
Practice Note 8

Engineers and Ethical Obligations

Engineering Practice

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Preface

The purpose of the Practice Note Engineers and Ethical Obligations is to provide interpretative guidance for the new IPENZ Code of Ethical Conduct that will be relevant to both IPENZ Members and Chartered Professional Engineers.

Practice Note Development

This Practice Note has been facilitated by the Institution of Professional Engineers New Zealand (IPENZ).

The IPENZ Engineering Practice Advisory Committee has given the authors the task of preparing a document to be adopted by the engineering industry that reflects a national perspective.

The Practice Note has been prepared in accordance with standard IPENZ Practice Note procedures, which includes reporting on progress to the Engineering Practice Advisory Committee, peer review and general Membership review. This review and reporting process ensures the delivery of a robust, good-practice document.

Introduction

A fundamental characteristic of any profession is its code of ethics, or code of ethical conduct, which members agree to be bound by.

Members of IPENZ and Chartered Professional Engineers (CPEng) are subject to separate but identical codes of ethical conduct. An extensive review of the IPENZ Code of Ethics and CPEng Code of Ethical Conduct was carried out during 2014 and 2015 resulting in the new Code of Ethical Conduct¹, which came into force on 1 July 2016.

This Practice Note provides interpretative guidance for the new Code and refers to the IPENZ Code and IPENZ Members but it equally applies to Chartered Professional Engineers referring to their Code of Ethical Conduct.

Engineers and society

The surest path to enduring success in business and in the profession is by developing a good reputation. Such a reputation is built through an ethical approach to work that encompasses competence and integrity, and personal and professional values. These values contribute to an engineer's ongoing standing within the engineering profession and society, and with existing and potential clients.

Clients typically rely on relative strangers for significant engineering services in circumstances where they cannot assess the expertise or diligence required for the service. This leads to a client placing significant trust in an engineer which the engineer, as a professional, must uphold by demonstrating high levels of competence and professionalism and by adhering to their ethical obligations.

Members of the engineering profession are engaged in a practice that has ethics at its core. Ethical practice is not an optional extra.

The adoption and publication of a distinct professional morality, by way of a code of ethical conduct, is a mechanism for publicising the ethical stance of any profession. IPENZ Members are asked to play their part in upholding the reputation of the Institution and its Members and in supporting other Members as they seek to comply with the Code of Ethical Conduct. This includes:

- sharing public domain engineering knowledge with other engineers
- seeking and encouraging excellence in their own and others' practice
- keeping their engineering knowledge up to date.

The new Code of Ethical Conduct also provides an important measure of accountability for the profession by setting out the standards of professional behaviour that society expects of professional engineers. IPENZ's complaints and disciplinary process is a way to hold Members to these standards and to monitor compliance.

¹ The IPENZ Code of Ethical Conduct is the Code of Ethics prescribed by the Board in accordance with Rule 4.2 of the Rules of the Institution. The CPEng Code of Ethical Conduct is contained in Part 3 of the Chartered Professional Engineers of New Zealand Rules (No 2) 2002, which is a regulation under the Chartered Professional Engineers of New Zealand Act 2002.

Ethical decision-making and communication

Good judgement and good decision-making are central to ethical practice. Ethical competence is demonstrated primarily in how Members make decisions. To make a good decision, it is essential that all relevant information, rules and values are assessed and weighed up to be then implemented into appropriate and effective outcomes. Good ethical decisions are characterised by:

- Diligence – have all reasonable factors been considered?
- Objectivity – how open has the Member been to those factors?
- Communication – have all avenues of communication been explored?
- Coherence – does this decision make sense within other decisions that have been made by the Member, or would this decision probably be made by another Member faced with the same circumstances?

Special consideration needs to be given to the importance of communication. All working relationships can be improved and misunderstandings avoided with careful attention to communication.

Important communication skills include:

- listening and asking relevant questions for clarification
- giving clear and concise advice
- being assertive with respect to clarification or interpretation of instructions.

Good communication procedures include:

- keep a summary of all important conversations with clients, other designers, contractors and other significant parties
- confirming verbal agreements in writing
- the basis of the fees charged recording all decision-making processes
- being available to clients to discuss matters of concern
- having documented procedures and internal audit systems for staff
- maintaining up-to-date files
- following a recognised professional practice .

The IPENZ Code of Ethical Conduct 2016

The Code of Ethical Conduct is framed around eight core 'rules' or 'principles'. Each rule will be considered and discussed.

1. Take reasonable steps to safeguard health and safety

This means Members must recognise the need to protect life and to safeguard people, and must act to address this need in their engineering activities.

The Code emphasises the engineer's role in designing and implementing safe technologies for the public and in creating safe workplaces for staff. This includes:

- Public safety - considering the safety and well-being of the community and having regard to this principle in assessing obligations to clients, employers and colleagues.
- Risk management - ensuring that reasonable steps are taken to minimise the risk of loss of life, injury or suffering that may result from their engineering activities, either directly or indirectly.
- Workplace and construction site - minimising potential dangers involved in the construction and manufacture of engineered products and processes. It is the engineer's responsibility to draw the attention of those affected to the level and significance of risk associated with the work.

The new Health and Safety at Work Act 2015 places specific obligations on engineers who undertake design, manufacture and construction.

2. Have regard to effects on environment

This means Members must recognise and respect the need for sustainable management of the planet's resources. It means they must endeavour to minimise adverse environmental impacts of their engineering activities for both present and future generations.

Sustainable management is often defined as the management of resources, production and emissions to meet the needs of the present without compromising the ability of future generations to meet their own reasonably foreseeable needs. The overriding purpose of the Resource Management Act 1991 is "to promote the sustainable management of natural and physical resources". This includes the built environment.

In accordance with this obligation, engineers should:

- use resources efficiently
- minimise the generation of waste and encourage environmentally sound reuse, recycling and disposal
- recognise the potential adverse impacts of their engineering activities on the environment and seek to avoid or mitigate them.

3. Report adverse consequences

Society expects engineers to take action on engineering matters of concern. Under the Code of Ethical Conduct, Members who observe an engineering matter that, in their opinion, has a likelihood of significant harm to people or the environment are obligated to act. As a minimum, this will involve the following steps:

- The Member making enquiries to satisfy themselves, on reasonable grounds, that the engineering matter of concern is being managed appropriately. For example: bringing the matter to the attention of an appropriate person; confirming the nature of the issue; understanding what, if any, processes or systems will address the matter; and satisfying themselves that those processes or systems are being appropriately used to address the matter.
- If, after making enquiries, the Member still has concerns, the Member should consider whether there are confidentiality considerations in reporting the matter. If there are confidentiality considerations, the Member must discuss the matter with the person(s) to whom confidentiality is owed (for example, a client or employer), including their intention to report the matter to the appropriate regulatory body. This provides an opportunity for the client or employer to respond to the concerns.
- If, after these steps, the Member still has concerns that the matter will not be addressed in an appropriate manner, the Member must report it to the appropriate regulatory body.

In dealing with such situations, Members will need to demonstrate professionalism, good judgement and diplomacy. Note the further confidentiality requirements as described in Rule 7.

4. Act competently

Members are required to keep their engineering knowledge and skills up to date, and only undertake work within their competence. This includes ensuring people performing engineering activities under a Member's supervision, or authority, are also competent.

Competence is the overarching obligation of the professional with respect to the client and employer and includes:

- Possessing sound engineering knowledge applied with skill, diligence and care
- Keeping engineering knowledge up to date through structured learning. For example, CPD and participation in technical specialist organisations.
- Understanding limits of competence. The engineer who undertakes work for which they are not qualified or sufficiently experienced deceives the client and risks harm to others and to their own reputation.
- Accepting personal responsibility for work done. This includes work done by themselves or those under their supervision, and requires taking steps to ensure that anyone working under their authority is both competent to carry out the assigned tasks and similarly accepts personal responsibility.
- Ensuring that they do not misrepresent their areas or levels of experience or competence.

Developing competence is a natural expectation of a professional and may involve:

- On the job learning and training
- Working under the guidance of a supervisor or mentor
- Having design work peer reviewed
- Attending training courses, seminars, or conferences
- Learning through networking and discussion groups
- Joining expert groups of technical organisations.

Sharing and communicating knowledge and expertise in professional groups or engineering associations by giving lectures, coaching or training.

5. Behave appropriately

As professionals, Members are required to behave appropriately. This means being honest and objective, demonstrating integrity in their dealings, and treating people fairly and with respect. This obligation covers all professional relationships that a Member might have in all areas of their engineering activities. These include relationships with clients, colleagues, project team members and all other professionals and project contributors. It also applies to all communications whether face-to-face encounters, phone conversations (including voicemails) or in writing (including all forms of digital media).

Even in circumstances where Members experience poor or inappropriate behaviour from another person in the course of their professional activities, they must endeavour to maintain their personal professionalism.

Managing conflicts of interest is a key element of professional behaviour. Conflicts of interest arise when the interests of a professional conflict with those of a client, or where the interests of one client clash with those of another. It is important that an engineer has no motive for compromising the performance of their duty to the client.

The Code of Ethical Conduct restricts the conditions under which a professional may act if a conflict exists. The Code requires an engineer to disclose, and appropriately manage, any financial or other interest that may, or may be seen to, impair their professional judgement on any engineering activities they are to carry out for that employer or client.

Good practice in all cases of conflict requires an engineer to first identify, and then assess, the actual or potential conflict. Suggested guidelines include:

- where possible in a dispute between two clients, decide which party the engineer is acting for and notify the other
- not to act for either, if doing so may harm the other
- assess whether it is better to withdraw
- suggest alternative professionals who can supply independent advice.

Inducements are a source of such conflicts. The Code of Ethical Conduct requires that the engineer not promise to give nor accept from any third party anything by way of inducement.

6. Inform others of consequences of not following advice

Members are required to exercise good judgement when assessing if important advice given directly to any party in the course of their engineering activities is unlikely to be followed. If significant harm to the health and safety of people or significant damage to the environment could or will result if their advice is ignored, then the Member must take action.

Members must take all reasonable steps to effectively communicate potentially significant outcomes to those not following the advice.

7. Maintain confidentiality

When dealing with employers and clients, Members are expected to treat information as confidential. This is the foundation of a professional relationship. An engineer's pursuit of their professional role is likely to be frustrated if clients are reluctant to be forthcoming with important, yet sensitive, information. The obligation to maintain confidence creates the conditions for the required level of openness.

Confidential information should be understood to be instructions and information that arise from, or as a consequence of, the engagement of a Member by a client or employer that a reasonable person would consider to be treated as confidential.

A Member must take care not to disclose confidential information relating to the work or knowledge of their employer or client (or former employer or client) without their agreement. A Member must also refrain from using that information for another purpose, including their personal benefit. It is recommended that the permission to disclose information be obtained in writing.

There are two important exceptions to the rules of confidentiality. The Code of Ethical Conduct permits disclosure of confidential information where, in the opinion of the engineer, there is the likelihood of significant harm to the health and safety of the public or to the environment. According to Rule 3, before disclosing confidential information, the engineer must make enquiries and be satisfied, on reasonable grounds, that the matter is not being, or will not be, dealt with in an appropriate manner. Confidential information can also be disclosed when that information is being required by a court of law. In all cases of disclosure, the Member must first inform the client or employer (to whom confidentiality is owed) of the intention to disclose, and give them an opportunity to respond.

8. Report breach of Code

As professionals, Members expect others who are bound by the Code of Ethical Conduct to also abide by it. Where a Member believes, on reasonable grounds, that another Member has significantly breached the Code of Ethical Conduct, the matter must be reported to IPENZ. What constitutes a 'significant breach' is a matter of judgement. Factors that might be considered in deciding whether a matter is a 'significant breach' may include the impact of the breach on the health and safety of people, the environment, the reputation of the engineering profession, or the impact on the client/employer.

Note on previous obligation related to Peer Review

Previously the IPENZ Code of Ethics required Members to inform others before reviewing their work. This provided the opportunity for the review to include all relevant information, some of which the member may not have been aware of but may have been known to the original designer or author. This obligation has now been removed from the Code as it was no longer considered to be a matter of Ethical Conduct. However, it is still considered to be a professional courtesy. Members should therefore continue to engage with those whose work they are reviewing, to ensure the assumptions and inputs to that work are fully understood.

For further information on conducting a peer review refer to IPENZ Practice Note "Peer Review".



If you have any questions about the IPENZ or Chartered Professional Engineers new Code of Ethical Conduct, please visit www.ipenz.nz/ethics or email ipenz@ipenz.org.nz

Legal information

Practice Notes offer guidance to practising engineers by exploring issues of importance to the profession and setting out good-practice methodologies. They are written by practitioners and subject to peer review by IPENZ Members. While every care is taken in their preparation, these documents are not intended to be exhaustive and are not offered as formal advice. Practices, systems and advice may vary depending on individual circumstances, and practitioners must exercise their own professional skill and judgement. IPENZ accepts no liability arising from their use and nothing in the Practice Note binds IPENZ in determining the outcome of any future complaint.




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