordable housing from the project would become an additional burden on adjacent landowners, in this working-class neighborhood, who are on fixed incomes or maxed-out due to the rising cost of living, this could result in loss of home or residential upkeep due to affordability. As stated in the narrative living in a well-kept neighborhood is important for health.*

Final notes: Kulshan states they have not had any complaints about the nursery. I have heard the following through the neighborhood grapevine:

- 1. The parcel owner to the north does not want additional traffic going through his property to access the garden area and stated he will not allow access through that parcel now or in the future as eluted in the narrative;*
- 2. A single complaint regarding an increase in petty crime increasing about the time the garden went into operation;*
- 3. A single complaint about air pollution associated with a nearby landowner who provides plants and/or flowers to City Sprouts*

Regardless of these complaints, I believe my neighbors appreciate City Sprouts efforts to help feed the community and, with the addition of legal zoning restrictions and perpetuity covenants, would support this endeavor. Likewise, I would like to support City Sprouts and Kulshan Land Trust's efforts, however, although the concept is innovative, I can't support this project as proposed due to Kulshan's persistent determination to infill to the max and provide 100% affordability housing at the expense of our climate, environment, wildlife, health, and quality of life, Kulshan's unwillingness to incorporate adjacent neighbor suggestions that do not fulfill their agenda, and Kulshan's desire for saving space for future unsupported endeavors regardless of the cost to the neighborhood. Unfortunately, to me, the most innovative thing about this application is the way Kulshan Land Trust has brilliantly manipulated the rules and sidestepped the truth in an effort to fulfill their mission. Thank you for you time and consideration in this matter.

Sincerely,

Mary Lou White

Permits Applied for Include:

See above.

Send written comments and requests for information to:

RECEIVED

Name: Kathy Bell, Planner, kbell@cob.org or 360-778-8347
Planning and Community Development Department - City Hall
210 Lottie Street - Bellingham, WA 98225

JUN 07 2024

City of Bellingham
Planning & Community Development

2912 Birchwood Avenue
SUB2024-0006

If you want to receive notification of the decision, please complete and return this section to the Planning and Community Development Department, City Hall, 210 Lottie Street, Bellingham, WA 98225.

Attn: Kathy Bell, Planner **Yes, I would like to know the action taken.**

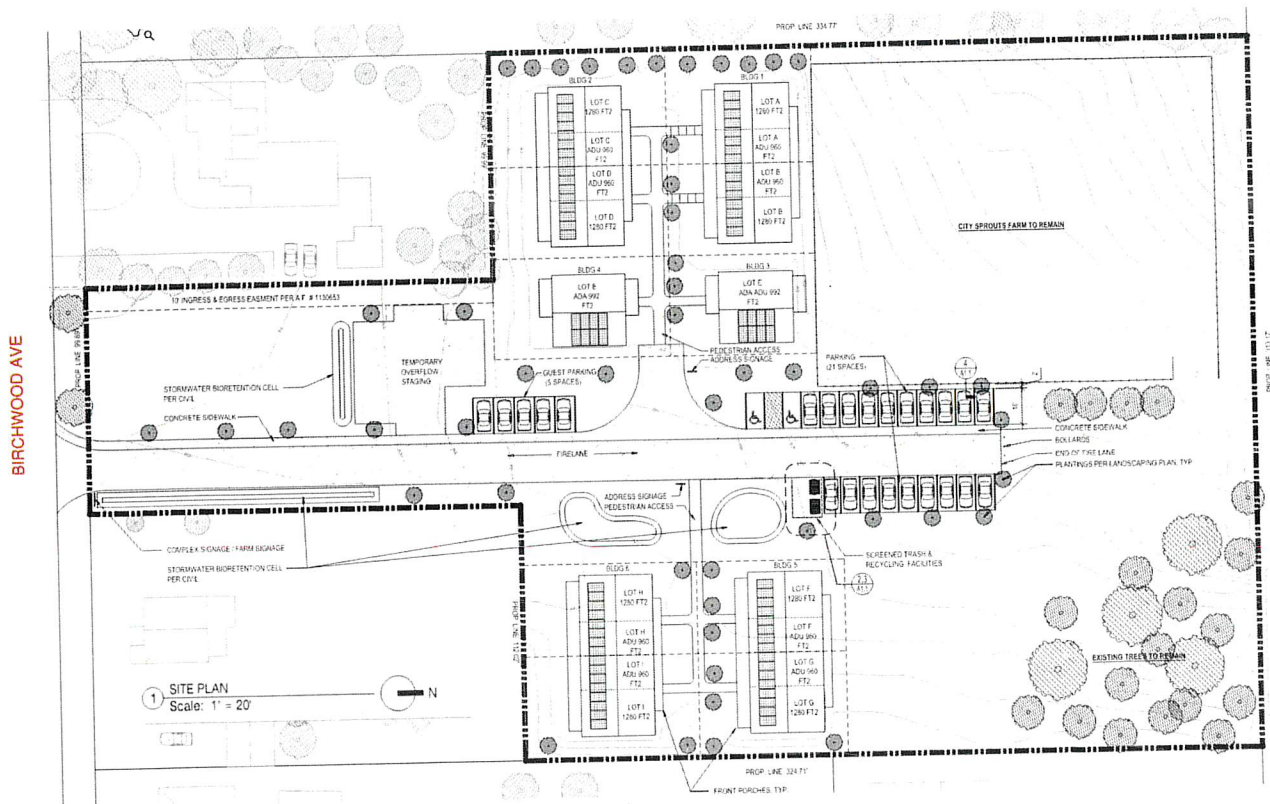
Name

Diana Veto

Address

3126 Pinewood Ave., Bellingham WA 98225

(include City, Zip)



Bell, Kathy M.

From: Dionne Peterson <dionnemarie93@hotmail.com>
Sent: Tuesday, September 17, 2024 1:05 PM
To: Bell, Kathy M.
Subject: Planning and community development.

[You don't often get email from dionnemarie93@hotmail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

CAUTION: This message originated from outside of this organization. Please exercise caution with links and attachments.

Hello and good afternoon.

I live at 2915 Birchwood ave, right across the street from where there has been possible planning for the development of multiple town homes.

I have lived in this town for over 30 years and specifically in this neighborhood for more than 7.

The Birchwood neighborhood has always been a very family friendly and quiet neighborhood with not a lot of traffic. I still can feel comfortable letting my kids out to play, and going on everyday walks.

Down the street, getting closer to 7-11 we have a very large problem with homeless people and also around many of the other apartment like buildings in that neighborhood. I fear for the children because of all the people with those unstable living situations and drug use. Developing these many town homes will only be creating more foot traffic and curiosity for the homeless people, causing theft and burglary from our homes and our vehicles.

We need to keep this neighborhood quiet and safe, what's left of it. I hope you consider my opinion while also thinking of the many negatives that will come along with this development.

Thank you for your time,

2915 Birchwood resident.

Sent from my iPhone

Bell, Kathy M.

From: William Glazier <snugharbormusic@gmail.com>
Sent: Tuesday, September 17, 2024 2:27 PM
To: Bell, Kathy M.
Subject: Re: Birchwood

You don't often get email from snugharbormusic@gmail.com. [Learn why this is important](#)

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To whom it may concern,

I have property located directly across from this development project and I feel a need to voice my concerns. Thank you for listening and for your time. I have several kids, neighbors with children and one on the way. My family is rooted here for generations to come. Not to mention a school less than a half block away. I pose this question- what is the intention of this development? If not for profit, etc (doesn't seem so with fixed income, etc and different rights when it comes to purchasing) it seems, it is merely to set up lower income folks with an opportunity for growth and housing. Well, that may in fact drive down the market value of my property value because of the kinds of other homes around it. We have homes on our street not multi-developments so some see it as a detractor. Also, demographically speaking some associate and may seem higher crimes where poverty or lower income rates exist and given that this is in *direct* relation to not only a stone's throw of my home but also our elementary school, it causes fear amidst our community members at the thought of random folks moving in and out of multi properties shuffling in and out until they can get different housing. I pose this question- Is this otherwise stable/safe neighborhood the best application for this development? Just because there may be a few lots available- does it need to be? There are other locations also that are not in direct correlation to school zones, communities etc. I know for one, when my son and I have to walk by 7-11 for example and there's people on the side walk for example it feels unsafe, when there are folks lurking about, when there's extra bodies everywhere it isn't as comfortable. This is what this feels like you're inviting into our neighborhood, into our school zone, where our children play and walk to school. Please reconsider. Please.

On Tue, Sep 17, 2024 at 2:19 PM William Glazier <snugharbormusic@gmail.com> wrote:

Just here in reply? no document or anything needed?

On Tue, Sep 17, 2024 at 12:07 PM Bell, Kathy M. <kbell@cob.org> wrote:

Absolutely. Please submit your written comments to me and I will make sure they get included in the record and forwarded to the Hearing Examiner.

Thanks for checking in.

Kathy Bell | Senior Planner

Planning & Community Development Dept., City of Bellingham

360.778.8347 kbell@cob.org



The Bellingham Plan will help shape the city's future. Learn how you can take part!

[The Bellingham Plan | Engage Bellingham](#)

Note: My incoming/outgoing e-mail messages are subject to public disclosure requirements per RCW 42.56

From: William Glazier <snugharbormusic@gmail.com>

Sent: Tuesday, September 17, 2024 11:46 AM

To: Bell, Kathy M. <kbell@cob.org>

Subject: Birchwood

You don't often get email from snugharbormusic@gmail.com. [Learn why this is important](#)

CAUTION: This message originated from outside of this organization. Please exercise caution with links and attachments.

Any chance I can still make a statement on birchwood development? Sorry I'm a day late I was out of town

Will Glazier

"Willdabeast" @ illdabeast

Manager/Performer @ Snug_Harbor, Michal Menert & The Pretty Fantastics and MMBB

Talent Buyer/Videographer at FunKeyProductions

snugharbormusic@gmail.com

www.snugharbormusic.com

www.willdabeastmusic.com

(360) 927-7602

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Will Glazier

"Willdabeast" @ illdabeast

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