

**Site Selection Criteria** (Please refer to definitions of terms used in the criteria provided on pages 3 and 4).

| No. | Specific Factor   | Criteria   | Rankings   |
|-----|---|--|--|
| 1   | Flood plains  | At least 500mm above a 100 year ARI floodplain.  | Essential  |
| 2   | Natural Waterways/Wetlands/Marine Systems                     | Not less than 1000m from high conservation/ ecological value aquatic ecosystems, not less than 500m from a slightly to moderately disturbed systems and not less than 250m from highly disturbed aquatic systems.                        | Essential (permanent systems)<br>Desirable (ephemeral systems)   |
| 3   | Groundwater   | Not within Public Drinking Water Source Areas (PDWSAs) P1-P3 priority areas identified in published development plans.   | Essential  |
| 4   | Groundwater   | Groundwater should be maintained at least 5m below the surface.  | Desirable  |
| 5   | Groundwater   | Hydraulic conductivity of any soil (natural or engineered) above ground water shall ensure that the transport time of contaminants to groundwater is more than 2 years.  | Essential  |
| 6   | Constructed drainage systems e.g. stormwater or road drainage | Not within 100m of an entry point of a constructed drain.  | Desirable  |
| 7   | Hydrogeology  | Should be located in an area where the hydrogeology can be readily monitored and managed with confidence.  | Essential  |
| 8   | Geological Stability  | Located on stable ground e.g. not in a seismically active area, areas susceptible to soil sinking, landslides or swelling, karst or sinkhole terrain.  | Essential  |
| 9   | Acid Sulfate Soils  | Not located on soils with high acid sulfate generating potential.  | Desirable  |
| 10  | Topography  | Not located in an area with a slope >4 %.  | Desirable  |
| 11  | Threatened Flora, Fauna and Ecological Communities            | Not within 500m of known habitats of threatened species of flora or fauna or threatened ecological communities except where the maintenance of threatened species or threatened ecological community values can be clearly demonstrated. | Essential (where the nature of the activity is likely to negatively impact on the relevant threatened species or threatened ecological community)<br>Desirable (where the nature of the activity is unlikely to negatively impact on the relevant threatened species or threatened ecological community) |

| No. | Specific Factor                     | Criteria   | Rankings                       |
|-----|-------------------------------------|--|--------------------------------|
| 12  | Conservation Value                  | No negative impact on national parks, nature reserves, or areas under conservation covenants.  | Essential                      |
| 13  | “Bush Forever” sites                | Not within areas designated or proposed as ‘Bush Forever’ sites.   | Essential                      |
| 14  | Public Acceptability                | A minimum 3km buffer from the nearest sensitive land use, with a desirable buffer distance of 6km from the nearest sensitive land use. | 3km Essential<br>6km Desirable |
| 15  | Heritage Value                      | No negative impact on sites of recognised cultural or historical significance.   | Essential                      |
| 16  | Transport Routes                    | Must be within 25km of major transport routes or suitable railway lines.   | Desirable                      |
| 17  | Transport Routes                    | Any traffic on local roads must be within acceptable congestion and safety limits.   | Essential                      |
| 18  | Emergency Services                  | Within approximately 25 minutes of adequate off-site emergency services including medical and fire fighting facilities.                | Desirable                      |
| 19  | Proximity to waste generating areas | Within 150km from where 80% of the waste it treats is generated.   | Desirable                      |
| 20  | Land Ownership                      | Located on State Government owned land.  | Desirable                      |
| 21  | Legislative Jurisdiction            | Within the jurisdiction of Western Australian legislation, policies or regulations ie not on Commonwealth land.                        | Essential                      |
| 22  | Equity/ employment                  | Within a reasonable commuting distance of a centre providing adequate facilities for a skilled workforce and their families.           | Desirable                      |
| 23  | Services                            | Ability to provide adequate access to water, telephone and electricity.  | Essential                      |
| 24  | Climate/ landform                   | Not in an area prone to frequent temperature inversions.   | Desirable                      |

## Terms and Definitions Used in Site Selection Criteria

**Adequate Off-Site Emergency Services** – This should take into account the distance to either a career fire station (ideally 25km) or a volunteer fire station (ideally 20km) and will require an assessment of the capability of the firefighting service to provide a range of fire suppression and hazmat services.

**ARI** – Average Recurrence Interval – a statistical estimate of the average period in years between the occurrence of a flood of a given size or larger e.g. floods with a discharge as big or larger than the 100years ARI flood event will occur on average once every 100 years.

**Bush Forever sites** - are sites that have been identified as being regionally significant bushland by the State Government that needs to be retained and protected forever.

**High Conservation/ecological value aquatic ecosystems** – effectively unmodified or other highly-valued ecosystems, typically (but not always) occurring in national parks, conservation reserves or in remote and/or inaccessible locations. The ecological integrity of the system is regarded as intact.

**Highly disturbed aquatic ecosystems** – These are measurably degraded ecosystems of lower ecological value.

**Karst** - Terrain with special landforms and drainage characteristics due to greater solubility of certain rocks in natural waters than is common.

**National Parks and Nature Reserves** – including conservation parks, nature reserves, national parks, regional parks, areas listed on the Register of the National estate and proposed additions to the reserve system (e.g. Forest Management Plan 2004-2013, pastoral leases acquired for reservation, 2015 pastoral lease exclusion areas, and areas identified in CALM Act management plans for addition to the conservation estate).

**Public Drinking Water Source Areas (PDWSAs)** - A PDWSA is a collective description for surface or underground water resources used for public drinking water supplies. They include Underground Water Pollution Control Areas, Wellhead Protection Zones, Water Reserves, Reservoir Protection Zones and Catchment Areas. Legislation allows the Water and Rivers Commission to proclaim areas of land such as PDWSAs for the State to ensure their protection and management.

**Priority 1 (P1) Areas:** P1 source protection areas are defined to ensure that there is no degradation of the water source. P1 areas are declared over land where the provision of the highest quality public drinking water is the prime beneficial land use. P1 areas would typically include land under Crown ownership. P1 areas are managed in accordance with the principle of risk avoidance and so land development is generally not permitted.

**Priority 2 (P2) Areas:** P2 source protection areas are defined to ensure that there is no increased risk of pollution to the water source. P2 areas are declared over land where low intensity development (such as rural) already exists. Protection of public water supply sources is a high priority in these areas. P2 areas are managed in accordance with the principle of risk minimisation and so some conditional development is allowed.

**Priority 3 (P3) Areas:** P3 source protection areas are defined to manage the risk of pollution to the water source. P3 areas are declared over land where water supply sources need to co-exist with other land uses such as residential, commercial and light industrial developments. Protection of P3 areas is achieved through management guidelines rather than restrictions on land use. If the water source does become contaminated, then water may need to be treated or an alternative water source found.

**Sensitive land uses** - include areas zoned residential, hotels, motels and hostels, caravan parks, hospitals and nursing homes, schools and other educational establishments, shopping centers, some public buildings and indigenous communities.

**Slightly to moderately disturbed aquatic ecosystems** – ecosystems in which aquatic biological diversity may have been adversely affected to a relatively small but measurable degree by human activity. The biological communities remain in a healthy condition and ecosystem integrity is largely retained.

**Sinkhole:** A sinkhole is a localized land subsidence, generally, a funnel-shaped or steep-sloped depression caused by the dissolution of underlying carbonate rocks or the subsidence of the land surface into a subterranean passage, cavity, or cave.

**Sites of cultural or historical significance**– including those listed on the *Register of Heritage Places*, a *Local Government Municipal Register*, the *National Trust Register* and the *Aboriginal Heritage list*.

**Threatened Ecological Communities** - ecological communities that are "Presumed Totally Destroyed, Critically Endangered, Endangered, Vulnerable, Priority 1-5, Lower Risk and Not Evaluated" as assessed by CALM. Communities are based on various life-forms including plants, invertebrates and microorganisms.

**Threatened Flora and Fauna** - Under the Wildlife Conservation Act, the Minister for the Environment may declare species of protected flora to be "Rare Flora" if they are considered to be in danger of extinction, rare or otherwise in need of special protection. Such species are referred to as Threatened Flora, and receive special management attention by CALM. This also includes species of fauna declared to be "threatened" by the Minister for the Environment. Species of fauna are declared to be 'threatened' if they are likely to become extinct, or are rare, or are otherwise in need of special protection.

**Wetland** – areas of marsh, fen, peatland or water, whether permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth to which at low tide does not exceed six metres. This excludes constructed wetlands but includes:

- Dampland (seasonally waterlogged basin)
- Sumpland (seasonally inundated basin)
- Lake (permanently inundated basin)
- Artificial basins (e.g. dams and reservoirs)