



The Beacon - Interview

More parking in less space...anywhere.

The Beacon - Interview with Sam Budhdeo



Sam Budhdeo is the leader behind Lumiere Developments, the visionary property investor and developer responsible for The Beacon, the World's most Sustainable Residential Tower.

He has chosen to use a Skyline Automated Parking System (APS), so we wanted to understand more about the project

from his perspective and how the Skyline APS fitted in with his vision.

Situated to the north of London in the UK, The Beacon combines state of the art energy-saving technology and traditional building techniques to provide luxury and affordable housing for all.

Sam kindly agreed to be interviewed by Skyline to talk about this new venture.

1. What inspired you to build The Beacon ?

“Quite simply my children - the strong desire to leave a positive legacy for them and future generations in term of health, quality of life and financial opportunity.

This will be the first generation in many years whose children will have less opportunities and worse living conditions than their parents.

For me sustainability is about lives - pollution through the burning of fossil fuels is killing people, that is a fact.

And the belief that it is possible to have a high standard of living with minimal effect on the environment.

When you look at the current legacy our generation will leave it is appalling - increasing levels of pollution, climate change that will directly impact negatively on their health and a lack of financial opportunity. Is this the legacy we want to leave them?

And I see a divide opening up between generations - young and old - we must break the circle of the perceived self-protectionism of this generation and leave a viable legacy for the future.”

2. Where did the vision for The Beacon come from?

“There were a number of key areas:

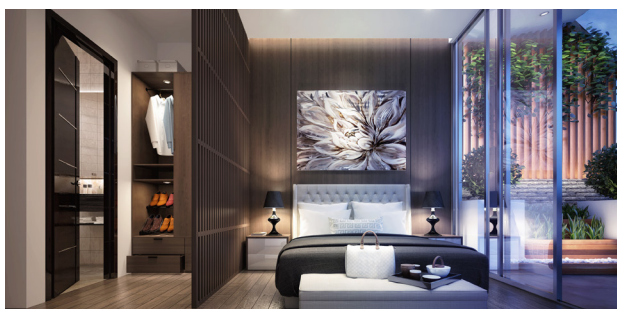
- Opportunity - we owned land so had the basis for developing the concept.
- Skills - a background in sustainable energy (through the existing Symbio Energies subsidiary).
- Culture - Lumiere encourages its employees to:
 - Challenge the accepted norms
 - Use science as a basis for decision-making as opposed to precedent
 - Challenge all conventions in a logical and coherent manner
 - Take responsibility for the future legacy we leave the next generation

This combined with a fundamental belief that there is always a better way and that by working together, be it locally or internationally, we have the opportunity to overcome challenges that would otherwise be insurmountable.

By combining all of these elements, I knew we could produce something very special in The Beacon, including the UK's only multi-dwelling, energy-neutral building with an EPC of A+ and the world's highest density vertical solar farm.



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This was driven by a belief that by combining existing proven technologies in a new way, we could produce a world-beating building that could deliver a positive legacy for future generations.”

3. How does the Skyline Automated Parking System support your vision for The Beacon?

“In so many ways and especially compared to the original conventional car parking design.

At a purely financial level, consider the benefits for Lumiere Developments over the conventional alternative:

- Increased site density for development
- Reduced Community Infrastructure Levy
- Reduced excavation costs (incl. tipping & piling)
- No sprinkler system
- No fresh air ventilation requirement
- No fire venting requirement
- Dramatically reduced lighting requirement
- No CCTV requirement

These savings alone totalled nearly five million pounds for The Beacon. Plus, the saving from the reduced operating

cost to run and maintain these systems for the life of the building. But looking beyond the financial benefits - what value would you put on your children’s future health in terms of:

- 80 % saving on total CO₂ emissions (carbon dioxide)
- 17 % saving on ECO₂ (embedded carbon)
- Elimination of NO and NO₂ emissions (nitrous oxides/dioxides)
- Elimination of PM10 emissions (particulate matter)

Then consider the benefits this system gives the residents:

- Vehicle security - risk of theft eliminated
- Vehicle damage - risk through other users eliminated
- Vehicle insurance - reduced premiums
- Personal security - brightly lit, 24-hour CCTV-monitored parking place above ground in a secure area
- Park your car at your front door - no more driving around looking for parking spaces
- Disabled access - double the regulatory amount of extra space for access
- E-charging - backward compatible



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For any developer the provision of car parking spaces is a major factor in the planning process. The provision of parking dilutes the housing density, having a significant effect on housing density and therefore GVA.

An underground parking provision combined with the Skyline solution, which requires over 50 % less volume than the alternative, can make the critical difference in whether or not a development is viable.

And what resident wants to drive down 25 metres to find a parking space (the depth of the conventional equivalent) when they can park their vehicle on the ground floor by the building entrance? Consider the commonplace fear of the weight of earth and feeling trapped underground as you drive down”.

4. Which aspect of the development are you proudest of?

“I will wait until The Beacon construction is complete and then decide.

But there are a number of key features that stand out:

- The Skyline Automated Parking System - the world’s fastest and highest parking density robotic parking system.
- The solar edge - enabling the inclusion of the world’s highest density vertical solar farm
- Embedded energy - using the building as a natural heat reservoir (a heat capacitor)
- On-site power generation - saving 20 % losses in normal power transmission and making The Beacon self-sufficient in all its energy needs (bringing the user to the power source).

- Technology consolidation - bringing together proven technologies in a new way to produce a unique and sustainable living experience.”

5. What is the single biggest challenge you have had to overcome?

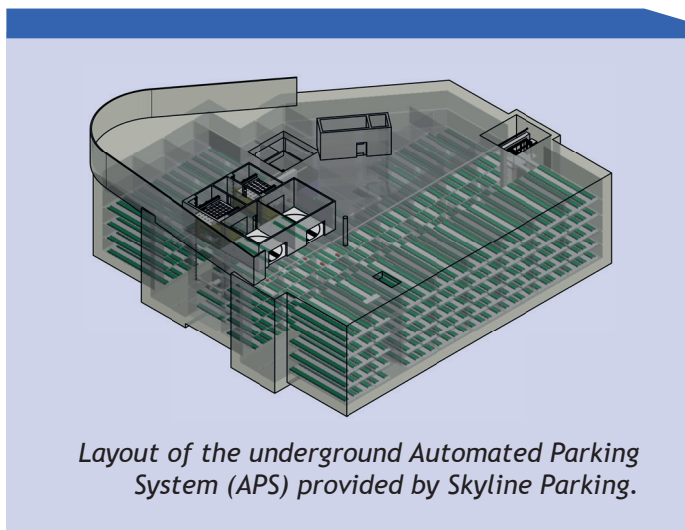
“Unfortunately, traditional costing models do not match the unique application of technologies we are using on The Beacon.

These outdated cost models use the past to predict the future, potentially stifling innovation and increased efficiencies in the industry, i.e. they use evidence-based assumptions and calculations.

This lack of ability to assess risk/cost/benefit for complex applications of simple technologies in new ways has forced Lumiere to develop our own cost models based on scientific facts.

These truly reflect the potential increases in building process efficiency and the benefits of using a combination of new and more established technologies.

In particular, there is a lack of science-based knowledge in the construction industry on the application of relatively new or combined technologies (in construction industry terms).



Layout of the underground Automated Parking System (APS) provided by Skyline Parking.



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This can only be improved through education and a holistic approach if we are to avoid the mistakes of the past, as the construction industry is built on standards and standards are built on experiences of the past, not the opportunities of the future.”

Also, look at the building holistically. Typically, designers and cost consultants look at simple cost comparisons such as the cost per parking space of a conventional parking system compared to an Automated Parking System (APS). This ignores the bigger picture; consider the holistic cost savings and the opportunity costs available if you use a Skyline APS to increase the site density.

6. Why do you think so few people have attempted this in the past?

“Generally, a lack of motivation - financial or moral - in investors, developers and the construction sector to break with the past and innovate - this requires a holistic approach and will be championed by individuals and probably not institutions.

People need to be educated to understand that emissions are actually killing people now - this is not a prediction; it is a fact. Sustainable construction developments are a part of the solution, death is the problem.

Also there is a lack of understanding of the real risk and opportunity. Current risk assessment is based on what is known and proven of a particular application - as soon as you change the parameters, nothing computes even if the individual technologies are OK.

I believe in education not legislation to drive this change - educate the young and they will follow - Fair Trade is a good example of this in action.”

7. If you could pass on one piece of advice to another developer considering a sustainable development, what would it be?

“You must truly believe that you can make a difference and be really motivated to challenge the accepted norms and precedents by which investors judge these types of developments today.

But I believe that it is only through education that we will change the future, not legislation.

Lumiere have set up the “How and Where” foundation which supports the education of schoolchildren in sustainability and stewardship of the environment, offering recognition, reward and encouragement.

But ultimately I return to my statement at the start of this interview - my inspiration for The Beacon was my children and the next generation - what legacy do you want to leave for them?”



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'The Beacon' APS entry area

