# modcell<sup>®</sup> straw technology

## renewable schools

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ModCell<sup>®</sup> Renewable Schools is a high quality, fast, turn-key solution, providing attractive, affordable and sustainable teaching space within existing school grounds.

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#### Educational Value

ModCell® Renewable Schools are designed to meet the exact needs of each school, providing spaces and relationships that meet curriculum and functional requirements. ModCell® Schools also meet Building Bulletin guidance in creative ways, and anticipate increases in Building Regulation standards.

The material palette and construction method enable teaching and learning opportunities to be integrated into the design and construction process, providing important added value for students and the wider community. This can be delivered for an exceptional turnkey fixed price.

#### Economic Value

ModCell® is a prefabricated straw bale construction system using a natural, low carbon, renewable product, providing high levels of thermal insulation. We use local labour to deliver a high quality, modern method of construction (MMC), reducing the negative impacts of building on the environment. The prefabricated panels are constructed in a "flying factory", located within ten miles of the construction site. This means we keep money and skills in the local economy.

Additional benefits of this process include: quick and efficient installation on site; excellent quality control; cost savings due to reduced construction time; waste reduction; involvement and ownership by the local community.



### Performance & Design Quality

The ModCell<sup>®</sup> Renewable Schools specification delivers an appropriate balance between high environmental performance and affordability. Full PassivHaus certification is achievable if required.

Fire and moisture can be perceived as posing particular risks; this is a common misconception.ModCell® lime rendered panels have a fire rating of over 2 hours and have been subjected to accelerated weathering tests and a range of structural and performance tests at the BRE's Centre for Innovation in Construction Materials at Bath University. ModCell®'s robustness and longevity has been shown to be in line with conventional building techniques and materials.





#### Technical

#### u-Values

ModCell <sup>®</sup> Core, non-rendered	0.13 - 0.14
ModCell® Core+, rendered	0.10 - 0.11
ModCell <sup>®</sup> Traditional rendered	0.18 - 0.19

#### Sequestered carbon (PAS 2050 methodology)

3m x 3.2m panel	1400kg of C	$O_2$
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#### Fire rating (TRADA - Chiltern International Fire Ltd)

ModCell <sup>®</sup> Traditional	2hrs 15mins
ModCell <sup>®</sup> Core and Core+	Please call

#### Acoustics – sound reduction (BRE)

ModCell <sup>®</sup> Traditional	50db
ModCell <sup>®</sup> Core and Core+	Please call

#### Panel sizes

visit www.modcell.com for information

ModCell<sup>®</sup> Renewable Schools offer permanent, high-quality accommodation for education authorities and school governing bodies looking for a rapid and cost-effective response to changing demographic trends, at costs comparable to temporary classroom solutions.

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