

Ashburton North Strategic Industrial Area (ANSIA)

IMPROVEMENT SCHEME NO. 1 SCHEME AMENDMENT REQUEST



Prepared for **Department of Jobs, Tourism, Science and Innovation
and LandCorp (Industrial Lands Authority)**
Prepared by **Taylor Burrell Barnett**



Western Australian Planning Commission

**IMPROVEMENT SCHEME NO. 1: ASHBURTON NORTH
STRATEGIC INDUSTRIAL AREA**

Amendment No . 1

Summary of Amendment Details

Rezoning of land within the Ashburton North Strategic Industrial Area to the General Industry and Strategic Industry zones, identification of additional uses and changes to land use permissibility in the Scheme and associated modifications to the Ashburton North Strategic Industrial Area - Guide Plan.

Planning and Development Act 2005

RESOLUTION TO ADOPT AMENDMENT TO IMPROVEMENT SCHEME

**Improvement Scheme No. 1: Ashburton North Strategic Industrial Area
Amendment No. 1**

Resolved that the Western Australian Planning Commission pursuant to section 122B of the *Planning and Development Act 2005*, amend the above Improvement Scheme by:

1. Rezoning part of Lot 153 on Deposited Plan 220110 from the Infrastructure zone to the Strategic Industry zone, as shown on the Scheme Amendment Plan.
2. Rezoning part of Lot 152 on Deposited Plan 22065 and part of Lot 1577 on Deposited Plan 7283 from the Industry Protection zone to the General Industry zone as shown on the Scheme Amendment Plan.
3. Deleting the boundary for Additional Use No. 1 from the Scheme Map, as shown on the Scheme Amendment Plan, and deleting the associated additional use provisions from Table 2 – Specific additional uses for zoned land in Scheme area in the Scheme Text.
4. Inserting an Additional Use boundary around the southern portion of the Strategic Industrial zone, as shown on the Scheme Amendment Plan, and modifying Table 2 – Specific additional uses for zoned land in Scheme area in the Scheme Text, as outlined below:

No.	Description of land	Additional use	Conditions
1	Lots 500, 506, 507, 508, 518, 540, and Portion of Lots 152, 153, 351, 505, 509, 519, 520, 541 and 563 as defined on the Scheme Map.	Discretionary (D) uses: Industry Industry – Noxious	1. The land use must be deemed to be of strategic significance to the regional and state economy. 2. The land use must not impede the operation of hydrocarbon processing industries.

5. Modifying Table 1 – Zoning Table in the Scheme Text by:
 - a. designating Industry – strategic extraction as a D use in the General Industry zone;
 - b. designating Supply base as a P use in the General Industry zone;
 - c. designating Transport overnight facility as a D use in the General Industry zone; and
 - d. inserting Animal husbandry – intensive as a use class and designating it as an X use in all zones.
6. Modifying the Ashburton North Strategic Industrial Area – Guide Plan by:
 - a. Deleting the boundary for Additional Use No. 1 from the Guide Plan as shown on the Guide Plan Amendment Plan;
 - b. Inserting an Additional Use boundary around the southern portion of the Strategic Industry zone as shown on the Guide Plan Amendment Plan;
 - c. Modifying the alignment and extent of the Indicative Western MUAIC and the extent of the Strategic Industry zone and Drainage areas on adjacent land, as shown on the Guide Plan Amendment Plan;
 - d. Inserting a Key Connection Symbol to the northern end of the Western MUAIC and updating the Guide Plan Legend accordingly, as shown on the Guide Plan Amendment Plan;
 - e. Deleting all Indicative Strategic Industrial Development Sites boundaries, and deleting Indicative Strategic Industrial Sites from the Legend, as shown on the Guide Plan Amendment Plan;

- f. Identifying part of Lot 152 on Deposited Plan 22065 and part of Lot 1577 on Deposited Plan 7283 as General Industry zone, as shown on the Guide Plan Amendment Plan;
- g. Identifying part of Lot 152 on Deposited Plan 22065 as Drainage areas, as shown on the Guide Plan Amendment Plan;
- h. Inserting boundaries which show the extent of the strategic industry, workforce accommodation and power station buffers, as shown on the Guide Plan Amendment Plan;
- i. Deleting section 1.5 Sites for Future Investigation;
- j. Modifying section 1.4.2 General Industry Zone by deleting reference to 'management plans and studies' and existing point g) and adding the following points after existing point f):
 - g) the existing Strategic Industry, Workforce Accommodation and Power Station buffers, as identified on the Guide Plan;
 - h) Environmental Assessment Report;
 - i) site investigations (such as geotechnical and acid sulfate soils); and
 - j) any other management plans and strategies the Commission considers relevant.
- k. Inserting section 1.5 Drainage, as follows:

1.5 Drainage

There shall be no development of buildings, structures or other infrastructure within a drainage area which will impede or undermine its primary drainage function. In the event that any construction is proposed in a drainage area, there shall be suitable modelling undertaken to determine that it does not undermine its primary drainage function.

- l. Inserting section 1.6 Provisions Applying to Development in all Zones, as follows:

1.6 Provisions Applying to Development in all Zones

When considering applications for development approval in any zone, the Commission shall have due regard to the following industrial synergies:

Supply synergies: *featuring local manufacturer and dedicated supplier of principal reagents for core process industries (e.g. production of nitrogen for industrial use). The main supply synergy is the provision of gas from the LNG and domestic gas processing plants; and*

By product synergies: *the use of a previously disposed by-product (as solid, liquid, or gas, including heat) from one facility by another facility to produce a valuable by-product. This includes CO² for ammonium urea production, heat for desalination or process heat, and inorganic solid waste by products (such as construction and demolition waste).*

The amendment is standard under the provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* for the following reasons:

- The amendments to the Strategic Industry and General Industry zones are consistent with the objective of the zones identified in the Improvement Scheme;
- The amendment is considered to have minimal impact on land in the Scheme area which is not subject of the amendment; and
- The amendment is not considered to result in any significant environmental, social, economic or governance impacts on land in the Scheme area.

Dated this 24 day of JULY 2019



CHAIRPERSON –
WESTERN AUSTRALIAN PLANNING COMMISSION



SECRETARY –
WESTERN AUSTRALIAN PLANNING COMMISSION

AMENDMENT REPORT

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1 INTRODUCTION

1.1 REQUEST FOR AMENDMENT

This report constitutes a formal request to the Western Australian Planning Commission (the Commission) to adopt an amendment to Ashburton North Strategic Industrial Area (ANSIA) Improvement Scheme No. 1. This Scheme Amendment proposes modifications to both Improvement Scheme No. 1 and the ANSIA Guide Plan to provide greater flexibility in the planning framework to facilitate a more sustainable and competitive strategic industrial area. The key components of the proposed Amendment to both Improvement Scheme No. 1 and the Guide Plan are as follows:

1. Rezoning land from Industry Protection zone to General Industry zone to progress planning and development within Stage 2 of the ANSIA; and
2. Applying an Additional Use boundary around the southern portion of the Strategic Industry zone and inserting associated Additional Use provisions.

Other minor amendments are also proposed, and these will be outlined later in the report.

1.2 BACKGROUND

In 2008, the Western Australian (WA) State Government determined that a new hydrocarbon processing precinct would be established in the Pilbara, in order to derive maximum benefit from substantial gas discoveries off the North West coast. The ANSIA was subsequently established. Located 12 kilometres south west of the town of Onslow, the ANSIA has the capacity to accommodate up to two Liquefied Natural Gas (LNG) processing facilities, at least two domestic gas processing facilities and multiple downstream, processing industries. The ANSIA has a critical role in providing for future energy needs by taking advantage of hydrocarbon resources found in the Northern Carnarvon Basin.

The ANSIA currently comprises land designated for strategic industry, general industry, general industry, port purposes, workforce accommodation, and a multi-user access and infrastructure corridor (MUAIC). The Port of Ashburton (Port), managed by the Pilbara Ports Authority (PPA), is fundamental to the development of the strategic industrial area. The MUAIC provides connectivity between industry sites and the Port.

The Department of Jobs, Tourism, Science and Innovation (JTSI) is the lead agency for the ANSIA, and LandCorp (Industrial Lands Authority) is the industrial estate manager. The following is a summary of major milestones at the ANSIA:

- In 2010 the ANSIA Special Control Area was adopted by the Shire of Ashburton (Shire) and Commission, establishing the planning framework for the area;
- In 2011 the ANSIA Structure Plan was approved by the Shire and Commission, establishing the land use framework and staging in more detail;
- In 2012 LandCorp (Industrial Lands Authority) leased land to Chevron for the Wheatstone LNG Project and BHP Billiton for the Macedon Domestic Gas Plant. Since the Macedon Domestic Gas Plant has been operating since 2013 and the first shipment of LNG from Wheatstone was announced in 2017;
- In 2013 LandCorp's (Industrial Lands Authority) General Industrial Area zoned 'Industry' under the Shire's Local Planning Scheme No. 7 (LPS 7);
- In 2013 the Shire adopted a Scheme Amendment for the ANSIA 'Future Industry Area' to rezone the area to 'Strategic Industry' under the Shire's LPS No. 7; and
- In 2016, the Improvement Scheme was gazetted to ensure efficient planning of the ANSIA as a strategic industrial area.

1.3 STAGING

Given the expansive area of the ANSIA, the scale and development timeframes, a staged approach to planning and development has been adopted, as illustrated in **Figure 1**. Extensive technical documentation informed the planning and development of Stage 1 of the ANSIA, as referenced in the Improvement Scheme No. 1 Report.

A key component of this Scheme Amendment is the rezoning of the Industrial Protection zone within Stage 2. The Guide Plan, as outlined in section 1.5, requires studies be undertaken prior to such a rezoning occurring. Accordingly, technical investigations have been undertaken in support of this Request and are addressed both within, and appended to, this report. The technical inputs prepared in support of the amendment include:

- Environmental Assessment Report (**Appendix A**);
- Engineering Concept Report (**Appendix B**); and
- Bushfire Management Plan (**Appendix C**).

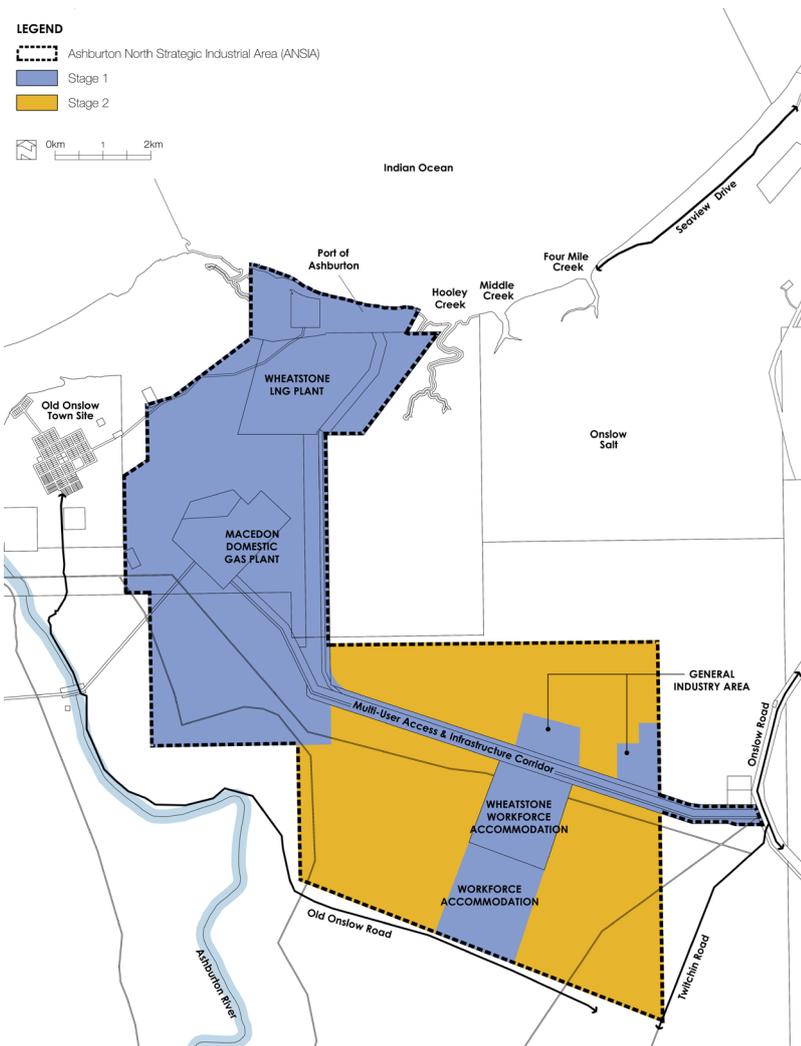


Figure 1 ANSIA Staging

2.2 LEGAL DESCRIPTION & OWNERSHIP

The ANSIA is comprised of Crown and freehold land owned by the Western Australian Land Authority (LandCorp (Industrial Lands Authority)) with a number of lease arrangements to facilitate the use and development of the land. The Port of Ashburton is vested with the Pilbara Port Authority. The ownership details for land within the ANSIA Improvement Scheme boundary are described within **TABLE 1** and shown on **Figure 3**.

TABLE 1 - LEGAL DESCRIPTION

Lot	Plan/ Diagram	Area (Ha)	Land Owner
152	220265	99641.36	State of Western Australia
153	220110	4390.9	State of Western Australia
226	219154	8.76	State of Western Australia
228	192685	1	State of Western Australia
238	195206	40.88	State of Western Australia
305	071345	13.07	State of Western Australia
350	105914	8.10	State of Western Australia
351	067599	8.09	State of Western Australia
500	069197	248.15	Western Australia Land Authority
505	69198	34.48	State of Western Australia
506	069197	1.68	State of Western Australia
507	069197	2.69	State of Western Australia
508	069197	1.77	State of Western Australia
509	069198	61.59	State of Western Australia
510	069198	1.92	State of Western Australia
511	069198	4.86	State of Western Australia
512	069200	32.93	State of Western Australia
518	069197	6.84	State of Western Australia
519	069198	182.86	State of Western Australia
520	069197	0.44	State of Western Australia
530	069198	0.17	State of Western Australia
535	069198	0.07	State of Western Australia
536	069198	0.01	State of Western Australia

Lot	Plan/ Diagram	Area (Ha)	Land Owner
540	069197	45.68	State of Western Australia
555	402556	15607	State of Western Australia
557	074894	4.81	Western Australia Land Authority
558	071346	1.2019	Western Australia Land Authority
560	071346	98.05	Western Australia Land Authority
561	071346	85.37	Western Australia Land Authority
563	071346	31.88	Western Australia Land Authority
564	071346	9.98	State of Western Australia
565	071346	8.30	Western Australia Land Authority
567	071345	441.75	Western Australia Land Authority
568	071345	169.12	Western Australia Land Authority
569	071345	273.94	State of Western Australia
570	071345	52.98	State of Western Australia
573	071345	137.21	Western Australia Land Authority
574	071345	34.85	State of Western Australia
575	071345	42.97	Western Australia Land Authority
881	402083	60.34	State of Western Australia
156 2	072843	1.6444	Western Australia Land Authority
157 7	072843	307.57	Western Australia Land Authority

LEGEND

-  Ashburton North Strategic Industrial Area (ANSIA)
-  Improvement Scheme Boundary

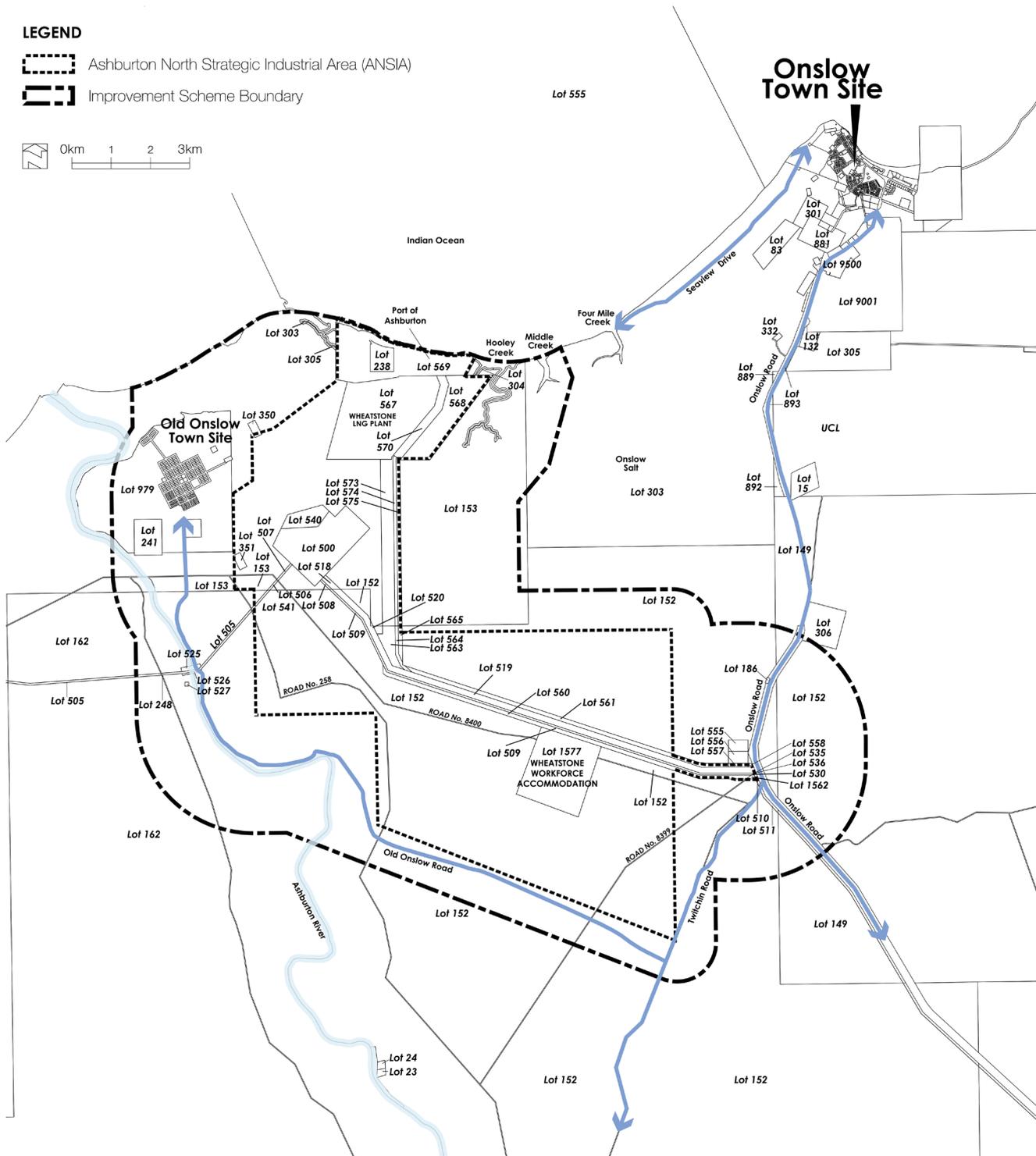
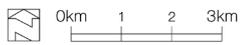


Figure 3 Lot Details

3 PLANNING FRAMEWORK

3.1 STATE PLANNING POLICY 2.6 STATE COASTAL PLANNING

The purpose of State Planning Policy (SPP) 2.6 is to provide guidance for decision-making within the coastal zone including managing development and land use change; establishment of foreshore reserves; and to protect, conserve and enhance coastal values. The policy requires that coastal hazard risk management and adaptation is appropriately planned for, encourages innovative approaches to managing coastal risk and provides public ownership of coastal foreshore reserves.

Modelling of the 100-year ARI storm event (water depth and velocity) for Stage 2 has been undertaken, including coastal storm surge and an allowance for climate change. These investigations have informed the areas more suited to development. This information is contained within the Engineering Concept Report which is appended to this report, refer **Appendix B**.

3.2 STATE PLANNING POLICY 3.7 PLANNING IN BUSHFIRE PRONE AREAS

SPP 3.7 assists in reducing the risk of bushfire to people, property, and infrastructure by encouraging a conservative approach to strategic planning, subdivision, development, and other planning decisions proposed in bushfire prone areas. SPP 3.7 applies to all land which has been designated as bushfire prone by the Fire and Emergency Services (FES) Commissioner as identified on the Map of Bush Fire Prone Areas.

The ANSIA is identified as bushfire prone on the Map of Bushfire Prone Areas. Accordingly, a Bushfire Management Plan (BMP) has been prepared and informed the Scheme Amendment Request. A copy of the BMP is included in **Appendix C** and discussed in more detail in section 6.8.

3.3 STATE PLANNING POLICY 4.1 STATE INDUSTRIAL BUFFER POLICY

The purpose of SPP 4.1 is to provide a consistent state-wide approach for the protection and long-term security of industrial zones, transport terminals (including ports) other utilities and special uses. It aims to provide for the safety and amenity of surrounding land uses while having regard to the rights of landowners who may be affected by residual emissions and risk. Industrial land uses and major infrastructure, as identified in SPP 4.1, require on-site and off-site buffers.

The Improvement Scheme includes the following buffers:

- **Strategic Industry Buffer:** a 3 kilometre risk, noise and air quality indicative buffer from the strategic industry area.
- **Workforce Accommodation and Western General Industrial Area Buffer:** a 1 kilometre 'land use sensitivity' buffer from the boundary of the workforce accommodation sites and the southern boundary of the western GIA over the Wheatstone workforce accommodation site. The aim of this buffer is to ensure surrounding land uses would not adversely affect health, safety or amenity of the workers' accommodation.
- **Power Station Buffer:** a 3 kilometre buffer from the proposed Horizon Power station site, including the Water Corporation desalination plant.

The buffers have defined the ANSIA Improvement Scheme boundary. As part of this Amendment, the buffers are proposed to be identified on the Guide Plan to clearly inform future development within the ANSIA.

3.4 IMPROVEMENT PLAN NO. 41: ASHBURTON NORTH STRATEGIC INDUSTRIAL AREA

Improvement Plan No. 41: Ashburton North Strategic Industrial Area authorised the making of Improvement Scheme No. 1. The purpose of the Improvement Plan was to establish the strategic planning and development intent, to provide for a framework endorsed by the Commission, and to provide guidance for the preparation of subsequent planning documentation and approvals.

The Improvement Scheme is informed by the following objectives:

- a) To create a strategic industrial estate comprising major hydrocarbon processing industries and synergistic services and/or facilities with viable port access.
- b) Ensure the safe and efficient use of land for the long-term industrial development of a strategic industrial area of regional, state and national significance.
- c) To provide an internationally competitive industrial estate that offers a layout designed to facilitate and encourage industry synergies, functional transport links and where possible, the sharing of infrastructure networks and corridors.
- d) To minimise and mitigate any adverse impacts on the surrounding land, the terrestrial and marine environment, and the Onslow community.
- e) To ensure the appropriate preparation and layout of land uses through appropriate internal and external buffers to prevent incompatible or conflicting land uses.

The proposed Amendment has been prepared in accordance with the ANSIA Improvement Scheme objectives. In particular, the primacy of the hydrocarbon processing industries has been maintained through the Strategic Industry zone which comprises the core of the ANSIA. Support services and facilities are in turn provided for through the proposed Stage 2 General Industry area. Conditions are proposed in relation to the Additional Uses identified for the southern portion of the Strategic Industrial Area to ensure the primacy of the hydrocarbon processing industries is not compromised.

3.5 IMPROVEMENT SCHEME NO.1: ASHBURTON NORTH STRATEGIC INDUSTRIAL AREA

The ANSIA Improvement Scheme No. 1 was gazetted on 30 September 2016. The Scheme replaces the Shire of Ashburton's Town Planning Scheme No. 7 as the land use planning instrument for the ANSIA.

The ANSIA Improvement Scheme includes the following zones:

- Strategic Industry zone;
- General Industry zone;
- Infrastructure zone;
- Workforce Accommodation zone;
- Industry Protection zone; and
- Special Use zone.

Whilst a number of minor amendments are proposed as part of this Scheme Amendment Request, the key components of the proposed Amendment is to provide for general industrial uses within the Stage 2 area and additional uses within the southern portion of the Strategic Industry zone.

3.6 ASHBURTON NORTH STRATEGIC INDUSTRIAL AREA GUIDE PLAN

The Improvement Scheme establishes provisions for the establishment and operation of a Guide Plan to provide more detailed guidance of planning intent for the Scheme Area. The Guide Plan is not prescriptive; it is intended to provide a broad framework and be used as a guide by the Commission in the assessment and determination of applications for development approval.

The Guide Plan was developed based on the following key elements and considerations:

- Utility synergies: shared use of utility infrastructure, mainly revolving around water and energy (e.g. water supply and recovery, cogeneration) and including industrial and general waste recycling and reuse;
- Supply synergies: featuring local manufacturer and dedicated supplier of principal reagents for core process industries (e.g. production of nitrogen for industrial use). The main supply synergy is the provision of gas from the LNG and domestic gas processing plants;
- By-product synergies: the use of a previously disposed by-product (as solid, liquid, or gas, including heat) from one facility by another facility to produce a valuable by-product. This includes CO₂ for ammonium urea production, heat for desalination or process heat, and inorganic solid waste by products (such as construction and demolition waste); and
- Service synergies: sharing of services and activities between industries (e.g. joint training of staff and sharing of maintenance contractors including the common visitor and training centre and general industry area(s)).

This Scheme Amendment Request proposes modifications to the approved Guide Plan to align with the proposed amendments to Improvement Scheme No. 1.

4 IMPROVEMENT SCHEME AMENDMENT

The proposed amendments to Improvement Scheme No. 1 are detailed below and identified on **Figure 4**.

4.1 STAGE ONE

4.1.1 APPLY ADDITIONAL USE BOUNDARY AND INSERT ADDITIONAL USE PROVISIONS – STRATEGIC INDUSTRY ZONE SOUTH

It is proposed to apply an Additional Use boundary around the southern portion of the Strategic Industry zone. The purpose of the boundary is to provide greater flexibility in relation to the potential land uses which can occur within this area of the Strategic Industry zone.

Now that much of the planned development of the key hydrocarbon industries is either completed or in train, there is a more accurate understanding of the total land requirement for hydrocarbon industries, which is considerably less than was initially planned for. The northern portion of the ANSIA core, which will be retained for hydrocarbon industrial uses is considered sufficient to provide for all current and future hydrocarbon development potential in the region.

It is intended that the proposed amendment will open the southern portion of Stage 1 up to other strategic industrial enterprises. While there would be a preference for uses that display a synergy with the primary hydrocarbon industries, the main criteria will be that the additional uses do not compromise the objectives of the Improvement Plan; in particular, that the ANSIA comprises of 'major hydrocarbon processing industries and synergistic services and/or facilities with viable port access'. Accordingly, conditions are proposed in relation to the additional uses, to protect the primacy of the hydrocarbon industries.

It is proposed to insert provisions into **Table 2** – Specific additional uses for zoned land in Scheme area within the Improvement Scheme which will apply to the Additional Use boundary, as outlined below.

TABLE 2 - SPECIFIC ADDITIONAL USES FOR ZONED LAND IN SCHEME AREA

No.	Description of land	Additional use	Conditions
1	Lots 500, 506, 507, 508, 518, 540, and Portion of Lots 152, 153, 351, 505,509,519, 520, 541 and 563 as defined on the Scheme Map.	Discretionary (D) uses: Industry Industry – Noxious	1. The land use must be deemed to be of strategic significance to the regional and state economy. 2. The land use must not impede the operation of hydrocarbon processing industries.

Industry and Industry-Noxious are proposed to be additional, discretionary uses for the southern portion of the Strategic Industrial area subject to the two conditions detailed. Industry and Industry-Noxious will allow other strategic industries to develop within the Strategic Industrial area. The conditions ensure the ANSIA's strategic status and purpose in providing a hydrocarbon processing precinct are not compromised. The uses are proposed to be discretionary so an assessment is required to ensure the uses comply with the conditions specified prior to development approval being issued.

4.1.2 REZONE WESTERN MUAIC TO STRATEGIC INDUSTRY ZONE

It is proposed to rezone the western MUAIC from Infrastructure zone to Strategic Industry zone. The current Infrastructure zone fixes the alignment of the western MUAIC. Whilst the alignment of the services corridor within the Port (which connects the MUAIC to the Port) is fixed, the final alignment outside of the Port is still subject to further investigations. The services planned within the MUAIC can all be permitted within the Strategic Industry zone; therefore, the rezoning will provide greater flexibility regarding the final alignment of the western MUAIC.

An amendment is proposed to the Guide Plan to show the indicative alignment of the MUAIC and to identify the fixed location at which it must connect to the services corridor within the Port Area. This amendment is discussed further in section 5.1.3.

4.1.3 REMOVE ADDITIONAL USE BOUNDARY AND PROVISIONS – BROLGA WORKFORCE ACCOMMODATION SITE

It is proposed to remove the Additional Use boundary (Additional Use 1) from the Brolga workforce accommodation site and the associated text provisions in Table 2 - Specific additional uses for zoned land in Scheme area. The additional use provided for workforce accommodation to support both the Macedon Domestic Gas Plant and Wheatstone LNG Plant. The workforce accommodation was a temporary use only; the site is no longer in use and has been decommissioned. The additional use is therefore no longer required.

4.2 STAGE TWO

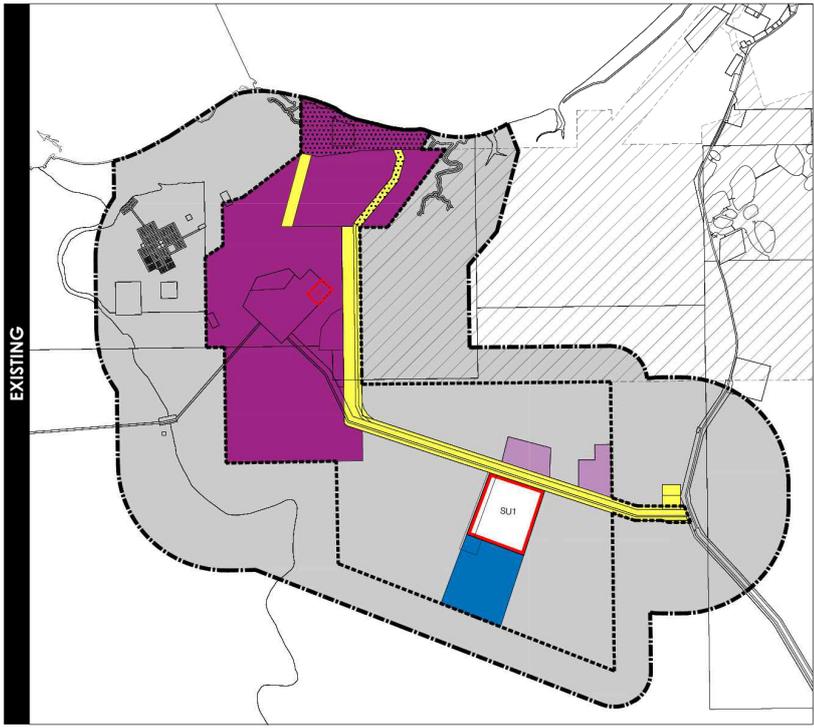
4.2.1 REZONE INDUSTRY PROTECTION ZONE TO GENERAL INDUSTRY ZONE

The Amendment proposes to rezone land within Stage 2 from Industry Protection zone to General Industry zone on the Scheme Map, as provided for in section 1.5 of the Guide Plan. The General Industry zone will primarily provide for synergistic services and facilities to the strategic industries located within the ANSIA core. To provide maximum flexibility for future development within Stage 2, all of Stage 2, with the exception of the existing Workforce Accommodation zone and the Special Use (SU1) site, is proposed to be rezoned to General Industry. The Guide Plan will then further refine the areas which are more suited to development within the General Industry area as informed by the Engineering Concept Report contained in **Appendix B**.

The rezoning to General Industry has been underpinned by the technical investigations undertaken and appended to this report which demonstrate that zoning the area for general industrial purposes is appropriate.

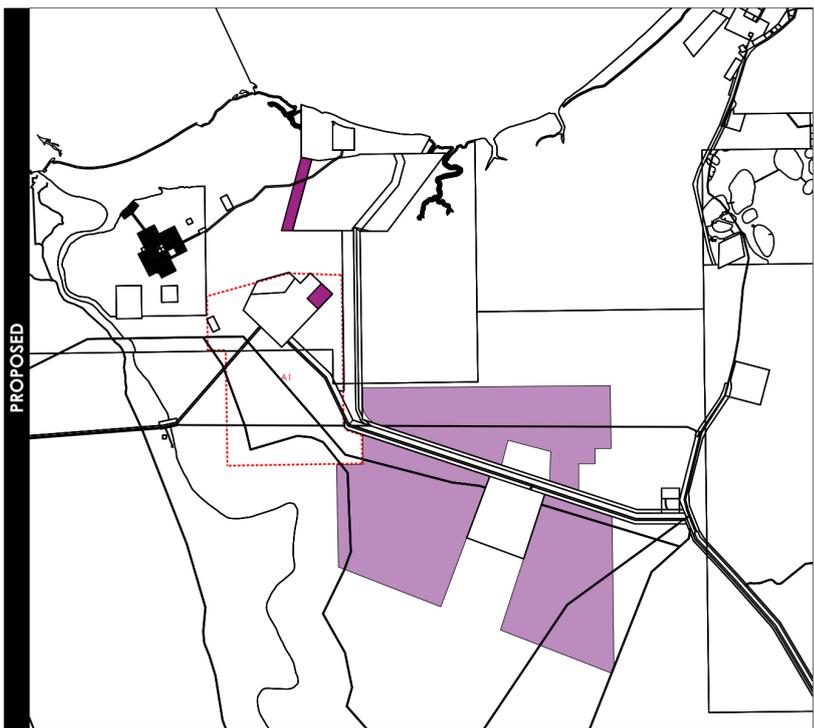
There has been sufficient technical investigation to establish that no part of the Stage 2 area needs to be precluded from development consideration based on strategic or environmental considerations. While some parts of the precinct may be physically more problematic for development, given that the possibilities for potential uses and development in the Stage 2 area are very diverse in terms of both type and scale, the extent to which the physical and environmental characteristics of the land might constrain development can be similarly varied. It is therefore considered inappropriate to preclude any land within the precinct from potential development, understanding that it will be incumbent on any future proponent to undertake their own detailed planning and investigations, as specified in the Guide Plan, to support their particular proposal and to determine its feasibility.

Compliance with section 1.5 of the Guide Plan is addressed in section 6.0 of this report. As highlighted in the Environmental Assessment Report, Engineering Concept Report and BMP, and provided for in the Guide Plan, additional investigations are required at the development application stage prior to development occurring within the General Industry zone.



LEGEND

- ASHBURTON NORTH STRATEGIC INDUSTRIAL AREA (ANSIA) IMPROVEMENT SCHEME BOUNDARY
 - ASHBURTON NORTH STRATEGIC INDUSTRIAL AREA BOUNDARY
 - STRATEGIC INDUSTRY ZONE
 - GENERAL INDUSTRY ZONE
 - INFRASTRUCTURE ZONE
 - WORKFORCE ACCOMMODATION ZONE
 - INDUSTRY PROTECTION ZONE
 - ADDITIONAL USE
 - SU1 SPECIAL USE ZONE
- EXPLANATORY NOTES
- AREA UNDER CONTROL OF PILBARA PORT AUTHORITY AND SUBJECT TO PORT AUTHORITIES ACT 1999. DEVELOPMENT OF LAND FOR THE PURPOSE OF PORT WORKS AND PORT FACILITIES REQUIRES THE APPROVAL OF THE PILBARA PORTS AUTHORITY.
 - ONSLow SOLAR SALT AGREEMENT AREA AND SUBJECT TO THE ONSLOW SOLAR SALT AGREEMENT ACT 1992 (WA).



LEGEND

- STRATEGIC INDUSTRY ZONE
- GENERAL INDUSTRY ZONE
- ADDITIONAL USE

Figure 4 Proposed Improvement Scheme Map Amendments

4.3 OVERALL

4.3.1 AMEND GENERAL INDUSTRY ZONE LAND USE PERMISSIBILITY

It is proposed to modify the land use permissibility of the General Industry zone as outlined in **Table 3** below.

TABLE 3 - GENERAL INDUSTRY ZONE LAND USE PERMISSIBILITY

Zones	General Industry	General Industry
Use Classes	Improvement Scheme No. 1	Proposed
Industry – strategic extraction	X	D
Supply Base	X	P
Transport Overnight Facility	I	D

The modifications to the permissibility of uses within the General Industry zone are proposed to ensure greater consistency with the objective of the zone. Industry – strategic extraction is proposed as a discretionary use to allow underutilised land to provide source materials for construction elsewhere. Supply base is considered an appropriate land use to occur within the General Industry zone and is therefore proposed to be a permitted use. Transport overnight facility is proposed as a discretionary land use to allow drivers to stop overnight when transporting materials.

4.3.2 INSERT 'ANIMAL HUSBANDRY – INTENSIVE' USE CLASS IN TABLE 1

It is proposed to insert 'animal husbandry – intensive' use class into Table 1 – Zoning Table as outlined in **Table 4** below. The need to identify this use, in particular, is instigated by virtue of previous approaches to try to establish such facilities within the area. The purpose of the amendment is to provide clarity that the land use is not consistent with the objectives of the Improvement Scheme and therefore is not permitted in any zone in the Scheme area.

TABLE 4 - ANIMAL HUSBANDRY – LAND USE PERMISSIBILITY

Zone	Strategic Industry	General Industry	Infrastructure	Workforce Accommodation	Industry Protection
Use classes					
Animal Husbandry - Intensive	X	X	X	X	X

5 GUIDE PLAN AMENDMENT

The ANSIA Guide Plan forms an appendix to Improvement Scheme No. 1. The purpose of the Guide Plan is to guide the location of land uses and development in Improvement Scheme No. 1 by outlining the specific requirements to be considered in each zone. The Guide Plan is not prescriptive and is intended to be used as a guide by the Commission in the assessment and determination of applications for development approval. It is proposed to amend both the Guide Plan map and text to supplement the proposed amendments to Improvement Scheme No. 1. The proposed amendments to the Guide Plan are detailed below and identified on **Figure 5**.

5.1 STAGE 1

5.1.1 AMENDMENTS CONSISTENT WITH IMPROVEMENT SCHEME MAP

The following amendments to the Guide Plan are proposed to ensure the Guide Plan is consistent with the Improvement Scheme Map. The rationale for the amendments is detailed in section 4.0.

1. Apply the Additional Use boundary around the southern portion of the Strategic Industry zone; and
2. Remove the Additional Use boundary from the Broilga workforce accommodation site.

5.1.2 UPDATE WESTERN MUAIC ALIGNMENT

It is proposed to update the alignment of the indicative western MUAIC. Further detailed site investigations have been undertaken regarding the alignment of the MUAIC. It is therefore proposed to identify the current alignment of the MUAIC on the Guide Plan to inform future planning and development.

5.1.3 APPLY 'KEY CONNECTION' SYMBOL

It is proposed to apply a 'Key Connection' symbol which links the future western MUAIC with the Port of Ashburton. As discussed previously, it is proposed to rezone the western MUAIC from Infrastructure zone to Strategic Industry zone on the Improvement Scheme Map to provide greater flexibility regarding the final alignment of the corridor. However, the alignment of the services corridor is fixed within the Port as determined by the Port of Ashburton Port Master Plan 2050. The application of the 'Key Connection' symbol will therefore clearly identify where the western MUAIC is required to connect into the services corridor within Port.

5.1.4 REMOVE INDICATIVE STRATEGIC INDUSTRIAL DEVELOPMENT SITES

A boundary denoting Indicative Strategic Industrial Development Sites is currently shown on the Guide Plan. However, the boundary only follows the outer edge of the Strategic Industry zone. The Strategic Industry zone on the Guide Plan clearly identifies where development should occur. The boundary is therefore considered superfluous and is proposed to be removed.

5.2 STAGE 2

5.2.1 IDENTIFY STAGE 2 INDUSTRY PROTECTION ZONE AS GENERAL INDUSTRY ZONE

It is proposed to identify the majority of land within Stage 2 currently shown as Industry Protection zone, as General Industry zone. The area to be identified as General Industry zone has been informed by the Engineering Concept Plan contained in **Appendix B**. Arup has undertaken multi-criteria analysis which has considered the following factors to assess the suitability of Stage 2 for future development:

- Topography;
- Slope;
- Flooding;
- Geology – Landform;
- Soils;
- Hydrology;
- Environmental; and
- Infrastructure Proximity.

Evaluation criteria was set for each of these factors to be used in the multi-criteria analysis. These criteria were weighted to place more emphasis on the more onerous considerations in relation to future development, notably flooding and topography. A rating of low, medium or high has then been applied. Areas identified as having a high level of suitability for development, and some isolated areas of medium to low suitability, have been identified as General Industry zone. The remaining areas of medium to low suitability, have been identified as Drainage. Areas rated as having a medium to low degree of suitability may still be capable of development however the engineering costs associated with the development of these areas are likely to be significant. Development outside of the General Industry zone, as shown on the Guide Plan, is discussed in section 5.2.2.

5.2.2 REMOVE CLAUSE 1.5 SITES FOR FUTURE INVESTIGATION

Clause 1.5 of the Guide Plan outlines the studies which the Commission shall have regard to prior to the rezoning and development of land identified as sites for future investigation in the Industry Protection zone, as outlined below.

1.5 Sites for Future Investigation

Prior to the rezoning and subsequent development of the land identified as sites for future investigation (Ashburton North Strategic Industrial Area Improvement Scheme Report Figure 6) in the Industry Protection Zone within the Ashburton North Strategic Industrial Area boundary, the Commission shall have regard to the outcomes of the following studies (as relevant):

- a) *Environmental Assessment Report;*
- b) *Established buffers from the Special Use zone and the Workforce Accommodation zone;*
- c) *Utilities investigations;*
- d) *Traffic and transport investigations;*
- e) *Hydrology investigations;*
- f) *Site investigations (such as geotechnical and acid sulphate soils); and*
- g) *Industrial ecology.*

As this Amendment is proposing to rezone the Industry Protection zoned land in Stage 2, there is no longer a need for this provision to be included in the Guide Plan once this Amendment is gazetted. As clause 1.5 references both rezoning and development, it is proposed to include the studies outlined in this clause which are not already addressed in clause 1.4.2 General Industry Zone, refer section 5.3.2. This will ensure all the necessary investigations have been undertaken prior to development occurring within the General Industry zone. These studies include: Environmental Assessment Report and Site investigations (such as geotechnical and acid sulphate soils).

5.2.3 IDENTIFY STAGE 2 BALANCE LAND AS DRAINAGE AND INSERT DRAINAGE PROVISIONS

It is proposed to identify the balance land within Stage 2, currently shown as Industry Protection zone, as Drainage. The area to be identified as Drainage has been informed by the Engineering Concept Plan contained in **Appendix B**.

As discussed above, Arup has undertaken multi-criteria analysis to determine the suitability of Stage 2 for future development. Generally, land rated as having a high level of suitability for development has been identified as General Industry zone. Land rated as having a low – medium level of suitability for development is proposed to be identified as Drainage on the Guide Plan given the hydrological impacts will be significant in these areas. While development may still be possible, under some circumstances, within the Drainage areas shown on the Guide Plan, there are currently no text provisions to provide guidance on development constraint or potential in such areas. It is therefore proposed to include the following text in the Guide Plan:

1.5 Drainage

There shall be no development of buildings, structures or other infrastructure within a drainage area which will impede or undermine its primary drainage function. In the event that any construction is proposed in a drainage area, there shall be suitable modelling undertaken to determine that it does not undermine its primary drainage function.

The provisions will ensure the drainage areas function appropriately. The provisions allow for development to occur within a Drainage area. However, should development be proposed, the onus will be on a proponent to demonstrate that the drainage function of the area is not unreasonably impacted.

5.3 OVERALL

5.3.1 APPLY BUFFERS

It is proposed to apply the strategic industry, workforce accommodation and power station buffer on the Guide Plan. The buffers have defined the ANSIA Improvement Scheme boundary and are referenced in the Improvement Scheme Report, as summarised below.

- **Strategic Industry Buffer:** a 3 kilometre risk, noise and air quality indicative buffer from the strategic industry area.
- **Workforce Accommodation and Western General Industrial Area Buffer:** a 1 kilometre 'Land Use Sensitivity' buffer from the boundary of the workforce accommodation sites and the southern boundary of the western GIA over the Wheatstone workforce accommodation site. The aim of this buffer is to ensure surrounding land uses would not adversely affect health, safety or amenity of the workers accommodation.
- **Power Station Buffer:** a 3 kilometre buffer from the proposed Horizon Power station site, including the Water Corporation desalination plant.

The change in zoning in Stage 2 to facilitate industrial development has generated the need to provide more specific guidance on buffer impacts in relation to future development. The buffers are proposed to be identified on the Guide Plan to protect both, existing planning and development, and clearly inform future development of land use considerations within Stage 2.

5.3.2 INSERT GENERAL INDUSTRY ZONE PROVISIONS

It is proposed to include the text below in the Guide Plan in relation to the General Industry zone. As discussed in section 5.2.3 it is proposed that section 1.5 be removed from the Guide Plan given the clause is no longer required. It is therefore intended to consolidate the list of management plans/studies which are required to be considered by the Commission when considering development applications under section 1.4.2 General industry Zone, by including reference to Environmental Assessment Report and Site investigations (such as geotechnical and acid sulphate soils). As the buffers are proposed to be shown on the Guide Plan it is also proposed that they be referenced in the Guide Plan text. This will ensure due consideration is given to buffers in the preparation and assessment of development applications. The amended text will therefore read as follows (added requirements/modified text underlined>:

1.4.2 General Industry Zone

When considering applications for development approval in the General Industry zone, the Commission shall have due regard to the following (as relevant):

- a) Fire Management Plan;
- b) Mosquito Management Plan;
- c) Water Management Plan;
- d) Construction Environmental Management Plan;
- e) Servicing Strategy;
- f) Traffic Impact Assessment;
- g) The established Strategic Industry, Workforce Accommodation and Power Station buffers as identified on the Guide Plan;
- h) Environmental Assessment Report;
- i) Site investigations (such as geotechnical and acid sulphate soils);
- j) Any other management plans and strategies the Commission considers relevant.

5.3.3 INSERT INDUSTRIAL ECOLOGY PROVISIONS

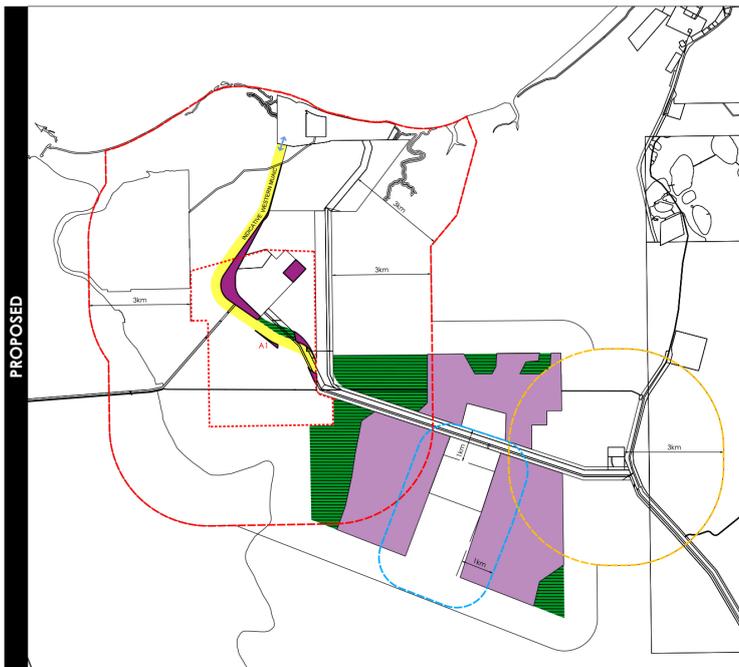
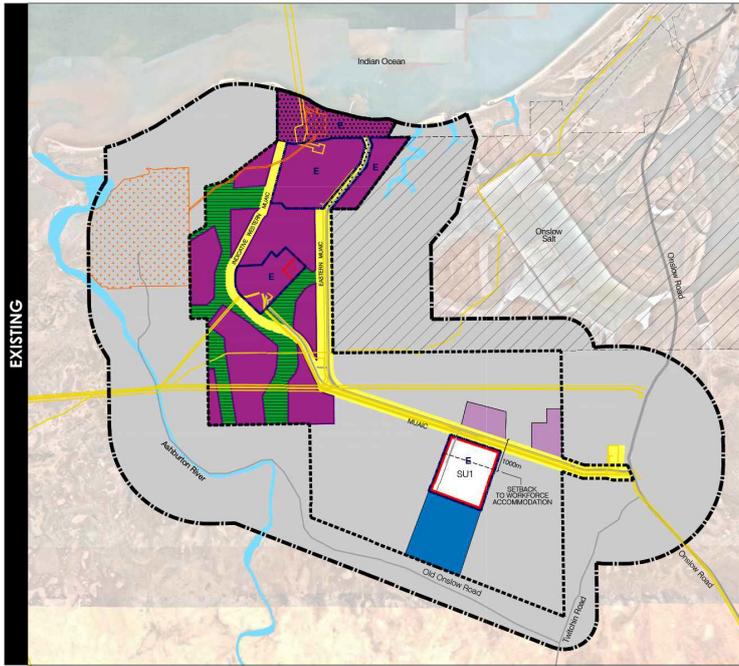
As outlined in the ANSIA Scheme Report, the industrial ecology principles outlined below informed the preparation of the Guide Plan. It is therefore appropriate that these industrial synergies are also given due regard by future proponents at the development application stage for all zones. It is therefore proposed as part of this Amendment that these key elements and considerations are included as a new section in the Guide Plan, as outlined below.

1.6 Provisions Applying to Development in all Zones

When considering applications for development approval in any zone, the Commission shall have due regard to the following industrial synergies:

Supply synergies: featuring local manufacturer and dedicated supplier of principal reagents for core process industries (e.g. production of nitrogen for industrial use). The main supply synergy is the provision of gas from the LNG and domestic gas processing plants; and

By product synergies: the use of a previously disposed by-product (as solid, liquid, or gas, including heat) from one facility by another facility to produce a valuable by-product. This includes CO² for ammonium urea production, heat for desalination or process heat, and inorganic solid waste by products (such as construction and demolition waste).



LEGEND

- ASHBURTON NORTH STRATEGIC INDUSTRIAL AREA (ANSIA) IMPROVEMENT SCHEME BOUNDARY
- ASHBURTON NORTH STRATEGIC INDUSTRIAL AREA BOUNDARY
- STRATEGIC INDUSTRY ZONE
- GENERAL INDUSTRY ZONE
- WORKFORCE ACCOMMODATION ZONE
- INFRASTRUCTURE ZONE
- INDUSTRY PROTECTION ZONE
- ADDITIONAL USE
- SU1 SPECIAL USE ZONE
- EXISTING GAS AND FUEL PIPELINES
- ROADS

EXPLANATORY NOTES

- AREA UNDER CONTROL OF PILBARA PORT AUTHORITY AND SUBJECT TO PORT AUTHORITIES ACT 1999. DEVELOPMENT OF LAND FOR THE PURPOSE OF PORT WORKS AND PORT FACILITIES REQUIRES THE APPROVAL OF THE PILBARA PORTS AUTHORITY.
- ONSLow SOLAR SALT AGREEMENT AREA AND SUBJECT TO THE ONSLOW SOLAR SALT AGREEMENT ACT 1992 (WA).
- OLD ONSLOW TOWNSITE (REGISTER OF STATE HERITAGE PLACES)
- INDICATIVE STRATEGIC INDUSTRIAL DEVELOPMENT SITES
- DRAINAGE
- MUAIC MULTI USER ACCESS AND INFRASTRUCTURE CORRIDOR
- E EXISTING DEVELOPMENT

LEGEND

- STRATEGIC INDUSTRY ZONE
- GENERAL INDUSTRY ZONE
- ADDITIONAL USE
- DRAINAGE
- INFRASTRUCTURE ZONE
- MUAIC MULTI USER ACCESS AND INFRASTRUCTURE CORRIDOR
- STRATEGIC INDUSTRY BUFFER
- WORKFORCE ACCOMMODATION BUFFER
- POWER STATION BUFFER
- KEY CONNECTION TO PORT (AS DETERMINED BY POA PORT MASTER PLAN 2050)

Figure 5 Proposed ANSIA Guide Plan Amendments

6 STAGE 2 COMPLIANCE

As discussed previously, the Guide Plan states that prior to the rezoning and subsequent development of the land identified as sites for future investigation in the Industry Protection zone, the Commission shall have regard to the outcomes of the following studies (as relevant):

- a) Environmental Assessment Report;
- b) Established buffers from the Special Use zone and the Workforce Accommodation zone;
- c) Utilities and investigations;
- d) Traffic and transport investigations;
- e) Hydrology investigations;
- f) Site investigations (such as geotechnical and acid sulphate soils); and
- g) Industrial Ecology.

Compliance with these requirements in relation to the proposed rezoning of land within Stage 2 from Industry Protection zone to General Industry zone, is addressed below. In addition to the studies listed above, a Bushfire Management Plan has also been prepared for Stage 2 and is discussed below.

6.1 ENVIRONMENTAL ASSESSMENT REPORT

An EAR has been prepared by RPS for Stage 2 of the ANSIA and is contained in **Appendix A**. Based on the key investigations and review of other environmental impact assessments in the region, none of the identified key environmental risk factors alone present a significant environmental impact which would preclude development within the area.

The recommended management responses detailed in the EAR to the environmental factors provided for within the ANSIA Guide Plan are summarised in **Table 5**.

TABLE 5 - SUMMARY OF ENVIRONMENTAL FACTORS AND MANAGEMENT RESPONSE *SOURCE: RPS*

Environmental Factor	Proposed Management Response
<p>Flora and Vegetation</p>	<p>Potential environmental impacts to flora and vegetation will be addressed at the subdivision or development stage using the mitigation sequence (i.e. avoidance, minimise, rectify, reduce, offset) and through the preparation and implementation of the following environmental management plans as part of future subdivision or development design and approval:</p> <ul style="list-style-type: none"> • Construction Environmental Management Plan • Water Management Plan. <p>The Guide Plan requires these management plans to be prepared (as relevant) as part of future development applications.</p>
<p>Terrestrial Fauna</p>	<p>Potential environmental impacts to fauna will be addressed at the development stage using the mitigation sequence (i.e. avoidance, minimise, rectify, reduce, offset) and through the preparation and implementation of a Construction Environmental Management Plan.</p> <p>The Guide Plan requires the management plan to be prepared (as relevant) as part of future development applications.</p>

Environmental Factor	Proposed Management Response
Terrestrial Environmental Quality – Acid Sulfate Soils	<p>If ASS is identified as occurring and is proposed to be disturbed by construction works, an Acid Sulfate Soil and Dewatering Management Plan is required to be prepared as part of future development.</p> <p>As part of this Amendment, the Guide Plan is proposed to reference the requirement for the Commission to have due regard to site investigations (such as geotechnical and acid sulfate soils) when considering applications for development approval in the General Industry zone.</p>
Hydrological Processes	<p>An Engineering Hydrological Assessment report / District Water Management Strategy (DWMS) have been prepared and approved by the (then) Department of Water (DoW) (now DWER) for the ANSIA.</p> <p>The purpose of the DWMS is to demonstrate that the area is capable of supporting industrial development and is able to achieve appropriate urban water management outcomes, particularly as there have been areas identified that will be subject to significant depths of flooding at high velocities.</p> <p>In addition to identifying and addressing these constraints, the preparation of the DWMS identified and discussed other significant environmental factors pertaining to the development of the ANSIA. The Guide Plan requires a Water Management Plan be prepared as part of development applications. The specific requirements of the Water Management Plan as detailed in BG&E's LWMS report are to also apply to Stage 2.</p>
Social Surroundings – Aboriginal Heritage and Culture	<p>As part of this Amendment, the Guide Plan is proposed to reference the requirement for the Commission to have due regard to the EAR when considering applications for development approval in the General Industry zone.</p> <p>As stated in the EAR, in the event that the application for development approval involves activities that will result in the disturbance of sites, approval for these activities must be sought under the <i>Aboriginal Heritage Act 1972</i>. Where heritage sites of Aboriginal heritage value are to be conserved, cultural heritage management plans to protect the integrity of these site will need to be prepared to ensure compliance with the <i>Aboriginal Heritage Act 1972</i>.</p> <p>If there are activities proposed in a development application that will impact on Aboriginal heritage locations, then consent for these activities must be sought through Section 18 of the <i>Aboriginal Heritage Act 1972</i> prior to any ground disturbing activities being undertaken.</p>

6.2 ESTABLISHED BUFFERS

The ANSIA buffers are addressed in sections 5.1.1 and 5.1.2 of the ANSIA Improvement Scheme Report.

As part of this Amendment it is proposed to apply the 3km Strategic Industry, 1km Workforce Accommodation and 3km Power Station buffers to the Guide Plan. Text is also proposed to be included in the Guide Plan requiring the Commission have due regard to the buffers when considering development applications.

The inclusion of the buffers in the Guide Plan ensures future proponents within the General Industry zoned land are required to give due consideration to the buffers as part of any future development proposal.

6.3 UTILITIES AND INVESTIGATIONS

An Engineering Concept Report has been prepared by Arup in support of this Amendment, refer **Appendix B**. The Engineering Report is consistent with the Engineering Concept Report 2016 prepared by Arup to support the ANSIA Improvement Scheme. Utilities are addressed in the report and detailed below.

6.3.1 WATER

As stated in the 2016 Arup Engineering Concept Report, the Water Corporation has ongoing plans to construct a new desalination plant to supply water to Onslow under the Onslow Water Infrastructure Upgrade Project (OWIUP). Potable water produced by this plant could also potentially be used to supply future developments within the ANSIA through a bulk supply point. The site for the proposed desalination plant is at the north-west corner of the intersection between Onslow Road and the ANSIA Access Road.

As part of the Wheatstone LNG project, Chevron has entered into an agreement with the State to invest in social infrastructure projects for the town of Onslow. This agreement is known as the Ashburton North State Development Agreement (Wheatstone Project). The agreed investments include the 2 ML/d reverse osmosis (RO) desalination plant, 16 km transfer main and a new 5 ML service tank at the town. The new desalination plant will be integrated with Onslow's current water source, the Cane River borefield. The proposed desalination plant is designed to service the town of Onslow.

Consultation with the Water Corporation in January 2018 confirms that there is still a commitment to the proposed desalination plant, however investment in infrastructure has been delayed. Water Corporation has noted that any supply to industries within the ANSIA would need to be individually negotiated regarding their proposed water demands, the need for additional source and infrastructure upgrades, the point of bulk supply and the charging regime.

In the interim, should a proponent wish to proceed with development ahead of the infrastructure being provided, the proponent will need to make their own arrangements in relation to water supply.

6.3.2 POWER

As stated in the 2016 Arup Engineering Concept Report, Horizon Power has begun construction of a new modular power station to supply the town of Onslow under the Onslow Power Infrastructure Upgrade Project (OPIUP). Power generated by this plant could also be used to supply future developments within the ANSIA Stage 2 area. The site for the power plant is adjacent to the proposed desalination plant at the north-west corner of the intersection between Onslow Road and the ANSIA Access Road.

January 2018 correspondence with Horizon Power has confirmed that construction of the new modular power station has commenced, with final commissioning of the power station scheduled for early 2018. Advice provided by Horizon Power notes that the modular power station can be expanded to service heavy load requirements and is therefore capable of expanding for future proponents within the ANSIA who wish to connect to the network.

6.3.3 GAS

Gas distribution pipelines are located within, and adjacent to, ANSIA Stage 2 areas. It is therefore anticipated that Stage 2 developments will be able to arrange a private supply agreement with pipeline operators for the provision of raw natural gas.

6.4 TRAFFIC AND TRANSPORT INVESTIGATIONS

As the nature of future development proposals is unknown, detailed traffic investigations cannot be undertaken at this stage. Notwithstanding, the existing MUAIC access road is currently constructed to a very high standard to accommodate the heavy vehicle usage associated with the port and the major hydrocarbon industries developed in Stage 1. It is therefore unlikely that any increases in traffic from new development will generate the need for additional upgrades to this road. Similarly, a section of Onslow Road is currently being upgraded by Main Roads WA, including the Onslow Road and North West Coastal Highway intersection. Further upgrades to Onslow Road are therefore also not expected.

In any event, future proponents within Stage 2 will be required to demonstrate that impacts on both the internal and surrounding road network can be appropriately managed. This is provided for in the Guide Plan, which requires the Commission to have due regard to a Traffic Impact Assessment when considering applications for development approval in the General Industry zone. In the event that any modifications or upgrades are required for a specific development proposal, then this will be the responsibility of the proponent.

6.5 HYDROLOGY INVESTIGATIONS

As outlined in **Appendix B**, in order to define the Stage 2 areas most viable for development, the existing ANSIA MIKE FLOOD model was updated and re-run utilising the latest LIDAR information available for the ANSIA. The new LIDAR accounts for landform changes and land developments which have taken place since the flood model was previously generated in 2010.

As a result, new 100-year ARI storm event (along with coastal storm surge and an allowance for climate change) water depths and velocities were determined. A maximum flood depth of 3.91m was identified along with a maximum velocity of 7.55 m/s. Both of these values were identified in locations considered to be existing floodways.

Flooding analysis completed in future stages of development will need to include refined modelling of overland flow paths along the drainage areas identified, to determine depth and velocity of flow, road floodway/culverts, pad level/freeboard, and rock armouring/scour protection. This will enable the stormwater management measures to be fully implemented.

As referenced in the EAR, the Department of Water and Environmental Regulation has confirmed that the approved District Water Management Strategy (DWMS) for the ANSIA is sufficient to accommodate this proposed Amendment to Improvement Scheme No. 1. As provided for in the Guide Plan, a Water Management Plan will need to be prepared as part of any development application for land within the General Industry zone which accords with the ANSIA's drainage management framework. As outlined in **Appendix B**, this Water Management Plan will need to include storm surge modelling incorporating the revised sea level rise requirements of State Planning Policy 2.6. The specific requirements of the Water Management Plan, as detailed in BG&E's LWMS report for the existing general industrial areas, are to also apply to Stage 2.

6.6 SITE INVESTIGATIONS

The Engineering Concept Report addresses site investigations within Stage 2. A summary of these investigations is outlined below; the report is contained in **Appendix B**.

6.6.1 GEOLOGICAL AND GEOTECHNICAL

The geological and geotechnical profile of the ANSIA Stage 2 area has been assessed on the basis of data extracted from the Geological Survey of Western Australia, 1981. As identified in **Appendix B**, three distinct geological profiles have been identified within the Stage 2 area:

- Czp – Claypan-dominant terrain – claypans with longitudinal and net dunes, and/or flat deflation-lag surfaces; clay, silt, sand and gravel;
- Qt – Supertidal Flats – calcareous clay, silt and sand with authigenic gypsum and superficial algal mats and salt crusts; and
- Qe – Longitudinal and network dunes and residual sand plains – reddish brown to yellowish quartz sand.

Each of the profiles have been assessed with respect to their suitability for development. This assessment has been described and mapped in the Engineering Concept Report. The assessment of the geological profiles has been incorporated into the multi-criteria analysis to inform the areas most suited to development within Stage 2. All of the above-listed areas are proposed to be identified as General Industry on the Guide Plan, with the expectation that more detailed analysis will be undertaken at the development stage to inform site planning.

6.6.2 ACID SULFATE SOILS

Acid Sulfate Soils (ASS) is variably present across all geologic units at the ANSIA however it has been identified that the risk of ASS is closely associated with the following geological landforms identified across the site:

- High to moderate risk – supratidal flats;
- Moderate to low risk – low lying clay pans; and
- No known risk - coastal dunes.

ASS have been considered in determining the development suitability of Stage 2 as identified on the Guide Plan and outlined in **Appendix B**. This Amendment also proposes to include site investigations (such as ASS) as a matter that the Commission will have due regard to when considering development applications.

6.7 INDUSTRIAL ECOLOGY

As outlined in the ANSIA Scheme Report, the synergies described below informed the preparation of the Guide Plan. It is therefore appropriate that industrial ecology is given due regard by future proponents at the development application stage. It is therefore proposed as part of this Amendment that these synergies are referenced in the Guide Plan as a requirement which the Commission shall have regard to when a future proponent submits an application for development approval in any zone.

Supply synergies: featuring local manufacturer and dedicated supplier of principal reagents for core process industries (e.g. production of nitrogen for industrial use). The main supply synergy is the provision of gas from the LNG and domestic gas processing plants; and

By product synergies: the use of a previously disposed by-product (as solid, liquid, or gas, including heat) from one facility by another facility to produce a valuable by-product. This includes CO² for ammonium urea production, heat for desalination or process heat, and inorganic solid waste by products (such as construction and demolition waste).

6.8 BUSHFIRE MANAGEMENT

A strategic Bushfire Management Plan has been prepared by Strategen in support of this proposed Scheme Amendment given Stage 2 is designated as bushfire prone on the WA Map of Bushfire Prone Areas (DFES 2019), refer **Appendix C**. The BMP provides a high-level consideration of bushfire risk and guidance on bushfire planning requirements at future planning and development stages. The BMP states that the bushfire hazards within and adjacent to the Stage 2 area, and the associated bushfire risks are readily manageable through standard management responses outlined in the Guidelines and AS 3959. Following implementation of the proposed management measures, the land within Stage 2 will be able to be developed with a manageable level of bushfire risk whilst maintaining full compliance with the Guidelines and AS 3959.

The BMP requires the preparation of site-specific BMPs to accompany future development applications where appropriate. Consistent with this requirement, the Guide Plan requires a Fire Management Plan to be prepared as part of a development application for land in the General Industry zone.

7 CONCLUSION

The ANSIA is of strategic economic significance at a regional, state and national level; it is therefore critical that the planning framework is robust and flexible to facilitate long term industrial development. The proposed Scheme Amendment to Improvement Scheme No. 1 provides the necessary changes to the planning framework to allow development of Stage 2 of the ANSIA to unfold and provide a more flexible planning framework. The Scheme Amendment aligns with the objectives of Improvement Plan 41, particularly in relation to providing synergistic services and/or facilities and an internationally competitive industrial estate.

The required technical investigations have been undertaken to inform the rezoning of Stage 2, including an Environmental Assessment Report, Engineering Concept Report and Bushfire Management Plan. The more accurate understanding of the total land requirement for hydrocarbon industries, which is considerably less than was initially planned for, has allowed for the southern portion of the strategic industrial area to be available for other strategic industries. These Additional Uses will be subject to conditions to ensure the primacy of the hydrocarbon industries is not compromised.

On this basis, support to the Amendment is sought to facilitate long term development of the ANSIA in a sustainable and competitive manner.

Planning and Development Act 2005

RESOLUTION TO AMEND AMENDMENT TO IMPROVEMENT SCHEME

**Improvement Scheme No. 1: Ashburton North Strategic Industrial Area
Amendment No. 1**

Resolved that the Western Australian Planning Commission pursuant to section 122B of the *Planning and Development Act 2005*, amend the above Improvement Scheme by:

1. Rezoning part of Lot 153 on Deposited Plan 220110 from the Infrastructure zone to the Strategic Industry zone, as shown on the Scheme Amendment Plan.
2. Rezoning part of Lot 152 on Deposited Plan 22065 and part of Lot 1577 on Deposited Plan 7283 from the Industry Protection zone to the General Industry zone as shown on the Scheme Amendment Plan.
3. Deleting the boundary for Additional Use No. 1 from the Scheme Map, as shown on the Scheme Amendment Plan, and deleting the associated additional use provisions from Table 2 – Specific additional uses for zoned land in Scheme area in the Scheme Text.
4. Inserting an Additional Use boundary around the southern portion of the Strategic Industrial zone, as shown on the Scheme Amendment Plan, and modifying Table 2 – Specific additional uses for zoned land in Scheme area in the Scheme Text, as outlined below:

No.	Description of land	Additional use	Conditions
1	Lots 500, 506, 507, 508, 518, 540, and Portion of Lots 152, 153, 351, 505, 509, 519, 520, 541 and 563 as defined on the Scheme Map.	Discretionary (D) uses: Industry Industry – Noxious	1. The land use must be deemed to be of strategic significance to the regional and state economy. 2. The land use must not impede the operation of hydrocarbon processing industries.

5. Modifying Table 1 – Zoning Table in the Scheme Text by:
 - a. designating Industry – strategic extraction as a D use in the General Industry zone;
 - b. designating Supply base as a P use in the General Industry zone;
 - c. designating Transport overnight facility as a D use in the General Industry zone; and
 - d. inserting Animal husbandry – intensive as a use class and designating it as an X use in all zones.
6. Modifying the Ashburton North Strategic Industrial Area – Guide Plan by:
 - a. Deleting the boundary for Additional Use No. 1 from the Guide Plan as shown on the Guide Plan Amendment Plan;
 - b. Inserting an Additional Use boundary around the southern portion of the Strategic Industry zone as shown on the Guide Plan Amendment Plan;
 - c. Modifying the alignment and extent of the Indicative Western MUAIC and the extent of the Strategic Industry zone and Drainage areas on adjacent land, as shown on the Guide Plan Amendment Plan;
 - d. Inserting a Key Connection Symbol to the northern end of the Western MUAIC and updating the Guide Plan Legend accordingly, as shown on the Guide Plan Amendment Plan;
 - e. Deleting all Indicative Strategic Industrial Development Sites boundaries, and deleting Indicative Strategic Industrial Sites from the Legend, as shown on the Guide Plan Amendment Plan;

- f. Identifying part of Lot 152 on Deposited Plan 22065 and part of Lot 1577 on Deposited Plan 7283 as General Industry zone, as shown on the Guide Plan Amendment Plan;
- g. Identifying part of Lot 152 on Deposited Plan 22065 as Drainage areas, as shown on the Guide Plan Amendment Plan;
- h. Inserting boundaries which show the extent of the strategic industry, workforce accommodation and power station buffers, as shown on the Guide Plan Amendment Plan;
- i. Deleting section 1.5 Sites for Future Investigation;
- j. Modifying section 1.4.2 General Industry Zone by deleting reference to 'management plans and studies' and existing point g) and adding the following points after existing point f):
 - g) the existing Strategic Industry, Workforce Accommodation and Power Station buffers, as identified on the Guide Plan;
 - h) Environmental Assessment Report;
 - i) site investigations (such as geotechnical and acid sulfate soils); and
 - j) any other management plans and strategies the Commission considers relevant.
- k. Inserting section 1.5 Drainage, as follows:

1.5 Drainage

There shall be no development of buildings, structures or other infrastructure within a drainage area which will impede or undermine its primary drainage function. In the event that any construction is proposed in a drainage area, there shall be suitable modelling undertaken to determine that it does not undermine its primary drainage function.

- l. Inserting section 1.6 Provisions Applying to Development in all Zones, as follows:

1.6 Provisions Applying to Development in all Zones

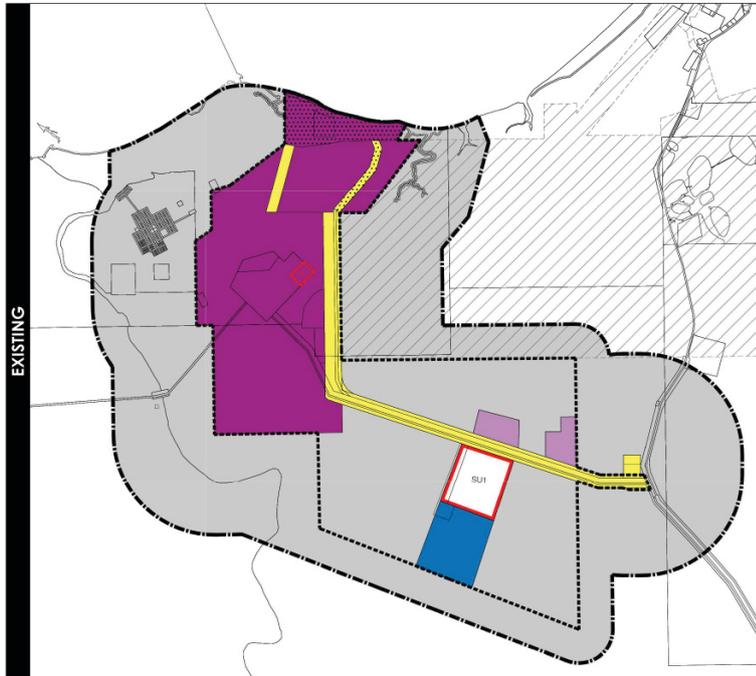
When considering applications for development approval in any zone, the Commission shall have due regard to the following industrial synergies:

Supply synergies: *featuring local manufacturer and dedicated supplier of principal reagents for core process industries (e.g. production of nitrogen for industrial use). The main supply synergy is the provision of gas from the LNG and domestic gas processing plants; and*

By product synergies: *the use of a previously disposed by-product (as solid, liquid, or gas, including heat) from one facility by another facility to produce a valuable by-product. This includes CO² for ammonium urea production, heat for desalination or process heat, and inorganic solid waste by products (such as construction and demolition waste).*

WESTERN AUSTRALIAN PLANNING COMMISSION

Improvement Scheme No. 1: Ashburton North Strategic Industrial Area Amendment No. 1 – Scheme Map Amendments

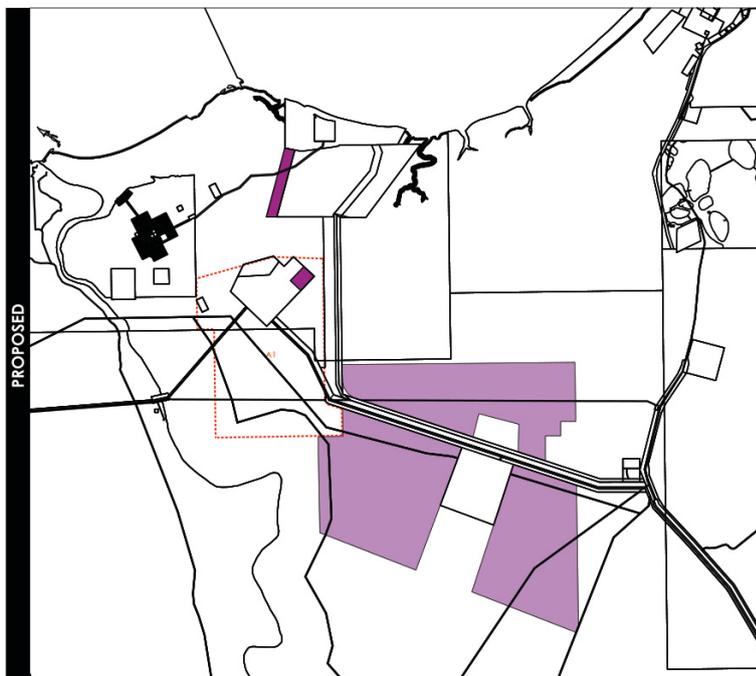


LEGEND

- ASHBURTON NORTH STRATEGIC INDUSTRIAL AREA (ANSIA) IMPROVEMENT SCHEME BOUNDARY
- ASHBURTON NORTH STRATEGIC INDUSTRIAL AREA BOUNDARY
- STRATEGIC INDUSTRY ZONE
- GENERAL INDUSTRY ZONE
- INFRASTRUCTURE ZONE
- WORKFORCE ACCOMMODATION ZONE
- INDUSTRY PROTECTION ZONE
- ADDITIONAL USE
- SU1 SPECIAL USE ZONE

EXPLANATORY NOTES

- AREA UNDER CONTROL OF PILBARA PORT AUTHORITY AND SUBJECT TO PORT AUTHORITIES ACT 1999. DEVELOPMENT OF LAND FOR THE PURPOSE OF PORT WORKS AND PORT FACILITIES REQUIRES THE APPROVAL OF THE PILBARA PORTS AUTHORITY.
- ONSLOW SOLAR SALT AGREEMENT AREA AND SUBJECT TO THE ONSLOW SOLAR SALT AGREEMENT ACT 1992 (WA).

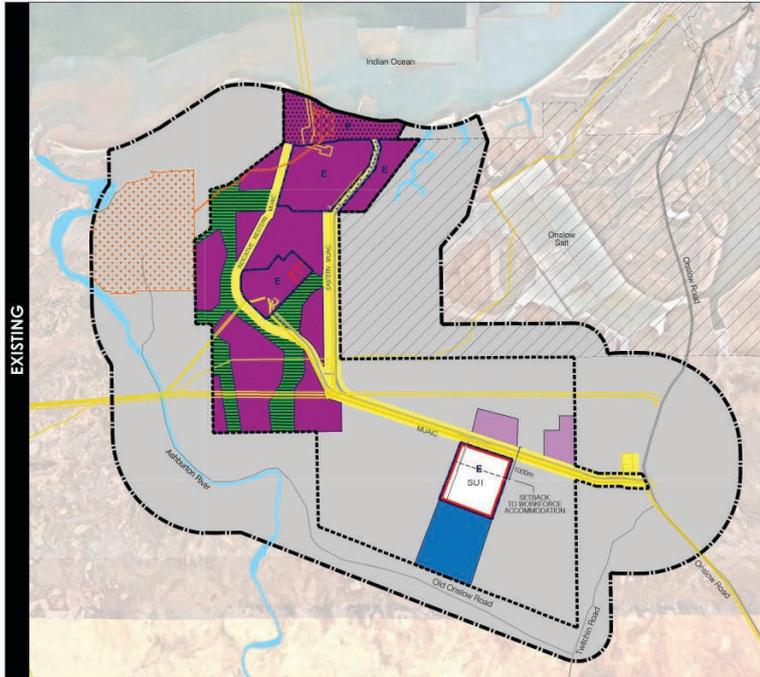


LEGEND

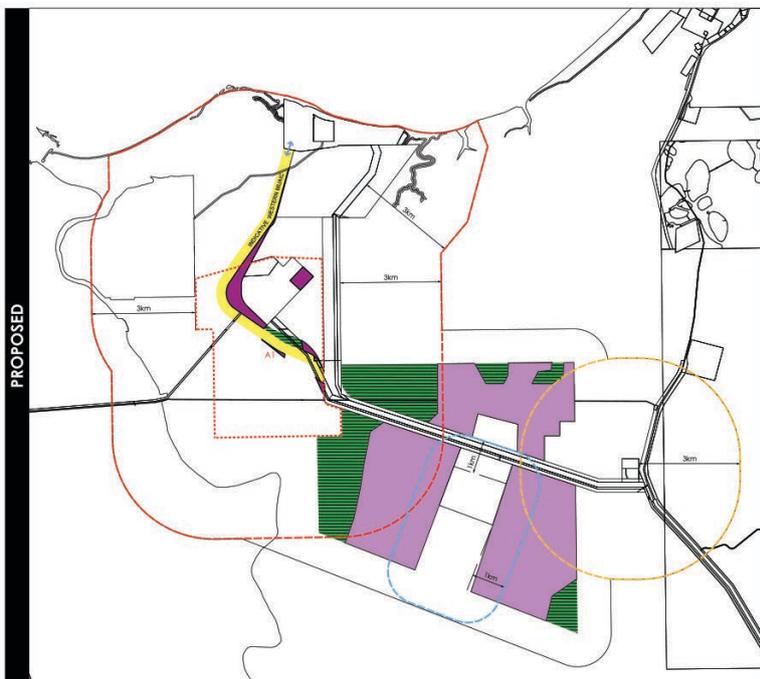
- STRATEGIC INDUSTRY ZONE
- GENERAL INDUSTRY ZONE
- ADDITIONAL USE

WESTERN AUSTRALIAN PLANNING COMMISSION

Improvement Scheme No. 1: Ashburton North Strategic Industrial Area Amendment No. 1 – Guide Plan Amendments



- LEGEND**
- ASHBURTON NORTH STRATEGIC INDUSTRIAL AREA (ANSIA) IMPROVEMENT SCHEME BOUNDARY
 - ASHBURTON NORTH STRATEGIC INDUSTRIAL AREA BOUNDARY
 - STRATEGIC INDUSTRY ZONE
 - GENERAL INDUSTRY ZONE
 - WORKFORCE ACCOMMODATION ZONE
 - INFRASTRUCTURE ZONE
 - INDUSTRY PROTECTION ZONE
 - A ADDITIONAL USE
 - SU1 SPECIAL USE ZONE
 - EXISTING GAS AND FUEL PIPELINES
 - ROADS
- EXPLANATORY NOTES**
- AREA UNDER CONTROL OF PILBARA PORT AUTHORITY AND SUBJECT TO PORT AUTHORITIES ACT 1999. DEVELOPMENT OF LAND FOR THE PURPOSE OF PORT WORKS AND PORT FACILITIES REQUIRES THE APPROVAL OF THE PILBARA PORTS AUTHORITY.
 - ONSLOW SOLAR SALT AGREEMENT AREA AND SUBJECT TO THE ONSLOW SOLAR SALT AGREEMENT ACT 1992 (WA).
 - OLD ONSLOW TOWNSITE (REGISTER OF STATE HERITAGE PLACES)
 - INDICATIVE STRATEGIC INDUSTRIAL DEVELOPMENT SITES
 - DRAINAGE
 - MUAIC MULTI USER ACCESS AND INFRASTRUCTURE CORRIDOR
 - E EXISTING DEVELOPMENT



- LEGEND**
- STRATEGIC INDUSTRY ZONE
 - GENERAL INDUSTRY ZONE
 - A1 ADDITIONAL USE
 - DRAINAGE
 - INFRASTRUCTURE ZONE
 - MUAIC MULTI USER ACCESS AND INFRASTRUCTURE CORRIDOR
 - STRATEGIC INDUSTRY BUFFER
 - WORKFORCE ACCOMMODATION BUFFER
 - POWER STATION BUFFER
 - KEY CONNECTION TO PORT (AS DETERMINED BY POA PORT MASTER PLAN 2050)

WESTERN AUSTRALIAN PLANNING COMMISSION ADOPTION

This Standard Amendment was adopted by resolution of the Western Australian Planning Commission on the.....24.....day of.....JULY....., 20..19..


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CHAIRMAN – WESTERN AUSTRALIAN PLANNING COMMISSION


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SECRETARY – WESTERN AUSTRALIAN PLANNING COMMISSION

WESTERN AUSTRALIAN PLANNING COMMISSION RESOLUTION TO ADVERTISE

by resolution of the Western Australian Planning Commission on the.....24.....day of.....JULY....., 20..19.. proceed to advertise this Amendment.


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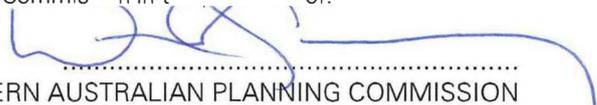
CHAIRMAN – WESTERN AUSTRALIAN PLANNING COMMISSION


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SECRETARY – WESTERN AUSTRALIAN PLANNING COMMISSION

WESTERN AUSTRALIAN PLANNING COMMISSION RECOMMENDATION

This Amendment is recommended for support by resolution of the Western Australian Planning Commission on the.....11.....day of.....December....., 20..19.. and the Common Seal of the Western Australian Planning Commission was hereunto affixed by the authority of a resolution of the Western Australian Planning Commission in t..... of:


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CHAIRMAN – WESTERN AUSTRALIAN PLANNING COMMISSION


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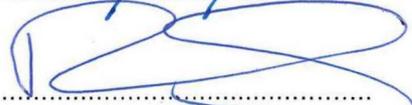
SECRETARY – WESTERN AUSTRALIAN PLANNING COMMISSION

WAPC ENDORSEMENT (r.63)


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DELEGATED UNDER S.16 OF THE P&D ACT 2005

DATE.....12/12/2019.....


.....

MINISTER FOR PLANNING

DATE.....28 January 2020.....



APPROVAL GRANTED