

Holly Burr

2410667

Project proposal Poster

Reopening of the Roads

Rebuilding Transportation Corridors in the West Midlands Post-Flooding

In July 2025, the West Midlands region was struck by an unprecedented flood event that led to widespread damage, including the destruction of vital roads and bridges. The River Severn breached its banks, causing extensive flooding that submerged major highways, crippled transportation networks, and severely impacted local businesses and communities. As a result, transportation corridors between key towns like Worcester, Shrewsbury, and Kidderminster were rendered impassable, hampering daily life and economic recovery.

Our proposed project focusses on the immediate rebuilding of these essential transportation corridors. The main goal is to restore vital roads, bridges, and transportation systems while ensuring long-term resilience against future flood events. By integrating flood-resistant features, such as flood barriers, advanced drainage systems, and robust structural designs, we aim to safeguard these critical infrastructures for years to come.

The project will proceed in five key phases: damage assessment, design and planning, construction and reconstruction, testing and inspection, and project handover. The first phase will involve a comprehensive survey of the damaged infrastructure to understand the extent of the destruction and identify immediate repair priorities. This will be followed by the design and planning phase, where experts will collaborate to develop blueprints for both the restoration and improvement of flood resilience. During the construction phase, roads and bridges will be rebuilt with durability in mind, including the integration of flood-resistant measures like enhanced drainage systems and flood barriers.

In addition to the reconstruction of physical infrastructure, the project will place significant emphasis on safety and regulatory compliance. We will work closely with environmental consultants to ensure the rebuilding process adheres to stringent environmental regulations and will continually test the resilience of structures against extreme weather conditions. Our final phase will involve safety inspections and quality control, ensuring that all works meet the required standards before the infrastructure is handed over to local authorities for public use.

This project is vital not only for the immediate recovery of the West Midlands but also for its long-term resilience. By building a transportation network that can withstand future flood events, we can reduce the risk of similar disruptions in the future and ensure that local communities, businesses, and services can operate without the fear of infrastructure failure. Furthermore, restoring the transportation system will help accelerate the recovery of the local economy by enabling the smooth movement of goods and people.

In terms of resources, the project will require skilled labour, construction materials, flood management technology, and sustainable financial investment. The total budget for the project is estimated at £50 million, which will be sourced from both local government funding and emergency disaster recovery funds, as the project progresses, the involvement of key stakeholders, including local councils, the Environment Agency, and contractors, will ensure that all work is completed on time and within budget, while maintaining the highest standards of safety and environmental responsibility.

Ultimately this project aims to rebuild the West Midlands transportation corridors, restore vital services, and build resilience for the future-creating a stronger, safer infrastructure that benefits the entire region.

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REBUILDING TRANSPORTATION CORRIDORS IN THE WEST MIDLANDS POST FLOODING (THE ROADS)

HOLLY BURR
2410667

PROJECT OBJECTIVES:

- ASSESS DAMAGE
- DESIGN RESILIENT INFRASTRUCTURE
- RECONSTRUCT TRANSPORTATION CORRIDORS
- INSTALL FLOOD MITIGATION SYSTEMS
- SAFETY AND TESTING

KEY MILESTONES

- DAMAGE ASSESSMENT
- DESIGN AND PLANNING
- CONSTRUCTION AND RECONSTRUCTION
- TESTING AND INSPECTION
- PROJECT HANDOVER

STAKEHOLDERS INVOLVED

- LOCAL COUNCILS
- ENVIRONMENT AGENCIES
- CONTRACTORS & ENGINEERS
- LOCAL COMMUNITIES AND BUSINESSES

RISK MANAGEMENT:

- ADVERSE WEATHER
- BUDGET CONTROL
- SAFETY RISKS

RESOURCES REQUIRED

- HUMAN RESOURCES
- MATERIAL RESOURCES
- FINANCIAL RESOURCES



corridors in the west midlands



Project management plan:
Rebuilding Transformation Corridors Post-Flooding

Holly Burr

(2410667)

Project Management

LCLM5003

Group 1

(lecturer) Rexon Nting

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Introduction

In July 2025, the west midlands of the UK were devastated by catastrophic flooding caused by an unusually intense weather system in the Atlantic (Bourdeau, Santamarina and Hall, 2020). Towns such as Worcester, Shrewsbury, and Kidderminster experienced widespread destruction, and critical infrastructure, including transportation routes, were heavily impacted (Gillenwater, Jacobs and Rao, 2020). This resulted in the closure of vital roads and bridges, making it difficult for residents and businesses to function. The River Severn breached its defences in multiple locations, and within hours, large portions of the area were submerged resulting, resulting in the failure of local electricity grids (Parker, Clarke and Jones, 2020).

This project management plan seeks to address the urgent need for the rebuilding and restoration of the west midland's transportation infrastructure. The primary focus is on the restoration of transportation corridors, specifically those that are crucial for the movement of goods and people. This project will not only involve repairing and reconstructing roads and bridges but will also incorporate flood prevention measures to ensure that the regions infrastructure is resilient in the face of future flooding events (Johnson and Lee, 2023). The project will work through several phases of planning, design, construction, and final inspection, with full stakeholder involvement and adherence to a structured timeline.

Project description

The project aims to restore the transportation networks within the west midlands, which are essential for local, national, and international transport (Coppola, 2021). The flooding has left roads, bridges, and transportation systems either severely damaged or completely submerged, making it impossible for essential services and businesses to operate at full capacity. Restoring these transportation corridors is paramount for the recovery of the local economy and the normal functioning of daily life in the affected areas (Gillenwater, Jacobs and Rao, 2020).

The project will focus on the following key objectives:

- **Design assessment:** initial surveys will be carried out to assess the extent of the damage to roads, bridges, and other key transportation infrastructure (Bourdeau, Santamarina and Hall, 2020).
- **Design and planning:** engineers and architects will work on redesigning infrastructure with a focus on future flood resilience, ensuring that the rebuilt structures are more robust against future weather events (Smith and White, 2022).
- **Reconstruction:** the process of rebuilding roads, bridges, and public transport systems will commence once designs are finalised, ensuring a smooth and sustainable reconstruction (Parker, Clarke and Jones, 2020).
- **Flood mitigation:** as part of the reconstruction, flood management measures, such as drainage systems and flood barriers, will be installed to prevent future flooding (Johnson and Lee, 2023).
- **Final inspections and testing:** following construction, the infrastructure will be tested to ensure it meets all safety, environmental, and operational standards (Miller and Roberts, 2019).

Scope

The scope of this project focuses on restoring the most heavily damaged areas of the west midland's transportation network. This includes all major roadways, bridges, and public transport routes in Worcester, Shrewsbury, and Kidderminster. The scope of work can be broken down into five key phases: damage assessment, design and planning, construction, flood prevention installation, and testing and inspection (Smith and White, 2022).

Specific tasks include:

- **Assessment of damage:** comprehensive surveys will be conducted to evaluate the extent of the flood damage to the roads, bridges, and other transportation infrastructure. These surveys will also assess the effectiveness of existing flood defences and identify areas for improvement (Gillenwater, Jacobs and Rao, 2020).
- **Design and engineering:** structural engineers and urban planners will collaborate to design infrastructure that can withstand future flooding events. The design phase will include flood mitigation measures, the installation of drainage systems, and the rebuilding of roads and bridges to ensure they comply with modern safety standards (Bourdeau, Santamarina and Hall, 2020).
- **Reconstruction of infrastructure:** roads and bridges will be rebuilt with a focus on speed, safety, and resilience. This phase will include the reconstruction of heavily damaged highways, such as the A449 between Worcester and Kidderminster, and the repair of local bridges that are essential for daily traffic flow (Miller and Roberts, 2019).
- **Flood mitigation systems:** the installation of flood barriers, drainage systems, and flood prevention measures will be critical to reducing the risks of future damage (Parker, Clarke and Jones, 2020). These systems will include the creation of flood barriers along key riverbanks and the installation of advanced drainage systems in flood-prone areas
- **Testing and final inspection:** once the construction and flood prevention measures are completed, all infrastructure will be thoroughly inspected to ensure that it meets safety standards and is resilient to flooding. This phase will also include final testing of transportation systems to confirm the readiness for public use (Coppola, 2021).

Work Breakdown Structure

The work breakdown structure (WBS) is essential for clearly defining and organising the tasks necessary to complete the project. Below is the breakdown of the project into major components.

1. Project planning and initiation

- Conduct damage assessments
- Identify key stakeholders and secure their engagement
- Define project scope and timeline
- Estimate the budget and allocate resources

2. design and development

- Engineering designs for road repairs and bridge construction
- Flood prevention system design (including flood barriers and drainage systems)
- Obtain necessary permits and regulatory approvals
- Plan for environmental impact and mitigation strategies

3. Construction

- Road resurfacing and structural reinforcement
- Bridge reconstruction
- Installation of flood barriers and drainage systems

4. Testing and Inspection

- Quality assurance checks for all rebuilt infrastructure
- Flood resilience testing and simulations
- Safety inspections and clearance for opening

5. Project closeout

- Final reporting to stakeholders
- Handover of completed infrastructure to local authorities
- Post project evaluation to identify improvements for future projects

Each of these phases will be broken down into further detailed tasks to ensure a thorough and organised approach (Smith and White, 2022).

Quad Chart

The Quad chart visually summarises key elements of the project:

Project overview	Project goals	Project risks	Resources required
Restoration of Transportation corridors in the West Midlands after flooding	Rebuild and restore critical transportation infrastructure. Intergrade flood prevention systems. Ensure long-term flood resilience.	Unpredictable weather events. Budget overruns. Resource shortages or delays in material supply.	Skilled labour (engineers, construction workers, safety inspectors). Materials (concrete, steel, drainage equipment). Machinery (cranes, excavators, bulldozers).

Gantry Chart

A Gantry chart outlines the projects timeline and milestones:

phase	Start date	End date	Key milestone
Assessment and planning	01/08/2025	31/08/2025	Damage assessment completed
Design and Development	01/09/2025	31/12/2025	Engineering designs finalised
Reconstruction	01/01/2026	30/06/2026	Infrastructure rebuilding completed
Testing and Inspection	01/07/2026	31/07/2026	Safety inspections and flood tests complete
Project handover and Closeout	01/08/2026	15/08/2026	Handover to authorities and project closure

Stakeholder Involvement

Key stakeholders for this project include:

- **Local councils:** the local authorities are responsible for approving designs, overseeing the allocation of designs, overseeing the allocation of funds, and providing regulatory oversight (Gillenwater, Jacobs and Rao, 2022).
- **Environment Agency:** ensures that flood prevention systems are designed and implemented in line with environmental regulations (Smith and White, 2022).
- **Transport companies:** They will provide insights on the feasibility and timing of road closures and reopenings, ensuring that the public transport systems schedule is not disrupted (Parker, Clarke and Jones, 2022).
- **Contractors;** construction firms will be tasked with rebuilding roads, bridges, and flood prevention systems (Miller and Roberts, 2019).
- **Local communities and businesses:** These stakeholders will be consulted regularly to provide updates on the progress and receive feedback on the works (Coppola, 2021).

Allocation of Recourses

Human Recourses

- **Construction Workers:** skilled labour will be required for the rebuilding and resurfacing of roads and bridges (Johnson and Lee, 2023).
- **Engineers and project Managers:** These professionals will be crucial for overseeing the design and development phases, ensuring that the infrastructure meets all safety and environmental standards (Gillenwater, Jacobs and Rao, 2020).
- **Environmental Consultants:** Experts will be needed to design and implement flood management systems and ensure the project complies with environmental regulations (Smith and White, 2022).
- **Quality Control and Safety Inspectors:** these roles will be essential during the construction and inspection phases to guarantee that all work meets high-quality standards and safety measures (Miller and Roberts,2019).

Material Resources

- **Construction Materials:** Concrete, asphalt, steel, and other building materials will be required for the reconstruction of roads, bridges and public transport infrastructure (Parker, Clarke and Jones, 2020).
- **Flood prevention systems:** Flood barriers, drainage pipes, and other related materials will be essential to ensure that the infrastructure is flood resilient (Coppola, 2021).
- **Heavy Machinery:** Excavators, bulldozers, cranes and other heavy construction machinery will be necessary for the rebuilding efforts and for the installation of flood prevention systems (Bourdeau, Santamarina and Hall, 2020).

Recourse Allocation Process

- **Timeline Considerations:** Resources will be allocated based on the critical needs of each project phase. The construction phase will require a high volume of skilled labour, while the design and planning phase will require fewer require a resource but will involve more planning and coordination (Smith and white, 2022).
- **Monitoring and Adjustment:** Resource allocation will be monitored closely to ensure there are no delays due to shortages. The project manager will adjust resources accordingly to meet project milestones.

Risk Analysis

Effective risk management will be critical to the success of this project. Several key risks have been identified:

Adverse Weather Conditions:

- **Risk:** Further extreme weather events, such as additional flooding or heavy storms, could cause delays and increase in costs.
- **Mitigation Strategy:** the project team will create a contingency plan for weather delays, incorporating buffer time into the overall project schedule and securing additional temporary protective barriers to safeguard ongoing construction (Parker, Clarke and Jones, 2020).

Budget Overruns

- **Risk:** Unforeseen complications, such as the need for more materials or labour than initially planned, could result in cost overruns.
- **Mitigation Strategy:** A contingency fund will be established to cover any unforeseen costs. Additionally, the project manager will conduct regular budget reviews to identify and address potential financial risks early (Gillenwater, Jacobs and Rao, 2020).

Construction Delays:

- **Risk:** Shortages of key materials or labour may cause significant delays, especially if key suppliers or contractors are unavailable due to competing demands.
- **Mitigation Strategy:** The project will maintain a detailed inventory and work closely with multiple suppliers to ensure timely delivery of materials. The scheduling of labour will also be flexible to accommodate any shortages (Coppola, 2021).

Stakeholder Conflict:

- **Risk:** Different priorities and objectives among stakeholders (such as local businesses, environmental agencies, and residents) could lead to conflicts, delays, or disputes during the project.
- **Mitigation Strategy:** Regular communication with stakeholders will be prioritised to manage expectations and ensure any concerns are addressed promptly. A dedicated stakeholder liaison team will be responsible for handling communication and resolving conflicts (Miller and Roberts, 2019).

Regulatory and Environmental Risks:

- **Risk:** The project may face delays or complications in obtaining the necessary permits or environmental clearance for certain activities.
- **Mitigation strategy:** Early engagement with regulatory authorities and environmental consultants will ensure that all necessary permits are obtained on time and that the project complies with local environmental regulations (Smith and White, 2022).

Health and Safety Risks:

- **Risk:** There is an inherent risk of injury on a construction site, particularly when working with heavy machinery or dealing with hazardous materials.
- **Mitigation Strategy:** A strict health and safety protocol will be always enforced, including regular safety training for workers, appropriate personal protective equipment (PPE), and daily safety inspections to minimize any risks (Bourdeau, Santamarina and Hall, 2020).

By implementing these mitigation strategies and regularly reviewing the risks, the project management team will ensure that risks are effectively managed and minimized, allowing the project to be completed on time and within budget.

Conclusion

This project management plan outlines a detailed and structured approach for the rebuilding of critical transportation corridors in the west midlands following the catastrophic flooding of 2025. The project has been carefully planned to address both immediate recovery needs and long-term flood resilience, ensuring that the regions infrastructure will be able to withstand future flooding events. By focusing on key project areas such as damage assessment, design, flood prevention, resource allocation, and risk management, this project aims to restore vital transport networks and help the effected communities return to normalcy as quickly as possible.

The involvement of key stakeholders, the allocation of appropriate resources, and the proactive management of risks will be critical to the project's success. By closely monitoring the progress and ensuring that all milestones are met, the project will not only restore transportation services but will also enhance the flood resilience of the infrastructure for future generations.

The commitment to delivering a high quality, safe, and sustainable transportation network will support economic recovery, improve local quality of life, and prepare the region for future challenges associated with extreme weather events.

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Reflective Report on Poster Presentation Feedback

After presenting my project poster on the “rebuilding transportation corridors in the west midlands post-flooding” I received valuable feedback that has helped me identify areas of improvement in my presentation skills and content delivery. This reflective report highlights the feedback provided and outlines how i intend to apply it in future presentations to enhance my communication and project management abilities.

One key piece of feedback I received was the absence of a Gantt chart in my poster. A Gantt chart is an essential tool in my poster. A Gantt chart is an essential tool in project management as it provides a clear visual representation of the project timeline, milestones, and dependencies. The absence of this chart in my initial poster presentation was noted as a significant oversight. Moving forward, i have decided to incorporate a Gantt chart into the revised version of my poster. This addition will not only improve the overall clarity of the timeline and milestones but will also demonstrate my ability to effectively manage and present project timelines in a professional manner. I have already started to create the chart and plan to update the poster before my next submission.

Another important point of feedback concerned my delivery during the presentation. While i was praised for speaking eloquently and confidently, it was pointed out that i relied heavily on notes. This was especially surprising to my lecturer as my first language is English and i generally communicate fluently. However, the feedback suggested that i should have memorised more of the content rather than relying on notes. Although i feel comfortable speaking English, i recognise that over reliance on notes can affect my engagement with the audience and detract from the impact of my message. In future presentations, i plan to strike a better balance between referring to notes and speaking freely, ensuring that i engage with the audience more directly. I will practice memorising key points and familiarize myself with the content so I can present with greater confidence and without losing eye contact with the audience.

While the feedback highlighted areas of improvement, it was also positive about my delivery. I was commended for speaking clearly and eloquently, which reaffirmed my strengths as a communicator. This positive reinforcement is motivating and has boosted my confidence. However, i now understand that effective presentations require not only good content but also strong delivery techniques, therefore, I plan to continue practising my public speaking skills to maintain my clarity and eloquence, while also working on minimizing my reliance on notes.

In conclusion, the feedback i received has been invaluable in shaping my approach to future presentations. The addition of a Gantt chart to my poster will enhance its professional quality, and reducing my reliance on notes will improve my audience engagement. I am confident that by addressing these areas, i can deliver even more compelling and polished presentations in the future.