



# Final Business Case Summary: Sydney Football Stadium Redevelopment

March 2018



## About this report

This document summarises the Final Business Case (the Business Case) for the proposed redevelopment of the Sydney Football Stadium at Moore Park. It has been prepared by Infrastructure NSW, the NSW Government's independent infrastructure advisory agency.

In November 2017, the NSW Government announced its intention to replace the existing Sydney Football Stadium with a new venue accommodating up to 45,000 seats on land owned by the Sydney Cricket and Sports Ground Trust at Moore Park. The Government subsequently commissioned Infrastructure NSW to prepare a Business Case to enable it to take final investment decisions on the Sydney Football Stadium's redevelopment.

The Business Case was prepared between mid-December 2017 and late February 2018, and is summarised in this document.

The Business Case considered three options for the redevelopment of the Sydney Football Stadium, against a "do minimum" Base Case.<sup>1</sup> The Business Case is predicated on the assumptions (a) that a rectangular football stadium should continue to be provided at Moore Park and (b) that, in line with Government policy, the stadium should continue to be a Tier 1 venue.<sup>2</sup>

### Summary

Stadia can generate significant economic benefits for a community, creating economic activity through sporting events, providing employment opportunities for local people and attracting visitors to NSW. The Business Case for the Sydney Football Stadium Redevelopment seeks to measure the extent to which such benefits could be generated through investment in the Sydney Football Stadium, and to compare those benefits with the cost of the associated investment.

Thirty years after its opening, the Sydney Football Stadium is at the end of its economic life, with shortcomings in its ability to meet contemporary safety, security and amenity standards, its operational efficiency, and the experience it provides to people using the venue. The stadium requires significant capital investment to remain operational.

Given that the stadium does not meet contemporary standards, including for safety and security, the option of "doing nothing" is not available. The Business Case therefore defines a Base Case, which is the lowest level of intervention required to make the current stadium fit for purpose for the next 30 years. The Base Case describes a program of work that would rectify the immediate safety, security and amenity issues to a level that would keep the stadium open. It would not improve the operational efficiency of the venue, nor improve the experience of stadium users. The stadium would not meet the access needs of people with disabilities.

In addition, implementing the minimum option to keep the stadium open would not deliver on one of the Government's stated objectives of investing in sports infrastructure, that is to maintain NSW's competitive position in the major events and tourism market.

The Business Case is clear that refurbishing the current stadium would require significant investment (\$714.5 million) for a relatively poor outcome. A refurbishment would address many of the stadium's compliance, operational and experience shortcomings, but the cost of this option is comparable to that of rebuilding the stadium, while the benefits fall well short of those generated through rebuilding. The refurbishment option has a Benefit Cost Ratio (BCR) of just 0.62.

The Business Case examines two options to rebuild the stadium – one with 40,000 seats and one with 45,000 seats. Each would deliver a contemporary, well equipped venue and would fully resolve the current operational and experience shortcomings of the stadium and ensure it meets contemporary standards. A rebuilt stadium would last for an estimated 50 years and deliver materially improved financial results both before and after life cycle costs are factored in.

<sup>1</sup> The Base Case is the level of intervention needed to maintain the current situation for the 30 year period being considered by the Business Case.

<sup>2</sup> The term Tier 1 is part of the classification system which the NSW Government uses to differentiate stadia by size and facilities. Tier 1 venues are the largest and best equipped, with a capacity of at least 40,000 seats and the ability to host international events. The current three Tier 1 stadia in NSW are Stadium Australia, the Sydney Cricket Ground and the Sydney Football Stadium.

Each of the rebuild options was analysed with an original scope of works, costing up to \$775 million, and then with some discretionary features removed, which limited the costs to \$729 million. The BCRs of the rebuild options are very similar, at 0.93 and 0.94, but the overall outcomes in terms of customer and community benefit are clearly greater for the rebuild options than for both the Base Case and the refurbishment option.

The Business Case suggests that the optimal capacity of a rebuilt stadium is between 40,000 and 45,000, with the final decision as to the venue's capacity to be informed by further design work that considers the physical site available, the precinct and the functional requirements of the stadium.

## Strategic context

### Stadia investment

In 2012, the NSW Government released the *NSW Stadia Strategy*, providing a framework for investment in sport and entertainment infrastructure. The strategy covered seven Government-owned or leased stadia; located in two international sporting hubs at Sydney Olympic Park (Stadium Australia and Sydney Showground) and at Moore Park (Sydney Cricket Ground and Sydney Football Stadium), and venues in the population centres of Parramatta, Newcastle and Wollongong.

*Rebuilding the Major Stadia Network* outlined the Government's investment priorities in line with the stadia strategy. The statement identified six projects to be delivered as part of a future pipeline of works. In 2017, additional funds were reserved to allow the redevelopment of Sydney Football Stadium with up to 45,000 seats and Stadium Australia with up to 75,000 seats.

### Economic benefits

Stadia can generate significant economic benefits for a community. Sporting events create economic activity through ticket sales, television and broadcast rights, advertising, sponsorship and the sale of merchandise. This boosts the economy by contributing directly to output, Gross Domestic Product (GDP), and by providing employment opportunities for the local community.

Sporting and entertainment events, particularly major events, can also promote intrastate, interstate and international tourism. Events hosted at stadia can attract new visitors to NSW, and this increased visitation can contribute to the economy by promoting activity in tourism-related industries such as accommodation, cafes and restaurants, retail and transport.

Increased visitation generates additional economic activity within the State. This is illustrated in an analysis conducted by PricewaterhouseCoopers (PwC) of the International Cricket Council (ICC) Cricket World Cup 2015. The tournament was hosted jointly by Australia and New Zealand. PwC estimated the total direct expenditure in Australia as a result of the tournament was \$785 million, with \$675 million of this being expenditure by visitors to Australia. The analysis calculated that the ICC World Cup 2015 generated an increase in GDP in Australia of \$350 million.<sup>3</sup>

### Social benefits

A community can derive less tangible benefits from the provision of major social infrastructure such as stadia. Such infrastructure can improve the liveability of a city/region/state and in turn improve its ability to attract and retain businesses, industries and people. There is evidence that social infrastructure such as stadia can increase people's pride in their community and generate wider benefits such as improved social cohesion and inclusion.<sup>4</sup> New or upgraded stadia can also have a catalytic impact on precinct development and can drive substantial urban renewal.<sup>5</sup>

<sup>3</sup> Economic impact and benefits analysis of ICC World Cup 2015, PwC, June 2015.

<sup>4</sup> See for example: An Examination of the Public Good Externalities of Professional Athletic Venues, Public Budgeting and Finance, Schwester, 2007; Value of public goods from sports stadiums: A CVM approach, Western Economic Association, Johnson, Whitehead, 2000.

<sup>5</sup> See for example: Magnet Cities, KPMG, 2014, pp 210-244.

The Business Case for the Sydney Football Stadium Redevelopment seeks to measure the extent to which these types of benefits could be generated through investment in the Sydney Football Stadium, and to compare those benefits with the cost of that investment.

## Problem description

### Past investment in stadia

For several years after the Sydney 2000 Olympic Games, the NSW Government's investment in sports infrastructure was limited and ad hoc. In response to ongoing calls for funding to upgrade venues, many of them owned by local councils, the Government announced its policy on stadia investment in 2012.<sup>6</sup> This identified a small number of key assets that would be the focus of Government investment. It committed to upgrading these assets to a high standard both for the benefit of stadium users and to protect NSW's competitiveness in attracting major sporting and entertainment events.

Infrastructure NSW noted in the *State Infrastructure Update 2014* that "notwithstanding the adoption by the NSW Government of the stadia strategy...real investment to implement the strategy has been slow to materialise".<sup>7</sup> The Sydney Football Stadium is one of the venues included in the strategy.

### The current Sydney Football Stadium

The Sydney Football Stadium was opened in 1988 as one of Australia's leading sporting venues. It was developed by the Sydney Cricket and Sports Ground Trust to provide a dedicated rectangular venue within the Moore Park precinct. The stadium met the standards and expectations of the day and reflected the environment in which professional sport was then played.

Thirty years on, the stadium is at the end of its economic life, with shortcomings in its ability to meet contemporary safety, security and amenity standards, its operational efficiency, and the experience it provides to people using the venue. The stadium requires significant capital investment to remain operational.

Key deficiencies include:

- **Safety, security and compliance:** The environment in which the stadium operates has changed markedly over the past 30 years. Both the Building Code of Australia and the Disability Discrimination Act have been introduced since the stadium opened.<sup>8</sup> The security context in which public assembly venues operate is also different from that of 30 years ago, and continues to evolve in response to terrorism threats. The stadium does not meet current building standards<sup>9</sup>, provide adequate access for people with a disability<sup>10</sup>, meet recommended targets for egress<sup>11</sup>, or have security features suitable for the current environment.<sup>12</sup>
- **Operational inefficiencies:** The venue's physical configuration leads to operational inefficiencies and additional costs due to the time required to prepare the stadium for events, and the need to allocate additional staff to ensure safety during events. The stadium's concourses are narrow and become unreasonably crowded as insufficient toilets and food outlets result in queueing. Back-of-house facilities are inadequate. There is one goods lift, storage and dock areas are undersize and the lack of a basement results in routine cross-over between operations and patrons. This lack of back-of-house infrastructure results in inefficient movement of goods, staff and waste around the venue.

6 NSW Stadia Strategy, Office of Sport, 2012.

7 State Infrastructure Strategy Update 2014, Infrastructure NSW, November 2014, pp. 128.

8 The Building Code of Australia (1990); Disability Discrimination Act (1992).

9 Building Code of Australia Site Audit Report, Allianz Stadium, Blackett Maguire + Goldsmith, 2016.

10 Allianz Stadium: Access Audit Report, iAccess Consultants, 2016.

11 Sydney Cricket & Sports Ground Trust – Allianz Stadium Egress Assessment Desktop Review Stage 1 Works, ARUP, October 2016. Sydney Cricket Ground Trust Precinct Evacuation Analysis, ARUP, 2016.

12 Allianz Stadium: Physical Security review and High Level Security Design Plan, Intelligent Risks Pty Ltd, 2016.

- **The venue experience:** While the issues described above all have an adverse impact on the experience of patrons, the key shortcomings of the venue experience are the viewing quality and the lack of weather protection. Sightlines at the stadium vary and some viewlines are obstructed. For example, high balls cannot be seen due to the overhang of the tier above. The roof of the stadium provides coverage of only 55 per cent to the “drip line”<sup>13</sup> - the lowest level of weather protection of any Tier 1 stadium in Australia. The lower bowl is entirely uncovered, and the upper levels are exposed to weather through openings at the back of the tiers.
- **The hirer experience:** The hirers of the venue also experience its limitations: there are only two change rooms, for example, and these are small and poorly equipped. The coaches’ boxes are inadequate and have an obstructed view of the field of play.

Many of the shortcomings described above could be rectified or ameliorated with capital investment. The options for investment have been assessed in the Business Case and are described below.

## Sydney Football Stadium Redevelopment: project description

The Sydney Football Stadium Redevelopment announced by the Government in November 2017 envisaged the construction of a new stadium with up to 45,000 seats, broadly on the site of the current stadium. The functionality of the proposed new stadium, scoped by Infrastructure NSW in consultation with the Sydney Cricket and Sports Ground Trust for the purposes of the Business Case, envisages providing patrons with:

- larger entrance plazas, making it easier to enter and leave the venue
- improved movement routes within and around the stadium, including additional elevators
- seating with high quality sightlines and improved proximity to the field of play
- curtaining technology that allows the venue to be configured to various capacities
- wide concourses that are weather-protected and equipped with a range of food and beverage outlets, including a food court
- contemporary digital technology, including a media halo
- a roof that covers 100 per cent of the seats
- improved premium hospitality and member facilities.

It is proposed that four fully equipped change rooms for teams will be provided to cater for “double header” events. This configuration anticipates the further growth of women’s sport. Facilities for coaches and match officials will be designed to meet international standards, with separate facilities provided to reflect increased female participation in all aspects of professional sport.

The proposed stadium will have a basement with a 360-degree service road, allowing it to operate efficiently, including when hosting concerts that require the movement of large quantities of stage and production equipment.

The basement and ring road will also provide outside broadcasters with easy access and technical interfaces. Within the stadium, it is intended that media personnel will be provided with state-of-the-art recording, reporting and production facilities.<sup>14</sup>

## Options identification and assessment

### Base Case

Given that the stadium does not meet contemporary standards, including for safety and security, the option of “doing nothing” is not available. The Business Case therefore defines a Base Case, which is the lowest level of intervention required to make the current stadium fit for purpose for the next 30 years.

<sup>13</sup> The drip line is the location of the leading edge of the roof.

<sup>14</sup> The scope of the project is defined in the Project Brief that has been developed by PwC on behalf of Infrastructure NSW with input from the Sydney Cricket and Sports Ground Trust.

The Base Case addresses immediate safety, security and compliance issues and includes sufficient refurbishment and replacement works to keep the venue operational. The Base Case improves safety and security but does not achieve full compliance, notably in the areas of disability access and the provision of an adequate number of toilets, due to the lack of physical space in the existing structure. It also does not improve the spectator experience, or the operational efficiency of the stadium, as the seating bowl and roof line are unchanged and no basement spaces are included.

The Base Case is estimated to have a capital cost of \$341 million, or \$292.39 million in net present value (NPV) terms.

Having defined the Base Case, the Business Case then compares its costs and benefits with those of refurbishing the existing stadium and those of building a new stadium.

### **Refurbishing the current stadium**

Refurbishing the stadium, the first option for upgrading the stadium over and above the Base Case, encompasses the works included in the Base Case together with a new roof covering 95 per cent of the seats and a basement with a 360-degree ring road.

This option would address immediate safety, security and compliance issues and improve the amenity of the stadium. The provision of roof coverage to most seats would improve the fan experience, and a basement and ring road would significantly improve back-of-house operations.

The capital cost of refurbishment is estimated to be \$714.5 million, or \$576.85 million in NPV terms.

Despite the moderate improvements in spectator experience and operability which the refurbishment would bring, many of the limitations and constraints of the current venue's structure would remain. Viewing positions within the stadium would be unchanged, much of the corporate product would remain in poor locations, and concourses, amenities and concessions would continue to fall short of relevant benchmarks.

In addition, much of the current building would be retained in the refurbishment option and the remaining useful life of the stadium after refurbishment would therefore be shorter than that of a fully redeveloped stadium built to modern standards.

### **Building a new stadium**

Two options were developed for the construction of a new stadium – one with 40,000 seats and one with 45,000 seats. Each option would deliver a stadium with features and facilities consistent with:

- contemporary stadium amenity, such as flip seats on minimum plat depths of 825mm, food and beverage outlets evenly distributed on concourses with a minimum of one point-of-sale per 100 patrons
- operational efficiency, including a basement and service road that separates patrons from back-of-house and provides access for concert production
- “best practice” facilities for teams and outside broadcasters
- a variety of hospitality options throughout the stadium for corporate patrons and members.

Both “new build” options would comply with the standards defined by the Building Code of Australia (BCA), the Football Stadia Advisory Design Council (FSADC), the Disability Discrimination Act of Australia (DDA), and those of the governing bodies of the major sporting codes.

Under the original specification contained in the Business Case, the capital cost of building a new 40,000-seat stadium is estimated to be \$750 million, or \$608.67 million in NPV terms. The cost of a new 45,000-seat stadium is estimated to be \$775 million, or \$628.75 million in NPV terms. A reduced specification for each option – excluding certain discretionary items of scope – was also costed, reducing the estimated capital cost of each by \$46 million (see Table 1 on page 8).



## Economic evaluation

### Benefits

The benefits that could be generated by the project have been assessed and evaluated following extensive reviews of data from other jurisdictions, reviewed and verified for Infrastructure NSW by consultants KPMG.<sup>15</sup>

On the basis of KPMG's analysis, the forecast benefits of a new stadium can be summarised as follows:

- **More sporting events and concerts:** Estimated by Infrastructure NSW at between 49 to 52 events per year on average.<sup>16</sup>
- **Increased attendances:** Sporting attendance is estimated to increase by up to 15 per cent in an average year. The annual average attendance is expected to be as high as 1,280,320, with 11 per cent of these people coming from outside NSW.<sup>17</sup>
- **Reduced operating costs:** Many of the shortcomings of the current stadium, such as restricted access and egress routes and limited concourse spaces, are currently managed by allocating additional staff to oversee patron safety. These arrangements, and the associated cost, would not be required in a new stadium.

### Evaluation

In preparing the Business Case, Infrastructure NSW subjected the refurbishment option and the two rebuilding options to an economic appraisal in accordance with pre-established NSW Treasury guidelines.<sup>18</sup>

These guidelines are consistent with those used in comparable jurisdictions around Australia and internationally.

Benefit Cost Ratios (BCRs) in the economic appraisal are incremental. They measure the costs and benefits of each option by comparison to those of the Base Case.

The economic analysis shows that the rebuilding option with 45,000 seats performs better than the other upgrade options, with a BCR of 0.94.

The BCR includes the benefits of avoiding the capital costs that would be required to make the current stadium fit for purpose (47 per cent), benefits to consumers (25 per cent), and benefits to NSW businesses and workers (25 per cent). These details are presented in Table 1 at page 8. The economic costs and benefits are expressed in NPV terms.

All the key inputs to the economic analysis contained in the Business Case were individually tested to measure their sensitivity to changed assumptions. In addition, two scenarios were considered, adjusting simultaneously the assumptions related to attendances, the capital cost of the project, the benefits to consumers and the benefits to businesses and workers.

The downward (or more pessimistic) adjustment of these assumptions for the 45,000 seat option reduced the BCR to 0.71. The upward adjustment increased the BCR to 1.29. This analysis, which was applied to each of the options, is presented in Table 2 at page 9.

<sup>15</sup> In recent times, KPMG have completed business cases for many stadia, convention centres and arena projects across Australia and internationally including Townsville Stadium, Western Sydney Stadium, Perth Optus Stadium, NIB Stadium, Perth Arena, Kai Tak Stadium Hong Kong, Christchurch Stadium, ICC Sydney, Brisbane, Melbourne and Perth Convention and Exhibition Centres.

<sup>16</sup> The event calendar for the Sydney Football Stadium was developed by examining all contracted events, analysing events in the venue during the past five years and assessing the potential for new content. The proposed event schedule was cross-referenced by Office of Sport with that from other government-owned stadia for consistency and reasonableness.

<sup>17</sup> The expected uplift in attendances were estimated based on KPMG's analysis and long-term actual attendances for sports codes and concerts at the Sydney Football Stadium, the attendance figures at other redeveloped and equivalent Australian venues and international peer reviewed academic research.

<sup>18</sup> NSW Treasury Guidelines for Capital Business Cases (TPP 08-05).

## The outcomes of the analysis

The refurbishment option returns a financial result which is significantly inferior to those of the redevelopment options. In an average year, the refurbishment option forecasts a small positive operating result before life cycle costs, and a negative result after life cycle costs.

The two options for rebuilding the stadium are estimated to return similar financial performances. Each of the options is expected to return a materially improved and positive operating result both before and after life cycle costs. The financial results of the two redevelopment options are within an acceptable margin of error, indicating there is effectively no difference between the financial performance of the two options.

The BCR of the refurbishment option is much lower (0.62) than those of the two redevelopment options, and relies heavily on the avoidance of capital costs for a high proportion of its benefits. The cost-benefit analysis delivers similar results for the two rebuilding options, with a net benefit of -\$41.08 million and a BCR of 0.94 for the larger stadium, and a net benefit of -\$42.93 million and a BCR of 0.93 for the 40,000-seat stadium - again, suggesting there is no material difference between the two rebuilding options.

While the Business Case does not clearly differentiate between the financial and economic performance of the rebuilding options, it does indicate that refurbishing the stadium compares poorly in almost all respects to rebuilding the stadium.

The capital cost of both the rebuild options as specified is higher than the \$705 million initially advised to the government in November 2017. This increase included cost escalation to reflect a revised project timetable. Given this, supplementary analysis was undertaken to investigate options to reduce the capital cost of the project. This analysis removed two items of emerging technology, namely the “media halo”, which is an LED display at the leading edge of the roof, and the “club mode curtain” which would allow the venue to be configured to a smaller size for club matches. This adjustment was suggested by the external reviewers as a way of moderating the cost of the project.

The removal of these items reduces the capital cost of both the 40,000 seat option and the 45,000 seat option by approximately \$46 million. The scope adjustment has a minimal impact on the BCR of each option, as the expenditure has associated offsetting benefits in attendances. However, even though there is no significant movement in the BCR, the capital funds required for the project are significantly reduced, to \$729 million for Option 1 with 45,000 seats and \$704 million for Option 2 with 40,000 seats. This can be achieved with very little impact on the other key indicators examined in the Business Case.

**Table 1** - Cost benefit analysis options (Incremental to Base Case)

Cost Benefit Analysis Outputs - Present Value - 7% Discount Rate - (\$FY18, \$m)					
	New stadium with 45,000 seats		New stadium with 40,000 seats		Refurbishing the stadium (40,258 seats)
	Original specification	Adjusted scope	Original specification	Adjusted scope	
<b>Costs</b>					
Project capital expenditure	628.75	593.66	608.67	573.58	576.85
Life cycle costs	7.30	5.29	4.23	2.34	18.12
Other project costs	27.72	27.72	20.87	20.87	4.30
<b>Total costs</b>	<b>663.78</b>	<b>626.68</b>	<b>633.77</b>	<b>596.79</b>	<b>599.27</b>
<b>Benefits</b>					
Avoided capital expenditure	292.39	292.39	292.39	292.39	292.39
Consumer benefits - Use and non-use	154.21	131.95	140.90	119.11	21.79
Business and employment benefits	157.44	141.62	140.66	125.67	59.32
Terminal value	18.65	17.33	16.89	15.63	-
<b>Total benefits</b>	<b>622.70</b>	<b>583.30</b>	<b>590.84</b>	<b>552.80</b>	<b>373.50</b>
<b>Outputs</b>					
Net benefit	(41.08)	(43.38)	(42.93)	(43.98)	(225.77)
<b>Benefit cost ratio</b>	<b>0.94</b>	<b>0.93</b>	<b>0.93</b>	<b>0.93</b>	<b>0.62</b>



**Table 2** - Analysis summary

<b>Options analysis summary</b>					
<b>\$FY18</b>	<b>Option 1 - New stadium with 45,000 seats</b>		<b>Option 2 - New stadium with 40,000 seats</b>		<b>Option 3 - Refurbishing the stadium (40,258 seats)</b>
	<i>Original specification</i>	<i>Adjusted scope</i>	<i>Original specification</i>	<i>Adjusted scope</i>	
<b>Design elements</b>					
Total capacity	45,000		40,000		40,258
Roof coverage	100%		100%		95%
Remaining useful life	50 years		50 years		30 years
<b>Project costs (\$m)</b>					
Capital expenditure	\$775.0	\$729.0	\$750.0	\$704.0	\$714.5
Life cycle costs	\$212.0	\$199.5	\$193.9	\$182.0	\$219.3
Other costs	\$34.6		\$34.6		\$30.8
<b>Demand</b>					
Total annual attendance (average year)	1,280,325	1,211,438	1,269,550	1,203,750	957,705
Annual event calendar	49-52	48-51	48-52	47-51	40-44
<b>Cost-benefit analysis (\$m, Incremental NPV, 7% discount rate)</b>					
Economic costs	\$663.78	\$626.68	\$633.77	\$596.79	\$599.27
Economic benefits	\$622.70	\$583.30	\$590.84	\$552.80	\$373.50
Net benefit	(\$41.08)	(\$43.38)	(\$42.93)	(\$43.98)	(\$225.77)
BCR	0.94	0.93	0.93	0.93	0.62
Pessimistic scenario (BCR)	0.71		0.72		0.53
Optimistic scenario (BCR)	1.29		1.25		0.78
Social impact alignment	High		High		Low - Medium

## Deliverability

Subject to Government investment decisions, the current stadium is expected to close at the end of the NRL season in 2018, with demolition to commence by the end of 2018. Construction is scheduled to begin in the second half of 2019.

The Sydney Football Stadium Redevelopment is likely to be delivered using a design and construct (D&C) method of delivery. Infrastructure NSW is planning to develop a reference design for the stadium that can be offered to proponents as part of a Request for Tender. The reference design will confirm the external dimensions of the building and the allocation of areas and spaces. By undertaking significant upfront design itself, the Government can help to reduce one of the deliverability risks of the project while reducing proponents' costs of tendering.

### Disruption during construction

The new stadium is proposed to be located slightly to the south and west of the current venue. This is to relieve "pinchpoints" around the current stadium which might otherwise compromise patron comfort and potentially, security. Spaces around the current stadium are particularly constrained adjacent to Moore Park Road.

Re-positioning the new stadium will require some of the surrounding buildings to be demolished, and require the relocation of tenants and businesses. The Indoor Cricket Centre will need to be demolished. The cost of this disruption and of finding alternative accommodation for tenants is included in the financial analysis of the project and in the calculation of the project's BCR.

### Key risks

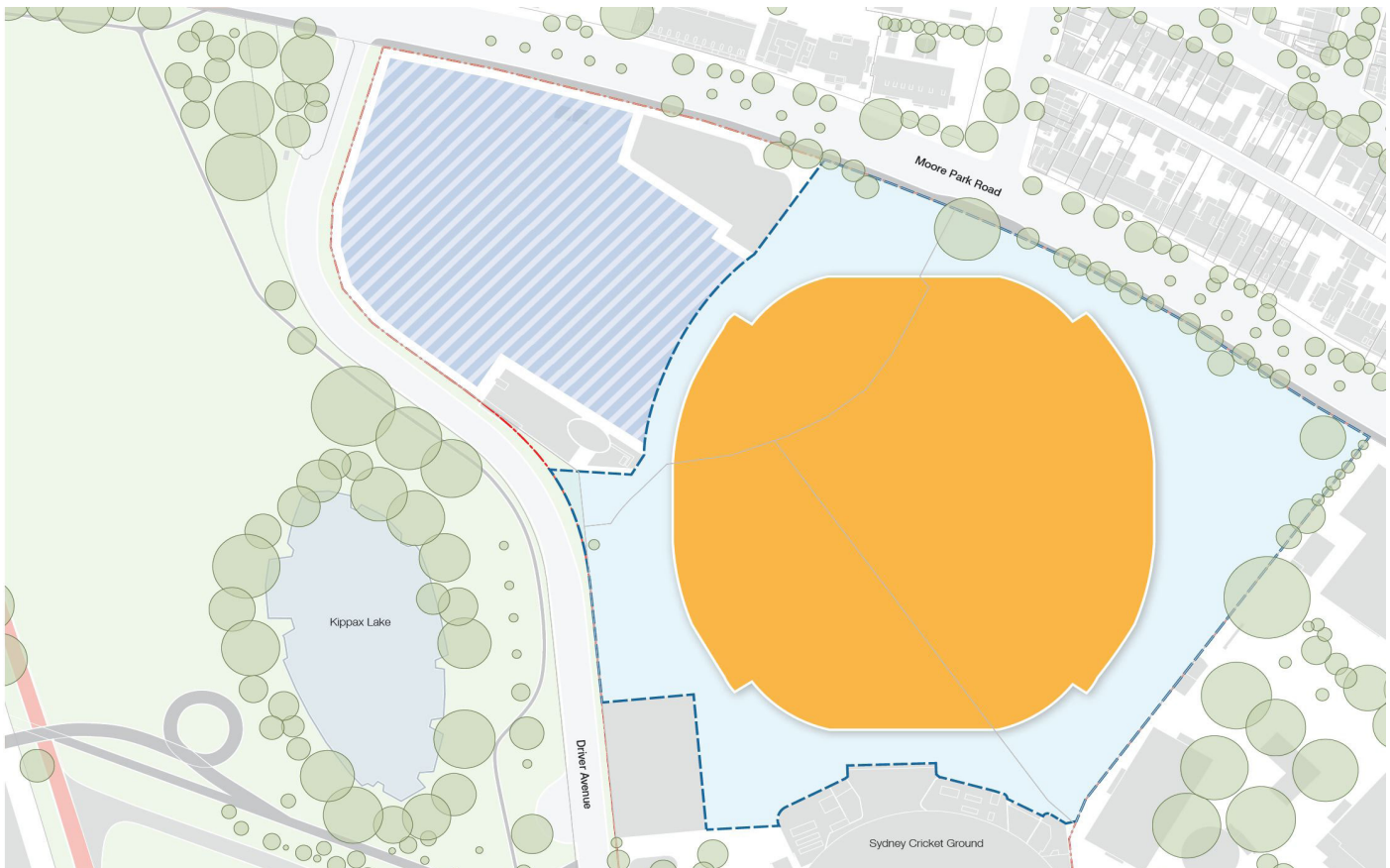
Given that the Sydney Football Stadium Redevelopment will take place within a functioning sports and entertainment precinct, the disruption to existing tenants, businesses and users, as well as to the ongoing events at Sydney Cricket Ground, will need careful management.

Other project-related key risks identified in the Business Case are:

- The stadium is in an inner urban area and its site is constrained. The design solution will therefore need to balance the size and amenity of the stadium with its impact on the amenity and functionality of the surrounding precinct.
- The planned construction period of the stadium coincides with other major state infrastructure projects. The capacity of the construction industry and its supply chains will require careful monitoring.

The external Gateway reviewers of the Business Case considered that satisfactory mitigation measures were either in place or planned to address these risks.

**Figure 1** - Estimated location of 45,000 seat stadium footprint



## External review

Infrastructure NSW routinely assesses business cases and provides advice to Government on the efficacy of their findings. In the case of the Sydney Football Stadium Redevelopment, however, Infrastructure NSW was tasked by Government with leading the production of the Business Case. Given these circumstances, and to ensure the robustness and reasonableness of the Business Case, it was subject to external review overseen by NSW Treasury.

Two external reviews of the Business Case for the Sydney Football Stadium Redevelopment have been undertaken during its development, consistent with NSW policy on assuring major projects. The Gateway process managed by NSW Treasury involved extensive independent review by three experts in stadium design, construction and operation.

The review concluded that the Business Case had successfully demonstrated the case for change at Sydney Football Stadium. That is, there was a clear reason to invest to address the venue's identified problems.

The review team endorsed the Business Case's conclusion that the Base Case expenditure of \$341 million (\$292.39 million NPV) was unlikely to be justified because, although it would allow the stadium to remain open,

it would result in a stadium that failed to meet a number of the standards included in contemporary building and disability access codes and would not improve the spectator experience.

The reviewers agreed that the option to refurbish the existing stadium as presented in the Business Case was demonstrably inferior to the redevelopment options. The review team agreed with the Business Case findings that “the refurbishment option, with a BCR of 0.62, is not economically justifiable”.

The reviewers supported the view that rebuilding the stadium was the preferred approach, but noted that there was no real difference between the economic cases for the 40,000-seat and the 45,000-seat options. The review team referred to the scenario analysis as an acknowledgement of the intrinsic uncertainty of forecasting future outcomes, but noted that there was no obvious point of difference between the rebuilding options and therefore no decisive evidence that a jump to a full 45,000 seat stadium was justified.

The review team agreed with the proposition in the Business Case that, given the relatively small difference in the capital costs of the two options, a possible course of action for the Government might be to proceed on the basis of 40,000 seats as a minimum capacity and 45,000 seats as a target capacity, with the final stadium capacity to be determined once more detailed design work had been completed and before any tender documents were released to the market.

## The Infrastructure NSW view

The Business Case supports the conclusion that, if a stadium is to be maintained at Moore Park, investment is required.

The Business Case is clear that refurbishing the current stadium would require significant investment (\$714.5 million) for a relatively poor outcome. A refurbishment would address many of the stadium’s compliance, operational and experience shortcomings, but the cost of this option is comparable to that of rebuilding the stadium, while the benefits fell well short of those generated through rebuilding.

The Business Case examines two options to rebuild the stadium, each of which would deliver a contemporary, well equipped venue. These options would fully resolve the current operational and experience shortcomings of the stadium and ensure it met contemporary standards. A rebuilt stadium would deliver materially improved financial results both before and after life cycle costs are factored in.

In economic terms, however, neither of the rebuild options has a BCR of greater than 1. Where a Business Case analysis suggests that this is the case, consideration needs to be given to implementing a base case “do minimum” option.

The Base Case in the Business Case describes a program of work that would rectify the immediate safety, security and amenity issues to a level that would keep the stadium open. While the Base Case requires a significantly lower level of investment (\$341 million) than the rebuild options (from \$704 million to \$775 million), it would deliver a significantly diminished outcome. It would not improve the operational efficiency of the venue, nor improve the experience of stadium users. It would not fully meet contemporary standards, continuing to rely on periodic assessments to be deemed to comply with important codes like fire safety. The stadium would not meet the access needs of people with disabilities. In addition, implementing the minimum option to keep the stadium open would not deliver on one of the Government’s stated objectives of investing in sports infrastructure, that is to maintain NSW’s competitive position in the major events and tourism market.

Once the Base Case is deemed to be unsustainable, then one of the two options to rebuild the stadium would become the preferred position. Each of the rebuild options was analysed with an original scope of work and then with some discretionary features removed to contain costs. The BCRs of all rebuild options are very similar. The Business Case suggests that the optimal capacity of a rebuilt stadium is between 40,000 and 45,000, with the final decision as to the venue’s capacity to be informed by further design work that considers the physical site available, the precinct and the functional requirements of the stadium.