



## Katz Architecture

28 Gwynne Street  
Cremorne VIC 3121

T (03) 9982 1855  
katzarchitecture.com.au  
ABN: 92 101 078 415

## Multi Deck Carpark Structures

### The Rapid Project Planning Pack

To assist the research and feasibility of your project

9 April 2025





## 01 Summary Sheet

Welcome to the Rapid Project Planning pack for multi deck carparks research phase.

### The #1 Project Problem:

Frequently we see people moving projects into the design phase before the research is started. This is like a doctor starting surgery without a thorough diagnosis, or trying to build on a bad foundation.

That is why we created the **Rapid Project Planning Pack** – Now you have a simple process to help you move through the research phase.

If you follow this tool, you will reduce project risk and improve project design outcomes.

#### 01. RP3 Summary Sheet

Once you have ticked all the boxes below, you are ready to move to the **Analysis Phase**

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#### 02. Building Project Roadmap

Review the roadmap and identify where you are on your journey

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#### 03. Building Experts Directory

Directory of professionals who can help you at each stage of your design and building process

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#### 04. Building Cost Estimator

Simple do-it-yourself worksheet to estimate your building project

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#### 05. FAQs & SAQs

Frequently-asked questions and should-ask questions you need to know about working with an architect

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#### 06. Myth & Reality

Some things architects do outside design to complete a project

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#### 07. How To Create A Design Brief Using Only 7 Questions

Contact your shortlisted architects to start your process

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#### 08. Readiness Slider

Gauge of how ready you are to move to the **Design Phase**

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## 02. Key risks facing multi deck carpark projects

*Some might say: it is just a carpark ...or...how hard can it be?*

Multi deck carpark projects are actually complex projects that benefit greatly from specific expertise to maximise efficiency, avoid pitfalls, realise potential and add value to any urban precinct.

Frequently we have been asked to review carpark designs prepared by base building experts in other fields and invariably can increase efficiency and performance.

A saving of just 1sqm in carpark efficiency returns many \$100,000's, due to the scale and cost of these structures.

Key areas to be aware of early include:

Key Risk	How to Minimize
Any architect can design a carpark	A carpark expert will ensure spatial efficiency and code compliance with AS2890.1. An efficiency of below 28sqm/car space should be able to be achieved
Cross Ventilation	To reduce operational costs, and provide healthy facility, cross ventilation that complies delivers significant benefits and avoids costly mechanical systems. This has spatial design requirements.
Fire engineered solutions	There are significant opportunities to enhance design outcomes with performance solutions. This can include: extended escape distances, proximity to site boundaries, façade configurations etc.
Monolithic Structures	These structures are large and can have detrimental effect on urban environments when not designed well. Treatment of facades, use of circulation cores can enhance outcomes. There are opportunities for parametric modeling solutions, as well as excellent off the shelf systems
Safety of Users	Close attention to CPTED (Crime Prevention through environmental design) can help to ensure the building is safe and encourages use and patronage, Anti climb barriers may need to be considered...
Sustainability	These buildings present wonderful opportunities for sustainability: Material choices, WSUD (water sensitive urban Design), Solar voltaic roofs, water collection, landscape

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W [katzarchitecture.com.au](http://katzarchitecture.com.au)  
E [paul@katzarchitecture.com.au](mailto:paul@katzarchitecture.com.au)

*Always best to have an expert, especially with these sort of risks, costs and potential savings...*



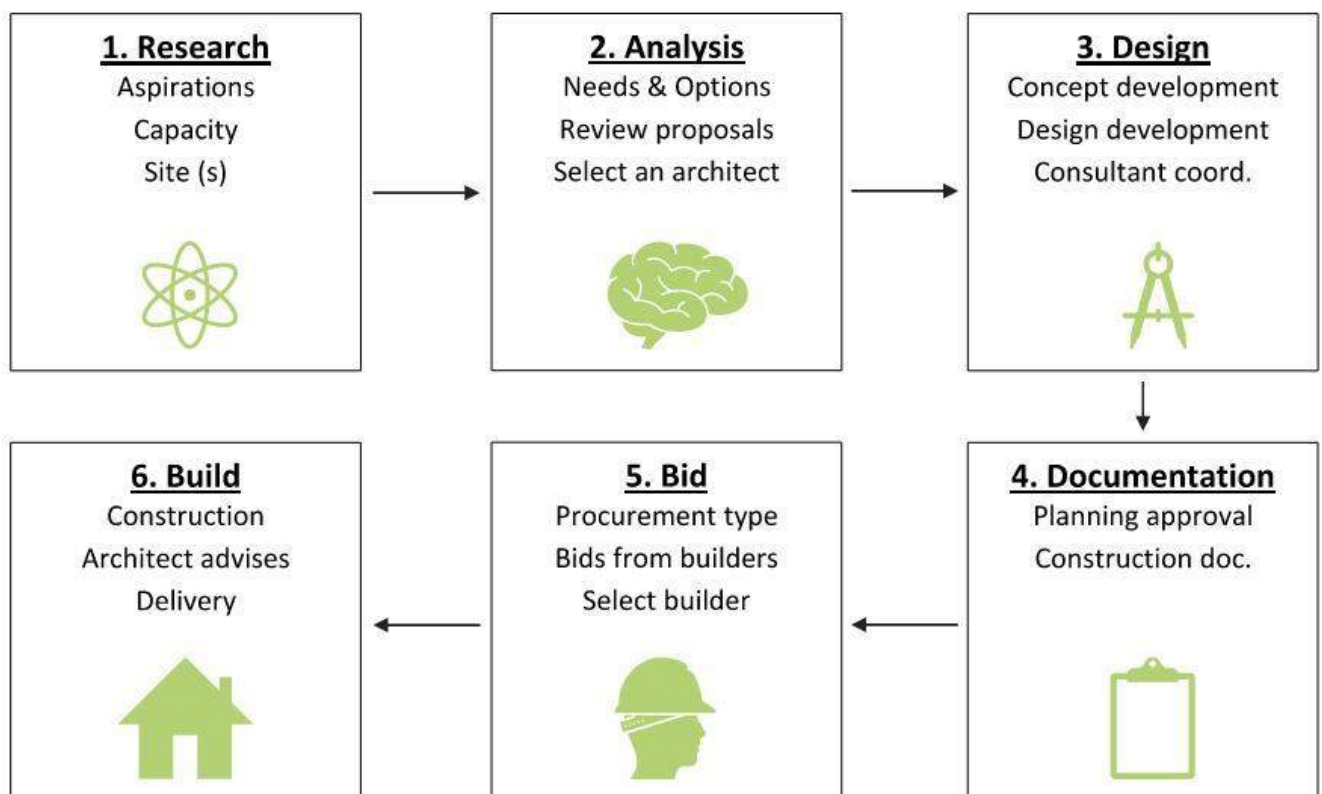
## 02. Project Roadmap

### Major steps required for designing and building multi deck carparks

Right now, you are likely in the **Research Phase**. This is where you are gathering information and playing around with ideas. At the point you want to get serious, you will want to check the feasibility of your ideas and understand what the project constraints are.

If you work with us, we will move to the **Analysis Phase** by conducting a Feasibility study or Needs and Options Review to eliminate assumptions, identify risks/constraints and find your best options.

You will receive a document that can be used by us or any other architect that will ensure you reduce project risk and get the best options for your site, brief and budget.



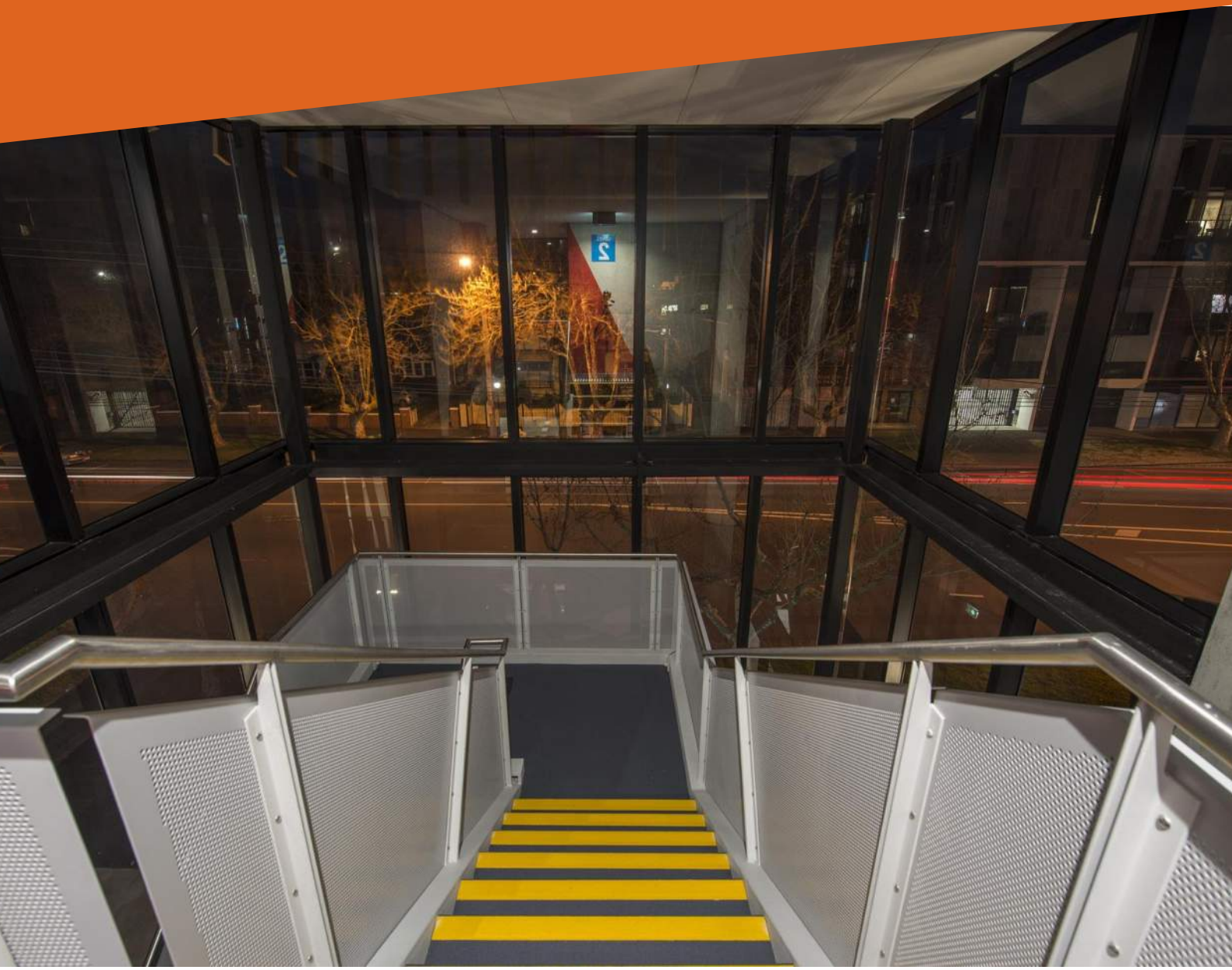
T +61 3 9882 1855  
W [katzarchitecture.com.au](http://katzarchitecture.com.au)  
E [paul@katzarchitecture.com.au](mailto:paul@katzarchitecture.com.au)

When you are ready to review the feasibility of your project/site, email or call us >>





*Consider all the opportunities  
that this building type can  
present – this will add value to  
the context and users*





## 03 Our Project Expert Directory

**Our personal project expert directory - The right architect will manage both the experts and the process**

Understanding what to do is one thing, knowing who are the key experts in this field to assist is another.

We have built up relationships with a range of professionals that understand the complexities of multi deck carpark design and construction. Not only do they do a great job, but they provide excellent specialised advice early to help guide projects to successful outcomes.

If you have any specific questions about your project, please reach out. If we can not answer your question, we will be able to draw on someone who can.



**Paul Katz** FRAIA (Fellow of the Australian Institute of Architects), BPD, B.Arch. (Hons), ARBV (Architects Registration Board of Vic),  
**Design Director**



**Tom Turner** RAIA, BPD, B.Arch. (Hons), ARBV (Architects Registration Board of Vic),  
**Technical Director**

T +61 3 9882 1855  
W [katzarchitecture.com.au](http://katzarchitecture.com.au)  
E [paul@katzarchitectcure.com.au](mailto:paul@katzarchitectcure.com.au)

Profession	Company	Key Person	Contact Details
<b>Architect</b>	Katz Architecture	Paul Katz Tom Turner	<a href="mailto:paul@katzarchitectcure.com.au">paul@katzarchitectcure.com.au</a> <a href="mailto:tom@katzarchitectcure.com.au">tom@katzarchitectcure.com.au</a>
<b>Façade Design</b>	Katz Architecture	Paul Katz Tom Turner	<a href="mailto:paul@katzarchitectcure.com.au">paul@katzarchitectcure.com.au</a> <a href="mailto:tom@katzarchitectcure.com.au">tom@katzarchitectcure.com.au</a>
<b>Traffic Engineering</b>	Ratio	Russel Fairlea	<a href="mailto:russellf@ratio.com.au">russellf@ratio.com.au</a>
<b>Structural Engineering</b>	Farrar D	David Farrar	<a href="mailto:david@farrad.com.au">david@farrad.com.au</a>
<b>Services Engineering</b>	Compass Intelle	Matthew Hill	<a href="mailto:Matthew.hill@compassintelle.com.au">Matthew.hill@compassintelle.com.au</a>
<b>Building Surveyor</b>	Krmeta	Baris Sahin	<a href="mailto:baris@krmeta.com.au">baris@krmeta.com.au</a>
<b>Fire Engineer</b>	Orbe	Brock Perry	<a href="mailto:Brock.perry@orbe.com.au">Brock.perry@orbe.com.au</a>
<b>Quantity Surveyor</b>	RBB	Angela Vong	<a href="mailto:Angela@rbb.com.au">Angela@rbb.com.au</a>
<b>Builder</b>	Building Engineering	Chris Doufas	<a href="mailto:chris@buildingengineering.com.au">chris@buildingengineering.com.au</a>

**Understanding the full implications of these structures early is critical to laying the foundation of their success, and ensuring all opportunities (and pitfalls) are realised**



## 04 Building Cost Estimator

### The #1 Question...

The most dreaded question architects, builders and every other professional dreads has got to be, '*how much will my project cost*'?

There are so many variables that a definitive answer is literally impossible.

Even worse, the consequences of trying to answer and risk giving 'bad advice' will have most experts running away to avoid the question.

The problem is that this question is VERY important. No one can proceed if they don't have a ball-park estimation of cost.

This guide will help you to determine an estimate of overall project costs. Your actual number may be more or less, but it can be helpful to see an estimated figure.

Cost/m2 Estimator				Estimate Your Cost	
Area	Standard	Medium	High	Area	Cost
Cost Per m2	\$1,400	\$1,550	\$1,900		
5,000	\$7,000,000	\$7,750,000	\$9,500,000		
10,000	\$14,000,000	\$15,500,000	\$19,000,000		
15,000	\$21,000,000	\$23,250,000	\$28,500,000		

A number of variables will impact project cost and these need to be explored and understood early:

- Site Infrastructure
- Inground Services
- Geotechnical Site Conditions
- Height of structure
- Footprint site constraints

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E [paul@katzarchitectcure.com.au](mailto:paul@katzarchitectcure.com.au)

**For a detailed cost and scope assessment, email or give us a call**



## 05 Questions to ASK

When hiring an architect, it is helpful to have a process to make sure you get the BEST firm to deliver.

Although extensive schooling and training are required for all architects, that doesn't mean all architects are created equal.

Finding the RIGHT architect for you depends on several factors, including: personality, multi level carpark expertise, building for taste or to make money, budget and even whether your project requires a specialist skill set

Choosing the right architect can mean the difference between an enjoyable experience and one plagued with problems and hassles the whole way through once a project moves into the **Build Phase**. How will your project go?

Good questions to consider ...

### A great architect is your Designer, Advocate, Teacher, Project Leader and Coordinator

□ What unique value do you have for our specific type of project?	□ How would you like us to share our ideas, images, needs, wants and research?
□ How can you add value to project	□ What can I do to help you deliver the best work for us?
□ Do you offer a pre-design analysis service to help move us safely and efficiently towards the design phase?	□ Do you have a team game plan that outlines how we will all successfully work together, even under pressure?
□ What are the specific challenges for our type of project and how have you overcome these in the past?	□ Will you run the tender process to find and select the best construction team?
□ If our budget, timeline and scope of project are unrealistic, will you let us know?	□ What educational material do you provide so we can understand the requirements of our specific type of project?

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Hiring the right architect is the single most important decision to ensure the most successful project result.





## 06 Myth v's Reality

### How the right architect can deliver.

Perhaps more than any other building type, there are many myths that deceive and cost building owners and operators significantly.

A skilled team experienced in the complexities of these structures will know the key issues to be addressed, and the opportunities to be explored to deliver real tangible returns

Myth	Reality
Often architect is an expert in another field does the carpark design (e.g. health architect, retail architect etc) for efficiency and simplicity	<b>Carpark Experts</b> – We have undertaken a number of multi level carparks and understand the pitfalls and benefits of different approaches. The cost savings through efficient design and understanding these structures can more than pay for the architectural fee
Carparks are easy to layout and plan. Perception "it's only a carpark" leads to poor design and inefficiency	<b>Ensuring Efficiency</b> - Typical efficiency of 28 sqm is exceeded – closer to 26sqm/car Cost per car space can be reduced or offset the cost of architectural facades or to focus funds on the primary client focus.
Most architects and engineers find Multi Level Carpark projects boring and treat them accordingly.	<b>Challenge</b> - We love a challenge and see every project as an opportunity and a have created a team of expert consultants, suppliers and builders to create something memorable as well as functional and cost effective
Often carparks are seen as functional structures with a straightforward solution.	<b>Leadership</b> - Wrong. MLC projects require specific expertise that a specialist team of consultants can resolve to create the most effective solution for your location.
The site has too many constraints making it too difficult or costly to build.	<b>Integration</b> – our interdisciplinary design team will plan and deliver your multi-level car park using an integrated and seamless approach. This means a smooth process and a perfectly coordinated project, saving you time, stress and money.
Carparks are simple	<b>Carpark designs need to achieve relevant code standards. This includes: Façade design, crash barrier design, ventilation requirements, lighting levels</b>

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## 07. How to create a design brief using only 7 questions

### Half the solution is knowing the problem!

We have developed a simple 7 step process to develop the key aspects of a project brief for any multi deck carpark.

These are the upfront considerations to explore early to ensure the project addresses your key salient requirements.

Question	Your Answer...
1. Outline your current site and its constraints that you are aware of?	
2. What is the reason you require a multi level carpark, what capacity?	
3. What will you need to achieve for the project to be a success?	
4. How is the building to fit in its context? What urban constraints or treatments should be considered?	
5. Who are the users? Eg. Staff, visitors, shoppers?	
6. What are the budget, timeframes and boundaries we need to work within?	
7. Is any future proofing required or desirable? Eg Addition of levels in the future? Conversion of other uses?	

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*“Focusing is about saying No”* Steve Jobs



## 08 Readiness Slider

### Are you ready to move to the design stage?

This exercise allows you to assess how ready you are to move to the **Design Phase**. If you are not close to 10 on ALL scales, then it's best to seek help from an expert to do this research.

If you rush into the design phase without this information available, you'll run the risk of making too many assumptions, which is the # 1 reason projects go over budget and over time.

*"Measure twice, cut once," Builders Mantra*

Question	Slider (0-10, zero = low, 10 = high)	
On a 1-10 scale, how clear are you on exactly what you need?	1	/10
On a 1-10 scale, how aware are you of all the various options your site will accommodate?	1	/10
On a 1-10 scale, how confident are you that you are aware of all the legal requirements?	1	/10
On a 1-10 scale, how aware are you of the process you will need to have in place to get the project completed on time and on budget?	1	/10
On a 1-10 scale, how confident are you that your budget will achieve your needs?	1	/10
Give yourself a current overall rating for readiness.	1	/10

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Don't worry if you are not at 10 on all scales yet. Our Needs and Options Review process can help to get you to 10 on all Sliders above and be ready for design phase to begin



*That is the short story of how  
to set your multi deck carpark  
project up for huge success*

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