Community Consultation for the Tweed River Entrance Sand Bypassing Project

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Abstract

The Tweed River Entrance Sand Bypassing Project (TRESBP) operates across the Queensland/New South Wales state border. Community consultation prior to the conception of TRESBP identified the need for a safe navigation channel at the Tweed River entrance along with the restoration and maintenance of the southern Gold Coast beaches. Community consultation for the project began during the environmental impact assessment process for the initial dredging of the entrance and beach restoration work, which was carried out whilst the concept for the permanent system was being developed.

An Environmental Management System was produced during this process that outlined an action program for community consultation for the duration of the project. Community consultation techniques have included media releases, poster noticeboards, public meetings, newsletters and brochures. Ongoing public input is being obtained through a project advisory committee. Through the implementation of these techniques valuable knowledge has been gained about holding successful public meetings and media interviews. This paper outlines the history, implementation and valuable lessons learnt from the community consultation process employed.

1. Introduction

The Tweed River entrance is located about 500 metres south of the New South Wales – Queensland border on Australia’s East coast. Wave induced longshore sand drift can cause dangerous navigation conditions at the entrance. This drift is predominantly from south to north with a net long-term average rate of 500,000 cubic metres per annum (Hyder et al 1997). The Tweed River Entrance Sand Bypassing Project (TRESBP) is being undertaken by the NSW and Queensland State Governments (with the support of the Gold Coast City Council) to improve navigation conditions and improve and maintain the amenity of the southern beaches of the Gold Coast by capturing sand on the southern side of the entrance using a jetty mounted jet pump system.

The system pumps the sand under the river and discharges it about 600 metres to the north. Whilst the planning and environmental studies were being undertaken for this fixed system, trailer suction dredges were used to maintain the navigation channel and restore the beaches to the north. This dredging and sand nourishment work commenced in April 1995 and will continue until August 2001.

Community consultation is the process by which the public can:

(1) learn about the project, and
(2) advise the proponents of their needs.

This process is of value as misunderstandings can be avoided and the public’s true objectives can be known and addressed.

The intention of this paper is to highlight some useful community consultation techniques and to stress the importance of a well planned consultation strategy.
2. Community Consultation prior to the TRESBP

In NSW, ongoing community consultation with the local residents of the Tweed River area previously existed via the Tweed Entrance Community Liaison Committee. This was set up by the then Department of Public Works and chaired by the local member. The committee initiated the ‘Reviving the Tweed’ (Public Works, 1990) and ‘River Management Plan’ (Public Works, 1991b) studies which were catalysts to the formulation of the estuary management processes used across NSW.

In Queensland, consultation had been carried out during each of the beach nourishment projects in the late 1980’s and Qld interests had also been represented by the Tweed Entrance Community Liaison Committee.

3. Public Consultation as part of the Environmental Impact Assessment Process

TRESBP has conducted two environmental impact assessment studies (Acer Wargon Chapman, 1994 & Hyder et. al., 1997). As these are referred to as Environmental Impact Statements in NSW and Impact Assessment Studies in Queensland, a merged title of EIS/IAS was adopted to reflect the differing terminology in each state.

The two staged construction approach was adopted to allow the navigation channel to be maintained and the beaches nourished using mobile dredges while the planning and environmental studies were completed for the long term sand bypassing system.

The 1994 EIS/IAS addressed the dredging of 2.5 million m$^3$ of sand from the mouth of the Tweed River to restore the southern beaches of the Gold Coast. Consultation with the community began in mid-1994 with newsletters and media releases. The EIS/IAS document was publicly displayed in November 1994 and a public meeting followed. A full-time presence was maintained on site at this time by manning a mobile office.

In 1995, after large quantities of sand were placed on the upper beaches, beach surveys were conducted to gauge people’s opinions of the local beach amenity and surf quality. At this time comments indicated that the condition of the beaches was good, but surf quality was generally mediocre.

The second EIS/IAS (1997) covered issues relating to the establishment and operation of a permanent sand bypassing system. Public opinion was sought from the local community via newsletters, posters, the media and a public meeting. A 24-hour telephone line was also established to receive community feedback.

Community consultation during the EIS/IAS process involved the processing of submissions from agencies, community groups and individuals. This provided an opportunity for residents to give the project input about the aspects of the project that concerned them and for them to flag these early in the consultation process. This was useful, as experience has shown that if these issues are not identified and addressed properly in the early stages then they are likely to cause concern later.

A Submission Review Report, containing all responses and replies, was prepared at the end of the consultation period for each EIS/IAS.

The EIS/IAS and associated submissions were forwarded to the Department of Urban Planning in NSW and the Environmental Protection Agency in South East Queensland. The project received environmental approval subject to a number of conditions, including conditions relating to community consultation.

Ongoing community consultation is addressed in the TRESBP Environmental Management System (EMS). Some of the Environmental Management Plans contained within the EMS address the community consultation approval conditions. A summary of the consultation issues resulting from the EIS/IAS process has been collated within the plans and an action program has been developed to ensure that adequate community consultation takes place.

4. Significant Community Consultation

Significant community consultation events during TRESBP’s six year history have been:

1. Project start up - The initial dredging and beach nourishment was a large undertaking that generated a considerable amount of interest. An information caravan was set up at Point Danger during this period and manned by Gold Coast City Council representatives.
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2. Attempts to raise a sunken trawler from the Tweed bar in 1998 - The unexpected collapse of the crane arm that was hauling out the trawler, ensured this event was newsworthy.

3. During the tendering and post-tendering negotiations it was difficult to publicise information about the project for reasons of confidentiality. Thus for about 18 months from the end of the second EIS/IAS to the start of construction there was a quiet period. This meant that the more recent ‘generation’ of residents was ignorant about the project and its objectives and many other residents had forgotten. Therefore a re-education exercise was necessary when work recommenced.

4. Construction of the permanent system during year 2000 - Various milestones throughout the construction phase were newsworthy stories. In March 2000, the Friends of Rainbow Bay appeared in response to the commencement of construction. They advised that they were unhappy with the proposed outlet design at Snapper Rocks West and requested consultation regarding the issue. A public meeting was held to discuss the options and the consultation resulted in a modified design.

This reaction was part of a larger concern about the Rainbow Bay beach width and the project’s effect on the “lagoon” feature. Some residents confessed an awareness of these problems during the EIS/IAS process, however they advised that they had elected not to respond or comment regarding them at that time.

5. Commencement of operations in 2001 - Media releases were issued for each significant event and were seen as an opportunity to re-educate the community. Project representatives also ‘manned’ the outlets to respond to questions from curious onlookers. Public access onto the jetty is an issue that developed during construction. A resistance towards public access related to the expected increased traffic through the village of Fingal. Therefore, the ongoing consultation has been between the local Tweed Shire Council and stakeholder residents.

5. Community Consultation Methods

5.1. Newsletters and Brochures

Newsletters have been generated to address current project issues. In late 1994 the first newsletter detailing plans for the initial stage of dredging (Stage 1A) and beach nourishment was circulated. This has been followed by nine more (Refer to Figure 1 for Newsletter 8). Newsletters have been circulated to residents via council mailing lists, Australia Post letterbox drops and distributed via community groups, organisations and local councils. Distribution from Tugun to Fingal requires printing of 17,000 copies.

Given that readers of the newsletters may know little about the project, a brief description of the project is incorporated in each issue. While it has been tempting to assume the public know about TRESBP, there is a constant population turnover and there are many temporary residents and tourists. As the audience for which the information is being provided is largely non-technical, the use of straightforward language without jargon or acronyms is important. Diagrams and photos have been utilised as much as possible.

In June 2001, a general information brochure was generated as an overview of the project and its objectives for those seeking general information.

5.2. Media Coverage

When possible, TRESBP has tried to form working relationships with journalists in order to “educate” them about the project. As a result reporting about the project has become increasingly accurate. Media appearances have been entirely by project engineers. Although some believe PR consultants should be used, we believe that the public appreciates hearing from people directly involved in the project.

When conducted professionally, virtually all media coverage can be beneficial, even “hostile” coverage. It informs the public and helps to dispel myths at an early stage. This means that by the time the work on site commences the public are not surprised. “Hostile” coverage is successful in attracting public attention due to its controversial nature. Careful consideration of public opinion and ideas can lead to the identification of areas where
In December 1999, the State Governments of New South Wales and Queensland announced that contracts had been executed with a consortium led by McConnell Dowell Constructors (Aust) Pty Limited for the development and operation of a permanent sand bypassing system for the Tweed River entrance.

The Tweed River Entrance Sand Bypassing Project is a joint scheme by both State Governments to bypass sand around the Tweed River entrance. The objectives of the project are:

- Establish and maintain a clear navigation channel at the mouth of the Tweed River to the open sea.
- Restore and maintain the amenity of the southern Gold Coast beaches by achieving a continuing supply of sand at a rate consistent with natural drift rates.

To achieve these objectives McConnell Dowell have built a permanent system that will pump sand from a specially constructed jetty on Letitia Spit to outlets on the southern Gold Coast beaches and also at Duranbah. From time to time the use of a mobile dredge will also be necessary to move any bar that forms at the entrance to the river as a result of sand that finds its way through the jetty pumping system.

**Commissioning Program**

The permanent system is now ready to be tested via a “commissioning program” to confirm the performance of the system. During January 2001 testing will take place using water. At the next stage, in February 2001, testing using a sand and water mixture will be trialed. Full operations will commence after the commissioning tests have been proved to be successful.

**Operation of the system**

During the commissioning program both day and night discharges may be expected to occur. Some testing is best done during the day when the flows can be observed by the operating personnel. After the commissioning program is over, sand pumping will mainly be at night.

**How sand is pumped from under the jetty**

As shown in the drawing of the jetty, the jet pumps mounted under the jetty will draw down a series of cones in the beach. Sand, that is moved along in the surf zone by waves, can fall into these cones to be picked up by the jet pumps. During the commissioning program earth moving equipment may be used to push a limited amount of sand into the cones if necessary to ensure that the system is tested at high transport rates. The beach immediately adjacent to the jetty will be temporarily restricted during the commissioning program. When normal operations take over, the beach will be re-opened.

**River entrance navigation**

The permanent sand bypassing works will reduce the supply of sand to the entrance, improving the entrance for navigation. However, the Tweed bar will always require caution because the waves and strong currents will still be present.

**Where the pipeline outlets are located**

The locations of the jetty, underground pipes, pumps and outlets are shown on the aerial photograph. The main outlet, known as Snapper Rocks East, is on the eastern side of Point Danger just north of Duranbah Beach. There is a secondary outlet located on the western side of Snapper Rocks. These are both permanent outlets.

There are also outlets at Duranbah and Kirra Point that will be used occasionally, but will be constructed as necessary each time pumping is to take place. A short flexible pipe is connected to a valve pit and laid on the ground surface to the preferred discharge point. Once the discharge program is finished the flexible pipes will be...
removed. During commissioning, all of the outlets will be tested with water, and Snapper Rocks East will be tested with sand slurry.

Sand and water discharges from the outlets
The sand and water mixture forms a slurry that will appear very much like ordinary seawater in the surf zone. A strong flow will be seen out of the end of a 400mm-diameter pipe. The water then flows away leaving the sand behind for the beaches. Signs will be posted, warning people about the fast flow of the slurry as it exits from the pipe, and a siren will sound before a discharge occurs.

Some of the sand pumped during the commencement of testing may look light grey because it has come from deep beneath the beach. After a couple of days this grey colour will disappear as the sand bleaches. Only one outlet will discharge at any one time.

Turbidity caused by the sand and water discharge
There will be periods of turbidity similar to the naturally occurring turbidity in the surf zone. The animals that live in the surf zone are used to elevated turbidity and are not harmed by it. Once slurry discharge stops, any outlet turbidity will disappear within minutes.

System noise
The pumps are located south of the Tweed River in an area where nobody lives. Apart from a short warning siren at the outlet just before a flow starts, noise will be negligible.

Potential for future beach erosion
Erosion will still occur from time to time but now beaches will recover after storm events. A big storm can push the beach back over 50 metres. However, the sand bypassing system will prevent long term erosion like that which occurred in the past when sand was being trapped south of the entrance training walls.

Surf quality
Surfing requires smooth peeling waves. These waves are at their best when they peel along a smooth sandbank. The permanent system will provide a continuous supply of sand that will be moved by the natural wave conditions and prevailing currents occurring within the active surf zone. This will ensure smooth sandbanks for better surf quality. Also, dredge placement strategies are being investigated that are intended to spread the sand evenly in the offshore areas of the southern Gold Coast beaches to a profile designed to complement surfing conditions.

MAINTENANCE DREDGING CONTINUES

Until the sand pumping jetty becomes fully operational in the next couple of months, the dredge “Port Frederick” will continue to keep the navigation channel open. The dredged sand is placed in waters off the southern Gold Coast beaches. The waves then move this sand onto the beaches in a natural fashion.

ENVIRONMENTAL AND COMMUNITY ISSUES

A “Beach Nourishment Group” has been formed recently from the local community. This group focuses on Duranbah, Snapper Rocks, Rainbow Bay, Greenmount, Coolangatta and Kirra. This group advises the sand-bypassing project on local beach and surf issues. If you would like to contribute to this group please contact Libby Boak at Gold Coast City Council on 07 5581 6962 or 0414 180 553.

The residents of Rainbow Bay provided valuable advice in regard to the Snapper Rocks West outlet. This outlet has now been built with little impact on the area.

An Environmental Management System (EMS) for the operation of the jetty pumping system is currently being finalised. This will make sure that the operations comply with approval conditions designed to protect the environment. The EMS is a public document that will be available shortly at local libraries. Alternatively, you can contact the hot line number below.

WANT TO KNOW MORE?

If you have any queries contact either:

- Dr Tom Connor at Brown & Root Services Asia Pacific Pty Ltd
  Phone (07) 3368 9228, Fax (07) 3368 9229, email: tom.connor@halliburton.com
- Ms Jennifer McMahon at McConnell Dowell Constructors (Aust) Pty Ltd
  Hot Line Phone (07) 5581 9673, Fax (07) 5524 5241
  email: jennifer_mcmahon @ macdow.com.au

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improvement can be made to the works being undertaken. Utilising this advice (with discretion) can not only lead to smarter technical solutions but provides the public with ownership of the project. To produce a successful outcome, consultation needs to take place at the right time. Its too late if it has been built!

5.2.1. Media Releases

An effective method of providing the press with information has been the production of media releases. The releases are written in a style that can be placed into a newspaper verbatim, to make it easy for the journalists. These releases are faxed to TV, radio and print media and Government advisers. Media bulletins must be timely otherwise they will be ignored.

5.2.2. Media Interviews

Following release of a media bulletin, or for other reasons, the media will request an interview. Usually little notice is given as the media operate on very short time scales. Radio interviews are mostly held over the phone immediately. Therefore, it is important that the project has knowledgeable people able to do these interviews at no notice. It is usually not feasible for public servants to do these interviews because of the time necessary to receive approvals through the bureaucratic process. For this reason mostly the TRESBP Project Managers (Brown & Root) and Operators (McConnell Dowell) have been interviewed.

Hostile interviews can be tricky. Our advice is, give oblique positive answers to hostile questions and stay calm. The TV media have a bad habit of conducting a 10 minute interview and subsequently broadcasting only 30 seconds of the footage where the interviewee has said something “strange”. Techniques for a TV interview include looking at the camera lens not the interviewer, not using jargon or acronyms, not saying “um” or “ah” and not wearing a white shirt.

5.3. Notice boards and WWW sites

Project poster boards have been erected at each of the beaches within the project bounds and at other sites where the project is a visible feature. These boards have been used to display general information as well as newsletters, posters concerning specific issues, pumping schedules and programs.

Recently two websites have been established to provide electronic access to this information. These are www.tweedsandbypass.nsw.gov.au and www.env.qld.gov.au/sandbypass.

5.4. Site Visits

Currently the sand pumping jetty is not open to the public, however, since the completion of the jetty, visits by school groups, bus loads of tourists and other interested groups have been numerous. Although sometimes time consuming for the system’s operator, the process has been beneficial as the participants have gained a first hand understanding of the system, which can be passed onto others (parents, friends, etc.). Community open days on site with a BBQ and staffed by project representatives have also led to further appreciation of the project.

6. Ongoing Public Input

An Advisory Committee, which has direct access to the Ministers, is part of the formal ongoing consultation process. Formed under the Heads of Agreement (31st March 1994) between the State of NSW and QLD, it has operated since late 1994. The Advisory Committee has four community representatives and two officers for each state appointed by the Ministers and a representative appointed by each of the two local councils. The function of the committee has been to provide advice at all stages during the project and to represent the views of various stakeholder groups. The Advisory Committee is regularly updated with progress about the project and consulted about public consultation strategies and publicity. Members are recognised in the community and often questioned about controversial issues by members of the public. Therefore, it is important that they are kept regularly informed.

To meet the consultation conditions developed through the EIS/IAS process, a “Beach Nourishment Group (BNG)” has been created. This group is facilitated by a council representative who arranges meetings and records opinions via evaluation sheets. The BNG select their own objectives for each beach. The sheets list these objectives which are ranked from 1 (unacceptable) to 6 (excellent). Examples of objectives include beach amenity, surf quality and fishing. This group selects a member who attends the Advisory
Committee to report the beach nourishment group’s evaluation.

7. Public Meetings

Possibly some of the most valuable knowledge gleaned from community consultation exercises during this project would be the techniques for executing a successful public meeting.

1. Hold the meeting in a comfortable sit down venue (not on site as it’s generally too noisy and uncomfortable)
2. Provide food and drink
3. Ensure the project speakers present in quick succession (as it should be expected that each presentation will annoy somebody in the audience)
4. Have professional audio visual presentations
5. Ensure the “opponents” representatives speak early in the meeting
6. Use radio microphones for question and answer sessions. This allows everyone to be heard and provides a method of controlling the discussion
7. Using butcher’s paper to record all of the question and answers, after the event incorporate this into a newsletter and mail it out to the attendees
8. Ensure the media attend and designate somebody to speak to them
9. Immediately after the meeting, produce a press release reporting the success of the meeting and the issues discussed. E-mail it to the media via a laptop and modem
10. Provide lots of visual aids eg. models, posters
11. Dress well, but not too formally (ie. No tie or jacket). The audience should be able to distinguish project members from the crowd
12. Employ a neutral meeting facilitator
13. Invite a neutral “expert” eg. University Professor, to comment on the project (it’s likely the audience will believe an “independent expert” before trusting the project team)
14. Project team should present a united front (ie. pre-arrange a consistent story).

8. Conclusions

Public consultation should be started early, but not too early (as people forget). It needs to be continuous otherwise you have to start from the beginning again.

Talk to the media as much as possible (even apparently adverse publicity is better than none at all).

The public have some smart ideas that are well worth incorporating into the project. Apart from genuine technical merit, incorporation of good ideas from the public helps to give them ownership of the project.

Consultation needs to be placed on the agenda of each meeting and proactive strategies developed. Although sometimes it can be easy to focus only on engineering issues and problems, it shouldn’t be forgotten that community pressure can completely prevent a project from ever getting off the ground.

9. Acknowledgments

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10. References
