



# Research Ethics



# What are Research Ethics?

Research ethics refers to the principles, standards, and guidelines that ensure research is conducted responsibly, honestly, and with respect for people, data, and the environment.





# Why are Research Ethics Important?

These ethics are designed to protect the rights, dignity, and welfare of participants, society, and the environment while maintaining the credibility of scientific research.



# Why are Research Ethics Important?

They govern how researchers design studies, collect and manage data, treat participants, report findings, and handle professional responsibilities.



# Principles of Research Ethics





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# Integrity and Honesty

Integrity is the foundation of ethical research and refers to the commitment to truthfulness throughout the entire research process.

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# Accurate Data Collection

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- Carefully documenting all raw data without omitting or altering inconvenient results.

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- Correcting genuine errors transparently, with clear notes on the changes made.

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- Avoiding “cherry-picking” data that only supports a desired outcome.

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- Fabrication: Creating data that was never collected.

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- Falsification: Manipulating data or results to mislead.



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- Plagiarism: Using another person's work or ideas without proper credit.

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- Clearly describing the procedures, instruments, and analytical methods used.

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- Reporting limitations, unexpected findings, and negative results honestly.



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Transparency ensures that research can be critically reviewed, replicated, and improved. This involves:

- Documenting any deviations from planned protocols and their reasons



# Respect for Participants

This principle ensures that anyone involved in a study—workers, professionals, community members—is treated with dignity and fairness.



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# Voluntary Participation

Voluntary participation means that all research subjects are free to choose to participate without any pressure or coercion.



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- No one should feel pressured, persuaded, or subtly coerced into taking part.



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# Informed Consent

Researchers must obtain informed consent, providing participants with all relevant information about the study.



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- What the study is about
- What information will be collected, and how it will be used
- Any risks, however minor (e.g., being observed while working)
- How their privacy and data will be protected



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- Ongoing, meaning participants may ask questions or reconsider at any time



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# Informed Consent

If they agree to participate, they can sign or initial the consent form.



# Right to Withdraw

- All participants can withdraw from, or leave, the study at any point without feeling an obligation to continue.
- Your participants don't need to provide a reason for leaving the study



# Minimising Harm

- Researchers must take active steps to minimise any potential harm to participants.
- This includes identifying possible physical, psychological, social, or professional risks before the study begins and putting measures in place to reduce them as much as possible.



# Minimising Harm

- Usually, you'll assess risks during the planning stage, considering how the study's procedures—such as site visits, interviews, monitoring, or testing—might affect participants. You should clearly explain what steps you are taking to keep participants safe and comfortable and adjust if new risks emerge.

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- If any concerns arise during the study, researchers must respond quickly, offering support, modifying procedures, or stopping the activity if necessary to protect participants' wellbeing



# Respect for Participants

- Protecting the rights of vulnerable populations in research is a cornerstone of ethical research practices.
- This principle ensures that individuals who may be at a heightened risk of exploitation, harm, or coercion are adequately safeguarded.



# Confidentiality and Privacy

- In the built environment, researchers frequently interact with data that can affect commercial competitiveness, personal reputations, or project outcomes.
- Therefore, maintaining confidentiality and protecting participants' privacy is a core research responsibility.



# Protecting Sensitive Information

Researchers often access sensitive or commercially valuable information in the built environment.

This may include tender prices, defect records, safety incident logs, productivity data, cost estimates, or internal project evaluations.

Such information can influence contract negotiations, professional relationships, or competitive bidding—so mishandling it can have real-world consequences.



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- Sharing sensitive documents with third parties, even informally, can breach trust and violate ethical standards.



# Anonymisation Procedures

Researchers must ensure that individuals and organisations cannot be identified unless explicit permission has been granted.



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# Anonymisation Procedures

- Remove names, company identifiers, project titles, site addresses, or any detail that could reveal identities.



# Anonymisation Procedures

- Anonymisation can be more difficult because small project teams, specialist roles, or unique project characteristics may make people recognisable even without names.



# Anonymisation Procedures

- Researchers must think carefully about whether contextual details, photos, or quotations could unintentionally reveal who contributed data.



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# Anonymisation Procedures

- When in doubt, reduce the level of detail or ask for participant confirmation before publishing.



# Ethical Handling of Digital Data

Use encrypted storage, secure cloud platforms, or institution-approved systems whenever possible.

Follow relevant data-protection regulations (such as GDPR) and the university's policies on data retention, storage, and disposal.

Avoid storing sensitive files on personal devices if not required and ensure that devices are protected with passwords and updates

Do not share digital files casually—such as via unprotected email, shared drives without access control, or unencrypted USB sticks.

Plan for long-term data management: decide who will keep the data, how long it will be stored, and how it will eventually be deleted.



# Safety and Risk Minimisation

- Safety is a fundamental ethical requirement research.
- Researchers must ensure that their activities do not put themselves, participants, or the public at risk.



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# Safety and Risk Minimisation

- Importance in Field Research, Engineering Labs, and Live Construction Sites
- Fieldwork and engineering labs frequently involve machinery, hazardous materials, elevated areas, confined spaces, and active operations.
- Researchers must complete all required safety inductions, obtain permits, and wear appropriate personal protective equipment (PPE) such as helmets, high-visibility clothing, boots, gloves, or eye protection.



# Conducting a Risk Assessment

- Before any research begins, identify potential hazards associated with study procedures.
- Evaluate risks to participants' safety, health, and well-being.
- Document preventive measures to mitigate these risks.
- Update risk assessments if conditions change (e.g., new site hazards, unexpected findings).



# Responsibility and Accountability

- Researchers are accountable to participants, host organisations, academic institutions, professional bodies, and society. Ethical practice requires transparency, diligence, and professional integrity.



# Proper Documentation

- Researchers must keep clear, accurate, and organised records of project approvals, consent forms, data collection methods, decisions, amendments, and communications.
- Thorough documentation supports reproducibility, protects participants' rights, and demonstrates the researcher's integrity.



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# Acknowledging Contributions

- Contributions such as technical support, site access, or providing data should be acknowledged appropriately, usually in an acknowledgements section.