

Attachment 1 - Flood Risk Assessment for Bray Park Community Centre

The following terms are useful in assessing the risk:

- Australian Height Datum (AHD)
- Annual Exceedance Probability (AEP)
- Average Recurrence Interval (ARI)

Australian Height Datum (AHD) refers to the height of the location relative to mean sea level. Three different height levels are relevant for the Bray Park Community Centre:

- Existing Minimum Ground Level (in the drain) = 1m AHD
- Existing Maximum Ground Level (at road frontage) = 5m AHD
- Existing Building Floor Level = 5.8m AHD

This information is then used to determine the impact a give size of flood would have (ie. a flood of 5m AHD at Bray Park Community Centre would be at the ground level at the road. A flood of 5.8m or higher would be at the building flood level, etc.).

Engineering (Flooding & Stormwater) have assessed the chance of flooding as follows:

20% AEP Flood Level (1 in 5 Year ARI) = 5.2m AHD
5% AEP Flood Level (1 in 20 Year ARI) = 6.3m AHD
1% AEP Flood Level (1 in 100 Year ARI) = 7.8m AHD

The Annual Exceedance Probability (AEP) is the chance of a flood of a given size (or larger) occurring in any one year. For example, for the Bray Park Community Centre there is a 20% chance of a 5.2m AHD flood (or higher) occurring in any one year. Similarly, there is a 1% chance of a 7.8m AHD flood (or higher) on any one year.

The Average Recurrence Interval (ARI) is the long-term average number of years between the occurrence of a flood as big as (or larger than) the selected event. For example, at Bray Park Community Centre there will be a 5.2m flood on average every 1 in 5 years (the ARI is the inverse of the AEP; two different ways of describing the same information. One which looks at the % in a given year, and the other which looks at the average number of years between floods of a particular size).