URBIS

KEMERTON BATTERY ENERGY STORAGE SYSTEM (BESS)

Development Application Report

PREPARED FOR

Trinasolar

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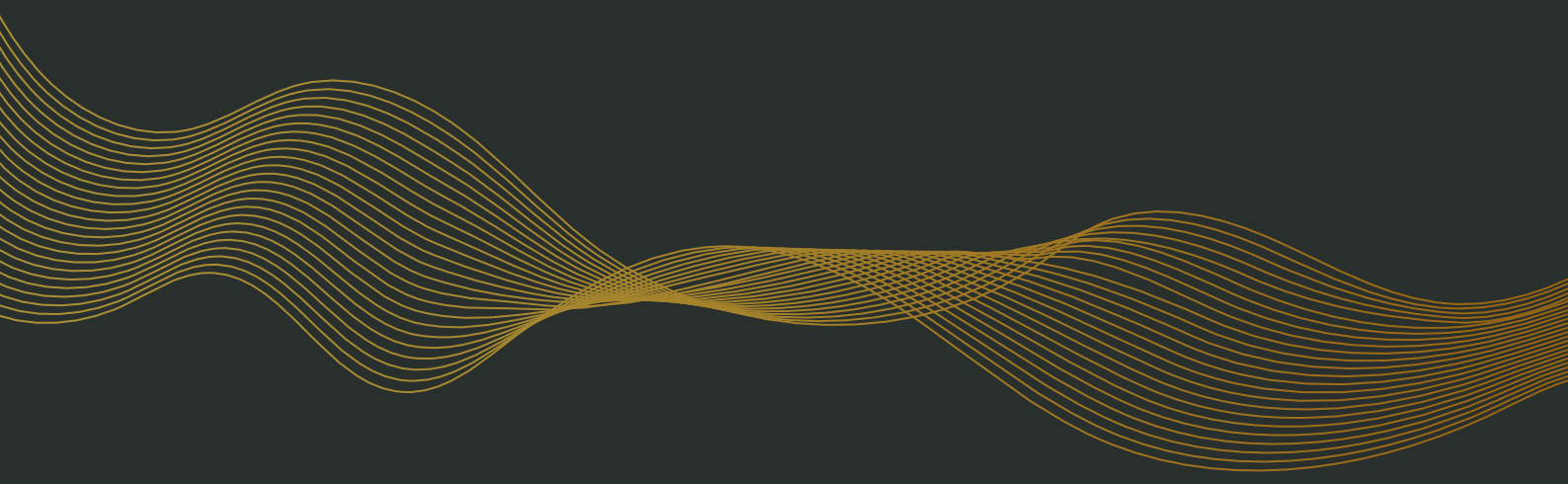

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EXECUTIVE SUMMARY

Urbis is pleased to represent Trina Solar in its visionary proposal for the integrated Kermerton Battery Energy Storage System (KBESS) and its associated infrastructure. The proposed site, strategically located at the intersection of Runnymede Runnymede Road and Wellesley Road North, Wellesley 6233, is within the Shire of Harvey's strategic industrial precinct, the Kemerton Strategic Industrial Area (KSIA) and near the Kemerton Terminal Station.

The KBESS represents a cutting-edge renewable energy facility that aligns perfectly with the State's vision for a cleaner, more sustainable future. TrinaSolar brings a wealth of experience in delivering modern and efficient renewable energy projects, offering the Shire of Harvey the opportunity to establish a state-of-the-art renewable energy storage facility.

This report provides an in-depth analysis of the proposal, highlighting its alignment with relevant state and local planning frameworks. It includes detailed site information, a description of the proposed development, a thorough planning assessment, consideration of broader strategic planning frameworks, and justification supported by extensive technical reports.

The proposed development, will be a significant contributor to the State's renewable energy future. The site selection was based on detailed investigations and the current land use, directly aligned with local and State objectives and clean energy vision.

The report demonstrates that the proposal complies with all relevant technical and planning legislation and frameworks. It shows that the site was chosen due to its strategic location within the KSIA, making it entirely suitable for the proposal. The proposal also exhibits a high level of compliance with Federal, State, Regional, Local, and other relevant frameworks for renewable energy facility developments.

Urbis presents this report to support the approval to commence development of the KBESS, acknowledging the comprehensive nature of the application process and the potential positive impact of this development on the region's sustainable energy vision.

1.0 INTRODUCTION

Urbis is pleased to represent Kemerton BESS Nominee Pty Ltd (Trina Solar), the proponent for the proposed integrated Kemerton Battery Energy Storage System (KBESS) and its associated infrastructure. The proposed site is strategically located at the intersection of Runnymede Road and Wellesley Road North, Wellesley 6233. The site is situated, within the Shire of Harvey's strategic industrial precinct, the Kemerton Strategic Industrial Area (KSIA) and is in close proximity to the Kemerton Terminal Station.

The proposal represents a state-of-the-art renewable energy facility, that aligns wholly with the State's vision for a cleaner more sustainable future.

Our client has an extensive history with the delivery and provision of modern and efficient renewable energy projects, creating the opportunity for the Shire of Harvey to supply and provide a modern renewable energy storage facility.

This comprehensive report reveals the context of the proposal, underscoring its alignment with appropriate state and local planning frameworks. The report includes the following information in support of the approval to commence development of the proposal:

The application is supported by the technical matters and reporting necessary to support the application including;

Appendix A Certificate of Title and Deposited Plan

Appendix B Development Application Forms

Appendix C Development Plans

Appendix D Traffic Impact Statement

Appendix E Environmental Noise Assessment

Appendix F Environmental Assessment

Appendix G Water Management Report

Appendix H Bushfire Management Plan

Site details and in depth local and regional context

Description of the proposed development and contextual background information

Detailed planning assessment against State and Local planning frameworks

Consideration of broader and relevant State strategic planning frameworks

Justification and detailed input from extensive technical reports

1.1 THE PROPONENT

Founded in 1997, Trina Solar has emerged as a global leader in solar photovoltaic (PV) technology. Headquartered in Changzhou, China, Trina Solar manufactures and provides high-performance solar modules, solar trackers, and energy storage systems. With a strong commitment to innovation and sustainability, Trina Solar's products are widely deployed in residential, commercial, and utility-scale projects worldwide. The company operates in over 150 countries, leveraging its extensive research and development capabilities to drive the advancement of renewable energy solutions. As of June 30, 2023, Trina Solar delivered more than 120 Gigawatt (GW) of solar modules worldwide and was ranked one of the world's most bankable PV module brands (the only module manufacturer for five consecutive years) in the 2023 PV Module and Inverter Bankability report issued by BloombergNEF.

Trina Solar's business finance and development team has grown to more than 160 employees worldwide, with 15 full-time staff across Australia with offices in Sydney (Head Office), Perth, Melbourne & Brisbane. The Australian team is committed to developing a diversified portfolio of renewable energy projects Australia-wide, contributing significantly to the Net Zero emissions target. Since establishing itself in Australia, Trina has grown their renewable energy development portfolio to more than 2.5GW as of 2024, with its most advanced project, the 260MW agri-solar farm development in Glenellen NSW, receiving development approval in December of 2023.

Trina Solar owns and operates renewable energy assets across China, Europe, America, Japan, Korea, and South East Asia with over 9.5 GW of solar power plants connected to the grid worldwide. Trina's business model is vertically integrated, encompassing every aspect of the renewable energy value chain from manufacturing to project development, ownership, and operation. This approach enables Trina to maintain quality control, optimize efficiencies, and build trust with local communities throughout the entire lifecycle of its projects.

1.2 STAKEHOLDER ENGAGEMENT

Trina Solar through careful consultation with Western Power, Tier 1 consultants and several years of discussions with the landowner, (who are a trusted local business who have been operating in the Shire of Harvey for over 20 years) has been formulating a suitable plan to re-purpose the depleted sand mine with a renewable energy BESS project. The landowners are in full support of revitalising their land and working with Trina Solar for the life of the project.

In late 2023 an access application for the KBESS was submitted to Western Power. In parallel with the submission of this development application, Trina Solar is continuing to work with Western Power to progress generator performance standard studies and detail design.

In addition, Trina Solar recently submitted an application to Western Power in response to the critical framework guideline established by Energy Policy WA (EPWA) and Western Power. This application detailed why the Kemerton BESS is considered a critical project for the State of Western Australia. The submission outlined the significance of the project and its alignment with several strategic energy policies and in particular it noted that the "grid forming energy storage technology being utilised by the Kemerton BESS will ensure a secure and reliable electricity supply by providing system strength and inertial response to replace that lost due to the retirement of coal plants in the region and by firming the supply of intermittent renewable energy sources within the state to ensure that there is a reduced risk of capacity shortfall". If identified by Western Power and EPWA as being a critical project for the state, the Kemerton BESS will be fast-tracked for connection.

Finally, throughout 2024 Trina Solar and the project team have engaged with relevant stakeholders and Government Authorities. This has included:

- Shire of Harvey
- Department of Jobs, Tourism, Science and Innovation
- Department of Fire and Emergency Services
- Department of Planning, Lands and Heritage

2.0 SITE DETAILS

2.1 REGIONAL CONTEXT

The proposal is located within the locality of Wellesley in the Shire of Harvey, nearby the regional centres of Bunbury and Australind. The subject site is situated adjacent to the Kemerton Strategic Industrial Area (SIA), a State Government project led by the Department of Jobs, Tourism, Science and Innovation and managed by DevelopmentWA.

This area will cater for a range of industrial operations with a focus on downstream processing of mineral sands and lithium. The SIA also accommodates the Transfield Power Station.

Other key industries across the shire include:

- Food, agribusiness and technologies
- Mining and manufacturing
- Renewable and clean technologies, and
- Tourism, sport and leisure.

2.2 LOCAL CONTEXT

The subject site is situated 15km south-west of the town of Harvey, and 14km north-east of the town of Australind and is comprised on undeveloped land within the Kemerton Strategic Industrial Area (see **Figure 1**).

The site is situated along Wellesley Road North and Runnymede Road, providing the site with key linkages to the regional road network in the area, both northbound and southbound. Wellesley Road North acts as a key route throughout the Kemerton Industrial Area, providing direct linkage to Kemerton Terminal Station 1.6km south-east, and further to Kemerton Power Station 3.4km south-east. Wellesley Road North acts as a key connection to major transport route, Forrest Highway which is situated 2.5km west of the subject site.

The subject site is situated entirely within the Shire's strategic industrial zone, with surrounding undeveloped rural land approximately 5km north of the site.

2.3 LOT DETAILS

Table 1 details the key lot particulars relevant to the subject site.

2.4 SITE SELECTION

The subject site was identified through a rigorous site selection process and was selected for several strategic reasons, including;

- Repurposing an already cleared 18.75Ha parcel of land.
- Close proximity to existing 330KV infrastructure including transmission lines and Kemerton Terminal Station.
- Access to the site already accommodates heavy machinery haulage trucks and is in close proximity to Forrest Highway.
- A cleared parcel of land that can accommodate a BESS project up to 660MW/2640MWh which is a significant addition to the SWIS network(one of the largest of its kind BESS in WA).
- The current landowners are supportive of the project. The owners of Lot 4 have been respectable business owners in WA for more than 50 years, operating in the South West (particularly Kemerton) for over 20 years.
- Through an iterative design process, appropriate separation has been established to ensure minimal vegetation clearing.
- An already cleared fire break which can accommodate an underground transmission-line alignment. Careful consideration associated with powerline infrastructure design and its alignment corridor shows that underground transmission lines will have the least impact on clearing of native vegetation. While this is not the most cost-effective solution (compared with overhead powerlines) it aligns with the protection of important environmental qualities specific to the region.

Table 1 Lot Details

LOT	PLAN	AREA (HA)	VOL/FOLIO	PROPRIETOR
4	5888	140.4782 ha	1942/426	S & C & B Catalano Pty Ltd Of South West Highway, Brunswick Junction
5	5888	103.1054ha	1826/663	Lyndon Mervyn Edwards

Figure 1 Aerial Imagery

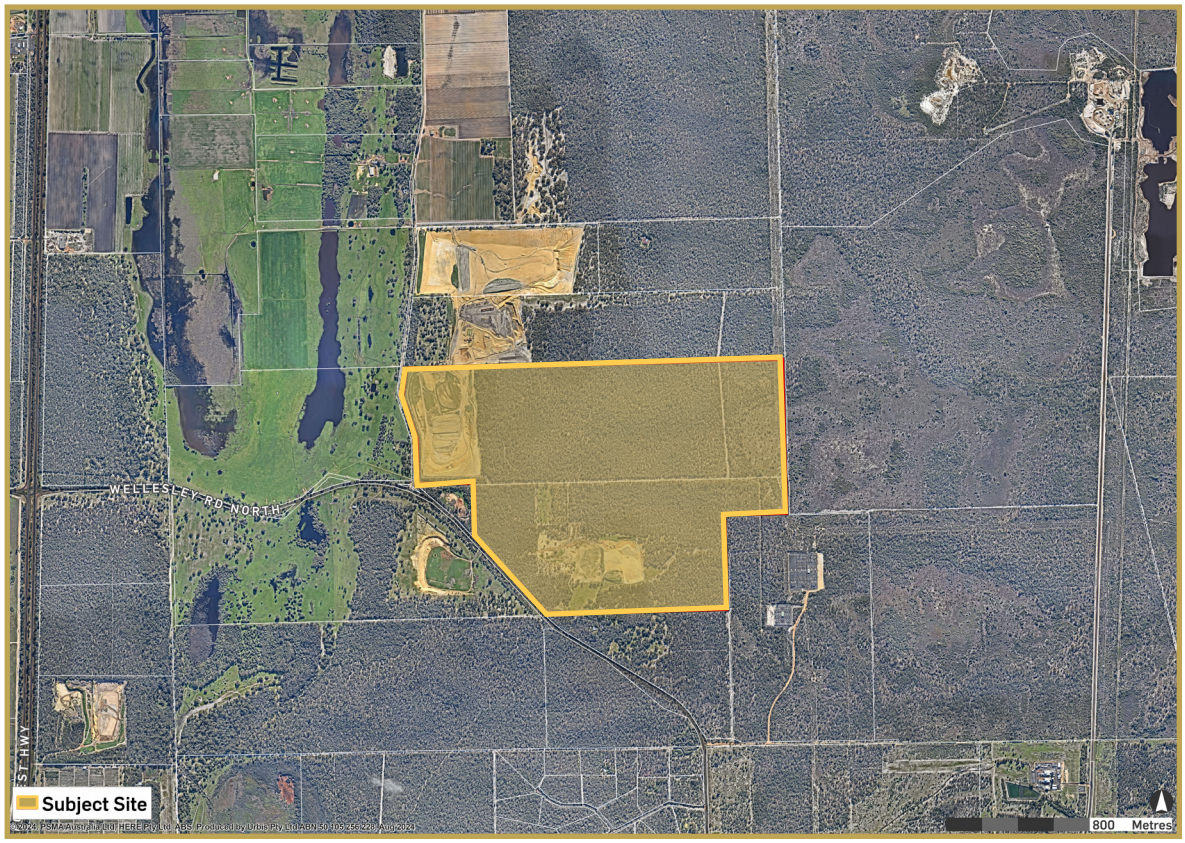
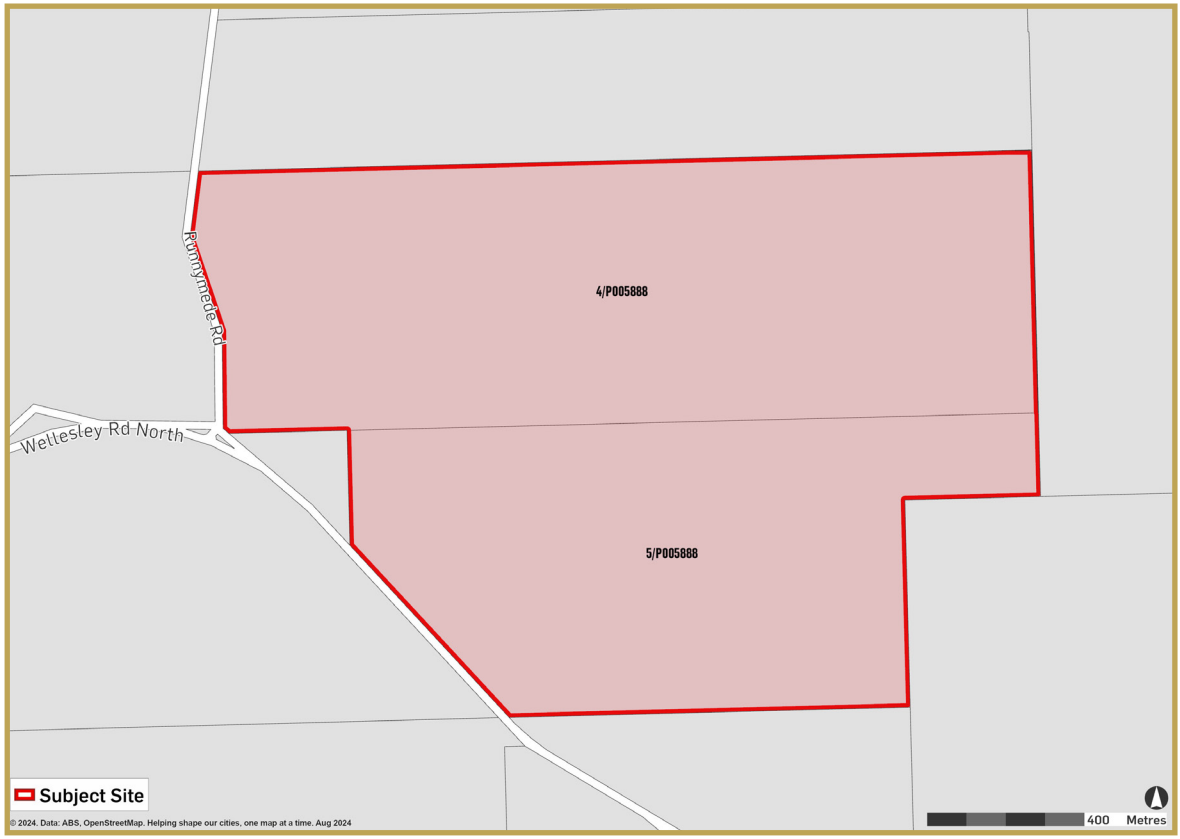


Figure 2 Aerial Imagery



3.0 PROPOSED DEVELOPMENT

3.1 BACKGROUND

The subject site is a proposed Battery Energy and Storage (BESS) facility situated on a portion of Lot 4 and Lot 5 Runnymede Road, Wellesley as indicated in **Appendix C**.

The subject site currently operates as part of a broader sand mining operation and is nearing the end of its life.

The BESS facility footprint will be situated on approximately 18.75Ha (approx.) of previously cleared land. Our client has an agreement in place with the landowner to lease the area required to house the BESS facility and its associated infrastructure and transmission lines to progress with the development.

As mentioned, this portion of the site has been historically cleared for sand mining. The sand mining operation is nearing the end of its life, presenting the opportunity to repurpose the site to align with the State's renewable energy targets.

The proposed BESS is strategically located less than 3km from the Kemerton Terminal Station. This Terminal Station represents a strategic connection point in the SWIS downstream of Kwinana and an area flagged as being a connection point for future Wind resources, both onshore and offshore.

The proposed BESS will be capable of supporting grid stability through grid-forming technology and facilitating renewable energy integration, such as Wind and Solar resources. The Proponent seeks to utilise advanced lithium-ion battery technology, enabling rapid response to grid demands and optimising renewable energy utilisation. Overall, the proposed BESS comprises a $400m capital investment in the SWIS.

The site is situated within a State Government lead initiative, the Kemerton Strategic Industrial Area (KSIA). The project is directly associated with the region's increasing industrial operations that cater for the processing of mineral sands and lithium. The BESS is proposed to provide a cleaner, renewable energy storage solution for the region, that aligns with the State's growing sustainable energy vision.

3.2 SUMMARY OF DEVELOPMENT

Appendix C depicts the proposed preliminary BESS site overview, including the layout of the facility and the associated infrastructure, it is noted that this layout is preliminary and subject to change. As detailed in layout, the BESS facility is in the western portion of the lot.

The BESS will be one of the largest of its kind in Western Australia, rated at 660MW and comprising of the following:

- 800 Battery Cabinets
- 200 Invertors Units
- Transformers/Switch Gear
- Control systems
- Cabling
- Operations and Facilities Space
- Internal access roads
- Site perimeter fencing and gates
- Water storage tanks
- 300kV underground transmission line

Operational includes an operational building for staffing and a storage building for the operation of the facility. Detailed development plans can be found at **Appendix C**.

In summary this will include:

- 1 x Operation Building
- 1 x Storage Building

3.3 OPERATION

The Kemerton Battery Energy Storage System (BESS) once operational, will have a local team of up to eight personnel on-site during standard business hours, Monday through Friday. The facility will be monitored and controlled by an experienced asset management team from a remote-control centre located in Australia. This centre will manage the daily operations of the Kemerton BESS, overseeing its interactions with the wholesale electricity market (WEM) as well as handling technical and maintenance activities. It will coordinate with local maintenance contractors and safety authorities to ensure the facility operates safely, and effectively, for the life of its operations.

The onsite operational staff will be responsible for monitoring, cleaning, and performing general maintenance on the BESS facility infrastructure. Major maintenance activities may include replacing critical equipment such as battery modules, inverters, switchgear, transformers, and other essential infrastructure. These tasks may require larger teams for limited durations as necessary.

The BESS will operate continuously, typically charging during the day when there is an excess of renewable energy generation and discharging during peak demand periods. It is anticipated that the facility will operate for 20 years after which time the project will be reviewed to determine whether to renew its operations or proceed with decommissioning

3.4 PROJECT STAGING

It is anticipated construction will commence in Q3 of 2026 and that the BESS facility will take up to 24 months to construct. In parallel to the development application assessment, Trina have lodged an access application with Western Power as of late 2023 and are continuing to progress with connection studies and detail design.

Achieving development approval and feedback from Government Agencies will be a critical step toward informing detailed design with Western Power and in turn the commencement of the procurement process.

The selection of an Engineering Procurement and Construction (EPC) contractor will be undertaken through a tender process to select a capable EPC contractor capable of delivering critical projects with a track record of quality and safety. The proposed BESS will generate up to 150 employment opportunities throughout the construction phase of the facility, upskilling many local employees.

3.5 PROJECT BENEFITS AND ALIGNMENT

The proposed BESS is aligned with the broader energy policy direction set for Western Australia set out through the Energy Transformation Strategy for WA and supporting policy frameworks. These are detailed in the subsequent sections of this report.

In addition to alignment with the States energy policy direction, as a global independent power operator, Trina Solar is committed to maximizing long-term benefits by owning and operating renewable assets. The owner-operator business model affords Trina Solar the advantage of gaining the trust of local businesses and communities. Trina understands that neighbours and the community will be involved in the project for the life of the project and that Trina must seek to develop local partnerships.

Where possible Trina will aim to provide further benefit to the southwest region by:

- Utilising local contractors and subcontractors
- Identify training opportunities
- Hold public briefings with local communities
- Invest in the local community

The Kemerton BESS, utilising 4-hour duration lithium-ion batteries, will enhance the reliability of proposed wind resources in the southern region by stabilising generation output. Installation of energy storage at Kemerton will facilitate the unlocking of south west wind resources and will provide the network with diverse wind profiles, thereby bolstering supply security for the electricity system and mitigating system capacity shortfalls forecast to commence from 2027.

4.0 STATE PLANNING ASSESSMENT

4.1 LEGISLATIVE CONSIDERATIONS

PLANNING AND DEVELOPMENT ACT 2005

The use and development of land across Western Australia is regulated by the Planning and Development Act 2005 (PD Act). In relation to the Proposal, the PD Act facilitates the implementation of State Planning Policies and the Shire's local planning framework.

ENVIRONMENTAL PROTECTION ACT 1986

The Environmental Protection Act 1986 (EP Act) provides Environmental Protection Authority, for the prevention, control and abatement of environmental pollution, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected with the foregoing. The key environmental considerations that apply to our subject site, associated with the EP act, are detailed in the Environmental Report, available in **Appendix D**.

A summary of key relevant sections of the act include:

Section 38 – Which sets out the requirements for 'significant proposals' to the Environmental Protection Authority (EPA) for assessment.

Division 2 – Which outlines key development implementations, such as the clearing of native vegetation during development.

Development will wholly consider and comply with the requirements of the EP act and obtain the required approvals for development.

ENVIRONMENTAL PROTECTION (NOISE) REGULATIONS 1997

The Environmental Protection (Noise) Regulations 1997 serve to regulate and control noise emissions in order to protect the well-being and comfort of individuals and communities in Australia. They establish permissible noise levels, outline procedures for noise assessment, and provide guidelines for noise management and mitigation.

An Acoustic Impact Assessment has been prepared, to demonstrate the extent of predicted compliance with the Noise Regulations as set out in the act, and is contained within **Appendix E.**

ABORIGINAL CULTURAL HERITAGE ACT 2021

The Aboriginal Cultural Heritage Act 2021 (ACH Act) is a legislative framework designed to protect and manage Aboriginal cultural heritage in Australia. It recognises the intrinsic connection of Aboriginal people to their cultural heritage and provides mechanisms for its preservation.

The ACH Act was developed to ensure that significant and 'protected places', where Aboriginal cultural heritage significance is identified, are subject to investigation and consultation before an activity proceeds. Regardless of an area's status as a protected zone, the ACH Act mandates the execution of a due diligence assessment (DDA). This assessment is designed to evaluate the potential risk a proposal might pose to Aboriginal cultural heritage. This requirement applies universally, irrespective of the area's designated protection status.

ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999 (COMMONWEALTH)

The EPBC Act and regulations are Australia's main national environmental legislation. They provide a way for us to protect and manage nationally and internationally important plants, animals, habitats and places. The act outlines nine Matters of National Environmental Significance (MNES) including ecological communities and nationally threatened species.

Technical studies carried out for this Proposal to evaluate the possible presence of Matters of National Environmental Significance (MNES) revealed that although MNES are present, the Proposal is designed to completely minimise potential impacts on these attributes.

4.2 STATE STRATEGIC FRAMEWORK

STATE PLANNING STRATEGY 2050

The State Planning Strategy 2050 outlines context and basis for the integration and coordination of land-use planning and development across state, regional and local jurisdictions. The strategy explains the context, principle and goals for land use planning in Western Australia. The strategy undertakes particular focus on the renewable energy sector, highlighting the increase in global demand and continued diversification of Western Australia's economic base, as core drivers for the increasing demand for renewable energy generation and technology.

The proposal directly aligns with State Planning Strategy 2050 by providing additional renewable energy storage capacity, capable of supporting the State's increasing renewable energy generation on the grid.

BUNBURY – GEOGRAPHE SUB-REGIONAL PLANNING STRATEGY

The Bunbury-Geographe Sub-Regional Strategy sets a vision for land use planning up to 2050, reflecting the agreed aspirations for the sub-region's future within the State Planning Framework. It outlines strategic directions and actions to realise this vision, reaffirms Bunbury's status as the State's second city, and defines the sub-region's settlement hierarchy.

The strategy identifies the future role of the renewable resources in the energy sector and notes the expected increase in importance and nature. To assist with this growth the State Government is undertaking a 'Whole of System Plan' to establish a structured and coordinated approach to the planning of the power system for the South West.

WESTERN AUSTRALIA FUTURE BATTERY INDUSTRY STRATEGY WESTERN AUSTRALIA

The Western Australian Future Battery Industry Strategy outlines the state's plan to develop a sustainable and globally competitive battery industry. The plan is designed to leverage Western Australia's plentiful supply of essential minerals, such as lithium, to create a thriving sector focused on the production and manufacturing of battery materials. There are several focus areas identified across the strategy that this proposal directly aligns with, including:

- The proposal provides significant opportunity for regional/domestic integration of renewable, battery energy storage systems.
- The proposal's location within an established industrial area provides opportunity for future battery maintenance, management and other associated industrial uses to be located within close proximity.

ENERGY TRANSFORMATION STRATEGY

The Energy Transformation Strategy outlines the State's plan to shift focus towards the transition to cleaner and more renewable energy technologies. The energy sector in Western Australia is experiencing a significant transformation, with renewable technologies becoming more cost-effective and consumers increasingly generating their own electricity through rooftop solar PV systems. Battery systems are also improving, offering efficient energy storage solutions.

The strategy sets out a detailed action plan across four key themes, including modernising energy systems, decarbonising energy supply, optimising energy use and empowering consumers. This proposal wholly aligns with the vision of this strategy, specifically:

- Provision of a decarbonised energy storage solution, reducing energy sector carbon emissions
- Ensuring the provision of a dependable energy supply
- Increasing the State's transition towards cleaner, more renewable energy storage

The proposal will contribute to the objectives of this strategy through:

- Utilising grid forming energy forming technology to ensure a secure reliable electricity supply and system strength and inertial response to the transition from coal fired power generation and firming the supply of intermittent renewable energy sources.
- The development of the proposed BESS at this specific location will maximise system utlisation and minimise the need for the augmentation of the existing network, supporting the affordable supply of energy to households and businesses.
- Provide much needed capacity and support for a growing wind energy sector within the South West and broader region connected to the SWIS.
- Provide additional job opportunities and training for skilled workers in the Greater Bunbury Region, which will ultimately be required to further support the States energy transition into the future.

POSITION STATEMENT – RENEWABLE ENERGY FACILITIES

This document presents the Western Australian Planning Commission's (WAPC) guidelines for the consistent development and provision of renewable energy facilities in Western Australia, replacing the 2004 Guidelines for Wind Farm Development. It outlines assessment measures to ensure renewable energy facilities are developed in areas that balance environmental and urban impact with energy production and operational efficiency.

The document delivers an outline of a framework for assessing and determining renewable energy projects. This includes guidelines for construction, site selection, design and operation. This proposal considers these guidelines and remains clearly consistent with the document's intentions, including the development of infrastructure and contextual impact of site selection.

4.3 STATE PLANNING POLICIES

STATE PLANNING POLICY 2.0 – ENVIRONMENTAL AND NATURAL RESOURCES POLICY

State Planning Policy 2.0 (SPP2.0) outlines the following as core objectives:

- Integrate environment and natural resource management with broader land use planning and decision-making.
- Protect, conserve and enhance the natural environment.
- Promote and assist in the wise and sustainable use and management of natural resources.

The proposal considers and adheres to the intentions of these policies throughout the entirety of the development process. The proposal is subject to relevant environmental assessments including a biological assessment of the site.

Assessment concludes that the proposal is wholly consistent with the objectives of SPP2.0, with particular focus on the conservation of the natural environment and the natural resources. The proposal site has been contextually selected and is determined as an appropriate, and low impact development site.

STATE PLANNING POLICY 2.4 – BASIC RAW MATERIALS

State Planning Policy 2.4 is responsible for ensuring basic raw materials (BRM) and extractive industries matters are considered during planning and development decision-making. A review of the subject site reveals a significant geological supply of 'sand'. The proposal wholly aligns with the objectives of SPP2.4, ensuring that the importance of the material is considered throughout all stages of the development process. The proposal poses no threat to supply, extraction or surrounds of the material.

STATE PLANNING POLICY 2.5 – RURAL PLANNING

SPP2.5 outlines policy objectives aimed at safeguarding rural land resources, recognising their significant contributions to the economy, natural resource management, food production, environmental conservation, and landscape aesthetics. The subject site is wholly zoned 'Rural' under the Bunbury Region Scheme (MRS). The proposal does not involve any activities that would constrain the use of the surrounding 'Rural' zoned land, for agricultural. /rural purposes.

STATE PLANNING POLICY 2.9 – PLANNING FOR WATER

SPP2.9 offers direction for the planning, safeguarding, and administration of surface and groundwater catchments. It considers water availability, management of waterways and wetlands, estuaries and their buffers, and the application of comprehensive water cycle management principles within the land use planning framework. The eastern third of the subject site is within trigger distance for the consideration of an estuary catchment on the Swan and Scott Coastal Plains. The proposal incorporates effective water sensitive design and management strategies to ensure the mitigation of any potential impacts to water environments. The proposal does not result in any significant or notable impact to surrounding water resources or environments.

STATE PLANNING POLICY 3.7 – PLANNING IN BUSHFIRE PRONE AREAS

SPP 3.7 directs how land use should address bushfire risk management in Western Australia. It applies to all land designated as bushfire prone by the Fire and Emergency Services (DFES) Commissioner. It applies to all higher order strategic planning documents, strategic planning proposals, subdivision and development applications located in designated bushfire prone areas.

As the majority of the site is within bushfire prone areas, a Bushfire Management Plan (BMP) (refer Appendix GH) and Bushfire Risk Management Plan (BRMP) (refer Appendix H) have has been prepared in support of the proposal, and to demonstrate the proposals consistency with the provisions of SPP 3.7.

4.4 GREATER BUNBURY REGION SCHEME

The Greater Bunbury Region Scheme (GBRS) is a high-level statutory document which guides the land use planning of the Greater Bunbury Region. The document divides the land within the Scheme area into zones and reserves and provides additional requirements and guidelines accordingly.

As shown in **Figure 3** below, the subject site is zoned 'Rural' and 'Industrial' under the GBRS. The zone objective for the 'Rural' zone is as follows:

"to provide for the sustainable use of land for agriculture, assist in the conservation and wise use of natural resources including water, flora, fauna and minerals, provide a distinctive rural landscape setting for the urban areas and accommodate carefully planned rural living developments."

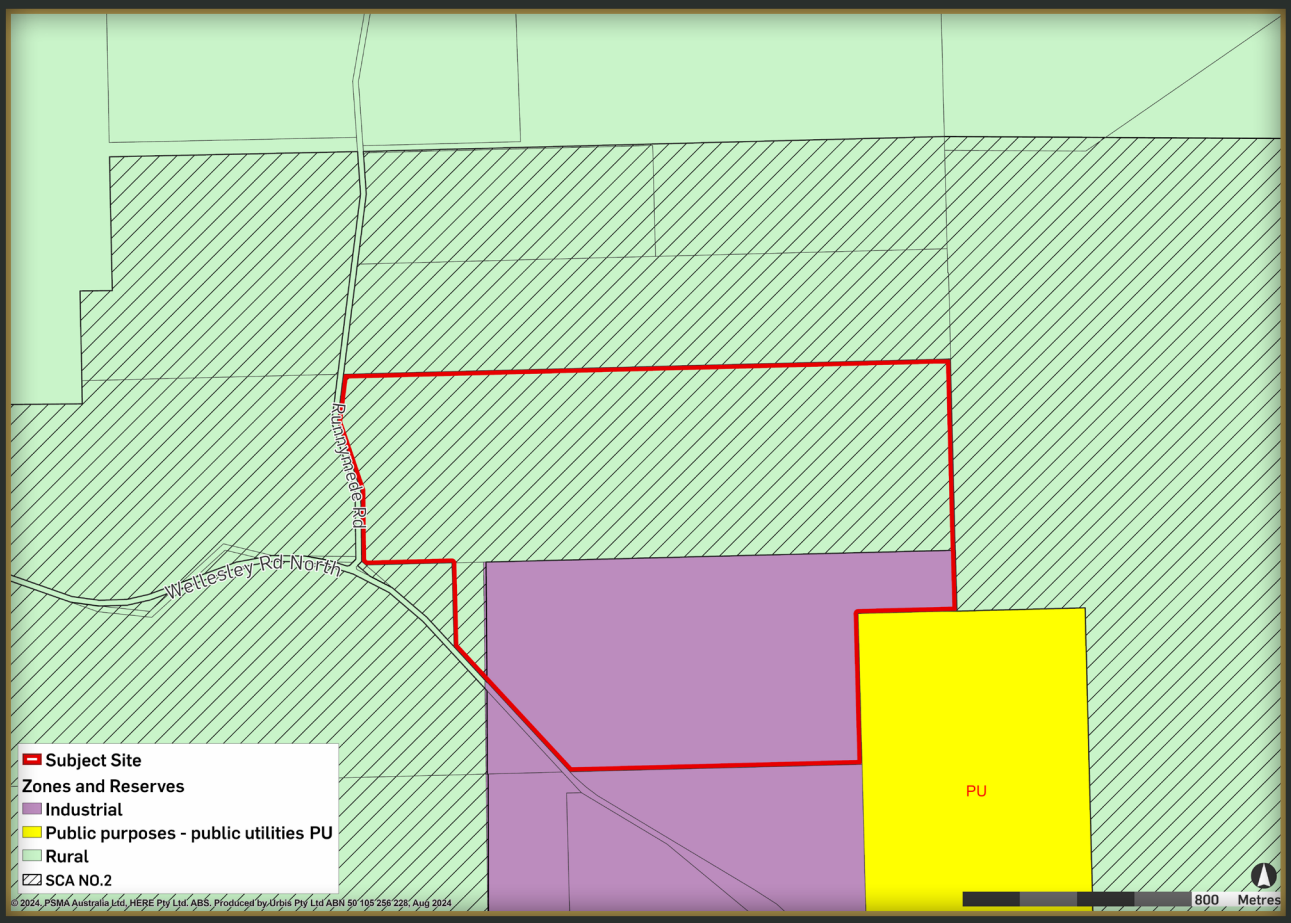
The objective of the 'Industrial' zone is:

"to provide for manufacturing industry, the storage and distribution of goods and associated uses."

The subject site is also located with Special Control Area No. 2 – Kemerton Industrial Zone Buffer Area (SCA No.2) SCA No. 2 seeks to ensure that development is compatible with existing or proposed future use or development within the Kemerton Strategic Industrial Area.

The proposed BESS is consistent with the objectives of both the Rural zone and the SCA No. 2 as it will facilitate the repurposing of a portion of the subject site for a productive renewable energy facility and minimisation of impacts on flora and fauna.

Figure 3 PGBRS Map



5.0 LOCAL PLANNING ASSESSMENT COMPLETE

5.1 SHIRE OF HARVEY LOCAL PLANNING STRATEGY

The Shire's Local Planning Strategy considers a variety of strategic planning considerations at the state and regional levels to determine the planning direction and objectives for the Shire's district. The strategy offers a broad roadmap for land use planning in the Shire for the upcoming 10-15 years. It highlights unresolved planning challenges and proposes necessary actions to resolve them. The strategy emphasises crucial planning considerations such as the sustainable use of land and water resources, ensuring planning accommodates future needs and that decisions create opportunities to enhance local attributes.

The proposal introduces significant opportunity for planning to accommodate future needs. The provision of sustainable energy storage directly addresses the State and regions' future need for a more renewable, decarbonised system of energy storage. The proposal brings opportunities for job creation during both the construction and operational phases within the Shire and the broader district. The emergence of new business, industrial, and employment possibilities could have a multiplying effect on the economic activity in Kemerton and its neighbouring regions.

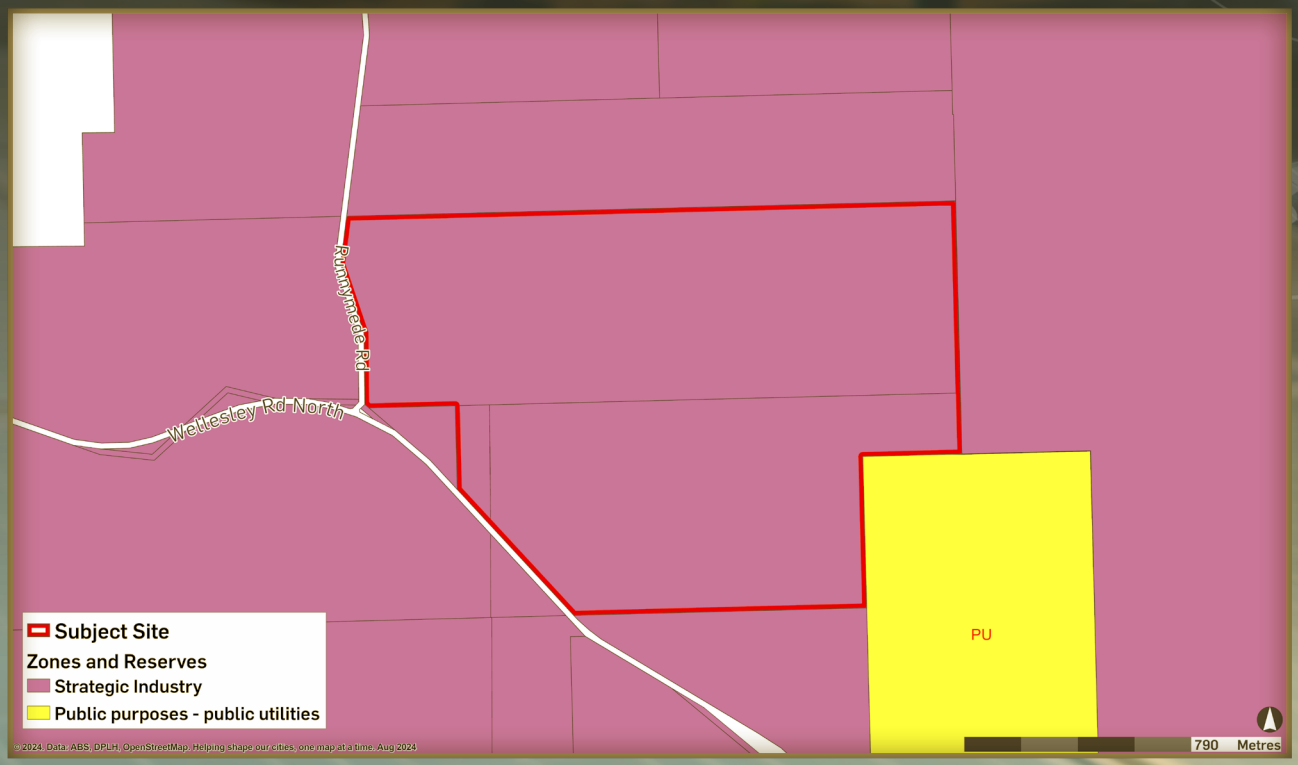
5.2 SHIRE OF HARVEY LOCAL PLANNING SCHEME NO.2

The Shire has recently adopted a new Local Planning Scheme No.2 (LPS2) gazetted on the 12th April 2024. The subject site is zoned 'Strategic Industry' under the Shire's LPS2 (refer figure below). LPS2 contains a range of objectives, as well as zoning and development provisions that apply to the Proposal. The primary objective of the 'Strategic Industry' zone as outlined in the LPS2 is:

To designate industrial sites of State or regional significance.

This indicates the industrial significance associated with the site, which aligns entirely with the proposals industrial objective, being the provision of a Battery Energy Storage System (BESS) facility that will provide State and regional energy storage services.

Figure 4 LPS2 Map



5.2.1 LAND USE PERMISSIBILITY

The proposal's primary land use function is the provision of electricity storage. This involves the development of associated infrastructure to control and distribute energy to the grid as required. Under LPS2, the proposal is suitably classed as a 'Renewable Energy Facility'.

As detailed in the LPS2's table 4 – zoning table, 'Renewable Energy Facility' is listed as a 'D' – Discretionary Use, meaning that development approval is required.

5.2.2 RESTRICTED AND ADDITIONAL USES

Table 2 outlines the relevant restricted and additional areas that apply to the subject site located in Lot 4. Notwithstanding the underlying zoning of the land, this restricts the uses that can be considered on the site consistent with the identified objectives. In this instance the restricted use provisions have been included so that the subject site effectively functions as a buffer to the core industrial area, the zoning then does not perpetuate the need for further buffers outside of the already zoned land. In this way it maintains the intent of the Kemerton Strategic Industrial Area Structure Plan as discussed further in this report.

5.2.3 SPECIAL CONTROL AREAS

Clause 36 of the LPS2 outlines special control areas within the Shire that require an additional set of site and development requirements. The subject site is within the SCA 2 – Basic raw materials zone. The purpose of this zone is to identify provide guidance for land use and development on land identified within the Scheme that contains mineral resources and basic raw materials of State or regional significance. The additional requirements and objectives of this area are detailed in **Table 3**.

5.2.4 ZONE DEVELOPMENT REQUIREMENTS

Schedule 4 of LPS2 outlines further general zone development requirements. **Table 4** outlines these and the proposals level of compliance.

Table 2 Restricted and Additional Uses

Zone No. / Name	Restricted Use	Objectives	Comments
R3 / Kemerton Industry Buffer	As a 'D' – Discretionary Use: • Renewable Energy Facility • Tree Farm • Telecommunication Infrastructure	1. Allow for low intensity development compatible with the activities within the Strategic Industry zone and the Kemerton Ancillary Industry area (R2). 2. Prevent the use and development of the land for sensitive uses or purposes incompatible with the intentions of the Strategic Industry Zone 3. Encourage conservation of the public recreation and flora and fauna.	The proposed development is defined as Renewable Energy Facility and therefore consistent with the Restricted Use Provisions

Table 3 SCA2 – Basic raw materials

SCA Area	Objectives	Objectives
SCA2 – Basic Raw Materials	**a.** ensure that the strategic resources of State or regional significance are not sterilised from incompatible land uses and development; and **b.** encourage the mining of strategic resources in accordance with acceptable environmental standards; and **c.** promote the rehabilitation and restoration of mining and extraction sites, after works have been completed, in a way that is consistent with the long-term use of the land.	The proposal does not sterilise or impact the current, or future availability of the BRM on our site, with extraction to occur prior to development wholly on the subject site. The balance of the BRM is to be mined prior to the construction of the BESS facility. The mining operator has confirmed agreements for service vehicle access onto to Runnymede Road for all operational servicing access requirements. The proposal will facilitate extraction to a sustainable level, including the returning of topsoil and required grading facilitate drainage.

Table 4 Zone Development Requirements

Zone	Minimum Setback	Proposed	Minimum Landscaping	Proposed
Strategic Industry	Front: 20m Rear: 30m Side: 10m	70+ meters 70+ metres	Min 1.5m width along all property boundaries abutting a road reserve or as determined by the local government.	It is planned to retain the existing vegetation that runs along all lot boundaries. Only % of the site is planned for development, with the balance vegetation retained on site.

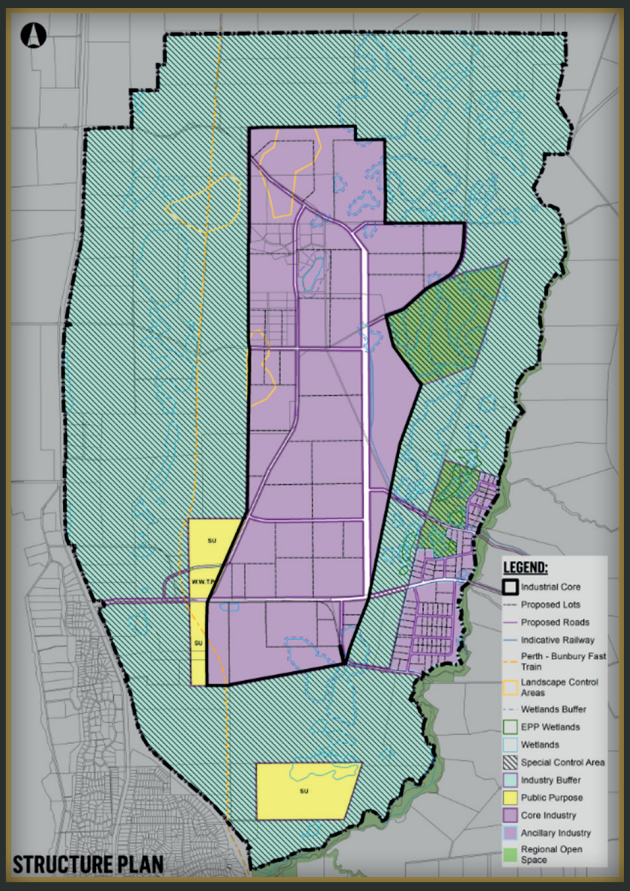
5.3 KEMERTON STRATEGIC INDUSTRIAL AREA STRUCTURE PLAN

The purpose of this Structure Plan is to provide a planning framework and the implementation requirements to guide the future development of the KSIA. The Structure Plan has been prepared in accordance with the requirements of clause 9.14 of the Shire of Harvey District Planning Scheme No.1 (DPS1) and applies to the entire KSIA.

The objectives of this plan are to offer industrial development areas that are flexible for future proposals, promote economic, environmental, and community benefits, and encourage synergistic business interactions. The plan also seeks to protect these areas from incompatible uses, respect visual management considerations, minimise environmental impact, and honour sites of Aboriginal heritage significance.

The KSIA Structure Plan, was developed in line with DPS1, designates the subject site within an 'Industrial Buffer' zone. This zoning has been amended in LPS2 to 'Strategic Industrial', a change that aligns with the objectives of DPS1. Both zonings share a mutual focus on safeguarding the region's industrial core, a principle that is consistently echoed in the proposed development.

Figure 5 Kemerton Strategic Industrial Area Map



5.4 LOCAL PLANNING POLICIES

5.4.1 LOCAL PLANNING POLICY 6.7.3 SUSTAINABLE BUILDING MATERIALS AND CONSTRUCTION PRACTICES

LPP 6.7.3 is universally applicable to all land and development within the Shire of Harvey. The policy's core emphasis is on fostering development that promotes sustainable land use. It aims to stimulate both local and regional economies by facilitating a diverse array of business opportunities. Moreover, it is designed to ensure that development does not impose significant adverse effects on the physical environment or the social health of the community. The KBESS aligns seamlessly with the principles outlined in LPP 6.7.3. The development is designed with a strong commitment to sustainable land use, ensuring that the land's utility is maximised while its ecological integrity is preserved.

The KBESS also contributes to the economic vibrancy of the region. It introduces a variety of business opportunities, throughout all stages of development and beyond. Furthermore, the development has been meticulously planned to minimise any significant impact on the physical environment and the social health of the community. It incorporates environmentally friendly practices and promotes social cohesion, ensuring thorough compliance with LPP 6.7.3.

6.0 TECHNICAL CONSIDERATIONS

6.1 TRAFFIC, ACCESS AND SERVICING MANAGEMENT

6.1.1 TRAFFIC IMPACT STATEMENT PREPARED BY SHAWMAC PTY LTD (APPENDIX D)

A Transport Impact Assessment (TIA) has been prepared by Shawmac to consider the traffic and transport impacts of the proposed development on the adjacent transport network with a detailed focus on vehicle access, car parking, service vehicles and traffic management. The findings of the report demonstrate the that subject site is suitable of accommodating the vehicle movements required during construction. Once constructed and operational, the development will generate little or no traffic.

The TIA concludes the following:

- The peak hour traffic generation is estimated to be in the order of 23 vehicles per hour (20 light vehicles and 3 heavy vehicles). The volume of construction traffic is considered to have a low impact and can be accommodated within the existing capacity of the road network.
- A preliminary vehicle swept path analysis demonstrate that the existing site access will accommodate the turning movement of 19m and 25m semi-trailers.
- There will be a low volume of OSOM vehicles required to access the site during construction, these vehicle movements will be undertaken under escort. There is the potential for the need for approval from Main Roads WA Heavy Vehicle Services
- The minimum required sight distance is achieved in both directions at the site access on Runnymede Road.
- A preliminary vehicle swept path analysis demonstrate that the existing site access will accommodate the turning movement of 19m and 25m semi-trailers.
- The access will also need to accommodate the turning movements of OSOM vehicles transporting the proposed transformers and beam sets. A total of 15 OSOM vehicle movements are expected for each stage of construction and these movements will be undertaken under escort.
- A vehicle swept path analysis will need to be undertaken to ensure that there is adequate room for the proposed OSOM vehicles to manoeuvre through the site access and along the proposed transport route. The appropriate approvals may also need to be obtained from Main Roads WA Heavy Vehicles Services.
- The crash history on the adjacent road network is low and does not appear to indicate any major safety issue on the road network. The proposed development will generate a low volume of additional traffic over a limited period of time and is unlikely to increase the risk of crashes unacceptably

6.2 ENVIRONMENTAL NOISE ASSESSMENT

6.2.1 ENVIRONMENTAL NOISE ASSESSMENT PREPARED BY LLOYD GEORGE ACOUSTICS (APPENDIX E)

Lloyd George Acoustics (LGA) have prepared an environmental noise assessment to report any potential impact and considerations with regard to noise emissions generated from the construction and operation of the Kemerton BESS facility. The development's compliance is assessed using the requirements from the Environmental Protection (Noise) Regulations 1997.

The assessment identifies four different scenarios in which the BESS facility maybe operated. It is critical to note that predicted noise levels are based on information provided by Tier 1 Original Equipment Manufactures (OEM) (which our client has a non-disclosure agreement with)the and is the best available information at the time of preparing the assessment. and cChanges to equipment selection and detailed designconstruction may alter these levels. The post-construction monitoring will confirm compliance against the assigned levels.

The assessment identifies a potential exceedance of 7dB at the Nearest Sensitive Receptor (NSR) during the nighttime period as part of the worst caseworst-case scenario. The Lloyd George Acoustics report noted that the investigation is inherently conservative, in that it assumes that all plant are concurrently operational, downwind conditions are occurring and tonality is present.

Further studies to investigate and confirm actual running operation patterns/procedures may be carried out in the future as the project progresses.

Also it should be noted that BESS HVAC from other projects LGA understands that BESS HVAC may not beare unlikely to ever operate at 100 percent fan speed operational during cooler periods such as night-time, so the noise emission from the BESS containers may be reduced as they are for the inverters when not 100 percent operational.

There are several mitigation strategies available to address these potential exceedances including the application of attenuation devices to battery infrastructure as well as the reduction of fan speeds during nighttime hours. This will be reviewed and confirmed during the detailed design phase and once operational, confirming compliance against the assigned levels.

6.3 ENVIRONMENTAL ASSESSMENT REPORT

6.3.1 ENVIRONMENTAL ASSESSMENT REPORT PREPARED BY WESTERN ENVIRONMENTAL (APPENDIX F)

Western Environmental has prepared an Environmental Assessment Report identifying the environmental values associated with the subject site and potential impacts on these values as a result of the proposed BESS. The EAR has also examined the adjacent landholding that may be subject to a further application to accommodate transmission.

The EAR sets out the following:

- An overview of legislation, policies, strategies and guidance that exist at the Commonwealth, State, and local levels that apply to and must be considered by the proposed development.
- Detail of the Site's environmental context through a review of existing information relating to the Site (including publicly available datasets and government-managed databases).
- A summary of the environmental characteristics of the Site and demonstrates how the development will comply with regulatory environmental objectives to minimise, avoid or mitigate impacts to the environment.
- Details of likely and possible environmental impacts and recommended mitigation and management measures.

FLORA AND VEGETATION

The EAR and preliminary site assessment identified the following regarding flora and vegetation at the subject site:

- Three primary vegetation types comprising Banksia Woodland TEC, Melaleuca vegetation community and wetland vegetation community.
- The Priority 3 (P3) flora species, Lasiopetalum membranaceum (Malvacaea) was identified on-site.
- DBCA database searches and previous reports showed that the threatened orchid species of Drakaea elastica and Drakaea micrantha have been recorded within 2 km of the Site to the south and east of the proposed Project Area within suitable vegetation communities and habitat.
- The Priority 3 flora species Dillwynia dillwynioides and Priority 4 species Acacia semitrullata have also been found to occur within the surrounding area and have a high likelihood to occur within the Site.
- The proposed transmission alignment runs through sections of Banksia Woodland TEC in Very Good condition.

A more detailed vegetation survey will be undertaken to confirm the presence of the environmental values above, their extent and condition as well as expected impacts. It is noted that the primary development footprint will not impact the vegetation values associated with the subject site due to its location within an existing cleared area. The impacts are limited to the transmission alignment, which itself has been located within an existing firebreak to minimise potential impacts.

FAUNA HABITAT

The EAR identifies the following Threatened and/or Priority Fauna species have been identified to have high likelihood of occurrence within the Site:

- Carnaby's black cockatoo (CBC) (Zanda latirostris)
- Forest Red-tailed black cockatoo (FRBC) (Calyptorhynchus banksii naso)
- Western Ringtail Possum (Pseudocheirus occidentalis)

The EAR identifies the presence of foraging habitat as well as suitable nesting trees within the subject site and adjacent sites suitable for Black Cockatoo's. The vegetation types identified within the subject site and adjacent land also represent suitable habitat for the Western Ringtail Possum.

Additional targeted surveys will be undertaken to confirm the presence of the above-listed fauna as well as the associated habitat values. However, the development footprint has been refined to minimise the potential impacts through the location of the primary development footprint and transmission within an existing cleared area.

6.4 STORMWATER MANAGEMENT

6.4.1 A WATER MANAGEMENT REPORT PREPARED BY OVERSBY CONSULTING (APPENDIX G)

The proposed stormwater management is designed to treat runoff as well as detention of the 1% AEP storm, consistent with the Shire of Harvey requirements. Water is to generally be sheeted off to the perimeter, where it will be picked up in a shallow grassed swale or flow directly into the grassed basin. The swales are to grade to the grassed basins.

1% AEP management

As there is no surface discharge of stormwater. The system is designed to infiltrate all stormwater up to and including the 1% AEP event.

The modelled required detention volume has been determined based on the following assumptions:

- The BESS and Transformer sites are 90% impervious with water discharged to the perimeter of the quarry. This sub catchment is 13.6835 ha with a slope of 1%. Of this 90% impervious are, 50% is assumed to capture the first 3mm (eg limestone road base) while the other 40% is assumed to have an initial loss of 1mm.
- The surrounding 5.0518ha buffer area is assumed to be 7% impervious with a slope of approximately 30%. This also discharges to the same location
- The northern external catchment is earth worked/ modified so that there is no flow onto the subject land. This water is to be sent to a separate grassed infiltration basin.
- Bunds are to be retained on the west, south and east boundaries to continue to stop water entering the subject land.
- All key infrastructure is to be RL 9.1 or higher.
- A minimum of 1m of separation between in key infrastructure and the 1% AEP flood level is required.

To achieve full detention an elongated basin is proposed around the perimeter of the BESS and Transformer areas.

The basin has the following characteristics:

- Basin 1m deep
- Base at RL 7.1 (0.5m above recorded maximum groundwater)
- 1:4 sides
- Base area of 1900m^2, (2m wide x 950m long).
- Top area of 9582m^2, (10m wide and 958m long).
- Volume at top of 5249m3.
- Base infiltration of 2m/ day and side infiltration of 3m/day.

This basin holds the full 1% AEP peak at RL8.1. In doing so, it also achieves full detention and infiltration of the 10% AEP storm. The basin has been modelled as a continuous basin. The basins will be interconnected via the shallow swales, allowing water to balance between the individual portions during larger events. The indicative location of the basin/s and associated swales can be seen in **Appendix G.**

6.5 BUSHFIRE

6.5.1 BUSHFIRE MANAGEMENT PLAN PREPARED BY WESTERN ENVIRONMENTAL (APPENDIX H)

A BMP has been prepared by Western Environmental to address SPP 3.7 and the Guidelines for Planning in Bushfire Prone Areas. The BMP identified the proposed BESS as a high-risk land use, which requires the preparation of a risk assessment in accordance with Policy Measure 6.6 of SPP 3.7. This risk assessment is included as an appendix to the BMP.

SPP 3.7 and the Guidelines do not currently provide an assessment framework for the specific consideration of renewable energy facilities. As such, in addition to the risk assessment and the requirements under SPP3.7 and the Guidelines, the BMP also includes and assessment against the Country Fire Authority (CFA) Design Guidelines and Model Requirements for Renewable Energy Facilities Version 4 (CFA Guidelines). The CFA Guidelines are currently considered the most appropriate framework for the assessment of the proposed BESS. The lease areas associated with the proposed BESS comprise existing cleared area historically utlised for sand mining surrounded by unmanaged vegetation classified as forest.

Further, as a high-risk land use the key components including the BESS cabinets, inverters and substations will be subject to a BAL-10 rating. This rating also applies to the habitable buildings on site, with non-habitable buildings being subject to a BAL-29 rating. The BMP demonstrates that the required BAL ratings can be achieved through sufficient separation between the different buildings and infrastructure without a requirement to modify the existing vegetation. The BMP also demonstrates that access to and within the site is consistent with the requirements under the Guidelines, including secondary access.

Overall, the BMP demonstrates that bushfire risk as a result of the proposed BESS, can be appropriately managed and comply with the requirements under SPP3.7 and the Guidelines.

In addition, the BMP also demonstrates that the proposed BESS complies with the requirements specified under the CFA Guidelines, providing additional assurance that the Bushfire Risk has been appropriately and comprehensively addressed.

7.0 CONCLUSION

The proposed Kemerton BESS is an important renewable energy project which will contribute significantly to the State's renewable energy future. The site has been selected based on detailed investigations and the site's current land use. The proposal wholly aligns with the local and State objectives and vision.

The proposal has been considered at a detailed level and this report demonstrates that it complies with all relevant technical and planning legislation and frameworks, as summarised below:

The site was selected due to its current sand mining use, and location within the KSIA, in which the proposal is entirely suitable for.

The proposal demonstrates a high level of compliance and alignment with Federal, State, Regional, Local and other frameworks that are relevant in considering proposals for renewable energy facility developments.

All aspects of the proposal comply at a technical level, with the following detailed technical studies undertaken to understand the potential impact may have on the surrounding locality and what mitigation measures may be implemented where required:

- **Environmental Noise Assessment**
- **Traffic Impact Assessment**
- **Bushfire Management Plan and Bushfire Risk Management Plan**
- **Water Management Plan**
- **Environmental review document and flora and fauna survey**

It is respectfully requested that this application be approved, subject to fair and reasonable conditions.

DISCLAIMER

This report is dated August 2024 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Ltd (Urbis) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of Trina (Instructing Party) for the purpose of Development Application Report (Purpose) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

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All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

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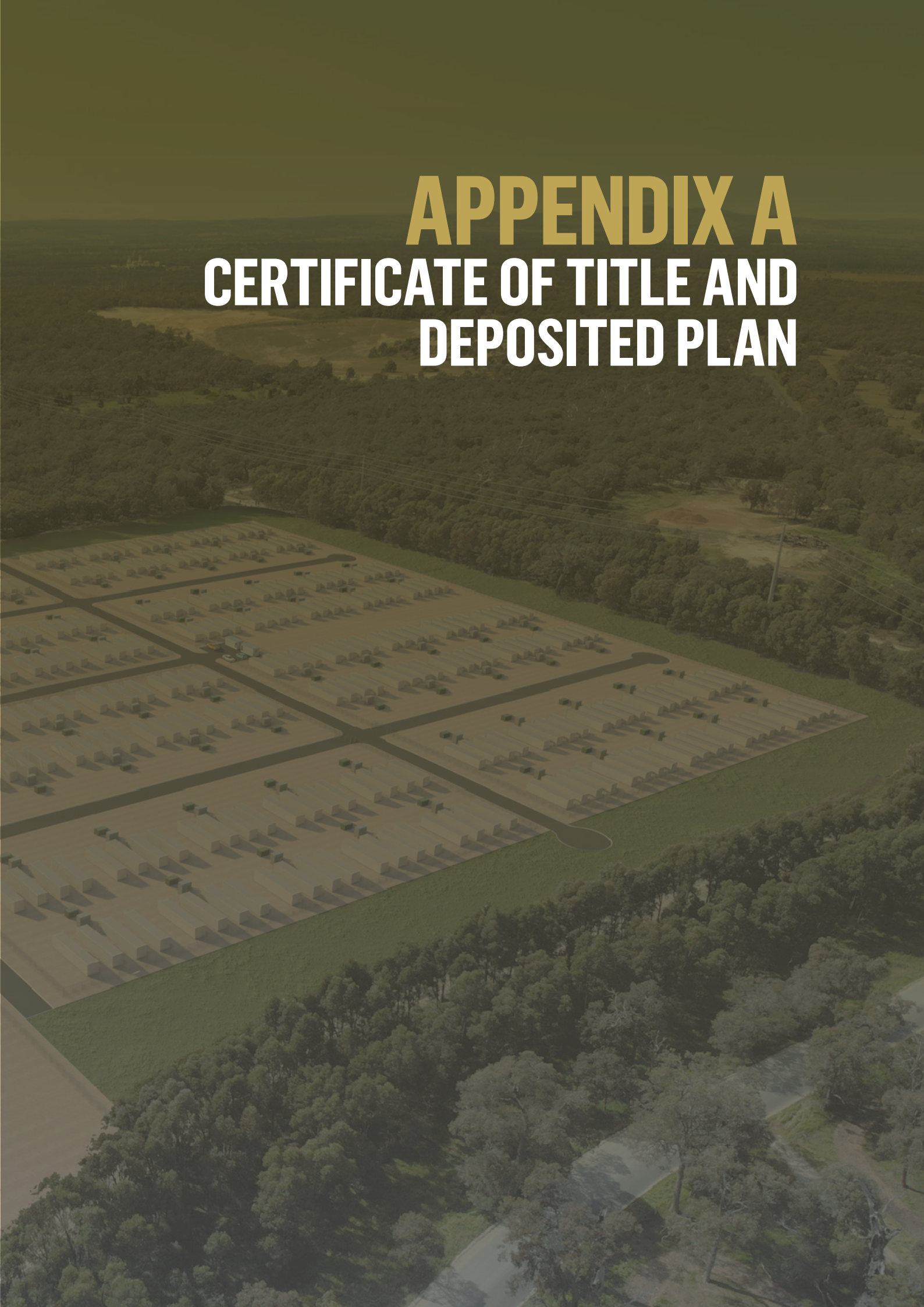
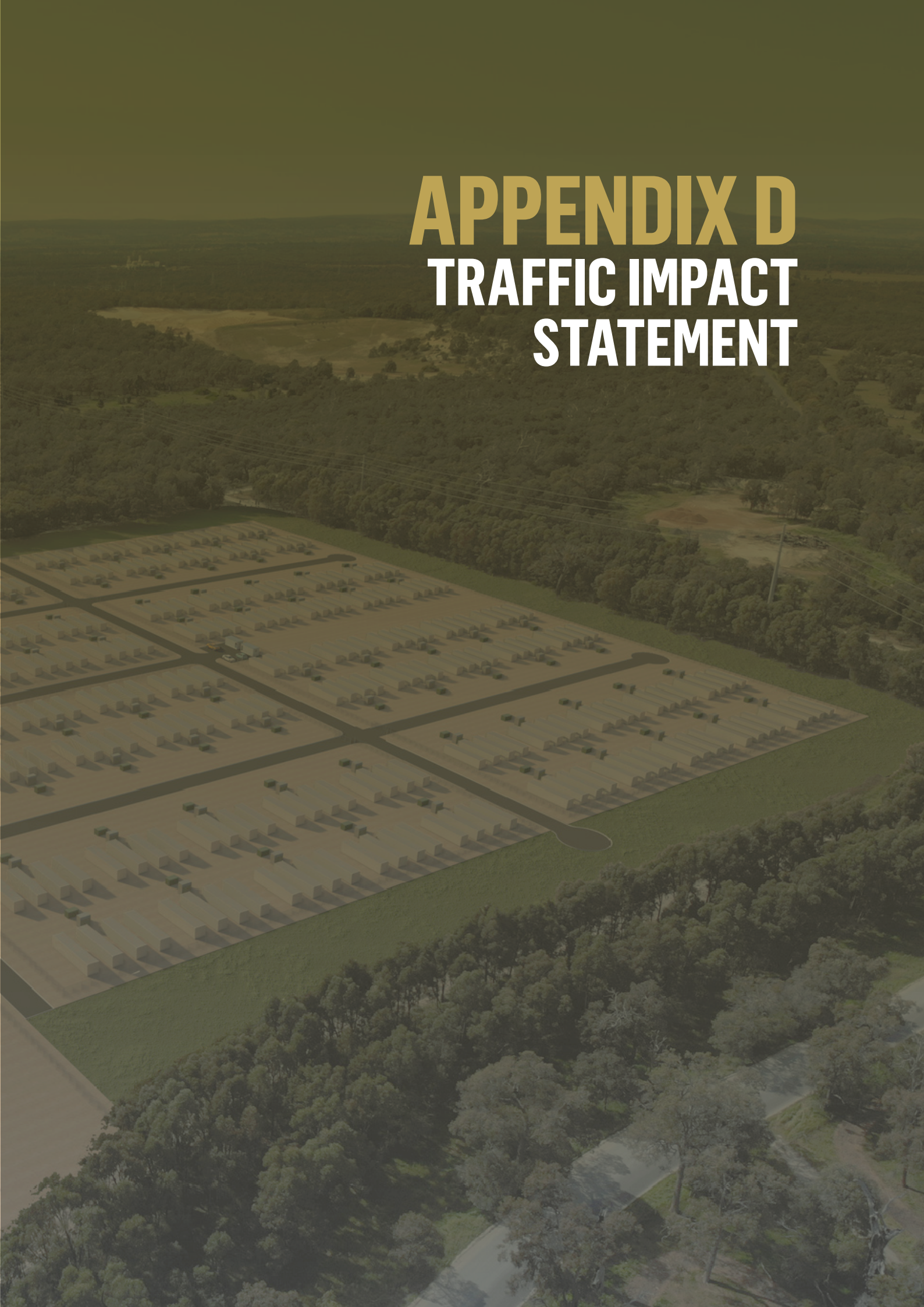
This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

APPENDIX A
CERTIFICATE OF TITLE AND DEPOSITED PLAN



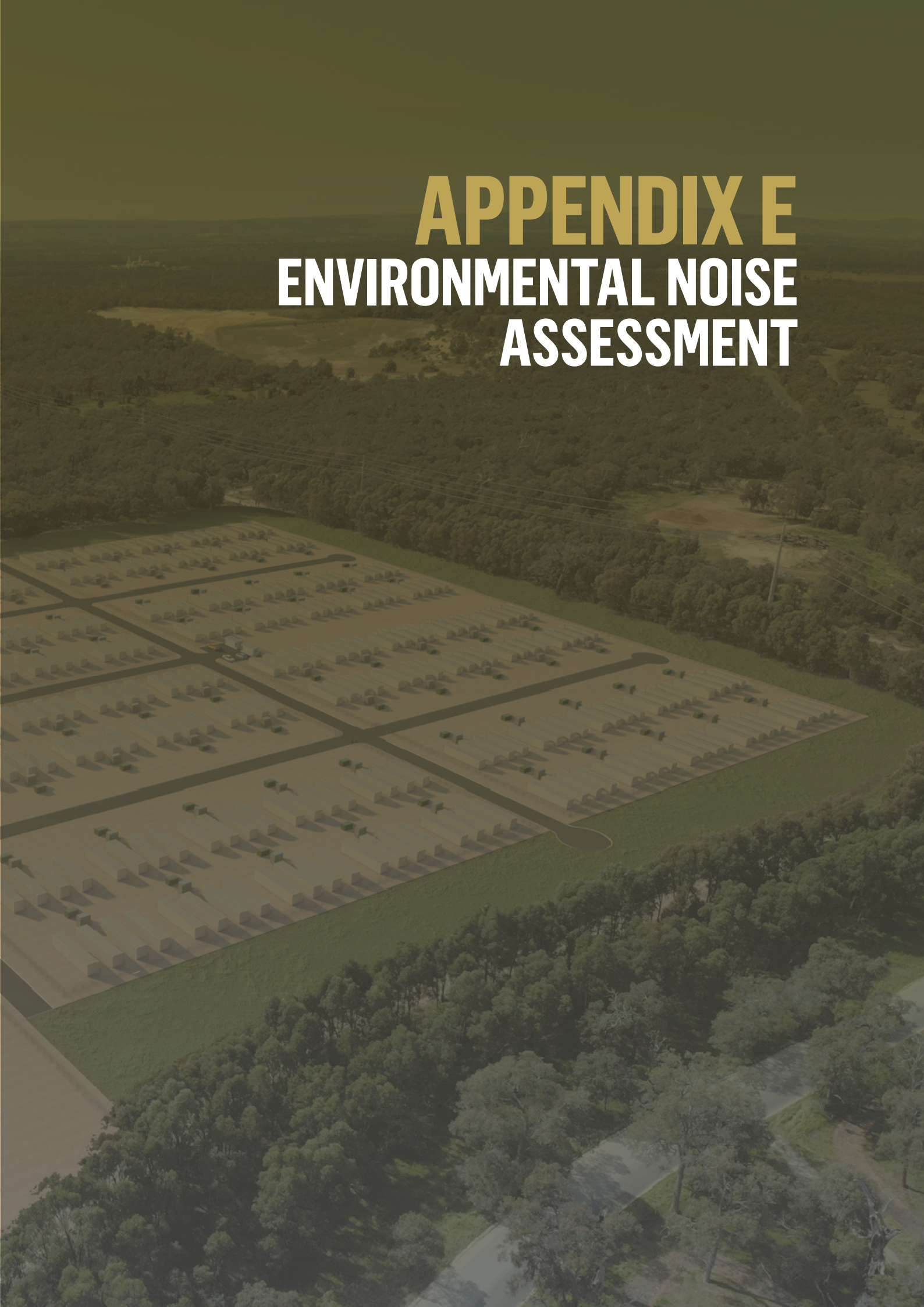
APPENDIX B
DEVELOPMENT APPLICATION FORMS

APPENDIX C
DEVELOPMENT PLANS

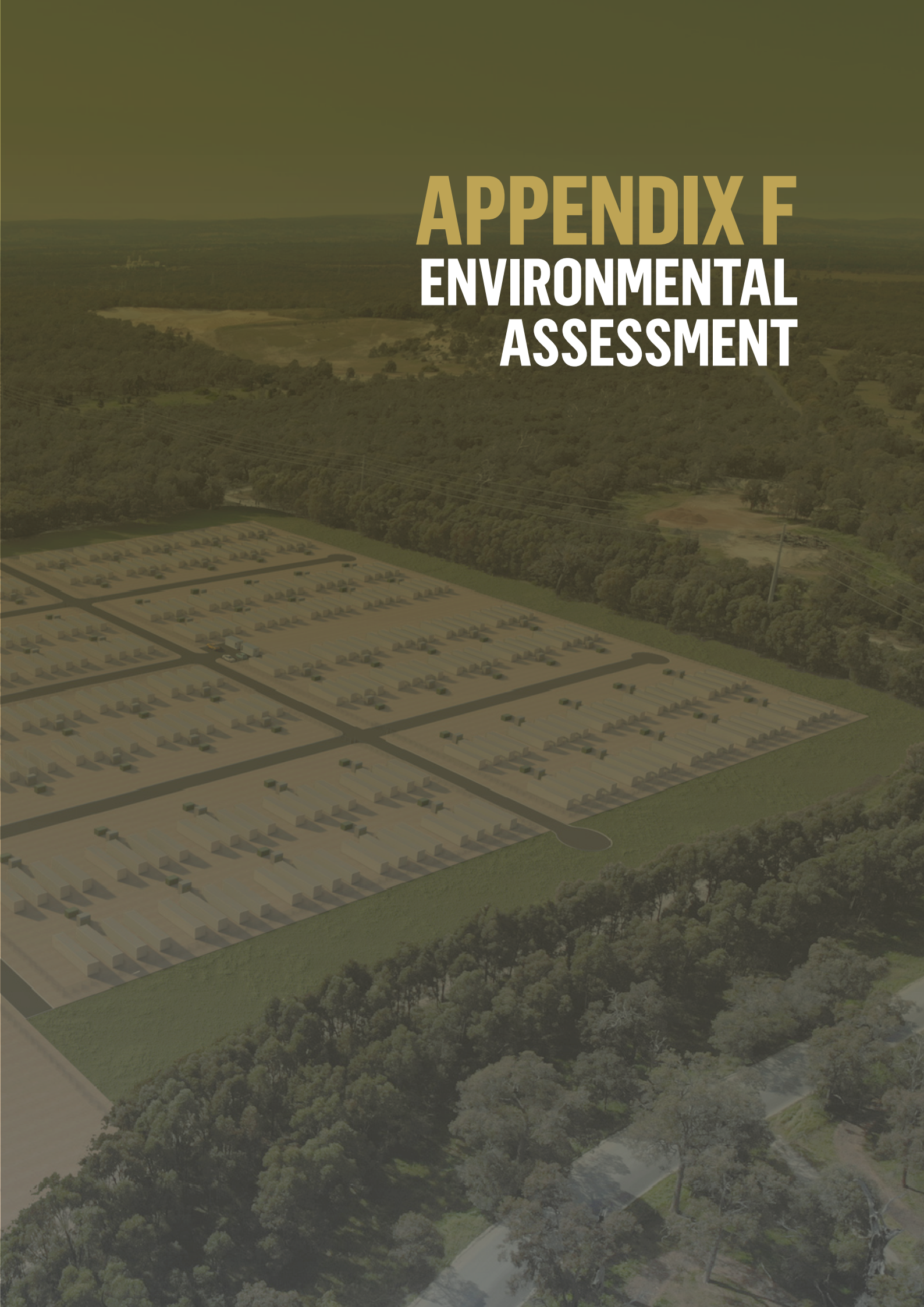


APPENDIX D
TRAFFIC IMPACT STATEMENT

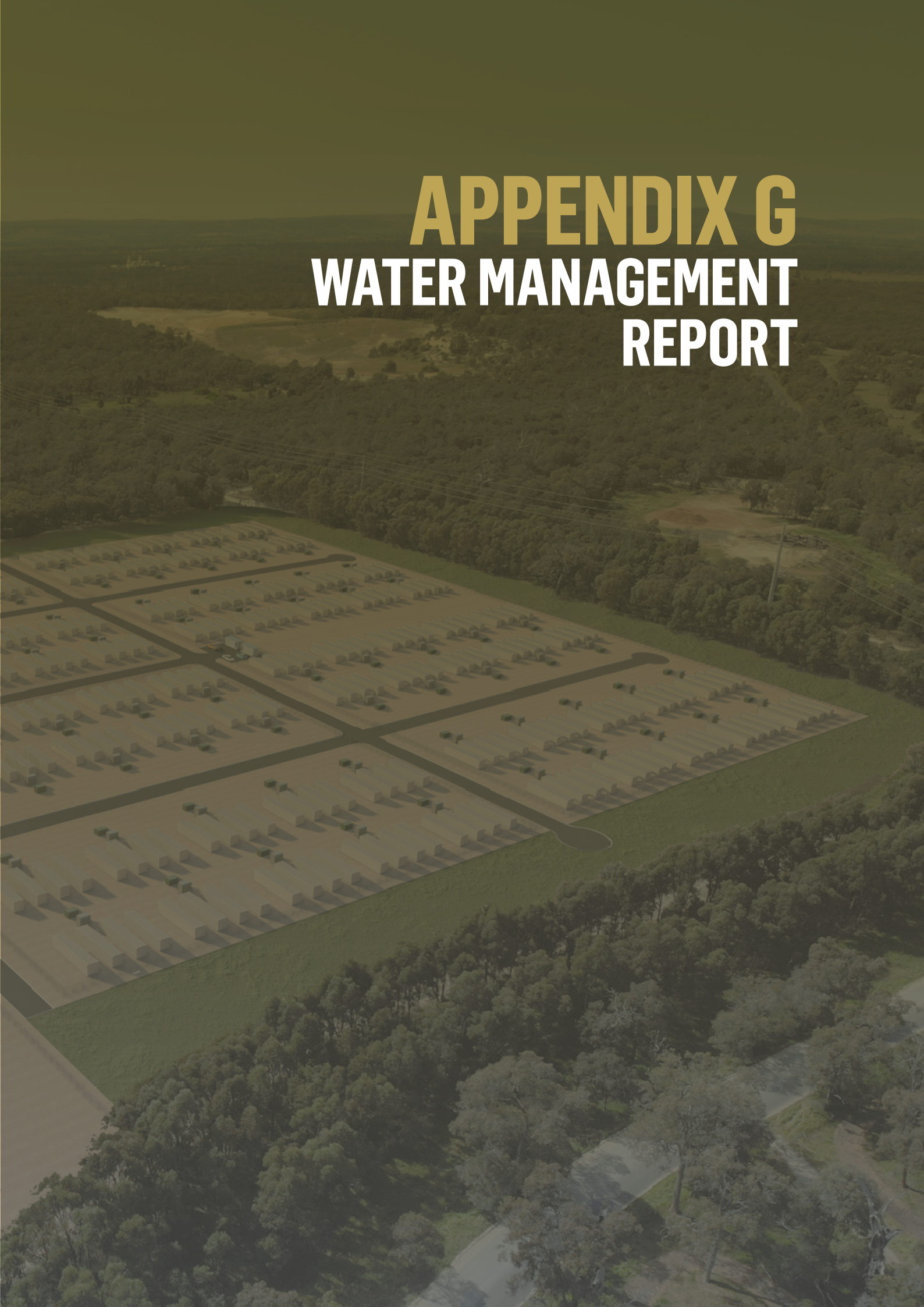
APPENDIX E
ENVIRONMENTAL NOISE ASSESSMENT



APPENDIX F
ENVIRONMENTAL ASSESSMENT



APPENDIX G
WATER MANAGEMENT REPORT



APPENDIX H
BUSHFIRE MANAGEMENT PLAN

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