

Gravity

Challenge Design Brief

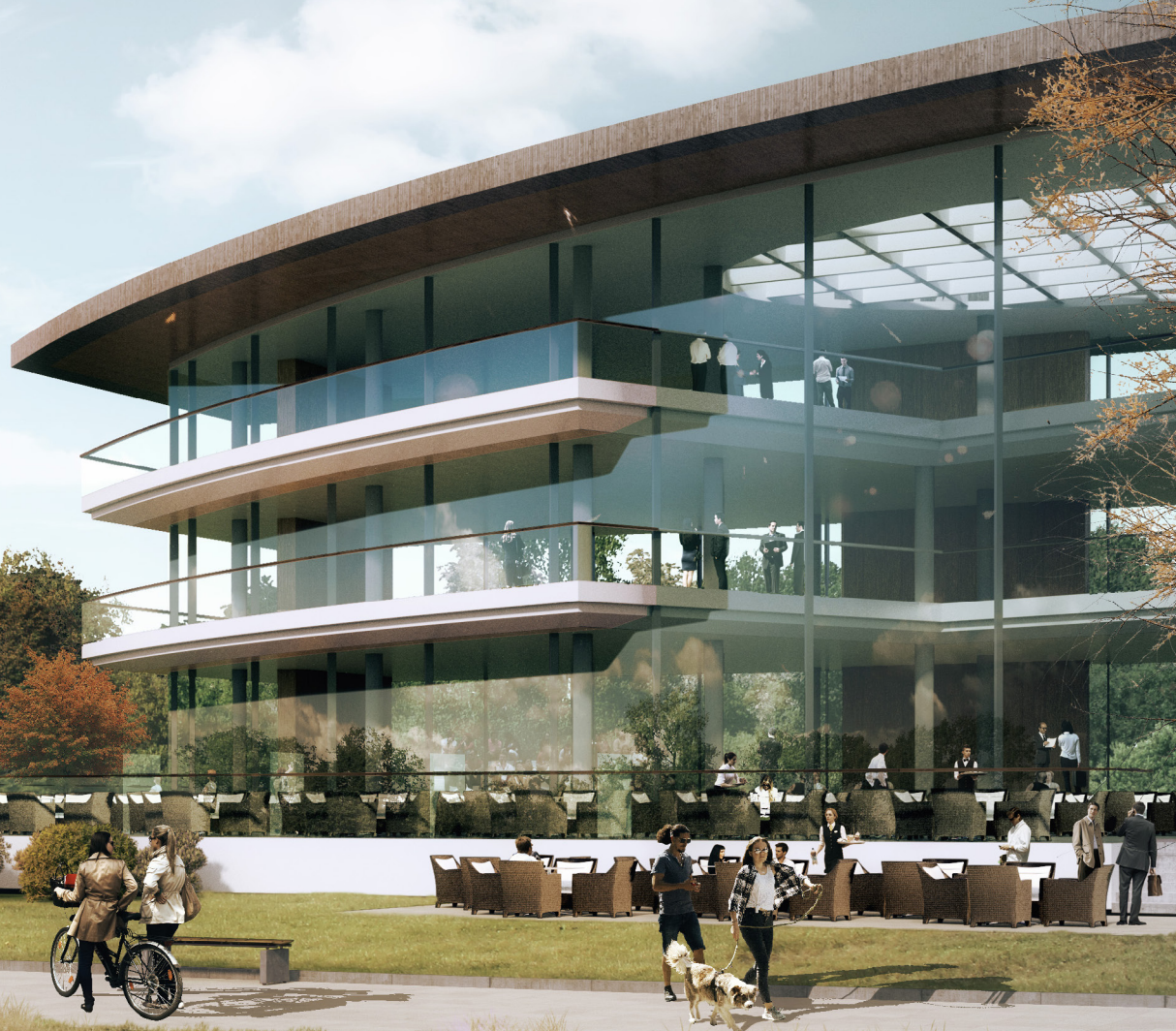
For Secondary Schools
& Colleges



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Introduction

This paper provides the key information about the Gravity Design Competition. There is a recording of a support webinar where you can find out more about the challenge.

Please see 'Note for Schools' on page 14 below.

About Gravity ^{1/2}

The Gravity project will establish a smart campus that delivers a new era of possibility for social interaction, economic growth and sustainable environments.

It is located near to Bridgwater, south of Bristol. It will establish a smart campus – a place to a place to live, work and play.

Gravity is an amazing development that will create a new location for clean, large-scale advanced manufacturing industries and it will enable people who work on the site to also live there – it is 'a blueprint for a smarter, greener future'. It will be one of the most sustainable and smart campuses in Europe.



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About Gravity ^{2/2}

Gravity wants to design the area in a way that benefits humanity, reduces our environmental impact, including delivering on mitigating climate change, and responds to future demands of people by creating a brilliant new place and space. The focus is on creating a UK destination for inward investment and specifically to target large scale advanced manufacturing. Gravity's ambition is to create a sustainable, connected campus and community, which will create around 4,000 jobs - www.thisisgravity.co.uk

The Design Challenge ^{1/2}

This challenge is inviting young people to play a part in the development of Gravity. We want you to create houses and spaces that you care about and want to live and spend time in.

We are asking you to look ahead and contribute your ideas on the future of Gravity. We want you to design a place and a home in that place that are environmentally 'super-green', creatively employing sustainable building materials and methods, energy and smart technology, and with an emphasis on health and well-being of people, the community, and our planet.



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The Design Challenge ^{2/2}

The design of every new community needs to consider the people who will live, work and play in that new place. Good design should help drive behaviour that protects the planet, promotes clean growth and inspires businesses and people to want to work and live there. Key ingredients of this challenge include designs that encourage human connection and that support healthy habits for individuals, the wider community and the planet, such as reducing the need to travel and use of sustainable modes of transport. Your design needs to consider the use of technology in a way that is aligned with humanity's best interest and that creates spaces where people can thrive.

In designing your home and place, think about how the house will be built (the method of construction), the building materials to be used, use of energy, the relationship of your home to workplaces on the site and how people will get around. Think about how the home and space will be used and how it might change over time.



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The Site

You should start by learning about the Gravity site and the surrounding new community that is being created. You can look at the site on a map or from old photographs and, if possible, talk to local people, family members who have lived in the area. View the South West Heritage Trust film which captures the history of the site from former employees.

Research on the internet similar projects and the homes and spaces that have been created on these.

We will provide you with data and existing plans, previous proposals, useful drawings, and other useful material including historic material. This will be provided to you electronically and you will be able to ask questions.



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Landscape, Nature & Environmental Conditions

If you look at the site on google maps or alternative, you can check out the 'lie of the land' and the setting of the site and surrounding landscape. Ask yourself some key questions, like how big is the site? Is it flat, are there any changes in levels? Is it easy to reach the site? Is it a quiet site or noisy? Where does the sun rise and set? Note any possible obstructions to the development such as trees, overhead cables, historic buildings.

What plants and creatures currently call this site home? How much wildlife is already here, might there be any protected species? How will you create, extend or replace the green space, trees and wildlife habitat in redeveloping the site? Look at the ecology report to find out what has been identified!

Heritage and Economy

The former Royal Ordnance Factory had an important manufacturing role during and after the Second World War.

What goods and services do you think the UK should make now and what jobs do you think should be created to attract young people and build future careers?



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People, Community & Work Spaces

Exploring what is important to people now and what will be in the future is critical to your design. Be open and curious to new ideas and think creatively about the type of community you are building, a community that will support living that is aligned with humanity's best interest and that promotes living and working on site to reduce the need to travel. Where will people work? How will they get around? What elements will you include in your design that encourage human connection and support healthy habits and will help occupants look after their physical and mental health?

Connectivity

Gravity is located in the South West of the UK and is connected by road, rail, a deep seaport and international airports. How will you exploit the benefits of the access available to the area whilst developing within to the goal of a zero-carbon economy? How will we travel in the future? Would you buy an electric car or scooter or even share a car, use a drone? How far would you walk or cycle to work on site?



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The Brief

Your Home Design

Your challenge is to design a great home in this new community that is zero carbon and meets the needs of the future. We want to see your home design and the layout of the surrounding space and place. This should include outdoor spaces such as gardens or shared spaces for socialising and relaxing in the open air.

You must decide who you are designing the home/living spaces for. You must show how you have thought about the people who will use your home – how will they live, work and play in this new place. What is important to them now and what will be important to them in the future? Explain how your ideas support living that is aligned with humanity’s best interest, that reduces our environmental impact.

Your house plans must explain the layout of the living spaces and how they will be used (resting, socialising, working), over what floors, inside, outside, private or shared? Your ‘masterplan’ will show the house and its relationship to work, amenities, communication routes, green spaces, etc.



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Meeting Future Needs

Your designs must consider the planet. It must be a 'green' home to build and run. Its construction must use sustainable materials, which could include recycled materials, and it should minimise building waste. It must have low energy requirements and low running costs, so it produces zero carbon emissions. Think about how the design of your house can reduce the need for materials and energy, and then how you can create the energy that is needed from renewable resources.

Show us how your space will consider the health and wellbeing of the people who live in it as well as those in the surrounding community.

Consider the use of technology in a way that is aligned with humanity's best interest.

Your new space should be beautiful to look at, as well as beautiful to experience being within.

Finally, how well will your design last into the future. For example, will it be flexible for future adaptations to future lifestyles?



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Modern Methods of Construction & Offsite Manufacture

Your home could use Modern Methods of Construction (MMC) or Offsite Manufacture (OSM). These are different ways of making homes, created from parts or units made in a factory, brought to the site and fitted together on site. They are designed to make new housing more efficient, improve quality and make the building faster, reduce costs and provide safer, cleaner and more comfortable conditions for the construction of the house.

If so, you might want to do some research into MMC and Offsite Construction methods and reflect this knowledge in your ideas. We will be happy to help and guide you through this part, please see the contact details at the end of this brief.



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The Gravity Design Competition Submission Details ^{1/2}

There are 2 submission age categories: 12-15 and 16-18

You can submit a physical or digital entry

Please include:

- **A sketch or drawing of your home** – you can free draw, use a computer or create a story board or booklet. A story board might include pictures from magazines, the internet, photos, or anything else that has inspired you. Think about your house layout, what rooms will it have, how it will work for you and your family and what will it look like?
- **A plan** showing your home within your area and community thinking about places of work, leisure and amenities, green space and transport and connections
- **Write** a short piece that explains what you have thought about and proposed in your project
- You could make a **model** to show what your home will look like and how it will be used. You only need to submit photos of your model (but keep it safe as we may want to display it later)



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The Gravity Design Competition Submission Details 2/2

There are 2 submission age categories: 12-15 and 16-18

You can submit a physical or digital entry

Please include:

- Show the **research** that you have carried out that has led to your ideas and designs. This could be telling us about your reading, or about examples you have seen around you, or in books, on the internet or films and TV, or asking questions of your family and relatives. Please tell us how you have changed your thinking and design along the way – even the things you decided not to include in your final design, this is all part of the design process
- Tell us about the **building materials** you have chosen to build your home and why you chose them
- Finally create a **logo** and a **name** for your home



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How will we assess your entry?

Your submission will be assessed by considering how well you have integrated the following:

- How has the submission considered the site and its surroundings, how has this influenced the design of the home and its surroundings?
- How does the submission reflect the people, communities and their activities that will use the site and its surroundings?
- How has the submission considered ‘future living’?
- How has the submission focused on the ‘greenness’ of the home? How does it help protect the planet and the environment?

Please send your submissions to home@mobie.org.uk

By **Friday, 11th June 2021**

Good Luck!



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Note for schools

There is a recording of a support webinar on the website which explains more about the design challenge, Gravity, Bounce Forward and MOBIE. If you would like a webinar for your school or college then pls contact home@mobie.org.uk.

Optional Extra

We are offering an option to help build students resilience as part of the project.

We aim to run these webinars between 1.30 and 2.30pm on 4th, 6th and 10th of May 2021 before students begin the design aspect of the project. We would welcome a member of staff to attend the webinars alongside students to enjoy the learning and to be able to support students to explore and build on the ideas as part of the design project.

Below offers a short summary of the webinars. To access the free Personal Development element please contact Bounce Forward at info@bounceforward.com or call 0330 133 0776



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Personal Development Offer for Students

The project will start by engaging students in a series of three one, hour webinars to help them understand key psychological concepts that drive human behaviour and explore the science of emotional resilience. The aim is to form a sound foundation of creative, flexible and realistic thinking to help you to create a sophisticated sense of self, to explore the value in social behaviour and to learn optimism as a driving force for future growth. This training will help them to develop a growth mindset for the design element.



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