

# Kogarah Golf Club Redevelopment

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## Sustainability Report

**Stockland Development Pty Limited**

Job No: 1047875  
Doc ref: 1047875-RPT-SY-001  
Revision: D  
Revision date: 01 May 2026

|               |                                 |            |
|---------------|---------------------------------|------------|
| Project title | Kogarah Golf Club Redevelopment | Job number |
| Report title  | Sustainability Report           | 1047875    |

Document revision history

| Revision ref | Issue date                 | Purpose of issue / description of revision      |
|--------------|----------------------------|-------------------------------------------------|
| A            | 10 November 2025           | Draft for review and coordination (70% design)  |
| B            | 11 December 2025           | Draft for review and coordination (100% design) |
| C            | 19 March 2026              | Minor update to wording. Final Submission       |
| D            | 1 <sup>st</sup> April 2026 | Minor Update to wording. Final Version          |
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Document validation (latest issue)

|                                                                                                  |                            |                                                                                                  |
|--------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------|
| 5/1/2026                                                                                         | 5/1/2026                   | 5/1/2026                                                                                         |
| <div>X </div> | <div>X P.P. Kerry He</div> | <div>X </div> |
| Principal author                                                                                 | Checked by                 | Verified by                                                                                      |
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## Executive Summary

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This Sustainability report has been prepared for the Stockland Development Pty Limited to accompany a State Significant Development Application (SSDA) (SSD-84467726) for a Concept Masterplan and Early Works associated with the Kogarah Golf Club Redevelopment located on land identified as 13-19A Marsh Street, Arncliffe (the site). The report covers:

- How ESD principles, as defined by Sections 193 of the NSW Environmental Planning and Assessment Regulation 2021, are incorporated in the design and ongoing operation of the development
- A description of how the principles of ecologically sustainable development would be incorporated into the design, construction and ongoing operation of the development covering the Sustainable Buildings SEPP 2022 general sustainability requirements (Section 3.2), Net Zero provisions (Section 3.2.1 & Appendix A) Energy & Water standards for office areas where equal or greater than 1000m<sup>2</sup>, and hotels with more than 99 rooms (Section 3.8);
  - minimise waste from associated demolition and construction, including choice and reuse of building materials,
  - reduce in peak demand for electricity, including through the use of energy efficient technology,
  - generate and store renewable energy,
  - reduce reliance on artificial lighting and mechanical heating and cooling through passive design
  - meter and monitor energy consumption,
  - minimise consumption of potable water. (Also featured in SEPP Industrial and Employment Section 2.19a)
- An assessment of the energy use of the proposal and all reasonable and feasible measures that would be implemented on site to minimise the proposal's greenhouse gas emissions covering the Industrial and Employment SEPP 2021 Section 2.19b Greenhouse Gas emissions policy requirements.

Stockland has been an Australian-based property group for over 70 years and now guides its sustainability approach through its ESG Strategy. Built around four pillars — Decarbonisation, Circularity, Social Impact, and Resilience — the strategy sets out long-term goals, including net-zero scope 1 and 2 emissions by 2025, key circularity and social impact milestones by 2030, and net-zero scope 3 emissions by 2050. Through these commitments, Stockland aims to create low-carbon, circular, inclusive, and climate-resilient communities for the future.

Development of sustainability initiatives is an ongoing and collaborative effort from Stockland and the wider project team. The initiatives will be reviewed over the lifetime of the project with potential measurable outcomes defined to provide positive outcomes for the environment and people. The project has strongly considered an ongoing assessment and commitment towards the implementation of a net zero carbon strategy throughout the full project lifecycle. This includes eliminating fossil fuels from permanent building operations where and if possible, due consideration towards installing onsite renewables, reducing upfront carbon in construction, incorporation of passive design principles and designing energy efficiency building services and controls.

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## 1.0 Introduction

This Sustainability report has been prepared for Stockland Development Pty Limited to accompany a State Significant Development Application (SSDA) (SSD-84467726) for a Concept Masterplan and Early Works associated with the Kogarah Golf Club Redevelopment located on land identified as 13-19A Marsh Street, Arncliffe (the site).

The vision for the Kogarah Golf Club Redevelopment is to create a world-class precinct that leverages the site's strategic location adjacent to Sydney Airport and strong transport connections by delivering multi-level logistics development, trade-related enterprise and supporting uses with publicly accessible open space. It seeks to deliver state-of-the-art facilities that will redefine the logistics landscape in Australia, setting new benchmarks for scale, efficiency, sustainability and innovation.

The Concept & Early Works SSDA seeks consent for an overarching Concept Masterplan that establishes maximum building envelopes, Gross Floor Area (GFA), land uses, and other parameters through Urban Design Guidelines and technical reporting. It also seeks consent for the carrying out of Early Works to facilitate the initial site preparation and infrastructure works required to support future development and publicly accessible open space.

### 1.1 Background

A Planning Proposal (PP-2022-1748) was previously submitted by John Boyd Properties for the Kogarah Golf Club Redevelopment site to amend and integrate planning controls into the *Bayside Local Environmental Plan 2021* (Bayside LEP 2021). It sought to deliver refreshed planning controls that prioritise land uses which support the adjacent Sydney Airport, as one of Australia's most important trade gateways.

The Planning Proposal was granted Gateway Determination on 5 August 2022 and publicly exhibited between 24 April 2023 and 6 June 2023. It was determined to proceed to finalisation in March 2024, with the amendments to the Bayside LEP 2021 gazetted on 9 May 2025.

Following gazettal, John Boyd Properties has entered a Joint Venture (JV) with Stockland for the Kogarah Golf Club Redevelopment. The JV will enable the effective development and future management of the strategically significant site for a world-class focused precinct by combining their expertise.

The amendments to the Bayside LEP 2021 are described as follows:

- Application of land uses, including:
  - SP4 Enterprise zone to form a development zone;
  - RE1 Public Recreation zone to facilitate the future Pemulwuy Park and overland flow areas;
  - C2 Environmental Conservation zone to enable the protection and conservation of land, including a foreshore zone; and
  - SP2 Infrastructure zone for land associated with the Marsh Street roadway and permanent M6/M8 Motorway Operation Facilities.
- An overall maximum building height of RL 51m (Lot 100 DP 1231954) graduating down to RL 40m in response to aviation controls in the south, and a maximum building height of 24m (Lot 31 DP 1231486);
- A total GFA of 343,250m<sup>2</sup>, applied through:
  - Lot 31 DP 1231486 – A maximum FSR of 1.25:1 (3,250m<sup>2</sup>);
  - Lot 100 DP 1231954 – A total floorspace that does not exceed 340,000m<sup>2</sup> of GFA, inclusive of:
    - A maximum 20,000m<sup>2</sup> GFA for 'office premises';
    - A maximum 20,000m<sup>2</sup> GFA for 'hotel or motel accommodation' and 'serviced apartments'; and
    - A maximum 10,000m<sup>2</sup> GFA for 'shops' and 'food and drink premises'.
- Application of additional permitted uses including 'Trade-related enterprises' (Lot 100 DP1231954) and 'Advertising structures' (Lot 31 DP1231486).

The Land Zoning Map associated with the Planning Proposal is presented in **Figure 1** below.

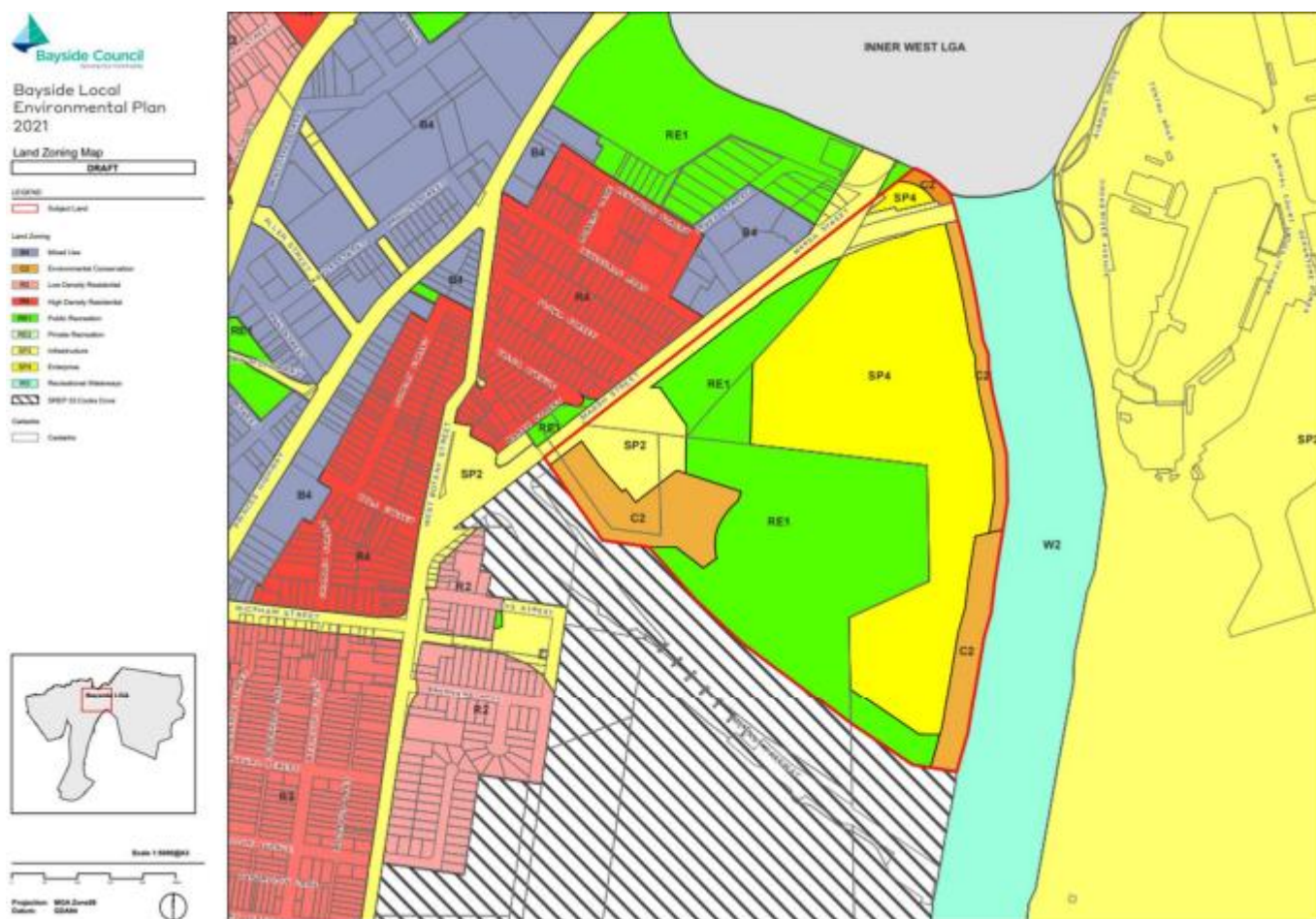


Figure 1 - Land Zoning Map - Planning Proposal (PP-2022-1748)

## 1.2 Site Description

The site is identified as 13-19A Marsh Street, Arncliffe within the Bayside Local Government Area (LGA). It is situated to the immediate west of the Cooks River and Sydney Airport, located approximately 6km west of Port Botany and 10km south of the Sydney Central Business District (CBD). It includes frontages to Marsh Street, providing direct access to the M5 Motorway, Sydney Airport and St Peters Interchange (via the Sydney Gateway).

The site comprises land associated with nine (9) allotments and a total area of approximately 32 hectares. The existing uses include the previous Kogarah Golf Club (vacated in March 2025) accessed via Levey Street and the temporary M6 Stage 1 construction compound accessed directly from Marsh Street.

The development area represents Lot 31 DP1231486 and Lot 100 DP1231954, excluding land subject to future dedication to Bayside Council. It comprises an area of approximately 16.7 hectares and is zoned SP4 Enterprise and C2 Environmental Conservation under the Bayside LEP 2021.

The site is described in Table 1 below and depicted in Figure 2 following:

| Lot & DP          | Address                     | Ownership                                                                |
|-------------------|-----------------------------|--------------------------------------------------------------------------|
| Lot 31 DP1231486  | 19A Marsh Street, Arncliffe | Cook Cove Nominees No 1 Pty Ltd as trustee of Cook Cove Property Trust 1 |
| Lot 100 DP1231954 | 19 Marsh Street, Arncliffe  | Cook Cove Nominees No 2 Pty Ltd as trustee of Cook Cove Property Trust 2 |
| Lot 60 DP1301057  | 13 Marsh Street, Arncliffe  | Bayside Council                                                          |
| Lot 61 DP1301057  | 19 Marsh Street, Arncliffe  |                                                                          |
| Lot 62 DP1301057  | Marsh Street, Arncliffe     | Transport for NSW                                                        |
| Lot 63 DP1301057  | Marsh Street, Arncliffe     |                                                                          |
| Lot 12 DP570900   | Marsh Street, Arncliffe     |                                                                          |
| Lot 102 DP1231954 | Marsh Street, Arncliffe     |                                                                          |
| Lot 103 DP1231954 | Marsh Street, Arncliffe     |                                                                          |

Table 1 Site Description (Lots & Ownership)





Figure 2 Site Aerial Map



### 1.3 Project Description

The Concept & Early Works SSDA seeks consent for the following:

- Concept Masterplan to support the staged delivery of the Kogarah Golf Club Redevelopment, including:
  - Maximum building envelopes, including maximum building heights and minimum building setbacks;
  - Maximum Gross Floor Area (GFA) up to 343,250m<sup>2</sup>, comprising:
    - 3,250m<sup>2</sup> of GFA (FSR of 1.25:1) on Lot 31 DP1231486; and
    - 340,000m<sup>2</sup> of GFA on Lot 100 DP1231954.
  - Conceptual primary land uses, including:
    - Block 1 – Mixed-use and advertising structures;
    - Block 2 – Logistics and mixed-use;
    - Block 3A – Logistics;
    - Block 3B – Logistics; and
    - Block 3C – Logistics and Data centres.
  - Urban Design Guidelines to guide future development of the built form and public domain; and
  - Strategies and mitigation measures to manage potential environmental impacts.
- Early Works to support the future delivery of built form and publicly accessible open space, including:
  - Site preparation works, comprising:
    - Demolition of existing structures;
    - Clearing of existing vegetation and removal of existing ponds;
    - Remediation works; and
    - Bulk earthworks, including ground improvement, flood mitigation and foreshore works.
  - Site servicing and infrastructure works, including:
    - Construction of the Flora Street East extension consistent with Item 3 of the executed Voluntary Planning Agreement with Bayside Council;
    - Construction of stormwater infrastructure; and
    - Construction and augmentation of service and utility infrastructure as necessary.

For a detailed description, refer to the Environmental Impact Statement prepared by Colliers Urban Planning.

The Concept Masterplan is supported by Indicative Reference Schemes that present as ‘proof of concepts’ within the proposed planning framework. The schemes demonstrate suitable primary land use, built form and public domain outcomes that align with the vision for a world-class precinct that leverages the site’s strategic location adjacent to Sydney Airport and strong transport connections.

The Indicative Reference Schemes consider different potential development outcomes enabled by the Concept Masterplan to support the delivery of the highest and best use at the time of redevelopment. This includes a Logistics scheme and Alternative Uses scheme, which facilitate the potential for four (4) different primary land use outcomes across the Site. The alternative land use outcomes enabled by the Concept Masterplan include an alternative mixed-use outcome on Block 2 and alternative data centre outcome on Block 3C.

The Indicative Reference Schemes are established in **Figure 3**, with the Logistics scheme and Alternative Uses scheme prepared by Grimshaw depicted in **Figure 4** and **Figure 5**.

It is noted that the Indicative Reference Schemes are indicative only and the development of future built form and publicly accessible open space will be subject to future Development Applications. The Indicative Reference Schemes demonstrate the ability to support different potential outcomes, consistent with the proposed framework under the Concept Masterplan including Urban Design Guidelines.

The Indicative Reference Scheme prepared by Grimshaw is depicted in **Figure 3** and **Figure 4** below.



Figure 3: Indicative Reference Schemes



Figure 4: Indicative Reference Scheme – Logistics Scheme





Figure 5: Indicative Reference Scheme - Alternative Uses Scheme

Table 2 Land Use Matrix – Indicative Reference Schemes

| Primary Land Use                        | Reference Scheme 1<br>Logistics | Reference Scheme 2<br>Logistics + Mixed-use | Reference Scheme 3<br>Logistics + Data<br>Centre | Reference Scheme 4<br>Logistics + Mixed-use<br>+ Data Centre |
|-----------------------------------------|---------------------------------|---------------------------------------------|--------------------------------------------------|--------------------------------------------------------------|
| Lot 31 DP1231486 (Block 1)              |                                 |                                             |                                                  |                                                              |
| Hotel                                   | 1,670m <sup>2</sup> (64 keys)   |                                             |                                                  |                                                              |
| Commercial                              | 1,260m <sup>2</sup>             |                                             |                                                  |                                                              |
| F&B / Shops /<br>Artisan F&B            | 320m <sup>2</sup>               |                                             |                                                  |                                                              |
| TOTAL                                   | 3,250m <sup>2</sup>             |                                             |                                                  |                                                              |
| Lot 100 DP1231954 (Block 2, 3A, 3B, 3C) |                                 |                                             |                                                  |                                                              |
| Warehouse                               | 336,200m <sup>2</sup>           | 293,000m <sup>2</sup>                       | 276,200m <sup>2</sup>                            | 231,600m <sup>2</sup>                                        |
| F&B / Shops                             | 1,950m <sup>2</sup>             | 10,000m <sup>2</sup>                        | 1,850m <sup>2</sup>                              | 10,000m <sup>2</sup>                                         |
| Hotel                                   | -                               | 20,000m <sup>2</sup> (300 keys)             | -                                                | 20,000m <sup>2</sup> (300 keys)                              |
| Commercial                              | 1,850m <sup>2</sup>             | 17,000m <sup>2</sup>                        | 1,850m <sup>2</sup>                              | 17,000m <sup>2</sup>                                         |
| Data Centre                             | -                               | -                                           | 25,400m <sup>2</sup> (80 MW)                     | 25,400m <sup>2</sup> (80 MW)                                 |
| TOTAL                                   | 340,000m <sup>2</sup>           | 340,000m <sup>2</sup>                       | 305,300m <sup>2</sup>                            | 304,000m <sup>2</sup>                                        |

## 2.0 Sustainability Requirements

### 2.1 Sustainability Requirements

This Sustainability Report addresses the relevant Planning Secretary's Environmental Assessment Requirements (SEARs) for SSD-84467726, as outlined in Table 4 below.

Table 3: Sustainability Issues

| Key Issue                                                                                                                                                                                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Reference in Report            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Identify how ESD principles, as defined by Sections 190 to 193 of the NSW Environmental Planning and Assessment Regulation 2021, are incorporated in the design and ongoing operation of the development | <p>Describes the incorporation of the principles of ecological sustainable development in the design, construction, and ongoing operation of the development, including:</p> <ul style="list-style-type: none"> <li>▪ Demonstrating the precautionary principle,</li> <li>▪ Facilitating inter-generational equity,</li> <li>▪ Prioritising conservation of biological diversity and ecological integrity,</li> <li>▪ Considering improved valuation, pricing and incentive mechanisms.</li> </ul>                                                                                                                                                                                                                                             | Section 3.2.1                  |
| An assessment of the energy use of the proposal and all reasonable and feasible measures that would be implemented on site to minimise the proposal's greenhouse gas emissions                           | <p>Demonstrates how the development minimises greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050) and consumption of energy, water (including water sensitive urban design) and material resources, including:</p> <ul style="list-style-type: none"> <li>▪ Assessment of energy use of the proposal and all reasonable and feasible measures that would be implemented on site to minimise greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050 &amp; SEPP Industrial and Employment Section 2.19a).</li> <li>▪ Identification of measures to reduce energy, water and material resources and consideration of water sensitive urbane design principles.</li> </ul> | Section 3.2.1, 3.3, Appendix A |
| Consideration of the use of green walls and external roofs in the design of the development                                                                                                              | <p>Considering the integration of green wall or external roof designs wherever applicable for development benefits including:</p> <ul style="list-style-type: none"> <li>▪ Natural air purification and dehumidification</li> <li>▪ Reduction of urban temperatures</li> <li>▪ Visual and Wellbeing benefits to occupants</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | Section 3.2.3, 3.2.5           |
| A description of the measures to be implemented to minimise consumption of resources especially energy and water                                                                                         | <p>Describes the improvements to building design, development and fitout that contribute to a reduction in energy and water usage via:</p> <ul style="list-style-type: none"> <li>▪ Solar Energy</li> <li>▪ Passive Design</li> <li>▪ Adherence to NCC construction code</li> <li>▪ Achieving Greenstar Rating best practice</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                        | Section 3.3                    |



|                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                 |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Minimise waste from associated demolition and construction, including choice and reuse of building materials               | Demonstrates how the development responses to Section 3.2 of the Sustainable Buildings SEPP 2022.                                                                                                                                                                                                                                                                                                                                                                                              | Section 3.2.6                   |
| Reduce in peak demand for electricity, including through the use of energy efficient technology                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Section 3.2.1, 3.8              |
| Generate and store renewable energy,                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Section 3.2.1, 3.8              |
| Reduce reliance on artificial lighting and mechanical heating and cooling through passive design                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Section 3.2.1, 3.8              |
| Meter and monitor energy consumption,                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Section 3.2.1, 3.8              |
| Minimise consumption of potable water                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Section 3.3, 3.7, 3.8           |
| Net Zero Provisions                                                                                                        | <p>Net Zero Statement to include the following:</p> <ul style="list-style-type: none"> <li>• Estimated scope1 and 2 emissions up to 2050</li> <li>• If fossil-fuel dependent systems are used, confirm adequate physical space, infrastructure, ventilation, and electrical capacity to operate without fossil-fuel by 2035</li> <li>• Provide information about onsite renewables, passive design and other infrastructure (such as chilled beams) that improve energy performance</li> </ul> | Section 3.2.1, 3.8 & Appendix A |
| Energy<br>Offices (base building) ≥1000 m2 net lettable area (NLA)                                                         | <p>Identify preferred Section J energy reporting pathway and submit NABERS Energy Commitment Agreement with development application.</p> <p>Submit Section J report and any independent review or performance-based solutions at construction certificate stage.</p> <p>Achieve minimum 5.5 Star NABERS rating within 24 months of occupation certificate</p>                                                                                                                                  | Section 3.8                     |
| Hotels or motels (whole of building) ≥ 100 rooms or Serviced apartments ≥ 100 apartments                                   | <p>Identify preferred Section J energy reporting pathway and submit NABERS Energy Commitment Agreement with development application.</p> <p>Submit Section J report and any independent review or performance-based solutions at construction certificate stage.</p> <p>Achieve minimum 4 Star NABERS rating within 24 months of occupation certificate.</p>                                                                                                                                   | Section 3.8                     |
| Water<br>Offices (base building) ≥1,000 square metres net lettable area<br>Hotels or motels (whole of building) ≥100 rooms | <p>Consider reducing potable water use and submit NABERS Water Commitment Agreement with development application</p> <p>Submit progress report (in the form of annotated drawings or written statement) at Construction Certificate.</p> <p>Minimum 3 Star NABERS water rating achieved within 24 months of the Occupation Certificate is issued</p>                                                                                                                                           | Section 3.8                     |

## 2.2 NSW Environmental Planning and Assessment Regulation 2021

The ESD principles, as defined by Section 193 of the NSW Environmental Planning and Assessment Regulation 2021, understood to relay the below:

Table 2: EP&A Principles

| EP&A Regulation Principle                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Section of the Report |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Precautionary principle                                       | <p>Threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:</p> <ul style="list-style-type: none"> <li>Careful evaluation to avoid, wherever practicable, serious, or irreversible damage to the environment, and</li> </ul> <p>An assessment of the risk-weighted consequences of various options.</p>                                                                                                                                                                                                                                                                                         | Section 3.1           |
| Inter-generational equity                                     | The present generation should ensure that the health, diversity, and productivity of the environment are maintained or enhanced for the benefit of future generations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Section 3.1           |
| Conservation of biological diversity and ecological integrity | Conservation of biological diversity and ecological integrity should be a fundamental consideration.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Section 3.1           |
| Improved valuation, pricing, and incentive mechanisms         | <p>Environmental factors should be included in the valuation of assets and services, such as:</p> <ul style="list-style-type: none"> <li>Polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance, or abatement.</li> <li>The users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste.</li> </ul> <p>Environmental goals, having been established, should be pursued in the most cost-effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.</p> | Section 3.1           |

## 2.3 NSW Government Targets

The NSW Net Zero Plan has three sustainability pillars – People, Planet and Governance. The sustainability strategy for the development seeks to address all three pillars of the NSW Plan while also aligning with the relevant SDGs.

The project is committed to applying each of the above key themes and developed proposed initiatives where applicable. Development of the initiatives will be a collaborative effort with ongoing input from Fife Capital, Stockland and the wider project team. Where feasible the initiatives will be tracked over the lifetime of the project with measurable outcomes defined to provide positive outcomes for the environment and people.

The development and implementation of a net zero carbon strategy is being considered for the project. This includes eliminating fossil fuels in building operations, onsite renewables, reducing upfront carbon in construction, incorporation of passive design principles and designing energy efficiency building services and controls.

The NSW Government Department of Planning, Industry and Environment's *NSW Waste and Sustainable Materials Strategy 2041 Stage 1: 2021-2027*, published in June 2021, establishes waste targets for NSW including the following:

- Reduce total waste generated by 10% per person by 2030
- Have an 80% recovery rate from all waste streams by 2030
- Significantly increase the use of recycled content by governments and industry
- Halve the amount of organic waste sent to landfill by 2030

The requirements of the NSW government across these are summarised below:

Table 4: NSW Governments pillars and requirements

| Strategy                        | Description                                                                                                                                                                                                                                                          | Section in Report    |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| People                          | Describes how the development will consider people-centric design for both occupants and the wider community                                                                                                                                                         | Section 3.2.3        |
| Planet                          | Describes the mitigation and/or prevention of negative impacts on biodiversity and protection of local resources<br><br>Describes implementation of strategy and initiatives aiming to mitigate and/or prevent the progression of climate change via the development | Section 3.2.1, 3.2.4 |
| Governance                      | Explores how the development will consider rapid environmental and industrial changes<br><br>Describes initiatives undertaken to minimise the environmental impact of the development during construction, use and end of life.                                      | Section 3.2.2, 3.2.5 |
| Waste and Sustainable Materials | Describes the responses the development will consider in line with the <i>Sustainable Materials Strategy 2041 Stage 1: 2021-2027</i> as above                                                                                                                        | Section 3.2.6        |

## 2.4 Stockland ESG Strategy

Stockland's portfolio-wide sustainability strategy is based on a four-pillar ESG strategy focusing on Decarbonisation, Circularity, Social Impact, and Resilience. Key initiatives include a commitment to net-zero emissions, scaling onsite renewable energy generation, reducing waste through circular economy principles, and enhancing social outcomes through programs like those supporting First Nations communities. It is also critical for development to be resilient to climate change through detailed consideration of the site-specific risks as well as fostering more resilient communities and eco-systems.

In line with Stockland's portfolio strategy 5-star Green Star is being targeted.

A summary of the key sustainability goals that are pursued for this project are set out below while an outline of the key strategies that are considered relevant at the masterplan stage are outlined in this report.



## Decarbonisation

- Target Net Zero Carbon (Scope 1 and 2) emissions
- Deliver large-scale onsite-renewable energy generation
- Facilitate customers' transition to renewable energy
- Target upfront embodied carbon reductions



## Circularity

- Embed circularity principles throughout the project design and operations
- Design out waste, reduce use of virgin materials
- Consider end-of life deconstruction and re-use rather demolition (both for existing built works and new industrial works)



## Resilience

- Strengthen resilience of project through detailed climate resilience assessment and adaptation strategy
- Develop flood risk management strategy and design approach
- Regeneration of Cooks River foreshore through enhancing the sites native ecosystems



## Social Impact

- First Nations engagement to focus on employment, procurement, and connection to country outcomes
- Undertake Community Engagement and Social Impact Assessment
- Target social value creation initiatives and evaluate social value contribution



## 3.0 Sustainability Strategy

### 3.1 Incorporation of ESD Principles



The table below lists the key ESD principles, as defined by Section 193 of the NSW Environmental Planning and Assessment Regulation 2021 and describes how sustainability strategy and initiatives can be used to embody them.

Table 4: EP&A Regulation Principles and Initiatives

| EP&A Regulation Principle                                                                  | Initiatives incorporated or being considered                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Precautionary principle                                                                    | <ul style="list-style-type: none"> <li>The project will explore all feasible opportunities to reduce climate change impacts from construction and operation activities, including energy efficiency, on-site renewable energy technologies, and embodied carbon.</li> <li>The project will strive to implement climate adaptation principles to increase the resilience of the development to risks caused by projected changes in climate.</li> </ul>                                                                                                                                                                                                                                                                                               |
| Inter-generational equity                                                                  | <ul style="list-style-type: none"> <li>The occupiable portions of the development will provide healthy internal and external environments for workers and visitors wherever possible. Specifically, due consideration to the sustainability of the environment by implementing project wide nature benefits will support future generations.</li> <li>There will be emphasis placed on considering energy efficiency, environmentally preferable materials, and water conservation.</li> <li>The master plan includes extensive foreshore enhancements including, tree planting and canopy coverage, foreshore nature corridor connecting to ecology parkland, integrated cycling, e-mobility routes, parking and end of trip facilities.</li> </ul> |
| Conservation of biological diversity and ecological integrity                              | <ul style="list-style-type: none"> <li>Design of landscaping will preference indigenous, low water use, drought resistant plant species wherever feasible.</li> <li>Landscaping to include ecological parkland and foreshore nature corridor.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Improved valuation, pricing, and incentive mechanisms responses to environmental problems. | <ul style="list-style-type: none"> <li>The project will seek to target a sustainability rating to guide environmental goals and solutions.</li> <li>The project sets environmental targets aligned with the Green Star Rating System, aiming to achieve the associated sustainability improvements wherever feasible.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                     |

### 3.2 UNSGs Strategy

The sustainability vision and strategy provide an overarching framework for all sustainability aspects of the development. The sustainability strategy has been developed in alignment with the United Nations Sustainable Development Goals (UN SDGs), focusing on the following key themes:



Figure 6: UNSDG's framework for sustainable strategy

These themes will be used to establish sustainability strategy and create initiatives for the development to further the sustainability of the development.

### 3.2.1 Climate Action

Carbon and greenhouse gas emissions (GHG) are fast becoming the primary quantification for climate change and sustainability. There are significant environmental and economic benefits to gain by adopting a net zero carbon / climate positive strategy for this development. As part of the environmental strategy the focus will be on the implementation of the following process:

Table 5

| Strategy                                   | Initiatives incorporated or being considered                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Low carbon construction                    | <ul style="list-style-type: none"> <li>Consider favourably Main Contractor tenders which include the use of low carbon construction technologies, such as electric powered plant, solar powered site offices, modular construction and reduced trip generation</li> </ul>                                                                                                                                                                                                                                            |
| Eliminate fossil fuels                     | <ul style="list-style-type: none"> <li>Avoiding of permanent natural gas connection wherever possible.</li> <li>Electric vehicle charging infrastructure</li> </ul>                                                                                                                                                                                                                                                                                                                                                  |
| Reduce other emissions                     | <ul style="list-style-type: none"> <li>Minimise waste and wastewater where possible</li> <li>Minimise usage of high global warming potential (GWP) refrigerants where possible</li> </ul>                                                                                                                                                                                                                                                                                                                            |
| Onsite renewable energy and smart metering | <ul style="list-style-type: none"> <li>Inclusion of in-front-of-the-meter solar PV generation, supplying renewable energy directly to the local network. This initiative reduces reliance on grid-supplied electricity, lowers peak demand, and increases the availability of clean energy for homes, businesses, and electric vehicle charging across the community.</li> <li>Metering to be in line with NABERS protocol</li> </ul>                                                                                |
| Battery storage                            | <ul style="list-style-type: none"> <li>Battery storage to be considered in the detailed design or provisions made for future installation, subject to fire risk assessments</li> </ul>                                                                                                                                                                                                                                                                                                                               |
| Reduce building operational carbon         | <ul style="list-style-type: none"> <li>Good passive design to minimise HVAC and lighting energy consumption</li> <li>High performance building services equipment and controls strategy</li> </ul>                                                                                                                                                                                                                                                                                                                   |
| Minimise upfront carbon                    | <ul style="list-style-type: none"> <li>Perform pre-demolition audit of existing Clubhouse and other assets to review re-use potential.</li> <li>Investigating low embodied carbon construction design and materials substitution opportunities</li> <li>Consideration of materials with higher reuse/recyclable components where available</li> <li>Preference for materials that sequester carbon, for example timber.</li> <li>Use of standardised modular construction techniques to minimise wastage.</li> </ul> |

The NSW Government has established a target for net zero emissions by 2050, to be achieved while creating new jobs, cutting household costs, and attracting investment. The Department of Planning, Industry and Environment's *Net Zero Plan Stage 1: 2020-2030* sets out four net zero priorities describing how the NSW Government will deliver on these objectives over the next decade. The development will seek to consider the following initiatives.

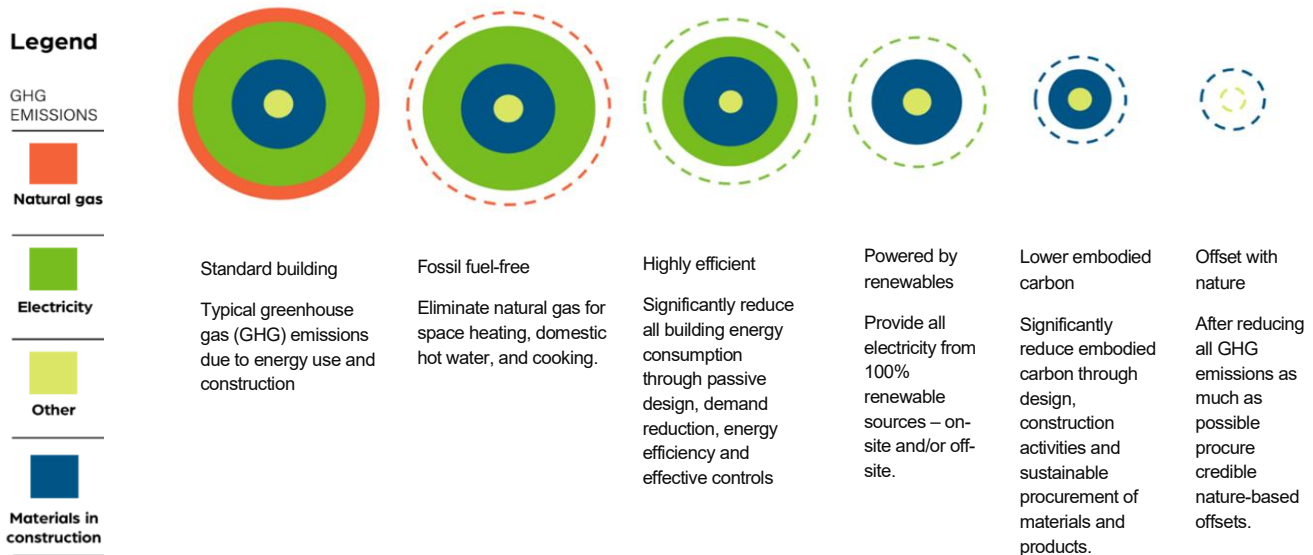


Figure 7: NSW Net Zero Emissions Pathway

The development design includes the following key attributes as a component of the strategy to minimise the proposal's greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050).

- Primarily an all-electric building, with a limitation on on-site fossil fuels usage.
- Maximised roof top solar PV provision.
- The ability to include a battery system to enable additional day time load to be stored in the system for usage overnight.
- Reduction in embodied carbon with consideration of lower carbon concrete and efficient steel design.

The final step to achieve net zero emissions, between now and 2050, include:

- Purchase of renewable energy (GreenPower) for any residual electricity needs beyond the on-site energy generation. To be considered in line with the tenants needs.
- A change to the HVAC system to have zero or very low Global Warming Potential (GWP) refrigerants, or if not technically possible, purchase of carbon off-sets for the refrigerants.

A Net Zero Carbon Statement included in appendix A.

| Priority                                                     | Initiatives incorporated or being considered                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Drive uptake of proven emissions reduction technologies      | <ul style="list-style-type: none"> <li>▪ The facility aims to support the installation of renewable energy with focus on reducing energy consumption.</li> <li>▪ Reduction of fossil fuel use through internal processes where possible.</li> <li>▪ Reduction in waste emissions where possible.</li> <li>▪ Support electric vehicle implementation through infrastructure.</li> </ul>                             |
| Empower consumers and businesses to make sustainable choices | <ul style="list-style-type: none"> <li>▪ The development will demonstrate leadership in sustainability and be an example of how industrial facilities can be powered by clean energy on-site.</li> <li>▪ The development is also focusing on supply chains, and materials to reduce embodied emissions.</li> <li>▪ Implementation of a Metering and Monitoring Plan to ensure lower emissions operation</li> </ul> |
| Invest in the next wave of emissions reduction innovation    | <ul style="list-style-type: none"> <li>▪ The development will consider the latest technology in sizing and implementation of solar PV systems to maximise clean nergy generation.</li> <li>▪ Sustainable practice via design improvements, materials substitutions, and possible construction improvements to reduce up-front emissions</li> </ul>                                                                 |
| Ensure the NSW government leads by example                   | <ul style="list-style-type: none"> <li>▪ As per responses above.</li> </ul>                                                                                                                                                                                                                                                                                                                                        |

Table 6 Net Zero Priorities and Responses





### 3.3 Responsible Material Use

A circular economy keeps resources and materials in use for as long as possible at their highest value. It maximises their usability and then recovers, regenerates and/or repurposes the materials holistically. For proposed development, there is a strong focus on waste minimisation in design, construction, operation, and end-of life.

Table 7: Circular Economy Initiatives

| Strategy                               | Initiatives incorporated or being considered                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Responsible Procurement                | <ul style="list-style-type: none"> <li>Investigating reuse, repurposing, and recycling of existing buildings into the new development</li> <li>Investigate opportunities to implement responsible procurement plan to guide selection of products, materials, and consumables</li> <li>Explore supply chain partnerships for sustainable materials</li> </ul>                                                                                                                          |
| Use responsible products               | <ul style="list-style-type: none"> <li>Early design team engagement to identify opportunities for dematerialisation in design and construction</li> <li>Selection recycled or reused products, or products that can be reused/recycled at the end of life</li> <li>Consider components prefabricated and designed for disassembly and reuse including second and third life uses</li> <li>Design for durability and robustness to reduce waste to landfill caused by damage</li> </ul> |
| Specify sustainably certified products | <ul style="list-style-type: none"> <li>Specify products that have certifications or evidence of sustainability such as: <ul style="list-style-type: none"> <li>Reused products</li> <li>Third-party certified</li> <li>Renewable</li> <li>Non-toxic</li> <li>Free of modern slavery impacts</li> </ul> </li> </ul>                                                                                                                                                                     |
| Maximise local procurement             | <ul style="list-style-type: none"> <li>Explore locally sourced products, materials, and labor</li> </ul>                                                                                                                                                                                                                                                                                                                                                                               |
| Operational waste                      | <ul style="list-style-type: none"> <li>Facilitate adequate separation of waste streams such as landfill, recyclables, and electronic waste, during operation.</li> </ul>                                                                                                                                                                                                                                                                                                               |



### 3.4 People and Community

People and community are a key driver for design strategy. The development looks to create opportunity to engage the wider community for input and ongoing discussion regarding development.

Table 8: People and Community Initiatives

| Strategy                                                                                               | Initiatives incorporated or being considered                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Provide excellent indoor environment quality                                                           | <ul style="list-style-type: none"> <li>High performance façade and services design to maximise visual, acoustic, and thermal comfort for occupants</li> <li>Non-toxic finishes</li> <li>Biophilic design including natural light and views such as the incorporation of Green Walls and Roofs</li> <li>Occupant-controlled daylight and natural ventilation for occupied areas</li> </ul>           |
| Provide accessible amenity spaces with fresh air, daylight, shade, dining area, views, and landscaping | <ul style="list-style-type: none"> <li>Design to promote activity, including end-of-trip facilities and perimeter green belt/walkway</li> <li>Mental and physical health programs</li> </ul>                                                                                                                                                                                                        |
| Inclusive design                                                                                       | <ul style="list-style-type: none"> <li>Design for a diverse range of needs</li> </ul>                                                                                                                                                                                                                                                                                                               |
| Zero modern slavery in the supply chain                                                                | <ul style="list-style-type: none"> <li>Select products/materials and labour with transparent, ethical supply chains</li> <li>Develop Modern Slavery Statement supported by Senior Management</li> </ul>                                                                                                                                                                                             |
| Respect and develop local community during construction and operation                                  | <ul style="list-style-type: none"> <li>Connection to Country and Culture</li> <li>Rigorous community engagement and reporting</li> <li>Partnerships with local educational institutions to develop soil health and carbon projects</li> <li>Partnership with social enterprise to run on-site demonstration greenhouse</li> <li>Regular public information days/tours/education sessions</li> </ul> |
| No negative impact on local air quality or noise quality                                               | <ul style="list-style-type: none"> <li>Operate in line with approved Environmental Management Plans.</li> <li>Give preference to contractors with certified ISO 14001 Environmental Management Systems</li> </ul>                                                                                                                                                                                   |



### 3.5 Biodiversity and Nature

The development of the site will strive to minimise negative impacts on biodiversity. This includes focusing on the existing biodiversity within the region as well as protecting water bodies and incorporating greenery within spaces.

Table 9: Biodiversity and Nature Initiatives

| Strategy                                                                                  | Initiatives incorporated or being considered                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimise stormwater pollution and peak runoff through water sensitive urban design (WSUD) | <ul style="list-style-type: none"> <li>▪ Consideration of water sensitive urban design using natural processes such as infiltration</li> <li>▪ Utilise district recycled water systems</li> </ul>                                                                                                                                 |
| Improve biodiversity on site compared to pre-development conditions                       | <ul style="list-style-type: none"> <li>▪ Extensive Onsite landscaping across the site and foreshore with indigenous, low water use, drought resistant plant species, with consideration of implications for the airport</li> <li>▪ Landscaping Designed for Country</li> </ul>                                                    |
| Consideration of Green Walls and External Roofs                                           | <ul style="list-style-type: none"> <li>▪ Incorporate green feature walls in common spaces such as lobbies and lunchrooms</li> <li>▪ Utilise otherwise unused surfaces for green areas that naturally provide shading</li> <li>▪ Allow for irrigation and airflow in feature walls and spaces to support implementation</li> </ul> |



### 3.6 Resilience

Resilience takes into consideration the capacity of individuals, communities, institutions, business, and systems to survive, adapt and grow no matter what kinds of chronic stresses and acute shocks they experience. Adaptation is the process of building more resilient communities, institutions, businesses, and systems to a given (anticipated) set of shocks and stresses. Resilience is the ability to minimise the deviation from the ideal or the ability to restore operation back to its ideals.

Table 10: Resilience considerations

| Strategy                       | Initiatives incorporated or being considered                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Climate change risk resilience | <ul style="list-style-type: none"> <li>Explore strategies to mitigate risks associated with an increase in extreme climate events related to rising temperatures, increased severity of rainfall events, floods, and bushfires</li> <li>Evaluate flood zones and areas impacted by extreme rainfall events and locate all critical equipment and services above Probable Maximum Flood (PMF) levels</li> <li>Evaluate infrastructure's ability to handle rising temperatures</li> <li>Identify options to reduce reliance on mains water and energy utilities through district wide recycled water use and energy generation.</li> <li>High albedo material choices to minimise urban heat island effect.</li> </ul> |

### 3.7 Waste and Sustainable Materials

As per the NSW Government Department of Planning, Industry and Environment's *NSW Waste and Sustainable Materials Strategy 2041 Stage 1: 2021-2027*, published in June 2021, initiatives to meet or exceed these targets are listed below.

Table 11: Waste and Sustainable Materials Priorities and Responses

| Priority                                                                       | Initiatives incorporated or being considered                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reduce total waste generated by 10% per person by 2030                         | <ul style="list-style-type: none"> <li>Increase education and awareness programs about the importance of reducing waste</li> <li>Implement measures to reduce single-use plastics, such as banning plastic bags and straws</li> <li>Encourage the use of reusable products, such as bags, containers, and water bottles</li> </ul> |
| Have an 80% recovery rate from all waste streams by 2030                       | <ul style="list-style-type: none"> <li>Provide adequate waste streams to accommodate the recycling of most materials</li> <li>Onsite waste management and waste resource recovery facilities</li> </ul>                                                                                                                            |
| Significantly increase the use of recycled content by governments and industry | <ul style="list-style-type: none"> <li>Lead by example by creating a demand for construction materials</li> </ul>                                                                                                                                                                                                                  |
| Halve the amount of organic waste sent to landfill by 2030                     | <ul style="list-style-type: none"> <li>Support sustainable agriculture, if possible, to reduce organic waste from landscaping</li> </ul>                                                                                                                                                                                           |

### 3.8 Sustainability Measures and Initiatives

Measures considered to reduce the use resources especially water and energy for the development have been listed below.

Table 12: Sustainability Measures and Initiatives

| Strategy                                                               | Initiatives incorporated or being considered                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reduce energy use and GHG emissions during construction and operation. | <ul style="list-style-type: none"> <li>The development is considering an onsite solar photovoltaic system that will provide clean renewable energy to the grid. This is also in alignment with the Government's 2050 net zero goals.</li> <li>Low carbon construction materials will be considered where feasible to reduce the embodied carbon impacts of the development.</li> <li>Steps towards efficient lighting has been made by consideration of efficient luminaires, reduced illumination power density, translucent sheeting to warehouse roof to provide high levels of daylight, and lighting controls such as photosensors and occupancy sensors to improve energy efficiency.</li> <li>Electric Vehicle Charging Stations are being considered for implementation to encourage environmentally friendly transport</li> </ul> |
| Incorporate passive design measures to minimise energy consumption.    | <ul style="list-style-type: none"> <li>A fabric assessment of the proposed building will be performed in accordance with the National Construction Code such that requirements for building envelope performance can inform energy efficiency outcomes.</li> <li>Sufficiently insulated conditioned spaces with consideration of zoned lighting and HVAC with controls to avoid energy consumption associated with unnecessary lighting and space conditioning.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                 |
| Non-potable water from alternative sources                             | <ul style="list-style-type: none"> <li>Future connection to district recycled water systems</li> <li>Integrate stormwater filtration systems (natural and artificial) to meet the water quality thresholds</li> <li>Metering and monitoring of major water uses</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| National Construction Code – Section J                                 | <ul style="list-style-type: none"> <li>A fabric and glazing assessment of the proposed building will be performed in accordance with the National Construction Code such that requirements for building envelope performance can inform passive design and energy efficiency outcomes.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Green Star – Sustainability Rating                                     | <ul style="list-style-type: none"> <li>The project is targeting a minimum 5 Star Green Star Buildings rating.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| NABERS                                                                 | <ul style="list-style-type: none"> <li>NABERS Energy 5.5 stars and Water 3 stars commitment to rate for all office areas over 999m<sup>2</sup></li> <li>NABERS Energy 4 stars and Water 3 stars commitment for hotels over 99 rooms</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |



## 4.0 Conclusions

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To conclude, this report has presented key sustainability initiatives that the Kogarah Golf Club Redevelopment is assessing and implementing to address:

- How ESD principles, as defined by Sections 193 of the NSW Environmental Planning and Assessment Regulation 2021, are incorporated in the design and ongoing operation of the development
- A description of how the principles of ecologically sustainable development would be incorporated into the design, construction and ongoing operation of the development covering the Sustainable Buildings SEPP 2022 general sustainability requirements (Section 3.2);
  - minimise waste from associated demolition and construction, including choice and reuse of building materials,
  - reduce in peak demand for electricity, including through the use of energy efficient technology,
  - generate renewable energy,
  - reduce reliance on artificial lighting and mechanical heating and cooling through passive design
  - meter and monitor energy consumption,
  - minimise consumption of potable water. (Also featured in SEPP Industrial and Employment Section 2.19a)
- An assessment of the energy use of the proposal and all reasonable and feasible measures that would be implemented on site to minimise the proposal's greenhouse gas emissions covering the Industrial and Employment SEPP 2021 Section 2.19b Greenhouse Gas emissions policy requirements.

The ESD initiatives being considered for the proposed development demonstrate that the proposed development will meet or exceed, industry standards and the sustainability pillars set by the NSW Government's Net Zero Plan.

## 5.0 Appendix A: Concept Net Zero Carbon Statement

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## Consultant's Advice Notice

|                   |                           |                  |            |
|-------------------|---------------------------|------------------|------------|
| <b>Project:</b>   | Kogarah Golf Club         | <b>Job No:</b>   | 1047875    |
| <b>Subject:</b>   | Net Zero Statement (SSDA) | <b>Date:</b>     | 30/02/2026 |
| <b>Attention:</b> | Planning Authority        | <b>Revision:</b> | A          |

## 1.0 Introduction

This Net Zero Statement has been prepared by Cundall on behalf of John Boyd Properties and Stockland (the Proponent). The site is identified as 13-19A March Street, Arncliffe within the Bayside Local Government Area (LGA). It is situated to the immediate west of the Cooks River and Sydney Airport, located approximately 6km west of Port Botany and 10km south of the Sydney Central Business District (CBD). It includes frontages to Marsh Street, providing direct access to the M5 Motorway, Sydney Airport and St Peters Interchange (via the Sydney Gateway). The existing uses include the previous Kogarah Golf Club (vacated in March 2025) accessed via Levey Street and the temporary M6 Stage 1 construction compound accessed directly from Marsh Street.

This Net Zero Statement has been prepared to outline how the precinct will avoid dependence on fossil fuels and be capable of operating at net zero emissions by 2035.

From 2035, 100% of the site's electricity demand will be sourced from renewable energy, through on-site or off-site renewable energy procurement. Accredited offsets will be purchased from 2035 to offset any remaining scope 2 and scope 3 emissions each year from grid electricity.

It addresses the requirements under the NSW Sustainable Buildings SEPP 2022, as per clause 35C of the Environmental Planning and Assessment Act Regulation and provides an assessment of development-appropriate measures that the project will implement in design and operation.

## Proposed Planning Requirements

In accordance with section 4.39 of the Environmental Planning & Assessment Act 1979 (EP&A Act), this report has been prepared to respond to the relevant issued planning requirements, as set out in the table below.

*Table 1: Relevant Planning Requirements*

| Planning Requirements                                                                                                                                                                                | Response / Location in report |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 9. Ecologically Sustainable Development                                                                                                                                                              | This Statement                |
| <ul style="list-style-type: none"> <li>In Chapter 3 of SEPP (Sustainable Buildings) 2022</li> <li>— Provide a net zero statement (as defined in section 35C of the EP&amp;A Regulations).</li> </ul> |                               |

## 2.0 Project Description

The indicative reference scheme 01 will seek consent for the construction of

- 336,200m<sup>2</sup> Logistics (Logistics benchmarking used. assumed an additional 10% for hardstanding and 10% for carparking)
- 1,950m<sup>2</sup> F&B/Shops (office benchmarking used as proxy)
- 1,850m<sup>2</sup> Commercial (office benchmarking used)

Alternate reference schemes are included in the SSDA submission but not captured in this Statement. NZC statements will be provided per each detailed SSDA submission.

## 3.0 Net Zero Design Initiatives

The table below details how reasonable and feasible measures will be implemented on site to reduce the site's greenhouse gas emissions to reach net zero emissions by 2035.

*Table 2: Net zero design initiatives*

| Strategy                      | Proposed Initiatives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eliminate fossil fuels        | <ul style="list-style-type: none"> <li>▪ No natural gas use for space heating or domestic hot water for buildings.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Upfront carbon                | <ul style="list-style-type: none"> <li>▪ Lower carbon materials will be investigated, including concrete with a supplementary cementitious materials (SCM) content</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Passive design features       | <ul style="list-style-type: none"> <li>▪ Building envelope will meet NCC Section J requirements for energy efficiency, including insulation and glazing performance requirements. Detailed Section J assessment will be undertaken during detailed design</li> <li>▪ Material specifications to minimise heat island effect</li> </ul>                                                                                                                                                                                                                                                                                                                          |
| Technical design features     | <ul style="list-style-type: none"> <li>▪ Efficient building services, systems, and equipment will be specified and installed, including: <ul style="list-style-type: none"> <li>- Energy efficient heating, ventilation, and air conditioning HVAC systems</li> <li>- LED lighting</li> <li>- Lifts with regenerative braking</li> <li>- Zoned lighting and HVAC and controls to avoid energy consumption associated with unnecessary lighting and space conditioning</li> </ul> </li> <li>▪ Comprehensive Commissioning and Tuning will be undertaken for the nominated building systems</li> <li>▪ Submetering and monitoring of major energy uses</li> </ul> |
| Energy Generation and Storage | <ul style="list-style-type: none"> <li>▪ Rooftop solar panels will be considered during the next stage of design</li> <li>▪ Energy not generated on-site will be procured from 100% Green Power from 2035</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Reduce other emissions        | <ul style="list-style-type: none"> <li>▪ Minimise waste and wastewater</li> <li>▪ Reduced global warming potential (GWP) refrigerants including HFO</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## 4.0 Greenhouse Gas Emissions Estimate

### 4.1 Emissions Scope and Coverage

Under this assessment, the following emissions scope has been assessed:

- Scope 1 – Related to direct emissions from sources within the boundary of the Project.
- Scope 2 – Related to the emissions resulting from the consumption of imported electricity from the local electricity grid.
- Scope 3 – Related to the indirect emissions attributable to losses through the electricity transmissions and distribution network.

Sources of emissions estimated in this assessment include the following:

- Imported electricity consumed in the operation of the warehouse and office

Emissions have been estimated on an annual basis under the assumption of full and ultimate operational capacity over a 50-year period from 2025 (i.e., conservatively ignoring phased fit out and load growth which are difficult to predict accurately).

#### 4.1.1 GHG emissions within each scope category

*Table 3: Emission Sources at Scopes 1,2, and 3*

| Scope   | Inclusions                                                                                                    |
|---------|---------------------------------------------------------------------------------------------------------------|
| Scope 1 | <ul style="list-style-type: none"><li>▪ None (no back-up generators assumed at this stage)</li></ul>          |
| Scope 2 | <ul style="list-style-type: none"><li>▪ Electricity consumption or purchase for building operations</li></ul> |
| Scope 3 | <ul style="list-style-type: none"><li>▪ Indirect GHG emissions</li></ul>                                      |

Emissions for non-energy uses such as refrigerants, waste, water, transport and other activities within the building have not been included in this assessment.

Any fossil fuels used by tenants has also not been included.

### 4.2 Input Data

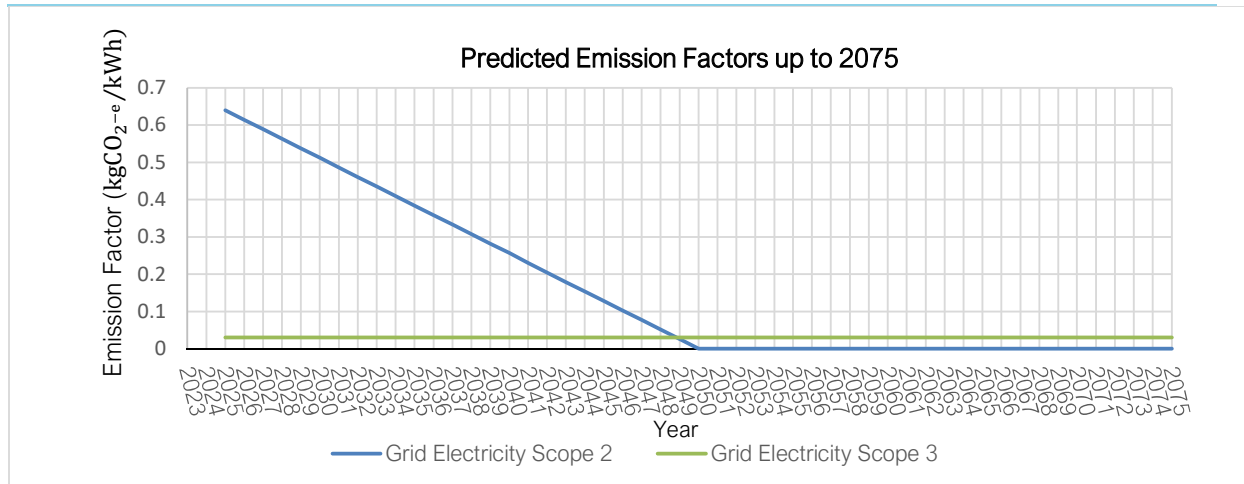
Emissions factors used for the estimation of GHG emissions have been taken from the National Greenhouse Accounts Factors 2025, published by the Australian Government Department of Climate Change, Energy, the Environment and Water. At the time of writing, this was the latest revision of these accounts' factors, and it is assumed that they are applicable to the estimates at commencement of operation.



Emissions factors associated with relevant sources for the Project are outlined in Table 4 below.

*Table 4: Emissions taken from National Greenhouse Accounts Factors 2025*

| Fuel Source          | Emissions Factors                      |
|----------------------|----------------------------------------|
| NSW Grid Electricity | Scope 1: N/A                           |
|                      | Scope 2: 0.64 kgCO <sub>2</sub> -e/kWh |
|                      | Scope 3: 0.03 kgCO <sub>2</sub> -e/kWh |



*Figure 1: Projected emissions factor for grid electricity for the life of the asset*

The decarbonisation of the electricity grid has been estimated based on linear interpolation and extrapolation of publicly announced government commitments related to renewable energy targets. Emissions for the generation of electricity are projected to decline with increased renewable energy supply while emissions for distribution losses are held constant (as a conservative assumption, although likely also to decline) up to the net zero carbon target of 2050. The building energy demand will be supplied by 100% electricity, there are no fossil fuels used on site including no backup generators specified therefore Scope 1 emissions are not present.

The Applicant has committed to attaining a suitable standard of energy use for the development. The building envelope will meet energy efficiency requirements from the building code. The building is designed to operate in a way that avoids the use of fossil fuels for heating and domestic hot water and will include efficient air conditioning systems and lighting. In addition, rooftop areas have been identified where solar photovoltaic panels can be installed.

| Category                                                       | Consumption (kWh) |
|----------------------------------------------------------------|-------------------|
| Estimated fossil fuel consumption per year (until 2035)        | 0                 |
| Estimated electricity consumption per year                     | 5,441,000         |
| Estimated electricity generated from on-site solar PV per year | 0                 |

|                                                                 |           |
|-----------------------------------------------------------------|-----------|
| Estimated total net grid electricity used on site per year      | 5,441,000 |
| Estimated energy consumption per year kWh/m <sup>2</sup> of GFA | 16        |

4.5 Estimated GHG emissions for energy use

The estimated 2025 annual scope 1, 2 and 3 emissions (without GreenPower) are as follows:

| Category                                                  | 2025 Emissions (tCO <sub>2</sub> -e) |
|-----------------------------------------------------------|--------------------------------------|
| Estimated direct (scope 1) GHG emissions per year         | 0                                    |
| Estimated indirect (scope 2 and 3) GHG emissions per year | 3460                                 |
| Total estimated GHG emissions per year                    | 3460                                 |

5.0 GHG Emissions Over Life of Asset

Figure 2 shows the total annual emissions for the predicted 50-year life of the asset, using the predicted emissions factors shown in Table 1. The electrical component of this will be offset through the purchase of GreenPower from 2035. In 2050 the electricity grid is expected to decarbonise therefore the associated scope 2 emissions will reduce to zero, however we have assumed that the scope 3 emissions will not be decarbonised under the 2050 net zero carbon policy. This has been captured in the below graph for the total carbon equivalent emissions for the life of the asset. Any scope 3 emissions after 2050 will be offset by PV generation or off-site renewable energy procurement.

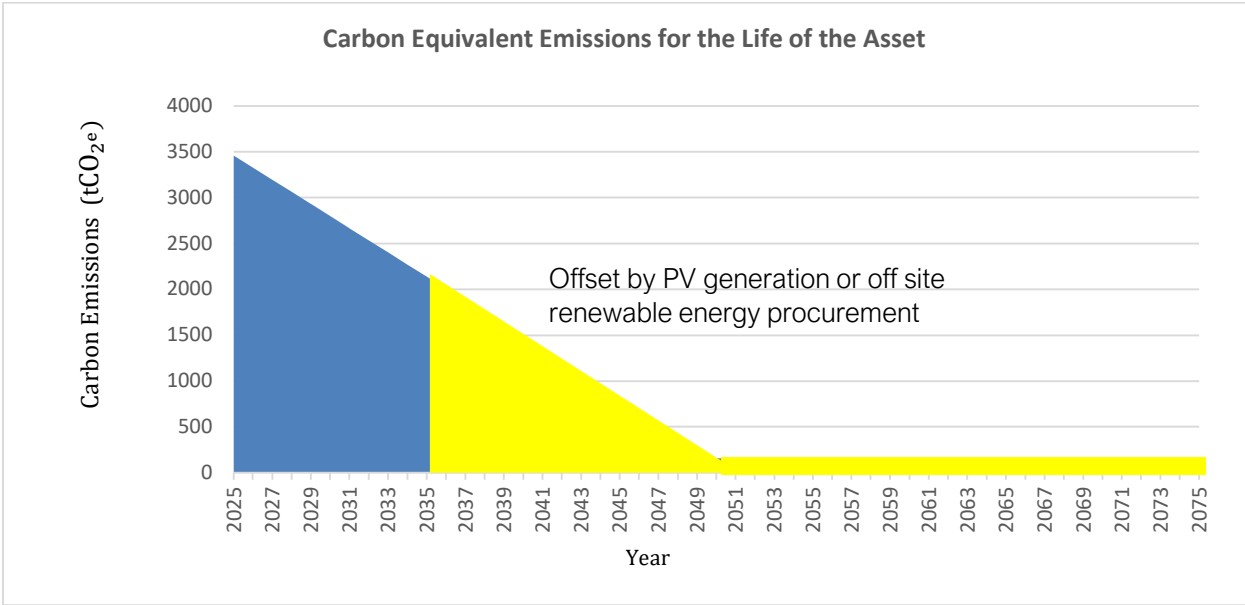


Figure 2: Annual CO2 equivalent over the life of the asset.

The estimated GHG emissions over the life of asset (without GreenPower) are as follows:

| Category                 | Predicted Total GHG Emissions (tCO2-e) |
|--------------------------|----------------------------------------|
| Whole life of the asset  | 50870.9                                |
| First year of operations | 3460                                   |
| Last year of operations  | 155                                    |

Yours sincerely

Benny Cheah  
Director – Building Services  
CPEng, NER

For and on behalf of  
Cundall Johnston and Partners Pty Ltd

