The Lille Art Museum has reopened with a new extension for its collection of Art Brut. The building is a radical addition, but it could have been even more daring, says Jay Merrick.

The VIP carpets, in a savage dressed-to-kill pink, had been rolled through the parkland setting.

The inflated plastic skin of the press conference structure shimmered like designer cellulite as the Paris media flooded through the gates, cultural visigoths in pillage mode. And better still, there was madness on the walls of the newly refurbished and extended Lille Art Museum (LaM), which reopened on Saturday after its makeover by the Parisian architect Manuelle Gautrand.

How sane Jack Kerouac's words seemed at that moment. There they were, in a rather humble display case, page one of the typescript of On the Road: "I first met Dean not long after my father died and I thought everything was dead." And next to it, hand-written pages, without a hint of amphetamine tremor, from his 1949 Road-Log: "The experience of life is a regular series of deflections that finally results in a circle of despair... one dark haunting thing. To me, 'this thing' is that Shrouded Stranger... our haunted sense of the thing."

Kerouac's words hung in the air of LaM like a critique murmured through the ghostly smoke of a 1950s Lucky Strike. The set-piece element of Gautrand's £17m intervention is her extension of the original museum building, which contains a marvellous cache of Art Brut, the so-called "outsider art" that Jean Dubuffet championed, along with artists such as Paul Klee, Max Ernst and André Breton. The extension's design is only faintly surreal; that it isn't absolutely surreal, or indeed brut, rankles.

One wonders what Dubuffet would have made of the new building. Its five fibrous cement- sheathed fingers reach asymmetrically around the eastern end of the original museum, whose designer, Roland Simounet, was obviously influenced by the American mid-century genius Louis Kahn, and by the bricky tectonics of Scandinavian modernist architecture.

The fingers of the extension just about recall Kerouac's "deflections", and they do indeed contain fragments of artistic despair. That's what Art Brut is all about: works by outsiders in the grip of intensely visionary obsessions - many have been clinically insane or psychologically disturbed; none have given a damn about art history or the art world in general.

Here's Dubuffet on the subject of Art Brut in 1947, when he was amassing the world's first collection of outsider art: "Those works created from solitude, from pure and authentic creative impulses - where the worries of competition, acclaim and social promotion do not interfere - are, because of these very facts, more precious than the productions of professionals. After a certain familiarity with these flourishes of an exalted feverishness, lived so fully and so intensely by their authors, we cannot avoid the feeling that..."
in relation to these works, cultural art in its entirety appears to be the game of a futile society, a fallacious parade."

The shadow of those words fall implacably across Gautrand's new architecture at LaM. Her design appears to introduce a sense of suitable strangeness, or of an inscrutable found object in the landscape. But for all its apparent originality, the new architecture fails as an expression of stark physical difference: it is not quite powerful enough; there is no otherness.

The architecture of the new building could perhaps have conveyed a more obvious sense of Art Brut - or, at the very least, suggested a massive sculpture to accompany the big Calder and Picasso pieces in the parkland around it. The only other option might have been a perfectly simple and beautifully detailed rectilinear glass pavilion - a virginal vitrine in the landscape whose purity and transparency would have been challenged by the artistic furies within it.

Having said that, it's clear that Gautrand was pinioned, to some extent, by three issues: a relatively small budget; the fact that the original museum building was given Historic Building status relatively recently; and a design brief that insisted, at least initially, that the extension should be clearly separated from the museum. That Gautrand managed to persuade the museum to accept an unexpected organic form attached to the original building on two sides is a triumph of sorts; so too is her refurbishment of Roland Simounet's building, which has thoroughly energised its engrossing matrix of spaces.

But how one wishes that Gautrand had been bolder with her treatment of the extension's form and materiality. Externally, the structure is sheathed in cement panels artistically punctured with abstract moucharaby patterns of holes. But the fussily delicate way the panels have been joined at their edges, and the way the fingers of the extension have been very slightly lifted clear of the turf, gives the whole ensemble the look of a giant grey cardboard architectural model. The extension is made of concrete: why this carefully contrived weightlessness?

Why not a rougher concrete shell to match the raw art inside? And why, when Gautrand has successfully created a very suitably unpredictable series of internal spaces - with few glimpses of the external moucharaby treatment, incidentally - are their walls a chaste gallery pale? Again, why not the real deal, raw brut béton concrete to match the Art Brut? The architect must have considered these options; but it's also likely that the concept of Roland Simounet's original museum building, conceived very specifically as an art collector's ideal and architecturally polite villa, weighed heavily on Manuelle Gautrand's mind. How ironic that the brick facades and concrete copings and mouldings of the supposedly orderly villa seem far more Brutalist than the ostensibly "strange" new extension.

I should make it clear that LaM's new building is, in broad terms, a success. Or, to put it another way, its spaces and layout definitely work as a mis-en-scène for Art Brut. There is also, in both the old and new parts of the museum, a welcome sense of the wonderfully engrossing Louisiana Museum of Modern Art, overlooking the Oresund in Denmark. And many of the Art Brut works on show are potent and gripping, and ask big questions not just about the "exalted feverishness" so relished by Dubuffet, but about the wavering line between what is considered to be crazed artistic solitude, and what is deemed to be definable mainstream art.

The great thing about LaM is that it brings Art Brut into often fascinating contrast with the museum's superb collections of modern and contemporary art, which is why the city of Lille is promoting it as an obvious destination for art-lovers from London, Brussels and Paris; even allowing for a 20-minute cab or public transport run from Lille station to LaM, you could catch the Eurostar from St Pancras and be reading Jack Kerouac's typescripts about two hours later.

You, a Shrouded Stranger from Blighty, could then decide for yourself whether the architecture of the new extension possessed that all-important "haunted sense of the thing". And if you happened to be listening to Coldcut's 2005 single, "Everything Is Under Control", on your iPod as you arrived, you'd be right on the money: it was inspired by Francis Dec, whose paranoid rant-scripts are regarded as Art Brut, and were described by the band as "mad deadly computer gangster godpoems". The reopened museum's first show, which runs until the end of January, is titled The World As Poem.

LaM, 1 Allée du Musée, Villeneuve d'Ascq, France (03 20 19 68 68; www.musee-lam.fr)