



October 2022

Completion of Social Impact & Opportunities Assessment

The US has set bold decarbonization targets to protect the planet and compete in the global economy. But achieving these goals will require major investments in the nation's infrastructure and domestic supply chain.

South32's Hermosa Project is the only advanced mining project in the United States that could produce two federally designated critical minerals — manganese and zinc — as well as silver and lead. All four are essential materials for securely powering the nation's clean energy future and delivering benefits for the nation and local community.

Background

Because our purpose is to make a difference by developing natural resources, improving people's lives now and for generations to come, South32 values collaborative and transparent relationships in all communities where we operate.

South32 regularly conducts social impact and opportunity assessments to identify, prevent, and mitigate potentially negative social impacts and enhance positive development opportunities. This assessment informs our development plans and provides an understanding of our potential direct and indirect impacts in communities.

South32 Hermosa hired SOOP Strategies to conduct a Social Impact and Opportunities Assessment and a preliminary Human Rights Impact Assessment for the Hermosa Project. The process commenced in early 2022 and included a desktop review of previously completed studies and local socio-economic data. Stakeholder interviews were conducted in May 2022 and informed the list of potential Hermosa Project impacts.

Results were compiled into a report and shared with the community at in-person sessions in late September 2022. It is important to note that the potential impacts listed are perceived potential impacts from the viewpoint of the external stakeholder.

Project development studies continue, and this information will be used to inform Hermosa Project development. These perceived impacts will continually be referenced and evaluated and can be mitigated with co-developed solutions that are acceptable to both the company and the community. We will also work with stakeholders to realize the opportunity to set a new standard for sustainable mining through the Hermosa Project.

Should you have further questions about this study, or anything related to the Hermosa Project, please reach out to us at askhermosa@south32.net.

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Hermosa Project: Social Opportunities and Impact Assessment / Human Rights Impact Assessment



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INTRODUCTION

1.1 Project Background

South32 ('the Company') is a mining and metals company headquartered in Perth, Western Australia with projects and operations in North America, Africa, Australia and South America. The Company is listed on the Australian Securities Exchange (ASX: S32), with secondary listings on the Johannesburg and London Stock Exchanges.

South32's stated purpose is to "make a difference by developing natural resources, improving people's lives now and for generations to come; to be trusted by the Company's owners and partners to realize the potential of their resources." Their Sustainability Policy affirms the Company's commitment to sustainable development, which they define as supporting the needs of the present generation without compromising the ability of future ones to meet their own needs.

The Hermosa Project ('Hermosa' or 'the Project') is a development option in an historic mining district in the Patagonia Mountains, in the state of Arizona, USA. South32 acquired the project in 2018, and preliminary studies revealed it contains a world-class resource. The resource has significant potential to provide critical base metals essential for current everyday needs and for future requirements in the effort to address climate change. Not only is Hermosa one of the only significant undeveloped resources for zinc, silver, lead, and manganese in America; it is also considered one of the world's most significant undeveloped resources for these metals. They are commodities that will be increasingly important to support the Biden Administration's goals to (a) transition to more renewable energy, (b) improve on battery storage to make renewable energy a base-load power resource, and (c) accelerate the shift towards electric vehicles.

The Project has recently completed the pre-feasibility study phase and identified a preferred development path which will transition the project to the feasibility phase and more in-depth analysis. South32's objective for this project is to identify the potential social impact and opportunities of Hermosa and begin planning mitigations accordingly. This report captures the process and findings and analysis of the Social Impact and Opportunities Assessment (SIOA), and the Human Rights Impact Assessment (HRIA) for the Hermosa Project.

The document covers the design and execution of the SIOA/HRIA, as well as the identification and analysis of potential impacts and opportunities.

1.2 Project Mandate

The SIOA/HRIA for Hermosa was aimed at identifying potential community impacts (positive and negative) and their mitigation actions. The scope aligns with the requirements in Section 1.1.2 of the Company's Social Performance Standard, and each identified impact has been assessed based on the criteria defined in:

- ICMM Community Development Toolkit, Tool 12: Social Impact and Opportunity Assessment Table 15.
- ICMM Module 5: Measuring the participating mine's positive and negative contributions to local communities.
- South32 Risk Management Standard.

- IFC Standards for Project-Induced In-Migration was to be considered and only invoked if the execution team determined that influx and in-migration to the region would have a severe impact.
- Incorporating specific questions in the interview process to gather stakeholder perceptions of South32 and the Hermosa Project.

The following elements were also critical points of consideration as part of the SIOA/HRIA mandate:

- Aligning our process with the ICMM Preferred Methodology and the United Nations Guiding Principles on Business and Human Rights (UN Guiding Principles).
- Access to and use of infrastructure, services and facilities, whether provided by local, state or federal governments, or by for-profit or non-profit organizations or volunteer groups.
- Impacts to community landscape, including access to and use of ecosystem services, public safety and security, access to and use of the natural and built environment, and its aesthetic value and/or amenity.
- Focus on the local tourism industry and the nature based restorative economy.
- Impacts on women and vulnerable and/or marginalized groups including minority, low-income, tribal, and Indigenous populations (e.g., financial, social, and other constraints).
- Santa Cruz County and other key stakeholder priorities, concerns and interests related to project development.
- The past and future social and economic profile of Hermosa and surrounding communities throughout Santa Cruz County and Southern Arizona (e.g., ranching, mining, cultural and recreation-based economies).
- Potential human rights issues associated with these social impacts and the potential for other human rights impacts.
- Utilize a human rights-based approach consistent with the United Nations Guiding Principles on Business and Human Rights (UN Guiding Principles).

2 PROCESS OVERVIEW

The flow-chart below illustrates the project phases.

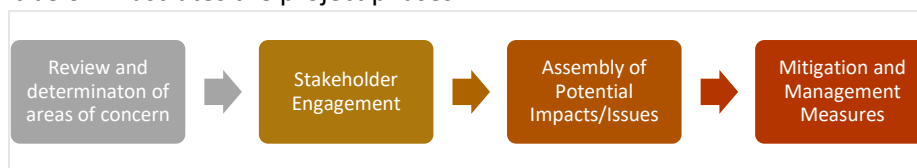


Figure 1 – Project Phases

2.1 Step 1: Review and Determination of Areas of Concern

2.1.1 Desktop Review

SOOP reviewed the social baseline study and determined areas of concern to the communities, potential impacts, as well as areas where the project might present opportunities. Key documents included:

- ERM 2019 Social Baseline Study
- ERM 2019 Social Impacts Memo

- ERM 2019 Community Stakeholder Interviews
- PFS Documents
- EPA’s Environmental Justice Screening Tool Results
- 2020 Hermosa Human Rights Self-Assessment

Additionally, SOOP downloaded several documents from the South32 public website, including community newsletters and meeting minutes of the Hermosa Advisory Panel, among others. A full list is provided in the Appendix.

Overall, the SOOP team has reviewed over 20 documents for the purpose of the Desktop Review. In addition, it is equally as important to understand the external context in which Hermosa will be built and operated. SOOP conducted an external analysis to understand the contexts, which include the political, environmental, social, legal, technological and economic contexts (PESTLe).

The outputs of this step were:

- Identification and assessment of issues (potential impacts and opportunities) based on an analysis of internal (i.e., South32 Hermosa Project) documentation, third-party reports, and additional sources such as public documents, and documents pertaining to the Hermosa Project from the Company’s corporate website.
- A PESTLe analysis to understand the external contexts within which the Hermosa Project will be built and operated.

The desktop study is a precursor to the stakeholder engagement exercise in which key themes and topics of importance to Hermosa Project stakeholders will be further explored and validated. These topics will assist in guiding and designing the stakeholder engagement process, including the interview and survey questions, and will form the foundation for the development of a comprehensive list of potential impacts and mitigations measures.

Through the analysis, 26 potential social impacts and opportunities topics were identified, nine of which are ICMM topics per Module 5 - Measuring the Participating Mine’s Positive and Negative Contributions to Local Communities of the Partnerships for Development Toolkit. Throughout the course of our analysis, SOOP recorded 238 mentions of the various 26 topics (see Appendix A for the complete list of SIOA topics). The mentions are not an indication of South32’s performance on a certain topic (adequate or poor), but rather an indication regarding the topic’s repetition and, therefore, importance. Note that this list of topics is further refined with the stakeholder engagement phase. The full list of topics and their importance are shown below in Figure 2. Hermosa SIOA Topics on page 7.

In order to assess the external factors impacting the Hermosa Project’s Social Impacts and Opportunities, SOOP conducted a PESTLe assessment using publicly available sources such as news outlets, community organization publications, and published analysis pieces. The result of the PESTLe analysis is presented in the Appendix.

2.1.2 Stakeholder Engagement

SOOP sought community, government, employee, and other stakeholder input through individual interviews and focus groups.

For this purpose, the SOOP team executed the stakeholder engagement tasks in Arizona (Tucson, Nogales, and Patagonia) during the period May 9-22, 2022. A summary of SOOP’s fieldwork is outlined in Table 1 below.

Table 1 – Summary of Fieldwork, Stakeholder Engagement

	Individual Interviews	Focus Groups	Topic of Focus Groups
Patagonia	21	3	<ul style="list-style-type: none"> • South32 Local Employees • Traffic and Transportation (Flux Canyon) • Mothers of Young Children
Nogales	9	1	<ul style="list-style-type: none"> • Women in Nogales
Tucson	4	0	N/A
TOTALS	34	4	

South32 provided SOOP with a comprehensive list of stakeholders from which to conduct outreach and booking of the interviews. The list also contained suggested stakeholders for various focus group topics.

The interview participants were selected by SOOP at random from the stakeholder list. Each participant was advised that the interview would be confidential, meaning that their comments would not be traceable back to them. In this way, we were able to create a comfortable space for them to share their opinions and perspectives more freely.

The focus groups were organized in a similar manner to the individual interviews.

The interview questions were assembled in advance by SOOP and finalized with feedback from South32 for accuracy purposes only and were used for both the individual interviews and focus groups.

For the interview process, SOOP focused on assessing potential changes to people’s way of life due to the development and operation of Hermosa. These potential changes include:

- How people live, how they get around, access to adequate housing, etc.
- How people work, access to adequate employment, working conditions and/or practices
- How people play, access to recreation activities
- How people interact with one another on a daily basis
- Impacts to community, including its composition, cohesion, character, how it functions and sense of place
- Culture, beliefs, customs, values, stories, and connections to land, or other socio-economic impacts or opportunities to Tribal stakeholders (at a high level)

Using SOOP Strategies analysis tool, we have generated a chart ranking the various SIOA topics based on the frequency of their appearance throughout the document analysis and analysis of interviews. A reminder that quantity of mentions is not an indication of South32’s performance on a certain topic (i.e. adequate or poor), but rather an indication regarding the topic’s repetition and, therefore, importance to the Company and/or the stakeholders of Hermosa Project. The figure below reflects the level of importance in order from least to greatest. It is clear that the Company-Community relationship is critical to both South32 and its stakeholders.

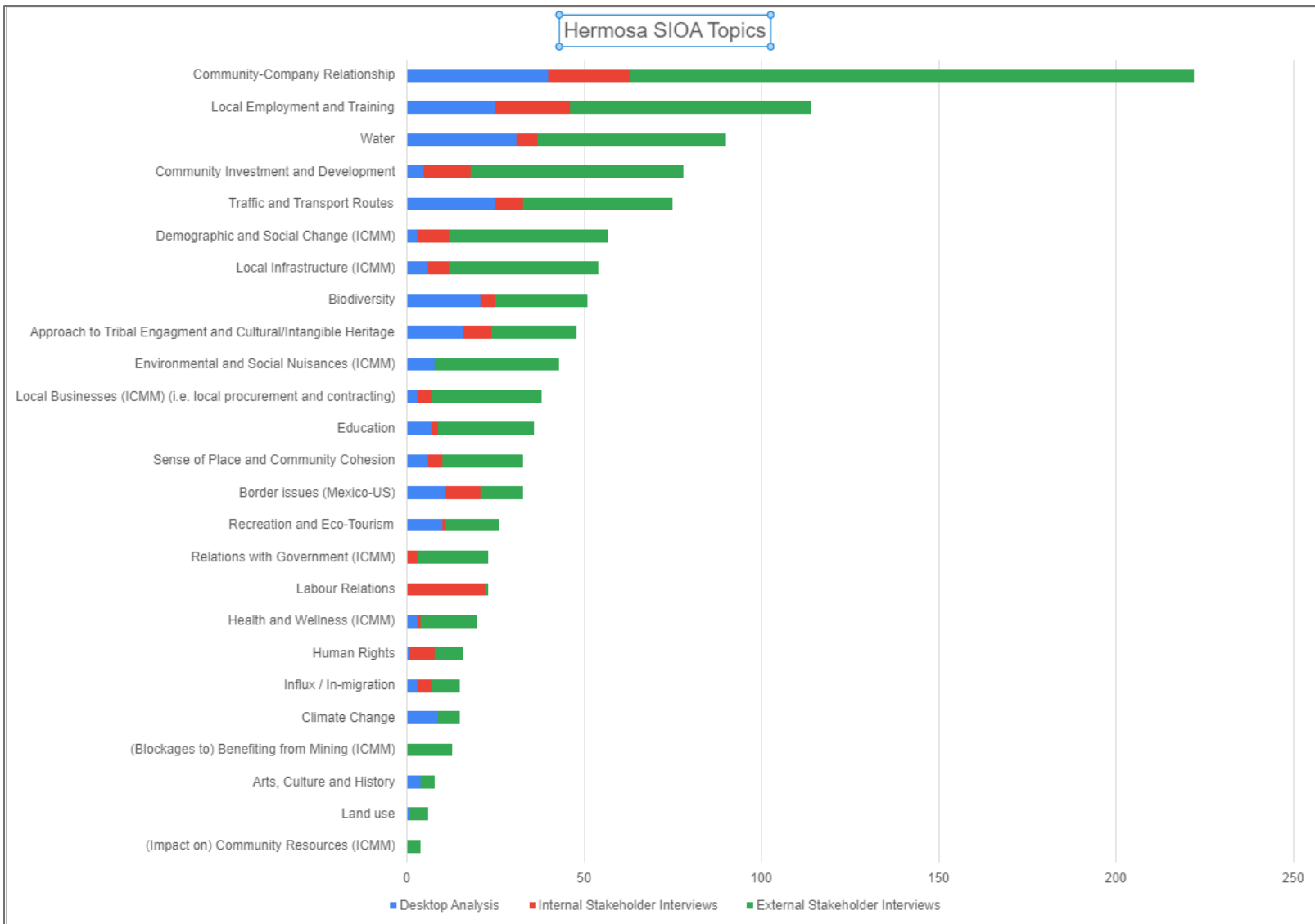


Figure 2 – Hermosa SIOA Topics

2.1.3 Calendaring Exercise

As part of achieving a broader understanding of Patagonia, SOOP conducted an interview with an employee of South32’s Patagonia office to identify important dates for the town in a calendar year. It is important for South32 to be aware of and consider such events when scheduling certain construction activities that may impact, or be impacted by, such community events. These are captured in Table 2 below.

Table 2 – Patagonia: Important events/dates

January	<ul style="list-style-type: none"> • New Year’s Party – KPOP radio station hosts
February	<ul style="list-style-type: none"> • N/A*
March	<ul style="list-style-type: none"> • N/A*
April	<ul style="list-style-type: none"> • Earth Day Festival, PRBC (Patagonia Regional Business Coalition) hosts household hazardous waste cleanup day, activities in the park
May	<ul style="list-style-type: none"> • First week - Empire Ranch Volunteer Day (possibly PIMA Country) • Second week (Kentucky Derby Weekend) Sonoita Fairgrounds Horse Races • May 21st – Annual Mariachi Festival at Lake Patagonia
June	<ul style="list-style-type: none"> • End of June – Patagonia Volunteer Fire Department Steak Fry
July	<ul style="list-style-type: none"> • 4th of July – Patagonia Park Hometown Parade, road closures
August	<ul style="list-style-type: none"> • N/A*
September	<ul style="list-style-type: none"> • Sonoita Labour Day Rodeo – Sonoita Fairgrounds • 3rd week – Sonoita County Fair
October	<ul style="list-style-type: none"> • 2nd weekend - Sky Island Artisans Market - large number of out of towners, road closures • 2nd weekend - Bisby 1000 – stair climb in Cochise County
November	<ul style="list-style-type: none"> • 1st weekend - The Spirit World 100 race - internationally recognized bicycle gravel road race. It shares the same roads as South32. Coordination between parties is required. • Day after Thanksgiving – Art Walk in Patagonia • November 11th – Veterans Day Celebrations in Patagonia and Elgin
December	<ul style="list-style-type: none"> • Christmas week – Fire department parade in Patagonia • Motorcycle Club toy run
Year Round	<ul style="list-style-type: none"> • Patagonia Farmers Market – each Thursday in front of Red Mountain Foods • Patagonia Flower Farm – holds the “Patagonia Flower Farm’s Monthly Artisan and Farmers Market” on the last Thursday of each month at the gazebo in the park. • Tin Shed Arts Centre – plays etc. throughout the summer • Opera House – restarted since COVID • Santa Cruz singers – performances in the fall • Audubon Society – Paton’s Center for Hummingbirds (where you can spot over 200 species of local birds)

*N/A – means that no events were reported to SOOP for these months

2.2 Step 2: Assemble the Impacts/Issues Assessment Chart

SOOP assembled the findings from the exercises outlined above in Step 1, and addressed each impact and opportunity with cause, nature, extent, magnitude, duration, and significance, per the SIOA process. The findings were shared with the South32 team for feedback and input.

Where possible, the impacts and opportunities were assessed with and without proposed mitigation measures in place, allowing for assessment of the significance of the impacts of action or inaction. SOOP considered how monitoring tools, infrastructure design and partnering communities can be efficiently and effectively undertaken (even on an iterative/adaptive basis) to minimize impacts and increase resiliency. Using ICMG Guidelines, and South32's Risk Assessment Standards, SOOP developed a hybrid set of criteria for analyzing the impacts and opportunities.

Through the stakeholder engagement exercises the 26 topics identified through the desktop review were refined, in some instances identifying new topics. By the end of analysis, the team arrived at 21 impacts (please see Table 3 – Hermosa Social Impacts and Causes) and seven Opportunities (Table 4 – Hermosa Social Opportunities and Sources).

The process of assessing human rights impacts was integrated into the SIOA process. For each impact, the question was raised how it might also be an impact to human rights. SOOP used the following guidelines for the HRIA:

1. United Nations Declaration on the Rights of Indigenous People
2. United Nations Environment Programme - What are environmental rights?
3. Universal Declaration of Human Rights
4. BSR Conducting an Effective Human Rights Impact Assessment
5. Danish Institute for Human Rights - Integrating Human Rights into Environmental, Social and Health impact assessments

Potential for impacting human rights is identified within the Table 3 – Hermosa Social Impacts and Causes on page 11.

2.3 Step 3: Mitigation and Management Measures

The SOOP team designed and presented mitigation and management measures for the issues identified in previous phases. This was shared with the South32 team for input and validation. In consultation with the Hermosa team to understand if there were already appropriate plans or activities in place, SOOP developed measures to manage and, if necessary, mitigate the identified impacts and enhance opportunities. If it was determined there would be problems associated with population influx during construction or other phases of the project, SOOP was to apply the IFC Handbook for 'Addressing Project-Induced In-Migration' to develop appropriate management measures.

The IFC Standard for Influx and In-Migration was not triggered for Hermosa as the Project is located on a populated urban area in Southern Arizona, allowing the possible influx to be absorbed into different cities within the region. However, a plan should be in place to address the anticipation of limited temporary construction workers moving to the region, especially to the Patagonia area. In addition, the Hermosa Project considers local employment targets of an initial 65% local employment and 80% in sustained operations, which will minimize the influx of workers. However, if these targets are not met the resulting risk and impact will require appropriate mitigation measures.

3 PROJECT FINDINGS

3.1 Key Highlights

3.1.1 *Potential Impacts Identified*

During the impact assessment process, SOOP identified 40 potential impacts across 21 categories. It is important to clarify that the impacts and the associated potential causes are based solely on stakeholders' perceptions, and not on the company's operational plans. The Project's social impacts and its causes are presented in the table below:

Table 3 – Hermosa Potential Social Impacts and Possible Causes

SIOA Topic	Potential Impact	Cause
<p>1. Community-Company Relations</p>	<p>1a. A break in the relationship with Patagonia (and Sonoita, Elgin, etc.) due to a drop in credibility and reputation.</p>	<p>Several possible causes:</p> <ul style="list-style-type: none"> - Change in South32 leadership (Pat and/or Melanie). Stakeholders were specific about this, especially in Patagonia. They do not necessarily trust the company, but they do trust Pat and Melanie. - The opposition group in Patagonia is small but loud and could be influential.
	<p>1b. A break in the relationship with Nogales (and the region, Rio Rico, etc.), due to a drop in credibility and reputation.</p>	<ul style="list-style-type: none"> - Setting or not managing expectations, particularly regarding jobs and hiring people from Nogales.
	<p>1c. Alienating the Spanish-speaking community.</p> <p>Potential HR Impact: No discrimination - Everyone is entitled to all the rights and freedoms, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.</p>	<p>South32 has been issuing most of their external communications in English. This leaves the Spanish-speaking people feeling left out or forgotten.</p>
	<p>1d. Increased rivalry between communities in Patagonia, local organizations, and alienation of members of community.</p>	<p>Focus on specific communities or organizations (mostly in terms of financial support and distribution of benefits) by South32, while missing others (unknowingly). Some such tension already exists, and may be increased due to the actions and presence of South32.</p>

SIOA Topic	Potential Impact	Cause
	1e. Tensions and conflicts could emerge between South32 and other industries/companies operating in the region.	South32 will become the employer of choice due to the higher-paying jobs with more benefits. This will lead other important industries in the area (produce, wine industry, etc.) and even small businesses to compete to attract and retain the workforce (and they may not be able to be competitive).
	1f. South32 losing its social license due to an increased distrust from the communities in the area of influence - specifically Patagonia.	<p>South32 not delivering on its commitments for a small footprint operation, generating lack of credibility and distrust from the community. This situation could be triggered by the development of the Clark deposit and the need to develop off-site facilities, like the warehouse and processing plant, to support Hermosa Project (both Clark and Taylor) development.</p> <p>The community has not been fully informed of the requirements for the development of the Clark deposit and may think the company is hiding information.</p>
2. Water	<p>2a. Patagonia and other towns downstream running out of water, and/or contamination of their water sources.</p> <p>Potential HR impact: Access to clean water and sanitation</p>	<p>South32 Hermosa Project affecting the water sources in the region due to project development and operations.</p> <p>Project activities that may contaminate the water and/or affect water availability include: dewatering process, water discharge.</p>
	<p>2b. Flooding during monsoon season.</p> <p>Potential HR impact: Access to clean water and sanitation</p>	South32 Hermosa Project dewatering program - towns and project are not prepared.
3. Community Investment and Development	3a. Communities will become dependent on the South32 Hermosa Project as a source of jobs and a source of funding their community development and/or maintenance.	This is high potential as South32 is the largest business in the region, and it will become the main employer in the region. It has deep pockets with which it can support or fund community initiatives and development; as the largest company and largest employer, it will become the most important taxpayer for Santa Cruz County.

SIOA Topic	Potential Impact	Cause
4. Traffic and Transport Routes	4a. Significant increase in volume of trucks/heavy (and light) traffic in Patagonia and the region.	South32 Hermosa Project construction phase will bring a higher volume of traffic and truck traffic to the local roads and highways. This will add to the traffic on Highways 82 and 83 (through Sonoita and Elgin in addition to the route through Patagonia), which are already busy with produce truck traffic. Roads (like Highway 82, 'The Scenic Highway'), are not built for the heavy and frequent truck traffic that South32 will bring.
	4b Increase in traffic accidents due to the truck/heavy (and light) traffic in Patagonia and the region.	The South32 Hermosa Project construction phase will bring a higher volume of traffic to the local roads and highways (see above re Highways 82 and 83).
5. Demographic and Social Change^{ICMM}	5a. Conflicts and division within the Patagonia community.	The South32 Hermosa Project development is exacerbating communal tensions and conflicts between various sub-groups of Patagonia due to an important difference in their interests and expectations (retiree community vs generational and young families).
	5b. Tensions and conflicts between the Patagonia and Nogales communities.	The South32 Hermosa Project development is exacerbating tensions between Patagonia and Nogales. Patagonia will endure more direct impacts than Nogales, especially during the construction phase; Nogales wants the mine for its employment opportunities. Could Patagonians perceive that they are putting up with the mine only for Nogales to benefit by obtaining the greatest number of jobs and training, and also receive the community benefits by way of improvements for their aging infrastructure?
6. Local Infrastructure (ICMM)	6a. Strain on many local infrastructure PHYSICAL systems in Patagonia, including: housing, power, digital communications (internet and cellular services), etc. Potential HR Impact: Right to social service – Everyone has the right to a standard of living adequate for the health and well-being of themselves and their family, including food,	Housing is of great concern, particularly in Patagonia. Internet and cellphone services are already almost non-existent in Patagonia and the region. An increase in population due to an influx will strain these systems.

SIOA Topic	Potential Impact	Cause
	<p>clothing, housing, medical care and necessary social services.</p>	
	<p>6b. Strain on many local infrastructure PHYSICAL systems in Nogales region, including: housing, road, power, digital communications (internet and cellular services), etc.</p> <p>Potential HR Impact: Right to social service - Everyone has the right to a standard of living adequate for the health and well-being of themselves and their family, including food, clothing, housing and medical care and necessary social services.</p>	<p>Housing is of great concern, in Nogales & Rio Rico. Internet and cellphone services are not the best in the region. Roads, (like Highway 82, 'The Scenic Highway'), are not built for the heavy and frequent truck traffic that South32 will bring.</p> <p>An increase in population due to an influx will strain these systems.</p>
	<p>6c. Strain on many local infrastructure SOCIAL systems in Patagonia, including: childcare and youth services, medical services, etc.</p> <p>Potential HR Impact: Right to social service - Everyone has the right to a standard of living adequate for the health and well-being of themselves and their family, including food, clothing, housing, medical care and necessary social services.</p>	<p>Childcare and youth services are already very limited, particularly in Patagonia (i.e., no sports leagues, Cub or Girl Scouts), and there is an issue with youth idleness and drinking/drugs.</p> <p>Medical care in the region is limited, and Patagonians often go up to Tucson.</p> <p>An increase in population due to an influx will strain these systems.</p>
	<p>6d. Strain on many local infrastructure SOCIAL systems in the Nogales area, including: childcare and youth services, medical services, etc.</p> <p>Potential HR Impact: Right to social service - Everyone has the right to a standard of living adequate for the health and well-being of themselves and their family, including food, clothing, housing, medical care and necessary social services.</p>	<p>Childcare and youth services are already very limited in the region (i.e., no sports leagues, Cub or Girl Scouts) and there is an issue with youth idleness and drinking/drugs.</p> <p>Medical care in the region is limited, and most residents in Nogales go across the border to Mexico for treatment.</p> <p>An increase in the population due to an influx will strain these systems.</p>

SIOA Topic	Potential Impact	Cause
<p>7. Biodiversity</p>	<p>7a. Negative effects on the quality of the environment, damage to local ecosystems, and disappearance of wildlife in the region. Specific to Patagonia and to specific stakeholders in Patagonia, i.e., those who moved to Patagonia for the 'nature lifestyle' such as birding.</p> <p>Potential HR Impact: Right to a healthy environment - Substantive rights are those in which the environment has a direct effect on the existence or the enjoyment of the right itself.</p>	<p>South32 Hermosa construction and operation will increase traffic, noise and dust in the area, driving species out of the region, resulting in damage to ecosystems through the creation of access roads, etc.</p>
	<p>7b. Damages to local biodiversity impacting local tourism, appeal of the region.</p> <p>Potential HR Impact: Right to a healthy environment - Substantive rights are those in which the environment has a direct effect on the existence or the enjoyment of the right itself.</p>	<p>South32 Hermosa construction and operation will increase traffic, noise and dust in the area, driving species out of the region, resulting in damage to ecosystems through the creation of access roads, etc.</p>
<p>8. Approach to Tribal Engagement and Cultural/Intangible Heritage</p>	<p>8a. Disturbance of traditional and archaeological sites, and endangered species. Unearthing of traditional artifacts.</p> <p>Potential HR Impact: Indigenous Peoples' right to practice and revitalize their cultural traditions and customs.</p>	<p>Project development will include land use and will cause disturbance to it. There may be a lack of traditional and cultural tribal awareness in the workforce during construction, as well as an absence of archaeological specialists on staff. Note that Hermosa does have inadvertent discovery protocols in place and has also completed cultural resource surveys on both patented and unpatented claims.</p>
<p>9. Environmental and Social Nuisances^{ICMM}</p>	<p>9a. South32 Hermosa operation affecting property values in Flux Canyon.</p> <p>Potential HR Impact: Right to Property</p>	<p>Properties of Flux Canyon are being monitored for water contamination. They may have power lines running through /alongside their lots, and increased traffic for operations over an extended period of time. From the stakeholder perspective, this has already affected values of their properties. They/some see South32 as the only potential buyer but want to ensure a fair price.</p>

SIOA Topic	Potential Impact	Cause
	<p>9b. Negative effects on Patagonia residents' health and wellbeing due to pollution, stress and anxiety.</p> <p>Potential HR Impact: Right to Health and Wellbeing</p>	<p>Construction activities will increase the amount of traffic, noise and dust in Patagonia, which may have an impact on residents' health and wellbeing.</p>
<p>10. Local Businesses^{ICMM} (i.e., local procurement and contracting)</p>	<p>10a. Local businesses in the region are left out of the procurement process.</p>	<p>Local businesses (small ones, in particular) are not capable of benefitting from the South32 Hermosa operation - regional businesses, especially small ones, may not be able to meet South32 requirements and high standards to provide their services as contractors.</p>
	<p>10b. Competition between local companies/businesses (including South32) for hiring is not equal, leaving local businesses (not South32) short of labour. Of particular concern is the active produce industry in the region.</p> <p>There is currently a shortage of drivers for heavy machinery so there is a concern now that South32 will take a portion of the existing drivers, leaving the ones who remain demanding higher wages.</p>	<p>South32 - following mining industry standards - provides significantly higher salaries and benefits compared to other industries in the region, leaving these companies in a difficult position of being unable to staff their operations sufficiently or with the best candidates (as they have all been hired by South32 and their major contractors).</p>
<p>11. Education</p>	<p>11a. Strain on education services in the region.</p> <p>Potential HR impact: Right to Education</p>	<p>Possible influx of workforce and their families during construction and operation will overwhelm the capacity of the schools in the area.</p>
<p>12. Sense of Place and Community Cohesion</p>	<p>12a. Concerns about Patagonia becoming a big town full of store franchises, changing the 'sense of place' for local residents.</p>	<p>The South32 Hermosa Project operation will bring growth and a possible increase in population to Patagonia, which will change the 'small town' feeling local residents enjoy.</p>
<p>13. Border Concerns</p>	<p>13a. Border closure or disruption causing potential impacts to the lives of South32 employees and their families.</p>	<p>A border closure or disruption (from various causes, like pandemic, political reasons, etc.) can impact the local communities in many ways.</p>

SIOA Topic	Potential Impact	Cause
	<p>13b. Increased security issues in the region as the Hermosa Project provides a possible corridor for migrants passing through Southern Arizona.</p> <p>13c. Increase in trafficking potential via South32, transport across borders for humans and drugs (South to North) and guns (North to South).</p> <p>Potential HR Impacts: Right to life, liberty, and security of person.</p>	<p>The South32 Hermosa Project will be a major employer in the area, especially during construction, increasing migration from the border.</p> <p>South32 using transport trucks or rail creates the potential opportunity for traffickers.</p>
<p>14. Recreation and Eco-Tourism</p>	<p>14a. Loss of tourism to Patagonia, i.e., tourists will choose not to visit Patagonia due to the mine.</p>	<p>Construction activities in particular will discourage visitors due to the reputation and reality for noise, dust, etc. An increase in traffic will affect recreational outdoor activities; Project employees and contractors will occupy the limited accommodation available.</p>
<p>15. Relations with Government^{ICMM}</p>	<p>15a. Santa Cruz County will not be able to maximize the benefits of South32 tax payments due to expenditure limits and lack of infrastructure and resources.</p>	<p>The amount of taxes South32 will pay during its operation will exceed the legal expenditure capacity of the local government. In addition, lack of experience with such significant local projects may cause inefficiencies in the local government's ability to use the funds wisely.</p>
<p>16. Health and Wellness^{ICMM}</p>	<p>16a. The current healthcare services and facilities of Patagonia will collapse; an increase in population will stress the already precarious healthcare systems in Santa Cruz County - particularly Patagonia and Nogales.</p> <p>Potential HR Impact: Right of social service - Everyone has the right to a standard of living adequate for the health and well-being of themselves and their family, including food, clothing, housing, medical care and necessary social services.</p>	<p>With the expected increase in the community sizes of Patagonia and Nogales as the Hermosa Project enters into development, current healthcare services and facilities are insufficient to manage the population growths of these communities/regions. They are currently already under stress, and will become further overburdened. Currently, locals go to other towns (Tucson) for healthcare, even across the border.</p>

SIOA Topic	Potential Impact	Cause
	<p>16b. Health and wellbeing of Patagonia residents may be impacted by mining activities resulting in dust and noise, with the proximity to the operation creating stress and anxiety.</p> <p>Potential HR Impact: Right to health and wellbeing</p>	<p>Construction activities will increase the amount of traffic, noise and dust in Patagonia, which may have an impact on residents' health and wellbeing.</p>
<p>17. Influx / In-Migration</p>	<p>17a. Unplanned growth of Patagonia due to the South32 Hermosa operation.</p>	<p>Population increasing due to influx of workforce.</p>
	<p>17b. Local (Nogales, Rio Rico) growth due to the South32 Hermosa operation. Strain on the housing market.</p> <p>Potential HR Impact: Right of social service - Everyone has the right to a standard of living adequate for the health and well-being of themselves and their family, including food, clothing, housing, medical care and necessary social services.</p>	<p>Population increasing due to an influx of workers, leading to increased pressure on the local housing market which is strained as is.</p>
<p>18. (Blockages to Benefiting from Mining)^{ICMM}</p>	<p>18a. Alliance with South32 or support for South32 from some community businesses must be kept hidden or suppressed; and so South32 loses out on needed community support for the Project.</p>	<p>Mining has a bad reputation for boom/bust, dirty, etc.</p>
	<p>18b. Patagonians refuse to apply for employment or grants from South32 because they believe Patagonia doesn't need the business (ecotourism is already booming) and they disagree with mining.</p>	<p>Ecotourism is seen as an already viable and positive economic impact to Patagonia; thereby demonstrating (for some people) that the mine is not needed for additional economic stimulation.</p>
<p>19. Arts, Culture and History</p>	<p>19a. Patagonia may lose its cultural/artistic charm, and become a mining town again.</p>	<p>Due to the proximity of the mine project and its related activities.</p>

SIOA Topic	Potential Impact	Cause
<p>20. (Impact on) Community Resources (ICMM)</p>	<p>20a. Cycling - gravel roads and other recreational roads are being closed.</p>	<p>During construction some of the recreational roads will be shared with company and contractor vehicles and could present a safety hazard.</p>
<p>21. Economic Impact</p>	<p>21a. Inflation - increasing cost of services. There will be an increase in economic activity and opportunities, which is normally accompanied by local inflation. Patagonia, Rio Rico and Nogales, where most workers live, are likely to become more expensive than other towns in the region. Those who work at the mine and benefit from higher salaries/benefits can manage this inflation. Others - those who are not/will not be South32 employees - cannot keep up with the inflation and this may cause tension and resentment of the inflated prices.</p>	<p>Inflation due to the increase in economic activity spurred by higher wages paid by South32 to their employees, who now have more disposable income.</p>

3.1.2 Key Opportunities Identified

In addition to uncovering and assessing the possible impacts of the Hermosa Project, SOOP assessed several potential opportunities for Hermosa to support capacity building in the areas of heritage economies, water resources management, education, health, employment, and training. During the process, SOOP also considered opportunities to enhance climate adaptation strategies and support environmental resilience. During the impact assessment process, SOOP identified 12 key opportunities for improvements across seven areas, presented in the table below:

Table 4 – Hermosa Social Opportunities and Sources

SIOA Topic	Opportunity (ICMM-modified by SOOP)	Source of the Opportunity (ICMM-modified by SOOP)
1. Community Investment and Development	1a. Most jobs at Hermosa will be filled by people from local communities, especially Patagonia, Nogales, Rio Rico, Sonoita, etc.	South32 has already stated (public commitment) that 80% of their workforce will be hired locally. Even omitting the mine camp employees from the mine plan, this is built into the mine plan, and HR is planning and developing local employment/recruitment plans. Outreach and partnering with external organizations has begun. Need an internal process for documenting these "verbal commitments" – include as part of legal and other requirements register
	1b. Patagonia: Visible/felt improvements in local infrastructure (i.e., helipad, paved roads). Note that some interviewees are not clear of South32's decision-making process regarding which community investment initiatives to support (fund).	Patagonians, as the closest town to the Hermosa site, will experience the most visible and felt impacts to their community. South32's corporate citizenship relies on being an active participant in the town's development.
	1c. Nogales: as the largest hiring company in the area, South32 can participate in the community development of Nogales to support the increase in population (due to an influx and natural growth). Nogales, though larger than other towns nearby (25k people), is looking to grow economically and needs local infrastructure (physical and social) to support this growth.	Nogales has an ageing infrastructure such as water/sewer systems, lack of available housing, limited cellphone signals in areas around Nogales i.e., Rio Rico, and transportation is a problem in Nogales and outside of Nogales i.e. to Patagonia or Tucson. This benefit applies to direct Community Development project investments by the Company.
	1d. Increase in the amount of tax Santa Cruz County and Arizona State will receive, which could mean increased investment by government in local community infrastructure (physical and social).	South32 will be the largest taxpayer for Santa Cruz County. Many community members are skeptical whether the taxes collected by State and County will be reinvested in Nogales, Patagonia etc.; possible tensions/conflict between county and state governments.
2. Local Businesses (ICMM) (i.e. local procurement)	2a. Patagonia: Local business owners are already and will likely continue to see an increase in activity, i.e., trailer and hotel room rentals to South32 contractors/workers, and the potential for new business creation to service the project/operation i.e., food supply.	South32 has a priority to contract locally, and is currently helping its contactors to do the same. Patagonia is the closest town to the Project and operating site; currently local businesses are benefitting from South32's presence, including the local trailer rental company, local wine bar, local bakery, hotel, and so on. This can only increase.

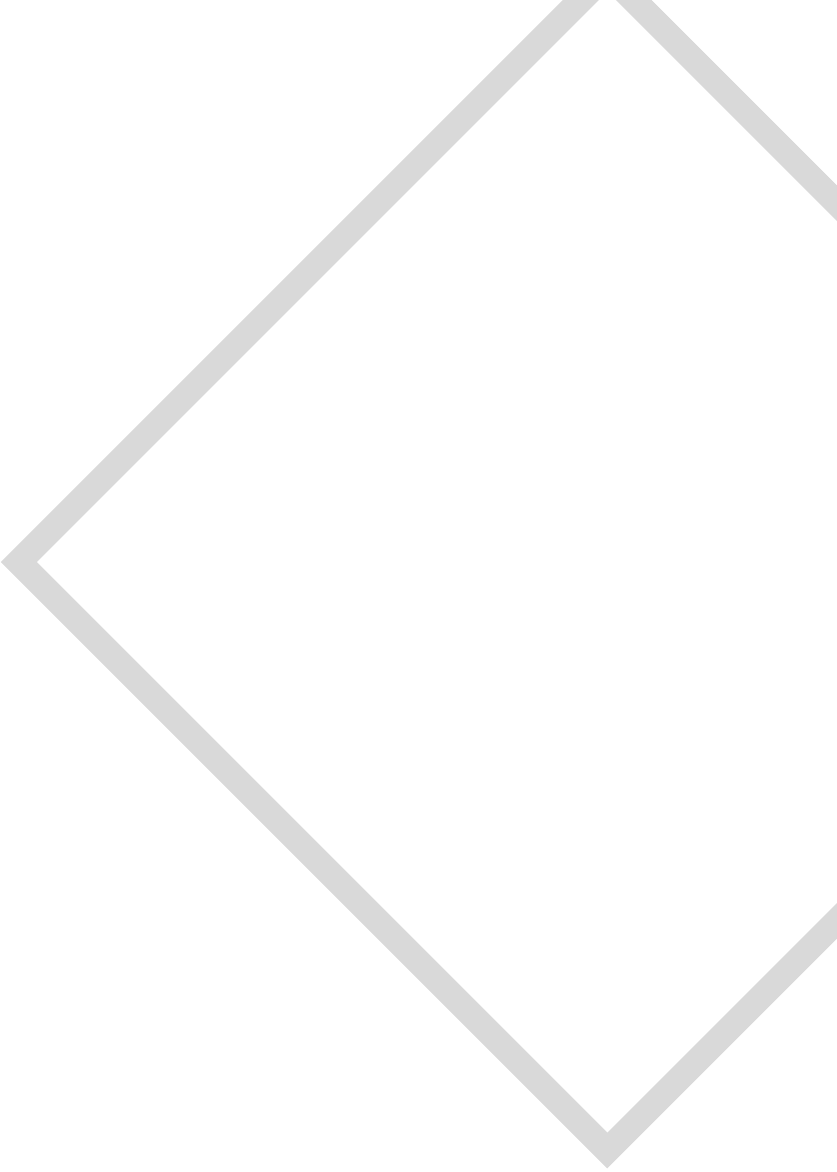
SIOA Topic	Opportunity (ICMM-modified by SOOP)	Source of the Opportunity (ICMM-modified by SOOP)
and contracting)	2b. Nogales: Local business owners are and will likely continue to see an increase in activity, i.e., trailer and hotel room rentals to South32 contractors/workers, and the potential for new business creation to service the project/operation i.e., food supply.	South32 has a priority to contract locally, and is helping its contractors to do the same; Nogales is the largest, closest town to the project site. Many workers are or (future workers) will be living in Nogales. Locals see this as a positive opportunity.
3. Education	3a. Younger generation that is currently in high school will be age-ready to be employed at South32 – if local resource development plans include raising awareness about work/career opportunities at South32/mining, and appropriate training programs are executed creating this new hiring pool.	Currently, the younger generation in Nogales and Patagonia don't see (and don't have) a productive or economical future if they stay home in Santa Cruz. South32 offers the opportunity for work and to stay home, with local training and education plans to develop this local resource of workers, which in turn will help the communities to grow. (Currently most youth leave for Tucson or other states for work.)
4. Labor Relations	4a. South32 Hermosa Project will become an employer of choice in the region	Higher than average salaries, health benefits, training and career growth, welcoming a diverse and inclusive workforce, prioritizing climate change decision/actions.
5. Human Rights	5a. Employees have a work environment where they feel safe to live with full self-expression.	South32 has governance (policies) together with cultural awareness training with an emphasis on creating a safe, diverse and inclusive workplace for Latino, tribal and LGBTQ community members. A hotline is available to employees to report any complaints.
	5b. Women feel safe and included on the project/operation site.	South32 has governance (policies) together with cultural awareness training with an emphasis on creating a safe, diverse and inclusive workplace for Latino, tribal and LGBTQ women. A hotline is available to employees to report any complaints.
6. Climate change	6a. The South32 Hermosa operation will have a small carbon footprint.	Commitment to use electric vehicles for their operations; mining minerals needed for cleaner energy; zinc is a critical mineral for a low carbon future.
7. Land use	7a. Small project footprint for Taylor Deposit.	South32 is an underground mine; dry stack tailings.

4 ADDITIONAL FINDINGS (BEYOND SIOA-HRIA BOUNDARIES)

Through our engagement process, we had the opportunity to listen to different opinions from a wide range of stakeholders, providing us with additional findings beyond the boundaries of the SIOA-HRIA scope of work. We consider this information to be valuable, especially for Hermosa's Community Relations team. We captured these findings in the table below. They have been arranged by stakeholder group.

Stakeholder Group	General Observations/Findings
<p>Patagonia</p>	<p>Common Sentiments</p> <ul style="list-style-type: none"> • In Patagonia, even if they are pro-mining, they do not want the town to change. • Some want limited growth – but not too much growth. • Pro-South32 community members hide their opinion for fear of backlash. • Some stakeholders noted that it is difficult to get to the South32 Community office during its office hours to learn more about Hermosa and ask questions. Consider staffing the office for a few hours on the weekends or for a few evenings per week. <p>Stakeholder Quotes</p> <ul style="list-style-type: none"> • “I’m not against mining, but I don’t want it in my backyard.” • “If the mine is going to happen, and we know it will, I would prefer South32 to do it.” • “I don’t like mining, but I trust Pat and Melanie, they are good people.” • “There’s a lot of division in the community because of the mine, we know it is not their intention, but it is happening.”
<p>Nogales</p>	<p>Common Sentiments</p> <ul style="list-style-type: none"> • Nogales is pro-mining. They want the jobs, the people, and the changes that will come with the mine. • Feelings of neglect and they note that South32 pays much attention to Patagonia. • There is a lack of understanding about modern mining and job opportunities. • The company needs to communicate in Spanish. <p>Stakeholder Quotes</p> <ul style="list-style-type: none"> • “We want the mine, we want the jobs, we need to grow and diversify our community.” • “If we have more people, we will have better services and more businesses.” • “Community projects need to be sustainable; we don’t want to end like another ‘ghost town’ once the mine is gone.” • “The company gets the support of the Spanish speaking community to make it.” <p>“In Nogales you need to build trust, that’s the way we work.”</p>
<p>Tribes</p>	<p>Common Sentiments</p> <ul style="list-style-type: none"> • Although there are no Tribal communities or Tribal lands adjacent to or in close proximity to the future operating site in Patagonia, Tribes are a key stakeholder group to mining in the region which is why South32 has already engaged well with them and worked on building that relationship. They should be engaged for specific community development (sharing of

	<p>benefits). We found that education of youth and preservation of cultural aspects are key concerns for Tribal communities near Tucson.</p> <p>Stakeholder Quotes</p> <ul style="list-style-type: none"> • “South32 is different, they are starting to get their trust (Tribes), they are sharing information about what they are doing now and what they will do in the future, now they (South32) need to be true to it.”
<p>South 32 Employees (Patagonia and Nogales)</p>	<p>Common Sentiments</p> <ul style="list-style-type: none"> • Generally enthusiastic and proud to be working for South32. Note that because of some strong anti-mining and anti-South32 sentiment, employees indicated to us that they do not often wear their South32 uniforms when in town to avoid being asked questions or experiencing adverse reactions. • Local employees are untapped resources for connecting with local communities, particularly the youth, i.e. to demonstrate career opportunities. The ones we spoke with indicated enthusiasm for doing community or youth outreach at local high schools. <p>Stakeholder Quotes</p> <ul style="list-style-type: none"> • “I didn’t know I could work in the mine; I am not a miner.” • “It feels good to be respected and valued, even when you speak with an accent.” • “There is a culture of respect, you feel safe expressing yourself.”
<p>Mothers of young children (in Patagonia)</p>	<p>Common Sentiments</p> <ul style="list-style-type: none"> • Most families/children in Patagonia live below the poverty line; most families rely on the breakfast/lunches provided at the school. • A lot of concerns about the possible environmental impacts, especially on water sources. • Education and training need to be improved at all levels. <p>Stakeholder Quotes</p> <ul style="list-style-type: none"> • “The Montessori school is not getting any attention or funding from South32, and they really need it. “ • We want to be able to live harmoniously with South32, to say “they are here but they help us fix infrastructure” • “Help us change the 1882 Mining Act. Prove you are different; be accountable.” • “We want South32 to find a balance between having the mine but staying a small quiet town”



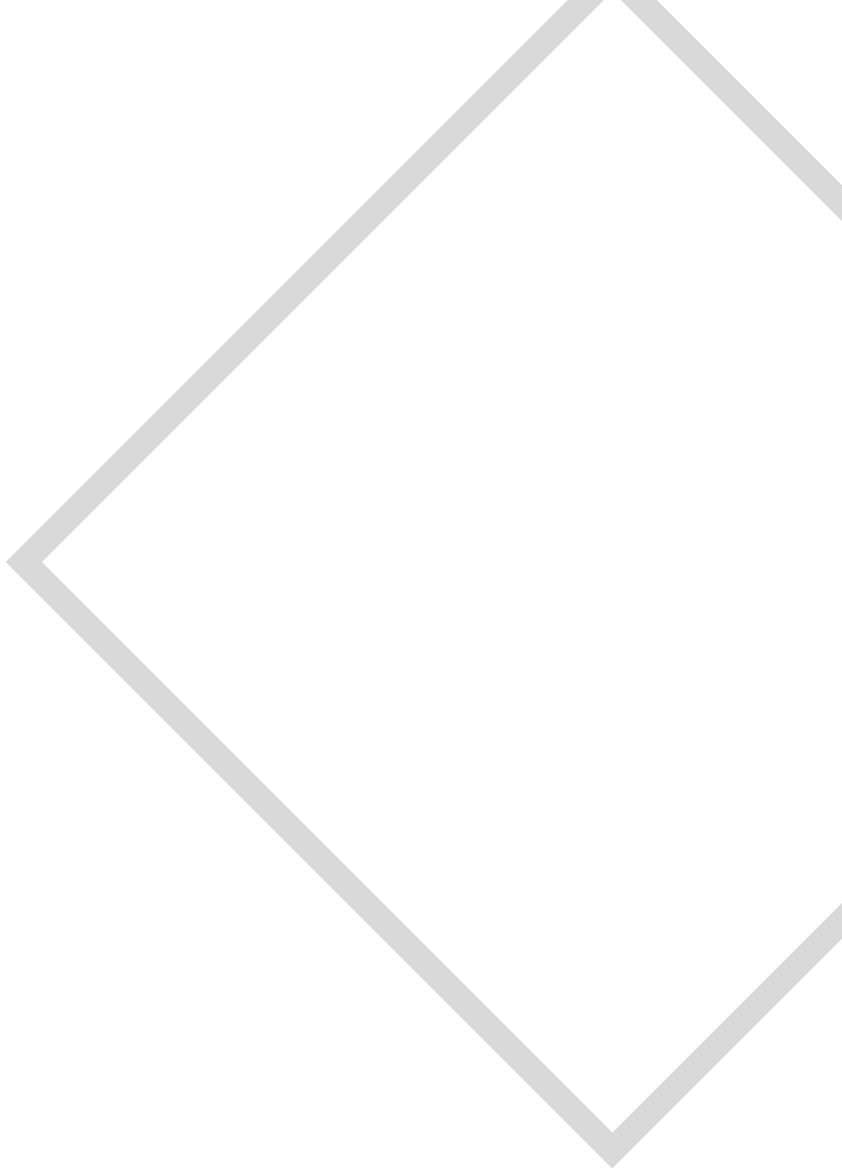
APPENDIX A: List of SIOA Topics

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SIOA Topic	Description
1. Approach to Tribal Engagement and Cultural Resources	How South32 undertakes outreach and engagement with Tribes, quality of relationships, respect for Tribal culture, archaeological management at site.
2. Arts, Culture and History	Arizona culture and history as a historical mining town; local art fairs, local artists, local museums, etc.
3. (Blockages to) Benefiting from Mining ^{ICMM}	Any barriers that prevent the local community (or sections of it) from benefiting from the presence of mining operations; are there real or perceived barriers, such as a lack of appropriate skills, inadequate infrastructure, management practices at the mine, access to capital, local politics, etc.
4. Biodiversity	Impacts on local environment; local species, endangered species; company programs to manage local biodiversity.
5. Border Concerns (Mexico-US)	Nogales is a Port of Entry; cross-border workers and families; cartel activity; trafficking of drugs, guns, humans, money; security of the area.
6. Climate change	Effects of climate change, causes of climate change, efforts to prevent climate change, concerns about climate change; the region is going through a decades-long drought.
7. Community-Company Relationship	How South32 engages with local communities, importance/value of the relationship, transparency and credibility.
8. Community Investment and Development	Company investment by donations or grants in local community programs and infrastructure and events; company investment for the improvement of local community, i.e., infrastructure projects.
9. (Impacts on) Community Resources ^{ICMM}	Damage or use of community resources that are important to the community to support their livelihoods or enjoyment; agricultural land (or water) used for cultural purposes or local tourism that has been impacted by the mining company; other communities not immediately adjacent to the mine felt or will feel knock-on effects of the mine; company responses to impacts.
10. Demographic and Social Change ^{ICMM}	Changes to community characteristics (i.e., gender, ethnicity, language, residential location, age, etc.); positive impacts due to more jobs, better services to support a larger population, or higher standards of living; potential impacts such as communal tensions, conflicts, crime levels, overcrowding, excessive demands on local services; attempts by the mining company to alleviate such impacts.

11. Education	Investments in and partnerships with local education institutions; average educational levels; access to public education; available training schools and opportunities.
12. Local Employment and Training	Hiring locally (Patagonia, Nogales, Santa Cruz County); training local people to fulfil jobs at South32.
13. Environmental and Social Nuisances ^{ICMM}	Noise, dust, light pollution. Positive or negative environmental or social nuisance impacts upon the local community: are these impacts equitably distributed – what about communities not immediately adjacent to the mine; potential impacts on noise amenity, air quality, waste generation or waste management services.
14. Food Security ^{ICMM}	Potential effects on availability and cost of food supplies; inflationary pressures in key food supplies or petrol/gas; company monitoring prices of basic goods.
15. Health and Wellness ^{ICMM}	Potential for health of local community to be impacted by the mine – positive because of better environmental, health and safety standards or provision of such services; negative because of pollution, poor safety standards, introduction of diseases by migrant workers; would health assistance provided by South32 be better than government or other company/organizations plans? Individual and family mental and physical wellbeing.
16. Human Rights	Access to water, impacts to quality of life, human safety and security.
17. Influx / In-Migration	The migration of people to local communities in expectation of working at or servicing the mine, resulting in population growth.
18. Labor Relations	Corporate culture; access to leadership, transparency; employee benefits, pay, diversity, equity and inclusion, etc.
19. Land use	Zoning, conservation vs. development of land.
20. Local Businesses ^{ICMM}	Including Local Procurement. Has/will the mine contribute to the development of local businesses; what extent has/will the mine place contracts with local businesses; does the mine have local content execution plans and are these well known by stakeholders; has the mine shared skills, facilities or expertise to make local firms more competitive; investment in the development of local businesses through social investment programs or helping regional, national or international development organizations to move the local economy forward; possible negative outcomes to local businesses due to the existence of the mine.

21. Local Infrastructure ^{ICMM}	Potential impacts to local physical and social infrastructure; impacts to roads, railways, air transport, or port facilities; leisure, sports and recreational structures, schools, hospitals and clinics; impact on electrical supply, fuels, water and waste treatment facilities, solid waste management; telecommunications and postal services; effects on community or local authorities in terms of new requirements for infrastructure; impacts on infrastructure vis-a-vis local government provision.
22. Recreation and Eco-Tourism	Recreation activities in the local area (Patagonia, Santa Cruz County); bird-watching; retirement lifestyle; hiking and cycling; wildlife watching.
23. Relations with Government ^{ICMM}	What interaction does the mine have with government agencies at the local, regional or national level; what is the impact of this interaction on both parties; how transparent do other members of the community consider these relationships?
24. Sense of Place and Community Cohesion	Stakeholders' feelings of connection (or disconnection) to the land, the community and to each other.
25. Traffic and Transport Routes	South32's current traffic habits, future/planned traffic schedules, routes, potential impacts on local people and wildlife.
26. Water	Access to and quality of clean water; dewatering and discharge to local creeks. The region is going through a decades-long drought; agriculture and ranching are water dependent industries.



APPENDIX B: PESTLe Analysis

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	Analysis
Political	<ul style="list-style-type: none"> The Hermosa Project is located in Arizona's Second District¹, which is dominated by the Democratic Party. The Democratic Party's views on immigration from Mexico, climate change, and environmental issues may shape public opinion in the region regarding mining in general. The incumbent Second District House representative, Ann Kirkpatrick, is not running for another term in the upcoming elections. This may lead to political uncertainty in the region. The political climate in Santa Cruz County, AZ is very liberal. In Santa Cruz County, AZ 67.1% of the people voted Democrat in the last presidential election, 31.6% voted for the Republican Party, and the remaining 1.3% voted Independent. In the last Presidential election, Santa Cruz County remained overwhelmingly Democratic, 67.1% to 31.6%. Santa Cruz County voted Democratic in every Presidential election since 2000.²
Environmental	<ul style="list-style-type: none"> Arizona is experiencing a decades-long drought which is affecting water availability, usage, costs, and public opinion. This leads to significant local concerns regarding the Project's dewatering plan. The Santa Cruz County, particularly the area of Patagonia, is a popular region for tourists due to the aesthetics and variety of its environmental sphere and biodiversity. Santa Cruz County has a sizable nature-based restorative economy for nature-based tourism, nature-based industries, and conservation, restoration, and preservation.³
Social	<ul style="list-style-type: none"> Land claims have been the point of contention in the region, with lack of transparency being flagged as an issue. Issues of access, wildlife disturbance and traffic have been voiced by local communities. The previous owner of the mining rights, Arizona Mining Inc. (previously Wildcat Silver Corp, now owned by South32), has encountered significant opposition from local groups, including legal action and successful lobbying to local authorities. Low employment and high poverty rates, as indicated in the 2020 Census, may lead to local communities developing high expectations for employment opportunities. Managed carefully with other industry and government partners, South32 needs to avoid creating a dependency on the Hermosa Project, thereby avoiding boom/bust cycles as in previous years in the region. Santa Cruz County is primarily a white demographic with a high percentage being Hispanic, due to the location on the border with Mexico.⁴
Technological	<ul style="list-style-type: none"> The mining industry is trending towards adoption of new technologies including automation and AI (Artificial Intelligence). This may displace a specific portion of the workforce due to insufficient skills and redundancy. This can create the opportunity for developing specific training programs, and partnering with academic institutions if planned sufficiently. Alternatively, if viewed as a missed opportunity, and outside professionals are brought in, then tensions could be created within the community-company relationship. News of South32's plan to employ a battery-electric fleet in the mine may create high expectations amongst local environmental organizations. The market for battery electric mining equipment is still in the development stage, which may hinder the company's ability to meet expectations. South32's use of dry stack tailings is one of the first in the US.

¹ SOOP understands that the Districts in Arizona may be under reassignment, therefore this may not be accurate.

² https://www.bestplaces.net/voting/county/arizona/santa_cruz?adlt=strict&toWww=1&redig=10F4607551174316891195B3D6ED60A4 last accessed May 25, 2022

³ <https://economics.arizona.edu/nature-based-restorative-economy-santa-cruz-county-arizona?adlt=strict&toWww=1&redig=9571DC9456344951973B1779657D9365> Last accessed May 25, 2022; ASU research paper by Duval, Bickel, Frisvold, Zheng

⁴ 2020 United States Census Bureau

Legal	<ul style="list-style-type: none"> Local environmental NGOs are active and vocal and are not hesitant to pursue legal action against mining companies (PARA action against APP permit, Center for Biological Diversity action against Rosemont Copper). Soon, locally and globally, companies operating in the extractive sectors are likely to feel the brunt of the increasing prominence of ESG-related litigation and the recalibration of societal norms towards sustainability, and should be proactive in limiting their exposure to climate change related exposure.
Economic	<ul style="list-style-type: none"> Water rates in the region are increasing. Tucson Water has recently announced a 10 percent rate hike. The transitioning away from emitting technologies and products to battery electric technologies, as proposed by South32, is usually associated with significant capital expenditure. As mentioned earlier under the Environmental section, Santa Cruz County has a sizable nature-based restorative economy for nature-based tourism, nature-based industries, and conservation, restoration, and preservation.⁵

⁵<https://economics.arizona.edu/nature-based-restorative-economy-santa-cruz-county-arizona?adlt=strict&toWww=1&redig=9571DC9456344951973B1779657D9365> Last accessed May 25, 2022; ASU research paper by Duval, Bickel, Frisvold, Zheng