

WHY THE FIVE FREEDOMS ARE OUTDATED?

what replaces them?

ANIMAL
SPACE DESIGN



DESIGNING FOR ANIMAL AGENCY

FREEDOM FROM
FREEDOM TO

For a long time, animal welfare focused mainly on one thing: reducing suffering.

For a long time, animal welfare focused mainly on one objective: reducing suffering. The Five Freedoms framework ensured protection from hunger, pain, discomfort, fear, and restricted movement. This was a necessary step that established a clear minimum standard and significantly improved how animals were treated in human care.

Over time, the limits of this approach became clear. It focused on preventing harm, but did not address how animals actually live, act, and engage with their environment.

Current welfare thinking moves beyond survival. It asks what animals are able to do within their environment: how they explore, choose, engage, and develop over time.

What this means for spatial design:

- **Spaces should support exploration and problem solving**
- **Materials, light, and space should vary rather than repeat**
- **Animals should be able to choose where to go and how to use the space**

From basic care to animal agency

- To develop skills
- To make choices
- To have some control over their surroundings
- To experience variety
- To interact with a complex environment

We know enough to design differently. Now it's time to rethink and change animal architecture.

Animals are not passive beings. They constantly learn, adapt, and respond to their surroundings through movement, exploration, and interaction with space. Each species has specific behavioral and psychological requirements that must be met for the animal to function properly. A space that is physically safe but offers no choice, variation, or control remains incomplete.

The nervous system is shaped through repeated interaction with the environment. Movement, problem solving, and sensory input are not optional activities, but core processes that support regulation and behavioral stability.

When environments fail to support these processes, animals may remain physically healthy while showing signs of disengagement, inactivity, or reduced behavioral range.

When addressed correctly, animal needs can be met without extra cost or major redesigns.





Enrichment has often been treated as something added after construction. Objects are introduced later and depend on staff time, routines, and the daily capacity of the team. Even when done with good intentions, this approach can become inconsistent, short-lived, and difficult to sustain.

A responsible design approach treats animal enrichment as part of the space itself. It is not an extra layer added at the end. It is built into the habitat, so engagement is supported every day, it becomes reliable for the animal helping to regulate the nervous system.



LAYERS OF ENRICHMENT

- **Passive**

Built-in terrain, changes in temperature, movement of light, presence of water

- **Active**

Scent systems, seasonal changes, tools adjusted by staff

- **Animal-activated**

Feeders, tactile elements, or systems animals can trigger themselves

When enrichment is embedded into the habitat, it begins to shape daily behavior patterns rather than interrupt them. Instead of relying on scheduled stimulation, the environment itself provides ongoing cognitive and sensory input that animals can return to throughout the day.

From a design perspective, enrichment stops being a task and becomes part of the space. The habitat supports balance without constant intervention.

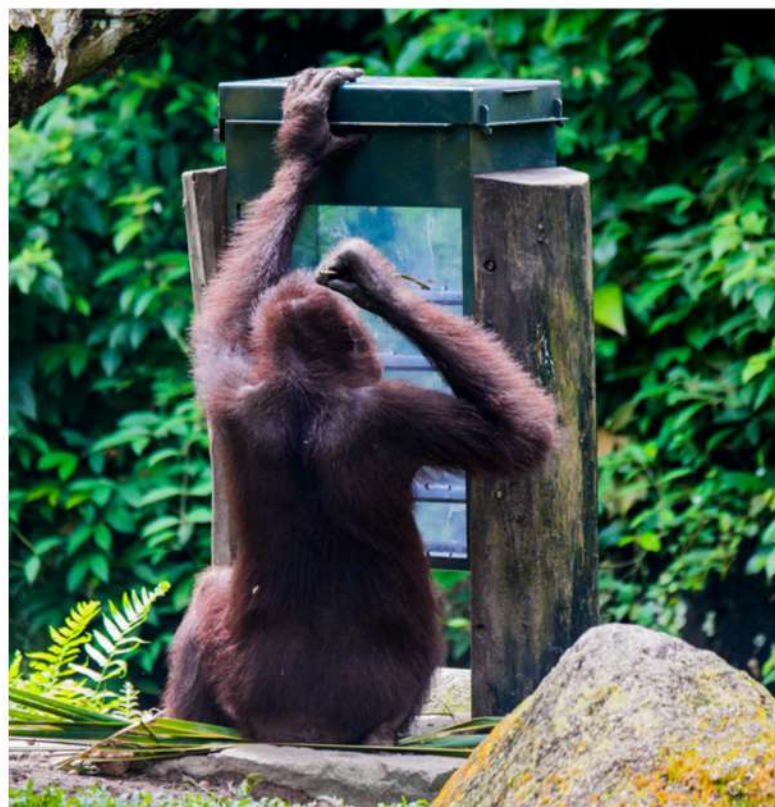
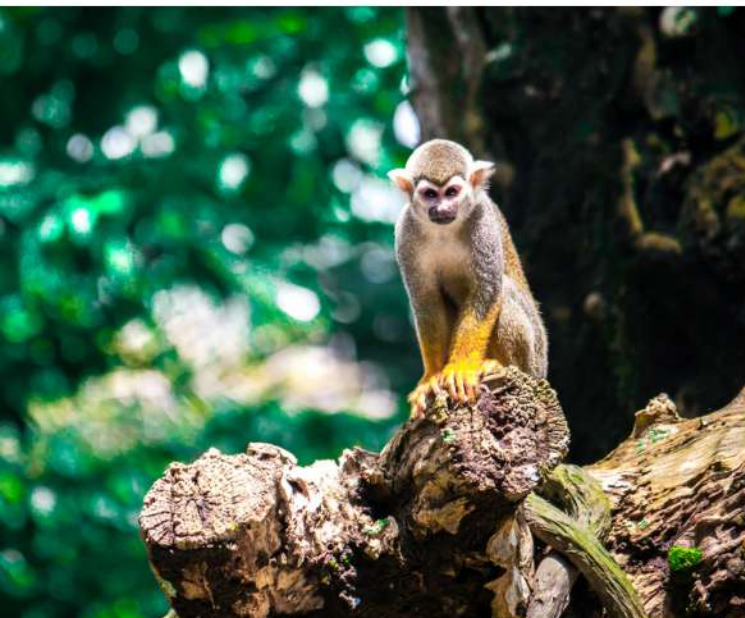


Large spaces are often seen as better, but size alone does not guarantee wellbeing. A large, empty space can be as limiting as a small one if it offers few choices and little variation. What matters most is not the total area, but the opportunities within it. This is why complexity is a stronger welfare indicator than size. When a habitat includes varied terrain, changes in height, and different sensory conditions, animals have more reasons to move, explore, and engage. Complexity invites curiosity, and it supports natural activity patterns across the day.

It is not the size of the space that matters most, but what the animal can do within it.

ELEMENTS OF A COMPLEX ENVIRONMENT

- Different textures and substrates
- Changes in height and terrain
- Areas for rest, activity, and withdrawal
- Elements that change with time or season
- Vertical horizontal and diagonal movement opportunities
- Zoopharmacognosy and geophagy

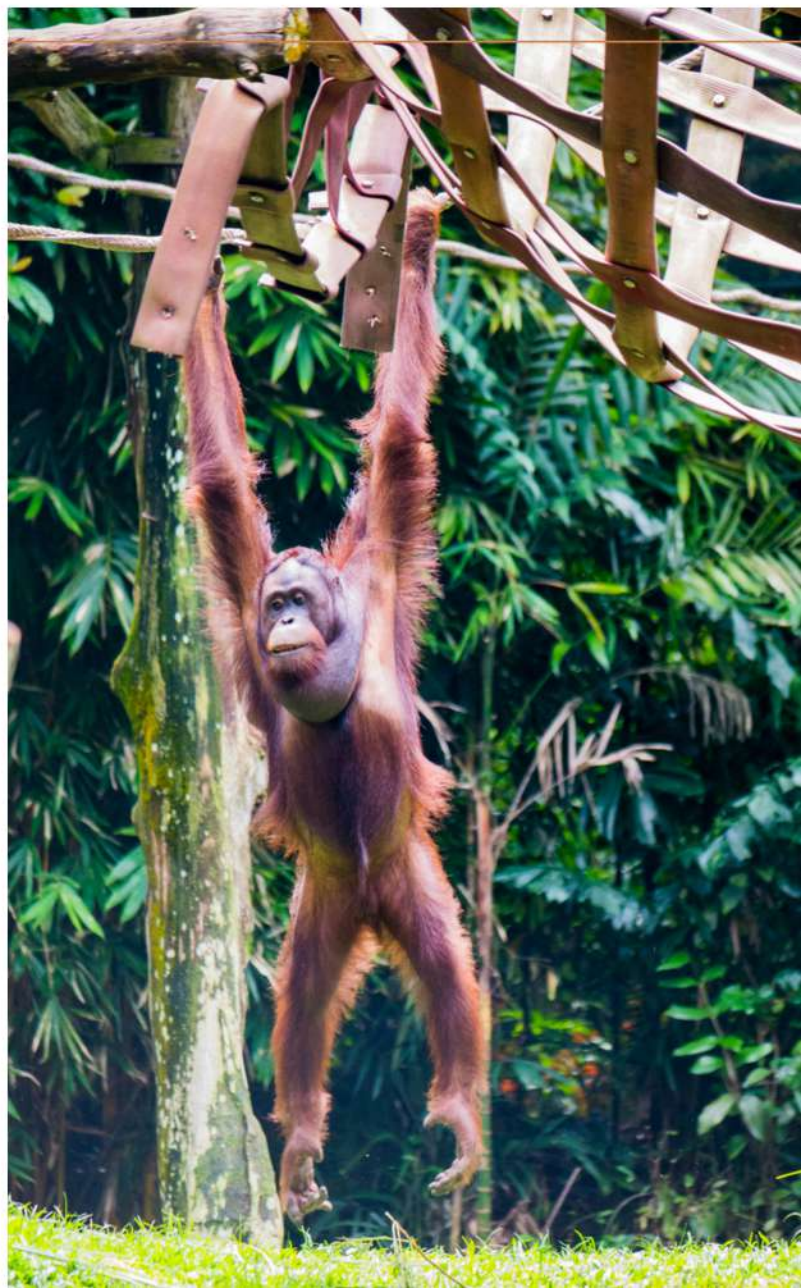


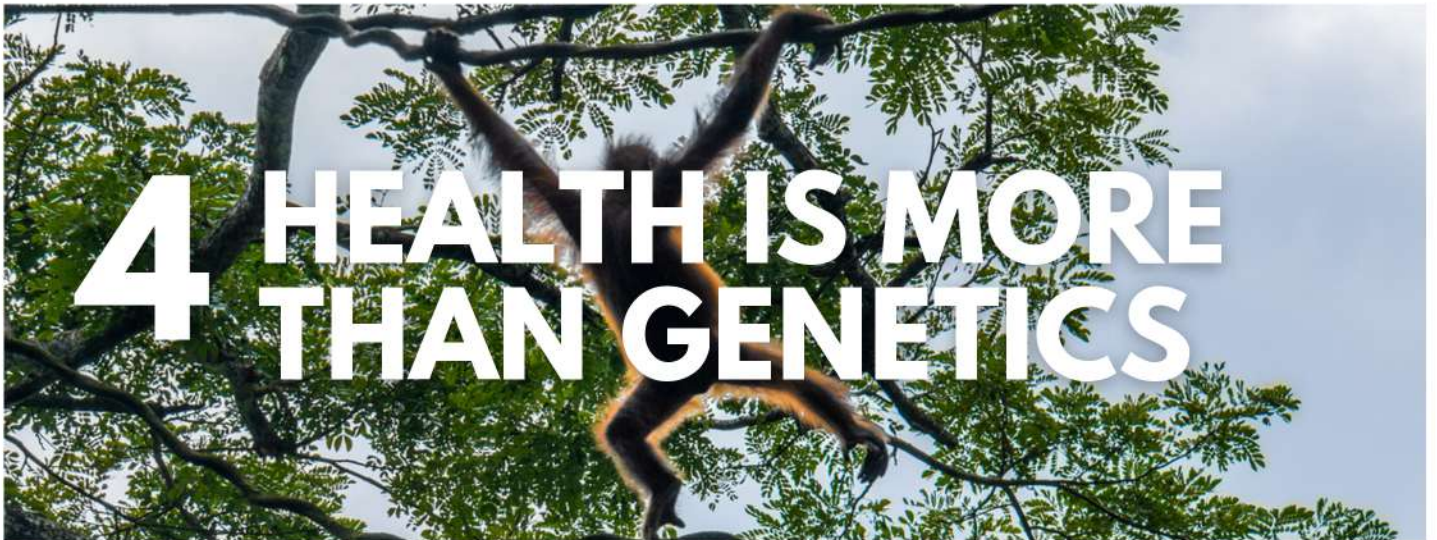


3 FROM HUMAN CONTROL TO ANIMAL CHOICE

Many zoological programs focus strongly on genetics and breeding. This work is important and necessary, but genetics alone does not guarantee a good quality of life. An animal can be genetically healthy and still lack motivation, curiosity, or confidence. Low activity, limited interaction, and repetitive behavior often point to habitats that do not support learning or engagement. Behavioral ability means being able to move, explore, solve problems, and respond to the environment in ways that make sense for the species. This is not a nice addition. It is a core part of how animals function and regulate their nervous system.

Traditional routines are human-controlled: feeding schedules, access, stimulation, and change. An advanced approach gives animals influence over their environment. Choice builds confidence, supports natural problem-solving, and reduces frustration caused by lack of control and predictability.





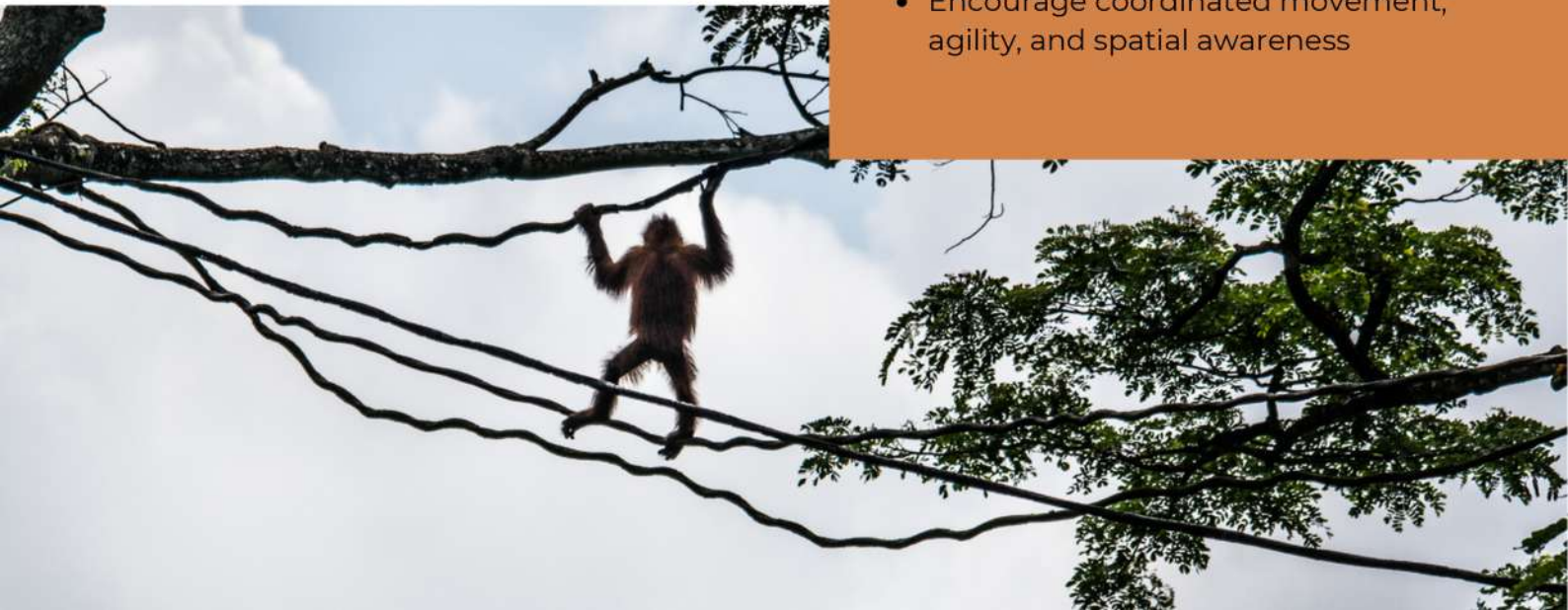
Many zoological programs prioritise genetic health, and this is essential for conservation goals. However, genetic health does not describe how an animal experiences daily life. An animal may be healthy on paper while still struggling behaviorally if the environment does not support agency. This is why welfare assessment should go beyond measuring space. It should look at what the animal can do in that space, and whether the habitat supports learning, movement, and meaningful engagement over time.

Health cannot be assessed only through genetics or the absence of illness.

In zoological settings, welfare evaluation now includes observable indicators of positive experience, such as voluntary engagement, exploration, play, and choice. These behaviours show whether an animal is motivated, engaged, and able to direct its own activity, offering insight into lived wellbeing rather than biological status alone.

DESIGN IMPLICATIONS

- Include varied elevation, surfaces, climbing routes, shelters, and spaces for decision-making
- Support problem-solving, spatial memory, and trial-error learning
- Encourage coordinated movement, agility, and spatial awareness





**IF A FACILITY DOES NOT
SUPPORT ANIMAL AGENCY,
IT MUST BE FIXED.**

**NEW HABITATS/RETROFIT
CHANGE IS POSSIBLE.**

**BOOK A
DISCOVERY CALL
TO FIX WHAT
IS NOT WORKING.**