

Facilitator guidance

These notes provide guidance on how to facilitate the Coastal Resilience Challenge for **two teams** taking part simultaneously in the game. Your role as facilitator is to guide the teams through the game, introducing the set-up, the resources, keeping to time, playing 'roles' and facilitating the feedback and review sessions.

The structure of the game and technical resources provided will help participants explore the key challenges and trade-offs in environmental engineering and coastal resilience (e.g. managing risk, design constraints, budgets, carbon, climate change, stakeholder preferences). Hopefully, participants will also learn about their role in how to work effectively as a team and the behaviours that support this.

Programme

Prep Wave tank set-up and calibration

The wave tank should be set-up and calibrated so that with a long beach and vertical wall there is some overtopping, and with a long beach and recurve wall there is little/no overtopping.

The wave tank should be presented to participants with the beach in the tank and no sea walls to represent the current situation in Shoretown (baseline scenario).

In our game, the beach is eroding quickly so participants should be encouraged to explore the impact of completely removing the beach to represent a future scenario.

Provide presentation resources of your choice (e.g. flipcharts, pens etc.)

0:00 Introduction to the game

Brief the participants (read out 'participant instructions') and demonstrate how to use the wave tank safely, how to generate 'good' waves and how to manage water displacement. Hand instructions to the teams. Do not tell them about the wild cards. Dissemination/sharing of instructions will be part of how they work together as a team.

Remind the group to work to their strengths, everyone is different, be respectful and have fun!

1. Game play session

0:15 During this section of the exercise, you will need to take on different roles (see below and 'Role Cards' resources). Teams should approach you for information, try not to volunteer the info without being directly asked! This is part of the learning around effective teamwork and consultation i.e. having a clear brief, fully understanding all the information before making decisions etc.

Coastal Resilience Challenge: Make waves to save Shoretown!

Teams score more highly if they consult stakeholders with their 'final' proposals before their presentation to the group. Nb. If they haven't asked you about the budget by 0:40 you may have to give them a hint!

Check they are using the wave tank effectively and safely.

0:45 Wild card 1

Ring a bell (or similar) and invite teams to send one person to collect their wild card (see below), they must choose from a face down set of cards (*Wild Card resources*).

1:15 Wild card 2

Ring a bell (or similar) and invite teams to send one person to collect their wild card (see below), they must choose from a face down set of cards (*Wild Card resources*).

1:20 Time reminder to participants

Teams should be self-managing their time but may need a nudge to start preparing their presentations.

1:45 Finish game! Short break for 15 minutes

Participants may continue preparing presentations or have a break.

2. Presentation session

2:00 Invite each group to present their recommendations to the 'local authority' (the facilitators) and the other team for 5-10 minutes.

Consider the scoring criteria and make notes to share high level feedback with the teams. Teams should be encouraged to share their decision-making process.

Following the presentations, this session can incorporate group discussion of the learning points and reflection on the differences between the teams' proposals.

Optional finish point

The game can finish there, or if you have more time available, you can utilise the more formal structure proposed in the 'Evaluation and review session' below.

3. Evaluation and review session (extension activity)

2:20 3A: Proposal evaluation and review in breakout groups

Share the 'Evaluation and Review Form' with the group (one per person).

Ask teams to complete the proposal evaluation form to discuss and review their own proposal. What would they do differently having seen the other team's presentation? They should come to a consensus and agree a score (out of 35).

2:30 3B. Teamwork reflection

Ask teams to reflect on how they worked together:

- How did you work together as a team?
- Who took on which roles?
- How did you feel in the session?
- What was the most challenging part of this exercise?
- Did you have any disagreements and how did you resolve them?
- How is it similar (or different) to your experience working in a team so far?
- How would you approach this differently if you did this again?
- How will take your learning into your role?

2:40 3C. Full group feedback

This is an opportunity to learn from peers and explore, compare and contrast experiences and learning. Ask each team to share their reflections and scores with the entire group. Consider: What do you think makes an effective high functioning team? Think about values, behaviours etc.

3:00 4. Awards and wrap-up

Thank you and a reminder to complete a feedback form about the game and session.

There is no outright 'winner' as the teams will have been given different conditions via the wild cards, however consider team awards for:

- Most innovative idea
- Best design
- Best presentation
- Most effective team (values and behaviours and ability to adapt)
- Highest 'proposal' score

Appendix: Competencies being developed

Team working and problem solving

- *Understands instructions and asks for clarification if needed*
- *Demonstrates effective team working and interaction with team members*
- *Conceptualises problems and identifies appropriate methods/techniques/solutions*

Professional ethics and commitment

- *Treats others with politeness, dignity and respect*
- *Is accountable and responsible for their actions*

Technical application of engineering ICE

Carrying out research to help solve problems

Communication and presentation skills – communicate complex decisions