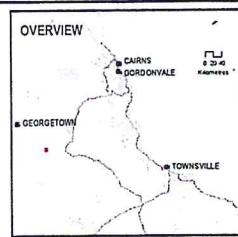


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- Legend**
- Boundary Points
  - Watercourses
  - Major Roads
  - Minor Roads
  - Water Intake Pipeline
  - Key Project Infrastructure Footprint
  - Spillway Options Corridor
  - Mining Lease Boundary
  - Cadastral Parcel

Coordinate System: GDA 1994 MGA Zone 55  
Projection: Transverse Mercator

1:17,000 (when printed at A3)



**Data sources:**  
Roads and Tracks, Cadastral, Watercourses - DHRM 2017  
Electrical Network - Ergon Energy 2017  
SISIP Imagery 2017

**Disclaimer:**  
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**Kidston Solar Farm  
Genex Power Limited**

Indicative Project Area

PROJECT: 654748  
CREATED BY: JA  
LAST MODIFIED: 13-10/2018  
VERSION: 1

**Figure  
1**



# Appendix N

Other Matters

## Appendix N Other Matters

### Consideration of other planning and environmental matters

Aspect	Assessment Summary
Land Use	<p>The Project site is largely surrounded by pastoral leases. Oaks Rush Station borders the mine site to the North, West and South and the Kimberly Station borders the township to the East. The township area of Kidston is between the border of the Mining Lease and the Copperfield River. There are some freehold land parcels and the remaining are land leases, State land and some Council owned reserves (i.e. Kidston Airport and Airstrip). The existing surrounding land uses include agricultural grazing land and renewable energy facilities. The lot adjoining the site to the south (Lot 2 SP289310) contains a solar farm (KS1).</p> <p>The township area was created for the purpose of servicing the mine. Since the closure of the mine the residential population of the town has significantly decreased leaving a small permanent population in the township. The permanent residential population is estimated at 10 residents in total. The residents are either employed by local council; Oaks Rush accommodation facility; maintenance or monitoring of the Kidston mine site; associated with the Kidston Renewable Energy Hub and grazing business in the area.</p> <p>The majority of the buildings and houses in the old township have been destroyed and depleted due to either natural disasters (i.e. cyclonic weather) or failure in the foundations of the buildings likely due to the age of the buildings.</p> <p>The Project area and surrounding land is zoned as rural under the Etheridge Shire Planning Scheme 2005. The planning scheme identified the Project area as containing good quality agricultural land and low and medium bushfire hazard (Etheridge Shire Council, 2005).</p> <p>The surrounding pastoral leases have previously co-existed with the former Kidston Gold Mine site during its long-term operation. Similarly, the Kidston Township has historically co-existed with the mine site directly adjacent, however given the mine has been closed for a number of years, residents present may not be accustomed to potential amenity impacts associated with the construction and operation of the Project.</p> <p>The wider Project has largely been contained within the Mining Lease, with the exception of the specific infrastructure associated with the required water discharges for the Project.</p>

Aspect	Assessment Summary
Native Title	<p>A search of the National Native Title Tribunal database on 8 May 2018 indicates that there are no current claims or determinations over the bulk of the Project area (lot 66 SP287774, lot 1 SP289310 and 2 SP289310).</p> <p>The Ewamian People #2 and Ewamian People #3 have been determined as holding Native Title (QCD2013/006, QCD2013/007) over parcels of land that abut the southern extent of the proposed spillway (lot 66 SP287774). The area over which Native Title has been determined includes the Copperfield River and its northern banks. Depending on the extent of works intended for the end of the spillway, this area of Native Title may be impacted and will be managed at the time. As part of the detailed design of this component of the Project, it is the intention of Genex to avoid any impacts to Native Title where possible.</p>
Cultural Heritage	<p>Genex and the Ewamian People signed a Cultural Heritage Management Agreement (CHMA) for the Kidston Renewable Energy Project in May 2018. The CHMA identifies roles and responsibilities, the organisation and arrangement of fieldwork and inductions, clear processes for the identification of unexpected heritage and a dispute resolution process.</p> <p>A cultural heritage assessment was completed for the areas which extend from the historical mining lease area. The proposed spillway is located immediately south of the Kidston Township, which is listed on the State Heritage Register (SHR#600506) for its historical, rarity, research, and technical significance in representing early 20<sup>th</sup> century goldmining.</p> <p>The survey did not identify evidence of either Aboriginal heritage sites or areas with potential for subsurface remains. Given the extent of historical ground disturbance in the area, the Ewamian People consider it unlikely that Project works will have an impact on Aboriginal archaeological values. However, should Aboriginal heritage objects be identified during Project works, the relevant procedures under the CHMA should be implemented.</p> <p>Given the proximity to the Kidston township, there is potential for archaeological sites to be present. Results of the cultural heritage assessment will be provided to Department of Environment and Science for discussion at completion of the survey report. Any places which are deemed to be of heritage significance will be avoided.</p>
Contaminated Land	<p>The Project site is included on the Environmental Management Register (EMR) due to historical mining activities on the site. A search of the EMR was undertaken in October 2017. The search identified that the site has been included on the EMR due to the following notifiable activities or hazardous contaminants:</p> <ul style="list-style-type: none"> <li>• abrasive blasting</li> <li>• chemical manufacturing or formulation</li> <li>• chemical storage</li> <li>• engine reconditioning works</li> <li>• explosive production or storage</li> <li>• landfill</li> </ul>

Aspect	Assessment Summary
	<ul style="list-style-type: none"> <li>• metal treatment or coating</li> <li>• mine wastes</li> <li>• petroleum product or oil storage</li> <li>• smelting or refining.</li> </ul> <p>Waste rock from the former Kidston mine is stored within the north, east, south and south east waste rock dumps and tailings stored within the tailings dam storage facility. Containment of seepage from the waste rock dumps and Tailings Dam is provided in onsite seepage containment structures (i.e. North Dump Seepage Dam, East Dump Seepage Dam, South East Dump Seepage Dam, Reclaim Dam, Butchers Creek Dam and Managers Creek Dam) (Barrick Australia, 2015).</p> <p>The Kidston mine was rehabilitated following strategies detailed in the Plan of Operations (February 2005 to December 2006) and the Closure Plan (Kidston Gold Mines Limited, 2000). The Closure Plan was implemented following completion of the major rehabilitation works, including the tailings storage facility, waste rock dump capping and completion of a Contaminated Lands Assessment (Stage 2) and remedial actions. The Contaminated Lands Assessment identified the primary contaminants present at the site as arsenic, which occurs naturally at the site as arsenopyrite in the ore and waste rock; hydrocarbons from spillage of oil and diesel fuels; and cyanide which is present in the South Pond sediments.</p> <p>Construction activities will consider the management of ground breaking activities through the Construction Environmental Management Plan, and, where required, address residual contamination issues. During operation, potential for impacts from contaminated land are considered to remain unchanged. The site will continue to be managed in accordance with the approved Plan of Operations and Environmental Authority.</p>
Waste Management	<p>Construction waste will be generated in high volumes throughout the construction of the Project. Waste will be transported back to Townsville on the vehicle that delivered the material to site. This was successfully undertaken as part of the KS1 Project and will form part of the construction program for this Project.</p> <p>Waste from operations will be generated mainly from the operations and maintenance building and is expected to be minimal. Waste will be general rubbish including putrescible waste, and recyclable material which will be placed into bins and disposed of at the waste facilities in Einasleigh.</p>
Failure Impact Assessment	<p>A Failure Impact Assessment has been completed for the proposed Wisnes Dam. The Failure Impact Assessment considered both Sunny Day and Dam Crest Failure flood of the Wisnes Dam. Evaluation of the population at risk varied for either a Sunny Day or Dam Crest Failure. The potential populations at risk was determined to be with the category of “two to 100 people”, and therefore defined as a Category 1 dam.</p> <p>The Failure Impact Assessment has been approved by the Chief Executive administering the <i>Water Supply (Safety and Reliability) Act 2008</i> under section 350 of the Act. This assessment also formed part of the development application process under the <i>Planning Act 2016</i>.</p>

Aspect	Assessment Summary
Traffic	<p>A Traffic Impact Assessment was undertaken as a part of the Development Application process under the <i>Planning Act 2016</i>. The estimated increase in traffic volumes along Gilberton Road during the construction phase will peak at 68 vehicles per day during month 14 of the construction works due to the construction phase coinciding with the Stage 2 Solar Farm Project.</p> <p>While no data is currently available to establish the exact traffic volumes currently on Gilberton Road it is expected that these volumes are relatively low based on current site observations. It is anticipated that the total traffic (including the construction traffic from the Project) would still be well below the limits of operation for a two way, two lane rural road. It is expected that there will be adequate “capacity” in the existing road network to cater for the additional trips generated by the Project.</p> <p>The operational phase of the Project is anticipated to have a peak traffic generation of 20 light vehicle movements for staff per day and at most 8 heavy vehicle movements per day (i.e. an AADT increase of 28). Staff movements are expected to be undertaken in 4WD vehicles and body trucks are the most likely vehicle to be used for deliveries. These traffic volumes are much lower than the construction phase of the Project and are also anticipated to have minimal impact on the existing road network.</p> <p>The Project site will be accessed from the external road network via Gilberton Road. The access locations will be confirmed during the detailed design stage. The final location of the access points will be based on achieving adequate sight distances for vehicles entering and exiting the intersections to ensure that safe operation of the accesses is achievable for all vehicles.</p>
Noise and Vibration	<p>Existing noise levels in the Project area are likely to be low, and dominated by typical rural activity, road usage and environmental contributors. The maintenance of the Kidston mine site may contribute a level of noise, however this is unlikely to be significant. The nearest sensitive receptor for noise is the Kidston Township, directly adjacent the site to the east.</p> <p>The regional meteorological data identifies the predominant wind patterns at the site are easterly.</p> <p>The Project has the potential to impact on the immediate area, and surrounding area during both construction and operation. No detailed noise and vibration impact assessments have been undertaken during this assessment, however both construction and operational activities have been considered.</p> <p>Construction activities that are likely to contribute to noise emissions include:</p> <ul style="list-style-type: none"> <li>• earthworks</li> <li>• blasting</li> <li>• drilling</li> <li>• rock stabilisation</li> <li>• concrete batching</li> </ul>

Aspect	Assessment Summary
	<ul style="list-style-type: none"> <li>• underground excavation works</li> <li>• increased vehicular movements</li> <li>• other general construction activities.</li> </ul> <p>During the operational stage, the noise and vibration impacts are likely to be less than those during construction. Operational equipment that may contribute to noise and vibration include:</p> <ul style="list-style-type: none"> <li>• operation of pumps</li> <li>• general operational activities</li> <li>• low level transport.</li> </ul> <p>Noise impacts associated with the water release at the Copperfield River are expected to be minor. The discharges will be occurring whilst the Copperfield River is already flowing, and the discharge site is more than 500m away from the closest residence, being the Kidston site manager's office.</p>
Air Quality	<p>The principal pollutant of concern for the Project in regard to potential impact on air quality is particulate matter from construction activities (dust). The Project's construction activities are likely to contribute to elevated levels of particulate include the following:</p> <ul style="list-style-type: none"> <li>• earthworks to raise the dam wall height</li> <li>• construction of concrete plinths to secure a high-density polyethylene liner</li> <li>• rock bolt stabilization works to batters</li> <li>• underground excavation works in hard rock to construct access tunnels</li> <li>• powerhouse cavern concrete and building works.</li> </ul> <p>The following data examines the prevailing meteorology and examines the constraints and risks likely to be associated with the dam construction activities.</p> <p>Regional meteorological data has been sourced from the Bureau of Meteorology (BOM) station located at Georgetown, approximately 100 kilometres north west of Kidston. The local area generally consists of slightly undulating terrain sloping to the north. The local relief of the surrounding area is minor and is not expected to influence air quality dispersion.</p> <p>No major industrial pollution sources are located in the area with road and aviation traffic (Kidston airport is located approximately one kilometre east of the site) the only potential pollution sources (although limited usage).</p>

Aspect	Assessment Summary
	<p>As the site is a decommissioned mine, there exists the potential for elevated levels of hazardous contaminants within the site, resulting in the potential for those pollutants to be within airborne dust generated during construction activities.</p> <p>The nearest sensitive receptors are located approximately 600m to the east of the site. It should be noted that the predominant wind patterns at the site are easterly suggesting that any pollution generated at the site would migrate to the west and is unlikely to affect the receptor locations.</p> <p>Given the lack of any complex terrain, major sources of pollution and given that the nearest sensitive receptors are positioned upwind of the site, with the implementation of appropriate management and mitigation measures there are only minor air quality issues requiring consideration in regard to the proposed works.</p> <p>The water discharge will be via diffusers into the Copperfield River during high flow periods. No air drift is anticipated and the discharge site is more than 500m away from the closest residence, being the Kidston site manager's office. Air quality impacts are not proposed to be further considered in the IAR.</p>
Fisheries Waterways	<p>Any structure located within the Copperfield River with a potential impact to fish passage, is anticipated to require a Development Permit for Waterway Barrier Works under the <i>Planning Act 2016</i>. Detailed design of the structure as it is positioned within the Copperfield River is not yet determined, however during the detailed design process, consideration will be given to existing and resulting fish passage, with the intent of minimising impacts where they may occur. It is also anticipated that where any significant residual impact to fish passage in the Copperfield River, resulting from the structure, will be subject to potential offset implications under the development approval process. Prior to lodging any development applications to obtain the before mentioned Development Permit, consultation will be undertaken with relevant State government departments, through the State Assessment and Referral Agency, pre-lodgement forum.</p> <p>The Department of Agriculture and Fisheries (DAF) mapping identified four low waterways to the northern section of the site. Of the four waterways only one had the potential to be relevant to the Project. The waterway is situated between the lower reservoir and the sloped area adjacent (to the immediate west of the lower reservoir). However the upper extent of the waterway is mapped as being below ground. Advice received from DAF stated no approval would be required for works in this area.</p>