

# Guidelines for annotating LCNER

These guidelines are heavily based on [NorNe guidelines](#) annotation guidelines.

## 1. What is an annotation?

An annotation is a markup of a text span in a specific format that indicates a feature or features of the text within the span (MUC-7). Each annotated span has one type: e.g. animal, plants, recreational facilities or activities.

## 2. What should be annotated?

In the LCNER project we annotate named entities. All terms of natural element, physical activity, and sensory perceptions that are found in the texts should be annotated.

### 2.1. General principles

1. **Annotate all explicit mentions of entities belonging to the defined categories.** Always tag words or phrases that clearly fall into one of the predefined entity categories
2. **Nested entities are allowed.** This means that if a span contains multiple entity types (e.g., a facility and an activity), both can be annotated, as long as they represent distinct concepts. Examples:
  - *Great place to exercise or to just have a break from the bustling city life!*
    - **exercise(Act\_MVPA); place to exercise(F\_MVPA); break(Act\_sedentary)**
  - *Clean water play for the kids.*
    - **water play(F\_recreation); water(N\_water)**
  - *It is especially nice sitting on the grass watching a concert at the open-air amphitheater at night.*
    - **sitting(Act\_sedentary); grass(N\_plant); concert(F\_cultural); amphitheater(F\_cultural); watching a concert(Act\_light)**
3. **Do not assign two entities of the same dimension to one span.** Nested spans must not overlap with two categories of the same **entity dimension** (e.g., two facility labels). Examples:
  - *water ski area* → annotated as **F\_MVPA**, but not also **F\_recreation**.

- *playground* → **F\_recreation**, not also **F\_MVPA**.
4. **Allow context-dependent (metonymic) interpretations.** The same span can belong to different types due to context. Examples:
- *water features* → **N\_water**
  - *water ski area* → **F\_MVPA**
  - *water cooler* → **F\_catering**
5. **Include abbreviations and spelling errors if the meaning is clear.**
- *caf* → **F\_catering**
  - *f & b* → **F\_catering**
6. **Include abbreviations and spelling errors if the meaning is clear.**
- *Tamarind Hill Restaurant* → **F\_catering**
  - *Gardens by the Bay* → no annotation
7. **Include abbreviations and spelling errors if the meaning is clear.**
- Do not include adjectives that do not affect entity judgment.
    - *children playground* → annotate only **playground(F\_recreation)**.
  - Include adjectives or modifiers if they change the entity category.
    - *food court(F\_catering), eating places(F\_catering), dining facilities(F\_catering), f & b options hawker(F\_catering)* → annotate fully as **F\_catering**.

## 2.2. Entity types

There are **24 categories of entities**, organized into **four dimensions**:

- **Act\_** → **Activity dimension** (human physical activities in parks)
- **F\_** → **Facility dimension** (built or service infrastructure in parks)
- **N\_** → **Nature dimension** (natural elements and features)

- **P\_ → Perception dimension** (sensory or psychological perceptions of park experience)

#### *2.2.1. Sedentary activities (Act\_sedentary)*

Include sedentary activities, such as resting, standing, sitting, lying, relaxing, chilling out, and meditation.

Direct mentions of sedentary activities:

- Just **lazing(Act\_sedentary)** in the green lawns.
- Just to **sit(Act\_sedentary)** and absorb the greens during day in the weekends.
- Quiet and quaint place to **unwind(Act\_sedentary)!**
- A nice large park (around 4 km end to end) to walk, cycle and **chill out(Act\_sedentary).**

#### *2.2.2. Moderate-or vigorous-intensity activities (Act\_MVPA)*

Include moderate- or vigorous-intensity activities, such as walking, jogging, cycling, hiking, scooting, and sports.

Direct mentions of activities:

- We go there for playground and **bicycle ride(Act\_MVPA)**, beach **swim(Act\_MVPA)**.
- We **walked(Act\_MVPA)** past beautiful and colourful bougainvilleas.

Mentions of renting/using equipment that clearly imply the activity:

- **Hired a bike(Act\_MVPA)** for 13\$ for 3 hours.
- People **walk(Act\_MVPA)**, use **bicycles(Act\_MVPA)** on the well-maintained roads adjacent to the lake.

Agent nouns referring to people engaging in MVPA:

- Crowded with **bikers(Act\_MVPA)** and fishing crowds on the weekends.
- It was 2 am and it's crowded with families, **bikers(Act\_MVPA)**, **rollerbladers(Act\_MVPA)**, and the odd **hikers(Act\_MVPA)** or **joggers(Act\_MVPA)**.

When the context implies active or typical participation, annotate both Act\_MVPA and F\_MVPA. Annotate **facilities (F)** when the text describes static park infrastructure (e.g., has, with, includes). **Annotate both** only when context clearly implies both facility presence and behavioral engagement (e.g., people, crowded, runs along, suitable for, good for, crowded cycling track).

- *The kayak area(Act\_MVPA, F\_MVPA) is always crowded with people.*
- *The cycling path is smooth and shaded. cycling(Act\_MVPA) , cycling path( F\_path)*
- *We went skating(Act\_MVPA) at the new skating area(F\_MVPA).*
- *The park has a running track(F\_path).*

Do not annotate as Act\_MVPA when only listing facilities; annotate as F\_MVPA or **F\_path** instead.

- Neighbour park with **running track(F\_path)**, **futsal court(F\_path)**, playground and **exercise area(F\_MVPA)**.
- Nice park equipped with a **running track(F\_path)** and **outdoor exercise machines(F\_MVPA)** with eateries close by.

#### 2.2.3. Light-intensity activities (Act\_light)

Include light-intensity activities, such as stroll, family gatherings, picnics, BBQs, playing, visiting, bird watching, and exploration.

Direct mentions of light activities:

- Or just simple **hang out(Act\_light)** with friends and family.
- Nice place for **bird watching(Act\_light)** with appropriately placed multiple observation hides & decks.

Mentions of facilities that imply light activities:

- The area is well maintained and offers plenty of **photo opportunity (Act\_light)**.

Tent, camp(Act\_light) generally involve small amounts of outdoor activity, so is categorized as light:

- Some people pitch up **tents(Act\_light)** and **camp(Act\_light)**.

Organized leisure activities that mainly involve light walking or participation:

- We joined one of the free **tours(Act\_light)** Saturday morning (the heritage **tour(Act\_light)**).
- The scenery is good, it is a good place for **leisure(Act\_light)** and relaxation, but there are a lot of mosquitoes.

General visiting or exploration expressions (go / visit / explore):

Verbs such as *go*, *went*, *go around*, *went around*, *visit*, *explore* typically refer to light sightseeing or browsing activities and should be annotated as **Act\_light**, unless the context clearly indicates a vigorous or extended outdoor exploration.

- We **went around(Act\_light)** the orchid gardens which were resplendent with colour.
- Went to **explore(Act\_light)** the botanical garden in the morning.
- We went to **visit(Act\_light)** the national park for a short tour.
- **explore the forest(Act\_MVPA)** vs **explore the museum(Act\_light)**

#### *2.2.4. Facilities for MVPA (F\_MVPA)*

Include facilities supporting moderate- or vigorous-intensity activity, such as fitness stations, and sports courts/fields.

Direct mentions of MVPA facilities:

- Complete **sports facilities(F\_MVPA)** on land and water.
- **Gym(F\_MVPA)** and **swimming pool(F\_MVPA)** available.

Exercise classes or training sessions hosted in facilities:

- Too crowded with **aerobics classes(F\_MVPA)** and slow track users are hogging the track.
- Every Thursday evening around 7 pm, there is a **zumba session(F\_MVPA)** too.

#### *2.2.5. Recreational facilities (F\_recreation)*

Include facilities for light activities, such as playgrounds, lawns, picnic areas, thematic zones, safra, and plazas.

Direct mentions of recreational facilities:

- Nice **place for bird watching(F\_recreation)** as well.

- This park is very small, a few **swings(F\_recreation)**, **rubber playground(F\_recreation)** and **seesaw(F\_recreation)**, and just a few trees.

Special themed gardens inside parks:

- Very beautiful **exotic garden(F\_recreation)** in the heart of Singapore to see absolutely.
- We didn't do the **orchid garden(F\_recreation)** but the **Ginger Garden(F\_recreation)** was very cool.

#### *2.2.6. Sedentary facilities (F\_sedentary)*

Include facilities primarily designed for sedentary or resting activities, such as benches, gazebos, pavilions, shelters, and seating areas. These facilities provide opportunities for sitting, resting, or relaxing, rather than engaging in vigorous or light physical activities.

Annotate direct mentions of sedentary facilities:

- There are some **shelters(F\_sedentary)**, **benches(F\_sedentary)**, a free public toilet with showering facilities.
- The whole complex is clean, well set out, and most of all lots of **seats(F\_sedentary)** and **cool areas(F\_sedentary)**.
- Ample **seating chairs(F\_sedentary)**, **benches(F\_sedentary)**, and even **sheltered area(F\_sedentary)**.

#### *2.2.7. Cultural facilities (F\_cultural)*

Include facilities and spaces for cultural, historical, artistic, or aesthetic activities, such as museums, memorial halls, statues, sculptures, displays, exhibitions, performance, concerts, and amphitheaters.

Direct mentions of cultural facilities:

- There are **cultural heritages(F\_cultural)** within too and a university related to botanical sciences.
- A lovely walk around the hill if you don't want to go inside the **bunker(F\_cultural)**.

Performance and exhibition facilities:

- There is a large **performance stage(F\_cultural)** where **concerts(F\_cultural)** are held and a beautiful lake area where you can picnic.
- It is especially nice sitting on the grass watching a **concert(F\_cultural)** at the **open-air amphitheater(F\_cultural)** at night.

#### *2.2.8. Service facilities (F\_service)*

Include supporting facilities, such as visitor centers, restrooms, mall, shop, spa, and first aid stations.

Direct mentions of service facilities:

- Very friendly and there are **toilet facilities(F\_service)** within the gardens.
- There are some shelters, benches, a free public **toilet(F\_service)** with **showering facilities (F\_service)**.
- Make sure to take ample water as the only water fountain is at the **ranger station(F\_service)** halfway round.

Rental facilities and rental actions:

- **Rent a bike(F\_service)** from the **rental kiosk(F\_service)** at the Chestnut Point.

When the terms “facilities” or “amenities” appear without descriptive adjectives (e.g., “sports”, “recreational”, “play”, “rest”, etc.) to indicate a specific type of function. Generic “facilities” or “amenities” without qualifiers:

- The park has good facilities (**F\_service**).
- Many amenities (**F\_service**) are provided around the entrance.

#### *2.2.9. Transport facilities (F\_transport)*

Include transport or accessibility infrastructure, such as carparks, bus stops, MRT/subway stations, taxi stands, ferry jetties, roads, and bridges, as well as adjectives or terms indicating accessibility or connectivity (e.g., *accessible*, *connected*, *reachable*, *convenient access*).

Direct mentions of transport facilities:

- We got a **taxi(F\_transport)** to Casa Verde in the garden to have breakfast.
- Revamp has made the trails more **accessible(F\_transport)**.

- The park is **accessible(F\_transport)** via **MRT(F\_transport)** and **bus(F\_transport)** connections.
- Spacious area with lots of greenery, easily accessed by **public transport(F\_transport)**.
- The **jetty(F\_transport)** is used to board the ferry. (Functional transport use, e.g. boarding or commuting)
- Beautiful **jetty(F\_recreation)** for sunset view / fishing spot. (Leisure or scenic use)

#### **2.2.10.           *Catering facilities (F\_catering)***

Include catering facilities, such as cafes, food kiosks, vending machines, and water fountains/coolers.

Direct mentions of catering facilities:

- Try traditional street food at the nearby East Coast Lagoon **Food Centre(F\_catering)**.
- Come here for a walk with a big bottle of water (**refill fountains(F\_catering)**) and loos are all over the place) and a towel because it will be sweaty.

#### **2.2.11. *Informational signs (F\_sign)***

Include informational or navigational installations, such as signs, maps, educational panels, and interpretive signs.

Direct mentions of informational signs:

- A bit hilly but many **information notices(F\_sign)** detailing the history and sights to be seen within the park make this great.
- Plants and trees are **labelled(F\_sign)** and make a great educational trip for students too.

#### **2.2.12.           *Paths and trails (F\_path)***

Include trails and roads within parks, such as walkways and hiking trails.

Direct mentions of paths and trails:

- Amazing **walking track(F\_path)** and **running track(F\_path)**.

- All **routes(F\_path)** are well marked and few animals and birds are seen.

When referring to **steps** or **stairs**, annotate based on whether they serve as a walkable route or a terrain feature:

- Follow the **stone steps(F\_path, N\_terrain)** up to the hilltop.
- The **trail(F\_path)** has many **steep steps(N\_terrain)**.

Do not annotate place names (e.g., *Orchard Road, East Coast Park Expressway*) unless they explicitly denote a physical access facility rather than serving as location names. Do not annotate when *road* or *bridge* clearly refers to external or vehicular access routes (e.g., *main road, driveway, cross the road*).

- Cross the road to Eco Green.
- Carpark entrance is beside the main road.
- The park's **internal road(F\_path)** is great for walking and cycling.

#### 2.2.13. *Lighting facilities (F\_lights)*

Include lighting installations, such as lamps, monument spotlights, and ambient lighting in gathering areas.

Direct mentions of lighting facilities:

- Beautiful park but the **lights(F\_lights)** don't work at times at night.
- I went during the Saturday afternoon nearing the **lantern festival(F\_lights)**.

Terms describing lighting condition or states:

- Perhaps **dim(F\_lights)** them a little more during the night.
- Very well maintained and **lit(F\_lights)** so we are able to walk there at night without any problems.

#### 2.2.14. *Terrain features (N\_terrain)*

Include terrain features, such as hills, slopes, stairs, and rock formations.

Direct mentions of terrain features:

- The road is quite **flat(N\_terrain)** so no **up and down hills(N\_terrain)**.
- The **hill(N\_terrain)** is quite **steep(N\_terrain)** in places.

- Nice recreational place for hiking but it is harder than MacRitchie due to more **stairs(N\_terrain)** and cycling.

When referring to a **specific part of a landform** (e.g., *peak of the hill, top of the slope, foot of the mountain*), annotate the **entire noun phrase** as **N\_terrain**.

- Have fun with the mountain climbing or rather **steps grinding up(N\_terrain)** to the peak of the **hill(N\_terrain)**.
- At the top of the **hill (N\_Terrain)** on the right there is a restaurant called the Tamarind Hill Restaurant located in an old colonial building.

When both topography and physical sensation are strongly implied, dual annotation (**N\_terrain + P\_tactile**) is acceptable.

- The **bumpy(P\_tactile) trail(N\_terrain)** makes for a rough ride.
- The **muddy(P\_tactile) hill(N\_terrain)** was difficult to walk up.

#### 2.2.15. *Vegetation (N\_plant)*

Include vegetation, excluding flowers; such as trees, bushes, lawns, forests, and grassy fields.

**Direct mentions of vegetation should be annotated as N\_plant:**

- There were no **weeds(N\_plant)**, past prime exhibits. This is the closest thing to getting to a real **jungle(N\_plant)** without the dangers of getting lost.
- Just to sit and absorb the **greens(N\_plant)** during day in the weekends.

#### 2.2.16. *Flowers (N\_flower)*

Include flowers or flowering plants (excluding metaphorical usage).

Direct mentions of flowers:

- One of the few places in Singapore with the fruity pink **Hoegaarden rose(N\_flower)** on tap/draft.
- Very beautiful place to visit, and the **flowers(N\_flower)** are beautiful.

#### 2.2.17. *Animals (N\_animal)*

Include animals (excluding metaphorical usage), such as birds, squirrels, and aquatic life.

Direct mentions of animals:

- You will come across **monitor lizards(N\_animal)** and **tree lizards(N\_animal)** (*Calotes versicolor*).
- Walked through the 2 ponds, spotted a **swan(N\_animal)** swimming.

Do not annotate when animals are mythical, used as food, or appear only in observational/figurative contexts:

- We had bird photographers sharing their rewarding photo shots of **bird(N\_animal)** guarding its nest of young ones and tower climbers pointing out the "Nessie" sighting, etc.

#### 2.2.18. *Water bodies (N\_water)*

Include water bodies for recreation or scenery, such as lakes, rivers, ponds, sand and beach (excluding drinking water).

Direct mentions of water bodies:

- Clean **water(N\_water)** play for the kids.
- Treetop Walk is a definite return visit and the **reservoir(N\_water)** is beautiful.

#### 2.2.19. *Weather (N\_weather)*

Include weather conditions, such as sunny, rainy, or snowy.

Direct mentions of weather:

- Really large park, clean, open and when **sunny(N\_weather)** amazing for a stroll or picnic.
- Before **sunrise(N\_weather)**, there are a lot of activities around there.
- The **sunset(N\_weather)** view is stunning over the water.

#### 2.2.20. *Natural colors (N\_color)*

Include colors reflecting natural or seasonal change, such as green grass or colorful flower beds.

Direct mentions of any colors:

- Lush, **green(N\_color)** and vibrant, the Singapore Botanic Gardens is a gem in Singapore's bustling cityscape.
- A path lined with **red(N\_color)** and **yellow(N\_color)** flowers.

#### *2.2.21. Perceived crowding (P\_crowd)*

Include perceptions of crowding or density in parks.

Direct mentions of perceived crowding:

- Used to be very quiet before Covid and now **flooded(P\_crowd)** with people.
- Also avoid this on a Sunday like the plague as the whole of Singapore descends here and it's **packed(P\_crowd)**.
- The park was **crowded(P\_crowd)** but not too much.
- **Not too crowded(P\_crowd)** on a weekend afternoon.

#### *2.2.22. Olfactory perceptions (P\_olf)*

Include olfactory experiences, such as scents from flowers, food vendors, or fresh-cut grass. It also includes general smell perceptions of the air or environment, such as fresh air.

Direct mentions of olfactory perceptions:

- Clean and well maintained, a bit of **fertilizer smell(P\_olf)** from the neighborhood but overall is fine for a good soccer game.
- The air was filled with **fragrance(P\_olf)** from blooming flowers.

#### *2.2.23. Tactile perceptions (P\_tactile)*

Include mentions of tactile or temperature sensations, such as texture, surface feel, or bodily temperature experience.

Direct mentions of tactile perceptions:

- The many water features bringing a sense of **coolness(P\_tactile)** in the tropical **heat(P\_tactile)** and **humidity(P\_tactile)**.
- The path climbs up, in a ten-minute **sweaty(P\_tactile)** walk, to Mount Faber.

- The pavement is **smooth(P\_tactile)** and easy to ride.
- The climb was challenging due to **humidity(P\_tactile)** and **heat(P\_tactile)**.

Do not annotate non-tactile uses:

- Smooth ride/process. (refers to overall experience, not literal tactile sensation).
- A cool idea. (metaphorical, not tactile).
- A rough day.

#### *2.2.24. Sound perceptions (P\_sound)*

Include mentions of sound-related sensory experiences, such as natural sounds (birds, animals, water) or human-made sounds (traffic, music, machinery).

Direct mentions of sound perceptions:

- A **peaceful(P\_sound)** escape from the bustling city.
- The **sound(P\_sound)** of trucks near the customs is too **noisy(P\_sound)**.
- Listening to **birds singing(P\_sound)** in the morning.