The CIBR/LEI Community Engagement Framework for Biowastes

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REPORT INFORMATION SHEET

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Acknowledgements

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EXECUTIVE SUMMARY

Stakeholder and wider community consultation is recommended for Resource Management Act 1991 consenting and by the Local Government Act 2002 when making decisions on behalf of the community. In addition, the Treaty of Waitangi (1840) guides partnerships with Iwi for environmental management. However, such engagement can be challenging without a robust transparent process in place.

In the case of waste management issues, there are often significant existing infrastructure investments. Therefore, decisions can be heavily driven by technical criteria and there is a limited range of options that are feasible. However, community input can improve the quality of policy being developed, making it more practical and relevant. It can ensure that services are delivered in a more effective and efficient way for a local community and can result in cost and time savings by addressing community issues much earlier in decision-making.

The Centre for Integrated Biowaste Research (CIBR), a multidisciplinary research organisation, and Lowe Environmental Impact (LEI), a science and engineering company, have developed a Community Engagement Framework to assist waste producers and regulators (regional, district and city councils) to more effectively undertake community consultation with respect to the discharge of biowastes to land in New Zealand. In the context of this framework, biowastes are described as solid and liquid organic biodegradable waste, including biosolids, organic industrial waste, agricultural waste, kitchen/food waste, green waste, sewage effluent and greywater.

CIBR researchers developed and implemented a number of community engagement methods and have evaluated them for their ability to support integrated decision planning and improve science, policy and community engagement. LEI brings practical experience and processes required to satisfy regulatory and environmental requirements. Together, their collective experience has developed this Community Engagement Framework for the management of biowastes that provides a pathway to meet the requirements of the Resource Management Act, Local Government Act and the Treaty of Waitangi.

The CIBR/LEI Community Engagement Framework provides a clear and manageable process. It is based on a number of different factors that support 'good practice' and processes required to satisfy regulatory and environmental requirements of preferred options. The framework utilises the quadruple bottom line (QBL) approach to decision-making where environmental, social, cultural and economic factors are thoroughly considered and outlines how two-way communication can be facilitated by interactive stakeholder workshops, hui or public meetings. These community meetings provide the mechanism that allows regulators, technicians, engineers, council staff, elected members and community members to identify the key 'community' values that a 'technical' solution will need to align with, as well as to elicit relevant knowledge from the community. Importantly the process helps build shared understanding between different stakeholders, strengthens council and community relationships, builds greater trust and confidence in the decision-making process and is showing improved buy-in by communities.

1.0   Purpose

Centre for Integrated Biowaste Research (CIBR) researchers have evaluated and tested community engagement methods with urban and rural communities since 2003 to collectively determine sustainable biowaste management. Lowe Environmental Impact (LEI) engineers have tested a practical approach to community engagement over the last 15 years. As their respective community engagement processes have many areas of commonality, this has led to the development of a joint CIBR/LEI Community Engagement Framework for biowastes, which is recommended for use by the waste sector. This joint framework is underpinned by significant research evidence (see Reference section) and practical field experience.

The CIBR/LEI Community Engagement Framework aims to assist waste producers and regulators (regional, district and city councils) to more effectively undertake community consultation with respect to biowastes[1], such as the discharge of biosolids[2] to land. The framework has been designed to support the *Guidelines for the Safe Application of Biosolids to Land in New Zealand* (New Zealand Water and Wastes Association, 2003*)*; to enable the greater involvement of communities in decision-making; and to enhance beneficial re-use of biowastes, such as biosolids.

More specifically, the framework aims to:
- provide a manageable process for integrating technical and social factors into the management of biowastes;
- provide a mechanism to identify issues of local significance, as well as diverse community concerns and interests; and
- encourage regulatory authorities to adopt a consistent approach to community consultation.

Utilisation of the framework can:
- create an awareness within the community of the potential benefits and risks of biowastes use; and
- help build shared understanding between different stakeholders, strengthen council and community relationships, and build greater trust and confidence in the decision-making process.

2.0   Background

Waste management has long recognised the importance of 'public acceptance' in the success of any beneficial re-use of biowastes, but this has focussed on public 'education', rather than public involvement in decision-making. This is often based on assumptions that more 'technical' information will change people's values and viewpoints (Goven and Langer, 2009). However, more education and information are neither always effective nor necessarily relevant. There is increasing recognition in the sector that the 'technical' expert estimations of 'actual (technical) risk' may not take into account the factors important to how individuals and communities may see risk.

Such factors, sometimes called 'outrage' factors include (e.g., involuntary or out of people's control); not reversible (e.g., persistent pollutants are permanent additions to soils); unknowable (e.g., difficulties of identifying fate/effects of waste components in particular environments); or having delayed effects (some effects from the waste may not be evident

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[1] Solid and liquid organic biodegradable waste, including biosolids, organic industrial waste, agricultural waste, kitchen/food waste, green waste, sewage effluent, greywater etc.
[2] Treated or stabilised sewage sludge.

immediately and may affect future generations). Other important factors that can impact upon people's willingness to consider re-use options include the place-based and deeply held intrinsic environmental values that inform tikanga and Māori knowledge frameworks (Marsden, 2003; Ataria, et al., 2016).

Issues relating to wastes, such as wastewater and sewage sludge, are strongly determined by technical criteria and constraints (e.g., existing infrastructure sites, systems and networks of pipes to transport wastewater, and the systems are that expensive to replace, maintain, change or redesign). Managers of waste systems may fear that involvement of communities in management decisions may unrealistically raise community expectations, and may expose such diverse views that a decision is unable to be made. However, community input can improve the quality of policy being developed, making it more relevant and practical. It can ensure that services are delivered in a more effective and efficient way for that community and can result in cost and time savings by addressing community issues much earlier in decision-making.

This framework provides an approach to incorporating community knowledge, concerns and views into 'technical solutions' that are justifiable and acceptable, and enhancing sustainable management of biowastes.

3.0 Statutory requirements

3.1 Local Government Act 2002

Local authorities have a general requirement under Part 6 of the Local Government Act 2002 to undertake consultation in relation to decisions made on behalf of the client community. This includes funding decisions for public works, in which case consultation will need to be with all of the rate-paying public, or at least those members of the rate-paying public with the potential to be exposed to any liability for costs.

3.2 Resource Management Act 1991

Under the Resource Management Act 1991 (RMA), there is no direct statutory requirement for consultation with any other party. However, it recommends stakeholder and wider community consultation when making decisions on behalf of the community. It is best practice to engage with persons considered by the consenting authorities to be affected parties (i.e. community stakeholders) and to ensure that consultation with affected parties starts well before consent applications are lodged.

3.3 Treaty of Waitangi 1840

The Treaty of Waitangi 1840 guides partnerships with Iwi for environmental management; and the increasing number of Treaty of Waitangi Settlement Acts often prescribe the nature of relationships between local government and mana whenua[3] entities and how the environment is to be managed. The relationship between local government and Iwi is especially important[4].

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[3] Mana whenua describes the local hapū within a designated area or district who have sovereignty or mana of that locality that in turn is derived from their connection to ancestral occupation of that area.
[4] Section 6 of the RMA sets out the 'Matters of National Importance' that shall be recognised and provided for by all persons exercising functions and powers under the Act and including "the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga".

As both a Treaty partner and key stakeholder, Iwi and rūnanga have a very keen interest in being involved in biowaste, water and environmental decision-making.

4.0 Approaches to community engagement

There are many ways to approach community engagement.[5] The International Association of Public Participation (IAP2) has developed a useful Spectrum (Figure 1) outlining five different approaches, along with their associated goals, promises, and tools. One size does not fit all; it is important to think about your community's issue and the approach that fits best with your purpose.

IAP2 PUBLIC PARTICIPATION SPECTRUM

INCREASING LEVEL OF PUBLIC IMPACT

INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
Public Participation Goal:	Public Participation Goal:	Public Participation Goal:	Public Participation Goal:	Public Participation Goal:
To provide the public with balanced and objective information to assist them in understanding the problems, alternatives and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision, including the development of alternatives and the identification of the preferred solution.	To place final decision-making in the hands of the public.
Promise to the Public:	Promise to the Public:	Promise to the Public:	Promise to the Public:	Promise to the Public:
We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for direct advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.
Example Tools:	Example Tools:	Example Tools:	Example Tools:	Example Tools:
• fact sheets • web sites • open houses.	• public comment • focus groups • surveys • public meetings.	• workshops • deliberate polling.	• citizen advisory committees • consensus-building • participatory decision-making.	• citizen juries • ballots • delegated decisions.

Figure 1: IAP2 Approaches for Community Engagement.

4.1   New Zealand specific research

Since 2003, CIBR researchers have worked with community groups and key regulatory and industry stakeholders to derive collaborative management systems and technical solutions that are fit for New Zealand purposes and best practice.

Outcomes of the CIBR research suggest that neither the *Inform* nor the *Consult* approach described in the IAP2 framework are likely to be successful in this domain as they do not encourage constructive community engagement. The *Involve* approach permits more

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[5] See References for some key publications in this field.

constructive engagement, but is not as likely as the **Collaborate** approach to generate innovation, learning, agreement, and commitment to the selected solution. CIBR research suggests that the **Collaborate** approach is the best approach to work towards for community engagement, when the necessary commitments can be made. It allows an open dialogue without a preconceived agenda to follow a particular course of action or a narrow range of options. The **Empower** approach will usually not be appropriate in the biowaste management context for technical and legal reasons. (See Appendix 1, where these approaches, and their pros and cons, are described in greater detail.)

Consult, **Involve** and **Collaborate** typically involve 'face-to-face' community meetings or workshops. For Iwi, the 'face-to-face' or 'kanohi te kanohi' approach is vital for building and maintaining constructive relationships. Be aware that some Iwi and community members may feel 'consultation fatigue' or may be cynical because previous consultations seemed to have little influence on the decisions.

5.0   The CIBR and LEI community engagement framework

5.1   The quadruple bottom line

The CIBR/LEI Community Engagement Framework brings together a number of different factors that support 'good practice', including the quadruple bottom line (QBL) approach where environmental, social, cultural and economic aspects are explicitly considered to generate sustainable solutions. The QBL decision criteria process helps provide a structured way to identify key community concerns and priorities to ensure that any decision is based on shared understandings and a strong overlap of technical and community criteria. This approach is recommended by the International Council for Local Environment Initiatives (ICLEI) as the most appropriate planning and reporting format for local governments for sustainable development. A globally adopted definition for sustainable development is development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission, 1987). It has long been recognised that there are three bottom lines (Triple Bottom Line)—ecological, social and economic sustainability—that must be balanced and considered. However, indigenous peoples throughout the world have had an understanding of the principles of sustainability and have lived sustainable lifestyles, for millennia, thus a fourth dimension has been added to the framework – spiritual or cultural considerations (Scrimgeour & Iremonger, 2004; Swanson & Zhang, 2012; Hikuroa et al. 2010; Sengupta et al. 2015). The CIBR social science research team have pioneered the application of the QBL to the waste sector in New Zealand.

There are different ways to present the QBL and, due to its complexity, graphics are helpful. Two examples are given below. Animating the graphics is also a useful way to explain how the QBL works, so animated versions of the graphics shown below are available on the CIBR and LEI websites (www.cibr.esr.co.nz; www.lei.co.nz). The graphic of choice will depend on the audience and the person facilitating or chairing the community meetings.

5.2   The CIBR QBL Footprint approach

CIBR researchers conceptualise community engagement as an exploration of the four elements of the QBL (environment impacts, social views, cultural acceptance and economic cost) in order to attain sustainable solutions. They have found it useful to represent the process as a decreasing QBL 'footprint' (Figure 2). Community engagement clarifies the threshold between the acceptable and the unacceptable across the four elements and helps to identify solutions that have an overall 'footprint' of acceptability. The goal for biowaste management is to move from what is currently often a large footprint to a smaller, more acceptable one.
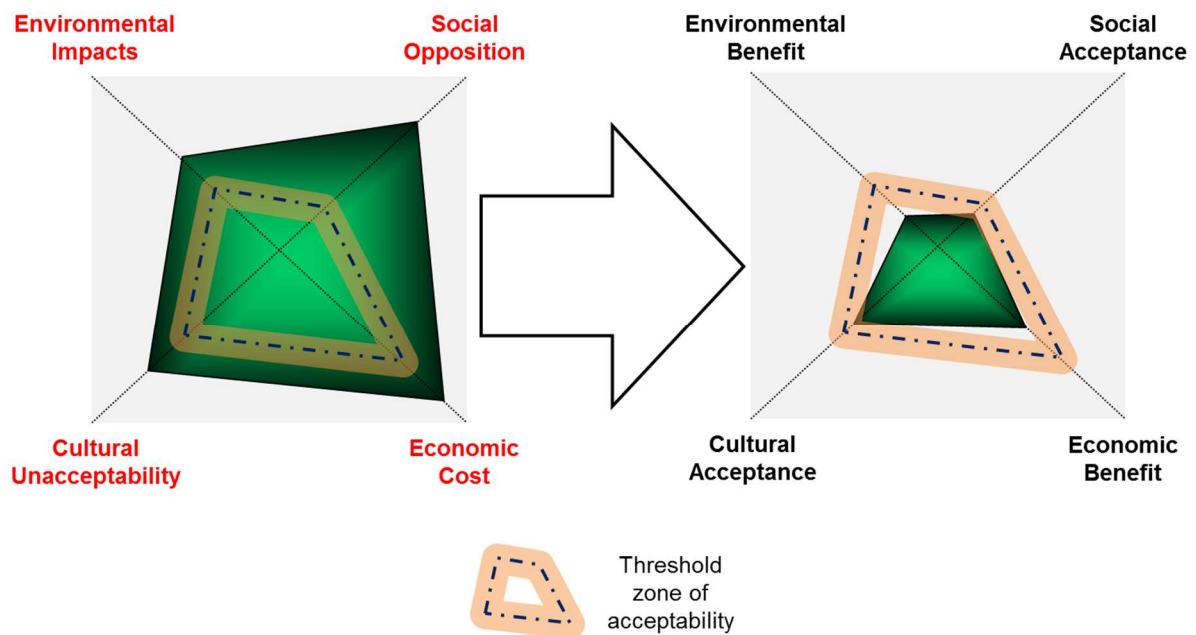
Figure 2. The Quadruple bottom line footprint. Reducing the size of the footprint via dialogue, technology and new knowledge.

5.3 The LEI Solid Stool Concept

LEI have developed a 'Solid Stool Concept' in their biowaste management projects with Councils and small-medium communities (e.g., Masterton and Foxton). The 'Solid Stool' builds on the QBL approach, but includes additional practical steps required for resource consenting, system operation and management. The concept involves a two-step process; the first step is working with the community to develop sustainable management options. The second step is the regulatory approval of the preferred options. The first step is essentially a Local Government Act process of engaging with the community and working out what is best, and the second is a Resource Management Act process where the preferred option is approved.

Step 1: A key aspect to the Solid Stool Concept is a 'Vision' which is developed at the onset of the project by the community and Council. LEI have found that presenting the QBL as a 'stool' provides an easy to understand concept and helps gain buy-in from the community on the need for each stool leg (or QBL consideration) to be considered as important. Failure to consider one or more values results in the overlying stool seat becoming unstable. The seat of the stool represents the practical journey from identifying values and issues, to developing options, identifying a preferred option and then implementing that option, these include:

- Gather Information
  - o Which enables an understanding of the background of issues, including:
    - Characterisation of the waste stream
    - Identifying limitations (e.g., material, site, environment etc.)
  - o Investigations:
    - What do we know and what don't we know?
- Design
  - o Once background work is complete:
    - Develop a range of technical options and modifications
    - Identify preferred option(s)

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- Consent
    - What Governance/community approval would be required for preferred option?
    - What regulatory approval is required?
- Operate and Manage
    - How will it look and how will it be managed?

Step 2: In the second step, engagement is around the effects of the preferred option, this will include investigating environmental, social/cultural impacts and affordability, i.e. the QBL. The solid stool can once again be used to aid these discussions with the community. As part of the RMA process it must be demonstrated that alternatives have been considered (i.e. Step 1). In Step 2 the seat of the stool is focussed on the regulatory requirements of the RMA, i.e. what is required to obtain the appropriate consents. This could include: gathering data for an Assessment of Environmental Effects (AEE) and Cultural Impacts Assessment (CAE); preparations of a Conceptual Design, and Management and Monitoring Plan.
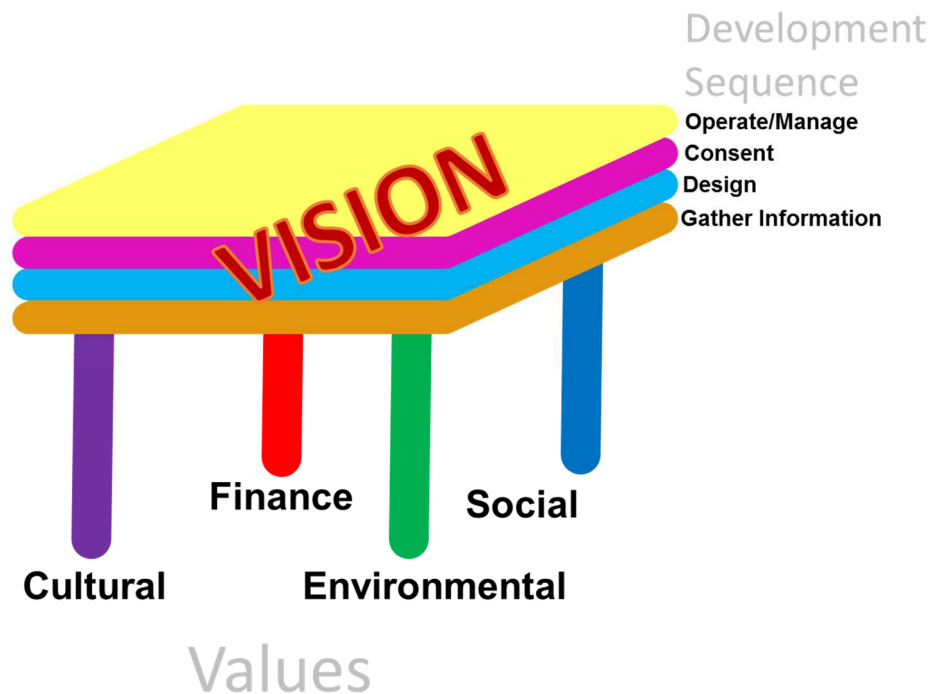
Figure 3. The solid stool concept.

5.4   Grounding Principles

The CIBR/LEI community engagement framework is underpinned by seven grounding principles:

5.4.1 Early

Engage as soon as possible, when there is still the flexibility to make changes to address issues raised by interested and affected people. Early engagement is likely to be more successful than engagement within a crisis. If engagement is left too late, people will think

there is no intention of taking their views into account. However, if consultation is *too* far in advance, too few may be interested (depending on the issue).

5.4.2 Transparent

Be open about what the project wants to achieve, what scope there is within the project to change certain aspects of the proposal and why there might be elements that may not be able to be changed.

5.4.3 Open Mind

Keep views open to the responses people make and the benefits that might arise from engagement.

5.4.4 Two-Way Process

Engagement is intended as an exchange of information and requires both the project team and community participants to put forward their points of view and to listen to and consider other perspectives.

5.4.5 Genuine

While the length of time available to engage is not open-ended or never-ending, engagement should not be seen merely as an item on a list of things to do that should be crossed off as soon as possible.

5.4.6 On-Going

It may be that engagement, or at least communication, will continue after the consent application has been lodged, or even after a decision has been made.

5.4.7 Agreement

Engagement does not mean that all parties have to agree on a proposal, although it is expected that all parties will make a genuine effort to strive for such an agreement. Even when agreement is not reached on all issues, it can be useful for points of difference to become better defined.

5.5 Step-by-step process

In this section a step-by-step process is outlined for community engagement that can aid the development of good working relationships with the community. This process will provide more robust decisions, with a good evidence base of community values and inputs**.**

5.5.1 Step 1. Know your community, issue and mandate

A. KNOW YOUR COMMUNITY

Get to know the local community and especially any mandated Iwi/hapū organisations or organisations that you believe would have an interest. Notify them of the issue, even if you are not statutorily bound to do so, because this is good relationship-building and shows respect and good faith.

Undertake an analysis of key stakeholders (e.g., affected people, environmental groups, local businesses, etc.) and know whom to involve. Have defensible criteria for why the invitation includes some people and not others, and be inclusive rather than exclusive. This 'scoping'

process is useful in building relationships and trust. If you use this process there is less chance of being surprised by someone who opposes decisions later on.

B. KNOW YOUR ISSUE

Know the technical facts – waste characteristics, site geology, hydrology, monitoring results etc. Be aware that some members of the community will also have expertise that they are willing to share For example, there might be retired engineers in your community, or people with specific local historical, cultural or environmental knowledge. Many in the community will look to the scientists and engineers as the experts and will want the organisation to show the lead in suggesting viable solutions to which they can then respond.

C. KNOW YOUR MANDATE

Know the limits of the engagement and decision-making process, and know the constraints, so that you can accurately outline the process timeline and what will happen next. Being open and transparent about budget and other limits, and who will actually make the final decisions and when, are important items in the initial conversations. Are the options fairly restricted, or is there scope to modify or do things differently? Can you consider new ideas and approaches?

Be flexible and ensure that staff are prepared to modify their own views by responding and incorporating community ideas. Normally the burden of community member involvement is borne by them so they often may want to know how their information is being used and to what extent it will make an impact. Or are you consulting simply to keep people informed, to test a predefined solution, or to build support for an outcome predetermined by regulators? If so, it is important to acknowledge this to yourselves and to the community.

5.5.2 Step 2. Disseminating Information

Getting the community involved will require dissemination of information. Effective communication is about ensuring that information is provided in a way that is clear and concise and reaches its target audience. Effective communication should follow these principles:

- **Relevant**. There is a lot of information freely available. It is important to make sure that all information provided is necessary and relevant;
- **Clear and Concise**. Information needs to get key messages across clearly and efficiently to capture peoples' attention;
- **Targeted.** Information needs to be targeted to its intended audience;
- **Accessible.** Innovative methods of information dissemination should be considered. In addition to more traditional methods such as newspaper and radio advertising, other methods may be appropriate, such as a project website, email updates and social media.

5.5.3 Step 3. Stakeholder and community dialogue/workshops

This step provides the mechanism to identify issues of local significance, as well as diverse community concerns and interests through two-way dialogue. It allows regulators, technicians, engineers, council staff, elected members and community members to identify the key 'community' values that a 'technical' solution will need to align with, as well as to elicit relevant knowledge from the community.

Every community has some people that have strong views and will readily make these views known to others. A robust engagement process can include those with strong views in a

structured and coherent way, while ensuring that the more reticent also have an opportunity to voice their views. Including these views ensures that those more passionate about the issue have a say, are listened to and that these people listen to the viewpoints of others. If people have a greater understanding of a complex issue and have been involved in a positive process they may be less likely to contest the decision in future. They should nonetheless be reassured that their involvement in the engagement process does not curtail their participation in later statutory processes.

You will need at least three meetings to allow time to present the background information and the potential options, provide the opportunity for feedback and further investigate the ideas or questions put forward. This will signal a commitment to include community inputs and provide a transparent process for feedback.

Each workshop has several steps, and 1½ hours is the minimum time required. It is important to be flexible: it may not be possible to get through all the steps, and tasks may need to be modified as the workshop progresses. A sample run sheet for workshops can be found in the Appendix 2.

Meeting 1:

- Understand the journey – what is the purpose of the engagement? What do you want to achieve? What are the parameters and constraints?
- Understand the background – what are the technical facts, waste characteristics, geology, hydrology, monitoring results, etc. Presentations need to be short, informative and focused on key information while pitched at the knowledge level of the group.
- Understand the options – what is the range of options available.
- Canvas from the group if there are other options that might be considered and if there are any questions (e.g., about the waste, the relevant environment or the options) that need to be answered before a decision can be made.
- Introduce the concept of the QBL and the need for balancing differing and often competing viewpoints of sustainability.
- The outcome of the first meeting is a greater collective detailed knowledge of issues and options, as well as awareness of what additional information needs to be obtained and who is missing and needs to be included in future dialogue.

Meeting 2:

- Present information answering any outstanding questions from Meeting 1.
- Review the QBL approach, using a brief 'workshop' process to raise questions/issues, which allows for community members to identify the key 'community' values that a 'technical' solution will need to align with. Much of the discussion should be focused on the environmental, cultural, social and economic QBL categories. There is no predetermination of what each category might mean as it is important that the community determine what these four areas mean to them. It is important to be flexible about the QBL categories. For example, a community may want to identify 'spiritual' values and concerns as a fifth criterion.
- Elicit feedback and community evaluation of options and arrive at a preferred selection of options. This can be done using a simple voting system.
- The outcome of this stage is typically a community nominated preference(s) or option(s) to a way forward with a number of questions or issues that may need to be answered or addressed at the third meeting.

Meeting 3:

- Review the process to date.
- Present information answering questions that may have arisen in Meeting 2.
- Discuss the short list of options produced in Meeting 2 and elicit a final option or options, again using a simple voting system.

- Discuss whether or to what degree the community's preferred option(s) will be implemented, explaining in detail which parts if any cannot be implemented and why and/or how the preferred option(s) will be implemented and what can expected. Be sure there is an opportunity for community responses and consideration of community views, objections and suggestions.

5.6 Conceptual design

Based on the previous three meetings, appropriate conceptual designs of the preferred option(s) are typically prepared, including the rationale for selecting this design and the anticipated operational, regulatory and environmental requirements.

A further community meeting may be required at this stage to refine the Conceptual Design. Based on the preferred option, there will be a need to identify the issues to be addressed in meeting planning and consenting requirements (see Statutory requirements above). At this stage of the process newspaper/website articles may be appropriate communication methods.

5.7 Guidelines for successful engagement

PLANNING IS CRUCIAL: Plan the process, steps and timing, so you have clear goals and steps. Outline these at the start so everyone has a common understanding of the process, steps and outcomes you want to achieve.

SCHEDULE CAREFULLY: Help ensure a good turnout by checking that the workshop does not clash with other festivals or community events.

REPRESENTATION: The quality of the data gathered is always dependent on who attends on the day. With most engagement processes, it is difficult to determine if the people that attend on the day represent the range of interests held by the wider community, so invite a good range of people or representatives from key interest groups. Emphasise that the workshop is only one form of community input and feedback, and that there will be other opportunities for feedback in the wider decision-making process. The more thoroughly the process is documented (e.g., minutes) and that documentation made available to the wider community, the greater the chances that the community as a whole will see value in the process and the decision reached through it.

MANAAKITANGA: Warm hosting and sharing food will bring participants together to dialogue constructively and minimise tensions or disagreements. Invite the local Iwi representatives to perform a karakia (prayer) then introduce the process. In closing, reiteration of next steps, feedback and larger decision process are respectful and informative.

PHYSICAL LAYOUT: An open area with tables arranged in a café style that allow small breakout groups is recommended so that people can work together. This helps break down the distinction between regulators, council and community that more formal rows of seating and speakers might convey.

FACILITATION: Consider having an independent facilitator to manage conflict if you suspect that workshop dynamics and personalities could get challenging. If appropriate, the workshop or hui should open with a karakia, followed by introductions of community leaders, kaumātua and the technical team. This should be followed by outlining the process and the rules for the day (e.g., listening respectfully to others) and clarifying expectations.

CIRCULATE: Community meetings work best with technical staff and expert advisors circulating to answer questions, share their knowledge and listen to the discussions. This can

strengthen understanding between staff and community participants, enable access to staff or expert knowledge to address some knowledge gap questions on the day to inform their discussions and test potential solutions more quickly.

SMALL GROUP PROCESS: Consider whether homogenous or heterogeneous (or both/alternating) small groups are appropriate. It is essential to ensure all voices are captured and all points acknowledged; 'park' points that are not immediately relevant to come back to and check for relevance later—have a blank sheet or other area set aside for this. Small groups of stakeholders can brainstorm a range of issues: for example, which concerns, values or aims are most important to them; which questions or knowledge gaps need follow-up; the relevance of their own local environmental knowledge; etc. It is good to rotate/circulate small groups if time permits so participants can appreciate that there are alternative values and different viewpoints to consider.

WHOLE GROUP PROCESS: The key points derived from small group discussions can be fed back to the wider group. Voting on values or options can take place by providing each participant with coloured dots (with or without priority ratings) and ask them to place their dots beside the values they feel are most important or options that are most preferred. A private voting process could be considered if an open process may influence responses. Examining tallied scores for majority support, contradictions, tensions or areas where trade-offs might be needed provides instant answers and feedback on decision-making.

PERSEVERANCE: Don't end the workshop early if things get difficult – stay engaged and try to move things on. Don't turn anyone away from a workshop. Even if someone has an antagonistic relationship with council staff, other community members in the group will be very quick to help moderate.

MEETING SUMMARY AND NEXT STEPS: Record the meeting in the form of comprehensive minutes; this enables an accurate record of what was discussed and any agreed next steps and or outcomes. As well as disseminating the minutes to the meeting participants, make them publicly available so that those who could not attend the meeting can be part of the process if they wish to attend the next meeting. The minutes should also describe what the next steps in the process will be.

6.0 Conclusions

There is a need for sustainable biowaste management solutions that recognise complex environmental, social, cultural and economic relationships and factor the latent and cumulative environmental effects that may occur at a catchment or regional scale. The CIBR/LEI Community Engagement Framework helps address this complexity by eliciting relevant environmental, social, cultural and economic knowledge; enabling shared understanding between different stakeholders; and strengthening council and community relationships, which can build greater trust and confidence in the decision-making process. The framework brings together 15 years of expertise from leading edge research and technical experience to produce an easy to follow step by step process to community engagement following a quadruple bottom line approach.

This enabling approach to consultation with community stakeholders is showing improved buy-in to biowaste projects by their respective communities, rather than a confrontational approach. Enabling communities to take ownership gives them the power to decide what they can afford and the trade-offs they are prepared to accept; which in turn will lead to an increased beneficial re-use of biowastes.

7.0 Further information

Further information on the CIBR/LEI Community Engagement Framework can be found at: **www.cibr.esr.cri.nz** or **www.lei.co.nz**

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Appendix 1: Applying IAP2 approaches to biowaste issues

Inform:

- One-way communication
- Often the default mode of engagement for waste infrastructure issues
- Not suitable for introducing change or getting 'buy-in'
- Provides limited opportunities for feedback and any feedback likely to be given by those with strong opposing views
- Typically low initial cost and useful for initial awareness-raising.

Examples: Notice of the resource consent intentions in a public newspaper; sending letters to affected parties; newspaper articles, leaflets, newsletters, written reports; posting information on council websites; social media, open days and school tours.

Consult:

- Often driven by regulatory conditions, e.g., statutory requirements for consultation
- Often used to ratify a pre-determined solution, or to obtain community feedback on selected pre-defined options
- Fits the 'business-as-usual' dynamics for wastewater decision-making, where there are strong technical and bureaucratic constraints
- Can evoke negative reactions from participants, as the opportunities for influence are highly constrained
- Lack of (perceived and/or real) ability to influence can result in a low turnout to public meetings
- Not recommended, except as a starting point.

Examples: Notification in the local newspaper or by mail to affected parties with an invitation for written submissions; surveys; public meetings.

Involve:

- Good approach to begin community engagement
- Signals a clear promise or commitment to include community inputs where possible
- Provides a transparent process for feedback to show how different viewpoints were considered
- Enables addressing questions on the day and testing potential solutions more quickly
- Enables relationship-building and gaining a better appreciation for the issues, different viewpoints, constraints and trade-offs
- Helps generate shared ownership for local solutions and innovations
- May raise expectations for greater community influence in decision-making, so it is important to have a good mandate and buy-in within council.

Examples: Interactive stakeholder workshops, working groups or hui with at least two meetings to give time for feedback and to further investigate the ideas or questions put forward. These meetings work best with 'experts on tap' so that council technical staff, local engineers and scientists can answer questions and circulate around working groups to share their knowledge and listen to the discussions. The 'involve' approach is used by councils and others in the Zero Waste Coordinator networks to inspire and involve communities, households, schools and non-governmental organisations (NGOs) in extending good practice and developing new initiatives for waste reduction and recycling.

Collaborate:

- Partnership approach
- Commitment to incorporate community viewpoints to the maximum extent possible
- Commitment to identify where and how community viewpoints have been incorporated, and to clearly explain reasons when community preferences not incorporated
- Requires a long-term commitment to building relationships and regular meetings
- Builds a strong sense of community ownership
- Provides a good platform to generate new ideas and build capacities and alliances to help find solutions to other council issues
- Requires approachable 'experts on tap' for any workshop or hui
- Can be resource-intensive and costly in the planning and in resources needed to sustain on-going conversations
- May require strong independent facilitation to manage historical or single-issue interest group dynamics or strongly expressed viewpoints.

Examples: Workshops or hui that are open to the community and are not designed to promote a predetermined course of action or limited options. The case-study that CIBR undertook in Kaikōura (Langer et al., 2013) used a 'collaborate' approach to build a science, Iwi and local council partnership, as well as involving wider community.

Empower:

- Involves a complete transfer of the decision-making power to the community, which may not be legally permitted in biowaste management contexts
- Not usually appropriate for decisions that include complex technical considerations, taking responsibility for large financial investments with long-term consequences and managing public health and environmental risks
- Time-consuming and requires significant resources to design and deliver well.

Examples: No examples exist in New Zealand to date. However, the RMA provides the ability to delegate authority to Māori. For example, the ability for consent authorities to transfer responsibilities to Iwi authorities (section 33); the ability for Iwi authorities to become heritage protection authorities and issue heritage orders (section 188); regional policy statements and plans and district plans which take into account any relevant planning document recognised by an Iwi authority and lodged with the council (sections 61(2A), 66(2A) and 74(2A)); and joint management agreements between councils and Iwi (section 32B).

Appendix 2: Sample workshop run sheet

Location: (Give clear instructions so people can find your meeting, or attach a map)

Date/time:

Workshop run sheet

Ground rules:
- Keep an open mind about the issues and options
- Respect each other's views
- Focus on the issues not the personalities
- Maintain confidentiality where necessary
- Seek consensus for decision-making where possible
- Accept the majority view as the Focus Group view where consensus is not available.

Aims:
- Selection criteria – QBL environmental, social, cultural and economic (What matters most?)
- Begin to explore the best options
- Outcome: Council has a list of options for costing and further technical review.

Outline:

7pm	Introductions	**Mayor**
7.15pm		**Selection criteria – environmental social, cultural, economic** **(Small group work)**
8pm		**Ranking the QBL criteria**
8.10pm		**Exploring the options** **(small group work)**
8.45pm		**Feedback** **Where to next?**
9pm	Finish	

Detailed run sheet: (preparation and instructions for staff and facilitators only)

Preparation:

Please can we have 'café style' room layout for the day – preferably round tables with chairs 3-4 people per table, 5 small tables, 1 rectangular or square table to side or back of room.

Materials/check list:

	Persons Responsible	Check
Room set up in café style – check with venue for set up. Café style' room layout for the day – preferably round tables with chairs 3-4 people per table, 5 small tables, 1 rectangular or square table to side or back of room.		
Drink and biscuits table – water jug, cups, teabags, hot water urn, coffee, sugar, biscuits etc. Mints for tables?		
Check with venue, Blu-tack on walls? No white table cloths?		
Name tags?		
Map of area (similar to Slide 51)		
Laptop		
Slide projector?		
Large table and/or wall to cluster & put posters on?		
Giant post-it note pad (is expensive with adhesive strip backing, could use flip chart paper and Blu-tack)		
Sheets/small roll of butcher paper (cheaper for cluster exercise, but we can join giant post-it notes together)		
Fine/medium tip different coloured marker pens (check no white table cloths)		
Multi coloured 8cm square post-it notes (x4 packs) Blu-tack, cellotape, Biro pens, scissors Coloured dots (red, blue/green, yellow, silver) Need 4 different coloured packs)		
Blu-tack, cellotape – can bring this		
A4 Questions for exploring options		
A4 Evaluation		
A4 Parking		
A4 Thoughts		

Detailed Run sheet – draft only

Have a plan like this, but be flexible. You might only get though some of the exercises.

Time	Activity	People/materials
6.15pm	Check/set up room.	Facilitator/all to set up tables/materials Parking and Thoughts sheets
6.45pm	Karakia for food Meet & greet.	Tea & biscuits (continuous)
7pm (10 mins)	Karakia – Iwi/mana whenua Mayor - introduction, endorse purpose Council staff – introduce outline process.	Check protocol and order with rūnanga/kaumātua
7.10pm (5 mins)	Facilitator (introduce her/himself, outline aims, expectations, structure of the workshop/hui). Incorporating community values into technical decision-making. First exercise on identifying the environmental, social, cultural and economic criteria that matter most. Acknowledge options that have been submitted and we will get to these later. If not completed please do so in next 5 mins and give to staff member to collate. Whilst we do this, engineer/staff person is going to work on inputting the options you have suggested. He will report to us at 8pm to show the top 5-6. We can then focus on these 'top' options in more detail in the second half of the meeting. Also, whilst we are working, the council staff might try to cluster these (cut and group same options together, 1s first, then 2s, 3s).	How will we weight these to show most popular? 1= 2= 3= 4= 5= 6= 7= etc.
7.15pm	Small group work (4 -5 tables, 4-5 people at each table). Allocate each table – 'Social', 'Cultural', 'Environmental', 'Economic'. Make sure you are with the topic that you really want to contribute to. We need all four areas covered so we have a deeper understanding of each area so this	Facilitator (small groups) - 2 giant post-it note sheets per table - 2-3 Marker pens - ½ cube small coloured post-it notes - Biro's

	information can help inform and guide further conversations.	
(5mins)	Quick intro name and organisation. Check who is sitting at the table beside you – do you need to move? Is there a good range of interests? Do you already know most of these people? Who is missing? Nominate a time keeper who can signal or say if someone is talking too much, give another person a turn, and help keep a process where we go around the table to give each person a turn to share their ideas. Nominate a scribe, someone who is a good open listener and who likes to write things down, but make sure scribe gets their own ideas down too.	
7.20pm (20-30mins)	*Understanding what matters most* Social, Cultural, Environmental, Economic Brainstorm – we want a list of bullet points to consider, have a deeper understanding of what criteria are most important to consider when thinking about wastewater treatment options. Unpack this, what do we mean by QBL etc. values. When we talk about culture, environment in relation to wastewater treatment and discharge, what are the criteria or concerns that underpin our views? What are our key concerns, values, or objectives? What really matters most? These might be impacts. Then, think about how you might measure each criterion, and/or what needs to be done to achieve or uphold this value. Note any questions you might have, or knowledge gaps that you can identify. Questions for experts? Questions? Parked questions? Time permitting: Rotate the posters to a different group to help appreciate there is more than just their value. Move poster to tables.	Facilitator
7.45pm	*Prioritise (All group)*	Facilitator

	Collect all the posters and Blu-tack to wall, or arrange on one big table. - Pass around the dots each invited person or interest group, if more than one, talk to each other to decide where to put the 3 dots (green or blue) - And 2 big red dots. Each person to take 3 red dots. - Optional: We could ask elected members and staff to use different coloured dots (yellow or orange) and do this exercise too, but we only count community votes. Keep the dot box secure with a staff member (don't just leave it on a table) as some people may help themselves to extra dots. Get people to walk around the posters. Look at the all issues that others in the room have identified. 1. Vote for the three issues that are most important. On Balance, across all the four areas, which three values/criteria matter most for you (blue/green) 2. Vote for the two issues that you think would really get in the way of an option, deal breakers. (red dots) Any crucial issues or criteria missing – write on post-it note and place on poster. Any thoughts on a poster that your group didn't work on. Questions, knowledge gaps? Any thoughts? Surprises? Is this what you expected? Is this how you'd expect the wider community to view things? Why/why not?	Coloured dots Three dots per person (blue, green) Two dots (red) Use dots and mini post-it notes to add comments to posters that you haven't been involved in.
(10-15mins)		
8pm (5-10mins)	*Options* Engineer/staff member report on most frequently ranked options. Show how clusters emerging on large table. Have map on standby, link options clusters with areas on map if possible.	Facilitator Data projector
8.05pm	*Options exercise* Back into small groups/tables – (Mix it up, sit at a different table, but think about good spread, range of viewpoints). Agree on a scribes and timekeeper roles.	Make an A4 question guide for here. Then they can work on giant post-it notes.

(20-25 mins)	Agreement on taking top five and not all of them. Would then randomly allocate option to each of the five tables. Maybe on table where not your top option, how does it sit. If you don't like, think about why? Title: A sentence to describe this option. Then thinking about the social, cultural, environmental, economic work that you've done, how does the option you are looking at fit with these criteria. List the benefits for this option? List the disadvantages of this option? Try to think about what others might think, think about options and issues/ideas outside your historic thinking, what would wider community think? Questions/prompts: Who is impacted? - Who will benefit? Who might be adversely affected? Who needs to be involved? Who do you need to work with to make this option viable? Bigger picture, wider impacts? What is needed to make this option work? What conditions need to exist for this option to be successful? Who has the power to block or undo this option? What are the uncertainties, unknowns, and knowledge gaps? Questions for experts?	
8.35pm (5-10mins)	*Big group* One person from each group to report to whole room. 1min each to summarise their option and key discussion points. Knowledge gaps perhaps.	Facilitator (all group)
8.45pm (5-10mins)	*All group* Stand around / have a look at the table of clusters. Talk to person beside you. Any surprises? Any underlying issues or tensions between the options? Where are the most unknowns or uncertainties? Has our best option changed? Are there any other options, other than the top five we have worked on today, that you'd like the council to consider?	Facilitator (all group)

	Which options would you like the council to do a full costing and technical review? All five or less?	
8.50pm (5mins)	Thank you to everyone. Anything you want to be heard within this process that you haven't had an opportunity to share, please write down on post-it note and stick to the 'Thoughts' poster. Evaluation forms – optional, to fill out before you go (A4 – What worked well, What could be improved? Any other comments?)	Facilitator (all group)
8.55pm (5 mins)	Council staff - What next? Timeline, feedback, notes of this meeting, next meeting etc.	Council staff
9am (5mins)	Close meeting Mayor – Closing Karakia	Mayor/Iwi
9.10pm	Tidy up and team debrief	Cellotape all the post-it notes to the posters. Label and keep each tables work together.