

Greater Christchurch Urban Development Strategy Forum

Report #3 – ASSESSMENT CRITERIA – 27 September 2004

This report presents the final draft list of Assessment Criteria to be used in the assessment of options, presented to the Forum meeting of 14 September, (Report#2) recommended for adoption by the Forum.

Possible criteria for Environmental Sustainability would include concepts such as efficient use and support of renewable resources, efficient use of non-renewable resources, and limiting pollution and environmental degradation (accounting for environmental carrying capacity and irreversible impacts). These are based upon an OECD Environmental Strategy report (May 2001) provided by Dr Morgan Williams.

It was recommended that high level "sustainability concepts" that apply to each criteria be refined during the assessment of options.

Two other possible criteria were discussed having been raised by Robin Odams and Dr Morgan Williams, these were:

- 1) "Affordability/ Fundability" and,
- 2) "Institutional Frameworks".

Following discussions it was agreed that these not be included as criteria for options assessment, but be included in the review of the development of "how" any preferred option or draft strategy might be pursued.

The Social Well-Being criteria were re-written to include Health and Education/Learning criteria (replacing "social capital" and "community facilities") after discussion with the City Council Social Assessment Staff.

Options Assessment Criteria and Indicators

General note: Benchmarking some indicators for comparison against other cities will be provided where possible.

I. ECONOMIC WELL-BEING

Criteria 1: *Future Economy and Distribution* - Urban development supports the desired future economy and likely future distribution of economic activity.

Example Indicators:

1. *Support for future desired economic activity (e.g. targeted business growth)*
2. *Alignment with existing/projected distribution of economic activities*
3. *Support to primary agricultural sector*
4. *Opportunity for high technology industries*
5. *Opportunity/support for tourism*
6. *Potential labour pool (to attract activities in the future)*
7. *Potential to accommodate activities requiring large amounts of space*
8. *Affordability (e.g. land prices)*

Criteria 2: *Access to Employment and Commercial Activity* - Urban development promotes or enables reasonable access to employment/job markets, and commercial activity.

Example Indicators:

1. *Travel time/cost of travel to work places (indicator work places to be identified)*
2. *Distance to major centres of employment*
3. *Travel time/cost of travel to commercial activities*
4. *Distance to major centres of commercial activity*

Criteria 3: *Public Cost (or Benefit)* - Public cost or benefit (relative) of transport system, sewage disposal and water supplies for urban development.

Example Indicators:

1. *Roading costs*
2. *Public transport including rail opportunities*
3. *Sewerage/sewage treatment and disposal*
4. *Water supply*
5. *Stormwater drainage*
6. *Refuse/solid waste collection and disposal*
7. *Open space (to accepted standard of provision for local/ neighbourhood open space)*
8. *Telecommunication costs*
9. *Education/School provision costs*
10. *Hospital provision costs*
11. *Thresholds for key infrastructure capacity upgrades*
12. *Other Public Agency costs??*
13. *Overall public cost (including comparison to existing funding forecasts)*

Criteria 4: *Private Cost* - includes building and transport costs (includes cost of traffic congestion, accidents) associated with urban development.

Example Indicators:

1. *Private transport time/costs. Change in average travel time/cost*
2. *Accident costs*
3. *Business costs including freight*
4. *Building costs - only relevant if options have a significant area of hillside development or land requiring hazard mitigation*
5. *Costs of compliance*

II. SOCIAL WELL-BEING

Criteria 5: *Community Identity and Social Cohesion* - Urban development fosters community identity, community focus and social cohesion.

Example Indicators:

1. *Complementary to/compatible with established town functions*
2. *Opportunities for development of identifiable communities (centres and boundaries)*
3. *Local neighbourhood identity*
4. *Access to local shopping/services*
5. *Accessibility/walkability*
6. *Cultural diversity*
7. *Safety, personal security*
8. *Supports wider Canterbury identity*

Criteria 6: Residential Quality - Urban development maintains/enhances the character, attractiveness and amenity values of living environments and provides choice of housing opportunities and living environments.

Example Indicators:

1. Choice of housing opportunities and living environments
2. Opportunity for home ownership(housing affordability)
3. Opportunities for "revitalisation" of degraded housing stock/residential environments
4. Average lot size and/or proximity and access to local open space
5. Rate of development/change

(Measures change in city identity and "liveability" - requires input from Urban Design.)

Criteria 7: Community Health - Urban development promotes or enables access to healthcare and recreation opportunities, reduces traffic accidents, etc.

Example Indicators:

1. Travel time/cost of travel to healthcare facilities, recreation opportunities, etc.
2. Distance to healthcare, recreation facilities

Criteria 8: Community Education and Learning - Urban development promotes or enables reasonable access to education and learning facilities.

Example Indicators:

1. Travel time/cost of travel to education centres
2. Distance to education centres
3. Thresholds capacity for key education facilities (e.g. requirements for major schools, libraries, etc.)

Criteria 9: Access to Open Space - Urban development promotes or enables access to and provision of quality and diverse open space and landscape.

Example Indicators:

1. Access to regional open space
2. Access/distance to local (neighbourhood) open space
3. Access/distance to large scale/quality open space

III. CULTURAL WELL-BEING

Criteria 10: Cultural Identity - Urban development enhances cultural values, including resources of significance to Maori and other cultures.

Example Indicators:

1. Residential development proximity and access to cultural resources, including resources of significance to Maori and other cultures.
2. Enhancement/support of (or impacts on) cultural resources, including resources of significance to Maori and other cultures.

Criteria 11: Heritage Well-Being - Urban development enhances heritage values, including resources of significance to Maori and other cultures.

Example Indicators:

1. Enhancement/support of (or impacts on) heritage resources including the built environment, and heritage resources of significance to Maori and other cultures.

IV. ENVIRONMENTAL WELL BEING

General Environmental Sustainability - to be applied for all Environmental criteria including efficient use and support of renewable resources, efficient use of non-renewable resources, limiting pollution and environmental degradation (accounting for environmental carrying capacity and irreversible impacts).

Criteria 12: Impacts on Energy Use - Urban development improves energy efficiency across all sectors, including reducing reliance on and consumption of transport fuels.

Example Indicators:

1. Vehicle kms travelled
2. Fuel use/emissions (CO₂)
3. Transport energy use
4. Residential energy use influenced by housing design
5. Distance to major attraction nodes (e.g. CBD, airport...), public transport
6. Total energy use across all sectors (including embodied energy assessment)

Criteria 13: Impacts on Air Emissions - Urban development enhances and takes into account effects on air quality, including avoiding areas prone to poor air quality and reducing contribution to air pollution.

Example Indicators:

1. Air quality pollution index by geographic location
2. Contribution of commuter traffic to local concentrations of air pollutants (CO₂, SO₂) (overall effect of transport emissions assessed under Energy above)

Criteria 14: Impacts on Water - Urban development enhances the quality of and takes into account effects on rivers and river margins, wetlands, aquatic ecosystems, groundwater and the coast.

Example Indicators:

1. Water demand
2. Waste water disposal
3. Impact on water quantity, quality (surface, groundwater)
4. Carrying capacity of sensitive catchments for stormwater drainage (at macro- and micro-scale level, e.g. local and UDS area)
5. Impact on sensitive ecosystems and wetlands
6. Residential land area/density within sensitive catchments
7. Community value (non financial) of water and associated ecosystems

Criteria 15: Impacts on Land - Urban development enhances and takes into account effects on land resources (indigenous vegetation, versatile soils, natural features, recreational areas, open space etc), biodiversity and ecosystems.

Example Indicators:

1. Residential land area/density within areas of indigenous vegetation
2. Residential land area/density within areas of versatile soil
3. Maintenance of opportunity for agriculture (including development of irrigation)
4. Residential land area/density within areas of outstanding landscape and natural features
5. Impact on recreational areas and open space of regional significance
6. Impact on biodiversity
7. Residential land area/density within areas with sensitive ecosystems
8. Total amount of land consumed/agricultural land consumed for urban purposes

Criteria 16: *Impacts on Strategic Infrastructure* - Urban development supports efficient use of strategic infrastructure such as strategic transport networks, Christchurch International Airport, the port, regional solid waste disposal (Burwood), sewage treatment and disposal and composting facilities/areas, electricity and telecommunications.

Example Indicators:

1. *Extent to which urban development contributes to congestion (kms). Change in length of congested road*
2. *Opportunity (including viability) for alternative modes (rail, light rail, public transport, cycling, walking)*
3. *Impact of traffic congestion on access to airport and seaport*
4. *Change in public transport patronage*
5. *Impact on operation of public transport (congestion on key routes, Bus interchanges, etc.)*
6. *Residential land area/density within airport and seaport protection zones*
7. *Residential land area/density within areas subject to other potential reverse sensitivity effects (regional solid waste disposal, sewage treatment and disposal facilities)*
8. *Residential land area/density within drainage retention basins*

Criteria 17: *Risks from Natural Hazards* - Urban development creates costs/benefits from relative exposure to various natural hazards, and improves risk management, resilience, and recovery to those risks.

Example Indicators:

1. *Residential land area/density within river flood risk zones*
2. *Residential land area/density within liquefaction zones or*
3. *Residential land area/density within areas subject to coastal hazards (including coastal erosion and inundation as a result of the likely effects of climate change)*

V. OTHER

Criteria 18: *Robustness* - Adaptability of urban development to higher (and lower) rates of population growth, unanticipated socio-economic conditions, technological innovation etc (development pattern of "least regret").

Example Indicators:

1. *Higher or lower population growth rates, changed age/family structures or ethnic mix*
2. *Adaptability to changing social and economic considerations*
3. *Unexpected (significant) effects of climate change*
4. *Vulnerability to fuel shortages or increased cost fuel (including costs of transport)*
5. *Unexpected power shortages*

Notes

- (i) For the purpose of this project, the entire UDS area is viewed as a single ecosystem and the impact on the ecosystem as a whole is represented by the overall assessment. Reference to ecosystems under Land relates specifically to terrestrial ecosystems.
- (ii) All public costs relate to the provision of services additional to current zoning requirements.
- (iii) The summation of public and private costs provides a measure of the total financial cost of each option. The assessment excludes opportunity costs and gains in land values as a result of land rezoning.

From the Management Steering Team

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