ANNEX D: INITIAL ADAPTATION OF LEED-ND FOR NH102 (NH102/6)

Annex to :

Lietz, K., Bijoux, D., Saville-Smith, K., Howell, M. (2006). *Testing the Prototype Neighbourhood Sustainability Framework.* Report NH102/2 for Beacon Pathway Ltd

All changes are tracked and comments are included in the form of footnotes. The base document is the draft LEED-ND, September 6, 2005.

LOCATION EFFICIENCY

Prerequisite: Transportation Efficiency

Intent

Reduce air pollution, energy consumption, and greenhouse gas emissions generated by transportation by encouraging new development in locations that reduce automobile dependence. Promote public health by encouraging new development in locations that provide increased opportunities for walking.

Requirements

1) Locate the **project** on either an **infill site** or on a **previously developed site,**
   OR
2) Locate the project near existing **adequate transit service** [1] so that a majority of dwelling units and business entrances within the project are within 400 m **walking distance** of publicly available bus transit service or within 800 m walking distance of adequate rail, light rail, streetcar, or ferry transit service. OR
3) Locate the project near existing neighborhood amenities and services so that the project boundary is **adjacent** to existing development and located within 400 m walking distance of at least four or within 800 m walking distance of at least six examples of the following uses, which must be existing and operational: police/fire station; bank; post office; place of worship; park; library; school; convenience store; laundry/dry cleaner; other neighborhood-serving retail; medical/dental office; other office building or major employment center; stand-alone pharmacy; restaurant; supermarket; community or civic center. Uses may not be counted in two categories, e.g., an office building gets counted only once even if it is also a major employment center, and a store of any kind gets counted only once even if it has a diverse line of products and services. But a mixed use building housing several of the above services as distinct enterprises would count each as a separate use.
   OR

2

[1] The definition of peak in LEED is 5.30 – 10.30 and 3.30 – 8.30, This was changed to 6.00 – 10.30 and 3.30 – 7.00, to reflect bus frequencies and commuting patterns in New Zealand Cities

[2] No equivalent research method could be found in New Zealand

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Deleted: In the case of planned service, show that the relevant transit agency has committed in a legally binding warrant that adequate transit service will be provided at or before the beginning of the transit agency's first service year after 50% of the units within the project are occupied and has identified all funding necessary to do so.

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Deleted: <#>Locate the project in a zone where research demonstrates that rates of driving per resident are lower than the average rate for residents of the metropolitan region as a whole. One of two research methods may be used:¶
<#>Projections from a metropolitan planning organization (MPO), derived from a household transportation survey, showing that the transportation analysis zone(s) within which the project will be located generate(s) fewer vehicle miles traveled (**VMT**) per resident than the average for the metropolitan region as a whole.¶
<#>A site-specific study prepared by a registered engineer, indicating by best available technology and practice, consistent with the methodology below, that the project will generate an average VMT per resident that is lower than the average for the metropolitan area as a whole. ¶

Deleted: Methodology: If the project will be located within an area served by an MPO, the MPO boundary must be used to determine the scope of the region as a whole, and the study must use the MPO's determination of the average VMT per resident of the area as a whole. If the project will be outside an MPO region but within a Metropolitan or Micropolitan Statistical Ar... [1]

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LOCATION EFFICIENCY

Prerequisite: Water and Stormwater Infrastructure Efficiency

Intent

Conserve natural and financial resources required for construction and maintenance of infrastructure. Encourage new development within and near existing communities, in order to reduce multiple environmental impacts caused by haphazard sprawl.

Requirements

1) Locate the **project** on a site served by existing water and sewer infrastructure
   Replacement or other on-location improvements to existing infrastructure are considered "existing" for the purpose of achieving this compliance path.
   OR
2) Locate the project within a planned water and sewer service area
   AND
   provide the new water and sewer infrastructure.

LOCATION EFFICIENCY

Credit: Contaminated Brownfields Redevelopment (4 Points)

Intent

Conserve land and reduce air, water, and land pollution from contaminated land.

Requirements

1) Locate **project** on a site, part or all of which is documented as contaminated,
   AND
   Remediate site contamination such that the controlling public authority approves the protective measures and/or clean-up as effective, safe, and appropriate for the future use of the site.

LOCATION EFFICIENCY

Credit: High Cost Contaminated Brownfields Redevelopment (1 Point)

Intent

Encourage the cleanup of more complicated or challenging contaminated brownfields sites.

Requirements

1) Earn the Contaminated Brownfields Redevelopment credit,
   AND
   Perform cleanup such that the costs of cleanup are in excess of $1.5 million (NZ).

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LOCATION EFFICIENCY

Credit: Adjacent, Infill or Previously Developed Site (3 to 10 Points)

Intent

Encourage development within existing communities and already-developed places to reduce multiple environmental harms associated with haphazard sprawl. Reduce development pressure beyond the limits of existing development. Conserve natural and financial resources required for construction and maintenance of infrastructure.

Requirements

1) Locate **project** on an **adjacent site** (3 points)
   OR
2) Locate project on an **infill site** (7 points)
   OR
3) Locate project on a **previously developed site**. (10 points)

Each project can only earn points for one of the three options.

LOCATION EFFICIENCY

Credit: Reduced Automobile Dependence (2 to 6 Points)

Intent

Encourage development in locations that exhibit superior performance in providing transportation choices or otherwise reducing motor vehicle use.

Requirements

1) Locate **project** on a site with outstanding transit service, defined as 60 or more easily accessible transit rides per day. The number of points available for increasing transit service is indicated in the table below. The total number of rides available is defined as the number of buses stopping within 400 m of a majority of the project's dwelling units and business entrances and the number of light rail trains, rail trains, and ferries stopping within 800 m of the project's dwelling units and business entrances on weekdays. The number of rides available on light rail trains or rail trains shall be multiplied by the number of train cars on each train. The number of rides available on ferries shall be multiplied by three.

Total rides available per weekday	Points earned
60 – 124	2
125 – 249	3
250 – 499	4
500—999	5
1000 or more	5

OR

OR

2) Locate project on a site with a nearby vehicle-sharing program. Such programs include a carshare facility with on-site vehicles such as Zipcar or Flexcar or a free bicycle-sharing facility within the project, or a carshare facility located within 800 m walking distance of a majority of dwelling units and business entrances in the project (1 point).

A point from (2) may be added to those earned under paragraphs (1), so long as the total earned does not exceed 6 points.

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Deleted: <#>Locate project on a site with outstanding performance on travel behavior, meaning that the project is within the study area of a Metropolitan Planning Organization AND within a transportation analysis zone where **VMT** per capita or driving mode share has been demonstrated by MPO research derived from a household transportation survey to be no more than 80% of the average of the metropolitan region as a whole. Additional credit may be awarded for increasing levels of performance, as indicated: ¶
Percent of average regiona... [2]

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LOCATION EFFICIENCY

Credit: Contribution to Jobs-Housing Balance (4 Points)

Intent

Encourage balanced communities with a diversity of uses and employment opportunities. Reduce energy consumption and pollution from motor vehicles by providing opportunities for shorter vehicle trips and/or use of alternative modes of transportation.

Requirements

For **projects** with residential components, locate the project within 800 m of a number of jobs equal to or greater than 50% of the number of dwelling units in the project.

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1) [3]

Deleted: For projects without residential components that are on an **infill site** or a **previously developed site,** locate the project within ½ mile of a number of existing dwelling units equal to or greater than 50% of the number of new jobs created by the project.

[3] Not applicable, all case study neighbourhoods have a residential component.

LOCATION EFFICIENCY

Credit: School Proximity (1 Point)

Intent

Promote children's health through physical activity by facilitating walking to school.
Promote a sense of community.

Requirements

1) Include a residential component in the **project**,
   AND Locate the project so that it borders a school that is open to the public or so that at least half the project's residences are within 800 m walking distance of a school that is open to the public.

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LOCATION EFFICIENCY

Credit: Access to Public Spaces (2 Points)

Intent

Provide access to public gathering space in order to promote sense of community.

Requirements

1) Locate and/or design **project** so that a public space, such as a park, plaza, town square, village green, etc., lies within 800 m of the all the entrances to the project's residential and commercial buildings.

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ENVIRONMENTAL PRESERVATION

Prerequisite: Imperiled Species and Ecological Communities

Intent

Protect imperiled species and ecological communities.

Requirements

1) Locate **project** on a **previously developed site**,

   OR

2) Work with the Department of Conservation to determine if threatened species have been found on the site. If any such species have been found,

   i) Coordinate with the relevant regional authority to perform adequate surveys of threatened species and ecological communities. If a survey finds that a threatened species or ecological community is present, do not disturb land on portions of the site that are within 92 m of the habitat for that species or ecological community. Protect such habitat from development in perpetuity. Analyse the threats that the project poses to identified species and ecological communities (e.g., introduction of exotic species, intrusion of residents into sensitive areas), and develop a management plan, which may include expanded buffers, that eliminates those threats.

Deleted: state's Natural Heritage Program

Deleted: listed under the federal Endangered Species Act, the state's endangered species act, or species or ecological communities classified by NatureServe as G1 (critically imperiled) or G2 (imperiled),

Deleted: Comply with an approved Habitat Conservation Plan (HCP) under the Endangered Species Act for each identified species or ecological community;

OR

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ENVIRONMENTAL PRESERVATION

Prerequisite: Parkland Preservation

Intent

Protect natural habitat.

Requirements

1) Do not develop on publicly owned parks or refuges or on **in-holdings** in publicly held land. Exemptions will be considered for public park-related facilities.

ENVIRONMENTAL PRESERVATION

Prerequisite: Wetland and Water Body Conservation

Intent

Conserve water quality, natural hydrology and habitat through conservation of water bodies and wetlands.

Requirements

1) Locate the **project** on a site that includes no **wetlands**, riparian areas, water bodies, or land within 30 m of these areas

   OR

2) Locate on a **previously developed site**. (No further action to achieve prerequisite is necessary, although local, state, or federal regulations may require further action or site design to accommodate, preserve, or restore natural hydrology.)

   OR

3) Locate on an **infill site** and do not build on or disturb 60% of any on-site wetlands, riparian areas, water bodies, and or buffer land that is within 30 m of these areas. Mitigate the development of any wetlands, riparian areas, water bodies, or 30 m buffer land on-site or within the project's sub-basin. (Mitigation is defined as the creation or restoration of wetlands.) Protect the remaining on-site wetlands, riparian areas, water bodies, and undisturbed 30 m buffer land from development in perpetuity

   OR

4) Do not build on or disturb 90% of any on-site wetlands, riparian areas, water bodies, and or buffer land that is within 30 m of these areas. Mitigate the development of any wetlands, riparian areas, water bodies, or 30 m buffer land on-site or within the project's sub-basin. (Mitigation defined as the creation or restoration of wetlands.) Protect the remaining on-site wetlands, riparian areas, water bodies, and undisturbed buffer land from development in perpetuity.

Exemptions from the above requirements:

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Deleted: (as defined by the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual)

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a) [4]Minor development within the buffer may be undertaken in order to enhance appreciation for wetlands and water bodies. Such development may only include minor pathways, limited pruning and tree removal for safety, habitat management activities, educational structures not exceeding 18.5 sqm, and small clearings for picnic tables, benches, and non-motorized recreational water crafts.

Deleted: If a wetland assessment is performed using a method that is accepted by state or regional permitting agencies, wetlands that are assessed as performing poorly (i.e., with a "low" rating) in providing all measured wetland functions may be excluded from the calculations of percentages referenced in options 3 and 4 under the requirements above, but the project must still include the full mitigation of any such areas and their functions that are destroyed, on-site or within the project's sub-basin.

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[4] No equivalent New Zealand method was found.

ENVIRONMENTAL PRESERVATION

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Deleted: Prerequisite: Erosion & Sedimentation Control

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¶
Intent¶
¶
Reduce water pollution from erosion during construction.¶
¶
Requirements¶

Deleted: <#>Design a sediment and erosion control plan, specific to the entire **project**, which conforms to U.S. EPA Document No. EPA 832/R-92-005 (September 1992), Storm Water Management for Construction Activities, Chapter 3, or to local erosion and sedimentation control standards and codes, whichever are more stringent. The plan shall meet the following objectives:¶
<#>Prevent loss of soil during construction by stormwater runoff and/or wind erosion, including protecting topsoil by stockpiling for reuse.¶
<#>Prevent sedimentation of storm sewer or receiving streams.¶
<#>Prevent polluting the air with dust and particulate matter. .
¶
AND¶
¶
<#>Stipulate in **CC&Rs** or other binding documents providing that these erosion control requirements will be met for the project as a system, and for each individual building and development phase.¶

[5] This would be impractical for older existing developments.

ENVIRONMENTAL PRESERVATION

Prerequisite: Farmland Preservation

Intent

Preserve irreplaceable agricultural resources by protecting prime and unique farmland from development.

Requirements

1) Locate on a site with no more than 25% Class 1 and 2 soils ??? (NZLRI)
   OR

Deleted: **prime soils**, **unique soils**, or soils of state significance as identified in a state Natural Resources Conservation Service soil survey. .

Deleted: <#>Acquire fee title or conservation easements on off-site land equal to the area of the **project** or five acres, whichever is larger. 75% of the preserved parcel must be covered by prime soils, unique soils, or soils of state significance. Ensure protection of the land from development other than agricultural uses in perpetuity. The preserved land must be within 100 miles of the LEED-certified project.¶

ENVIRONMENTAL PRESERVATION

Credit: Support Off-Site Land Conservation (2 Points)

Intent

Protect land that is important for natural or cultural resources from development.

Requirements

1) Acquire fee title or conservation easements on off-site land that is equal to or larger than 50% of the area of the **project** or two hectares, whichever is larger;
AND
Ensure protection of the land from development in perpetuity

The land must be within 320 km of the project, and must be identified by a local, regional, or national government as important for conservation for natural or cultural purposes. Land for this credit may not be used as mitigation required by law or by prerequisites for LEED-ND.

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ENVIRONMENTAL PRESERVATION

Credit: Site Design for Habitat or Wetland Conservation (1 Point)

Intent

Conserve native wildlife habitat, **wetlands** and water bodies.

Requirements

1) Undertake an ecological assessment to determine if significant habitat occurs on the site. If significant habitat is found, do not disturb that significant habitat or portions of the site within 92 m of it. Protect significant habitat and its 92 m buffers from development in perpetuity. Significant habitat includes

   - habitat for species that are threatened (as listed by DOC)
   - locally or regionally significant habitat, patches of natural vegetation at least 60 hectares in size (irrespective of whether some of the 60 hectares lies outside the **project** boundary),
   - or habitat flagged for conservation by a local or regional authority.

   OR

2) If the project is located on a **previously developed site**, use native species for all exterior vegetation. Any green roofs constructed do not have to use native species under this requirement.

   OR

3) Design the project to fully conserve all water bodies, wetlands, and their functions on the site;
   AND
   Conduct an assessment, or compile existing assessments, showing the extent to which water bodies and/or wetlands on the site perform the following functions: 1) water quality maintenance, 2) wildlife habitat protection, and 3) hydrologic function maintenance, including flood protection.
   AND
   Based upon the functions provided, contiguous soils and slopes, and contiguous land uses, assign appropriate (not less than 30 m) buffers from development throughout the site,
   AND
   protect wetlands, water bodies, and their buffers from development in perpetuity.

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Deleted: listed or are candidates for listing under state or federal endangered species acts, or for those classified as G1, G2, G3 and/or S1 and S2 species by Natureserve (see note below about G and S classification);

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Deleted: under a regional or state conservation or green infrastructure plan.

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ENVIRONMENTAL PRESERVATION

Credit: Restoration of Habitat or Wetlands (1 Point)

Intent

Conserve native wildlife habitat, **wetlands** and water bodies

Requirements

1) Restore native habitat, using only native species, to an area equal to at least 10% of the **development footprint** and protect such habitat from development in perpetuity.

   OR

2) Document any impairment of wetlands, water bodies and their functions from pre-existing uses or off-site factors;
   AND
   Increase the total area of on-site wetlands and water bodies;
   AND/OR
   Improve the function of existing on-site wetlands or water bodies through restoration of hydrology, planting native species, removing exotic species, or other measures.

ENVIRONMENTAL PRESERVATION

Credit: Conservation Management of Habitat or Wetlands (1 Point)

Intent

Conserve native wildlife habitat, **wetlands** and water bodies.

Requirements

1) Create a long-term (at least 10-year) management plan for on-site native habitats and their buffers and create a guaranteed funding source for management. Involve at least one person from a natural resources agency, a natural resources consulting firm, or an academic ecologist in writing the management plan and conducting or evaluating the ongoing management. The plan should include biological objectives consistent with habitat conservation, and it should identify a) procedures, including personnel to carry them out, for maintaining the conservation areas and b) threats that the **project** poses for habitat within conservation areas (e.g., introduction of exotic species, intrusion of residents in habitat areas) and measures to substantially reduce those threats.

   OR

2) Create a long-term (at least 10-year) management plan for any on-site wetlands, water bodies and their buffers and a guaranteed funding source for management. Involve at least one person from a natural resources agency, a natural resources consulting firm, or an academic ecologist in writing the management plan and conducting or evaluating the ongoing management. The plan should include biological objectives consistent with wetland and water body conservation, and it should identify procedures, including personnel to carry them out, for maintaining the conservation areas.

ENVIRONMENTAL PRESERVATION

Credit: Steep Slope Preservation (1 Point)

Intent

Minimize erosion to protect habitat, and reduce stress on natural water systems, by preserving steep slopes in a natural, vegetated state.

Requirements

1) Build on sites that have no slopes greater than 15%.

   OR

2) On sites with slopes greater than 15% that are also **previously developed sites**,
   - treat any fractions of the site that have not been **previously developed** by complying with the requirements for sites that are not previously developed set forth below;
     OR
   - restore 100% of slopes over 40%, 45% of the area of slope between 25% to 40%, and 60% of the area of slope between 15% to 25% with native or adapted vegetation.

   AND stipulate in **CC&Rs** or other binding development documents showing that the steep slope requirements will be met for the development as a system, and for each individual **project** and development phase.

   OR

3)3) On sites with slopes greater than 15% that are not previously developed sites,
   - do not build on slopes greater than 40%
     AND
   - do not build or disturb site within 15 m of the top of the slope, and 23 m from the toe of the slope. The toe of a slope is defined as where there is a distinct break between a 40% slope and lesser slopes;
     AND
   - limit development to no more than 45% of the area of slope between 25% to 40%, and to no more than 60% of the area of slope between 15% to 25%.
     AND
   - stipulate in CC&Rs or other binding development documents showing that the steep slope requirements will be met for the development as a system, and for each individual project and development phase.

For all three compliance paths stated above, slopes up to 6 m in elevation that are

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more then 9 m from another slope greater than 15% are exempt from the requirements, although more restrictive local regulations may apply.

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ENVIRONMENTAL PRESERVATION

Credit: Minimize Site Disturbance During Construction (1 Point)

Intent

Conserve existing natural areas and protect trees to provide habitat and promote biodiversity.

Requirements

1) Locate the **project** on a site that is 100% **previously developed** and for which the zone of construction impact is 100% previously developed.

   OR

2) Identify limits of building area through the creation of building footprint zones
   AND
   limit site disturbance including earthwork and clearing of vegetation to 12 m beyond the building footprint zone perimeter, 1.5 m beyond primary roadway curbs, walkways and main utility trenches, and 7.5 m beyond constructed areas with permeable surfaces (such as pervious paving areas, stormwater detention facilities and playing fields) that require additional staging areas in order to limit compaction in the constructed area;
   AND
   identify all existing trees with a diameter larger than 300 mm, and preserve a minimum of 50% of them;
   AND
   stipulate in CC&Rs or other binding documents that these requirements will be met for the project as a system, and for each individual building and development phase.

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ENVIRONMENTAL PRESERVATION

Credit: Minimize Site Disturbance Through Site Design (1 Point)

Intent

Preserve existing tree canopy, native vegetation and pervious surfaces while encouraging high density, smart growth communities.

Requirements

1) Locate the **project** on a **previously developed site**.

   OR

2) Depending on the overall density or intensity of the project, do not develop or disturb a proportion of the land that has not been **previously developed** on the site, exclusive of any land excluded from development by law or required to be preserved as a prerequisite of LEED-ND.
   AND
   Stipulate in **CC&Rs** or other binding development documents that the undisturbed area will be protected from development in perpetuity.

   Densities, intensities, and minimum percentages are:

Residential Density per acre of **buildable land**	Commercial Intensity per acre of buildable land	Minimum percentage of previously undeveloped site area to leave undisturbed
< 37 units/hectare	**FAR** < .50	20%
37-52 units/hectare	FAR = .50 – 1.00	15%
> 52 units/hectare	FAR > 1.0	10%

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ENVIRONMENTAL PRESERVATION

Credit: Maintain Stormwater Runoff Rates (1 Point)

Intent

Reduce stormwater pollution, prevent flooding, and promote aquifer recharge.

Requirements

1) Maintain stormwater volume rates, such that the **post-project** development 2 year, 24 hour peak discharge volume does not exceed the **pre-project** development 2 year, 24 hour peak discharge volume.

ENVIRONMENTAL PRESERVATION

Credit: Reduce Stormwater Runoff Rates (2 Points)

Intent
Reduce stormwater pollution, prevent flooding, and promote aquifer recharge.

Requirements

1) Implement a stormwater management plan that results in a 25% decrease in the rate and quantity of **post-project** development stormwater runoff when compared with pre-project rates and quantities.

ENVIRONMENTAL PRESERVATION

Credit: Stormwater Treatment (2 Points)

Intent

Reduce surface water pollution from stormwater.

Requirements

1) Implement a stormwater management plan that captures and treats the stormwater runoff from 90% of the average annual rainfall (see note, below) using acceptable best management practices (BMPs) that are capable of removing 80% of the average annual post-development total suspended solids (TSS) load based on existing monitoring reports. BMPs are considered to meet these criteria if
   a) they are designed in accordance with standards and specifications from a regional or local program that has adopted these performance standards, or
   b) there exists in-field performance monitoring data demonstrating compliance with the criteria. Data must conform to accepted protocol for BMP monitoring, for example, (e.g., Technology Acceptance and Reciprocity Partnership (TARP) Washington State Department of Ecology) for BMP monitoring.

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ENVIRONMENTAL PRESERVATION

Credit: Outdoor Hazardous Waste Pollution Prevention (1 Point)

Intent

Reduce stormwater pollution from the use of pesticides and fertilizers

Requirements

1) Provide CC&Rs or other binding documents that stipulate that
   - only the safest and least polluting fertilizers and pesticides may be used to maintain landscapes within the **project** boundaries

     OR

   - that no fertilizers and pesticides may be used to maintain landscapes within the project boundaries.

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Prerequisite: Open Community

Intent

Promote developments that are good neighbors to their surrounding communities. Foster a sense of community and connectedness beyond the development.

Requirements

1) Ensure that all streets, sidewalks, and public spaces that are built as part of the **project** or serving the project directly are available for general public use, and are not enclosed within a gated enclave.

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Prerequisite: Compact Development

Intent

Conserve land. Promote livability, transportation efficiency, and walkability.

Requirements

1) Build residential components of **project** at an average density of 17 or more dwelling units per hectare of **buildable land** available for residential use
AND
Build commercial components of project at an average intensity of a floor area ratio of 0.50 or greater.

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COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Prerequisite: Diversity of Uses

Intent

Promote community livability, transportation efficiency, and walkability.

Requirements

1) Build on a site smaller than 2.8 hectares

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OR

2) Include a residential component in the **project**
AND
ensure that no more than 90% of total interior square meterage comprises any single **use type**.

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OR

3) Locate the project such that its boundary is located within 400 m **walking distance** of at least four OR within 800 m walking distance of at least six examples of the following uses: police/fire station; post office; place of worship; park; library; school; convenience store; laundry/dry cleaner; supermarket; other neighborhood-serving retail; medical/dental office; other office building; pharmacy; restaurant; other major employment center; community or civic center. Uses may not be counted in two categories, e.g., an office building gets counted only once even if it is also a major employment center, and a store of any kind gets counted only once even if it has a diverse product line. But a mixed use building with several of the above services included as distinct enterprises would count each as a separate use.

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COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Compact Development (1 to 5 Points)

Intent

Conserve land. Promote community livability, transportation efficiency, and walkability.

Requirements

1) Design and build **project** to achieve the the average densities or intensities shown in the table below. To earn specified points, the residential portion of the project must be built to the residential densities in the table below AND all nonresidential components of the project must be built to the non-residential intensities below.

Residential Density Measured as dwelling units per hectare of **buildable land**	Non-residential Intensity Measured as Floor to Area Ratio (**FAR**).	Points Available
37 to 52	0.75 to < 1.0	1
53 to 67	1.0 to < 1.5	2
68 to 84	1.5 to < 2.0	3
85 to 96	2.0 to < 2.5	4
> 97	2.5 and higher	5

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COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Transit-Oriented Compactness (1 Point)

Intent

Maximize walking trips to and from transit stops in the area immediately surrounding the transit stop.

Requirements

1) Design and build the **project** such that the average residential density and nonresidential intensity of all project development within 250 m of a transit stop has a minimum of twice the average density or intensity, as appropriate, of the full project or of the area within 400 m of the transit stop, whichever area is larger.

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COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Diversity of Uses (1 to 3 points)

Intent

Promote community livability, transportation efficiency, and walkability.

Requirements

1) Include a residential component in the **project**
   AND
   design or locate project such that the majority of the dwelling units are within 800 m of uses in at least two (1 point), four (2 points) or seven (3 points) of the following non-residential use categories:
   - everyday retail (convenience, general, grocery, drug, hardware, gas, laundry),
   - discretionary retail (restaurants, bookstores, departments stores, specialty shops),
   - entertainment (movies, theaters, concert halls, music and performance venues),
   - educational facilities (daycare, schools, college, university),
   - public/private clubs (not open to public) and associated recreational facilities,
   - religious (including cemeteries),
   - government services (city hall, court, jail, police station, fires station, post office, motor vehicle admin),
   - other civic buildings (library, museum, community center, transportation depots/stations/terminal),
   - offices (not counting home-based, small, personal offices),
   - lodging,
   - medical (hospital, clinic, private offices),
   - public recreational facilities: playing courts, sports fields, extensive trail networks,
   - light industrial (including auto repair) warehouses,
   - nurseries, market gardens, public community gardens.

   A pedestrian must be able to reach the uses via pedestrian routes that do not necessitate crossing any streets that a) have speed limits of greater than 80 km per hour, or b) have no pedestrian crossings where vehicle traffic stops.

Deleted: ½ mile

Deleted: 50 miles

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Housing Diversity (4 Points)

Intent

To enable citizens from a wide range of economic levels and age groups to live within a community.

Requirements

1) Include a sufficient variety of housing sizes and types in the **project** such that the total variety of housing within the project or within 400 m of the project achieve at least 0.5 on the Simpson Diversity Index using the housing categories below.

The Simpson Diversity Index score is calculated with the following equation:

Score = $1- \Sigma (n/N)^2$,
where n = the total number of dwellings in a single category, and
N = the total number of dwellings in all categories.

Housing Categories:

- Detached residential large - (greater than 112 sqm)
- Detached residential small - (less than 112 sqm)
- Duplex or townhouse - large (greater than 112 sqm)
- Duplex or townhouse - small (less than 112 sqm)
- Multifamily dwelling in building with no elevator - large (greater than 112 sqm)
- Multifamily dwelling in building with no elevator - small (less than 112 sqm)
- Multifamily dwelling in building with elevator - large (greater than 112 sqm)
- Multifamily dwelling in building with elevator - small (less than 112 sqm)
- Live/work large (greater than 112 sqm)
- Live/work small (less than 112 sqm)
- Accessory Unit – large (greater than 112 sqm)
- Accessory Unit – small (less than 112 sqm)

Score on the Simpson Diversity Index	Points Earned
≥ 0.5 and < 0.6	1
≥ 0.6 and < 0.7	2
≥ 0.7 and < 0.8	3
≥ 0.8	4

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COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Affordable Rental Housing (1 to 2 Points)

Intent

To enable citizens from a wide range of economic levels and age groups to live within a community.

Requirements

Include at least 10 % Housing New Zealand units.[6]

Deleted: Include a proportion of rental units priced for households earning below **area median income** such that .
¶
<#>At least 20% of total rental units are priced for households up to 50% of area median income (1 point) .
OR¶
<#>At least 40% of total rental units are priced for households up to 80% of area median income (2 points). .
¶
AND .
¶
<#>Maintain these units at affordable levels for a minimum of 15 years.¶

[6] It is acknowledged that just including Housing New Zealand properties has limitations, however this appears the only workable measure. The percentage would have to be reviewed after the case studies.

7

Deleted: **Credit: Affordable For-Sale Housing** (1 to 2 Points)¶
¶
Intent¶
¶
To enable citizens from a wide range of economic levels and age groups to live within a¶ community.¶
¶
Requirements¶
¶
<#>Include a proportion of for-sale housing affordable to households at or slightly above the area median income**:¶**
<#>At least 10% of for-sale housing is priced for households up to 100% of the area median income (1 point).
OR¶
At least 20% of for-sale housing is priced for households up to 120% of the area median income. (2 points)

Deleted: ¶

[7] It was decided that this was too hard to measure.

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Reduced Parking Footprint (2 Points)

Intent

Reduce stormwater runoff per capita. Encourage neighborhood walkability and promote public health through physical activity.

Requirements

1) Use no more than one row of parallel, angled, or perpendicular parking spaces to separate the front of buildings from the street. (1 point)
   AND/OR
2) Use no more than 20% of the **project** land devoted to residential and/or commercial uses for surface parking facilities. Underground or multi-story parking can provide additional capacity if necessary. On-street parallel parking spaces are exempt from this calculation. (1 point)

8

Deleted: Credit: Community Outreach and Involvement (1 Point)¶
¶
Intent¶
¶
To encourage community participation in the **project** design and planning and involve¶
the people who live in a community in deciding how it should be improved or how it¶
should change over time.¶
¶
Requirements¶
¶
<#>Meet with immediate neighbors and local public officials to solicit input on the proposed project during the pre-conceptual design phase, .
AND¶
<#>Host an open community meeting during conceptual design phase to solicit input on the proposed project, .
AND¶
<#>Modify the project design as a direct result of community input, OR, if modifications are not made, explain why community input did not generate design improvements, .
AND¶
<#>Work directly with community associations and/or other social networks of the community to advertise public meetings and generate comments on project design, .
AND¶
Establish ongoing means for communication between the developer and the community throughout the design and construction.

Deleted: ¶

[8] Too difficult to assess retrospectively.

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Block Perimeter (1 to 4 Points)

Intent

To promote connectivity.

Requirements

1) Limit average block perimeter within the **project**, as follows:

Average block perimeter	Points available
Between 470 and 550 metres	1
Between 400 and 469 metres	2
Between 320 and 399 metres	3
Between 240 and 319 metres	4

The perimeter of each block includes the properties bounded by the sidewalk or the equivalent provision for walking, and does not include the sidewalks themselves.

Deleted: 1551
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Credit: Locating Buildings to Shape Walkable Streets (1 Point)

Intent

Encourage pedestrian-oriented streets.

Requirements

1) Design and build **project** such that each building has a front façade that faces a public space such as a street, square, or plaza;
   AND
   the front façades of at least 80% of all buildings are no more than 7.5 m from front property line;
   AND
   the front facades of at least 50% of buildings are no more than 5.5 m from the front property line;
   AND
   the majority of mixed-use and commercial buildings are contiguous to the sidewalk.

Deleted: 25'

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COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Designing Building Access to Shape Walkable Streets (1 Point)

Intent

Encourage pedestrian-oriented streets

Requirements

1) Design and build **project** so that a principal functional entry of every building faces a public space such as a street, square, or plaza;
   AND
   there are functional building entries located every 23 m, on average, or more frequently, along commercial streets
   AND
   there is at least one entry per building facing a public space such as a street, square, or plaza in residential areas.

Deleted: 75 feet

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Designing Buildings to Shape Walkable Streets (1 Point)

Intent

Encourage pedestrian-oriented streets.

Requirements

1) Design and build **project** so that each building has a front façade that faces a public space such as a street, square, or plaza;
   AND
   all ground-level non-residential interior spaces that face a public space have transparent glass on at least 33% of the ground-level façade;
   AND
   no blank (without doors or windows) walls longer than 15 m are constructed along sidewalks. Public art installations such as murals may be exempted;
   AND
   Stipulate in **CC&Rs** or other binding documents that owner(s) will keep groundlevel non-residential spaces unshuttered at night.

Deleted: 50 feet

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Comprehensively Designed Walkable Streets (2 Points)

Intent

Encourage pedestrian-oriented streets.

Requirements

1) Earn all three of the following credits:
    - Locating Buildings to Shape Walkable Streets
    - Accessing Buildings to Shape Walkable Streets
    - Designing Buildings to Shape Walkable Streets

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Street Network (1 Point)

Intent

Provide direct and safe connections, for pedestrians and bicyclists as well as drivers, to local destinations and neighborhood centers. Promote public health though increased physical activity.

Requirements

1) Provide at least 116 intersections per square km of newly developed land,
   AND
   Include a pedestrian or bicycle through-connection in a majority of any new culde-sacs unless topographical conditions prohibit them.

Deleted: 300

Deleted: mile

The number of intersections required to earn this credit will be prorated for parcels smaller than a square mile.

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Pedestrian Network (1 Point)

Intent

Provide direct and safe connections, for pedestrians to local destinations and neighborhood centers. Promote public health though increased physical activity.

Requirements

1) Provide continuous sidewalks or equivalent provisions for walking along all streets within the **project**. New sidewalks must be at least 1200 mm wide.

Deleted: four feet

Equivalent provisions for walking include *woonerfs* and footpaths.

Sidewalks are not required on both sides of the street where the street is designed for a speed of 15 km per hour or lower.

Deleted: 10 miles

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Maximize Pedestrian Safety and Comfort (1 Point)

Intent

Provide direct, safe, and comfortable connections, for pedestrians and bicyclists, to local destinations and neighborhood centers. Promote public health though increased physical activity.

Requirements

1) Provide on-street parking on 80% of all new streets,
   AND
   Design and construct all streets within the project, whether new or existing, for a maximum speed of 30kmh for primarily residential streets or 40 kmh for primarily commercial streets,
   AND
   Plant street trees between the vehicle travel way and sidewalk at intervals of no less than 12 m;
   AND
   Ensure that a majority of ground-floor dwelling units have an elevated finished floor no less than 600 mm above the sidewalk grade.

Deleted: 20 mph

Deleted: 25 mph

Deleted: 40 feet

Deleted: 24”

The percentage of on-street parking shall be measured by comparing the length of street designated for parking to the total length of the curb around the perimeter of each block, including curb cuts, driveways, and intersection radii.

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Superior Pedestrian Experience (1 to 2 Points)

Intent

Provide appealing and comfortable pedestrian street environments in order to promote pedestrian activity.

Requirements

1) In commercial or mixed use **projects**, design and build 50% or more of the total number of office buildings to include ground floor retail;
   AND
   Ensure that all businesses and/or other community services on the ground floor are accessible directly from sidewalks along a public space such as a street, square, or plaza; (1 point)

   AND/OR

2) Place trees or other structures to provide shade when mature over at least half the length of sidewalks included within or contiguous to the project. The estimated crown diameter (the width of the shade if the sun is directly above the tree) is used to calculate the shaded area. (1 point)

9

Deleted: **Credit: Applying Regional Precedents in Urbanism and Architecture** (1 Point)

Deleted: ¶
¶
Intent¶
¶
Promote energy savings, respond to regional climate, increase the life of buildings and¶
materials, provide cultural continuity, and reinforce local distinctiveness.¶
¶
Requirements¶
¶
<#>Obtain certification from municipal planning authority, local design review board, chapter of the American Institute of Architects, chapter of ASLA, or local historic preservation organization that the following have been accomplished by the **project** team:¶
<#>Early in the design process, local and regional historical patterns of neighborhood development and building design were analyzed. .
AND¶
<#>To-scale comparisons were made between those patterns and the proposed plan in terms of: block size; orientation to the sun and prevailing breezes; relationships of buildings to streets; materials; treatments of wall openings; roof types; encroaching elements such as porches, arcades, or overhangs; and/or landscape patterns. .
AND¶
<#>Patterns that have proven successful and have stood the test of time were replicated.¶

[9] Not possible retrospectively.

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Transit Subsidy (3 Points)

Intent

Reduce energy consumption and pollution from motor vehicles by encouraging use of public transit.

Requirements

1) Provide transit passes, subsidized to be half of regular price or cheaper, for at least one year, for residents and employees located within the **project**. Publicize the fact that subsidized transit passes are available to the eligible residents and employees. (3 points)

   OR}

2) Provide transit service (with vans, shuttles, buses) to rail, ferry, or other major transit facilities and/or another major destination such as a retail or employment center, with service no less frequent than 5 rides per weekday peak period. Guarantee service for at least one year. (3 points)

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Transit Amenities (1 Point)

Intent

Reduce energy consumption and pollution from motor vehicles by encouraging use of public transit.

Requirements

1) Provide covered and at least partially enclosed shelters, adequate to buffer wind, with at least one bench at each transit stop within the **project** boundaries.

   OR

2) Provide kiosks, bulletin boards, and/or signs devoted to providing local transit information as part of the project, including basic schedule and route information at each transit stop that borders or falls within the project.

COMPACT, COMPLETE & CONNECTED NEIGHBORHOODS

Credit: Access to Nearby Communities (1 Point)

Intent

Provide direct and safe connections, for pedestrians and bicyclists as well as drivers, to local destinations and neighborhood centers. Promote public health by facilitating walking and bicycling.

Requirements

1) Design and build **project** such that there is at least 1 through-street every 270 m. This does NOT include connections that cannot physically be made; e.g. wetlands, rivers, railroads, extreme topography, natural gas lines, pipeline easements, highways, expressways and other limited-access roads.

Deleted: 1/6 mile

Credit: Adaptive Reuse of Historic Buildings (1 to 2 Points)

Intent

Encourage use of historic buildings in a manner that preserves their historic materials and character.

Requirements

1) Incorporate into the **project** one or more buildings that have been designated, listed or identified as
   - a historic place under the Historic Places Act.

   AND

   Rehabilitate the building(s), ensuring that each building complies with the guidelines for historic places. (2 points)

Deleted: <#>"historic" by a local government or locally recognized historic preservation organization .
OR¶
a "contributing building," in a state historic register or on the National Register of Historic Places, or as a National Historic Landmark building or district or as a nationally significant building or district by the state.

Deleted: local or federal standards for rehabilitation, as follows:

Deleted: <#>Obtain confirmation from the municipality, and/or the local historic preservation commission that the building(s) meet the local standards for an historic rehabilitation. (1 point) .
OR¶
<#>Comply with the Secretary of the Interior's "Standards for Rehabilitation." (2 points)¶

RESOURCE EFFICIENCY[10]

Deleted: ¶
Credit: Certified Green Buildings (1 to 5 Points)¶
¶
Intent¶
¶
Encourage the design and construction of buildings to utilize green building practices.¶
¶
Requirements¶
¶
Design, construct, or retrofit one building as part of the **project** to be LEED certified under one of the other LEED building-centric rating systems: LEED-NC (New Construction), LEED-EB (Existing Buildings), LEED-H (Homes), LEEDCS (Core & Shell). (1 point)
AND
Stipulate in deed restrictions, **CC&Rs**, or other binding development documents, showing that the requirement will be in force in perpetuity.¶
¶
Additional points for percentages of LEED-certified buildings is available as follows:¶

Deleted: Percent of project's buildings LEED certified

Deleted: Points

Deleted: 20%

Deleted: 2

Deleted: 30%

Deleted: 3

Deleted: 40%

Deleted: 4

Deleted: 50%

Deleted: 5

[10] There is no New Zealand rating system in place.

RESOURCE EFFICIENCY

11

Deleted: **Credit: Energy Efficiency in Buildings** (1 to 3 Points)

Deleted: ¶
¶
Intent¶
¶
Encourage the design and construction of energy efficient buildings to reduce air, water, and land pollution and environmental impacts from energy production and consumption.¶
¶
Requirements¶
¶
<#>Design and construct all buildings in the **project** such that they meet one of the following requirements according to the appropriate category:

Category 1: For non-residential buildings and residential buildings over 3 stories, establish the budget based upon a design of 15% below ASHRAE/IESNA Standard 90.1 - 1999 or 15% below the local energy code, whichever is more stringent.
Category 2: For residential buildings 3 stories or fewer, establish the budget based upon complying with Energy Star requirements.
AND
Stipulate in deed restrictions, **CC&Rs**, or other binding development documents, showing that the requirement will be in force in perpetuity. (1 point)

OR
¶
<#>Achieve 10% additional energy savings beyond the relevant standard set forth above, and stipulate corresponding provisions in binding development documents. (2 points)

OR
¶
<#>Achieve 20% additional energy savings beyond the relevant standard set forth above and stipulate corresponding provisions in binding development documents. (3 points)¶

[11] Relates to individual houses, this is not included in the NSF

RESOURCE EFFICIENCY

12

Deleted: **Credit: Water Efficiency in Buildings** (1 to 2 Points)

Deleted: ¶
¶
Intent¶
¶
Encourage the design and construction of water efficient buildings to reduce the environmental impacts from water consumption.¶
¶
Requirements¶
¶
<#>Design and construct all buildings in the **project** such that each uses 20% less water than the water use baseline set forth in the Energy Policy Act of 1992, or the local code, whichever is more stringent.
AND
Stipulate in deed restrictions, **CC&Rs**, or other binding development documents, showing that the requirement will be in force in perpetuity. (1 point)
OR
¶
<#>Achieve 30% water use reduction beyond the relevant standard set forth above, and stipulate corresponding provisions in binding development documents. (2 points)¶

[12] Relates to individual houses, this is not included in the NSF

RESOURCE EFFICIENCY

13

Deleted: **Credit: Heat Island Reduction** (1 Point)

Deleted: ¶
¶
Intent¶
¶
Reduce heat island effect to minimize impact on microclimate, human and wildlife habitat, and required energy for cooling.¶
¶
Requirements¶
¶
<#>For shared portions of the **project** or public or common areas,¶
<#>provide shade (within 5 years) and/or use light-colored/high-albedo materials with a reflectance of a least 0.3 and/or open grid pavement for at least 30% of non-roof impervious surfaces, including streets, parking lots, walkways, plazas, etc.;
OR
¶
<#>place a minimum of 50% of parking spaces underground or covered by structured parking;
OR
¶
<#>use an open-grid pavement system (less than 50% impervious) for a minimum of 50% of the streets and parking lot areas;
AND
¶
<#>stipulate in **CC&Rs** or other binding documents that non-roof heat island requirements will be met for each development phase.¶
OR¶
¶
<#>For non-shared portions of the project,¶
<#>provide shade (within 5 years) and/or use light-colored/high-albedo materials (reflectance of a least 0.3) and/or open grid pavement for at least 30% of nonroof impervious surfaces, including streets, parking lots, walkways, plazas, etc.;
OR
¶
<#>place a minimum of 50% of parking spaces underground or covered by structured parking;
... [3]

[13] Deleted because there is a considerable amount of work involved in assessing this and only a very remote chance that any of our case studies would earn this credit.

RESOURCE EFFICIENCY

14

Deleted: **Credit: Infrastructure Energy Efficiency** (1 Point)

Deleted: ¶
¶
Intent¶
¶
Reduce air, water, and land pollution from energy consumption.¶
¶
Requirements¶
¶
<#>For common or public amenities (street lights, lift stations, traffic lights), design or purchase equipment to comply with the appropriate equivalent of ASHRAE/IESNA Standards or the local energy code, whichever is more stringent.
OR
¶
<#>For common or public amenities, benchmark energy use of conventional equipment and reduce consumption by 15%.¶

[14] No equivalent New Zealand standard

RESOURCE EFFICIENCY

Credit: On-Site Power Generation (1 Point)

Intent

Reduce air, water, and land pollution from energy consumption and production by increasing the efficiency of the power delivery system. Increase the reliability of power.

Requirements

1) Develop or incorporate into future **project** build out through **CC&Rs** or other binding documents, on-site source(s) of power generation sufficient to meet at least 5% of the energy needs of all building uses and commonly owned infrastructure in the project.

Base energy demand is based on the allowable entitled area for the project, according to the following categories:

> **Category 1:** For non-residential buildings and residential buildings over 3 stories, establish the budget based on a design of 15% below ASHRAE/IESNA Standard 90.1 - 1999 or 15% below the local energy code, whichever is more stringent.
> **Category 2:** For residential buildings 3 stories or fewer, establish the budget based on compliance with Energy Star requirements.[15]

Calculations for total on-site energy can include future site or building-integrated systems stipulated through CC&R**s** or other binding documents.

[15] To be amended if any of the case studies have on site generation.

RESOURCE EFFICIENCY

Credit: On-Site Renewable Energy Sources (1 Point)

Intent

Reduce environmental impacts associated with fossil fuel energy generation by increasing the use of on-site renewable energy sources.

Requirements

1) Design and specify, or incorporate into future **project** build-out through **CC&Rs** or other binding documents, the use of shared on-site nonpolluting renewable energy generation technologies such as solar, wind, geothermal, low-impact hydroelectric, and biomass to supply at least 5% of the total energy used by all building uses and commonly owned infrastructure in the project.

Base energy demand is based on the allowable entitled area for the project, according to the following categories:

> **Category 1:** For non-residential buildings and residential buildings over 3 stories, establish the budget based on a design of 15% below ASHRAE/IESNA Standard 90.1 - 1999 or 15% below the local energy code, whichever is more stringent.
> **Category 2:** For residential buildings 3 stories or fewer, establish the budget based on compliance with Energy Star requirements.

Calculations for total on-site energy can include future site or building-integrated systems stipulated through CC&Rs or other binding documents.

RESOURCE EFFICIENCY

Credit: Efficient Irrigation (1 Point)

Intent

Conserve potable water.

Requirements

1) No in-built irrigation systems in public areas.[16]

Deleted: For common or public landscaped areas, reduce potable water consumption for irrigation, except for initial watering to establish plants, by at least 50% compared to conventional means through native plant selection, high-efficiency irrigation technology, rainwater harvesting and/or **greywater** systems; AND stipulate **CC&Rs** or other binding documents to insure future compliance by building owners.

[16] It would be hard to determine what conventional use would be, this seems a straight forward measure that we could use.

RESOURCE EFFICIENCY

Credit: Greywater & Stormwater Reuse (2 Points)

Intent

Conserve potable water.

Requirements

1) For common and public areas, design and construct **greywater** and/or stormwater systems to capture and reuse at least 50% of greywater and stormwater,
   AND
2) stipulate **CC&Rs** to mandate this over time.

RESOURCE EFFICIENCY

Credit: Wastewater Management (1 Point)

Intent

Reduce pollution from wastewater and reuse nutrients from the wastewater stream.

Requirements

1) Design and construct shared infrastructure as part of the **project** to reprocess at least 50% of the organic wastes generated by the project into useful nutrient sources. Isolate these wastes and prevent toxic contributions to the designated wastewater stream.

RESOURCE EFFICIENCY

Credit: Reuse of Materials (1 Point)

Intent

Promote reuse of materials and resources.

Requirements

1) Use salvaged, refurbished, or reused materials for at least 5% of all materials in new shared infrastructure such as sidewalks, roads, grading subbase, paving, curbs and sewers.

RESOURCE EFFICIENCY

Credit: Recycled Content (1 Point)

Intent

Promote use of recycled materials.

Requirements

1) Build *common and public* infrastructure such as sidewalks, roads, grading subbase, paving, curbs, and sewers using materials with recycled content such that the sum of post-consumer recycled content plus one-half of the post-industrial recycled content constitutes at least 5% of the total value of the materials (1 point)
   OR
2) or at least 10% of the total value of the materials (2 points).

The value of the recycled content portion of a material shall be determined by dividing the weight of recycled content in the item by the total weight of all material in the item, then multiplying the resulting percentage by the total value of the item. Mechanical and electrical components shall not be included in this calculation. Recycled content materials shall be defined in accordance with the Federal Trade Commission document, *Guides for the Use of Environmental Marketing Claims, 16 CFR 260.7 (e).*

RESOURCE EFFICIENCY

17

Deleted: Credit: Regionally Provided Materials (1 Point)¶
¶
Intent¶
¶
Promote selection of regionally available materials and resources to build local economy and reduce embodied energy.¶
¶
Requirements¶
¶
<#>Build common and public infrastructure such as sidewalks, roads, grading subbase, paving, curbs, and sewers using a minimum of 20% of materials that are manufactured, extracted, harvested or recovered within a radius of 500 miles of the **project**.¶
¶
Manufacturing refers to the final assembly of components into the building product that is furnished and installed by the tradesmen. For example, if the hardware for a joist comes from Dallas, Texas and the lumber from Vancouver, British Columbia, but the joist is assembled in Kent, Washington, then the location of the final assembly is Kent, Washington.

Deleted: ¶

[17] Not practical because there will be no records.

RESOURCE EFFICIENCY

18

Deleted: Credit: Construction Waste Management (1 Point)¶
¶
Intent¶
¶
Promote efficient use of solid waste by diverting construction, demolition and land clearing debris from landfill disposal, and by redirecting resources for recycling and reuse.¶
¶
Requirements¶
¶
<#>Develop and implement a construction waste management plan that quantifies material diversion goals and the procedures for achieving them . AND¶
<#>Recycle and/or salvage construction, demolition and land clearing waste generated through infrastructure development and construction of public or common amenities such that either¶
<#>50% of these wastes are diverted from landfills, . OR¶
<#>25% of these wastes are recycled or reused on-site.¶
¶
Calculations can be done by weight or volume, but must be consistent throughout and cannot include earth moving. Hazardous substances, pollutants and contaminants that are removed from the site as part of a sanctioned remediation process are excluded from the calculation.

Deleted: ¶

[18] Not practical because there will be no records.

RESOURCE EFFICIENCY

Credit: Comprehensive Waste Management (1 Point)

Intent

Promote safe and efficient disposal or reuse of waste streams generated by occupants.

Requirements

1) Include the following as part of the **project**:

   a) at least one drop-off point available to all project occupants for office or household hazardous wastes such as paints, solvents, oil, batteries.

      OR

      locate project in a municipality that provides services for collecting these materials;

   AND

   b) at least one recycling or reuse station available to all project occupants dedicated to the separation, collection, and storage of materials for recycling including, at a minimum, paper, corrugated cardboard, glass, plastics and metals

      OR

      locate project in a municipality that provides recycling services for these materials;

   AND

   c) at least one compost station available to all project occupants dedicated to the collection and composting of food wastes.

   AND

   d) publicize the availability and benefits of these drop-off point(s), station(s), or services.

RESOURCE EFFICIENCY

19

Deleted: **Credit: Light Pollution Reduction** (1 Point)¶
¶
Intent¶
¶
Reduce light pollution.¶
¶
Requirements¶
¶
For shared portions of the **project**, design exterior lighting to meet or provide lower light levels and uniformity ratios than those recommended by the Illuminating Engineering Society of North America (IESNA) *Recommended Practice Manual: Lighting for Exterior Environments* (RP-33-99); .
AND .
Design exterior lighting such that all exterior luminaires with more than 1000 initial lamp lumens are shielded and all luminaires with more than 3500 initial lamp lumens meet the Full Cutoff IESNA Classification; .
AND .
Stipulate **CC&Rs** or other binding documents that require continued adherence to these standards.

Deleted: ¶

[19] There is no New Zealand standard.

LOCATION EFFICIENCY

Credit: Contaminant Reduction in Brownfields Remediation (1 Point)

Intent

Encourage brownfields cleanup methods that reduce contaminant volume or toxicity and thereby minimize long-term remediation or monitoring burdens.

Requirements

1) Earn the Contaminated Brownfields Redevelopment credit,
   AND
   Use cleanup method(s) that treat, reduce or eliminate the volume or toxicity of contaminated material found on the site.

Cleanup methods which include only capping or translocation of contaminated material to an off-site location will not achieve this credit.

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Methodology: If the project will be located within an area served by an MPO, the MPO boundary must be used to determine the scope of the region as a whole, and the study must use the MPO's determination of the average VMT per resident of the area as a whole. If the project will be outside an MPO region but within a Metropolitan or Micropolitan Statistical Area as defined by the US Census (see OMB Bulletin 05-02, February 22, 2005), the boundary of the region as a whole must be the same as that used by the Census to define the Statistical Area. If the project will be outside such an area, the scope of the region shall be the engineer's delineation of an equivalent "commuteshed," encompassing the average commuting distance reported by the US Census for the project's census tract. The study must take into account the latest data from all relevant government sources (including, for example, MPOs, the Census, and the Nationwide Personal Transportation Survey of the US Department of Transportation), and all assumptions and conclusions must be fully explained and justified.

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Locate project on a site with outstanding performance on travel behavior, meaning that the project is within the study area of a Metropolitan Planning Organization AND within a transportation analysis zone where **VMT** per capita or driving mode share has been demonstrated by MPO research derived from a household transportation survey to be no more than 80% of the average of the metropolitan region as a whole. Additional credit may be awarded for increasing levels of performance, as indicated:

Percent of average regional VMT	Points earned
71% to 80%	2
61% to 70%	3
51% to 60%	4
41% to 50%	5
40% or less	6

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Intent

Reduce heat island effect to minimize impact on microclimate, human and wildlife habitat, and required energy for cooling.

Requirements

For shared portions of the **project** or public or common areas,

provide shade (within 5 years) and/or use light-colored/high-albedo materials with a reflectance of a least 0.3 and/or open grid pavement for at least 30% of non-roof impervious surfaces, including streets, parking lots, walkways, plazas, etc.;

OR

place a minimum of 50% of parking spaces underground or covered by structured parking;

OR

use an open-grid pavement system (less than 50% impervious) for a minimum of 50% of the streets and parking lot areas;

AND

stipulate in **CC&Rs** or other binding documents that non-roof heat island requirements will be met for each development phase.

OR

For non-shared portions of the project,

provide shade (within 5 years) and/or use light-colored/high-albedo materials (reflectance of a least 0.3) and/or open grid pavement for at least 30% of nonroof impervious surfaces, including streets, parking lots, walkways, plazas, etc.;

OR

place a minimum of 50% of parking spaces underground or covered by structured parking;

OR

use an open-grid pavement system (less than 50% impervious) for a minimum of 50% of the streets and parking lot areas;

AND

stipulate in CC&Rs or other binding documents that non-roof heat island requirements will be met for each development phase.

OR

For any project

Use Energy Star® compliant (highly reflective) AND high emissivity roofing (emissivity of at least 0.9 when tested in accordance with ASTM 408) for a minimum of 75% of the roof surface of all buildings within the project;

OR

install a “green” (vegetated) roof for a least 50% of the roof area of all buildings within the project. Combinations of high albedo and vegetated roof can be used providing they collectively cover 75% of the roof area of all buildings.
AND

Stipulate in CC&Rs or other binding documents that roof heat island requirements will be met for each development phase.