TECHNICAL SUMMARY

PURPOSE

This summary provides a technical summary for the implementation and use of the Land Information Screening Tool (LIST) within the Islands Trust Housing Options Toolkit. LIST is a spatial decision-support tool designed to screen and compare areas for potential residential development, informed by environmental conditions, freshwater sustainability, geohazards, transportation, and infrastructure considerations.

BACKGROUND

The Islands Trust Land Information Screening Tool (LIST) is a spatial decision-support framework developed to assist planners, trustees, and community partners in identifying regional areas of opportunity for increased residential density and intensity.

LIST is a technical component of the Islands Trust Housing Options Toolkit. It is intended to inform policy exploration and planning analysis at a regional scale rather than to determine site-specific outcomes. The tool integrates existing geospatial datasets, each representing an environmental, hydrological, hazard, or infrastructural factor that contributes to relative land suitability.

The primary geospatial datasets used in LIST are derived from publicly available provincial sources, including the BC Data Catalogue, as well as professionally produced spatial data developed by or on behalf of the Islands Trust. These regionally consistent, island-wide datasets are processed using industry-standard GIS suitability modelling tools based on a multiple-criteria decision analysis (MCDA) framework to assign relative suitability ratings and generate a composite screening map.

In addition to island-wide datasets used in suitability scoring, LIST incorporates island-specific spatial information that identifies localized constraints, exclusions, or areas requiring site-specific consideration. These datasets are typically vector-based (polygons, lines, or points), may be derived from field observations or site-specific mapping, and are applied as overlay layers rather than as inputs to suitability scoring. Examples include protected areas, riparian buffers, archaeological or heritage sites, covenants, and other locally relevant features.

Together, these datasets enable LIST to provide regionally consistent screening while retaining the flexibility to reflect island-specific conditions and constraints. This structure ensures that housing-related planning discussions are informed by data appropriate to its scale, purpose, and level of accessibility, while preserving the need for professional judgment and site-level review.

OUTCOMES AND DELIVERABLES

The primary output of the Land Information Screening Tool is a composite screening map that presents relative land suitability as a gradient to support regional comparison and planning discussions within the context of the housing toolkit. The resulting map is intended to illustrate patterns of opportunity and constraint across an island rather than to determine parcel-level outcomes.

LIST is delivered on an island-by-island basis and is provided to planning staff as an internal ArcGIS Online web map. The web map includes the composite screening output, contributing Type 1 input layers, and relevant Type 2 and Type 3 overlay layers. This format allows staff to explore how individual environmental, freshwater, hazard, transportation, and infrastructure factors influence overall screening results and to present this information clearly to Local Trust Committees.

In practice, planners use LIST to compare areas across an island, explore housing-related planning scenarios, and focus policy discussions on locations where increased residential density and intensity may warrant further

consideration. The tool supports early-stage evaluation, helps prioritize areas for additional analysis or engagement, and provides a shared, evidence-based reference for discussion with trustees and community stakeholders.

LIST outputs are intended to inform, not replace, professional planning judgment, regulatory review, or site-specific studies. The screening map is one component within a broader planning toolkit and must be interpreted in conjunction with existing bylaws, development permit areas, overlay constraints, and other applicable legislation.

DATA TYPES

For the purposes of the Land Information Screening Tool, spatial data inputs are categorized into three distinct data types based on scale, spatial coverage, analytical function, and access considerations. This classification clarifies how datasets are incorporated into the screening model, supports methodological consistency across islands, and establishes clear boundaries between analytical inputs, interpretive overlays, and restricted information.

- **Type 1 data** consists of island-wide raster datasets that are used directly in the suitability scoring process. These datasets provide continuous coverage across an island and are processed through the suitability modelling workflow using standardized classification criteria and weighting to evaluate relative land suitability. Type 1 data forms the analytical foundation of LIST and is used to generate the composite screening map.
- **Type 2 data** consists of island-specific vector datasets that identify localized constraints, exclusions, or areas requiring site-specific consideration. These datasets do not require island-wide coverage and are applied as overlay layers rather than as inputs to suitability scoring. Type 2 data provides contextual information that supports interpretation of screening results and informs planning review at the parcel or site scale.
- **Type 3 data** consists of site-specific vector datasets that function as overlays similar to Type 2 data but are subject to access, confidentiality, or data-sharing restrictions. These datasets are not publicly available and are used internally to inform planning review where sensitive environmental, cultural, archaeological, or regulatory information must be considered. Type 3 data does not influence suitability scoring and is managed in accordance with applicable legislation, data-sharing agreements, and organizational policy.

The sections below describe each data type in greater detail, including accepted formats, minimum technical requirements, access considerations, and intended use within LIST. This structure ensures that island-wide screening results are generated using consistent analytical inputs while allowing localized and sensitive information to inform interpretation without altering the integrity of the core suitability model.

Type 1 Data: Island-wide Suitability Layers

Type 1 data consists of island-wide raster datasets used directly in the suitability scoring process. A raster layer represents spatial information as a continuous grid of uniformly sized cells, with each cell assigned a value reflecting a specific environmental, hydrological, geohazard, or infrastructural characteristic. These datasets provide full spatial coverage across an island and represent regionally consistent factors relevant to identifying areas of opportunity for increased residential density and intensity.Type 1 datasets incorporated into LIST are derived from authoritative public sources or professionally produced spatial data.

Type 1 datasets are processed through the suitability modelling workflow using standardized classification criteria and weighting to evaluate relative land suitability. Each dataset is normalized or reclassified to enable comparison and combination with other Type 1 inputs, resulting in a composite screening map. Because these datasets directly influence model outputs, they must meet defined technical standards to ensure consistency, repeatability, and defensibility.

Type 1 datasets must meet the following minimum requirements:

- Data format: Raster (GeoTIFF preferred)
- Spatial resolution: Appropriate for island-scale analysis (typically 30 × 30 metres or finer)
- Spatial extent: Full land area coverage of the relevant island(s)
- Coordinate system: UTM Zone 10N, NAD83 (CSRS)
- Data values: Standardized, classifiable, or continuous values suitable for suitability scoring
- No Data handling: Clear and consistent treatment of non-applicable or excluded areas
- Metadata: Documentation of data source, date, processing steps, assumptions, and data steward

TYPE 1 DATA: SUITABILITY MODELLING LAYERS		
Theme	Type 1 Layer	Source
Ecosystems	Ecosystem Resiliency	B.C. M.O.E; Madrone Environmental Services Ltd.; Parks Canada; Galiano Conservancy; Islands Trust GIS
	Species & Ecological Communities At Risk	B.C. Conservation Data Centre
	VRI Dominant Age	Vegetation Resource Inventory
Freshwater	Groundwater Recharge Potential	Islands Trust Freshwater Atlas
	Watershed Resiliency	Islands Trust Freshwater Atlas
	Groundwater Well Density	Islands Trust Freshwater Atlas
	Risk of Saltwater Intrusion	Islands Trust Freshwater Atlas
Geohazards and Infrastructure	Road Adjacency	Islands Trust GIS; GeoBC Digital Road Atlas
	Steep Slopes	Islands Trust GIS; GeoBC - Terrain Resource Information Management

Type 2 Data: Site-specific Overlay Layers

Type 2 data consists of island-specific vector datasets that identify localized constraints, exclusions, or areas requiring site-specific consideration. These datasets do not influence suitability scoring and are not incorporated into the composite calculation. Instead, they are applied as overlay layers to support interpretation of screening outputs and to inform planning review at the parcel or site scale.

Type 2 datasets are typically vector-based (polygons, lines, or points) and may be derived from field observations, localized studies, regulatory mapping, or community-contributed information. Unlike Type 1 datasets, Type 2 data does not require full island coverage and is not normalized or weighted within the model.

Type 2 overlays provide essential contextual information by identifying areas where development may be constrained, excluded, or subject to additional regulatory review. These datasets support professional judgment

and ensure that localized environmental, cultural, and regulatory considerations are reflected alongside island-wide screening results.

Type 2 datasets must meet the following minimum requirements:

- Data format: Vector (polygons, lines, or points), including ESRI Shapefile, File Geodatabase Feature Class, GeoPackage, or convertible KML/KMZ
- Spatial reference: UTM Zone 10N, NAD83 (CSRS) preferred (other coordinate systems accepted and reprojected as required)
- Geometry: Clearly defined and topologically valid features
- Attributes: Fields identifying feature type, relevance or significance, and data source
- Metadata: Documentation of purpose, data collection method, scale, date, author or organization, and contact information

TYPE 2 DATA: SUITABILITY OVERLAY LAYERS		
Theme	Type 2 Layer	Source
Admin and Planning	Roads	Digital Road Atlas
	Parcel Fabric	Land Title and Survey Authority of British Columbia
	Riparian Areas DPAs	Islands Trust GIS and Planning
	ALR	Provincial Agricultural Land Commission
	Covenants	BC Assessment; Islands Trust Conservancy and GIS
	Parks & Protected Areas	Islands Trust GIS, Islands Trust Planning
	Water Service Areas	Islands Trust GIS, Islands Trust Planning
Environmental	Marine Shore Adjacency	Islands Trust GIS, Islands Trust Planning
	Young Forest	Derived from SEM data – Islands Trust GIS
	Forest Contiguity	Cabin Forestry for Islands Trust
	Critical Habitat	Environment Canada

Type 3 Data: Restricted or Non-Public Overlay Layers

Type 3 data consists of site-specific vector datasets that function similarly to Type 2 overlays but are subject to access, confidentiality, or data-sharing restrictions. These datasets are not publicly available and are not included in publicly released screening products. Type 3 data is used internally to inform planning review where sensitive environmental, cultural, archaeological, or regulatory information must be considered.

Type 3 datasets may represent archaeological sites, cultural heritage resources, sensitive ecological features, species at risk habitat, or information provided under specific data-sharing agreements with Indigenous governing bodies or partner agencies. These datasets do not influence suitability scoring and do not require island-wide coverage. Instead, they are applied as internal overlays to flag areas requiring additional consultation, procedural safeguards, or regulatory compliance.

Access to Type 3 datasets is managed in accordance with applicable legislation, data-sharing agreements, and Islands Trust policy. Use of this data is restricted to authorized staff and planning processes to ensure responsible stewardship of sensitive information.

Type 3 datasets must meet the following minimum requirements:

- Data format: Vector (polygons, lines, or points)
- Spatial reference: UTM Zone 10N, NAD83 (CSRS) preferred
- Geometry: Clearly defined and topologically valid features
- Metadata: Documentation of data source, purpose, access restrictions, and applicable data-sharing or confidentiality requirements
- Governance: Use and access limited to authorized staff in accordance with legislation, agreements, and organizational policy

TYPE 3 DATA: SUITABILITY OVERLAY LAYERS		
Theme	Type 3 Layer	Source
First Nation and Archeological	Heritage Site & Archeological Sites	Archaeology Branch, Ministry of Forests
Environmental	Species at Risk	B.C. Conservation Data Centre

METHODOLOGY

The Land Information Screening Tool (LIST) applies a structured and transparent methodology to evaluate relative land suitability using multiple spatial criteria. The analysis is implemented in ArcGIS Pro using ESRI's Suitability Modeler, which is based on a multiple-criteria decision analysis (MCDA) framework.

MCDA is a recognized decision-support approach used in land use planning to systematically evaluate, standardize, weight, and combine diverse environmental, hydrological, hazard, and infrastructural factors within a consistent analytical framework.

ESRI's Suitability Modeler was selected because it provides a transparent, reproducible, and industry-standard environment for raster-based spatial modelling. The tool enables planners and GIS staff to document classification schemes, weighting values, and model expressions within a structured workflow that can be reviewed, updated, and re-run as new data becomes available. This ensures methodological consistency across islands and over time.

Analytical Framework

The LIST methodology follows a consistent sequence of steps.

Island-wide datasets suitable for raster-based analysis are first identified and prepared as Type 1 inputs. These datasets are standardized to ensure comparability across layers. Each dataset is then classified into a common suitability scale.

Relative weights are applied to reflect the influence of each factor within the overall screening model. The weighted raster layers are combined using raster algebra within the Suitability Modeler environment to generate a composite screening surface representing relative land suitability.

Island-specific overlay datasets (Type 2 and Type 3 data) are subsequently applied to support interpretation and planning review but are not incorporated into suitability scoring. This structured workflow ensures that screening results are repeatable, transparent, and scalable across islands while preserving the ability to incorporate localized context through overlays.

Data Preparation and Standardization

All Type 1 datasets are prepared using a common spatial reference, resolution, and analysis extent prior to modelling. Source datasets are processed as required to ensure technical compatibility, including rasterization of vector inputs where appropriate and alignment of cell size and spatial extent to ensure consistent pixel-by-pixel comparison across layers. NoData values are handled consistently to prevent unintended distortion of model results. Areas outside the analysis scope, marine areas, or lands intentionally excluded from consideration are explicitly defined. Data quality checks are performed to confirm spatial alignment, completeness, and logical consistency prior to inclusion in the suitability workflow.

Each dataset is classified or normalized so that resulting values represent relative suitability within a consistent numeric scale. Standardization of source datasets that vary in measurement units and data structure ensures that no dataset disproportionately influences results due solely to its original value range. Where necessary, spatial processing techniques such as buffering, proximity analysis, or density calculation are applied to convert source data into raster inputs appropriate for regional screening analysis.

Preprocessing is a critical step in ensuring that the model compares like with like. Without standardization, differences in source format, scale, or spatial extent could introduce analytical bias unrelated to actual planning conditions. By applying a consistent preparation workflow to all Type 1 datasets, the LIST supports transparent comparison between layers and ensures that subsequent classification, weighting, and combination are based on a common technical foundation.

Suitability Classification and Scoring

Each Type 1 dataset is translated into a standardized suitability scale to enable comparison and combination across diverse planning factors. Because source datasets vary in units, measurement scales, and classification systems, they are reclassified into discrete suitability classes prior to combination.

For each dataset, source values or categories are assigned to qualitative suitability classes (for example, Very High, High, Moderate, Low, or Very Low) that reflect the relative appropriateness of an area for increased residential density and intensity within the context of housing-related planning objectives. These qualitative classes are then converted into numeric suitability factors on a common scale to support raster-based calculation within the model.

This standardization step is necessary to ensure that very different types of information can be meaningfully assessed together within a single screening framework. Ecological classes, groundwater indicators, slope values, and infrastructure proximity measures do not begin on a common measurement basis. Reclassification into a shared suitability scale allows each dataset to contribute to the model according to planning relevance rather than according to its original format or range of values.

Classification decisions are informed by:

- Professional planning judgment
- Established environmental and hazard management practices
- Alignment with Islands Trust priorities related to ecological integrity and freshwater sustainability
- Risk considerations associated with residential density and intensity

Classification schemes are layer-specific and reflect whether higher or lower source values correspond to greater or lesser suitability in a planning context.

Weighting and Combination

Two related but distinct processes occur within the LIST model: suitability scoring within individual layers, and weighting between layers in the composite analysis.

Within each Type 1 dataset, source attributes are classified into standardized suitability factors. This process assigns relative suitability values (e.g., Very High to Very Low) to the underlying characteristics of that dataset. For example, specific ecosystem types, groundwater recharge classes, or slope ranges are translated into numeric suitability factors based on planning intent, technical analysis, and professional judgment. This step determines how conditions within a single layer contribute to suitability and is undertaken through technical professional review.

Once all layers are standardized to a common suitability scale, relative weights are applied between layers to reflect their overall influence within the screening model and to support community planning objectives. Layer weighting addresses the relative importance of one planning factor compared to another (e.g., freshwater sustainability relative to road adjacency). Weighting decisions are informed by planning objectives, professional expertise, and risk-based considerations associated with residential development.

Within the Suitability Modeler environment, weighted raster layers are combined using raster calculations to generate a composite screening surface. The resulting output represents the cumulative influence of all classified and weighted factors under the defined model structure. Both classification schemes and layer weights are explicitly configured and documented within the model. Any adjustment requires modification of model parameters and re-execution of the analytical workflow, ensuring consistency, transparency, and reproducibility.

The table below defines how each Type 1 dataset is classified and weighted within the LIST model. Source data are standardized into a common suitability scale, enabling multiple planning factors to be systematically combined into the composite screening map. The table also distinguishes between suitability scoring applied within individual layers and the relative weighting assigned between layers in the overall model.

THEME	LAYER	OVERALL SUITABILITY WEIGHTING	LAYER UNITS		CLASSIFICATION VALUE	SUITABILITY	SUITABILITY FACTOR
Ecosystems	Sensitive Ecosystems	15	Primary Class	N/A	0	Very High	10
				Young Forest	0.33	High	7
				Seasonally Flooded	1	Very Low	1
				Mature Forest	0.66	Moderate	3
				Herbaceous	1	Very Low	1
				Cliff	1	Very Low	1
				Sand	1	Very Low	1
				Wetland	1	Very Low	1
				Woodland	1	Very Low	1
				Older Forest	1	Very Low	1
				Riparian	1	Very Low	1
				Freshwater	1	Very Low	1
	At Risk Species & Ecological Communities	15	Risk Scale	None	0	Very High	10
				Yellow	0.33	High	6
				Blue	0.66	Moderate	3
				Red	1	Low	1
	Dominant Age	10	Age Scale Percentrage	Cleared	0	Very High	10
				Pole/Sappling	10-20	High	8
				Young Forest	40-60	Moderate	5
				Mature Forest	60-100	Low	2
				Old Forest	>100	Very Low	1
Freshwater	Groundwater Recharge Potential	10	Potential Raster Class	High Discharge	0.0-0.1	Low	5
				Low	0.1-0.2	High	8
				Moderate	0.2-0.4	High	8
				High	0.4-0.8	Low	2
				Very High	>0.8	Very Low	1
	Combined Resiliency	10	Resilliency Risk Class	Very High	0.8-1.0	Very Low	1
				High	0.5-0.8	Low	1
				Moderate	0.3-0.5	Moderate	5
				Low	0.1 - 0.3	High	9
				Very Low	0 - 0.1	Very High	10
	Groundwater Well Density	10	Wells per Km^2	Very Low	<1	Very High	10
				Low	1-10	High	8
				Moderate	10-20	Moderate	4
				High	20-30	Low	2
				Very High	>30	Very Low	1
	Risk of Saltwater Intrusion	10	Risk Class	Very Low	VERY LOW	Very High	10
				Low	LOW	High	8
				Moderate	MODERATE	Moderate	5
				High	HIGH	Low	2
				Very High	VERY HIGH	Very Low	1
Geohazards and Infrastructure	Road Adjacency	10	Distance (m)	Very Near	<200	Very High	10
				Near	200-400	High	8
				Moderate	400-600	Moderate	5
				Far	600-800	Low	2
				Very Far	800-1000	Very Low	1
	Steep slopes	10	Degree Slope	Very Low	0-5	Very High	10
				Low	5-9	High	9
				Moderate	9-15	Moderate	5
				High	15-30	Low	1
				Very High	>30	Very Low	0

IMPLEMENTATION

The Land Information Screening Tool is intended to support housing-related planning discussions by identifying regional areas of opportunity for increased residential density and intensity in a manner informed by ecological integrity, freshwater sustainability, geohazard considerations, transportation, and infrastructure context.

The LIST is a decision-support tool and not a regulatory instrument. Its outputs are intended to inform professional planning judgment, policy development, and community discussion, rather than to prescribe specific land use outcomes. The composite suitability map is most appropriately used to identify areas where further planning exploration may be warranted, including consideration of zoning, housing policy, servicing alignment, and growth strategy discussions.

Areas identified as having lower relative suitability should not be interpreted as conservation designations or development prohibitions. Conversely, areas identified as having higher relative suitability do not imply development approval or reduced regulatory oversight. All proposals remain subject to existing bylaws, development permit areas, environmental requirements, site-specific studies, and applicable provincial legislation.

Documentation and Reproducibility

The LIST methodology is documented to ensure transparency, defensibility, and repeatability. Technical documentation includes data sources, processing steps, classification criteria, weighting structures, and model configuration details. This documentation is maintained separately from this memorandum as supporting technical material**.** As datasets are updated or refined, the suitability model can be re-run using the established workflow to maintain consistency across analyses. Model expressions, processing scripts, and implementation steps are preserved as part of the technical record and may be appended where required to support review, audit, or replication.

Use of Data

Type 2 and Type 3 datasets are not incorporated into the suitability scoring process and do not influence composite suitability values. Instead, these datasets are applied as overlay layers to provide contextual information, identify localized constraints or exclusions, and flag areas requiring additional review. This separation preserves the methodological consistency of the island-wide suitability analysis while ensuring that site-specific, sensitive, or restricted information appropriately informs planning interpretation and professional judgment. Overlay data supports responsible application of the LIST without altering the standardized regional screening framework.

Internal Technical Review and Staff Coordination

Planning and GIS staff are responsible for maintaining the technical integrity of the LIST. This includes reviewing underlying datasets, confirming classification schemes and layer weights, and ensuring that overlay layers are current and appropriately applied. Prior to presentation to a Local Trust Committee, staff review the composite suitability output alongside Type 2 and Type 3 overlays to identify any contextual considerations requiring clarification. Staff interpretation ensures that the tool is applied consistently and that results are presented within their appropriate analytical scope and limitations.

Any proposed technical adjustments to classification thresholds, weighting structures, or model configuration are evaluated internally to confirm methodological consistency and alignment with Islands Trust planning objectives before re-running the model.

Internal review also provides the opportunity to identify data gaps, assess whether newly available information warrants a model update, and confirm that any island-specific constraints are being appropriately interpreted through overlay layers rather than through informal adjustment of core model outputs. This process supports a consistent line between technical model administration and planning interpretation.

Local Trust Committee Workshop and Model Discussion

The LIST may be presented to a Local Trust Committee (LTC) as part of housing-related planning discussions. Workshops provide an opportunity for trustees to understand how the model operates, how individual layers contribute to overall suitability, and how relative weighting reflects planning objectives.

Trustee discussion may include consideration of relative layer weighting within the model to reflect local planning priorities, provided that adjustments remain consistent with Islands Trust mandate, adopted policy direction, and technical standards. Any proposed modification to layer weights must be formally documented and implemented by staff through re-execution of the established modelling workflow to ensure transparency and comparability.

Attribute-level classification within individual datasets — including ecological classes, hazard thresholds, freshwater risk categories, or provincially defined standards — is based on authoritative source data and professional technical interpretation. These classifications are not subject to ad hoc modification through workshop discussion. Changes to classification criteria, threshold definitions, or source dataset selection require formal technical review, documentation of rationale, and administrative approval prior to model revision.

The addition or removal of Type 1 datasets from the suitability model similarly requires formal staff review to ensure methodological integrity and consistency across islands. All model revisions are version-controlled and recorded to maintain a clear analytical history of adjustments over time.

Community Engagement and Public Communication

The LIST may be used to support community engagement by illustrating regional patterns of relative suitability and explaining how environmental, freshwater, and infrastructure considerations influence planning discussions. When shared publicly, outputs are presented with appropriate context regarding limitations, intended use, and the distinction between screening-level analysis and site-specific evaluation. Restricted (Type 3) data is not displayed in public-facing materials. Community feedback may inform future planning discussions and, where appropriate, may be considered in subsequent model review processes through established governance procedures.

Model Maintenance, Updates, and Governance Controls

The LIST is intended to function as a controlled and updateable planning support tool. As underlying datasets are revised, improved, or replaced, the analysis may be re-run using the established methodology to maintain technical defensibility, consistency, and planning relevance. The model configuration, including classification schemes, layer weights, and associated technical documentation, is retained as part of the formal technical record. All modifications are tracked and version-controlled to maintain a clear record of what was changed, when the change was made, and the rationale supporting it.

Substantive modification of the LIST, including changes to Type 1 layer selection, suitability classification schemes, or layer weighting, is to occur only through a documented review process led by planning and GIS staff. Where model adjustments are considered in response to evolving planning priorities, trustee discussion, community input, or improved data availability, those changes must be formally evaluated, documented, and implemented through revision of the model configuration. They are not to be introduced through ad hoc interpretation, informal adjustment, or presentation-level modification of outputs.

This governance approach is necessary to preserve methodological integrity, comparability, and transparency across islands and over time. It ensures that LIST remains a professionally administered decision-support tool that can evolve in response to improved data and planning needs without compromising analytical consistency or public accountability.

SUMMARY

This memorandum provides technical guidance for the implementation and use of the Islands Trust Land Information Screening Tool (LIST) within the Housing Options Toolkit. LIST is a GIS-based decision-support tool designed to identify regional patterns of relative suitability for increased residential density and intensity, informed by ecological integrity, freshwater sustainability, geohazard considerations, transportation, and infrastructure context. The tool supports housing-related planning by providing a consistent and evidence-based framework for screening land across an island and identifying broad areas where additional planning exploration may be warranted.

The memorandum establishes a clear and defensible framework for how spatial data is incorporated into LIST. Inputs are classified into three data types: Type 1 island-wide raster datasets used in suitability scoring; Type 2 site-specific vector overlays used to inform interpretation and planning review; and Type 3 restricted or non-public overlays used internally where sensitive information must be considered. Technical standards, access considerations, and documentation requirements are defined for each data type to ensure consistency, transparency, and appropriate professional oversight. This structure allows regionally consistent screening to be undertaken while preserving the flexibility to reflect island-specific conditions, local constraints, and data governance requirements.

The methodology underpinning LIST is implemented using ArcGIS Pro and ESRI's Suitability Modeler within a multiple-criteria decision analysis (MCDA) framework. This approach enables diverse environmental, hydrological, hazard, and infrastructure factors to be systematically standardized, classified, weighted, and combined in a repeatable and transparent manner. The methodology distinguishes between suitability scoring within individual layers and weighting between layers in the composite model, ensuring that both the internal logic of each dataset and the broader planning influence of each factor are explicitly documented. Supporting technical documentation, including model configuration, processing logic, and implementation steps, is maintained separately to ensure reproducibility and facilitate future updates.

The principal deliverable of LIST is a composite screening map presented through an internal ArcGIS Online web map on an island-by-island basis. The web map includes the composite screening output, contributing Type 1 input layers, and relevant overlay layers, allowing planning staff to review how different environmental, freshwater, hazard, transportation, and infrastructure factors shape the overall screening pattern. In practice, LIST supports early-stage planning analysis, policy exploration, and structured discussion with Local Trust Committees by providing a shared evidence base for comparing areas across an island and focusing attention on locations where increased residential density and intensity may merit further consideration.

The memorandum introduces a framework for maintaining and updating the tool over time. Model configuration, including classification schemes and layer weights, is documented and retained as part of the formal technical record. Substantive changes to Type 1 layer selection, classification, or weighting are to occur only through a documented review process led by planning and GIS staff, with changes formally recorded and version-controlled. This governance approach ensures that LIST remains transparent, comparable, and professionally administered as new datasets become available, planning priorities evolve, and additional islands are advanced through the screening process.

The guidance set out in this memorandum positions LIST as a practical and defensible planning support tool for housing-related policy work within the Islands Trust Area. Used within its intended scope, LIST strengthens planning conversations by clarifying regional patterns of opportunity and constraint, supporting transparent communication with trustees and communities, and ensuring that land suitability screening remains grounded in consistent methodology, high-quality spatial data, and appropriate professional oversight.