

Aurukun Bauxite Project

Initial Advice Statement

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AURUKUN BAUXITE PROJECT

INITIAL ADVICE STATEMENT

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For:

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AURUKUN BAUXITE PROJECT INITIAL ADVICE STATEMENT

for Glencore Bauxite Resources Pty Ltd

1 INTRODUCTION

1.1 PURPOSE

This Initial Advice Statement (IAS) has been prepared in order to initiate the Queensland environmental assessment and approval process for the Aurukun Bauxite Project (the project). The IAS has been prepared to meet the requirements of Section 41(3) of the *Environmental Protection Act 1994* (Qld) (EP Act). It includes a high level overview of the project, its environmental setting and a description of stakeholder consultation proposed to be conducted. It also provides a preliminary overview of potential environmental impacts. An Environmental Impact Statement (EIS) will be prepared for the project as part of the environmental approval process and the IAS provides information to assist regulators with identifying issues that should be addressed in the EIS.

The project is a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) (EPBC 2020/8624). The EIS that will be prepared as part of the Queensland approval process will also be used to inform the environmental assessment under the EPBC Act.

1.2 PROJECT OVERVIEW

The project involves the construction and operation of an open cut bauxite mine on a greenfield site in western Cape York, Queensland (Figure 1).

The project is anticipated to have a peak production rate of up to 15 Million tonnes per annum (Mtpa) of run of mine (ROM) bauxite ore, which will be processed to produce up to eight (8) Million dry tonnes per annum (Mdtpa) of product bauxite. The mine life is approximately 22 years. The bauxite will be mined by conventional open cut mining methods using front end loaders and haul trucks. Ore will be screened and washed in an on-site Beneficiation Plant. Product bauxite will be transported by road train via the Product Haul Road to a Coastal Loading Facility (CLF) from where it will be loaded on to a Transshipment Vessel. The Transshipment Vessel will transport the product bauxite to an Ocean Going Vessel, which will ship the product bauxite to international markets. The location of key project components is shown on Figure 2.

1.3 THE PROPONENT

The project proponent is Glencore Bauxite Resources Pty Ltd (Glencore), a wholly owned subsidiary of Glencore plc. Glencore plc is one of the world's largest globally diversified natural resource companies and has been operating in Australia for nearly 20 years.

Glencore holds significant interests in a range of commodities across all mainland states and the Northern Territory. Glencore is a major Australian employer, with about 18,000 people working across industries that include coal, copper, nickel, oil, zinc, cotton, grain and oilseed.

1.4 REPORT STRUCTURE

The structure of the report is as follows:

- Section 2 Queensland and Federal regulatory framework governing environmental approvals.
- Section 3 Description of the project.
- Section 4 Details of the baseline environment, potential impacts and EIS approach.
- Section 5 Details of stakeholder consultation.
- Section 6 References.

2 REGULATORY APPROVAL PROCESS

2.1 KEY PROJECT APPROVALS

Table 1 summarises the legislation relating to the primary environmental approvals that are required for the project and also includes legislation relevant to tenements.

Table 1
Key Project Approvals

Approval	Legislation	Administering Authority
Environmental Authority (EA)	<i>Environmental Protection Act 1994</i> (EP Act)	Queensland Department of Environment and Science (DES)
EPBC Act approval	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	Commonwealth Department of Agriculture, Water and the Environment (DAWE)
Mining Leases	<i>Mineral Resources Act 1989</i> (MRA)	Queensland Department of Natural Resources, Mines and Energy (DNRME)

The project also requires approvals related to land access, as well as a range of other secondary environmental approvals. These approvals will be described in the EIS to be prepared for the project.

2.2 ENVIRONMENTAL PROTECTION ACT

2.2.1 Overview

The EP Act was established to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains ecological processes. The EP Act provides a framework for the regulation of Environmentally Relevant Activities (ERAs), including mining activities. This framework includes a requirement for environmental assessment before approval may be granted for a project. Approval under the EP Act is provided in the form of an Environmental Authority (EA), which imposes environmental management and/or performance conditions on a project.

2.2.2 EIS Process and Grant of EA

An application to prepare a voluntary EIS has been lodged for the project, supported by this IAS. The next step in the EIS process under the EP Act is the development of the Terms of Reference (TOR) for the EIS. The proponent intends commencing the TOR process once DAWE has made a controlled action decision under the EPBC Act for the project.

The TOR process involves preparing Draft TOR for the EIS and then placing the Draft TOR on public exhibition. Regulators, interested and affected persons and members of the public are able to make submissions on the Draft TOR. The TOR is then finalised, taking into account any submissions that are received, and the final TOR is published. Although this IAS provides an indication of some of the technical work that is proposed to be undertaken as part of the EIS, the final scope of the EIS will only be determined once the Final TOR has been issued.

An EIS will then be prepared for the project. It will be scoped to address the requirements of the TOR and relevant guidelines, and any issues identified as part of the EIS consultation process (Section 5). The EIS will include studies prepared by a team of multi-disciplinary specialists, and will characterise the baseline environment, describe and assess environmental impacts and describe proposed mitigation and management measures.

The EIS will be placed on public exhibition and the proponent will be required to address any submissions made on the EIS. The EIS process concludes with DES issuing an EIS Assessment Report, which takes into account the information contained in the EIS, submissions made on the EIS and the proponent's response to these submissions, and the requirements of the EP Act. The EIS Assessment Report will make recommendations about the suitability of the project and recommend conditions that should form part of the EA.

The proponent will lodge an application for an EA in the future at the time that it applies for mining leases for the project. The EA application can be progressed once the EIS Assessment Report has been issued. The project cannot proceed until the EA and mining leases have been issued.

2.2.3 Environmentally Relevant Activities

Table 2 lists the ERAs, as prescribed under the *Environmental Protection Regulation 2019* that are proposed to be carried out as part of the project. It also indicates the potential location in which these ERAs will be carried out. Any EA granted for the project will list these ERAs and will include conditions related to the management of impacts that could arise from the ERAs.

Table 2
Preliminary List of Environmentally Relevant Activities

ERA Number	ERA Description	Potential Location of ERA (Figure 2)
Schedule 3 <i>Environmental Protection Regulation 2019</i>		
	Mining Bauxite – 11	Potential Mining Area
Schedule 2 <i>Environmental Protection Regulation 2019</i> – Prescribed ERAs		
ERA 8 (3)	Chemical Storage	Mine Infrastructure Area and Coastal Loading Facility
ERA 14 (2a)	Electricity Generation	Accommodation Village, Tapplebang Dam, Mine Infrastructure Area and Coastal Loading Facility
ERA 31 (2b)	Mineral Processing	Mine Infrastructure Area
ERA 63	Sewage Treatment	Mine Infrastructure Area and Accommodation Village
ERA 64	Water Treatment	Mine Infrastructure Area and Accommodation Village

2.3 EPBC ACT

The EPBC Act provides a mechanism for national environmental protection and biodiversity conservation. Projects that are considered likely to have a significant impact on Matters of National Environmental Significance (MNES) prescribed under the EPBC Act require approval from DAWE. The nine MNES protected under the EPBC Act include:

- World heritage properties;
- National heritage places;
- Wetlands of international importance (listed under the Ramsar Convention);
- Listed threatened species and ecological communities;
- Migratory species protected under international agreements;
- Commonwealth marine areas;
- The Great Barrier Reef Marine Park;
- Nuclear actions (including uranium mines); and
- A water resource, in relation to coal seam gas development and large coal mining development.

Actions that are likely to have a significant impact on MNES are subject to an assessment and approvals process. The level of assessment required under the EPBC Act is determined by the nature and scale of the potential impacts of the project. A referral under the EPBC Act was made on 25 February 2020 and on 11 June 2020 DAWE determined the project to be a controlled action under the EPBC Act. The controlling provisions are listed threatened species and communities, listed migratory species and the Commonwealth marine area. DAWE will make use of the EIS prepared under the EP Act for its assessment under the EPBC Act. DAWE will be involved in the EIS process by providing submissions at key stages of the EIS process (e.g. Draft TOR and on the EIS).

2.4 MINING LEASES

The MRA provides for the assessment, development and utilisation of mineral resources to the maximum extent practicable, consistent with sound economics and land use management. The MRA provides for issuing mining leases for mining, or for purposes associated with mining, such as infrastructure to support mining operations. The project cannot proceed until a mining lease/s has been granted.

The project's proposed mining activities are located within Mineral Development Licence (MDL) 2001, which is held by the proponent (Figure 3). The proponent will apply for a mining lease over part of MDL 2001.

The Product Haul Road and CLF are located on land currently subject to ML 7024, which is held by Rio Tinto, and is the mining lease for the Amrun Mine as well as much of Rio Tinto's Weipa mining operations. Specific provisions of the MRA (Part 2, Chapter 6) apply to the granting of mining tenure as part of the project. These provisions, as well as provisions in the *Commonwealth Aluminium Corporation Pty Limited Agreement Act 1957* (Qld) are intended to facilitate certainty of tenure for the holder of the Aurukun bauxite resource. In accordance with these and other statutory provisions, the proponent will seek the appropriate land tenure to facilitate the construction and development of the project infrastructure proposed to be located on ML 7024. The proponent intends to seek an agreement with Rio Tinto, as well as Traditional Owners and the State, regarding the most suitable long-term tenure required for those elements of project infrastructure which are located on ML7024 however the proponent expects to apply for a 'transportation mining lease' for the Product Haul Road as well as establish tenure for the CLF area.

The area shown in Figure 3 as the "Project Site Boundary" equates to the intended area over which tenure will be sought.

3 PROJECT DESCRIPTION

3.1 DESCRIPTION OF THE PROJECT SITE

3.1.1 Definition of Project Site

The project site is defined for the purposes of the IAS to include the following areas, which are shown on Figure 3:

- An area located within MDL 2001, which encompasses the project mining areas and associated mine infrastructure. This is termed the “Mine Site” in this IAS.
- An area to the west of MDL 2001 that will connect the Mine Site to the coast. This area encompasses the proposed Product Haul Road and the CLF and is termed the “Product Bauxite Transport Corridor” in this IAS.

The project site covers approximately 27,000 ha. As indicated in Section 2.4, tenure will be sought over the full extent of the project site.

3.1.2 Project Location

The nearest town to the project site is Aurukun, which is located 23 km to the south-west (Figure 2). The project site is located approximately 35 km south of Weipa (Figure 3). The Mine Site is located within the Aurukun Shire Council (ASC) area (Figure 4). The Product Bauxite Transport Corridor is located within the Cook Shire Council area (Figure 4).

3.1.3 Land Ownership

The Wik and Wik Waya People hold the Native Title rights over the Mine Site. Ngan Aak-Kunch Aboriginal Corporation (NAK) is the nominated agent/representative and prescribed body corporate in respect of these rights. Native Title over this area was determined in 2004 (QCD2004/002).

NAK is also the holder, on behalf of the Wik and Wik Waya People, of Aboriginal freehold title for land that includes the Mine Site (Figure 5). This title was granted in 2013 (Lot 211 on SP241404).

The Product Bauxite Transport Corridor is also subject to the Native Title rights of the Wik and Wik Waya People, although there is no Aboriginal freehold title held over that land. Native title over this area was determined in 2009 (QCD2009/002).

Prior to the grant of mining leases for the project, the proponent will need to fulfil the requirements of the *Native Title Act 1993* (Cth) in respect of the affected Native Title. In addition, and to comply with its obligations under the MRA, the proponent intends to seek a Compensation Agreement with NAK as the registered owner of the Aboriginal freehold land.

3.1.4 Land Use and Sensitive Receptors

The Mine Site area is used occasionally by Aurukun community members and others for hunting feral pigs. It is also used by Traditional Owners (TOs) for collecting resources, including timber for art, seeds for land rehabilitation programs and other resources for cultural ceremonies. The area is used as an access route for TOs to the coast, via Amban Road.

Built infrastructure within the Mine Site area includes an unsealed landowner/community road (Amban Road) and a (non-operational) communications tower. The Mine Site area borders Aurukun Road (controlled by ASC). The local road network is shown in Figure 2.

The Product Bauxite Transport Corridor is within the boundary of Rio Tinto's ML 7024. At present this area is used intermittently by TOs to access the coast. However, much of this land is subject to approved plans for future mining as part of the Amrun Mine. No decision has been made by Rio Tinto as to if, or when, such development would take place within the Product Bauxite Transport Corridor other than stating that it would be subject to future market conditions.

The only built infrastructure within the Product Bauxite Transport Corridor is Amban Road, an unsealed private landowner/community road (Figure 2).

The nearest sensitive receptor to any part of the project site is the Amban Outstation, which is located approximately 2 km to the south of the proposed CLF (Figure 2). The Amban Outstation comprises a small residential building and some shelter structures, used intermittently by TOs for recreation.

3.1.5 Topography and Natural Features

The landform of the Mine Site comprises a broad tertiary plateau of gently undulating plains with occasional shallow drainage depressions. The elevation within the Mine Site ranges from 9 to 91 m Australian Height Datum (AHD). Tapplebang Creek and Coconut Creek traverse the Mine Site. Coconut Creek flows in a south-westerly direction joining Tapplebang Creek to become the Ward River, approximately 9 km from the project site boundary (Figure 6). Coconut Creek and Tapplebang Creek both flow during and immediately after the wet season. Flows cease during the dry season and, depending on the nature and timing of the preceding wet season, the creeks may dry out entirely or be restricted to remnant pools by the late dry season.

Figure 7 shows published Regional Ecosystem (RE) mapping for the project site. This mapping will be ground-truthed as part of the EIS. This mapping indicates that the dominant vegetation type within the Mine Site is *Eucalyptus tetradonta* (Darwin Stringybark) +/- *Corymbia nesophila* (Cape Melville Bloodwood) woodland to open forest (RE 3.5.36). Other vegetation types in the Mine Site include:

- *Lophostemon suaveolens* (Swamp Box) woodlands on creeklines and swamps (RE 3.3.9);
- *Corymbia clarksoniana* or *C. novoguineensis* woodland on alluvial plains (RE 3.3.20);
- *Eucalyptus tetradonta* and *Corymbia stockeri* woodland on ironstone knolls and slopes (RE 3.7.4);
- *Eucalyptus cullenii* +/- *E. tetradonta* woodland on erosional escarpments and plains (RE 3.7.3); and
- *Balioskion tetraphyllum* subsp. *meiostachyum* and/or *Leptocarpus* spp. and/or *Dapsilanthus spathaceus* open sedgeland in drainage swamps (RE 3.3.64).

The Mine Site is located approximately 15 km inland and the Product Bauxite Transport Corridor connects the Mine Site to the coast. There are no watercourses within the Product Bauxite Transport Corridor.

The elevation within the Product Bauxite Transport corridor is approximately 50 m AHD at the Mine Site boundary, dropping down to 12 m AHD at the CLF, which will be set back from the coastline. A Load-out Jetty at the CLF will extend into the ocean and traverse a stretch of sandy beach.

Government mapping of regional ecosystems (Figure 7), indicates that the majority of the Product Bauxite Transport Corridor comprises *Eucalyptus tetradonta* +/- *Corymbia nesophila* woodland to tall woodland (RE 3.5.36), with a small strip of coastal vegetation on the sandy foreshore.

3.1.6 Tenements

Current tenement arrangements are as follows:

- The Mine Site is located within MDL 2001, which is held by the proponent. MDL 2001 is located within Restricted Area (RA) 315 (Figure 3). RA 315 is designated under the MRA and encompasses a resource termed the Aurukun Bauxite Deposit. In 2015, by entry into a Development Agreement with the State of Queensland, the proponent was awarded the right to apply for an MDL (and ultimately a mining lease) for the development of the Aurukun Bauxite Deposit. The MDL took effect from 1 January 2018.
- The Product Bauxite Transport Corridor is within ML 7024, which is located to the west of MDL 2001. As noted in Section 2.4, ML 7024 is held by Rio Tinto.

As indicated in Section 2.4, the proponent will apply for tenure over the full extent of the project site.

3.1.7 Access to the Project Site for Undertaking EIS Studies

The Mine Site is within MDL 2001, which provides the proponent with rights with respect to accessing the land to carry out studies. In accessing the land, the proponent must comply with relevant regulatory requirements, including the requirements of the Native Title Protection Conditions and the requirements of the MRA (in respect of the conduct of preliminary and advanced activities).

The Product Bauxite Transport Corridor is within ML 7024, held by Rio Tinto. The proponent and Rio Tinto have entered into an Access Licence for the purpose of undertaking study activities within ML 7024 (Figure 3). The study activities, as defined by the Access Licence, include:

- Consultation activities with relevant stakeholders including on country consultation with TOs;
- Baseline fieldwork for specialist environmental studies such as cultural heritage, terrestrial ecology, aquatic ecology, surface water and noise and air; and
- Geotechnical investigations of the proposed project areas within ML 7024.

3.2 PROPOSED PROJECT ACTIVITIES

Project activities will include the mining and beneficiation of bauxite ore, the transport of product bauxite by road trains to the CLF and the transport of product bauxite to international markets using transshipping methods. These project elements are discussed in further detail in the following sections, with the description being divided into activities to be undertaken within the Mine Site (Section 3.2.1) and activities within the Product Bauxite Transport Corridor and associated transshipping (Section 3.2.2). Project scheduling, workforce arrangements and site access are described in Sections 3.2.3, 3.2.4 and 3.2.5, respectively.

The information contained in this section, and in the remainder of the IAS, is based on preliminary project planning and is subject to change as further engineering studies are undertaken. The EIS will contain a detailed project description based on detailed engineering work.

3.2.1 Mine Site

Mining Operations

Figure 2 shows the indicative location of project mining areas. The bauxite ore body is relatively shallow, typically exposed less than 1-2 m below ground level, and typically around 6-7 m thick. The bauxite ore will be mined by open cut mining methods in accordance with the mine plan. No mining activities are proposed within the floodplains of Tapplebang Creek or Coconut Creek and mining activities will be designed to avoid the need to divert watercourses.

The general sequence of mining operations will be as follows:

1. Clearing of vegetation.
2. Stripping topsoil. Topsoil will be placed directly on areas that are ready for rehabilitation, or stockpiled in designated areas for later use.
3. Removing subsoil. Subsoil will be excavated, using front end loaders, in order to gain access to the ore. Subsoil will be placed directly on previously mined areas or temporarily stockpiled.
4. Mining ore. The ore will be mined using front end loaders. Front end loaders will load the ore onto haul trucks that will transport the ore to the Beneficiation Plant.
5. Backfilling mined areas following ore removal (from year 4). Designated mined areas will be backfilled with fines material (resulting from the beneficiation process).
6. Re-shaping. Once mining and any backfilling with fines has been completed, mined areas will be shaped to final profiles using dozers and available subsoil.
7. Topsoil replacement. Topsoil will be spread over re-shaped areas and ripped.
8. Revegetation. Topsoiled areas will be revegetated in order to achieve the agreed post-mining land use. The post-mining land use and detailed rehabilitation program for the project will be developed in consultation with the TOs.

Product Beneficiation

Bauxite ore will be screened and washed at the Beneficiation Plant. The beneficiation process will produce both product bauxite and fines. Product bauxite will be transported by road train to the CLF, as described in Section 3.2.2. Fines will be pumped to the Fines Containment Area (FCA) during the first few years of mining (nominally the first three years of mining). In later years of mining fines will be disposed of in mining pits.

Mine Infrastructure

Infrastructure within the Mine Site that will be required to support mining operations includes:

- Haul roads and a mine access road;
- Conveyors, stockpiles and stacker reclaimers;
- Workshops, warehouse, laydown areas;
- Accommodation village and administration buildings;
- Vehicle servicing, refuelling and wash down facilities, and fuel storage facilities;
- Power supply infrastructure, including generators and transmission lines;
- Water supply and water management infrastructure;
- Communications infrastructure; and
- An incinerator for non-regulated waste that cannot be recycled.

Figure 2 shows the location of the Mine Infrastructure Area (the area in which much of this infrastructure will be located) and the Mine Administration Area.

Water Supply

The project's annual raw water demand is estimated to be up to a maximum of 10 Gigalitres (GL). A water supply dam on Tapplebang Creek will be the primary water source for the project. A preliminary analysis has been undertaken and has determined that the required capacity of the water supply dam is approximately 9 GL. The proposed location of the water supply dam is shown in Figure 2.

The temporary water supply for the construction phase (i.e. prior to the construction of Tapplebang Dam) is expected to include surface water sources within the project site, i.e. direct abstraction from watercourses, and potentially a single artesian groundwater bore.

Water supply options are still being refined within ongoing technical, economic, environmental and social evaluation. Developing ways to maximise the reuse and recycling of water will be a key component of the water supply strategy.

Power Supply

Diesel powered generators will be used to supply power for the project. No off-site power supply options are proposed. There may be scope to consider the inclusion of a hybrid power solution that combines solar panels, battery storage and diesel-powered generators. The merits of pursuing a hybrid power solution will be explored further in the project feasibility study.

3.2.2 Product Bauxite Transport Corridor

Product Haul Road

A Product Haul Road will be used to connect the Mine Infrastructure Area to the CLF (Figure 2). Road trains will be used to transport product bauxite from the Beneficiation Plant to the CLF.

Coastal Loading Facility

Road trains will unload product bauxite into a hopper and conveyor system at the CLF. If a Transshipment Vessel (TSV) is moored at the Load-out Jetty, the product bauxite will be transported directly to the TSV. If there is no TSV moored at the Load-out Jetty, the product bauxite will be stockpiled and reclaim conveyors will be used to transfer the stockpiled product bauxite to the TSV. The TSV will be loaded via a conveyor on the Load-out Jetty.

Infrastructure proposed to be located at the CLF is shown on Figure 8 and includes:

- Road train dump loop;
- Product stockpiles, conveyors and reclaim hoppers;
- Load-out Jetty;
- Washpad and workshops;
- Administration Area;
- Power generation and fuel storage facilities;
- Water management infrastructure, including sediment ponds; and
- Communications tower.

The jetty will be approximately 450 m in length and up to 12 m high. CLF infrastructure such as stockpiles and workshops will be set back from the coastline. The Load-out Jetty will traverse the foreshore, but the pylons for the jetty are the only infrastructure that will result in disturbance of the sandy beach.

When the TSV is not in use, it will be moored at the Load-out Jetty. In the event of a cyclone the TSV is designed to go to sea to avoid adverse conditions. If further design work identifies the need for a cyclone mooring, it would be established to the south-west of the Load-out Jetty. Figure 9 shows an indicative location for a cyclone mooring.

Transshipping

The TSV will transport product bauxite to an Ocean Going Vessel (OGV), via the transshipment route shown on Figure 9. The OGVs will be Panamax vessels and/or Capesize vessels. OGVs will be anchored approximately 18 km offshore. There are three possible locations

proposed for anchoring the OGVs, as shown on Figure 9 (shown as Outer Transshipment Area 1 & 2 and Inner Transshipment Area). No infrastructure will be constructed in these locations; these are simply the locations at which the OGVs are proposed to be anchored. These locations have been selected because they are deep enough for the OGVs to access and because marine surveys have shown that there are no sensitive environmental features on the sea floor in these locations (e.g. no corals) that could be disturbed by ship anchors.

The TSV will be fitted with a retractable conveyor boom which will be used to transfer product ore from the TSV directly into the hold of the OGV. The retractable conveyor boom will be covered and will be fitted with a loading chute to minimise the potential for spillage and dust. The loaded OGVs will then transport the product bauxite to international ports. The shipping routes to international ports are to the north and will not traverse the Great Barrier Reef.

The TSV is forecast to take approximately 12 hours to complete one cycle (i.e. load at CLF, travel to OGV, unload and return to CLF). The project only requires one TSV, which will make 2 trips per day and operate for approximately 320 days per year. It will take the TSV approximately 12 trips (i.e. 6 days) to load the OGV and there will be approximately 51 OGVs over the course of a year.

Site Selection

The proponent has undertaken an options analysis to guide the CLF site selection and the proposed method for transporting product (i.e. transshipment arrangements, rather than a port). This has included consideration of factors related to engineering, operability, potential environmental impacts, economics and tenure arrangements. This included consideration of the viability of integrating the project's requirements with other existing facilities in the vicinity of the project site. The EIS will provide detail on site selection and alternatives.

3.2.3 Schedule and Mine Life

The timing of regulatory approvals will be a key driver for the timing of the commencement of construction, although construction is not anticipated to commence prior to 2022. The project life is expected to be approximately 25 years, including approximately two years of construction.

3.2.4 Workforce and Accommodation

At peak construction, up to 350 workers may be needed. The annual average operations workforce will be approximately 400 workers based on current project planning, with up to 250 workers on site at any one time.

The operations workforce will consist of a combination of:

- Local hires i.e. residents of Aurukun; and
- Non-local hires i.e. people who reside permanently outside of Aurukun and commute (i.e. fly-in/fly-out or drive-in/drive out) to work for block shifts.

An Accommodation Village is proposed to be constructed to house the operations workforce. The Accommodation Village will be designed to accommodate up to 280 persons and is proposed to be located adjacent to the Mine Administration Area (Figure 2).

Accommodation for the construction workforce will be provided at a temporary facility adjacent to the proposed Accommodation Village.

3.2.5 Site Access and Transport

The Mine Site will be accessed via Aurukun Road, with a new intersection off Aurukun Road proposed to be constructed. The main transportation route for supplies will be via the State-controlled Peninsula Developmental Road (PDR) (Figure 1).

Fuel, and some other supplies, will be transported to the Mine Site via the existing barge service which supplies the town of Aurukun. The barge is operated by a commercial operator. The barge operator is considering developing a fuel storage facility and laydown area in the industrial precinct in Aurukun and this facility would be used for any project supplies delivered by barge. These facilities would be developed by an independent operator, who would also be responsible for obtaining the necessary development approvals. The facilities do not form part of the project that is being assessed in the EIS.

The fly-in/fly-out component of the workforce will access the site via Aurukun Airport. They will then be transported directly to the Mine Site by a shuttle bus service provided by the proponent.

4 ENVIRONMENTAL VALUES AND POTENTIAL IMPACTS

An EIS will be prepared for the project. The EIS will include an environmental impact assessment of all the activities within the project site as well as the transportation of the ore to OGVs. The EIS will consider the impacts from the construction, operation and decommissioning stages of the project.

The key areas that will be studied during preparation of the EIS include the following:

- Terrestrial ecology;
- Marine ecology and coastal processes;
- Groundwater;
- Surface water and aquatic ecology;
- Soils and land suitability;
- Geochemistry of mine wastes;
- Rehabilitation;
- Noise and vibration;
- Air quality and greenhouse gas;
- Socio-economics;
- Visual amenity;
- Traffic and transportation;
- Waste management; and
- Cultural heritage.

A description of the project's environmental values and potential impacts is supplied in the following sections. This section is based on preliminary information, given that EIS studies are still to be undertaken.

4.1 CLIMATE

The Aurukun Bauxite Project is located in Far North Queensland within the Weipa Plateau sub-region of the Cape York Peninsula Bioregion. The region experiences tropical monsoonal conditions with average temperature ranges recorded in Weipa of between 21.8°C and 35.7°C in the summer months, and 18.7°C and 32.1°C in the winter months (BoM, 2018). The region receives an annual average rainfall of approximately 1,918 mm with a pronounced monsoonal wet season. More than 85% of the annual rainfall is typically recorded between December and March, inclusive (BoM, 2018).

4.2 TERRESTRIAL ECOLOGY

4.2.1 Environmental Values

As detailed in Section 3.1.5, the dominant vegetation type within the project site is *Eucalyptus tetrodonta* (Darwin Stringybark) woodland, with areas of riparian vegetation along creek lines. The majority of the project site is mapped as supporting remnant vegetation. All Regional Ecosystem (REs) within the project site have been mapped as Least Concern under the *Vegetation Management Act 1999* (VM Act).

The site contains the following landscape features which could potentially provide habitat values for fauna:

- Coconut Creek and Tapplebang Creek and associated riparian vegetation;
- Hollow-bearing trees that can provide roosting and breeding sites for birds and mammals; and
- Termite mounds which can provide habitat for some bird and reptile species.

Threatened species listed under the EPBC Act and/or the Queensland *Nature Conservation Act 1992* (NC Act) have the potential to occur within the project site. Threatened species that have been recorded within the project site or have potential to occur within the project site based on database searches and available habitat are listed in Table 3. The species list is indicative and still to be confirmed with fieldwork.

Table 3
Listed Threatened Species Recorded or with Potential to Occur within the Project Site

Species	EPBC Act Status	NC Act Status
Present in the Project Site		
Red Goshawk (<i>Erythrotriorchis radiatus</i>)	Vulnerable	Endangered
Palm Cockatoo (Australian) (<i>Probosciger aterrimus macgillivrayi</i>)	Vulnerable	Vulnerable
Black-footed Tree-rat (north Queensland) (<i>Mesembriomys gouldii rattoides</i>)	Vulnerable	Least Concern
White-throated Needletail (<i>Hirundapus caudacutus</i>)	Vulnerable	Vulnerable
Potential to Occur in Project Site		
Northern Quoll (<i>Dasyurus hallucatus</i>)	Endangered	Least Concern

Species	EPBC Act Status	NC Act Status
Bare-rumped Sheathtail Bat (<i>Saccolaimus saccolaimus nudicluniatatus</i>)	Vulnerable	Endangered
Masked Owl (northern) (<i>Tyto novaehollandiae kimberli</i>)	Vulnerable	Vulnerable

There is also potential for migratory species listed under the EPBC Act to occur within the project site.

No threatened flora species have been recorded within the project site to date.

4.2.2 Potential Impacts

The clearing of vegetation to facilitate mining activities and the construction of Tapplebang Dam are the key project activities that may give rise to impacts on terrestrial ecology. Potential impacts include:

- Loss of habitat, including loss of habitat for threatened species, due to the clearing of vegetation;
- Fragmentation of vegetation communities and habitat;
- Spread of weed and pest species;
- Potential for changes to the fire regime, with resultant impacts on flora and fauna;
- Indirect impacts on fauna due to dust, noise, blasting, vibration and lighting; and
- Changes in the flow regime in Tapplebang Creek and downstream waterways, resulting in disturbance to vegetation communities, particularly riparian vegetation.

4.2.3 Proposed EIS Study

A comprehensive, two-season terrestrial ecology field survey will be undertaken as part of the EIS. It will include targeted searches for threatened species. The survey will aim to:

- Identify and determine the distribution of vegetation within the project site;
- Confirm the presence of threatened flora and fauna species within the project site;
- Determine areas of high value habitat for threatened species found on the project site, and those with a high to moderate likelihood of occurring on the project site;
- Record the presence of any pest animal or weed species on the project site; and
- Assess potential impacts of the project and detail any necessary mitigation measures.

4.3 MARINE ECOLOGY AND COASTAL PROCESSES

4.3.1 Environmental Values

The marine environment relevant to the project is the area in which the Load-out Jetty is proposed to be located, as well as the proposed transshipment route (i.e. the route from the CLF to the Transshipment Areas).

The Load-out Jetty will traverse the foreshore, but the pylons for the jetty are the only infrastructure that will result in disturbance of the sandy beach. Marine turtles nest on the beaches on western Cape York, including this stretch of beach (Pendoley Environmental, 2018). The beach is currently subject to some disturbance from recreational off-road vehicles.

The Load-out Jetty is proposed to be constructed in an area of shallow coastal waters where the seafloor consists of subtidal soft sediment and the occasional boulder. Initial work has shown that there is a clear navigational passage from the CLF to the Transshipment Areas which avoids sensitive marine features, such as corals and seagrass, on the sea floor. The Transshipment Areas are located in the Commonwealth Marine Area (Figure 9). The EIS marine study will include a review of potential marine values in the vicinity of proposed project infrastructure and activities, including, but not limited to, rocky reefs, offshore and nearshore sediment upwellings and foraging habitat for bird species.

Threatened marine species listed under the EPBC Act and/or the NC Act have the potential to occur within the project's marine environment. Threatened species that have been recorded within the project's marine environment or have potential to occur based on database searches and available habitat are listed in Table 4. The species list is indicative and still to be confirmed with fieldwork.

Table 4
Listed Threatened Marine Species Recorded or with Potential to Occur within the Project's Marine Environment

Species	EPBC Act Status	NC Act Status
Present within the Project's Marine Environment		
Australian Humpback Dolphin (<i>Sousa sahalensis</i>)	-*	Vulnerable
Loggerhead Turtle (<i>Caretta caretta</i>)	Endangered*	Endangered
Green Turtle (<i>Chelonia mydas</i>)	Vulnerable*	Vulnerable
Hawksbill Turtle (<i>Eretmochelys imbricate</i>)	Vulnerable*	Endangered

Species	EPBC Act Status	NC Act Status
Olive Ridley Turtle (<i>Lepidochelys olivacea</i>)	Endangered*	Endangered
Flatback Turtle (<i>Natator depressus</i>)	Vulnerable*	Vulnerable
Saltwater Crocodile (<i>Crocodylus porosus</i>)	-*	Vulnerable
Beach Stone-curlew (<i>Esacus magnirostris</i>)	-	Vulnerable
Potential to Occur within the Project's Marine Environment		
Australian Snubfin Dolphin (<i>Orcaella heinsohni</i>)	-*	Vulnerable
Dwarf Sawfish (<i>Pristis clavata</i>)	Vulnerable*	-
Green Sawfish (<i>Pristis zijsron</i>)	Vulnerable*	-
Eastern Curlew (<i>Numenius madagascariensis</i>)	Critically Endangered*	Endangered
Dugong (<i>Dugong dugon</i>)	-*	Vulnerable

- Not listed as threatened under the EPBC Act.

* Species are also listed as migratory under the EPBC Act.

There is also potential for additional marine migratory species listed under the EPBC Act to occur within the project site.

4.3.2 Potential Impacts

The construction and operation of the Load-out Jetty and vessel movements for the transport of product bauxite are the key project activities that may give rise to impacts on marine ecology. Potential impacts include:

- Impacts on coastal marine habitat due to the construction of coastal infrastructure;
- Increased turbulence and sediments due to vessel movements;
- Anchor drag on the sea floor in the transshipment areas;
- Spillage of product bauxite during loading of TSVs and OGVs;
- Introduction of marine pest species from foreign vessels and ballast water;
- Vessel-strike interactions with marine mega-fauna such as dolphins and turtles; and
- Noise and light impacts from infrastructure and vessels causing disturbance to marine fauna species, include marine turtles.

4.3.3 Proposed EIS Study

A comprehensive, two-season marine survey will be undertaken as part of the EIS. The survey will aim to:

- Collect baseline data of the physico-chemical properties of marine waters and sediments from the project's marine environment;
- Identify the extent of marine and estuarine habitats within the project's marine environment using data from bathymetry surveys and quantitative data assessments;
- Assess the likelihood of listed threatened marine species and species of fisheries importance to occur within the project's marine environment;
- Determine the benthic habitat values of the project's proposed anchorage sites; and
- Assess potential impacts of the project and detail any necessary mitigation measures.

4.4 GROUNDWATER

4.4.1 Environmental Values

The groundwater regime within the project site is characterised by two shallow aquifer systems including:

- The bauxite layer; and
- The weathered zone of the upper Tertiary Bulimba formation.

The bauxite layer is intersected from just below the topsoil to a depth of approximately 6 m below ground level (mbGL). The bauxite layer is typically unsaturated during the dry season. The water table during the wet season approaches the base of the bauxite in incised areas.

The weathered Bulimba formation occurs immediately below the bauxite to a depth of approximately 30 mbGL. The water table within this formation is expected to be relatively low during the dry season. However, rainfall during the wet season percolates through the unsaturated bauxite layer to the underlying weathered Bulimba formation. This layer accepts the rainfall recharge and the water table elevation increases. After the wet season, the groundwater table in the weathered Bulimba formation layer recedes due to the lateral and vertical flow of groundwater. Much of this lateral and vertical flow of groundwater would report as discharge to surface water features.

The Great Artesian Basin (GAB) is also known to be present within the project site. The main aquifer of the GAB occurs at a depth of approximately 800 mbGL and is confined by several hundred metres of low permeability sediments such as shale and siltstone. The GAB is hydraulically separated from the shallow groundwater system at the project site.

4.4.2 Potential Impacts

Open cut mining activities, including excavation of subsoil and the underlying bauxite ore body, have the potential to impact the shallow groundwater regime. Where groundwater is present, the mining of bauxite ore and associated or overlying sediments could potentially result in localised drawdown or depressurisation of groundwater. Groundwater drawdown could potentially impact receptors such as surface waters or groundwater dependent ecosystems (including stygofauna).

Potential impacts on groundwater quality also require consideration, including any impacts from the storage of fines and from the use and storage of hydrocarbons.

4.4.3 Proposed EIS Study

A detailed groundwater monitoring program has been established at the project site. Geological and groundwater data from the project site will be used to describe the existing groundwater regime within the project site and surrounding areas.

A numerical groundwater model will be developed to simulate the existing conditions of the groundwater regime and provide predictions of the potential impacts of project activities. It will identify the scale and extent of impacts on groundwater levels. The impacts associated with any predicted change in groundwater levels will be assessed. This will include an assessment of any potential impacts on surface water flows and on groundwater dependent ecosystems.

4.5 SURFACE WATER AND AQUATIC ECOLOGY

4.5.1 Environmental Values

As detailed in Section 3.1.5, the majority of the project site is located within the catchments of Tapplebang Creek and Coconut Creek (Figure 6). These creeks flow into the Ward River, in the Watson River sub-basin. A small area in the north-west of the project site is located in the upper catchment of Norman Creek.

The creeks within the project site are ephemeral and while flows exist for an extended period of time after the wet season, only remnant pools remain by the late dry season. The creeks are anticipated to receive some groundwater contribution, particularly during and immediately following the wet season when the groundwater table rises. There are no freshwater wetlands within the project site.

4.5.2 Potential Impacts

Potential impacts on surface water and aquatic ecology include:

- Potential impacts due to the construction of Tapplebang Dam, including:
 - Creation of a perennial lake upstream of the dam;
 - Clearing and inundation of riparian vegetation;
 - Changes to downstream flow, giving rise to changes in flood behaviour, changes to the saltwater/freshwater interface and geomorphic impacts on watercourses;
 - Disruption to fish passage;
- Floodplain drainage impacts, including ponding of runoff in the post mining landform; and
- Surface water quality impacts, particularly impacts from sediment mobilisation and from the management of water that has been captured in pits.

4.5.3 Proposed EIS Studies

Proposed EIS studies include:

- A flood study, including robust hydrologic and hydraulic modelling of a range of flood events.
- A mine water balance modelling study, which will describe the operation of the mine water management system. The water balance will simulate the performance of the mine water management system over the life of the project and ensure that mine water storages are adequately sized to maximise water use between both the dry and wet seasons, whilst minimising the need for discharge of mine-affected water.
- An assessment of potential downstream impacts of Tapplebang Dam, including:
 - Identification of downstream values including aquatic ecology, water supply, geomorphology, riparian vegetation, social and cultural values. Environmental values will be characterised by undertaking ecological and geomorphological surveys and cultural values will be characterised through a program of stakeholder consultation;
 - Development of environmental flow objectives;
 - Development of an environmental flow release strategy for the dam;
 - Assessment of impacts on downstream values and development of mitigation measures for significant impacts; and
 - Inclusion of design elements to address potential impacts on fish passage.
- A water quality monitoring program to capture baseline information on the water quality at the project site. Surface water quality data is proposed to be collected on a monthly basis from all relevant watercourses associated with the project including Coconut Creek and Tapplebang Creek.

4.6 SOILS AND LAND SUITABILITY, GEOCHEMISTRY AND MINE REHABILITATION

4.6.1 Environmental Values

The project site comprises gently undulating plains with occasional shallow drainage depressions. The majority of the project site is dominated by deep gradational uniform red massive soils with aluminous concretions. The soil profile contains high concentrations of bauxite pisolites in a loose earthy matrix. The soils exhibit low fertility but may be suitable for limited cropping activities.

4.6.2 Potential Impacts

The project will result in localised soil disturbance due to the construction of mine infrastructure and open cut mining activities. The impacts of soil disturbance can potentially include increased erosion and sediment mobilisation and reduction in land use capability. There are no agricultural activities (e.g. grazing or cropping) currently being undertaken within the project site.

4.6.3 Proposed EIS Studies

A soil study will be undertaken to identify and quantify the project's available soil resources. The assessment will inform mine planning, including the scheduling of soil stripping and rehabilitation activities. The study will include identification of any specific soil handling or management measures required to conserve soil resources. It will also include general recommendations in relation to erosion and sediment control.

A geochemistry study will be undertaken to chemically and physically characterise the project's subsoil, ore and fines materials. The assessment will identify any potential environmental risks associated with these materials including acid generation and the potential leaching of soluble metals. The study will include identification of specific management measures required for handling and storage of materials.

The EIS will describe the proposed mine rehabilitation strategy in accordance with the requirements of the DES Guideline *Progressive Rehabilitation and Closure Plans (PRC Plans)*, current at 1 November 2019.

4.7 NOISE, VIBRATION AND AIR QUALITY

4.7.1 Environmental Values

The project's existing acoustic environment is likely to be dominated by natural sounds from birds and insects. The background air quality is likely affected by natural sources of dust and existing anthropogenic sources of air pollution such as bushfires. The nearest sensitive

receptor to any part of the project site is the Amban Outstation, which is located approximately 2 km to the south of the proposed CLF. The Amban Outstation comprises a small residential building and shelter structures, used intermittently by TOs.

4.7.2 Potential Impacts

Potential noise and dust sources from the project which could impact sensitive receptors include:

- Mining bauxite ore and transporting it to the Beneficiation Plant;
- Transporting product bauxite from the Beneficiation Plant to the CLF via road trains;
- Operation of equipment at the CLF including stackers and conveyors; and
- Operation of ancillary infrastructure such as diesel generators.

4.7.3 Proposed EIS Studies

A noise assessment will be undertaken for the project. Baseline noise monitoring will be conducted to determine applicable noise criteria at relevant sensitive receptor/s. Noise levels and sources of noise emissions associated with the project will be assessed, including consideration of mobile equipment, mining activities and the transport of ore and product bauxite. The construction and operation phases of the project will be assessed. Noise modelling will be undertaken to inform the noise impact assessment.

An air quality study will be undertaken for the project to identify the aspects of the project that may result in emissions to the atmosphere. If necessary, dispersion modelling will be conducted to estimate the ground-level concentrations of dust that could impact sensitive receptors. A greenhouse gas assessment will also be undertaken for the project.

Land surrounding the Amban Outstation has already been approved for use as part of a future expansion/extension of the Amrun Mine. Potential noise and dust sources from the Amrun Mine operations could impact on Amban Outstation. The potential for cumulative noise and dust impacts from Amrun Mine and the project will be assessed.

4.8 SOCIAL, ECONOMICS AND VISUAL AMENITY

4.8.1 Environmental Values

The Aurukun community comprises approximately 1,200 people, of which 90% are Aboriginal and/or Torres Strait Islander people (ABS, 2016). The Aboriginal TOs of the land surrounding Aurukun are the Wik and Wik Waya people.

The remote location of Aurukun has fostered a strong attachment to traditional culture and ties to the land amongst TOs. While Aurukun is the central location for many people living in the area, there are also a number of outstations in the region, which enable TOs to spend time on country. Amban Outstation is the nearest outstation to the project site.

TOs make use of the area surrounding the project site for activities such as camping, fishing, hunting and collection of resources, typically for traditional uses such as timber for carvings.

4.8.2 Potential Impacts and Opportunities

Potential social impacts of the project include:

- Impacts to the TO's use and enjoyment of the land;
- Loss of land for traditional practices;
- Changes in values and future aspirations of TOs;
- Social changes in Aurukun; and
- Changes to visual amenity and use of the coastline for recreational activities i.e. camping and fishing.

Potential opportunities presented by the project include:

- Increased local employment, education and training opportunities;
- Improved local business capability and increased local business opportunities; and
- Community benefits from the proponent's social investment opportunities.

4.8.3 Proposed EIS Studies

A comprehensive social impact assessment (SIA) will be undertaken for the project.

The SIA will identify and assess the projects' potential social impacts and describe management and monitoring measures. A stakeholder consultation program will be undertaken which includes culturally appropriate engagement with directly affected TOs and the broader Aurukun community. The SIA will also assess visual amenity issues. The assessment will be undertaken in accordance with the Queensland Department of State Development, Manufacturing, Infrastructure and Planning *Social Impact Assessment Guideline* (2018), the *Strong and Sustainable Resource Communities Act 2017* and any other relevant guidance.

An Economic Assessment will be undertaken in accordance with the Department of State Development *Economic Impact Assessment Guideline* (2017).

The SIA will describe measures to reduce impacts and enhance the opportunities that may be provided by the project. In particular, it will describe measures to be taken to secure local industry participation across all phases of the project, and measures to facilitate local workforce participation.

4.9 TRAFFIC AND TRANSPORTATION

4.9.1 Environmental Values

The project site is currently accessed via Aurukun Road which is a gazetted public road (Figure 2). Aurukun Road is accessed via the Peninsula Development Road, which is a State controlled road (Figure 1).

The project site is traversed by unsealed access tracks which are used by TOs to access key locations such as Amban Outstation and recreational areas along the coast. Road realignments of existing access tracks will be required to maintain community access to key locations.

4.9.2 Potential Impacts

Potential impacts to the local road network include:

- Increased project-related traffic movements along public roads during construction and operational phases causing safety hazards; and
- Damage to public roads due to increased project-related traffic.

4.9.3 Proposed EIS Study

A traffic impact assessment will be undertaken for the project. The assessment will include:

- Description of the existing local road network and users;
- Identification of the proposed vehicle movements associated with the project; and
- Assessment of potential road impacts.

The EIS will describe any proposed realignment of existing access tracks and will describe the measures to be adopted to ensure that the project does not create any barriers to TOs or the local community accessing outstations or recreation areas.

4.10 WASTE MANAGEMENT

4.10.1 Environmental Values

There are no existing waste facilities on the project site. The closest landfill is located at Aurukun but it does not have sufficient capacity to store waste generated by the project. A waste facility for the collection and management of mine waste streams will be developed within the Mine Site and will include the following:

- A dedicated pad for collection of recycling goods;
- An incineration facility for disposal of municipal waste;
- A bio-pad for treatment of contaminated materials; and
- A hazardous waste storage facility.

Waste material which cannot be incinerated will be transported off-site for disposal at a licensed facility. The licensed facility that will be used is still to be confirmed. The transport of waste will be via barge and/or road.

4.10.2 Potential Impacts

The project's waste materials, if not appropriately managed, could cause contamination of land and water resources. A waste strategy will be developed to ensure that waste is managed responsibly. The strategy will include assessment of waste reduction and reuse opportunities. In instances where feasible reduction and reuse options are not available, wastes will be stored appropriately to prevent pollution and transferred off-site for disposal at a licensed facility.

4.10.3 Proposed EIS Studies

An inventory of waste types and quantities generated by the project will be compiled and management strategies for waste materials will be described.

4.11 CULTURAL HERITAGE

Land is particularly significant in the culture of the Wik and Wik Waya people. Ceremony, initiation and spirituality play a central role in Wik life in Aurukun and some traditional practices and cultural norms are still prominent.

Archaeological artefacts, culturally sensitive landforms and story places are present within the project site. Cultural heritage surveys have been undertaken, and are ongoing, in order to ensure that the presence of any significant cultural sites is taken into account in project planning.

4.11.1 Potential Impacts

Potential impacts of the project include:

- Loss or damage to areas of cultural significance;
- Changes in access to traditional land for recreational and/or hunting purposes;
- Impacts to cultural and spiritual values and aspirations of TOs; and
- Loss or damage to items of non-Indigenous heritage.

4.11.2 Proposed EIS Studies

Any potential impacts on Indigenous cultural heritage are required to be managed in accordance with the requirements of the *Aboriginal Cultural Heritage Act 2003*.

A cultural heritage study will be undertaken to inform project design and ensure that any potential impacts on cultural heritage are addressed. Aboriginal cultural heritage on the project site will be managed in accordance with the requirements of the *Aboriginal Cultural Heritage Act 2003*.

The EIS will describe any non-indigenous heritage on the project site, will assess any potential impacts on non-indigenous heritage and will provide any necessary management measures.

5 STAKEHOLDER CONSULTATION

A comprehensive stakeholder consultation program will be conducted for the project. The program will be conducted throughout the EIS preparation phase and the findings will be integrated with environmental impact assessment and project planning. The program will include consultation with all affected and interested persons, as defined under Section 38 of the EP Act, residents of Aurukun, and any other relevant stakeholders identified during the consultation program. A list of affected and interested persons and their contact details has been provided to DES.

The objectives of the stakeholder consultation program will be to:

- Establish open communication with all stakeholders;
- Facilitate stakeholder understanding of the project;
- Identify stakeholder issues and concerns with the project;
- Respond to stakeholder issues through environmental impact assessment, project planning or communication; and
- Provide feedback to stakeholders in relation to their issues and how they have been addressed.

Stakeholders to be consulted include, but are not limited to, the following:

- Directly affected TOs;
- The Aurukun community;
- Service providers and business owners;
- Relevant Aboriginal Representative Bodies;
- Government and non-government agencies;
- Local Councils;
- Non-government organisations and interest groups; and
- Landowners in the broader region.

The initial phase of the stakeholder consultation program involves identifying stakeholder issues. Stakeholders are provided with key information about the project, the EIS and project approval process, and the consultation program. Culturally appropriate consultation is undertaken with directly affected TOs, the broader Aurukun community and other relevant stakeholders. This consultation phase has already commenced and tools such as on-country engagement have been used, and will continue to be used.

A second phase of consultation will be undertaken to respond to the key issues and concerns raised in the initial round of consultation, and to work with stakeholders to develop appropriate solutions and strategies to manage identified impacts. This phase will involve culturally

appropriate engagement with key stakeholders, including directly affected TOs and the Aurukun community.

A final phase of engagement will occur in parallel with the public exhibition of the project EIS. The primary objective of this phase of consultation is to assist stakeholders in understanding the findings of the EIS.

Consultation as part of the SIA will be conducted in parallel with the initial phase of EIS consultation and will involve similar stakeholders.

The findings of the SIA consultation will inform the prediction and analysis of potential social impacts, and the development of appropriate management measures.

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for
HANSEN BAILEY



Laura Knowles
Principal Environmental Scientist

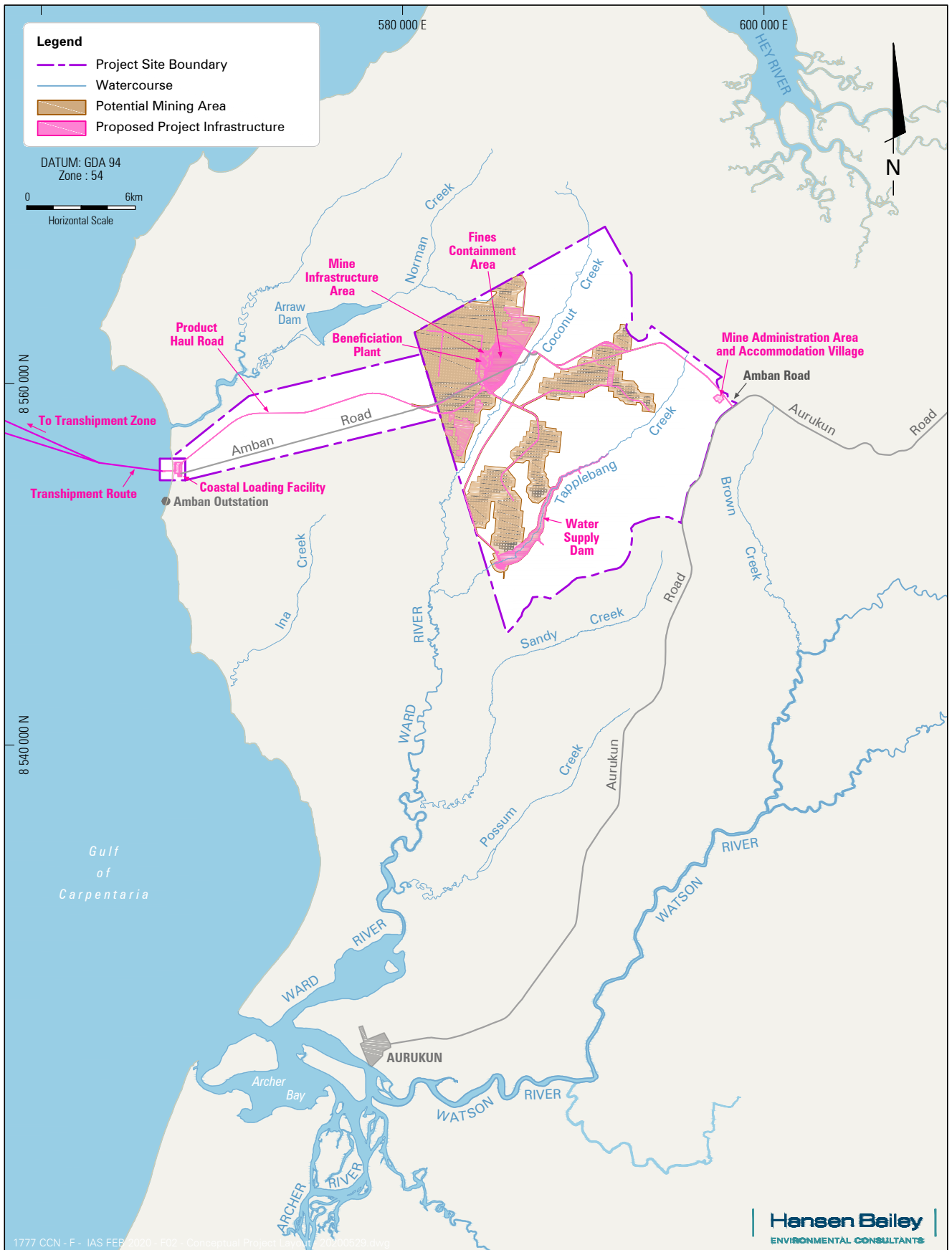


Peter Hansen
Director

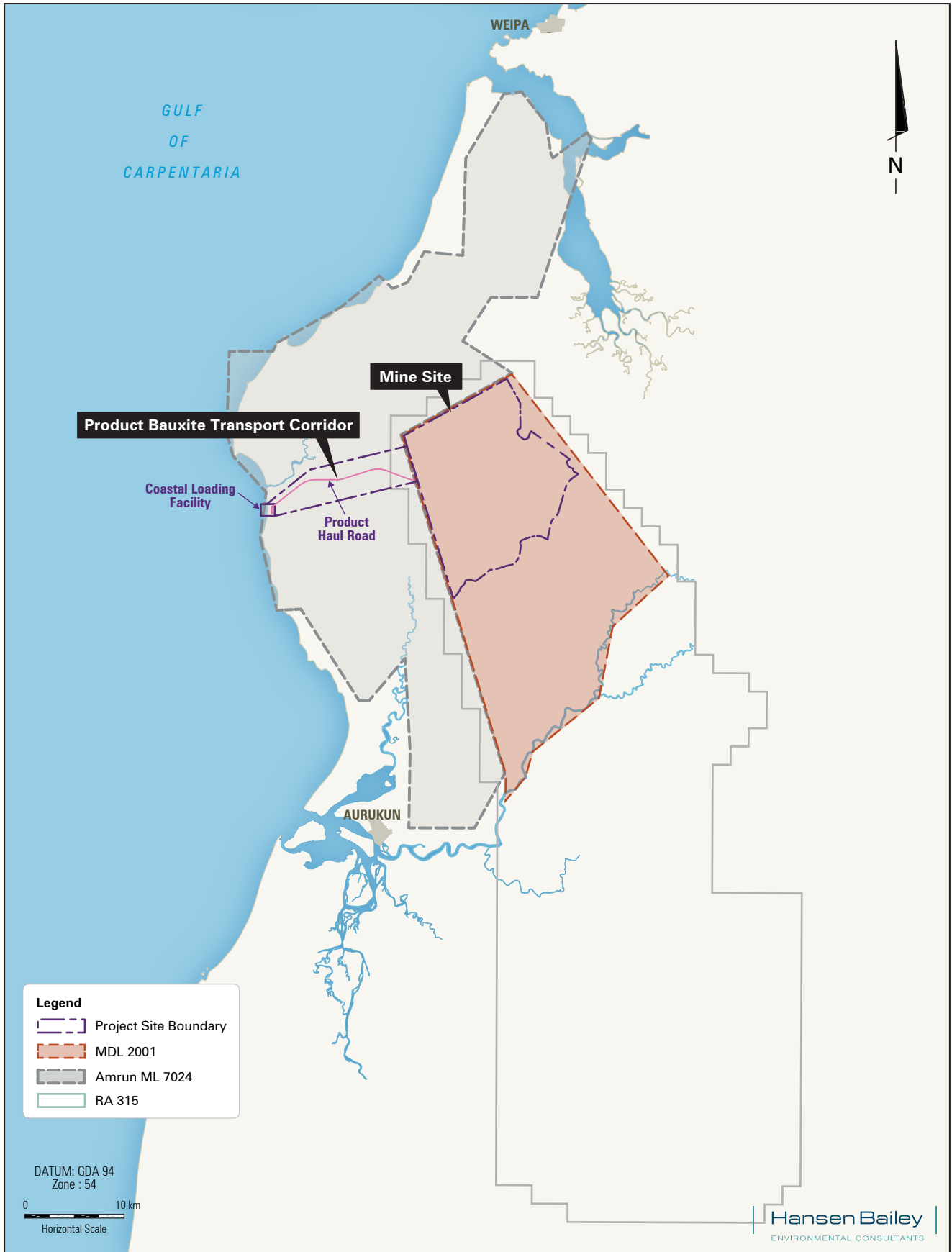
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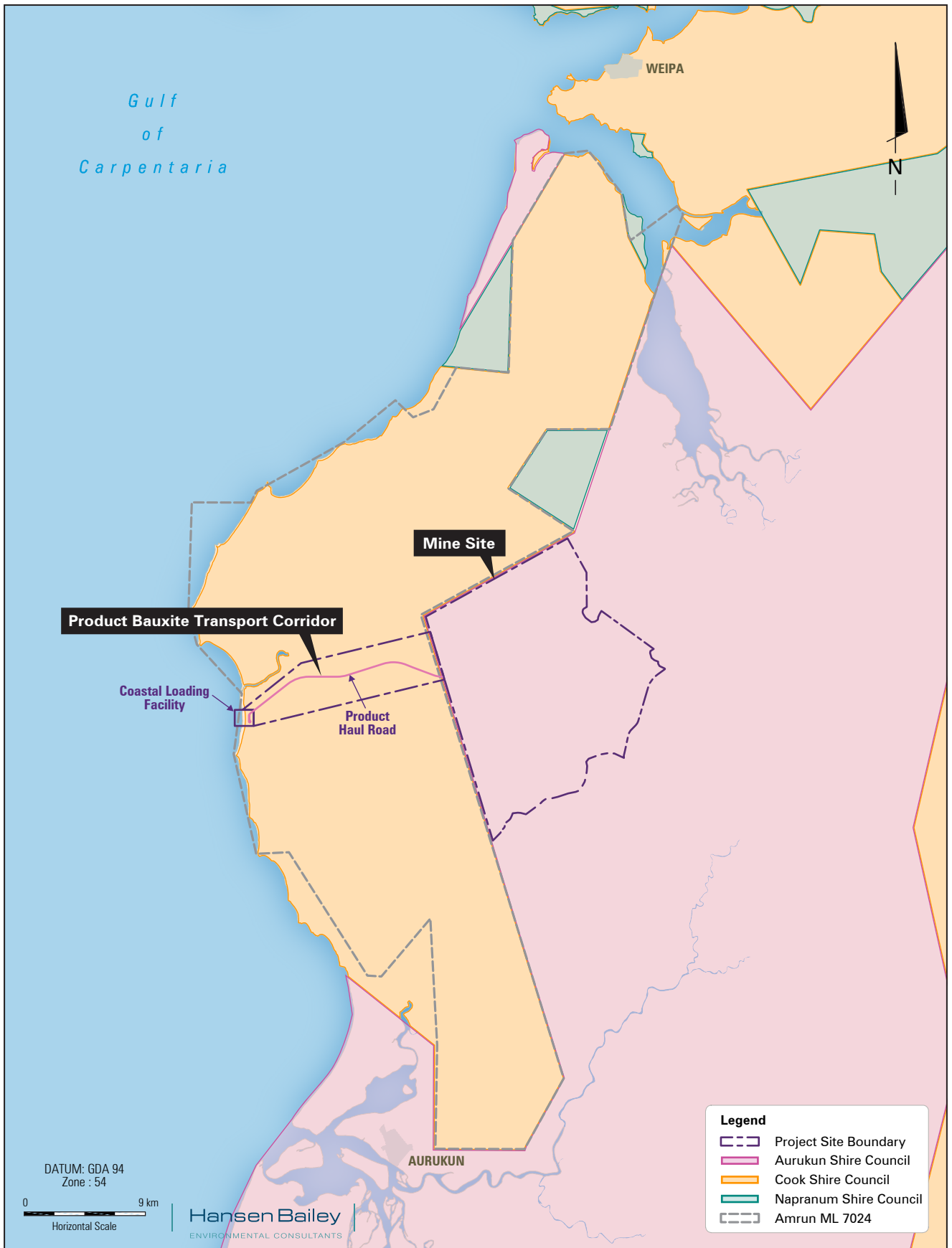
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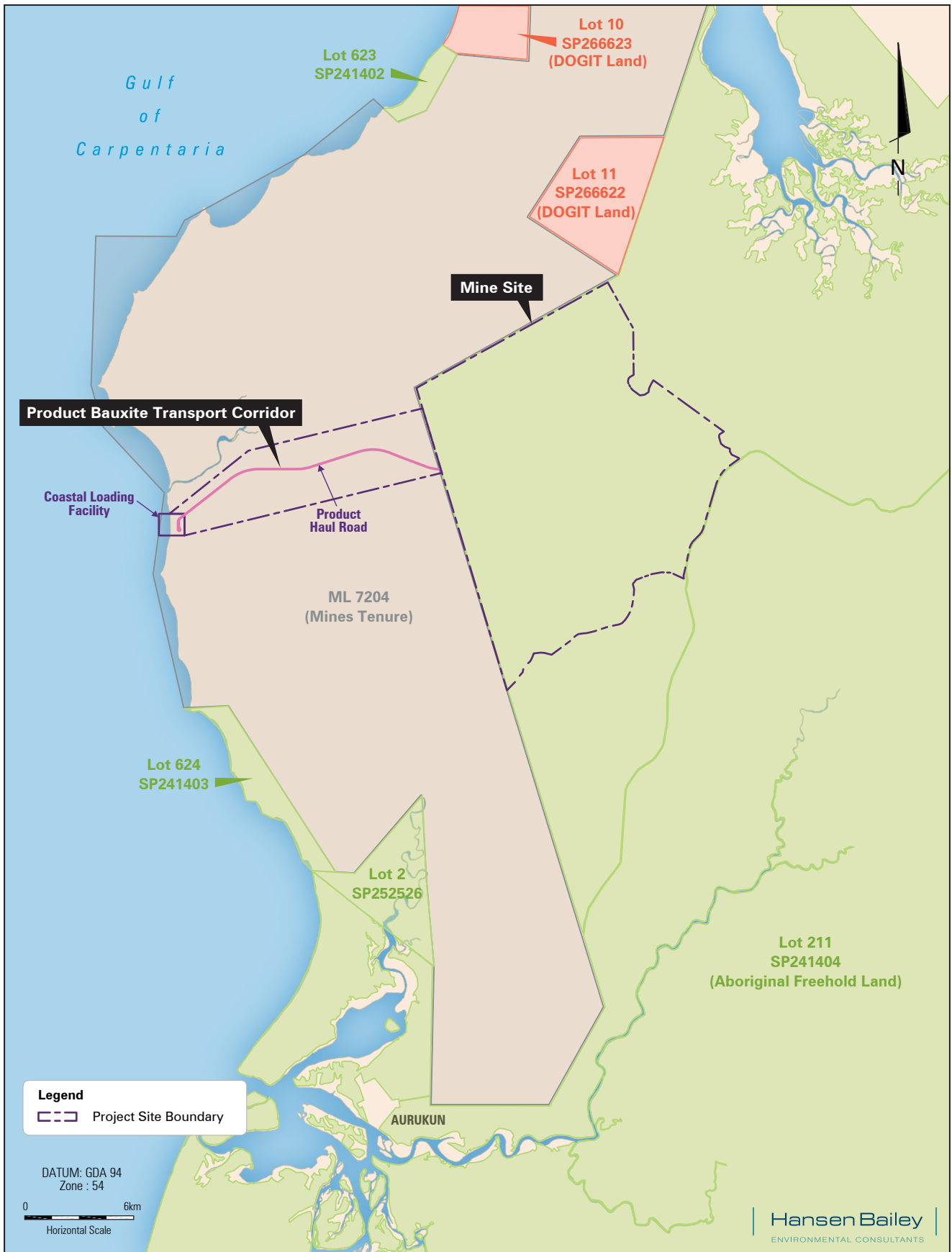
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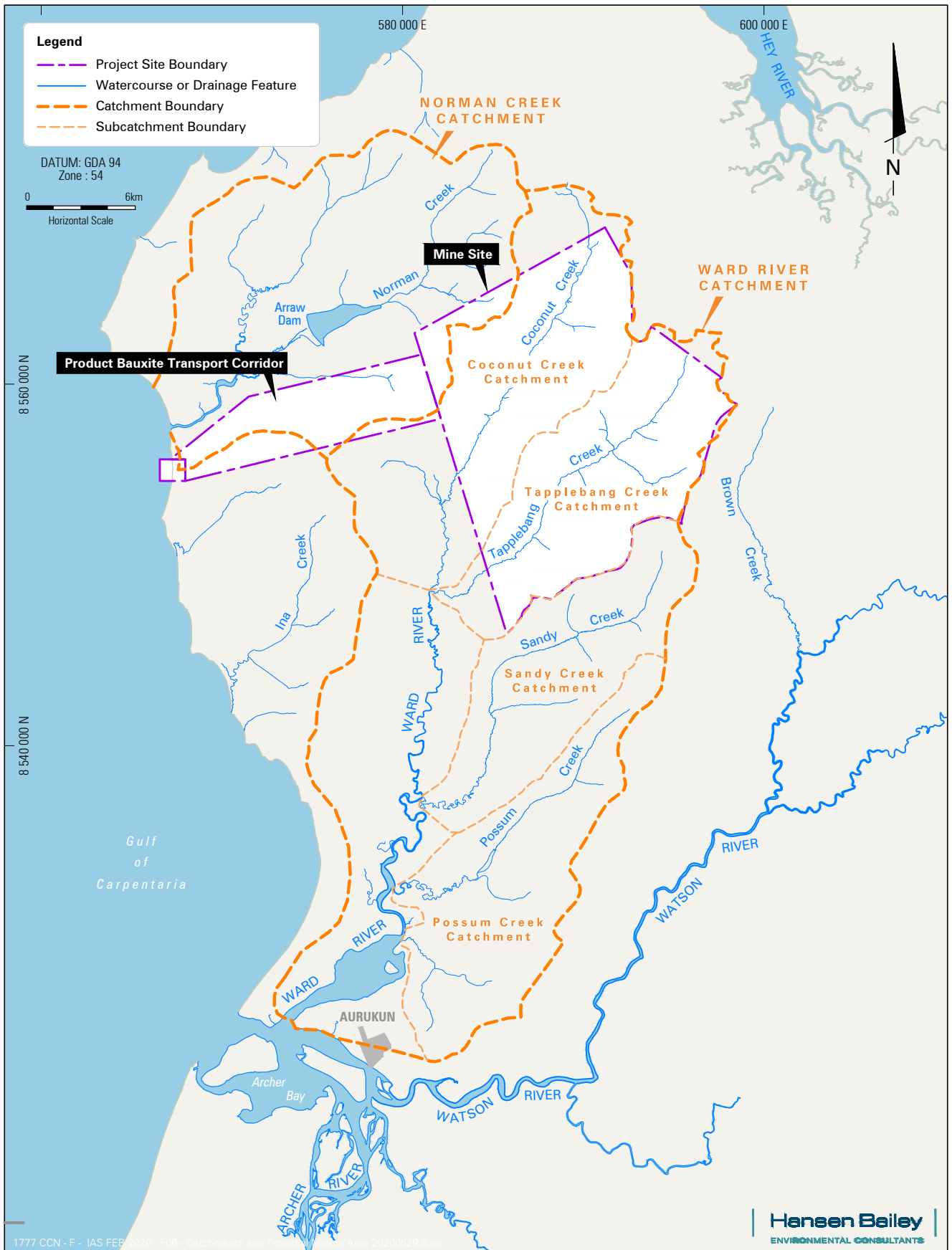
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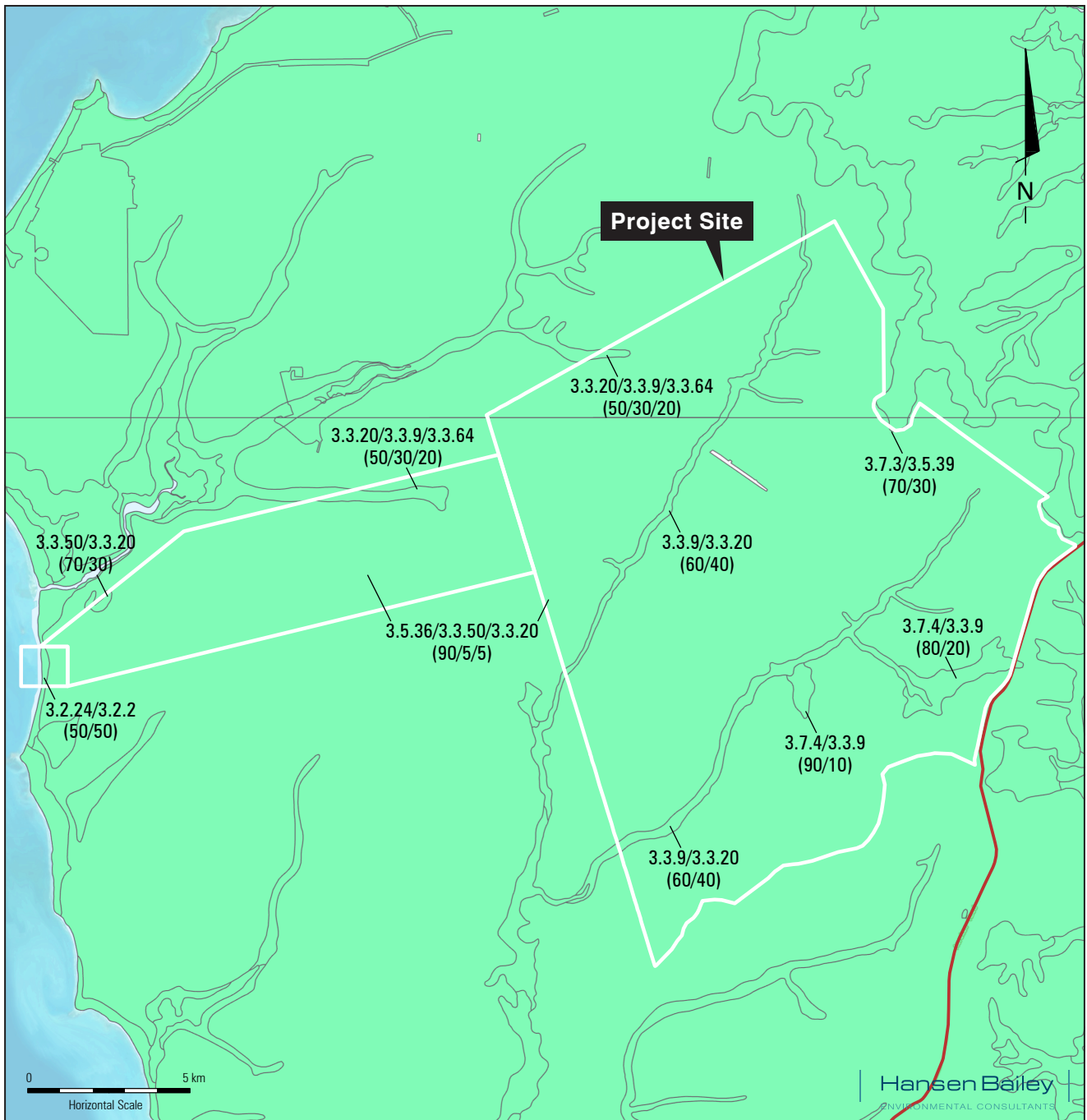


AURUKUN BAUXITE PROJECT

Catchment Boundaries

GLENCORE

FIGURE 6



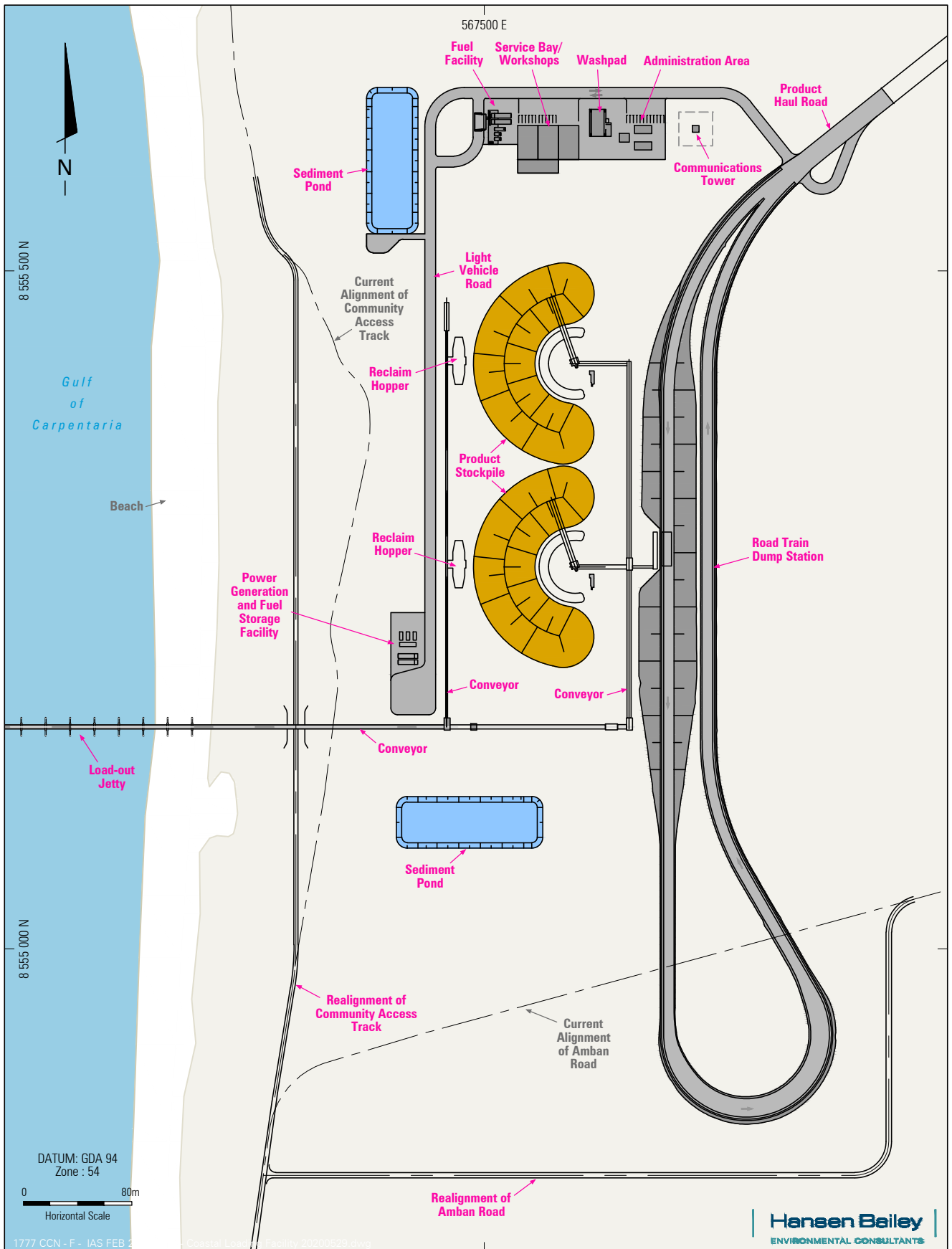
Legend

- Category A or B area that is least concern
- Category X Area
- Main Road

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Print date: 19/11/2019
 Datum: Geocentric Datum of Australia 1994
 Projection: Web Mercator EPSG 102100

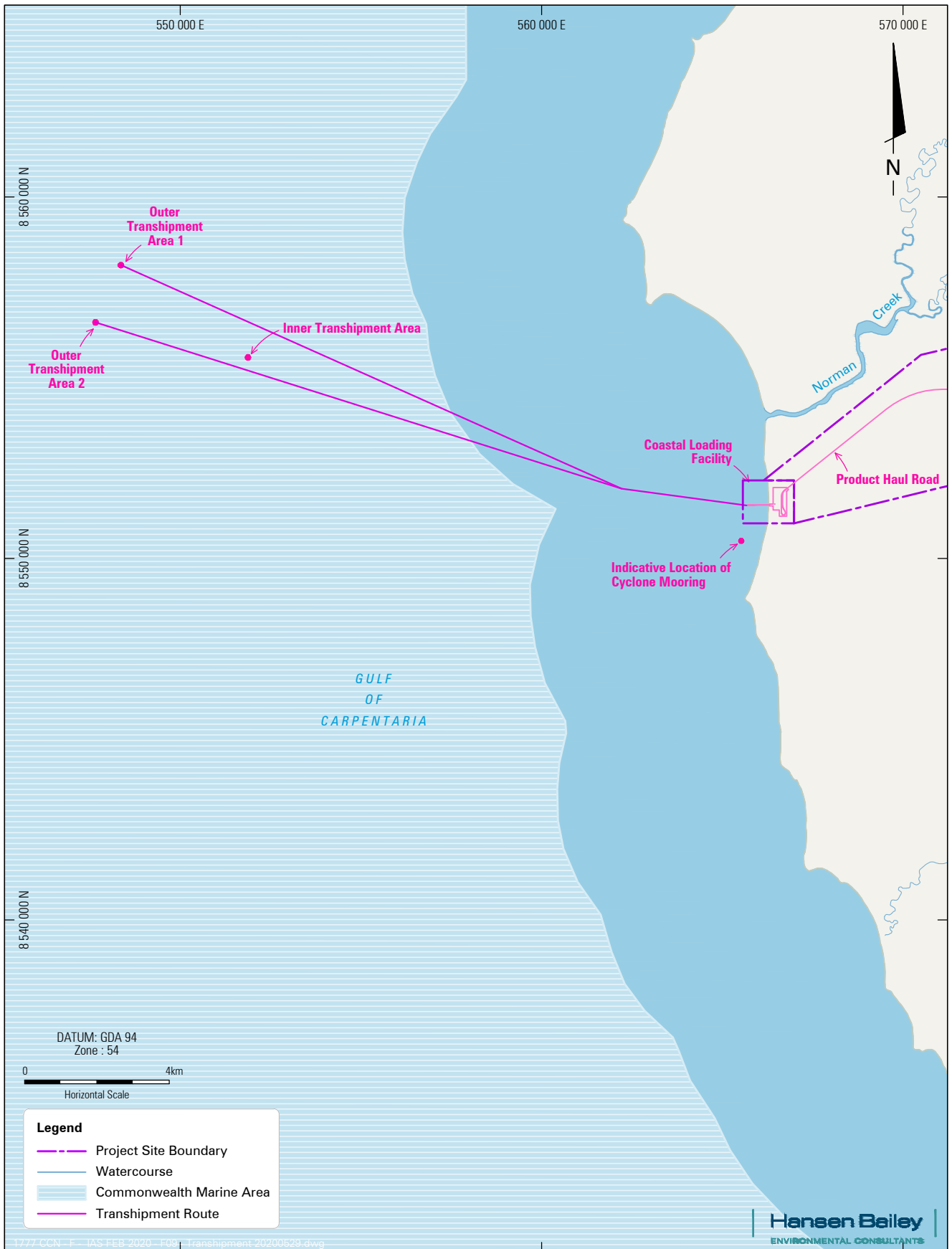
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Coastal Loading Facility

FIGURE 8



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Transshipment

FIGURE 9