

Arch 464
ECS
Spring 2019

Name _____

Quiz #3

"On Your High Horse"

Read and look at everything before you write!



The southeast-facing wall is composed of pivoting glass doors that open to the living dining kitchen area.

All photos & drawings: Architectural Record, Record Houses, May 1, 2018

High Horse Ranch, Willits, California

Kieran Timberlake

High Horse Ranch, in Mendocino County, California, has abundant wildlife—deer, bobcats, chorus frogs, juncos, and more—but nothing equine. Echoing the names of such nearby places as Dead Horse Canyon, this mountainous 64-acre property playfully honors owner Clive McCarthy, who, as his wife, Tricia Bell, puts it, “enjoys getting on his high horse, now and then, for a good-natured rant.” It’s also a nod to the land’s former use: as a marijuana farm. But no longer committed to such crops, the property is now a retreat for this couple and their guests—a remote getaway designed for comfort and an intimate experience with wild terrain in dramatic surroundings.

The pair first came here looking to create an escape from San Francisco, 150 miles to the south, where they inhabit a converted industrial warehouse. They welcomed the idea of getting above the Northern California fog, on a site that reaches an elevation of 2,300 feet. After driving up switchbacks on a gravel road—through steep, mossy terrain, amid soaring firs and craggy oaks draped in lacy lichen—they’d barely entered the property when they caught an unexpected glimpse of a spectacular mountain cleft beneath them; they were smitten. As Bell, then a practicing physician, recalls, “Right then, we both knew we wanted to buy the place.”

They considered local architects before encountering a book by Philadelphia-based Kieran Timberlake on Loblolly, a house fabricated off-site. “I loved the precision,” says McCarthy, a British-born former electrical engineer turned tech executive, who now makes digitally inspired artworks. He and Bell were impressed

that Loblolly had been assembled (rather than built) without even a chainsaw on-site. They too hoped to tread lightly, preserving the abundant trees on their nearly pristine land.

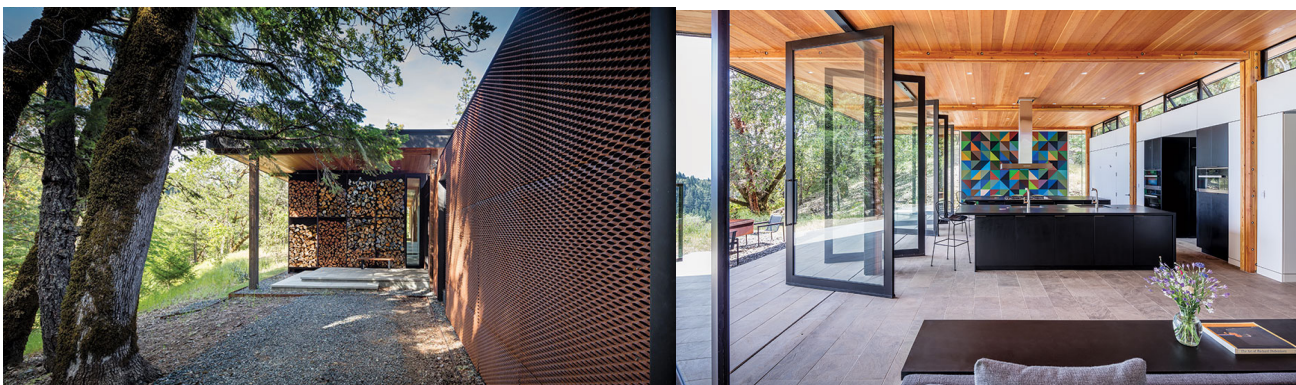
The couple envisioned a mountaintop house with a seemingly casual, yet orchestrated, approach. The quarter-mile ascent on their grounds would offer that teasing initial peek into the valley before meandering back through dense forest. Then, all cars would park 200 feet downslope from the house in a well-hidden area (doubling as the obligatory fire truck turnaround). Everyone would walk the last stretch or ride in a motorized cart. “Finally, finally, you’d enter the house from its more solid [northwest] side and—blammo!” says McCarthy. A long, southeast-facing wall, mostly of glass, would reveal a phenomenal mountain view, akin to the original glimpse but much more revealing and dramatic.

The architects responded with a 2,580-square-foot main residence and two secluded 290-square-foot cabins, all sharing common traits. Rectangular, flat-roofed forms, partially constructed off-site in 12-foot modules, they all play Cor-Ten-clad elevations against a view-framing back wall of floor-to-ceiling, operable glass. The main house consists of two single-story volumes, offset in plan but joined by a service-circulation spine. There, the prime entry crosses into the “great room.” Beneath 11-foot ceilings clad in reclaimed Douglas fir, this dining/kitchen/living area spills out, through pivoting glass doors, onto a terrace. A deep roof overhang and sandblasted-limestone floors (radiant-heated indoors) extend from inside. With doors and windows open, air flows from the glass elevation through a clerestory opposite it. Offering unobstructed sight lines, this 53-foot-long space has large-scale artwork anchoring its ends and an open kitchen with paired work islands, faced in a black paper-resin composite. Giving the interior’s almost-Miesian geometry a slightly rustic twist, exposed Douglas fir structural members mark the rhythm of the house’s 13 modules, which were roughed out off-site, craned onto concrete foundations, and bolted together.

The building’s more private volume contains a study and the master suite, where corner-joined glass walls immerse the bedroom, pavilion-like, in a forest of mossy boulders amid the trees. On a recent visit, the spring weather shifted from misty rain—bringing out mushrooms and the scents of pine needles and wet earth—to a picturesque dusting of snow.

Like the main residence, the elegantly simple cabins have facades textured by expanded Cor-Ten rainscreens and exterior built-ins stacked with firewood. But, unlike the firmly grounded house, these satellites perch on concrete piers over steep terrain. Inside, against a reclaimed-redwood floor and ceiling, each cottage has a bedroom, study area, bathroom, and an entire wall that slides open to the landscape. The cabins, each a single shipping-container-like module, were craned in over the trees, “barely breaking a twig,” recalls Bell. “It’s where the project,” says Timberlake, “best realizes the potential of off-site fabrication.” While the trees emerged unscathed, prefabrication is only as good as the contractors who construct the modules and stage their on-site assembly—and that team missed the mark, year after year losing the narrow opportunity to build in a climate with long rainy seasons.

—Sarah Amelar



Firewood stored on porch and NW-facing corten rain screen.

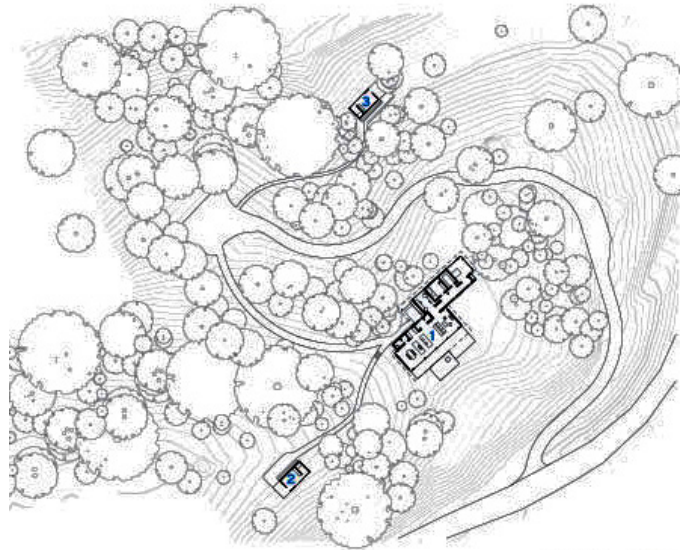
Great room with operable windows and reclaimed doug fir ceiling. The limestone floor is hydronically heated.

Site Energy

1. The architect did not opt for any on-site energy generation except solar hot water, but the house could easily harvest sufficient site energy to operate lights and appliances. (1) **Discuss** the ideal placement for the solar collector for heating water. (2) **Discuss** the merits, placement, and drawbacks of photovoltaics. & (3) **Discuss** the merits, placement, and drawbacks of a wind turbine. Use diagrams and the site plan to **illustrate and locate** your ideas.

3 points

1



SITE PLAN

0 50 FT.
15 M.

Site slopes up from the house to the southwest and down in all other directions. Cabin 2 is above the house, cabin 3 below it.

2

3

Regeneration-Based Checklist for Design and Construction

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Project:

For one point of extra credit rate the house for each of the checklist items and give a total score.

		degeneration				sustainability				regeneration	
		-100 always	-75 usually	-50 sometimes	-25 a bit	0 balances	25 a bit	50 sometimes	75 usually	100 always	
the site	pollutes air										cleans air
	pollutes water										cleans water
	wastes rainwater										stores rainwater
	consumes food										produces food
	destroys rich soil										creates rich soil
	dumps wastes unused										consumes wastes
	destroys wildlife habitat										provides wildlife habitat
	imports energy										exports energy
	requires fuel-powered transportation										requires human-powered transportation
	intensifies local weather										moderates local weather
the building	excludes daylight										uses daylight
	uses mechanical heating										uses passive heating
	uses mechanical cooling										uses passive cooling
	needs cleaning and repair										maintains itself
	produces human discomfort										provides human comfort
	uses fuel-powered circulation										uses human-powered circulation
	pollutes indoor air										creates pure indoor air
	is built of virgin materials										is built of recycled materials
	cannot be recycled										can be recycled
	serves as an icon for the apocalypse										serves as an icon for regeneration
is a bad neighbor										is a good neighbor	
is ugly										is beautiful	

negative score 2200 possible	positive score 2200 possible
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final score:

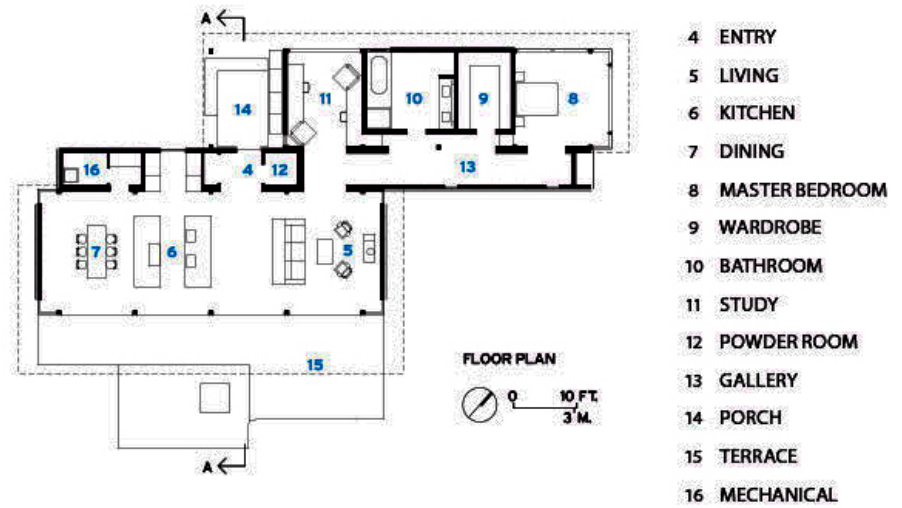


Cabin 2 viewed from the southwest and its interior showing operable window wall and clerestory.

Building Regeneration

4 points

2. The house site is at about 2,000 feet in elevation on a southeast-facing slope. Given the building plan and orientation **point out and discuss three** features of the **building design** that would earn regeneration points on the SBSE checklist (facing page) and **one** feature of the **building design** that would earn degeneration points on the SBSE checklist.



1+

2+

3+

1-

Site Regeneration

2. Given the site location and orientation **point out and discuss three** features of the **site design** that would earn regeneration points on the SBSE checklist (page 4) or that would earn degeneration points on the SBSE checklist, **at least one positive and one negative.**

3 points

1+

2+/-

3-