Appendix P – Social Impact Assessment

Vaxa

Tweed Sand Plant expansion
Cudgen

Social Impact Assessment

February 2021

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Executive summary

Hanson Construction Materials Pty Ltd (Hanson) is proposing to expand and extend the life of the Tweed Sand Plant (TSP) on Altona Road, Cudgen, which they have operated since acquiring the plant in 2007. From this plant Hanson supplies sand for the construction industry to primarily support the production of concrete.

The plant was originally established in 1983, and has approximately 6-10 years supply remaining under the current approval, depending on market demand. The new approval currently being sought would extend the life of the plant to approximately 30 years to secure sand supply to growing markets in northern NSW and SEQ.

The proposed, expanded footprint is illustrated below. The current operational footprint is the lighter shade of blue at the eastern side of the shaded area.

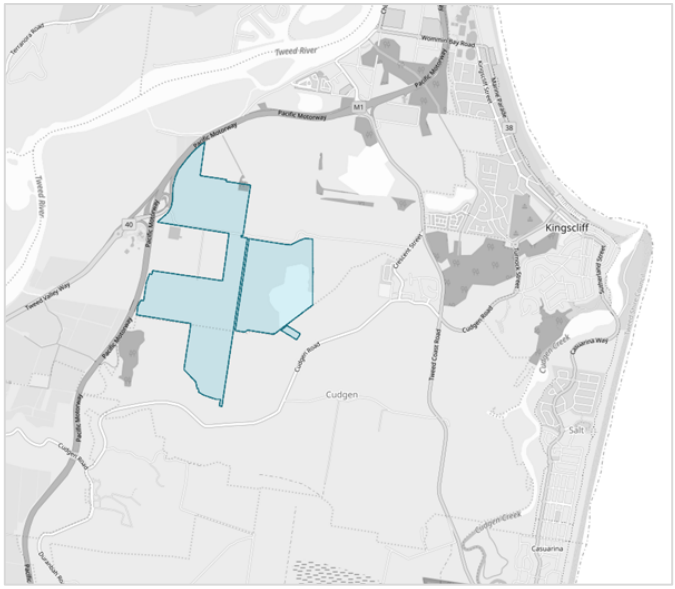


Figure 1 - Site of proposed expanded Tweed Sand Plant

The NSW Government has designated the proposal as a 'Project of State Significance' and will therefore be determined under state legislation. This Social Impact Assessment (SIA) is a component of the Environment Impact Statement (EIS), prepared in response to the NSW Government's requirements. The SIA has been prepared in accordance with the NSW Government guideline for social impact assessment for state significant mining, petroleum and extractive industry development projects.

Site context – high level overview:

TSP has limited residential interface and the majority of the community appear to be unaware of the existing plant operations. There are no public sand sales from this site and therefore minimal community interface. Altona Road is a minor road and TSP operates quite discretely. Anecdotally, residents driving on or living near Tweed Coast Road notice the heavy vehicle movements from current operations, and they would prefer less vehicle movements. Hanson maintains a complaint register, with no complaints received for the past three (3) years. Consultation undertaken confirms low community concern about the proposal with stakeholders explaining that they don't expect to experience impacts.

SIA Methodology:

Stakeholder engagement and desktop studies informed the preparation of the TSP SIA. This included discussions with near neighbours, communications with the existing Community Consultative Committee and other local stakeholders including the local primary school.

In early 2021, the project team distributed information about the project and the opportunity to be involved. There was only moderate response from the community, however local discussions generated rich anecdotal data which informed the SIA.

Several Tweed Shire Council reports were referenced, including strategies built upon significant community consultation. The research and consultation created a robust social baseline for the Cudgen community and surrounds to reference potential changes and impacts from an expanded TSP operation.

Important community values:

From research and consultation, it is evident the Cudgen community value and are protective of their rural and village lifestyle and have close connection with Tweed's natural environment and scenery.

They also value a viable and sustainable agriculture industry, as part of the area's local character and economy. Residents are wary of over-development, including greater densities and building heights. These features are described within this report.

The purpose of the SIA is to understand:

- The extent of change associated with the proposal
- The type and duration of this change
- Whether change confers impacts or potential benefits (compared to the values described above).

In the case of impacts, mitigations are nominated from technical TSP EIS studies or a social impact treatment perspective.

Increase in extraction footprint and operational hours:

A key change with potential to impact the community to some extent, is the proposed increase in operational hours. Hanson is seeking approval to operate on a 24/7 basis in response to market demand, particularly driven by large scale construction projects. Sand extraction would include dredging and pumping sand from the base of the lake, sand washing and stockpiling, and loading and transporting sand in heavy vehicles.

Noise related to night operations is expected to be generally within set limits, although the project is close to the Pacific Motorway where there is significant ambient night noise from frequent vehicle movements. Night operations would only take place in response to market demand.

The proposed extraction footprint means Hanson's operations will be closer to residential properties on Cudgen Road at around Phase 9 which would be in approximately 19-22 years from project commencement (See phasing map following). Hanson has opportunity to commence planting and establishing vegetation screening leading into this phase as a mitigation.

It is anticipated at approximately year 2043 specific, considerate construction and operational methodologies will need to be applied, along with noise monitoring, and other mitigations (as proposed in the EIS). This would also need to include ongoing stakeholder engagement as to the effectiveness of these mitigations. Consultation revealed some minor concern about 24 hour operations.

Amenity change and loss of land

A distinct change is the creation of water bodies across the rural floodplain landscape as material (primarily sand) is extracted. The eventual amenity change will be significant; however the change will be slow and take place over an estimated 30 years.

There isn't any specific data available as to how this gradual amenity change could generate material social change, apart from some minor concern expressed about change of rural values. This change doesn't seem to reduce specific values such as scenery, especially as the project is relatively distant to most properties and is located in a cleared floodplain. Hanson is planning to progressively rehabilitate and landscape the site during and following sand extraction to create lake edges which appear natural and suited to the landscape. Some local residents explained they would prefer to see water bodies, and this would provide greater recreational opportunities.

In context, a water body has been created from the existing extraction since the 1980s and there is no evidence this amenity change has conferred any negative social impact. Actual social impacts from the amenity change therefore seem low and there are good prospects for beneficial community use of the rehabilitated land and water bodies at the end of the project. This appears to be a reasonable 'trade-off' if there are future concerns and issues about visual amenity change.

The proposal will remove the potential for future conventional agricultural use at this location, which may be considered as cumulative loss of potentially productive agricultural land. However, there hasn't been intensive agricultural use of the land for at least a decade, and therefore there is no social change. The site has been professionally assessed as 'marginally productive' (Agricultural Land Assessment, Gilbert & Sutherland, 2021) with diminishing prospects due to climate change. The Cudgen Plateau land which is known to be higher value agricultural land is to the south of the site and not impacted by this proposal.

Of note, the expanded TSP will not interfere with the nearby Australian Bay Lobster Producers (ABLP) site, or their expansion plans, as demonstration of continuity of productive agribusiness use in this locality. Protection of this business is important to local stakeholders.

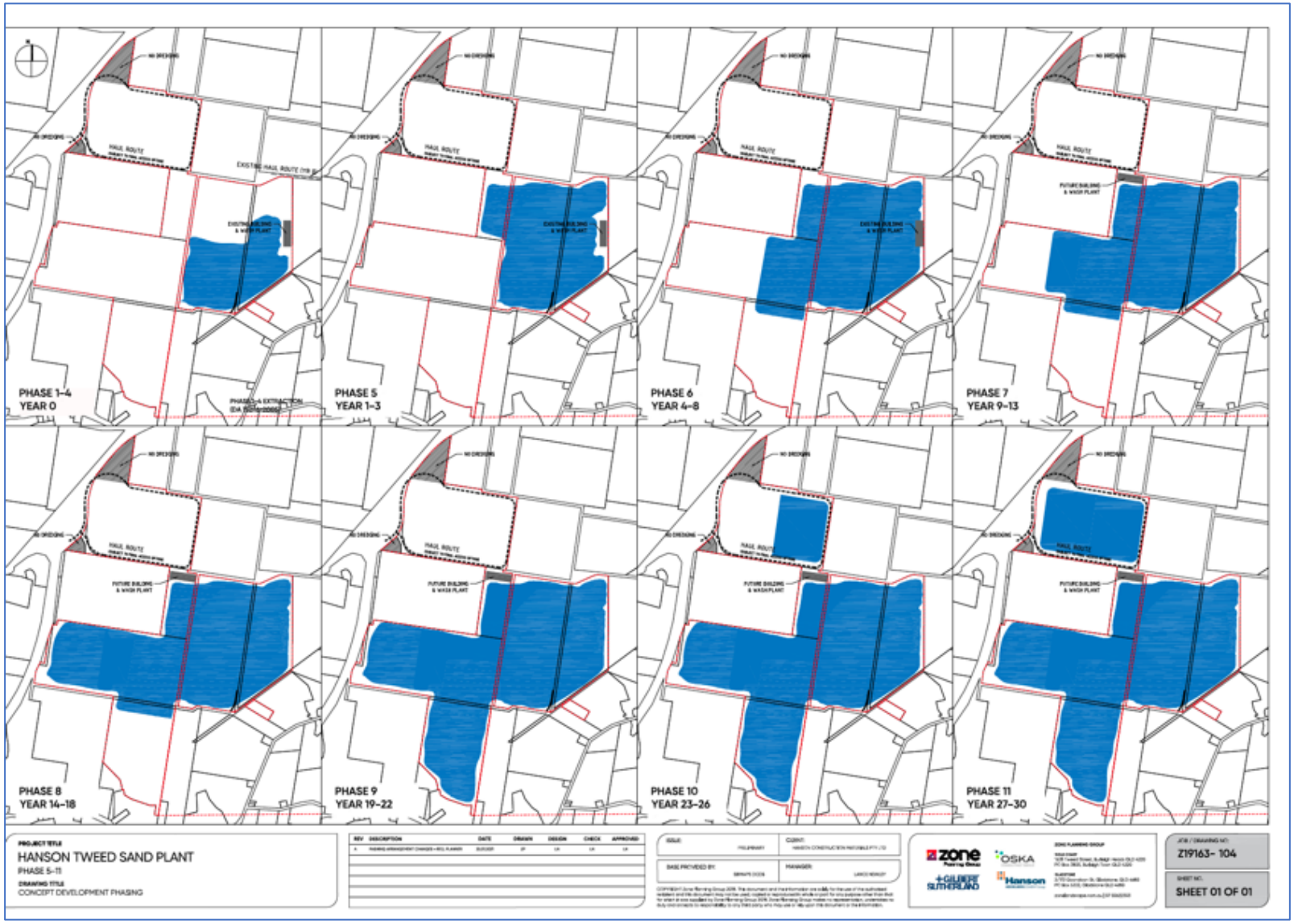


Figure 2 - Phasing and staging of the proposed expansion of the Tweed sand Plant

Transport:

The current heavy vehicle movements to and from TSP concern some local residents. Currently, vehicles use Altona Road, Crescent Street and Tweed Coast Road to connect with the Pacific Motorway where they transport the sand product to market.

To mitigate this concern and remove heavy vehicle from local roads, the project scope includes the construction of a new sealed internal haul road within the project site. The sealed haul road is proposed to connect to the Tweed Valley Way south bound offramp. From here vehicles can directly access the Pacific Motorway.

This mitigation removes transport and traffic related concerns, as TSP heavy vehicles will no longer be on local Council roads. The increased truck movements at the Tweed Valley Way interchange will be a change and potential social impact for people regularly using this interchange. This initiative was supported by stakeholders during local consultation.

Proposed tenure and no community legacies:

On completion of sand extraction at least 30 years from the time of project commencement, Hanson will retain ownership and management of the site.

Any proposed subsequent use of the site would be decided via the appropriate consultative, application and regulation processes in place at that time.

Conclusion:

Overall, there are low social impacts associated with the proposed expansion of the TSP. Based on communication and consultation undertaken in early 2021 there is little interest and concern associated with the current operations and this proposal. The changes and identified impacts can be monitored, with mitigations applied as needed, such as noise attenuation.

The permanent loss of the agricultural land is unlikely to limit agriculture opportunities on a regional basis, which was confirmed through consultation. The land is largely vacant, is not prime agricultural land, and regarded as 'marginally viable'. The land has not been used for intensive agricultural purposes for at least 10 years.

The footprint of the plant will change the visual amenity. However, this will be slow and gradual over the course of 30 years and there will be progressive rehabilitation. This is unlikely to generate specific or material social impacts. Consultation reveals some people would prefer there is no change, some do not have a view and others support the change to provide a mix of land and water in local amenity along with greater recreational opportunities.

There is likely beneficial community use of the rehabilitated site and water bodies at the end of the life of the plant, which can provide positive social impact/ benefits. This is in addition to the economic benefits identified through ongoing investment, employment, and allied business activity.

Hanson's initiative to remove heavy traffic from local roads is a social benefit, which is valued by local residents and stakeholders. In reference to the baseline social findings within this report, there are no material changes arising from the proposed use that would impact residents' lifestyle or the enjoyment of their environment.

1.0 Author's declarations

1.1 Author's qualifications and suitability to prepare this SIA

The author of this report, Greg Bourke, has qualifications in social science, including geography, at a Masters' post-graduate level.

Greg has prepared, assisted and peer reviewed multiple social impact, evaluation and consultation reports over the past 25 years.

Greg has also worked within multiple Councils and Government departments in a community, social planning, communications, and consultation basis, and delivered numerous projects for Councils including in northern NSW as a consultant.

Greg was formerly a social analyst and social policy advisor to the Queensland Government within the Department of Premier and Cabinet.

Greg's private and public sector experience includes projects in the resources, water, construction, tourism, aviation, and transport sectors. From this experience Greg has deep appreciation of community dynamics and how projects can impact residents and businesses.

Greg undertook both the research and consultation which informs this report.

Qualifications: B. Education (Social Science). M. Education (Social Science). GDBA, Dip T.

1.2 Author's declaration

The following report is an independent review of social impacts in accordance with the relevant NSW guideline for the preparation of social impact assessment.

The following assessment does not contain false or misleading information to the best of the author's knowledge.

A compliance report is provided at Attachment 1.

Greg Bourke

Greg Bourke
Director, Vaxa Group

2.0 Introduction and purpose of this report

2.1 Purpose

In December 2019, the Planning Secretary's Environmental Assessment Requirements (SEARs) were issued for the preparation of the EIS for the proposed TSP expansion. In relation to social impact, the SEARs requires the following -

- A detailed assessment of the potential social impacts of the development building on the findings of the Social Impact Assessment Scoping Report, in accordance with the social impact assessment guideline for *State significant mining, petroleum production and extractive industry development*, paying particular consideration to:
    - How the development might affect people's way of life, community, access to and use of infrastructure, services and facilities, culture, health and wellbeing, surroundings, personal and property rights, decision-making systems, and fears and aspirations.
    - The principles in Section1.3 of the guideline.
    - The review questions in Appendix D of the guideline.

The following Social Impact Assessment (SIA) has been prepared in accordance with the NSW Government Social Impact Assessment Guideline - for State significant mining, petroleum production and extractive industry development, September 2017.

2.2 Objectives of this SIA

The SIA objectives are consistent with the guideline (NSW Department of Planning, Industry and Environment, 2017), which outlines some mandatory requirements to be met by SIA practitioners in NSW. The guideline outlines best practice engagement techniques, and provides a process for assessing, determining and responding to social impacts. The objectives contained in the guideline have been adopted for this SIA comprising:

- Providing a clear, consistent and rigorous framework for identifying, predicting, evaluating and responding to the potential social impacts of the TSP, as part of the overall EIA process
- Facilitating improved project planning and design through earlier identification of potential social impacts
- Promoting better development outcomes through a focus on minimising negative social impacts and enhancing positive social impacts
- Supporting informed decision-making by strengthening the quality and relevance of information and analysis provided to the consent authority
- Facilitating meaningful, respectful and effective community and stakeholder engagement on social impacts across each environmental impact assessment (EIA) phase, from scoping to post-approval; and

- Ensuring the potential social impacts of approved projects are managed in a transparent and accountable way over the project life cycle through conditions of consent and monitoring and reporting requirements.

3.0 Legislative and policy context

This section outlines the strategic and local planning and policy context for reference when assessing the social impacts and opportunities associated with the TSP expansion proposal.

There is a considerable policy and planning framework which applies to the region and the study area, providing context for consideration of the alignment of the TSP expansion proposal, along with social impact assessment. This is outlined within this section.

3.1 EP&A Act

The EP&A Act sets the legislative context for this study. The objects of the EP&A Act are to:

- Promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the state's natural and other resources
- Facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment
- Promote the orderly and economic use and development of land
- Promote the delivery and maintenance of affordable housing
- Protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats
- Promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)
- Promote good design and amenity of the built environment
- Promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants
- Promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the state
- Provide increased opportunity for community participation in environmental planning and assessment.

The SEARs (and therefore the guideline) are issued under the provisions of the EP&A Act and set legislative requirements that this SIA must accommodate.

3.2 State Significant Development Criteria

Clause 8 of State Environmental Planning Policy (State and Regional Development) 2011 identifies certain developments are declared to be State Significant Development for the purposes of Section 4.36 of the *EP&A Act 1979*.

A development is State Significant Development if it meets the following requirements:

- The development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and
- The development is specified in Schedule 1 or 2.

The project meets the definition of 'Extractive Industry'. 'Extractive Industry' is permissible with consent on the site under both the Tweed Local Environmental Plan (TLEP) 2014 and State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

The proposal is not identified as exempt development, complying development, permissible without consent or prohibited development. Under Schedule 1 of State Environmental Planning Policy (State and Regional Development (2011), development for the purpose of 'Extractive Industry' which meets any of the following is identified as 'State Significant Development' (SSD).

- Extracts more than 500,000 tonnes of extractive materials per year, or
- Extracts from a total resource (the subject of the development application) of more than 5 million tonnes, or
- Extracts from an environmentally sensitive area of State significance.

Hanson is proposing to extract up to a maximum of 950,000 tonnes per annum from a total resource of between 30 and 35 million tonnes. Therefore the project meets both Schedule 1 Clause 7(1)(a) and (b) and is State Significant Development.

3.3 North Coast Regional Plan 2036

Although the North Coast Regional Plan 2036 (NSW) is silent on Cudgen, the plan outlines the direction the region is seeking to take. The following narrative is relevant to this SIA:

The Tweed Shire is the gateway between the North Coast of New South Wales and South East Queensland, and is the fastest growing area in the region.

Tweed Heads is a regional city continuing to develop and integrate with South East Queensland and its 'twin town' of Coolangatta. Tweed residents will continue to access high-quality services and facilities from both sides of the NSW-Queensland border. Local services and facilities are provided at Kingscliff, Casuarina, Cabarita, Pottsville and Murwillumbah.

The coastal settlements of the Tweed Shire have experienced some of the strongest growth on the North Coast. The popularity of the Tweed Coast is expected to continue into the future, particularly as opportunities for greenfield housing on the Gold Coast become more limited. Kingscliff will be an important centre in this regard and will service the growth of the Tweed Coast's network of villages.

The Tweed is recognised for its iconic natural environment and contains the Mt Warning Caldera, World Heritage listed rainforests and dramatic mountain ranges. This environment, and the Tweed's proximity to

the nationally significant tourist area of the Gold Coast, will support ongoing growth in the tourism industry.

Regional priorities

- Manage and support growth in Tweed Heads.
- Foster stronger alignment and integration with South East Queensland and adjoining local government areas such as Byron, Ballina and Lismore.
- Deliver housing and jobs growth in Tweed Heads, Murwillumbah and Pottsville.

Economy and employment

- Foster the growth of knowledge-based, education and health-services industries within the Southern Cross University and The Tweed Hospital precincts.
- Maximise opportunities associated with the growth of South East Queensland.
- Promote economic diversification and business, industrial and aviation-industry employment growth by leveraging opportunities related to the Gold Coast Airport.
- Deliver new employment and business park opportunities at Kingscliff, Pottsville and Murwillumbah.
- Identify opportunities to expand nature-based, adventure and cultural tourism places and enhance visitor experiences associated with areas such as the Wollumbin, Mebbin, Mount Jerusalem and Nightcap national parks.

Housing

- Deliver housing in Kingscliff, Cobaki, Bilambil, Terranora, and Kings Forest, and explore additional Greenfield opportunities at Dunloe Park in Pottsville.
- Enhance housing diversity by increasing the number of homes in Tweed Heads, Kingscliff, Cobaki, Kings Forest and Dunloe Park.

In addition, the North Coast Regional Plan 2036 contains several directions and actions for implementation of sustainable development in the North Coast Region. Of relevance to the site and project are directions 11 and 13.

Direction 11 of the Plan is to 'Protect and enhance productive agricultural land'. A portion of the site is mapped as important farmland however, the plan also includes criteria for assessing the suitability of important farmland for non-agricultural land uses. The Important Farmland Interim Variation Criteria is identified as:

- Table 10: Important Farmland Interim Variation Criteria (Source: North Coast Regional Plan 2036) Important Farmland Interim Variation Criteria. Land may be suitable for uses other than farmland if:
- Agricultural capability - The land is isolated from other important farmland and is not capable of supporting sustainable agricultural production.
- Land use conflict - The land use does not increase the likelihood of conflict and does not impact on current or future agricultural activities in the locality.

- Infrastructure - The delivery of infrastructure (utilities, transport, open space, communications and stormwater) required to service the land is physically and economically feasible at no cost to State and Local Government.

Direction 13 Sustainably manage natural resources

- The region's other resources support the economy by providing the raw materials for major infrastructure projects, new housing, and industrial and agricultural businesses. It is important that these resources are not affected or sterilised by the encroachment of sensitive land uses, and that mining activities are undertaken sensitively to minimise negative impacts on the environment, significant agricultural land, neighbouring businesses and the community. Planning for these activities will help to avoid potential land use conflicts.
- Action 13.2: Plan for the ongoing productive use of lands with regionally significant construction material resources in locations with established infrastructure and resource accessibility.

3.4 Tweed Shire policies, plans and reports

Tweed Shire Council has undertaken a number of strategy, planning and consultation exercises and studies over recent years to establish preferred and intended land use outcomes. This includes direction setting on social outcomes such as social infrastructure and recreation opportunities. The documents relevant to TSP and this SIA are described below.

3.4.1 Local Strategic Planning Statement – 2020

The Local Strategic Planning Statement (2020) brings together the community vision and goals in the Community Strategic Plan 2017-2027 (see below) and aligns those with the vision and goals in the North Coast Regional Plan 2036. Thereby it allows Council to plan for a future Tweed to meet the community's expectations and achieve the Tweed's wider expected role within NSW.

In the words of Council, the projected population growth and corresponding need for development in the Tweed over the next 20 years is significant. Much of this growth is likely to be concentrated in the new urban release areas of Cobaki Lakes, Kings Forest and Dunloe Park.

These growth areas span Tweed's coastal range from north to south and have been in the planning for over two decades. This coastal concentration of growth adjacent to existing urban areas will augment the Tweed's already diverse urban communities, however it may lead to lower population growth and demand for development in some of the Tweed's rural areas.

Relevant to this SIA, the natural values and beauty of the North Coast environment, combined with year-long warm climate, is highly valued by its residents and is attractive to migrants seeking lifestyle change, particularly in their retirement phase of life. These attributes also sustain a thriving tourism and lifestyle economy.

The Statement explains the extent of rural land in the shire is 65% with 4% of urban use from existing and future, known areas.

Within the Statement Council also observes the importance of the SEQ and Gold Coast economies to future social and economic opportunities within the Tweed Shire. There is important interplay between the regions with 23% of workers travelling to work in Gold Coast and SEQ, with 17% of Tweed's workforce living on the Gold Coast/ SEQ.

From this Statement: In 2040, the Tweed's vibrant urban, coastal and rural communities will be recognised for adapting to the challenges of climate change and population growth in a way that protects and

enhances our internationally significant natural environment, maintains a highly desirable lifestyle, and supports a thriving local economy. This vision is underpinned by a suite of strategies.

In summary, the strategies most relevant to the TSP proposal and this SIA include:

- Facilitate cross border collaboration, transport integration and connectivity to deliver sustainable, planned economic growth.
- Protect landscape and scenery values
- Ensure productive agricultural land is protected and sustainably managed while creating innovative and diverse economic opportunities through compatible boutique industries, rural living and recreation.
- Ensure flexibility in land-use planning to capitalise on a broad base of industry and business that supports a diverse range of local employment.
- Guide a balanced interface between rural, urban and environmental land that minimises land-use conflict and protects agricultural productive capacity in a sustainable manner for current and future generations.
- Maintain separation between neighbouring villages and centres, avoid continuous ribbon of development along the coast.

3.4.2 Tweed Shire Community Strategic Plan 2017-2027

The Community Strategic Plan is the overarching, visionary document in Council's Integrated Planning and Reporting Framework, which is part of the Council's hierarchy of planning drawing upon the above Statement.

The plan translates the community's key priorities and aspirations into long-term strategic goals guiding the future direction of Tweed Shire. Environmental protection and stronger communities were leading concerns identified during community engagement to create the plan.

Council has a custodial role in developing the Plan, while realising its long-term strategic goals is a shared responsibility between Council, the community and other government and non-government entities.

The plan includes community aspirations and Council intentions following extensive community consultation. There is acknowledgement the region will grow and is under current growth pressure.

Of the policy positions and initiatives within the strategic plan, the following elements are most relevant in relation to the TSP proposal and this SIA:

1.1 Natural resource management

- Lead and engage the community to enhance awareness and improve sustainable management of the environment
- Provide for appropriate public access and use of natural areas

1.2 Asset protection

- Ensure adequate stormwater drainage infrastructure is provided with new development

1.4 Managing community growth

- Enable economic opportunities for productive and employment-generating land uses
- Plan for well-located and connected centres to meet the business, health and social needs of the community
- Protect and manage the Tweed's unique character and world heritage scenic landscapes
- Protect and enhance productive farmland

2.2 Engagement

- Communicate and engage with the community, government and business groups on important matters affecting the Tweed

3.1 People

- Protect public health and community safety
- Provide more opportunities for people in the Tweed to work

3.2 Places

- Provide places, spaces and facilities for the sporting, recreation, leisure and cultural pursuits of locals and visitors

3.3 Moving around

- Provide a safe, connected and efficient regional transport network
- Design, construct and maintain a safe and efficient local transport network.

3.4.3 Kingscliff locality plan (2017)

Tweed Shire Council undertook planning and consultation to inform the future land uses and services in the Kingscliff locality, particularly to sustainably manage population growth. The Kingscliff locality includes Cudgen and the majority of the TSP area of social influence.

The plan was placed on Public Exhibition and the published consultation findings have informed the baseline social values assessment within this report.

From the Kingscliff Locality Plan: "The study area also includes Cudgen Village given the proximity and strong historic relationship with Kingscliff the need to more holistically consider the broader locality context, particularly in relation to land-use, desired future character and traffic management considerations." (Page 8).

The very detailed plan provides guidance on all elements of sustainable community creation, including themes relevant to the TSP expansion proposal. These include:

- The rural character and landscape values in this locality
- Importance of farmland/ hinterland, rural views with respect to scenic amenity
- The future of the region should retain current network of villages
- Desire for the hinterland to retain working agricultural farms
- State significant farmland exists to the south of the site on the red soil Cudgen plateau
- Need for future development to be supported by ecological studies to drive protection of important environment values and rehabilitation opportunities
- Importance of construction to future economic opportunities and job creation
- The need to increase depth and diversity within the local economy
- Support for aquaculture (which is in vicinity of the TSP proposal, but not impacted)
- Recognition of historic sand mining in the district (and at the TSP locality)
- Increasing density needs to be supported by more 'green'/ open space and recreational infrastructure.

The Kingscliff Locality Plan identifies sand mining at the current location and also suggests there may be active and passive recreation and educational opportunities, with open space, at a nearby sand plant as a result of the created water bodies. (Page 100).

3.4.4 Tweed Open Space strategy (2018-2028)

The Tweed Open Space Strategy is aligned with the Tweed Shire Community Strategic Plan 2017-2027. The purpose of the strategy is explained within the introduction:

"The Open Space Strategy 2019-2029 sets the vision for the future of open space and provides the overarching framework and strategic direction for public open space planning in the Tweed Shire for the next 10 years. Whilst the strategy presents broad strategic directions for the Shire, it also includes specific actions relating to future works in parks and open spaces in local communities. This makes the Open Space Strategy both a strategic and an operational planning document. Implementation of the strategy will ensure our open spaces provide existing and future residents and visitors with diverse, dynamic and enjoyable places to live, work and play." (Introduction, p. 6)

This is an important strategy in the context of the possible recreational use of the property when the water bodies and surrounds are rehabilitated, and may be suitable as a local and regional recreational asset. (Although waterways are excluded from the strategy, this report was regarded as instructive of community preferences for more recreational infrastructure, particularly given the extent of Council consultation).

In relation to waterways the strategy makes the following observation: 'Rivers and creeks support biodiversity, water quality, transportation, recreation and/or visual amenity. Waterways provide for a wide range of recreation activities including fishing, boating, swimming, canoeing, kayaking, stand up paddle boarding, nature appreciation and wildlife observation'.

The strategy explains community access to open space and recreational opportunities has health and social benefits (p. 11).

The strategy describes Council's policy settings to progressively provide, enhance, maintain and sustain open space and recreational opportunities as the region grows.

3.4.5 Cudgen-Casuarina Open Space Strategy (2018-2028)

This is a district implementation plan to fulfil the Tweed Open Space Strategy. This sub-strategy outlines the current access to open space and parks. The strategy includes a range of requests and aspirations for more recreational infrastructure and opportunities, along with upgrades and maintenance.

Extracts from the local strategy -

"The area offers a diverse network of open spaces providing a range of outdoor recreation and social opportunities for residents and visitors. Activities include child's play, walking, cycling, sport, picnicking, nature appreciation and water-based activities, such as surfing, kite surfing, canoeing, kayaking and fishing."

"In Cudgen, there is one neighbourhood park. Access to the park is poor and the facilities are older. There is an oversupply of district parks (Laceflower Parade Park and Casuarina Central Park), but the existing district parks lack facilities for youth. Residents of Cudgen are 3.5km from a district park (Faulks Park, Kingscliff) just outside the recommended 3km."

3.4.6 Rural Land Strategy 2020-2036

The Rural Land Strategy seeks to balance the sometimes competing desires of the rural community for security in operation of legitimate agricultural enterprises, protect the environment and important extractive resources, provide income generating opportunities without the need to work off farm, and provide greater housing opportunities without destroying the character of the Tweed. (Page 8).

A part of the strategy is to protect agricultural land and support its productive use. The intent of the strategy is to ensure existing and future agricultural production on rural land is facilitated and encouraged through the planning framework, and land capable of agricultural use is protected.

The strategy seeks to protect the scenic landscape and development does not adversely impact the amenity or desired future character of the locality.

A principle of the strategy is extractive industries are protected and land use conflict minimised. The policy intent is for extractive industry sites and operations to be protected by appropriate zoning where necessary to service local resource needs.

3.4.7 Tweed Sustainable Agriculture Strategy (2017)

Through the Tweed Sustainable Agriculture Strategy and more broadly, Tweed Shire Council is seeking to improve the viability and environmental capacity of the Tweed's farmland. The strategy identifies changes and threats to the viability and sustainability of farming within the region. This strategy explains prime farmlands should be protected to provide a sustainable agricultural sector. Following is one of four (4) key outcomes:

- Prime agricultural land is preserved for sustainable primary production and land-use conflicts are avoided or managed.

3.4.8 Tweed Rural Villages Strategy (2016)

The Rural Villages Strategy provides a vision for the rural settlements of the Tweed Shire, with a set of strategic goals, actions and activities to deliver this vision.

Cudgen is not nominated as a focus village within this strategy. However the TSP proposal would not interfere with the premise of the strategy as it may pertain Cudgen, which is to ensure Tweed's villages remain viable and retain their character.

3.4.9 Tweed Shire economic development strategy (2014)

The Tweed Shire Economic Development Strategy (2014) identifies a variety of ways the Tweed can grow its economy, particularly to optimise employment participation and reduce economic disadvantage. Extractive industries aren't referenced within the strategy; however the strategy discusses the need to diversify the economy and is more focused on new economic opportunities.

3.4.10 Community Engagement and Participation Plan (2019-2024)

Based on the consultation requirements to prepare this SIA, reference was made to Council's community engagement and participation plan.

While this plan expresses Council's standards with respect to inclusive and transparent engagement, the principles are applied to this SIA for consistency. This is also because projects of State Significance within the Council area are regarded as projects the community should be aware of.

Council also provide a threshold of engagement relative to the potential impact of a policy or proposal, within a participation matrix (page 14). Based on this matrix, Hanson should 'inform' and 'consult' about a project of this nature which has relatively low impacts (which was undertaken through this SIA).

In summary, the community engagement key principles include:

- Providing opportunity for people to be involved in projects and decisions which may impact them
- Providing information in a timely manner, and in plain English
- Allowing opportunity for engagement on the future direction of land use planning and development decisions
- Stakeholder profiles should be prepared to understand the relevant segments of the community to be engaged
- Providing opportunities for ongoing partnerships and participation

4.0 SIA methodology

This section describes the methodology for preparing the SIA and how findings were determined.

4.1 Understanding of the social context

To understand the social context with reference to the proposal, consultation, site investigations and desktop research were undertaken across late 2020 and early 2021.

As TSP already operates from a site immediately neighbouring the proposed expansion location, this provides an opportunity to assess change and impacts from an existing baseline of operations. This included discussions with the current Hanson TSP manager and the existing Community Consultative Committee.

The following methodology was applied to prepare the TSP SIA:

- Describing the project scope, scale and key activities
- Establishing a project specific area of social influence
- Local stakeholder engagement
- Desktop research
- Establishing the baseline social values and conditions (from c and d).
- Determining likely social impacts and benefits, with reference to baseline conditions, along with draft mitigations.

4.2 The SIA study location - Area of social influence

To ensure the SIA was sufficiently inclusive, the project's 'area of social influence' (ASI) was determined. The ASI explains the extent of change, impacts and benefits arising from the proposed expansion of the TSP. This methodology and approach is consistent with the NSW Government SIA guideline.

The TSP 'area of social influence' (ASI) has been determined by assessing community interface with the project and operations, and the likelihood of potential offsite changes, impacts and benefits. The ways the community may interface or experience expanded operations can include:

- Traffic interface
- Potential environmental 'nuisance' e.g. noise and dust
- Potential environmental nuisance at night, when operating 24/7
- General proximity - visual contact with the project site
- Economic development/ employment opportunities
- Agribusiness owners
- Residents and groups who may have views on the proposed end uses of the water bodies created through extraction.

Based on the above parameters and consultation, the ASI is generally bound and confined by:

- Pacific Motorway to the west
- Cudgen Road to the south and inclusive of the Cudgen community
- Tweed Coast Road to the east
- Chinderah, south of the Pacific Motorway.

This area is inclusive of the future project footprint, the Cudgen community and near residents and businesses.

The ASI also includes pockets of residential addresses at Terranora to the north. Residents in these locations will likely be able to see the new water bodies in future years because of their elevated vantage points. This is deemed to be a potential social impact.

The area of social influence was also confirmed by a number of field visits and discussions with local stakeholders. The ASI is illustrated in the annotated map below.

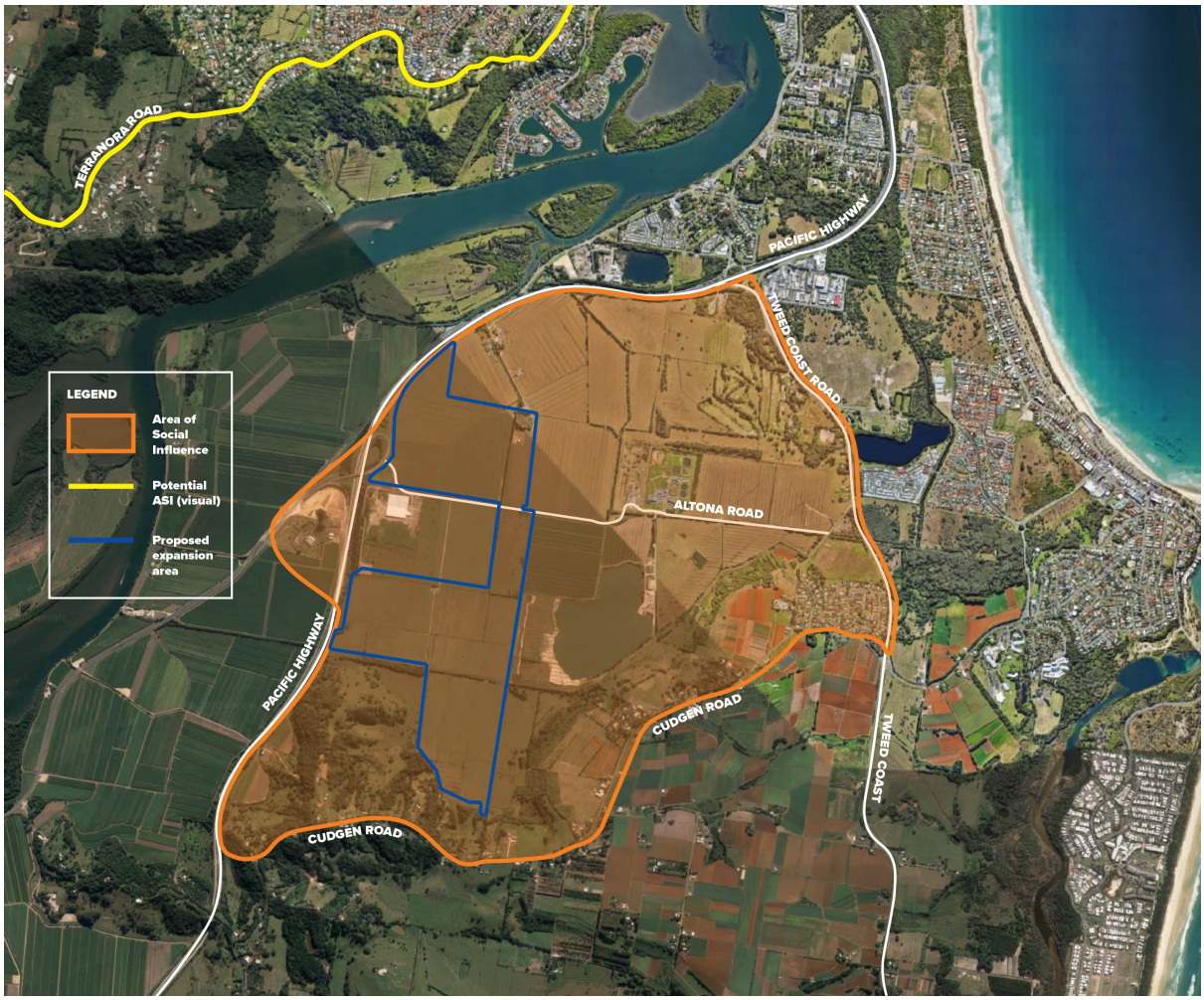


Figure 3: TSP area of social influence

4.3 Stakeholder engagement

Local stakeholder engagement was undertaken to inform this SIA and confirm the extent of the nominated 'area of social influence'.

Stakeholders who were likely to have an interest in the proposal and/or were identified as being potentially impacted by the proposal, were directly contacted by letter. The correspondence included plain English information about the proposal, along with an invitation to contact the project team by phone and email to discuss Hanson's proposal.

The ASI was identified and stakeholders were nominated on a 'conservative' or 'precautionary' basis. As above, stakeholders were identified based on their likely interest or potential impacts or benefits:

- Proximity to the project site (local landholders, residents and businesses) who may be subject to future environmental 'nuisance' e.g. noise and dust.
- Residents who may have a vantage point whereby there may be a visual connection, where they can see the project site, operations and emergence of water bodies even at a long distance.
- Stakeholders who have community leadership roles such as elected representatives.
- People with interests in economic development/ employment opportunities.
- Residents and groups who may have views on the proposed end uses of waterbodies.
- Stakeholders and the ASI were also considered on the basis of the operating life of the expanded sand plant and potential end uses.

Before undertaking engagement, a stakeholder profile was prepared based on known or likely interest and potential impacts. This stakeholder list included companies, agencies and people within and outside the ASI to maximise contribution.

As this proposal is an expansion of an existing use and Hanson has been operating the plant for ~15 years, the proponent has a good understanding of the stakeholder environment.

Stakeholders who were contacted included:

- Tweed Shire Council
- Immediate residents and businesses
- Local agribusinesses
- Cudgen residents
- Cudgen Public School
- Traditional owners
- Business associations
- Existing TSP Community Consultative Committee.

Communications and response

The project team distributed over 400 letters within the 'area of social impact' and sent emails to identified lead stakeholders. In response to this proactive communication, the project team received return contact and held discussions with 12 local stakeholders. In total the project held 2 meetings, 5 phone conversations, received 5 surveys and 4 emails.

4.3.1 Engagement and communication methodologies

The project team offered discussions in a variety of formats suited to individual stakeholder preferences. This included:

- Small group discussions (face to face and online)
- Structured 'interviews' – in person or by telephone
- Individual meetings
- Phone calls – discussions and information exchange
- Email information exchange.

4.3.1.1 Role of structured surveys

Stakeholders were also encouraged to complete a survey to provide anecdotal data to inform the SIA and project studies. This survey was also the basis of structured interviews and discussions. This survey can be referenced at Attachment 2.

4.4 Role of specialist EIS studies and other reports

Specialist studies were completed by the EIS team to meet SEARs requirements with reference to the project scope. The detail within these reports helped to inform potential social issues and benefits, along with mitigations where needed.

Relevant specialist studies for completion of this SIA included:

- Air quality
- Noise
- Traffic
- Cultural Heritage
- Visual impact
- Rehabilitation
- Economic benefit
- Flooding
- Groundwater
- Acid Sulphate Soils.

These studies included mitigation options which have been included as relevant in the social impact assessment at the end of this report.

An example of a mitigation is the proposed internal haul road which will divert heavy traffic away from local roads and townships. In addition to the specialist studies informing this SIA, an early appreciation of potential social impacts informed the project scope which was prepared in 2019.

4.5 Agency feedback to project scope (late 2019)

In 2019, the NSW Government received feedback from Government agencies and Tweed Shire Council in relation to the TSP project scope. This influenced inclusions within the SEARs about matters which would need to be studied within the EIS. This also informed understanding of potential social impacts and benefits within this SIA. For example, this included considerations about: traffic, environmental impacts, and visual amenity.

4.6 Baseline social conditions

Current social values and conditions for the Cudgen locality were assessed as a baseline to assess the extent of possible impacts and benefits associated with the proposed TSP expansion.

4.6.1 Social conditions structure

The social values and conditions were aligned with the NSW Government SIA guideline: https://www.planning.nsw.gov.au/Policy-and-Legislation/Under-review-and-new-Policy-and-Legislation/Social-Impact-Assessment

As per the guideline, social impacts were assessed as per the following potential changes:

- Way of life, including:
  - how people live, for example, how they move around, access to adequate housing
  - how people work, for example, access to adequate employment, working conditions and/or practices
  - how people play, for example, access to recreation activities
  - how people interact with one another on a daily basis.
- Community, including its composition, cohesion, character, how it functions and sense of place.
- Access to and use of infrastructure, services and facilities, whether provided by local, state, or federal governments, or by for-profit or not-for-profit organisations or volunteer groups.
- Culture, including shared beliefs, customs, values and stories, and connections to land, places, and buildings (including Aboriginal culture and connection to country).
- Health and wellbeing, including physical and mental health.
- Surroundings, 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.
- Personal and property rights, including whether their economic livelihoods are affected, and whether they experience personal disadvantage or have their civil liberties affected.
- Decision-making systems, particularly the extent to which they can have a say in decisions affecting their lives, and have access to complaint, remedy and grievance mechanisms.
- Fears and aspirations related to one or a combination of the above, or about the future of their community.

4.6.2 Baseline data sources

A diversity of qualitative and quantitative data was sourced, with an emphasis on Cudgen and near surrounds to ensure reliability in preference to broader, regional data sets.

An understanding of the social conditions has been drawn from the following sources:

Tweed Shire Council planning and consultation documentation: Tweed Shire Council strategy and planning documentation provided rich anecdotal information about the values and aspirations of the locality. These documents are particularly useful as they are built upon local stakeholder engagement. Key documents, considered as primary information, included:

- Tweed Shire Community Strategic Plan 2017-2027 (community aspirations and Council intentions expressed following extensive community consultation)
- Kingscliff Locality Plan consultation (including Cudgen) – community consultation responses, TSC, (2018)

- Tweed Open space strategy (2019-2029) and Cudgen-Casuarina open space planning (2019-2029) consultation, TSC (2019)
- Rural Land Strategy 2020-2036 (stakeholder engagement reporting)
- Coastal Management Program for the Tweed River Estuary: Recreational Use Study, Tweed Shire Council (Hydrosphere Consulting) (2017)
- Tweed Sustainable Agriculture Strategy (2017)
- Tweed Rural Villages Strategy (2016)
- Tweed Shire economic development strategy (2014).

Media and social media: Media coverage including articles, editorial information and advertising was a useful secondary source of qualitative and anecdotal data. This was combined with review of public social media accounts which also revealed common interests, issues and expectations. Sources included:

- Various media reports and social media responses in relation to key shire issues and interests with a focus on the Tweed Daily News (2019-2020 sample)
- Social media (e.g. Tweed Shire Council Facebook account) (2020) (This group of participants is broader than the target area, however this research provides broad overlay of values and tends to reinforce some of the outcomes of Council's consultation).

Community and stakeholder consultation: As explained earlier, baseline social values were also informed through local stakeholder engagement. The project team sent project information and an invitation to meet and discuss the project with stakeholders within and external to the 'area of social influence'.

There was relatively low community uptake of the opportunity to discuss the project, however the discussions held were highly informative.

In response to the outbound communications, the project held 2 meetings, 5 phone conversations, received 5 surveys and 4 emails. (When we asked why the response was low, stakeholders explained that the plant is low profile, with no impacts or issues).

While these numbers are relatively low, stakeholders were long-term residents, well connected and could offer what they considered were widely held beliefs. Stakeholders included a leading agribusiness advisor, the local principal at the Cudgen Public School, and the school P&C president.

Where practical, discussions were structured within survey fields – see Attachment 2.

4.6.3 Reliability of data and findings

Most of the information relied upon is qualitative, which is common for social impact assessments. As this data is anecdotal and can be subjective, there is some degree of risk and error.

To ensure reliability, a number of social science methodologies were applied. The key technique was to assess baseline values from more than one source to 'triangulate' assessment and findings. Techniques included:

- Multiple data sources, primarily from Council reports involving substantial community consultation
- Highly consistent subject themes from multiple sources and multiple locations, through varied channels, over a number of weeks
- Local stakeholder engagement including a survey structured around lifestyle and perceptions of impact/ benefit etc.

- Direct contact and discussions with neighbours (although low eventual response/ but rich and informed community responses)
- Application of 'informal' data such as community comment on media stories and social media posts (to capture perspectives from people who may not usually participate in structured engagement)
- Large data set (reducing bias based on under-representation of key audiences)
- Limited disparity of data received (very limited outlying or unique comments)
- Highly aware and informed audience, and high engagement with proposal elements
- All data assembled by one author to avoid errors associated with data handling and sorting
- Application of NSW Government SIA guideline to ensure best practice.

In the view of the author, there is high reliability of findings based on the combination of this suite of techniques and consistency of findings.

4.6.4 Identification of key social values

Social values were identified based on the frequency of lead topics raised by the community, which provided trends.

These were not weighted, as the data set isn't uniform and isn't generated through common methodologies. The information gathered described key interests, expectations and aspirations of locals for the Cudgen area and surrounds.

This provided a rich qualitative data set, combined with stakeholder inputs. This provides a detailed and clear indication of local social values, which is described further in this SIA.

Cudgen and regional information – The desktop research draws on Cudgen values as a first preference. Information also includes inputs from neighbouring Kingscliff, Casuarina and nearby areas, particularly when drawing from broader data sets, such as ABS and Council sources.

Purpose of the baseline report - Current social conditions have been appraised as a baseline to assess the extent of possible impacts and benefits associated with the proposed expansion of the Tweed Sand Plant.

4.6.5 Cudgen and surrounds social values - high-level snapshot

The detailed description of social conditions and values are listed at section 5.6.

At a high level, the following are the key social values for reference when assessing the potential changes, issues and opportunities associated with expanded TSP scale and operations:

- Retaining a relaxed village feel (not heavily urbanised like some coastal regions and the Gold Coast)
- Protection and enhancement of environment
- Maintaining strong sense of community and personal safety
- Aspiration for more and enhanced recreational opportunities
- Ongoing, sustainable agricultural character and production, and protection of agricultural land.

5.0 Site and operational context

The following section provides an overview of the operational context and baseline social values.

5.1 Project area of social influence

The project area of social influence was determined through assessment of the proposed development footprint and operational activity. The area of social influence is described in section 4.2.

5.2 Local demography

Following is the local demographic composition for the Tweed mid-coast-Casuarina, which includes Cudgen. The village of Cudgen which is close to the TSP site, has a population of around 1,000 people, therefore approximately a quarter of the ~ 4,000 population base (2016). This information has been sourced from the Tweed Shire Council website which draws from ABS data.

5.2.1 Population

Table 1 – Local population

Year	Population
2016	3,923
2026	6,521
2036	11,631

This profile represents significant growth and change for this part of the Tweed Shire; however the TSP project is not on land zoned for residential development.

5.2.2 Population density

- Mid coast – Casuarina: 1.3 persons/ ha
- Tweed Shire: 0.74 persons/ ha

5.2.3 Age profile and ageing

Table 2- Local age profile

	0 -11	12-24	25-34	35-49	50-59	60+
2016	19.3	14.4	11.4	24.8	13.7	16.4
2026	18.8	16.8	9.9	22.2	14.3	17.9

5.2.4 Indigenous representation (2016)

- Mid coast – Casuarina: 2.9%
- Tweed Shire: 4.0%

5.2.5 Housing

Table 3 – Local dwelling numbers

Year	Dwelling numbers
2016	1,661
2026	2,778
2036	5,055

5.2.6 Household types – 2016-2036

Table 4 – Household types

	Couples with Children	Couples without Children	Lone person households
2016	38.8	25.2	13.4
2026	33.5	32.8	17.5

5.2.7 Dwelling summary (2016)

Table 5 – Dwellings by type

Dwelling type	
Separate houses	
Mid coast – Casuarina 65.5%	Tweed shire 61.7%
Medium density	
Mid coast – Casuarina 26.8%	Tweed Shire 24.2%
High density	
Mid coast – Casuarina 6.8%	Tweed Shire 7.8%

5.3 Economy

5.3.1 Needs assistance due to age or disability (2016)

- Mid coast – Casuarina 3.1%
- Tweed Shire 7.1%

5.3.2 Income (2016) Median household income

- Mid coast – Casuarina $1773
- Tweed Shire $1056

5.3.3 High/low income ratios

Table 6 – Local income profile

	High income	Low income
Mid coast – Casuarina	26.6%	9.8%
Tweed Shire	11.4%	24%

5.3.4 SEIFA Index of Disadvantage

The Socio-Economic Indexes for Areas (SEIFA) combines a number of data sets to determine relative levels of social and economic advantage and disadvantage. A score of over 1,000 suggests less disadvantage (statistically) and a score of under 1,000 suggests greater disadvantage.

The following SEIFA outcomes identify that the Tweed Shire on average has slightly more disadvantage, whereas the mid-coast-Casuarina (including the ASI/ Cudgen area) has slightly less disadvantage.

Table 7 – SEIFA profile

Location	SEIFA index of disadvantage
Mid coast – Casuarina	1068
Tweed Shire	973

5.3.5 Unemployment

The unemployment rate was most recently recorded at 3.8% in March 2020, compared to the state average of 4.6%. A proportion of employed people travel to the nearby Gold Coast for work, including within the construction industry. This is suggested to be around 30% (Tweed Shire Council source).

The social profile of the locality reveals there will be further growth, which this proposal is unlikely to impact. There are no evident impacts on the social profile based on the nature or scale of sand extraction operations proposed.

5.4 Existing social infrastructure

Existing social infrastructure was identified to assess any potential impacts and benefits upon these elements, which the community value, access and reply upon. A broad definition of social infrastructure was applied.

Important local social infrastructure was identified through stakeholder engagement and desktop review. The following list includes social infrastructure most relied upon by Cudgen locals and is most immediate to the TSP ASI:

- Cudgen Public School
- Cudgen Oval
- Alan McIntosh Park
- Sporting and recreational infrastructure
- Public transport service – 603 bus service and Cudgen bus stops
- Sustainable Living Centre, Altona Road
- Kingscliff TAFE
- Kingscliff High School.

The location of key social infrastructure is illustrated on the map following:

Figure 4 – Key social infrastructure: Cudgen and environs

5.5 Stakeholder engagement outcomes

The project team distributed over 400 letters within the 'area of social impact' and sent emails to identified lead stakeholders. In response to this proactive communication, the project team received return contact and held discussions with 12 local stakeholders.

5.5.1 Survey outcomes

A survey was distributed to local stakeholders who expressed interest in providing feedback about the proposal. The survey was completed by 5 local residents. Most of these stakeholders were long term residents with knowledge of TSP operations. The feedback received helped to reinforce the social baseline. The key feedback received includes:

- They value the beauty and quality of life
- TSP is operated professionally, and there are no likely impacts from the project
- Support change of scope to take trucks off local roads/ they support projects which will improve traffic flow and safety
- Recognise sand is crucial for cement and everyone has need for cement
- Support projects which will generate employment, and locals should receive preference during future recruitment.

5.6 Baseline social values

The following baseline assessment is structured in accordance with the social themes within the NSW SIA guideline for extractive industry. The most common terms identified through desktop research and consultation have been included in the following tables. Based on the inter-connectivity of social elements, there is overlap and associations across the values.

Note – Commentary about typical and common community social values follows. These are qualitative characteristics and generalisations to establish a narrative to discuss change and potential impacts and opportunities associated with this proposal.

5.6.1 Way of life

The wonderful Tweed Shire climate, scenery and lifestyle is heralded in many documents and through consultation. Local residents value and enjoy the peaceful, relaxed village and rural lifestyle. Locals want the natural, generally rural feel of Cudgen protected and would prefer less urban development. They also want business and employment opportunities, including continuity of agribusiness in the locality. The business and industrial park at Chinderah is an important local employment base for the locality. Residents value the opportunity to access local parks and the nearby beaches, without living in the busier coastal areas.

The detailed findings about Cudgen and surrounds 'way of life' are listed in the following table.

Table 8 – Way of life

Social value	Cudgen and surrounds values, interests and expectations
Way of life	• Relaxed, unhurried, "laid-back" lifestyle • Natural and rural feel, with connections to nature • Seeking to maintain village and rural feel • Ensure scale of development is appropriate to the location • Keep uncrowded and not over-developed (like Gold Coast) • Benefit from the opportunities of being near to South East Queensland growth, while maintaining village feel/ atmosphere/ identity • Value near and close access to beach/ coast/ surf • Support for local business and employment opportunities, including local light industry precinct at Chinderah • Enjoyment of climate.

5.6.2 Community

Cudgen locals generally believe they are part of a close community and village, which has a friendly country feel. They value the close bonds with neighbours and friends, and the local school and clubs are important community nodes for local residents. There is close identity with local sporting clubs and pride in their performance. There are stronger employment bases on the near coast and SEQ, and many residents commute to work. Road safety is a priority.

The detailed findings about Cudgen and surrounds 'community' are listed in the following table.

Table 9 - Community

Social value	Cudgen and surrounds values, interests and expectations
Community	• Value positive social connections and friendly, country feel • Availability and access to social infrastructure, e.g. clubs • Value maintenance and condition of community infrastructure, e.g. parks • Value responsible pet ownership • Pride in local sports clubs and performance.

5.6.3 Access to and use of infrastructure, services, and facilities

The small village of Cudgen and surrounds has infrastructure, services and facilities which are important to the Cudgen and ASI lifestyle. The detailed findings about Cudgen and surrounds 'community' are listed in the following table.

Table 10 - Access to and use of infrastructure, services, and facilities

Social value	Cudgen and surrounds values, interests and expectations
Access to and use of infrastructure, services, and facilities	• Safe access to use and use of roads • Availability and access to social infrastructure, e.g. clubs and recreational paths and open space • Seeking adequate local parking • Seeking opportunity for more water-based recreation, e.g. canoeing, swimming and fishing • Value maintenance and condition of community infrastructure, e.g. parks • Require adequate local parking • Value near and close access to beach/ coast/ surf • Pride in local sports clubs and performance.

5.6.4 Culture

There is recognition and respect expressed for traditional owner values and their long connection with lands across the Tweed Shire. Cudgen residents also have a close connection with land and the natural/ rural values. Residents express the importance of sustainability and environmental protection. Residents expect agricultural production will be an important part of the community fabric, with an emerging artisan and food culture emerging in the district.

The detailed findings about Cudgen and surrounds 'culture' are listed in the following table.

Table 11 - Culture

Social value	Cudgen and surrounds values, interests and expectations
Culture	• Recognition of Aboriginal heritage and values, and long association with the land • Protecting productive farming lands/ supporting food production • Value emerging artisan and organic food culture • Leave positive environmental legacy.

5.6.5 Health and wellbeing

Living in a more rural setting, local residents value the associated health and wellbeing opportunities with clean air and a more natural environment. Residents value recreational opportunities, with a mix of residents preferring more self-directed recreational activities (such as walking) compared to organised sport. However organised team sport is still important to many people.

Residents explain the reason they live in this part of the Tweed Shire is because of the climate, scenery and access to nature-based recreational opportunities, including the nearby beach and coastal trails. The results of consultation demonstrate residents are seeking more recreational opportunities including water based recreation and walking trails. Road safety for commuters, cyclists and pedestrians is an important value. For local residents, health and wellbeing also means reasonable protection from fire and floods.

The detailed findings about Cudgen and surrounds 'health and wellbeing' are listed in the following table.

Table 12 – Health and wellbeing

Social value	Cudgen and surrounds values, interests and expectations
Health and wellbeing	• Access to recreational infrastructure to support healthy and active lifestyles • Able to enjoy great climate through outdoors and recreation • Value a variety of recreational and sport options and facilities • Protection from flooding and fire • Good road access, with road safety • Pedestrian and cyclist safety • Seeking opportunity for more water-based recreation, e.g. canoeing, swimming and fishing.

5.6.6 Surroundings

The Cudgen community value their surroundings, with a natural and rural aspect and lifestyle. They value their climate, clean air and opportunity to live in a more natural environment compared to more urbanised areas. Residents explain the reason they live in this part of the Tweed Shire is because of the climate, scenery and natural amenity. Residents feel a close connection to nature and value environmental protection and enhancement.

The detailed findings about Cudgen and surrounds 'surroundings' are listed in the following table. (There is overlap with other social values.)

Table 13 - Surroundings

Social value	Cudgen and surrounds values, interests and expectations
Surroundings	• Able to enjoy great climate through outdoors and recreation • Access to recreation to support healthy and active lifestyles • Seeking more trails across the shire, especially as a tourism drawcard • Preference for unstructured recreation and activity, rather than organised sport • Support for nature based recreation (land and water) • Would like to increase supply of open space (passive and active) • Protect natural scenery and amenity • Maintain environmental protection, including pest management • Protect productive farming lands/ supporting food production • Value emerging artisan and organic food culture • Ensure good water quality within local waterways • Value close access to services and beach • Recognition of traditional owners connection with land.

5.6.7 Personal and property rights

Residents value living in a peaceful, friendly locality. They are protective of their property values and lifestyle. There is appreciation among the community that the region will continue to experience population growth pressure. The findings about Cudgen and surrounds 'personal and property rights' are listed in the following table.

Table 14 – Personal and property rights

Social value	Cudgen and surrounds values, interests and expectations
Personal and property rights	• Maintain and value personal safety • Maintain security over property • Reduce, minimise crime • Maintain property values.

5.6.8 Decision-making systems

Local residents expect to be informed and involved in decisions which may impact them, particularly land use strategy, re-zoning and development proposals. They value inclusive and consultative decision making, and many residents contribute to Council consultation exercises. Residents also like to have their say through informal, less structured ways, which is evident through social media.

The key finding about Cudgen and surrounds 'decision making systems' is listed in the following table.

Table 15 – Decision making systems

Social value	Cudgen and surrounds values, interests and expectations
Decision-making systems	• Opportunity to make comment through engagement and consultation • Ability to comment on issues and interests through social media and discussions.

5.6.9 Fears and aspirations

Residents within Cudgen and surrounds are concerned about greater development and/or over-development to the extent it changes the character of the region and impacts lifestyle. There is pressure on school enrolments through increasing parent applications. There is regular reference to more intensively developed and busier places such as near coastal areas and the Gold Coast. There is some concern development within the floodplain may exacerbate flooding risks.

Some residents express aspiration for more self-sufficient and sustainable living. As above, residents regularly explain they want the rural and village feel to be protected, along with natural values and scenery. Residents want land protected to ensure there is an active and viable agricultural sector.

The key findings about Cudgen and surrounds 'fears and aspirations' are listed in the following table.

Table 16 – Fears and aspirations

Social value	Cudgen and surrounds values, interests and expectations
Fears and aspirations	• Managing and containing density/ careful growth management/ low building heights • Protecting agricultural land • Interest in more sustainable living including recycling • Maintain natural beauty.

5.7 Site history - overview

The locality is the traditional homelands of the Bundjalung Aboriginal Nation who are thought to have been present within the region for around 10,000 years.

Since colonisation, the floodplain was cleared for agriculture and grazing. Sugar cane farming was the most intensive agricultural use at the project site, and this ceased over 10 years ago. The majority of the subject site remains cleared and there is low intensity cattle grazing on some of the lots.

Sand extraction has been undertaken at the current site since 1983, with Hanson taking over operation of the site in 2007.

Across the current and proposed expanded area, the site is used for 'Extractive Industry', livestock grazing and some tea tree cultivation.

5.8 Current TSP operations, Altona Road, Cudgen

The Tweed Sand Plant is located on Altona Road, Cudgen. The applicant's current site has a total area of approximately 77ha, of which 46ha is an existing approved extraction area.

At this location Hanson undertakes sand extraction operations via a pontoon-mounted dredge. Material is processed on-site to produce fine, washed sand, predominantly for offsite concrete manufacture. At the site, sand is stockpiled and loaded via a front-end loader into heavy vehicles for transportation to market.

Loaded trucks pass across the site weighbridge (logging product weight and truck departure date/time). The trucks follow a standard haul route along Altona Road, Cudgen onto Crescent Street, then Tweed Coast Road to proceed either northbound or southbound on the Pacific Motorway.

5.8.1 Current TSP operations – community outcomes

Based on the location of the plant and type of operations (slow dredging), the current TSP operations appear to operate with low visibility, and low community awareness and concern. Complaints are rare (with none recorded since 2018), and the TSP Community Consultative Committee is generally satisfied with management and operational standards.

Communication and engagement with local stakeholders revealed relatively low interest and low concern about the current scale of operations. Hanson and others explain there is some concern expressed about truck movements and local road safety.

Based on the nature of operations there is also risk of environmental 'nuisance' such as dust (from stockpiles). However there is active dust suppression through sprinklers and stakeholders are distant from the plant's sand stockpile.

There may be some noise nuisance from vehicle movements and dredge pumping for immediate landowners/ residents. Currently, there are slight noise exceedances to two immediate receivers, with these landowners expressing consent to the slight, occasional exceedances. To reduce operational noise, it is possible the current dredge could be replaced in future years.

5.9 Proposed expansion

As explained and defined within the project scope (TSP project scope), Hanson has approvals to extract sand from a 46ha site, which has limited remaining life. To meet expected market demand for high grade fine sand, approval is being sought to expand sand extraction at the subject site.

Approval is sought to expand the sand extraction area to 236ha. This would allow extraction of up to 30-35 million tonnes, with a maximum of 950,000 tonnes per annum over a 30 year timeframe.

The (sand) wash plant is planned to be relocated to a more central location on the expanded site when needed. This will move this activity away from Cudgen Road where the majority of near neighbours are located.

Under current approvals, the existing access route via Altona Road, Crescent Street and Tweed Coast Road is utilised to transport the sand product to market. To remove heavy vehicles from local roads, the project scope includes the construction of a new sealed internal haul road and connection to the Tweed Valley Way south bound offramp.

Approval is also sought for 24/7 operations to meet future operational and market demand.

As sand is extracted, the fields would be gradually transformed into water bodies over the life of the project, with progressive rehabilitation undertaken to stabilise and revegetate the banks of the new lakes.

5.9.1 Ownership following the end of resource extraction operations

As sand is extracted, a water body is gradually created. Following the removal of sand, each area will be progressively rehabilitated, with regular water quality monitoring undertaken.

On completion of sand extraction around 30 years from the time of new approvals, Hanson will retain ownership and management of the site. Any proposed subsequent use of the site would be decided via the appropriate consultative, application and regulation processes in place at that time.

5.9.1.1.Potential future community use of site following end of resource extraction operations

While not determined at this time, there is potential for community access and use of the site post resource extraction. Under Hanson ownership, rehabilitation would be progressive and the following outcomes would be sought at the end of the project, and thereafter:

- A self-sustaining, water body with stable acceptable water quality (preferably for 'primary contact')
- A diverse ecosystem of native flora designed to provide habitat for native fauna
- A visually pleasing site with water bodies and vegetation designed to achieve a 'natural' appearance
- Low maintenance infrastructure to enhance the recreational appeal of the site
- The incorporation of any necessary infrastructure to ensure public safety.

5.10 Scale of new project and operations – potential impacts

The proposed project scope and operations will create changes, with potential and likely social impacts, along with opportunities and benefits resulting from rehabilitated land and water bodies. These include:

Visual amenity: The scale and intensity of resource extraction is proposed to increase, and the extraction footprint would expand. Following extraction, permanent water bodies will gradually be created, with rehabilitation to create stable banks with vegetation re-introduced to screen the location and also stabilise the banks. This will change the amenity at this location from cleared fields to a water body, which will be a noticeable change, but not confer a significant social impact. The type and extent of vegetation introduced will also appear more as a natural environment than a manufactured lake, over time.

Noise: As TSP will gradually develop and operate closer to properties, there is likely to be some minor noise nuisance for the duration of the dredge-based extraction in those locations. Operations are also proposed to be 24/7 and would include dredge operations and truck haulage.

Air quality: As the extraction process involves consolidation of product, stockpiles are created. While sand has low dust content, there is slight potential for offsite dust-related impacts. (While these may be regarded as environmental impacts, there is also a social aspect regarding 'way of life' etc).

Traffic: Whilst road users may notice more heavy vehicle movements at the Tweed Valley Way interchange onto the Pacific Motorway, this will be offset by the removal of all heavy vehicle traffic associated with TSP from the local road network currently utilised.

Lifestyle and livelihood: As the land isn't intensively used there are no impacts to livelihoods and the offsite impacts appear to be relatively minor and would not impact lifestyle and livelihoods.

While these potential impacts are likely and should be mitigated and monitored, there was very limited concern expressed during the communications and stakeholder engagement program across early 2021.

5.11 Calculated economic benefit

In consideration of potential social impacts (negative and positive), RPS (economic assessment consultant) have identified the following economic benefit. The economic assessment shows that during the construction/establishment phase of the expansion, the project will generate:

- $21.6m in output
- $5.7m in Income
- 43 jobs and $9.4m in Gross Value Added (GVA) for NSW.

Operational activity (post expansion at full production capacity) will generate:

- $6.3m in economic output
- $1.7m in incomes
- 18 jobs and $3.0m in GVA annually for NSW.

The Tweed LGA will capture the majority of the benefits to the NSW economy, accounting for 92.4% of construction phase GVA and 89.9% of operational phase GVA.

(Reference: Tweed Sand Plant Economic Assessment, RPS, 2021).

6.0 Assessment of social impacts

This section describes the assessed social impacts and opportunities associated with the proposed TSP expansion.

6.1 Potential changes to baseline social values and impact

The project may take at least 30 years to fully realise, with water bodies gradually created and progressively changing the current rural appearance.

While the project isn't intensive, there will be regular operations with associated noise and heavy vehicle movements. A key change is the proposed move to 24/7 operations.

At the end of the project, recreational infrastructure may be available for community use which can confer new public amenity and benefits.

Impacts are assessed over the development and operational phases as these are effectively concurrent. The key exception is the development of the internal haulage route which is a specific construction activity at the beginning of the project.

6.2 Nature of social change

In considering impacts that may occur through change, the assessment appreciated the variables as explained within the NSW Government guideline.

Social impacts vary in their nature, and can be:

- positive (for example, increased local and regional job opportunities) or negative (for example, increased prevalence of certain physical health conditions)
- tangible (for example, availability of affordable housing) or intangible (for example, social cohesion)
- direct (that is, caused by the project), indirect (that is, caused by a change that is caused by the project), or cumulative
- directly quantifiable, indirectly or partly quantifiable (including by using proxy indicators), or only able to be described and assessed in qualitative terms
- experienced differently:
    - by different people and groups within a community (for example, an increase in the cost of housing may be positive for homeowners wanting to rent out or sell their properties, but negative for individuals and families wanting to enter the same market)
    - by different communities (for example, people neighbouring a project may experience most of the noise and dust impacts, while people in the region's nearest town may experience most of the job opportunities)

- at different times and stages of the project (for example, construction and commissioning, operation, decommissioning and closure, and post closure management).

6.3 Evaluation of the significance of the social impacts – evaluation process

Potential impacts associated with the changes caused by the TSP expansion were rated through a conventional risk assessment, as recommended within the NSW Government SIA guideline. The risks were evaluated in terms of likelihood and consequence, as described in the following table.

Table 17 – Rick calculation matrix

			Consequence Level				
			1	2	3	4	5
			Minimal	Minor	Moderate	Major	Catastrophic
Likelihood Level	A	Almost certain	A1	A2	A3	A4	A5
	B	Likely	B1	B2	B3	B4	B5
	C	Possible	C1	C2	C3	C4	C5
	D	Unlikely	D1	D2	D3	D4	D5
	E	Rare	E1	E2	E3	E4	E5
Social Risk Rating							
	Low		Moderate		High		Extreme

The social impact consequences were evaluated on the following basis:

- Minimal
- Minor
- Moderate
- Major
- Catastrophic.

This is defined as follows –

Table 18 – Risk consequence definitions

Consequence	Definition
Minimal	No lasting detrimental or negligible impact on the community or environment.
Minor	Minor, short-term isolated impact on the community or environment.
Moderate	Modest, medium-term, widespread impact on the community or environment.
Major	Serious, long-term, widespread impact on the community or environment. Widespread community unrest or discomfort.
Catastrophic	Severe/extensive on-going, widespread impact on the community or environment.

6.4 Mitigations

In principle, impacts should be **avoided** or **reduced** to the best degree practical and affordable before they are accepted. Avoidance and reduction are achieved through the selection and application of appropriate mitigations or risk treatments.

Following are the mitigation categories which have been applied to both reduce impacts and realise opportunities.

Performance-based – identifies performance criteria to be complied with to achieve appropriate outcomes but do not specify how the outcome is to be achieved.

Prescriptive – itemises actions needing to be taken or things not to be done, for example, adopt a known best-practice technology, design or management approach to mitigate the impact. (The applicant needs to be able to justify why this approach is appropriate by providing scientific evidence or referencing relevant guidelines or case studies).

Management-based – where the potential impacts can be satisfactorily avoided or mitigated by implementing known management approaches. (Applicants should provide details on the proposed management approaches in the EIS to provide greater transparency and certainty).

Mitigations for social impacts are nominated on the following basis:

- Proposed management methods raised within related technical reports, which are part of this EIS
- Current TSP conditions of development and operational licences, which are reasonable, effective and can be applied to this proposal
- Mitigations and professional site management techniques which have proved to be successful on like or similar operations
- Actions suggested through consultation.

Hanson has elected to proactively introduce early mitigations as part of the project scope. Notably, this includes the removal of haulage vehicles from Altona Road, Crescent Street and other local roads.

6.4.1 Focus of mitigations to reduce impacts

As identified through preparation of the project scope and consultation, the following key changes and impacts are a focus of assessment and mitigation:

- Potential environmental 'nuisance'
    - Noise
    - Dust
    - Light (night-time operations and safety lighting)
- Visual amenity – change of visual aspect from some elevated sites.

6.4.2 Proactive mitigations to avoid impacts

To avoid impacts - as is preferable - Hanson has elected to apply significant mitigations, along with receiving advice through the various EIS studies.

The mitigations are detailed in other reports, and are in summary:

Table 19 – Potential Social Impact and Mitigation

Potential impact (and social impact)	Mitigation
Interaction with heavy vehicles on local roads	• Construction and use of internal haul road with direct access onto Tweed Valley Way and Pacific Motorway, which avoids heavy vehicle use of local roads
Construction dust	• Construction methodologies to avoid and reduce dust • Separation from sensitive receivers
Operational dust	• Sealing of the internal haul road • Water sprinkling of sand stockpiles and processing area
Construction and operational noise	• Machinery specification and attenuating wash plant • Separation from sensitive receivers
Visual amenity	• Hanson to apply extensive land rehabilitation and revegetation to help ensure the lakes have natural appearance.
Cost legacies at the end of the project	• Determination by Hanson as they will own, maintain and manage the site on conclusion of the project
General or identified in the future	It is assumed the existing TSP Community Consultative Committee will continue to convene during the life of expanded TSP operations. This committee provides ongoing opportunity for the operator to assess whether there are emerging issues and impacts which need to be assessed and mitigated.

6.5 Impact assessment – SIA values

6.5.1 Way of life

The expanded TSP will extract sand from rural property with little interface with the public. The majority of residents are either unaware of the current sand extraction activity or not impacted.

The 'way of life' including the Cudgen lifestyle is not expected to be impacted through TSP expansion. At a point in the development of the site, likely to be after 2040, extraction will move closer to residential properties on Cudgen Road. This may generate some additional noise including at night from operations, should the plant operate at night. The phased clearing of the extraction area will involve heavy machinery, which may generate dust along with noise, although this will be very short-term, temporary and during the daytime.

The project doesn't directly increase local development or population, which are the key factors most locals believe will impact their way of life.

For the majority of residents, the project doesn't appear likely to reduce residents enjoyment of their climate and environment, nor does it interfere with any of the key social infrastructure or local roads. In fact the proposed relocation of TSP traffic onto the internal haul road with direct access to Tweed Valley Way and Pacific Motorway, is likely to improve this aspect.

Table 20 – Way of life impacts and mitigations

Social value	Cudgen and surrounds values, interests and expectations	Social impacts	Mitigation
Way of life	• Relaxed, unhurried, "laid-back" lifestyle • Natural and rural feel, with connections to nature • Seeking to maintain village and rural feel • Ensure scale of development is appropriate to the location • Keep uncrowded and not over-developed (like Gold Coast) • Benefit from the opportunities of being near to south east Queensland growth, while maintaining village feel/ atmosphere/ identity. • Value near and close access to beach/ coast/ surf • Support for local business and employment opportunities, including local light industry precinct at Chinderah • Enjoyment of climate.	Potentially, some minor temporary impacts when establishing dredging lakes and operating closer to residential properties*. Negligible/no/ minimal impacts on these social values.	Dust and noise monitoring when operating closer to residential properties, with application of common mitigations. Local residents could advise of any issues, either directly to Hanson or via the Community Consultative Committee.

*EIS reports identify some environmental nuisance at properties on Cudgen Road at Phase 9 in the project, at around the 19-22 year mark, when lake establishment and sand extraction is being undertaken in vicinity of these residences. The phasing map is listed at page 7 of this report.

6.5.2 Community

Cudgen residents and stakeholders explain there is a strong sense of community, with social bonds and generally good neighbourly relations. They explain this is because Cudgen has a village scale and feel. Cudgen residents along Cudgen Road live on large lots with less connection with neighbours and value their space, separation from others and privacy. They also are protective of property and community values.

Table 21 – Community impacts and mitigations

Social value	Cudgen and surrounds values, interests and expectations	Social impacts	Mitigation
Community	• Value positive social connections and friendly, country feel • Availability and access to social infrastructure, e.g. clubs • Value maintenance and condition of community infrastructure, e.g. parks • Value responsible pet ownership • Pride in local sports clubs and performance.	Negligible/no/ minimal impacts on these social values.	No specific mitigation/s proposed. Local residents could advise of any issues, either directly to Hanson or via the Community Consultative Committee

6.5.3 Access to and use of infrastructure, services, and facilities

The project site is isolated, and therefore doesn't interface, influence or impact with any social infrastructure, services and facilities, and isn't likely to create impacts across the delivery of the expanded TSP. Project traffic will avoid local roads and heavy vehicle movements are unlikely to have a noticeable impact on resident's use of the Pacific Motorway.

Conversely, the community is interested in more water-based recreational activity opportunities, as per Council consultation (about regional recreational needs). Water-based recreation is possible at the project site when extraction and rehabilitation has been completed.

Table 22 – Access and use of infrastructure, services and facilities impacts and mitigations

Social value	Cudgen and surrounds values, interests and expectations	Social impacts	Mitigation
Access to and use of infrastructure, services, and facilities	• Safe access to use and use of roads • Availability and access to social infrastructure, e.g. clubs and recreational paths and open space • Seeking adequate local parking • Seeking opportunity for more water-based recreation, e.g. canoeing, swimming and fishing • Value maintenance and condition of community infrastructure, e.g. parks	No negative impacts Potential positive social infrastructure benefit, which	No specific mitigations proposed Hanson to consider future recreational uses of project

Social value	Cudgen and surrounds values, interests and expectations	Social impacts	Mitigation
	• Require adequate local parking • Value near and close access to beach/ coast/ surf • Pride in local sports clubs and performance.	can be investigated towards the cessation of sand extraction.	site when extraction is complete, in consultation with regulatory authorities and community.

6.5.4 Culture

Traditional owners and current landowners have a close connection to local lands. The cultural heritage survey and liaison indicates the land has little specific cultural heritage value, as it has been significantly modified. The permanent additional modification from land/pasture to a water body concerns some people.

Table 23 – Culture impacts and mitigations

Social value	Cudgen and surrounds values, interests and expectations	Social impacts	Mitigation
Culture	• Recognition of Aboriginal heritage and values • Close affinity with land among residents and farmers	The conversion of the land to a water body concerns a small number of people, but not all as survey comment included support for water bodies. This is a low social impact from a cultural perspective.	Specific mitigations and actions – Rehabilitate water bodies and surrounds so these areas can become habitat and refuge for fauna, such as birds, and for beneficial community use, with the involvement of and recognition of traditional owners.

6.5.5 Health and wellbeing

As the site is relatively isolated, the project will not cause any impacts to health and wellbeing. The project will not interfere with residents ability to exercise, or access to recreational infrastructure. There is very low likelihood of the project activity endangering the public, as there is no direct public interface.

The project will not impact people's livelihood or business. Conversely there are likely to be local business and employment opportunities over the duration of project delivery.

As above, the community is interested in more water-based recreational activity opportunities, as per Council consultation (about regional recreational needs) which is possible at the project site when extraction and rehabilitation has been completed. This was also raised during community consultation.

Table 24 – Health and wellbeing impacts and mitigations

Social value	Cudgen and surrounds values, interests and expectations	Social impacts	Mitigation
Health and wellbeing	• Access to recreation to support healthy and active lifestyles • Protection from flooding and fire • Good road access, with road safety • Pedestrian and cyclist safety • Value a variety of recreational and sport options and facilities • Seeking opportunity for more water-based recreation, e.g. canoeing, swimming and fishing	No negative impacts Potential positive social infrastructure benefit	No specific mitigations proposed Hanson to consider future recreational uses of project site when extraction is complete, in consultation with regulatory authorities and community.

6.5.6 Surroundings

Cudgen residents have close connection with their surrounds which is a key element of their highly-valued lifestyle. As the site is relatively isolated there is no community connection with the site, and few people are aware of TSP operations. The project doesn't interfere with current or future access to natural areas and the local beaches which are valued by locals.

Locals value local agricultural activity, as part of the locality's lifestyle and identity. While intensive agriculture (sugar cane) ceased at the site over 10 years ago, the expansion of TSP will permanently remove the agriculture production potential of this land.

With the apparent permanent cessation of sugar cane production here, this change and any associated impact has happened already. EIS studies have determined the land is marginally viable for agriculture. The Cudgen Plateau land which is known to be higher value agricultural land is to the south of the site and not impacted by this proposal.

The conversion from land to a water body is generally viewed as a neutral outcome. This was not a significant issue during consultation and some stakeholders expressed preference for a water body to offer recreational opportunities.

Local residents value environmental protection and expect no offsite impacts, which the environmental studies indicate can be achieved. Through rehabilitation, habitat values through wetlands can be created. Residents are interested in the recreation potential of the site, post-rehabilitation. This provides community connection to part of their surroundings which doesn't yet exist, as the project site is privately-owned land with no public access.

Table 25 – Surroundings impacts and mitigations

Social value	Cudgen and surrounds values, interests and expectations	Social impacts	Mitigation
Surroundings	• Able to enjoy great climate through outdoors and recreation. • Access to recreation to support healthy and active lifestyles • Seeking more trails across the shire, especially as a tourism drawcard • Preference for unstructured recreation and activity, rather than organised sport • Support for nature based recreation (land and water) • Would like to increase supply of open space (passive and active) • Protect natural scenery and amenity • Maintain environmental protection, including pest management • Protect productive farming lands/ supporting food production • Value emerging artisan and organic food culture • Ensure good water quality within local waterways • Value close access to services and beach • Recognition of traditional owners connection with land.	Minimal negative impacts Potential positive social infrastructure benefit	No specific mitigations proposed Hanson to consider future recreational uses of project site when extraction is complete, in consultation with regulatory authorities and community. Hanson to undertake re-planting as part of rehabilitation plans to assist local visual amenity and future habitat values. This would help ensure the lakes have natural appearance.

6.5.7 Personal and property rights

Project studies and consultation have not revealed any significant impacts to local livelihoods, property, or property values and personal safety. The project is likely to improve these values through the removal of heavy trucks from local roads. The most significant concern is the proposed 24/7 operations and whether this will generate noise and light which is noticeable at night.

Table 26 – Personal and property rights impacts and mitigations

Social value	Cudgen and surrounds values, interests and expectations	Social impacts	Mitigation
Personal and property rights	• Maintain and value personal safety • Maintain security over property • Reduce, minimise crime • Maintain property values.	Minimal impacts on these social values, with low risk of audible night time noise	Noise monitoring to determine impacts on ambient noise levels at near residents when project approaches near neighbours on Cudgen Road, Cudgen. Local residents could advise of any issues, either directly to Hanson or via the Community Consultative Committee

6.5.8 Decision-making systems

The project team provided the opportunity for locals to be involved and comment on the project scope across early 2021. This engagement allowed for input on a project which residents may consider will have an impact upon them, or they can see potential benefits.

Residents will also have the opportunity to make comment during the future public exhibition phase. The delivery of the project will have no impact on local decision making systems.

Table 27 – Decision-making systems impacts and mitigations

Social value	Cudgen and surrounds values, interests and expectations	Social impacts	Mitigation
Decision-making systems	• Opportunity to make comment through engagement and consultation • Ability to comment on issues and interests through social media and discussions.	Negligible/no impacts on these social values	No specific mitigation/s proposed Local residents could advise of any issues, either directly to Hanson or via the Community Consultative Committee

6.5.9 Fears and aspirations

Local's key aspiration is their locality and region is not over-developed and retains a generally village and rural character. While the project is technically a 'development' project, the TSP will not directly increase population or housing.

Locals would generally prefer productive agricultural land is protected. While there has been sand extraction from this site since the 1980s, delivery of the project will remove the future agricultural potential at this site. With the apparent permanent cessation of sugar cane production here, this change and any associated impacts has likely happened already.

There is no suggestion from research or consultation there is insufficient local land to conduct boutique or commercial scale agriculture. This is also likely to not be a future constraint upon local or regional agricultural activities during the life of the project. Importantly, the project does not impact the proposed expansion of aquaculture activities adjacent to the site, with allowances made in consultation with the Australian Bay Lobster Producers plant. While not proposed at this time, there is potential for aquaculture in the water bodies and market gardens in the remaining land dependent on opportunities circa 2052.

Table 28 – Fears and aspirations impacts and mitigations

Social value	Cudgen and surrounds values, interests and expectations	Social impacts	Mitigation
Fears and aspirations	• Managing and containing density/ careful growth management/ low building heights • Protecting agricultural land • Interest in more sustainable living, including recycling • Maintain natural beauty.	Negligible/minimal impacts on these social values.	No specific mitigation/s proposed. Because of the nature of the project, no mitigation is possible re loss of potential agricultural land. Hanson to apply extensive land rehabilitation and revegetation to help ensure the lakes have natural appearance. Local residents could advise of any issues, either directly to Hanson or via the TSP Community Consultative Committee.

6.6 Cumulative impacts

In accordance with the NSW SIA guideline, cumulative impacts are considered within this SIA.

This assessment is undertaken to determine how other near projects may add to and/or exacerbate impacts generated by the TSP expansion proposal. The two (2) relevant projects include:

- Australian Bay Lobster Producers (ABLP)
- Cudgen Lakes Sand Operation (CLSO)

These projects are within the local floodplain and neighbour the TSP site and expanded extraction footprint. The project influence is bounded by the local topography and roads, and thereby other approved or proposed projects aren't considered relevant to an expanded TSP. This is also justified as the TSP proposal has only low, specific and local potential impacts. The location of the three projects is illustrated in the following map:

Figure 5 – Project locations re cumulative impact assessment

Australian Bay Lobster Producers

The ABLP is an aquaculture operation, with the first of three (3) approved stages delivered and operating. The site receives seawater to sustain operations, with spent seawater piped to the nearby wastewater treatment plant.

The seafood product is sent to market via vehicles, with a relatively low number of vehicle movements directly to the Pacific Motorway.

The approved hours of operation are standard for weekdays and weekends. ALBP appears to operate without community notice or concern.

The development footprint is planned to expand over time. This is an approved use and there will be visual change to the generally rural landscape.

There are no known social impact issues associated with ABLP or impacts which would add to potential social impacts from the expanded TSP.

Cudgen Lakes Sand Operation

The CLSO operates directly to the east of the TSP site. The operation is comparable to the existing TSP activities, involving the extraction of sand by dredge and pump, along with the progressive creation of a water body.

The CLSO has an onsite sand wash/ processing facility. The product is either pumped by slurry or transported by trucks off site, as approved. Heavy vehicle movement to and from the plant is via Altona Road, Crescent Street and Tweed Coast Road, as is currently the practice for TSP.

The CLSO footprint is closer to Cudgen Village compared to TSP. CLSO operates under development conditions to manage or limit offsite impacts, including operating hours, types of activities and permitted times, noise levels and number of truck movements. The CLSO maintains a complaints record, and there is a very low record of contact and complaint.

CLSO explain the water bodies can provide recreational opportunities as part of their master-planning.

6.6.1 Cumulative Impacts – key considerations

Cumulative impacts have been assessed over the construction and operational phases, from a resident interface and community perspective. The key areas of assessment related to the combined activities of the three (3) projects are summarised in the following table.

Table 29 – Assessment of cumulative impact

Potential social change	Assessment of change	Assessment of cumulative impact
Traffic	Reduced heavy vehicle movements – TSP haul road	Existing approved vehicle movements from CLSO. Some increase in vehicle movements from ABLP as this operation expands; however this traffic is not on local roads and will not be noticeable. Overall cumulative improvement (reduced vehicles on local roads from TSP)
Noise	Increased construction and operational activity (all projects)	Minor impacts during TSP phase 9 development and extraction (able to be mitigated). No material cumulative change, assuming CLSO and TSP (a) comply with regulated noise levels, and (b) this does not generate any nuisance.
Dust	Limited concern based on: • no material dust emissions from ABLP. • Dust suppression requirements and methodologies at sand plants.	No material impacts to sensitive receivers above baseline. Active dust suppression is undertaken across stockpiles.

Potential social change	Assessment of change	Assessment of cumulative impact
Light	• Limited light spill from sites. • Some new light sources at night from TSP when operating 24/7. This light will generally not shine into residents' homes.	Some additional light for safety reasons at TSP and ABLP sites, and from TSP vehicles moving along internal haul road. This is a cumulative increase, but not regarded as a material social impact, as light will be distant.
Visual amenity	There will be change in visual amenity. • Increased building ABLP footprint, over time. • Increased operational footprint of TSP and CLSO - associated waterbodies with change visual amenity.	There will be cumulative visual change from the gradual transition from rural lands to new uses. This may not be preferable for near residents, and Council's general preference is for the preservation of rural character across the Shire. This is a cumulative change, however there is no evidence this will confer material or specific social impacts. There is potential community access and use of the TSP and CLSO sites for recreation, post production, and this presents as a potential benefit and 'trade-off'. CLSO have a public stance to position water bodies on their property for recreational use. Hanson's rehabilitation and vegetation program can help ensure the lakes have natural appearance.
Impacts to livelihood in agricultural sector	The two (2) sand plants will remove the future prospect of traditional agricultural use of these lands.	The ABLP operation is aquaculture, and provides a more intensive and productive primary industry use of the marginal agricultural land. The footprint of the two sand plants is on land that has not supported intensive or productive agricultural use for at least a decade. The land is regarded by local experts as marginal for productive and profitable agribusiness use. The Cudgen plateau, with rich, fertile red soil is regarded as more valuable, compared to the floodplain soils where these projects are located. No material cumulative impact to the local or regional agricultural sector is expected from these projects. The planned expansion of the ABLP operation will provide more primary production opportunities at this location.

The key considerations to assess cumulative impact are:

a) Contribution of (i) new TSP activities to (ii) prevailing and current social impacts generated by others
b) Combination of (i) ongoing activities and change by others, with (ii) TSP activities and changes.

As there are only minor social impacts associated with (a) (i) and no known material social impacts associated with (a) (ii) there is no net cumulative social impact of concern. As there are no known or material social impacts associated with (b) (i) and only minor change and social impacts associated with (b) (ii) there is no net cumulative social impact of concern.

No material cumulative impact. Based on the known scale of the existing projects and the type of activities and change, the TSP proposal is not expected to create noticeable cumulative impacts. All three (3) uses are relatively discreet and passive, with limited interface with 'sensitive receivers'. There will be no impact on the way people access and use local social infrastructure.

Ongoing cumulative considerations -

The greenfield features of the combined project areas will change over time, although they are already highly modified from vegetation clearing and historic agricultural use.

Active operational management regimes can detect the extent and significance of change, and consider treatments as necessary.

All organisations are regulated with performance reports available to the public. This information and ongoing local engagement will allow all proponents to consider whether combined activities and changes are generating material social impacts.

If social impacts (and beneficial opportunities) are detected, appropriate management strategies can be considered and implemented to maintain community confidence and support.

6. 7 Evaluation of the significance of the social impacts

The following table explains the rating of potential social impacts, proposed mitigations, and the outcomes & rating following mitigation. This table would be converted into a management plan as part of an operational plan. This plan would also be reviewed by the TSP Community Consultative Committee.

Table 30 - Evaluation of the significance of the social impacts

Impact description			Impact without mitigation		Impact with mitigation		
Impact **SIA guideline value*	Timing 0-30 yrs.	Affected parties	Impact characteristics	Social risk rating	Mitigation and new impact characteristics	Social risk rating	Residual risk description
Noise impacts – removal of topsoil to expand lake. **Way of life*	19-22 years #	Near residents (small number)	The day-time removal of topsoil to expose new sand extraction areas during 'phase 9' will create a footprint closer to some properties on Cudgen Road. This work is predicted to create some day-time noise nuisance, and possibly some noise exceedances. This is temporary activity, which will generally only take 1-2 weeks to complete once a year.	Low-Medium	Noise monitoring to assess performance in accordance with approved noise approvals. Application of noise mitigations as recommended by ATP Consulting Engineers (proposed Noise Mitigation Plan).	Low	Low
Noise impacts – night-time sand extraction. **Way of life*	19-22 years	Near residents (small number)	TSP currently operates during day only, with approval sought to expand to 24/7 operations. Ambient noise levels may change and increase during night operations, although the nearby Pacific Motorway generates significant ambient night-time noise.	Low-Medium	Noise monitoring to assess performance in accordance with approved noise approvals. Application of noise mitigations as recommended by ATP Consulting Engineers (proposed Noise Mitigation Plan).	Low	Low
Potential dust generation during removal of topsoil to expand lake for sand extraction. **Way of life*	19-22 years #	Near residents (small number)	Topsoil removal is undertaken by machinery to create the lake to allow for sand extraction. The topsoil is removed by earthmoving equipment and is stockpiled. This has potential to generate dust. The construction phase will generally only take 1-2 weeks once a year.	Low	Dust to be reduced by working in small areas only, suppression of dust with watering, working only during favourable weather conditions (e.g. low wind and wind direction away from local homes). Dust monitoring.	Low	Low

Impact description			Impact without mitigation		Impact with mitigation		
Impact **SIA guideline value*	Timing 0-30 yrs.	Affected parties	Impact characteristics	Social risk rating	Mitigation and new impact characteristics	Social risk rating	Residual risk description
Visual amenity. **Surroundings*	5-30 years	Residents with elevated aspects and views of plains	Over the course of 30 years the rural fields will be slowly and progressively converted into water bodies, to allow sand extraction. Lakes may appear manufactured with long straight lines, which may have visual impact and amenity concerns among some stakeholders.	Low	Mitigations and opportunity response include rehabilitation and planting to create new habitat. Hanson is able to rehabilitate and landscape the remnant lakes to ensure they appear natural. Ongoing water quality monitoring and reporting. There is potential for community access and use, subject to consultation and approvals at the end of the project.	**Low**	**Low**

 # Note – the potential impact is likely to be experienced at some point during year 19-22 of the project (phase 9) but not be sustained for 2 years – the construction phase is likely to be 1-2 weeks only.

Attachment 1 - SIA compliance

Table 31 – SIA compliance assessment

SIA guideline requirement	Whether and how this SIA complies
General	
1. Has the applicant applied the principles in Section 1.3? How?	Yes. These principles have been applied across the preparation of the SIA and associated consultation.
2. Does the lead author of the Scoping Report meet the qualification and skill requirements in Box 2?	Yes. The Scoping Report author is experienced and qualified, and was supported by a SIA advisor.
3. Does the lead author of the SIA component of the EIS meet the qualification and skill requirements in Box 4?	Yes. See declaration including qualification and experience.
4. Has the lead author of the SIA component of the EIS provided a signed declaration certifying that the assessment does not contain false or misleading information?	Yes. The report is a faithful reflection of available evidence and consultation outcomes.
Community engagement for social impact assessment	
5. Does the SIA include adequate explanations of how the engagement objectives have been applied? How?	Yes. The SIA contains detail about NSW SIA and Council engagement standards, along with TSP SIA engagement methodology and outcomes. There are frequent references to consultation outcomes in the SIA discussion.
6. Does the SIA demonstrate that there has been a genuine attempt to identify and engage with a wide range of people, to inform them about the project, its implications and to invite their input? How?	Yes, the area of social impact was defined through field assessment and consultation, and a conservative and precautionary stance taken. All residents and businesses within the ASI were contacted by letter. A project fact sheet was distributed, with encouragement to contact the project team by email or free call 1800 number.
7. Does the SIA demonstrate that an appropriate range of engagement techniques have been used to ensure inclusivity and to ensure the participation of vulnerable or marginalised groups? How?	Yes. All project documentation was provided in plain English with email address and phone offered for queries. The methodologies applied are consistent with Council's approach to local consultation.

SIA guideline requirement	Whether and how this SIA complies
Scoping – area of social influence	
8. Does the Scoping Report identify and describe all the different social groups that may be affected by the project?	Yes. The report identifies potential impacts and how they may be experienced, and identifies residential interface.
9. Does the Scoping Report identify and describe all the built or natural features located on or near the project site or in the surrounding region that have been identified as having social value or importance?	Yes, this is included as Attachment 13 in the scoping report.
10. Does the Scoping Report identify and describe current and expected social trends or social change processes being experienced by communities near the project site and within the surrounding region?	The scoping report mentions existing sand extraction within the shire. The scoping report provided good guidance for the scope of this SIA.
11. Does the Scoping Report impartially describe the history of the proposed project, and how communities near the project site and within the surrounding region have experienced the project to date and others like it?	Yes. The current operations has existed since the 1980s, and are low profile with limited concern.
Scoping – identifying social impacts	
12. Does the Scoping Report adequately describe and categorise the social impacts (negative and positive), and explain the supporting rationale, assumptions and evidence for those categories?	Yes, the scoping report highlights the visual amenity change.
13. How has feedback from potentially affected people and other interested parties been considered in determining those categories? Does the Scoping Report outline how they will be engaged to inform the preparation of the SIA component of the EIS?	Consultation with the agencies and Council influenced the scoping report inclusions, including social impact considerations.
14. Does the Scoping Report identify potential cumulative social impacts?	The context of the TSP expansion and interface are discussed. (Cumulative assessment has been undertaken for this SIA.

SIA guideline requirement	Whether and how this SIA complies
Social baseline study	
15. Does the SIA component of the EIS discuss the local and regional context in sufficient detail to demonstrate a reasonable understanding of current social trends, concerns and aspirations?	Yes. Considerable research, reference to Council documents and consultation has been undertaken to demonstrate understanding of local social values applicable to the TSP proposal.
16. Does the SIA component of the EIS include appropriate justification for each element in the social baseline study, and provide evidence that the elements reflect the full diversity of views and potential experiences in the affected community?	Yes. A detailed baseline study is included in this SIA. Considerable effort was undertaken to invite stakeholder involvement to support or add to desktop research. A stakeholder survey was also distributed to help establish baseline social conditions and values.
17. Does the social baseline study include an appropriate mix of quantitative and qualitative analysis, and explain data gaps and limitations?	Yes. The baseline study combines qualitative and quantitative data, with an emphasis on rich qualitative data from a number of sources. The key anecdotal data been triangulated directly from community sources to reduce error, with limited assumptions. The assessment is regarded as reliable.
Prediction and analysis of impacts	
18. Does the SIA component of the EIS include an appropriate description of the potential impacts in terms of the nature and severity of the change and the location, number, sensitivity and vulnerability of the affected stakeholders?	Yes, risk assessment methodology has been applied and the specific locations where there are possible or likely impacts are identified. Direct contact has been made with residents in this vicinity also.
19. Does the SIA component of the EIS identify potential impacts at all stages of the project life cycle?	Yes. The SIA assesses potential impacts during construction, operation and closure.
20. Does the SIA component of the EIS appropriately identify and justify any assumptions that have been made in relation to its predictions?	Yes. A small number of assumptions are made, but these are low risk, such as: it is assumed the current TSP Community Consultative Committee structure will continue. In view of the author there are no assumptions in relation to information uncertainty. Robust qualitative analysis has been applied.
21. Does the SIA component of the EIS include appropriate sensitivity analysis and multiple scenarios to allow for uncertainty and unforeseen consequences? If relevant, does it include comparisons with studies of similar projects elsewhere?	Yes. Comparison is made with other resource extraction projects as relevant. The proposal is an expansion of the existing sand plant (which the proponent has operated since 2007) and scenarios have been considered in relation to historic

SIA guideline requirement	Whether and how this SIA complies
	and future outcomes. The SIA is supported by a range of technical reports, and the noise analysis, for example, assesses current on-site equipment.
Evaluation of significance	
22. Does the SIA component of the EIS explain how impacts were evaluated and prioritised in terms of significance?	Yes. The potential impacts have been assessed through multiple layers, namely: review of current operations; project scope; technical assessment: social assessment; consultation with the TSP Community Consultative Committee and local consultation. This has allowed the author to report on the most significant (while minor) impacts.
23. Does the evaluation of significance consider cumulative aspects where relevant?	Yes. Near projects are considered in terms of cumulative assessment.
24. Does the evaluation of significance consider the potentially uneven experience of impacts by different people and groups, especially vulnerable groups?	Yes. There is appreciation of where construction and operational impacts may be experienced, such as from Cudgen Road in the case of noise and visual amenity. This includes businesses and residents. Stakeholders were also able to comment on whether the loss of potentially productive agricultural land was of concern. The existing TSP Community Consultative Committee was also consulted, which is comprised of diverse and representative local stakeholders. Traditional owners were also consulted during the preparation of this EIS.
Responses and monitoring and management framework	
25. Does the SIA identify appropriate measures to avoid, reduce, or otherwise mitigate any significant negative impacts of the project, and justify these measures?	Yes the SIA and EIS studies identify a suite of mitigations. Based on the project scope and decisions taken by the proponent; considerable mitigations are identified and proposed within the EIS. These include construction methodology, machinery specification, project separation from sensitive receivers, removal of heavy vehicles from local roads, sealing of the internal haul road, and determination by Hanson they will own, maintain and manage the site at the conclusion of the project to ensure there are no liabilities for Council or the community.

SIA guideline requirement	Whether and how this SIA complies
26. Does the SIA explain and justify measures to secure and/or enhance positive social impacts?	Yes. The key benefits are economic returns and employment; along with potential community use of the site when the project is completed and fully rehabilitated.
27. Does the SIA component of the EIS impartially assess the acceptability, likelihood and significance of residual social impacts?	Yes to the extent relevant. Residual impacts have been considered. Impacts associated with construction and operations are relatively limited, temporary and can be mitigated. Hanson will own, manage and maintain the site when the sand resource is exhausted, and therefore there are no residual impacts after the project is complete.
28. Does the SIA component of the EIS propose an effective monitoring and management framework?	Yes. The impacts and mitigation table (6.7) can be included into the operational plan to ensure ongoing governance.
Modifications	
29. Are the social impacts associated with the modification expected to be new or different (in terms of scale and/or intensity) to those that were approved under the original consent? If yes, apply the review questions above to the SIA component of the environmental assessment.	Yes the proposal is a modification to the existing approval. There will be change as the operational footprint moves closer to residential properties. This is discussed in the SIA.

Attachment 2 – SIA community survey

Social impact assessment	
Lifestyle	
Location/ address:	
Activity/ occupation:	
Years within the community:	
What are the key things you normally do around your community during the week?	
What are the reasons you live here? What is it about your community you value most?	
What needs to be protected for your lifestyle to continue largely as is?	
Current operations	
What do you know about Hanson's sand plant at Cudgen?	
How do you know about this?	
Does the sand plant impact or benefit you in any way?	
If so, please describe:	
Proposed expansion and new operations	
Based on the description and your understanding of this proposal, do you believe this will impact you or others in any way?	
How? Why do you believe this? What phase of the project/ how long/ when?	
Are there any specific ways in which these impacts might be avoided?/ benefits realised?	
If these potential impacts are avoided, would you expect any further influence or impacts?	
In your opinion, what are the key considerations towards the community that are needed, as the project is planned?	

Tweed Sand Plant

Proposed expansion

Hanson
HEIDELBERGCEMENT Group

Altona Road Cudgen

Hanson has operated the Tweed Sand Plant at Altona Road, Cudgen for over a decade since acquiring the site in early 2007.

Hanson is one of Australia's leading providers of materials to the construction industry, supplying gravel, sand, aggregates and premixed concrete.

To ensure reliable, affordable supply of sand to the construction industry, Hanson is seeking to expand and extend the life of the existing sand plant.

Currently the plant has around 6-10 years remaining life depending on market demand and based on existing approvals. We are seeking to extend this to a 30-year timeframe to support the construction industry and jobs in the longer-term.

The subject land is largely cleared and there is low-scale grazing on some of the land parcels.

Project overview

- **Existing sand plant area – 46ha**
- **Approval sought for expanded area – 236ha**
- **Approval sought for extraction of up to a maximum of 950,000 tonnes per annum, over a 30 year timeframe**
- **Approval sought for 24/7 operations (as contingency)**

Planning and approvals

The NSW Government (the State) has determined our proposal is a 'project of state significance'. This means the State is leading the review and approvals process.

The State has provided Hanson with the planning and approvals requirements for this proposal, which includes the need to prepare an Environmental Impact Statement (EIS).

The EIS requirements are included in the Secretary's Environmental Assessment Requirements (SEARs) document. This can be referenced at: **www.planningportal.nsw.gov.au/major-projects/project/25926**

To complete the EIS, Hanson has engaged specialist consultants to complete a variety of studies, including: air quality, noise, flora and fauna, cultural heritage, traffic, surface water quality, groundwater, flooding, visual amenity, economic benefit, social impact and rehabilitation planning.

Impact mitigation

The sand plant currently operates with minimal notice and interference to the Cudgen, Kingscliff or Chinderah localities.

As part of the EIS process Hanson needs to identify any construction and operational impacts, and the extent to which these can and should be mitigated to reduce any potential nuisance.

During the EIS preparation, we are consulting locally to understand the extent to which locals may feel potentially impacted by the proposal and discuss opportunities to minimise these impacts.

Staging of extraction

The sand resources will be extracted gradually. Not all areas will be accessed at once, and the creation of the eventual water bodies will be gradual and take at least 30 years.

View of existing water body at Hanson Tweed Sand Plant, Cudgen

Mitigating traffic impacts

As part of impact mitigation planning, trucks travelling to and from the sand plant will not access local Council controlled roads including Tweed Coast Road, as they do currently.

As an alternative, Hanson is proposing a road connection across private land directly onto the Pacific Motorway at the Tweed Valley Way interchange, south of Chinderah.

Long term site ownership

As sand is extracted, a water body is gradually created. Following the removal of sand, each area will be progressively rehabilitated, with regular water quality monitoring undertaken.

On completion of sand extraction around 30 years from the time of new approvals, Hanson will retain ownership and management of the site.

Any proposed subsequent use of the site would be decided via the appropriate consultative, application and regulation processes in place at that time.

Opportunity to be involved

Hanson welcomes community review and enquiry. We are offering briefings and discussions about the proposed expansion of the Tweed Sand Plant.

Depending on your preference, these discussions can be individual, small group, or via online/electronic communications.

The EIS report will be placed on Public Exhibition when completed, during which time the community can comment on the report and project. This is likely to be in the first half of 2021.

Further Information

If you would like to find out more and comment on the project, please contact our project team:

E: contact@tweedsand.com.au

P: 1800 844 889

Tweed Sand Plant expansion Cudgen

Stakeholder engagement report

February 2021

Stakeholder engagement report

7.1 Context and to be read with SIA

Following is a sub-report to the SIA report. This is attached to the SIA to be read in conjunction with the SIA findings.

This is deliberately a synopsis - In the interest of brevity for the reader, sections of the SIA with reference to consultation are not repeated in entirety in this report.

The communications and engagement undertaken across early 2021 informed the conclusions within the SIA. The findings complemented the extensive data collected through baseline research.

7.2 Overview

Hanson Construction Materials Pty Ltd (Hanson) is proposing to expand and extend the life of the Tweed Sand Plant (TSP) on Altona Road, Cudgen, which they have operated since acquiring the plant in 2007. From this plant Hanson supplies sand for the construction industry to primarily support the production of concrete.

The plant was originally established in 1983, and has approximately 6-10 years supply remaining under the current approval, depending on market demand. The new approval currently being sought would extend the life of the plant to approximately 30 years to secure sand supply to growing markets in northern NSW and SEQ.

The proposed, expanded footprint is illustrated below. The current operational footprint is the lighter shade of blue at the eastern side of the shaded area.

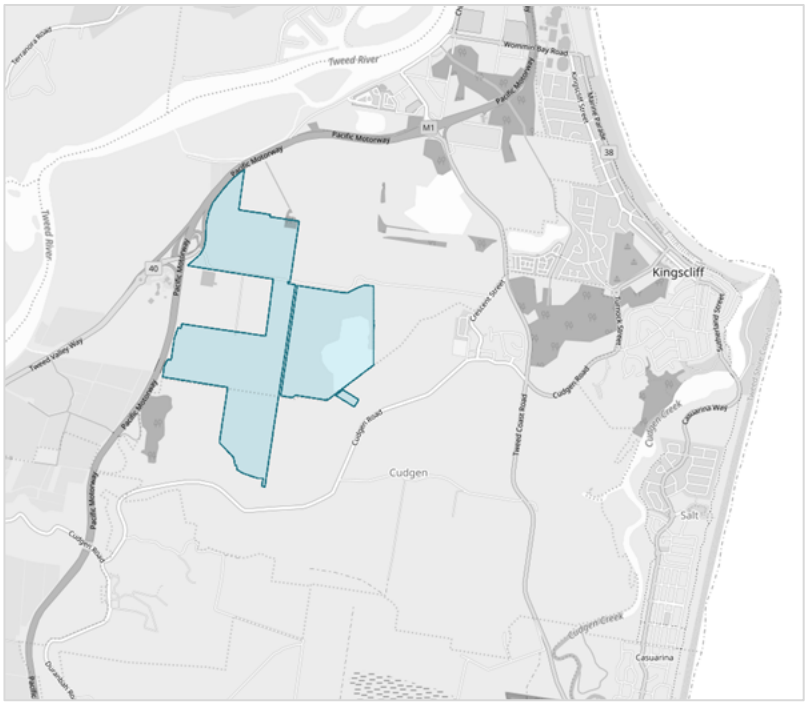


Figure 6 - Site of proposed expanded Tweed Sand Plant

The NSW Government has designated the proposal as a 'Project of State Significance' and will therefore be determined under state legislation.

7.2.1 Site context – high level overview:

TSP has limited residential interface and the majority of the community appear to be unaware of the existing plant operations. There are no public sand sales from this site and therefore minimal community interface. Altona Road is a minor road and TSP operates quite discretely. Anecdotally, residents driving on or living near Tweed Coast Road notice the heavy vehicle movements from current operations, and they would prefer less vehicle movements. Hanson maintains a complaint register, with no complaints received for the past three (3) years.

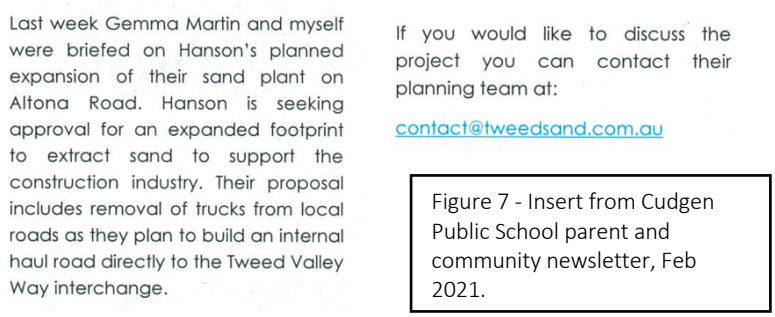
7.3 Communications and engagement methodology

The project reviewed the guidance from the NSW Government in preparing the communications and stakeholder engagement strategy. As this is a local project with limited interface residents, the project team elected to undertake targeted local communications; however considerable effort was undertaken to inform and involve local stakeholders.

Communication was distributed through a targeted letterbox drop across the project catchment as defined by the 'Area of Social Influence' as determined through the Social Impact Assessment.

In total over 400 letters were dropped into local letterboxes by the community engagement consultants. This information was supplemented with phone calls and emails. The project team dropped a second round of letters to immediate neighbours to further advise of opportunities to discuss the project.

In addition, a notice was included in the Cudgen Public School newsletter promoting the opportunity to be involved, and the project was discussed at the school P&C. This was initiated following briefing of the Principal and P&C President (Parent and local resident) by project representatives.



Last week Gemma Martin and myself were briefed on Hanson's planned expansion of their sand plant on Altona Road. Hanson is seeking approval for an expanded footprint to extract sand to support the construction industry. Their proposal includes removal of trucks from local roads as they plan to build an internal haul road directly to the Tweed Valley Way interchange.

If you would like to discuss the project you can contact their planning team at:

contact@tweedsand.com.au

Figure 7 - Insert from Cudgen Public School parent and community newsletter, Feb 2021.

The TSP Community Consultative Committee was also informed about the project and encouraged to make comment, including completing the community survey.

7.3.1 Quality assurance

The SIA and stakeholder engagement was undertaken by the Vaxa Group to ensure consistency of interface and interpretation of information sourced through research and received through consultation. The Vaxa Group is an experienced social impacts assessment and stakeholder engagement agency, who have undertaken projects in the resources industry. All information was collated across January-February 2021.

7.4 Stakeholder profile

A stakeholder profile was developed across the project area. The profile was also influenced by the area of social impact, as identified by the social scientist and town planning expert.

The profile was prepared to ensure all key stakeholders were identified for contact. This included the entire community of Cudgen.

Stakeholders who were contacted included:

- Tweed Shire Council
- Immediate residents and businesses
- Cudgen residents
- Cudgen Public School
- Traditional owners
- Business associations
- Existing TSP Community Consultative Committee.

7.5 Key messages – accessible information

Key messages were prepared in plain English to support stakeholder communications. This content focused on:

- Background about the applicant (Hanson)
- Factual information about the scale of the project
- Project attributes and rationale
- Explanation of the planning process and opportunities to contact the planning team and make comment on the plans
- How to make contact and seek more information.

This detail was included in project communications collateral.

7.6 Communications collateral

Various communications collateral items were prepared to meet audience needs. These included:

- Residents letter x 2 – Cudgen and Terranora
- Newsletter for stakeholders seeking additional information (see within the SIA report)
- Presentation.

All collateral carried:

- Name of applicant
- Name of the project
- Contact points: 1800 number and email address.

7.7 Communications channels

Communications channels were established and promoted to ensure the local community were aware of the project and the opportunity to be involved.

The following accessible communications channels were (and are) available for community contact and information exchange:

- 1800 number (freecall)
- Project email
- Hanson website – background operational information (statutory reporting) and newsletter.

In addition, the NSW Government has made available substantial information about the project, which is publicly and easily accessible: https://www.planningportal.nsw.gov.au/major-projects/project/25926

7.8 Contact register

A contact register was prepared, which remains open. This is populated with stakeholder feedback to assist with reporting and further planning. This registers comments an issues raised.

7.9 Overall response during the initial consultation phase

The project team distributed over 400 letters within the 'area of social impact' and sent emails to identified lead stakeholders. In response to this proactive communication, the project team received return contact and held discussions with 12 local stakeholders. In total the project held 2 meetings, 5 phone conversations, received 5 surveys and 4 emails.

When we asked why the response was low, stakeholders explained that the plant is low profile, with no impacts or issues.

All of the information provided is relevant to the proposal, however without greater levels of data, it is not possible to say whether the views expressed are representative on these numbers alone.

However stakeholders were long-term residents, well connected with other groups and could offer what they considered were widely held beliefs. Stakeholders included a leading agribusiness advisor, the local principal, and the school P&C president. One contributor explained the project has been discussed by a number of community groups with little material concern expressed.

Stakeholder contact and comment - Information received

Table 32 – Stakeholder feedback

Sentiment	Number of responses
Positive	
No impact	7
Proximity to new lakes/ operational area no concern	4
Professionally managed operation	3
Beneficial traffic solution	3
Professional trained drivers	3
Positive opportunity for future recreation which doesn't currently exist	4
Necessity of sand for concrete production and the construction industry	4
Neutral	
Interested in justification 24/7 hour operations	2
Interested in whether Cudgen would see more traffic, inc. heavy traffic	2
General interest - extent of lakes	3
Query about the extent and effect of landscaping/ rehabilitation	3
Request to consider cumulative impacts in studies and operations	1
Request for third party to access intended private haul road	1
Negative	
Potential impacts to visual amenity	2
Potential concern about noise	2
Potential light at night from truck movements	2

Communications collateral

Community letters

January 2021

Hanson Tweed Sand Plant – proposed expansion

Your opportunity to be involved and comment

Hanson is one of Australia's leading providers of materials to the construction industry, supplying gravel, sand, aggregates, and pre-mixed concrete.

To ensure stable and affordable supply of these materials for construction companies, Hanson manages a supply chain network from local sources.

As part of this supply chain, Hanson has operated a sand plant at Cudgen for almost 14 years. The plant is located near the wastewater treatment plant off Altona Road, Cudgen. From this plant, Hanson supplies sand for building, infrastructure and road construction projects.

As the construction industry needs certainty of reliable, affordable supplies of sand, Hanson has lodged an application with the NSW Government to expand and extend the life of the plant and the volume of sand we can extract.

Currently the plant has a life of around 6-10 years depending on market demand. To achieve longer-term security of supply, we are seeking to extend this to a 30 year timeframe to support future construction projects and jobs.

The NSW Government has determined our proposal is a project of "State Significance". We therefore need to complete an Environmental Impact Statement (EIS) to determine the suitability of our application.

To complete the EIS we are welcoming community and stakeholder review and input to our project. We are planning to provide briefings and seek community input about our plans.

If you would like to discuss our project, please get in touch with our project team by email at: contact@tweedsand.com.au and by freecall at: 1800 844 889 to arrange a time that best suits you.

A description of the project and our planning requirements can be referenced at: https://www.planningportal.nsw.gov.au/major-projects/project/25926 This also includes the planning and approvals requirements, including the various studies we need to complete as part of the EIS.

Thank you for your interest and we look forward to hearing from you soon.

Tweed Sand Plant project team

January 2021

Hanson Tweed Sand Plant – proposed expansion

Your opportunity to be involved and comment

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A description of the project and our planning requirements can be referenced at: https://www.planningportal.nsw.gov.au/major-projects/project/25926 This also includes the planning and approvals requirements, including the various studies we need to complete as part of the EIS.

While the sand plant is several kilometres from your residence and separated by the Pacific Motorway and the Tweed River, you may be able to see the plant at some time in the future, as it gradually expands and a water-body is eventually created. As part of our social impact assessment, we would like to discuss your thoughts on the potential impacts or benefits to you.

Thank you for your interest and we look forward to hearing from you soon.

Tweed Sand Plant project team

vaxagroup.com