

EFFICIENT THINGS COME IN SMALL PACKAGES!

Introduction

The 5x4 Hayes Lane Project is a unique, inner-city dwelling in Melbourne that only occupies a five by four metre footprint. Other than the unusually small urban print, the narrow house is able to generate, store and control its own power through solar panels - and NHP have played a part in the project!

Ralph Alphonso came up with the concept by gathering ideas from architecture studies, international innovations, and efficient and sustainable construction overseas. Coming into a project with efficient utilisation of space at its core, the notion of sustainable building presented itself strongly, for to get efficiency, you need sustainability, and vice versa.

Project Overview

There are many inefficiencies within the Australian construction industry, and watching these in previous projects led to the hunt for a more sustainable, efficient way to build in an urban environment.

With such small confinements, one of the hardest challenges was crane, truck and lift access to the 5x4 site, which is located down a very narrow laneway. This at times dictated the sequence and way in which the house was fabricated.

Determined to stick to his mandate, Mr. Alphonso used many advanced products and methods which were new to the Australian market. "Some of these items in the 5x4 Project had never been used in the way we were using them! This meant that there were always going to be teething problems, and it meant that I had to be very hands on in independently learning these intricacies and being able to solve these problems as they presented themselves," he said.

Ensuring space was capitalised, each feature, placement, product and construct had at least two functions. For example, the couch in the kitchen area was not just a couch, in fact, it was designed by Alphonso to turn into a dining table when need be. The limited space forced a tactical plan towards every inch of this dwelling, where optimisation was priority and livability was key.

When it came to automation and temperature control for the project, a product from NHP was specified to ensure the thermally efficient elements in the building envelope was consistent, no matter the outside extremities.

"Knowing the innovative 5x4 Project was being constructed for learning purposes in the architecture realm and essentially creating a benchmark for future designs, NHP was proud to be involved in such a successful project," Lara Pournayeb (Product Marketing Manager – Automation and Networks) from NHP.

The Solution

NHP contributed to the project by supplying the touchscreen Allen-Bradley® PanelView™ 800 HMI (Human Machine Interface) to monitor and run the heating and cooling, hot water and hot tub temperature within the four story infrastructure. Consequently, this product, in conjunction with other initiatives used, severely minimises the building's peak energy load, reducing costs by about 20-30%.

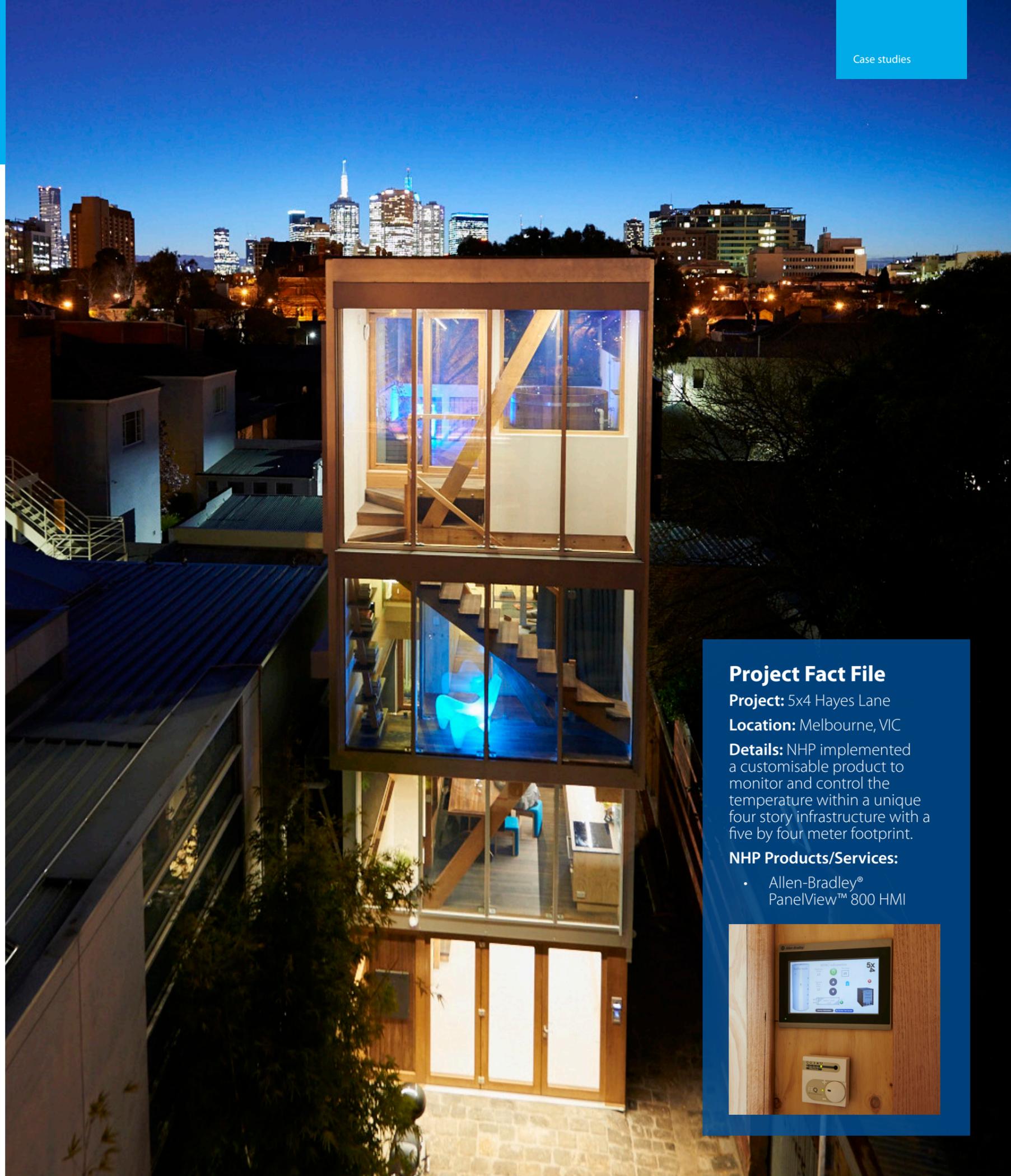
"It helps drive down the energy expended monitoring those aspects individually, and having them displayed enables us to see the status of multiple systems and intuitively switch off ones that are not required based on personal comfort as well as the raw data being displayed on the NHP screen," Ralph said when asked about the PanelView™ 800.

The ultimate success for this NHP device is the flexibility of the product. "Despite our unusual setup, the device is able to display all systems and allows us to customise at our will. To be adaptable and flexible is key when developing innovative products, because adaptability also goes a long way to creating personal, customised configurations, which are always the most efficient," Mr. Alphonso continued.

With an eye to detail and desire to create change in a stagnant industry, Mr. Alphonso has developed a sharing source for design and construction, enabling people to learn from his efforts in producing an energy efficient concept. This thought-driven 5x4 Project has revolutionised the way in which Australian architecture will evolve, and NHP is pleased to have contributed to its success.



NHP's Lara Pournayeb with 5x4 creator, Ralph Alphonso



Project Fact File

Project: 5x4 Hayes Lane

Location: Melbourne, VIC

Details: NHP implemented a customisable product to monitor and control the temperature within a unique four story infrastructure with a five by four meter footprint.

NHP Products/Services:

- Allen-Bradley® PanelView™ 800 HMI

