



Microclimate

Local site microclimate, including winds and shaded areas, should be evaluated to identify passive design features that can be incorporated into the design to improve thermal comfort. Abu Dhabi's characteristic sun angles, diurnal temperature swings, and relative humidity should be considered. An east-west building orientation generally maximizes the opportunity for shading control.



Flora & fauna, priority species, habitats and ecosystems

Though most proposed sites in Abu Dhabi will contain limited habitat, areas that contain priority habitats such as mangrove, sea grasses etc are particularly important to protect and preserve.



Attention should be paid to identify 'significant assets' and 'valuable assets'.

'Significant assets' in Abu Dhabi include intertidal mudflats, mangroves, vegetated sandy beaches, marine (seagrass, coral), wadis, sand sheets and low dunes, interdunal plains and high dunes, alluvial plains and jebels, or any other sensitive habitats identified. "Significant assets" also includes protected species determined to be critically endangered, vulnerable, threatened, near threatened or sensitive.

'Valuable assets' are features of ecological value, including healthy native trees or shrubs.

In addition, the assessment should consider the wider region, identifying any internationally, nationally or locally protected areas and species.

Refer to the Plant Information Database on the UPC website for species identification information.

The following items should be included in the Natural Systems Assessment Report:

- Narrative (describing all the natural systems on the site, the area of probable impact surrounding the project site, sub-regional and regional scale)
- Maps (highlighting different natural systems and areas to be protected, enhanced and allocated for habitat creation/restoration)
- Site Photographs

Maps and site photographs must clearly identify the extent of different habitats and other natural features.

The assessment must be carried out by a suitably qualified environmental professional trained to complete such analysis and assessment.

Example 2.2b: Narrative Extracts

- "Although sparsely vegetated, the proposed site includes two notable ecological assets, depicted in photos: a spiny-tailed lizard burrow and several ghaf trees."
- "The existing ghaf trees, as a native species, are valuable for both habitat and landscaping. They are pre-established, non-invasive and, as a drought-resistant, salt-tolerant species, will require less irrigation than other species."
- "The soil of most of the plot has been found to be sandy up to a depth of 35 cm with a more rocky substrate underneath. In the northwestern portion of the parcel, soil contains more sandy load, in part in relation to the presence of the trees."
- "The site-wide masterplan included an inspection of the site for potential contamination. As a previously unutilized location, no contamination has been identified or suspected on this proposed site."
- "The microclimate generally corresponds to Abu Dhabi averages with some particularities, as follows:
 - High midday sun with marginal overshadowing from adjacent developments to the south.
 - High levels of solar radiation year-round
 - Exposed on north and south sides,
 - Warmer southern winds prevailing during day
 - Cooler NW winds in mornings & E winds at night
 - Site allows for optimized building orientation
 - Existing trees on site provide shaded zones
 - Adjacent properties can break-up wind regime and introduce turbulence"