

Mundaring Water Treatment Plant Site Selection Multi-Criteria Analysis (MCA): Biodiversity Scoring Process and Potential for Land Degradation Scoring Process

Outcomes from Workshop: 23rd July 2007

Facilitated by Megan Dilly (GHD)

Participants:

Beth Schultz (WA Forest Alliance)
Fiona Jordan
Jael Johnson (EARTH)
Paul Benson
Sandra Bentley (Reserve Protection Group)
Steve McKiernan (Conservation Council)
Toni Burbidge (Shire of Mundaring)

Apologies:

Allan and Anne Pilgrim (Eastern Hills Wildflower Society)
Paul Van de Beecke (Shire of Mundaring Environmental Advisory Group)
Penny Hussey (Helena River Catchment Group)

Biodiversity

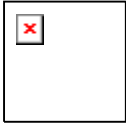
This criterion relates to the biodiversity values of the site, including the clearing footprint required. Biodiversity is the variety of all life forms, the different plants, animals and micro-organisms, the genes they contain, and the ecosystems of which they form a part.

In the case of the proposed Mundaring WTP, the issues to be considered under the sustainability criterion of impact on biodiversity are:

- ▶ The overall ecological value of the sites;
- ▶ The conservation significance of the sites;
- ▶ The clearing footprint required at the sites (the amount of native vegetation that will be cleared);
- ▶ The value of the site for native flora; specifically the diversity of native flora at the site, any significant flora species or vegetation types at the site and the health of the vegetation at the site;
- ▶ The value of the site for native fauna; specifically, the potential of the site to support native species, including significant species; the value of the site as fauna habitat and the use of the site as a habitat linkage.

Potential for Land Degradation

Land degradation is a serious environmental problem in Western Australia and can be defined as the decline in condition or quality of the land as a consequence of human activities. For the purposes of the project this criterion addresses potential issues associated with the construction and operation of the WTP as they relate to erosion and soil degradation at the site and the potential to introduce diseases and weeds to the general area. When considering this criterion it is necessary to assess the current status of the land and the extent of degradation of the site, ie what soil degradation already occurs and whether weeds and diseases (specifically dieback) already occur at the site. It also assesses the sensitivity of the site to land degradation factors.



General Issues Raised by Participants

Site One

Site One was generally seen as degraded, though the value of the granite outcrops (that are present on the site) as fauna habitat was discussed. One of the biggest issues with this site is the requirement for an additional site for the drying beds and chlorine store. It was generally agreed that impacting on two sites was worse than retaining the impact at one site. Potential impacts on the Helena River adjacent to the site was also discussed, particularly any potential downstream impacts.

One advantage of this site is that a new pipeline will not be required to transfer water north of the weir (though one will be required for transfer to the sludge drying beds) and so impacts on vegetation along the existing main conduit will be reduced.

DEC Land

The area required for the plant is degraded and impacts here were seen to be minor. Participants raised the issue of the number of weedy species within and adjacent to the site and discussed whether Water Corporation could undertake weed control as a management measure, which could increase the value of the areas adjacent to the plant. The value of this site as fauna habitat was raised. The majority of the site contains introduced species, which have some value for fauna; however, it was accepted that the introduced species are of less value to fauna than native vegetation.

Pine Plantation

The majority of the plant at this site would be in an area currently under pines, which is an area of relatively low value; however, it was recognised that pines do provide habitat for some native species, including black-cockatoos.

While the impact on biodiversity from the site itself may be low, the potential impacts from the required access to this site, particularly due to clearing of vegetation adjacent to the existing road and potential fragmentation of habitat was seen as an issue.

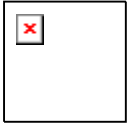
This site is within a Dieback Disease Risk Area and is within areas of native vegetation, away from the high areas of human activity near the weir. The WTP at this site was seen to be potentially causing impacts in an area where other impacts are limited, this may increase the risk of land degradation, particularly the spread of Dieback and weeds.

O'Connor Site

There was a very strong consensus that this was the worst site in terms of potential impacts on biodiversity and land degradation. While the site has been previously disturbed, it still has the highest biodiversity values of all the sites and will require substantially more clearing of native vegetation than the other sites.

General Issues

The requirement for drying beds was an issue that was discussed and the point raised that if native vegetation is required for clearing for drying beds then it should be assessed to determine if another form of drying (such as mechanical drying) would be preferable.



Final Rankings (1 is the best outcome and 6 is the worst outcome (most impact)). The majority of participants reached consensus and where consensus was not reached the alternative rankings are included.

Biodiversity:

Four participants ranked:

1. DEC Land
2. Site One and DEC Land
3. Pine Plantation
4. Site One and Pine Plantation
5. Site One and O'Connor Site
6. O'Connor Site

Two participants ranked:

1. DEC Land
2. Pine Plantation
3. Site One and DEC Land
4. Site One and Pine Plantation
5. Site One and O'Connor Site
6. O'Connor Site

One participant ranked:

1. Site One and DEC Land
2. DEC Land
3. Pine Plantation
4. Site One and Pine Plantation
5. Site One and O'Connor Site
6. O'Connor Site

Potential for Land Degradation

Six participants ranked:

1. DEC Land
2. Site One and DEC Land
3. Site One and Pine Plantation
4. Pine Plantation
5. Site One and O'Connor Site
6. O'Connor Site

One participant ranked:

1. Site One and DEC Land
2. DEC Land
3. Site One and Pine Plantation
4. Site One and O'Connor Site
5. Pine Plantation
6. O'Connor Site