ENVIRONMENTAL SCOPING DOCUMENT

Proposal name:	Lake Way Sulphate of Potash Project
Proponent:	Salt Lake Potash Pty Ltd
EPA assessment number:	2228
Location:	25 km south of Wiluna, Western Australia
Local government area:	Shire of Wiluna
Public review period:	Environmental review – no public review
EPBC referral number:	NA

1 Introduction

On 18 December 2019, the Environmental Protection Authority (EPA) determined that the Lake Way Sulphate of Potash Project (the Proposal) should be assessed under Part IV of the *Environmental Protection Act 1986* ('EP Act'). The assessment process recommended by EPA was an Environmental Review with no public consultation.

This Environmental Scoping Document (ESD) has been prepared by Salt Lake Potash Pty Ltd (SO4) in accordance with the EPA's Procedures Manual (Part IV Divisions 1 and 2). The ESD describes the:

- Form of the report (Environmental Review Document) that will serve as the basis for EPA's assessment of the Proposal.
- Content of the Environmental Review Document (ERD).
- Timing for preparation and submission of the ERD and for EPA's assessment of the Proposal.
- Processes and procedures to be followed in during EPA's assessment of the Proposal, pursuant to s. 40 of the EP Act.

1.1 Form of Environmental Review Document (ERD)

The ERD will be prepared in the form specified by EPA in its *Instructions on how to prepare an Environmental Review Document* (27 April 2018).

1.2 ERD Content

The ERD will include the content detailed in sections 2 to 6 of this ESD.

1.3 Assessment timeline

Table 1-1 presents a timeline for the assessment of the Lake Way SOP Project (the Project) as agreed between the EPA and SO4.

Table 1-1: Assessment timetable

Key assessment milestone	Completion date
EPA approves Environmental Scoping Document	15 May 2020
SO4 submits first draft of Environmental Review Document (ERD)	22 May 2020
EPA provides comment on first draft of ERD (6 weeks from receipt of ERD)	03 July 2020
SO4 submits revised ERD	17 July 2020
EPA prepares draft assessment report and completes assessment	07 Aug 2020
EPA finalises assessment report and presents report to the Minister (6 weeks from completion of assessment)	18 September 2020

1.4 Procedure

The EPA requires the proponent to undertake the environmental review according to the procedures in the Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016 and the Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual (EPA, 30 March 2020). This ESD has not been released for public review but will be available on the EPA website (www.epa.wa.gov.au) upon endorsement and will be appended to the ERD.

Other factors or matters may be identified during the course of the environmental review that were not apparent at the time that this ESD was prepared. If this situation arises, the EPA requires the Proponent to consult with the EPA to determine whether these factors and/or matters are to be addressed in the ERD, and if so, to what extent.'

1.5 Environment Protection and Biodiversity Conservation Act 1999

The Project has not been referred to the federal Department of the Environment and Energy for assessment under the *Environment Protection and Biodiversity Conservation Act 1999*, as the Proposal is not likely to have a significant impact (as defined in the MNES Significant impact guidelines 1.1) on a matter of national environmental significance (MNES). If information arises in the course of baseline studies to show that there could be a risk of a significant impact on an MNES, then SO4 would refer the relevant aspects of the Proposal to the Commonwealth.

1.6 Background

1.6.1 Lake Way SOP Demonstration Plant

Lake Way SOP Demonstration Plant (CMS17578, Not Assessed - Advice Given under Section 39A(7) of the *Environmental Protection Act 1986*) http://epa.wa.gov.au/sites/default/files/public-advice/CMS17578%20-%20Public%20Advice.pdf.

The proposal is to extract and evaporate natural brines to produce up to 50 kilo tonnes per year of Sulphate of Potash (SOP). This proposal is located in and around Lake Way, approximately 25 km south of Wiluna. This proposal includes 804[1] ha of disturbance and is limited to a 5 year time frame with the Works Approval W6282/2019/1 expiring on 17 October 2026.

1.6.2 This Proposal

The current proposal is an expansion and extension of the Lake Way SOP Demonstration Plant from 50 kilo tonnes per annum (ktpa) to up to 260 ktpa and from a five year trial to an ongoing operation, with an estimated life of 20 years. This proposal includes 2,750 ha of disturbance which is in addition to the 804 ha of disturbance approved under the previous Lake Way SOP Demonstration Plant proposal. The cumulative total disturbance associated with both proposals is 3,554 ha within a development envelope of 25,449 ha.

This proposal is further described in Section 2 Proposal description.

1.6.3 Excluded from This Proposal

Certain elements of the overall project design have been excluded from this proposal, as they have been either previously considered by the EPA, or the approval pathway excludes a referral under the EP Act. The works excluded are:

- Clearing and Construction of the Lake Way SOP Demonstration Plant (CMS17578) the disturbance and construction associated with the plant infrastructure is approved under a Native Vegetation Clearing Permit (CPS8677-1), a mining proposal (Reg ID: 83761) and a works approval (W6282/2019/1).
- Process water extraction from licensed bores within West Creek Borefield (GWL 203216(2) and Southern Borefield (GWL167103 (3)) (under the *Rights in Water and Irrigation Act 1914*).
- Exploration activities.

[1] 757 ha of on-playa disturbance (i.e. the bare salt lake surface) and 47 ha of off-playa disturbance.

2 Proposal description

SO4 proposes to develop and operate the Project at Lake Way, which is located approximately 25 km south of Wiluna in the Mid-West of Western Australia. The regional location of the proposal is shown in Figure 2-1

Key characteristics for the Proposal, estimated areas of disturbance for physical elements of the proposal and operational elements of the proposal are summarised in Table 2-1. A conceptual site layout is presented in Figure 2-2.

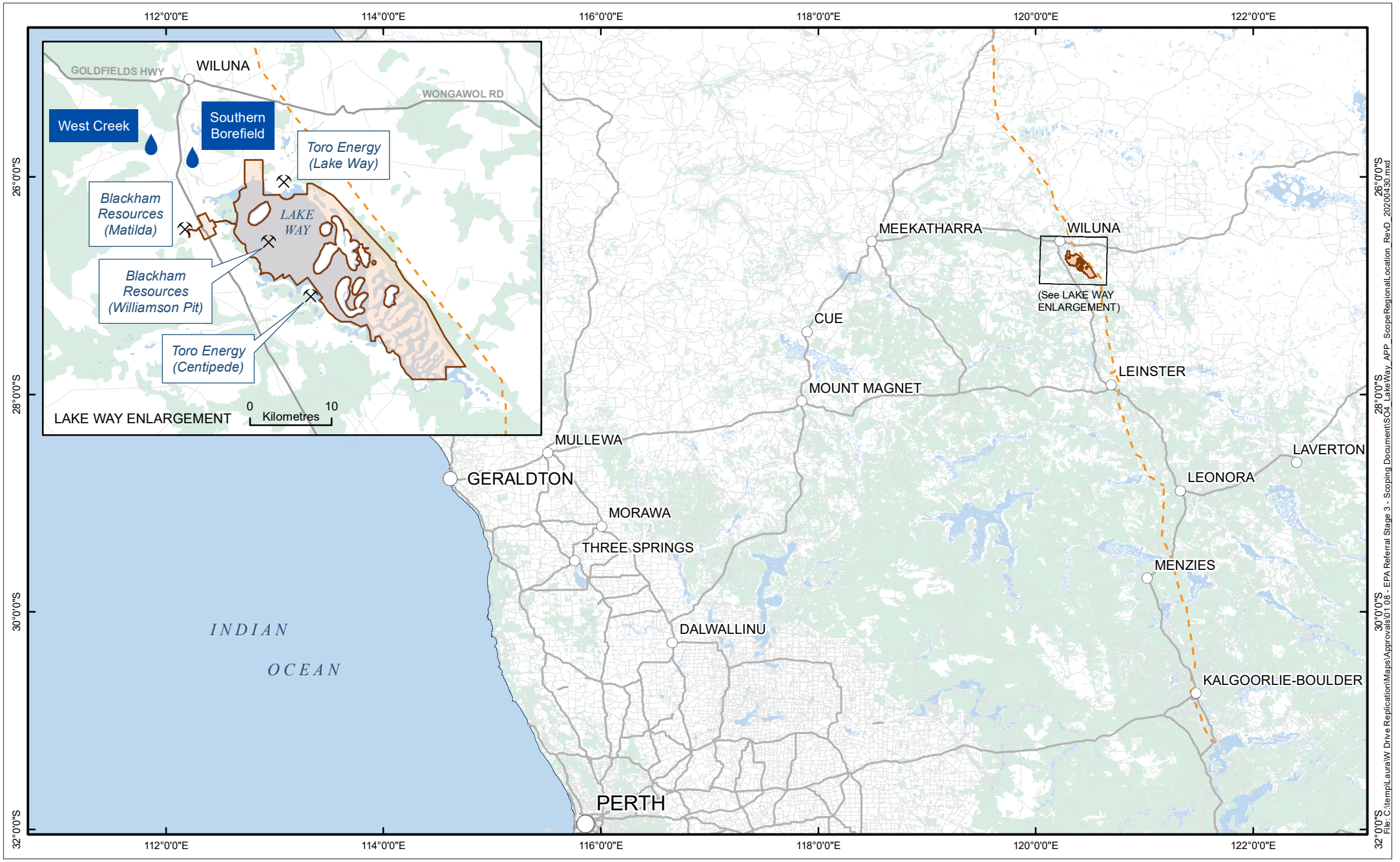
Table 2-1: Key proposal characteristics

Summary	
Proposal title	Lake Way Sulphate of Potash Project (Project)
Proponent name	Salt Lake Potash Pty Ltd (SO4)
Short description	SO4 proposes to develop and operate the Project at Lake Way, which is located approximately 25 km south of Wiluna in the Mid-West of Western Australia. The Proposal would involve abstraction of Sulphate of Potash (SOP) rich brines from sediments underlying Lake Way to produce approximately 260 kilotonne per annum (ktpa) of Sulphate of Potash (SOP) product. The proposal includes establishment and operation of: • Evaporation ponds, brine abstraction infrastructure including trenches, and paleochannel production bores; brine transport infrastructure including brine pumps/pipework; access and miscellaneous supporting infrastructure; and excess salt disposal areas. • This proposal extends the lifespan of infrastructure not formally assessed under the Lake Way Demonstration Plant Project (CMS17578) from demonstration to long-term operations. The project includes modifications to the process plant that will allow for increased production capacity up to 260 ktpa.

Table 2-2: Location and Proposed Extent of Physical and Operational Elements

Physical elements		
Element	*Location*	*Lake Way SOP Project*
Evaporation ponds, brine abstraction trenches, paleochannel bores, brine pumps/pipework, access and infrastructure corridors and excess salt disposal areas.	*Figure 2-1*	*Disturbance of no more than 2,750 ha within the 25,449 ha Development Envelope. Clearing of no more than 138 ha of native vegetation with a total direct impact of no greater than 50 ha to Tecticornia habitat.*
Operational elements		
Element	*Location*	*Lake Way SOP Project*
Brine abstraction from paleochannel brine production bores and trenches	*Figure 2-1*	*Abstraction of up to 30 GLpa.*
Excess Salt Disposal	*Figure 2-1*	*Disposal of no more than 5.1 Mtpa of excess salt into the excess salt areas.*
Processing plant and associated infrastructure.		
Processing plant	*Figure 2-1*	*260 ktpa of Sulphate of Potash.*

The project has not been materially changed since the submission of the Environmental Referral Document to EPA in September 2019. An updated indicative layout is shown in Figure 2-2. The amended indicative layout has not caused a change to the referred disturbance totals.



0 Kilometres 100

1:5,000,000 @ A4

GCS GDA 1994

Lake Way

Figure 2-1
Regional location

Legend

- Mining interest
- Borefield
- Locality
- Gas pipeline
- Major road
- Minor road
- Development envelope
- Waterbody

SALT LAKE POTASH LTD

Date: 30/04/2020
Version: D

Drawn: L. Weggelaar
Author: C. Pascov

0 Kilometres 5

1:110,000 @ A3

GDA 1994 MGA Zone 51

Lake Way

Figure 2-2
Lake Way Sulphate of Potash Project
Indicative Layout

Legend

- Development envelope
- Demonstration plant (CMS 17578) indicative infrastructure
- Lake Way SOP Project indicative infrastructure

SALT LAKE POTASH LTD

Date: 7/05/2020
Version: B

Drawn: L. Weggelaar
Author: C. Pascov

File: C:\temp\Laura\W Drive Replication\Maps\Approvals\01.08 - EPA Referral Stage 3 - Scoping Document\SO4_LakeWay_APP_ScopeFullProjectSummary_RevB_20200507.mxd

3 Preliminary key environmental factors and required work

The preliminary key environmental factors to be addressed in the environmental review document are:

- Flora and Vegetation (impacts arising from the clearing of 138 ha including 50 ha of *Tecticornia* shrubland and potential indirect impacts to 167 ha of *Tecticornia* shrubland).
- Terrestrial Fauna (impacts arising from the clearing of terrestrial habitat and disturbance of 2,750 ha within the Development Envelope).
- Inland Waters (potential impact of changes to surface water and groundwater hydrological processes).
- Social Surroundings (potential impact to Aboriginal sites of significance).
- Greenhouse Gas Emissions.

Tables 3-1 through 3-5 outline the work required for each preliminary key environmental factor. The following information is provided for each preliminary key environmental factor:

- EPA objective for that factor.
- Relevant activities – the proposal activities that may have a significant impact on that factor.
- Potential impacts and risks to that factor.
- Required work for that factor.
- Relevant policy and guidance – EPA (and other) guidance and policy relevant to the assessment.

Table 3-1: Flora and vegetation – required work

EPA objective	To protect flora and vegetation so that biological diversity and ecological integrity are maintained.
Relevant activities	• Brine abstraction. • Establishment and operation of infrastructure (including trenches, bores, ponds, stockpiles). • Clearing of native vegetation. • Storage, handling and transport of brine. • Movements of mobile plant and equipment.

Potential impacts and risks	• Indirect impacts to riparian vegetation health, loss of individual plants from significant taxa and / or changes in community composition and structure of riparian vegetation due to changed hydrology of surface and groundwater.
	• Direct loss (clearing of up to 138 ha) of native vegetation including 50 ha of *Tecticornia* habitat.
	• Impacts to vegetation health and / or changes in community composition and structure due to:
	  ○ Changed soil or groundwater salinity (saline runoff from operations areas).
	  ○ Introduction and spread of weeds.
	  ○ Altered fire regime.

Work required	1. A desktop review of available technical reports, relevant databases and spatial data to identify the potential flora and vegetation that may be present. 2. Identify and characterise the flora and vegetation of areas that may be directly or indirectly impacted by the proposal in accordance with Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment. Survey should be designed to inform local and regional context –including an appropriate survey of the islands within the playa (where allowed by Traditional Owners) Survey is to include: a) a detailed flora and vegetation survey in accordance with *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment* covering all areas likely to be directly or indirectly impacted by the proposal.

	b) Targeted searches for populations of significant flora in areas likely to be directly or indirectly impacted by the proposal. Submit specimens of significant flora to the WA Herbarium for lodgement. c) Targeted surveys for significant flora to quantify and map the size and extent of populations within the Development Envelope d) Targeted surveys for *Tecticornia* taxa. Two sampling events in appropriate climatic conditions to occur to target seeding for *Tecticornia* taxa. Appropriate timing of *Tecticornia* sampling events to be decided upon on the advice of the *Tecticornia* expert at the WA Herbarium. All *Tecticornia* specimens to be submitted to the WA Herbarium for identification and lodgement. e) Any survey reports provided will be accompanied by IBSA Data packages prepared in accordance with EPA guidance where the guidelines apply. Ensure database searches and taxonomic identifications are up-to-date. All surveys will be appended to the environmental review documentation. 3. Provide figures showing the extent of *Tecticornia* habitat within the Development Envelope and showing the extent of direct and indirect impacts. 4. Provide figures of the proposed clearing and predicted extents of indirect impact to significant vegetation and flora species. 5. Determine whether any flora species or vegetation communities recorded are significant, and provide an analysis of local and regional context, (refer *to Environmental Factor Guideline – Flora and Vegetation* for definition of significant flora). 6. Discuss potential direct and indirect impacts on flora and vegetation, including groundwater dependent vegetation, resulting from changes to hydrological regimes as a result of abstraction and placement of infrastructure, trenches and ponds on the lake playa. This should include but not be limited to, consideration of changes to patterns of water flow and redistribution of flood waters. 7. Discuss, and determine significance of, potential direct, indirect and cumulative impacts to flora and vegetation (including groundwater dependent vegetation, if present) as a result of the Proposal at a local and regional level. Include a quantitative assessment of levels of impact on significant flora and significant vegetation. For significant flora this includes: a) Estimates of numbers and proportions of individuals in a local and regional context. b) Estimates of numbers and proportions of populations directly or potentially indirectly impacted. c) Numbers/proportions/populations within the Western Australian conservation estate (where known).

	For ecological communities and significant vegetation units this includes: a) The area (in hectares) and proportions directly or potentially indirectly impacted. b) Proportions/hectares of ecological community or vegetation unit currently protected within Western Australia's conservation estate (where known). 8. Outline and justify the proposed avoidance and mitigation measures to reduce the potential impacts of the proposal on significant vegetation and flora. Include proposed management and/or monitoring plans that will be implemented pre- and post-construction to demonstrate and ensure residual impacts are not greater than predicted. Management and/or monitoring plans are to be presented in accordance with the EPA's Instruction. 9. Demonstrate that all practicable measures have been taken to reduce both the area of the proposed Disturbance Footprint and the Development Envelope. 10. Demonstrate and document in the ERD how the EPA objective for this factor can be met. 11. Determine and quantify any significant residual impacts by applying the Residual Impact Significance Model and WA offset Template in the WA Environmental Offset Guidelines (2014). 12. Where significant residual impacts remain, propose an appropriate offset package that is consistent with the WA Environmental Offset Policy and Guidelines. Spatial data defining the area of significant residual impacts should also be provided. 13. Prepare a conceptual Mine Closure Plan (MCP) consistent with Statutory Guideline for Mine Closure Plans (MCP) (DMIRS, 2020) which considers the proposed rehabilitation methods to achieve successful rehabilitation of all areas disturbed by mining with vegetation composed of native species of local provenance, where possible. Where local provenance seed cannot be sourced, seed will be collected from an appropriate reference ecosystem as close as possible to the rehabilitation site.
Relevant policy and guidance	***EPA Policy and Guidance*** • EPA - Statement of Environmental Principles, Factors and Objectives (EPA 2016). • Environmental Impact Assessment (EIA) (Part IV Divisions 1 and 2) Administrative Procedures 2016 (EPA 2016). • EIA (Part IV Divisions 1 and 2) Procedures Manual 2016 (EPA 2020).

	• EPA Environmental Factor Guideline – Flora and Vegetation (EPA 2016). • Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016). • Instruction on how to prepare an Environmental Review Document (EPA 2016). • Rehabilitation of Terrestrial Ecosystems – Guidance for the assessment of Environmental Factors (GS 6) (EPA 2006). • Statutory Guideline for Mine Closure Plans (MCP) (DMIRS, 2020). • Instructions and Form: IBSA Data Packages · • Instructions on how to prepare *Environmental Protection Act 1986* Part IV Environmental Management Plans

Table 3-2: Terrestrial Fauna – required work

EPA objective	To protect terrestrial fauna so that biological diversity and ecological integrity are maintained.
Relevant activities	• Brine abstraction. • Clearing of vegetation and habitat. • Establishment and operation of infrastructure (including trenches, bores, ponds, stockpiles). • Noise and light emissions associated with plant operations. • Movements of mobile plant and equipment. • Storage, handling and transport of brine.
Potential impacts and risks	• Fauna entrapment in ponds or trenches. • Modification of surface hydrology through the establishment of infrastructure on playa. • Fauna attracted to permanent water storages: creation of manmade habitats. • Increased feral predator access to islands on playa (via causeways / access tracks). • Modification of groundwater hydrology as a result of brine abstraction. • Removal and/or fragmentation of fauna habitat at local scale. • Direct fauna injury or mortality: contact with mine vehicles. • Entrapment in ponds. • Fauna attracted to permanent water storages. • Potential increase in feral animals, resulting in increased predation and competition. • Degradation of fauna habitat through indirect impacts (i.e. weeds). • Light and noise impacts on fauna behaviour.

Work required	14. In accordance with the requirements of EPA Guidance conduct a desktop study to identify and characterise the terrestrial fauna including water birds, aquatic invertebrates and Short Range Endemics (SRE), to inform local and regional context; and based on the results of the desktop study: a. Conduct a Basic (level 1) survey and fauna habitat assessment; and b. Conduct Detailed (Level 2) surveys for waterbirds, SREs and aquatic invertebrates that may be directly or indirectly impacted. c. Conducted targeted surveys for significant terrestrial fauna that may be directly or indirectly impacted. d. If cryptic species including potential undescribed species are encountered during surveys, prioritisation will be given to their identification. e. Any survey reports provided will be accompanied by IBSA Data packages prepared in accordance with EPA guidance where the guidelines apply. Ensure database searches and taxonomic identifications are up-to-date. All surveys will be appended to the environmental review documentation. 15. Conduct a targeted survey for the Night Parrot in order to determine presence/absence of the species and/or critical habitat within the Development Envelope, in accordance with the draft DBCA guidelines for the species. This survey will use recording devices and will be carried out over at least 6 nights of recording and conducted within three to four months of significant rainfall to maximise detection of the Night Parrot. 16. If the targeted survey for the Night Parrot identifies presence and/or critical habitat within the Development Envelope, detail and map the extent to which direct and indirect impacts will impact habitat for the Night Parrot within the Development Envelope. 17. Provide detailed mapping of the terrestrial fauna habitat, including locations of significant species, within the Development Envelope. Mapping should show the likely spatial extent of loss of habitats from both direct and indirect impacts.. 18. Assess and quantify the occurrence of SRE invertebrate and habitats and provide figures to show extent of impacts to SRE's. 19. Demonstrate that no SRE's are restricted to the area of impact, if this cannot be demonstrated, show that such species have been adequately surveyed for outside the area of impact.

	20. Assess and quantify the direct and indirect impacts to significant fauna species and fauna habitats in a local and regional context. Include an assessment of cumulative impacts to significant fauna and fauna habitats at Lake Way. 21. Consider habitat types that provide important ecological function within the proposal area (e.g. refugia and important habitat corridors). 22. Demonstrate application of the mitigation hierarchy to avoid and minimise impacts to fauna and fauna habitat. 23. Outline and justify the proposed avoidance and mitigation measures to reduce the potential impacts of the proposal. Include proposed management and/or monitoring plans that will be implemented pre- and post-construction to demonstrate and ensure residual impacts are not greater than predicted. Management and/or monitoring plans are to be presented in accordance with the EPAs Instruction. 24. Where significant residual impacts remain, propose an appropriate offset package that is consistent with the WA Environmental Offset Policy and Guidelines. Spatial data defining the area of significant residual impacts should also be provided. 25. Demonstrate and document in the ERD how the EPA's objectives for this factor can be met. 26. Prepare a conceptual MCP consistent with Statutory Guideline for Mine Closure Plans (MCP) (DMIRS, 2020).which addresses the need for rehabilitation of habitat for significant fauna species.
Relevant policy and guidance	***EPA Policy and Guidance*** • EPA - Statement of Environmental Principles, Factors and Objectives (EPA 2016). • Environmental Impact Assessment (EIA) (Part IV Divisions 1 and 2) Administrative Procedures 2016 (EPA 2016). • EIA (Part IV Divisions 1 and 2) Procedures Manual 2016 (EPA 2020). • EPA Factor Guideline – Terrestrial Fauna (EPA 2016). • Technical Guidance – Sampling Methods for Terrestrial Vertebrate Fauna (EPA 2016). • Technical Guidance – Terrestrial Fauna Surveys (EPA 2016). • Technical Guidance – Sampling of Short Range Endemic Invertebrate Fauna (EPA 2016).

	• Instructions and Form: IBSA Data Packages · • Instructions on how to prepare *Environmental Protection Act 1986* Part IV Environmental Management Plans • Instructions on how to prepare an Environmental Review Document, (EPA, 2016) ***Other Policy and Guidance*** • Interim guideline for preliminary surveys of night parrot (Pezoporus occidentalis) in Western Australia (DBCA 2017). • Government of WA 2011, WA Environmental Offsets Policy. • Government of WA 2014, WA Environmental Offsets Guideline (including template). • Commonwealth Offsets Policy (2012) and Assessment Guide. (2012). • Statutory Guideline for Mine Closure Plans (MCP) (DMIRS, 2020).

Table 3-3: Inland waters – required work

EPA objective	To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected.
Relevant activities	• Brine abstraction. • Establishment and operation of infrastructure (including trenches, bores, ponds, stockpiles). • Storage of waste salt. • Storage and use of salt, reagents and fuels. • Modification of surface drainage at a local scale. • Disposal of treated septic effluent. Note: abstraction of groundwater from the West Creek and the Southern borefield is not part of the activities referred to EPA for assessment.
Potential impacts and risks	• Impacts to Groundwater Dependent Ecosystems and riparian vegetation. • Alteration of local drainage patterns (frequency, extent or duration of ponding on playa surface). • Changes to surface water or groundwater quality. • Groundwater drawdown interactions with surface water regime. • Contamination of surface water or groundwater. • Increase in erosion or sedimentation.
Work required	27. Characterise the baseline surface and groundwater hydrology in a local and regional context and describe any connection between the surface water and groundwater system. 28. Characterise and describe the baseline surface and groundwater (brine) quality in a local and regional context. 29. Conduct a H3 detailed hydrological assessment, including drilling, test pumping and groundwater model in accordance with DWER's *Operating Policy No. 5.12 – Hydrological reporting associated with groundwater well licence* (DWER, 2009)..

	30. Provide an assessment and discussion of impacts of brine extraction from Lake Way on surrounding creeks, wetlands and groundwater dependent vegetation (if present). 31. Assess, determine and quantify the direct and indirect impacts to surface water quality, flow and flooding associated with the proposal including how flow and flooding patterns across the lake will be impacted by trenches and placement of ponds and stockpiles. 32. Provide maps illustrating spatial variability of the predicted change in flooding regime (e.g. areas and depths) for the proposal compared to the existing flooding regime at Lake Way. 33. Identify brine production bore locations and design requirements to meet project needs (extraction of brine). 34. Determine expected abstraction over the life of the project and assess the sustainability of paleochannel brine borefield. 35. Determine the change and impact to hydrological regimes as a result of abstraction and placement of infrastructure, trenches and ponds on the lake playa. 36. Provide a description of the design and location of the waste stockpiles and potential impacts (short and long term) to surface water and groundwater quality from the stockpiles. 37. Discuss the proposed management, monitoring and mitigation measures to be implemented to prevent significant adverse impacts to groundwater and surface water hydrology as a result of the implementation of the proposal. 38. Demonstrate within the ERD how the EPA's objective for this factor can be met. 39. Determine and quantify any significant residual impacts for the proposal by applying the Residual Impact Significance Model and WA Offset Template in the WA Environmental Offset Guidelines. 40. Where significant residual impacts remain, propose an appropriate offset package that is consistent with the WA Environmental Offset Policy and Guidelines. 41. Prepare a conceptual Mine closure plan consistent with Statutory Guideline for Mine Closure Plans (MCP) (DMIRS, 2020). which addresses the development of completion criteria to maintain the quality of surface water and groundwater so that environmental values are maintained post closure.

Relevant policy and guidance	**EPA Policy and Guidance** • EPA - Statement of Environmental Principles, Factors and Objectives (EPA 2016). • Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016 (EPA 2016). • Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual 2020 (EPA 2016). • EPA Factor Guideline –Inland Waters (EPA 2016). • Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans • Instructions on how to prepare an Environmental Review Document, (EPA, 2016) **Other Policy and Guidance** • Western Australia Water in Mining Guideline (DWER 2013) • Statutory Guideline for Mine Closure Plans (MCP) (DMIRS, 2020). • Operational Policy 5.12 - Hydrogeological reporting associated with a groundwater well licence (DoW 2009). • Australian groundwater modelling guidelines (Sinclair Knight Merz and National Centre for Groundwater Research and Training, Waterlines Report Series No. 82, June 2012).

Table 3-4: Social surroundings– required work

EPA objective	To protect social surroundings from significant harm.
Relevant activities	• Accessing sensitive areas by people not recognised as culturally appropriate (including for baseline survey work and monitoring). • Establishment and operation of infrastructure. • Accessing the process plant and associated infrastructure areas by people not recognised as culturally appropriate (including for baseline survey work and monitoring). • Establishment and operation of processing plant and associated infrastructure. • Transport of material and vehicle movements.
Potential impacts and risks	• Disturbance of heritage sites / culturally significant areas. • Restriction in access for customary practices. • Inappropriate access by non-initiated people. • Impact of the development on local towns and communities.
Work required	42. Characterise the heritage and cultural values of the Development Envelope and any other areas that may be indirectly impacted to identify sites of significance and their relevance within a wider regional context. 43. Provide details on any consultation undertaken with Traditional Owners and future plans for consultation and detail any changes made to the proposal as a result of consultation with Traditional Owners. 44. Assess the impacts of the proposal on heritage sites and/or cultural association as a result of implementation of the proposal, including those arising from changes to the environment which may impact on ethnographic and archaeological heritage significance. 45. Complete a local traffic impact assessment to ascertain potential project impacts to public amenity and safety. 46. Describe the proposed management, monitoring and mitigation measures proposed to ensure residual impacts are not greater than predicted. 47. Demonstrate within the ERD how the EPA's objective for this factor can be met. 48. Determine and quantify any significant residual impacts for the proposal by applying the Residual Impact Significance Model and WA Offset Template in the WA Environmental Offset Guidelines.

	49. Where significant residual impacts remain, propose an appropriate offset package that is consistent with the WA Environmental Offset Policy and Guidelines.
Relevant policy and guidance	**EPA Policy and Guidance** • EPA - Statement of Environmental Principles, Factors and Objectives (EPA 2016). • Environmental Impact Assessment (EIA) (Part IV Divisions 1 and 2) Administrative Procedures 2016 (EPA 2016). • EIA (Part IV Divisions 1 and 2) Procedures Manual 2016 (EPA 2020). • EPA Environmental Factor Guideline – Social Surroundings (EPA 2016). **Other Policy and Guidance** Aboriginal Heritage Due Diligence Guidelines, Version 3.0. Perth, Western Australia (DAA, 2013).

Table 3-5: Greenhouse Gas Emissions – required work

EPA objective	To reduce net greenhouse gas emissions in order to minimise the risk of environmental harm associated with climate change.
Relevant activities	• Vegetation clearing. • Petroleum fuel combustion (mobile fleet) • Power generation using petroleum fuels (gas, diesel). • Generation of putrescible and organic wastes (septage, food waste).
Potential impacts and risks	Generation of greenhouse gases through power generation or combustion of fossil fuels.
Work required	50. Characterise the greenhouse gas emission key sources from the proposal. 51. Estimate the expected Scope 1 (direct) and Scope 2 (energy indirect: purchase electricity) greenhouse gas emissions on an annual basis and over the life of the proposal. 52. Analyse the greenhouse gas intensity (i.e. quantity of CO2-e generated per tonne of product produced) of the proposal and benchmark against comparable projects. 53. Describe the greenhouse gas emission minimisation and monitoring measures. 54. Demonstrate within the ERD how the EPA's objective for this factor can be met.
Relevant policy and guidance	**EPA Policy and Guidance** • Environmental Factor Guideline - Greenhouse Gas Emissions (EPA 2020). • EPA - Statement of Environmental Principles, Factors and Objectives (EPA 2016). • Environmental Impact Assessment (EIA) (Part IV Divisions 1 and 2) Administrative Procedures 2016 (EPA 2016). • EIA (Part IV Divisions 1 and 2) Procedures Manual 2016 (EPA 2020). **Other Policy and Guidance** • Greenhouse Gas Emissions Policy for Major Projects (Government of Western Australia, August 2019). • Climate change in Western Australia – Issues Paper (Government of Western Australia, September 2019).

4 Other environmental factors or matters

The EPA has identified the following other environmental factor relevant to the Proposal that must be addressed during the environmental review and discussed in the Environmental Review Document.

Subterranean Fauna: The following work will be completed in relation to potential Proposal impacts on subterranean fauna:

- In accordance with the requirements of EPA Guidance conduct a desktop study to identify and characterise subterranean fauna at Lake Way.
- Characterise and assess the direct, indirect and cumulative impacts of the proposal, if any, on subterranean fauna.

Provide a discussion of the proposed management, monitoring and mitigation methods to be implemented in relation to impacts to subterranean fauna.

5 Stakeholder consultation

As part of its development of the Lake Way potash project, SO4 has sought to develop a clear understanding of the potential environmental and safety risks that the Project may cause and to identify design approaches and management measures to effectively treat the risks. Active stakeholder engagement has been undertaken since May 2018. Key stakeholders with whom SO4 has engaged to date include:

- Traditional Owners (Tarlka Matuwa Piarku (Aboriginal Corporation) RNTBC ('TMPAC'))
- Underlying pastoral and mining tenure holders (Blackham Resources, Toro Energy, MPI Nickel)
- State government agencies and decision-making authorities (DMIRS, DWER, DBCA, DPLH)
- The Shire of Wiluna

A summary of planned stakeholder engagement for the Project, beginning in Q1 2020 is provided in Table 5-1. SO4 will continue to engage with relevant stakeholders on matters associated with the Project to ensure stakeholder concerns are addressed and potential impacts are managed. The Stakeholder Engagement register forms part of the SO4 Environmental Management System (EMS) and is routinely updated following stakeholder consultation. The Environmental Review Document prepared for the Lake Way potash project will reflect the outcomes from SO4's ongoing stakeholder consultation.

Table 5-1: Stakeholder Engagement Plan

Stakeholder	Type	Purpose of planned engagement	Issues to be raised
Toro Energy	Meeting	Tenure access	Discuss land access.
TMPAC	Meetings, emails	Update on Project	Section 18 applications, project status, clearing activities.
Lake Way Station; Millbillillie Station	Email Meeting	Ongoing work	Exploration activities and use of pastoral tracks and roads.
Wiluna Shire	Meeting	Project Infrastructure update and future Requirements	Use of airport in town, upgrading of road intersections.
Blackham Resources Limited	Meeting	Co-ordination of on-lake activities	Project updates. Operations on lake and interface between work areas. Authorities to lodge statutory applications.

Stakeholder	Type	Purpose of planned engagement	Issues to be raised
DMIRS	Meetings	Progressing project approvals Mine rehabilitation and closure	Approvals pathways, tenure applications, parallel processing of statutory applications, closure strategies and information requirements.
DWER	Meeting, email	Part V permits and licences	Parallel processing of statutory applications.
DWER	Meeting, email	RIWI Act.	Water licensing, development of groundwater operating strategy.
APA/Australian Gas Infrastructure Group for Gas Pipeline	Emails, meeting	Pipeline capacity and route	Determine availability of gas from region pipeline line. Submission of requested information in relation to the Project schedule.
Relevant Ministers	Meeting	Progressing Project and Project update	Approvals pathways.
DPLH	Emails Meetings	Indigenous Affairs	Status of Native Title Agreements / Management Plans, status of Section 18 applications.

The following information will be provided in the ERD, as required by EPA guidelines:

- identified stakeholders;
- the stakeholder consultation undertaken and the outcomes, including decision-making authorities' specific regulatory approvals and any adjustments to the proposal as a result of consultation; and
- any future plans for consultation.

6 Decision-making authorities

The decision-making authorities (DMAs) listed in Table 6-1 are likely to be relevant to the Lake Way SOP proposal. EPA may identify additional DMAs during the assessment.

Table 6-1: Decision-making authorities

Decision-making authority	Relevant legislation
Minister for Environment	*Environmental Protection Act 1986*; *Biodiversity Conservation Act 2016*
Minister for Water	*Rights in Water and Irrigation Act 1914*
Minister for Mines and Petroleum	*Mining Act 1978* *Dangerous Goods Safety Act 2004* *Mines Safety and Inspection Act 1994*
Minister for Aboriginal Affairs	*Aboriginal Heritage Act 1972*
Director General, Department of Water and Environmental Regulation	*Environmental Protection Act 1986*; *Rights in Water and Irrigation Act 1914*
Executive Director, Environment Division, Department of Mines, Industry Regulation and Safety	*Mining Act 1978* *Mines Safety and Inspection Act 1994*
Chief Dangerous Goods Officer, Department of Mines, Industry Regulation and Safety	*Dangerous Goods Safety Act 2004*
State Mining Engineer, Department of Mines, Industry Regulation and Safety	*Mining Act 1978* *Mines Safety and Inspection Act 1994*
Chief Executive Officer, Shire of Wiluna	*Local Government Act 1995* *Planning and Development Act 2006*
Commissioner, Main Roads WA	*Main Roads Act 1930*