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Project Title:
Reopening of Highway 5 After the 2022 Flooding in British Columbia

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Table of Contents

List of Table.....	3
Poster	4
Reflection on Feedback	5
PROJECT MANAGEMENT PLAN.....	7
1. Introduction	8
2. Project Description	8
3. Project Scope.....	9
4. Work Breakdown Structure (WBS)	9
5. Quad Chart	10
6. Gantt Chart	10
7. Stakeholder Involvement	11
8. Resource Allocation	12
9. Risk Analysis.....	12
10. Conclusion	13

List of Table

Table: 1 Poster British Columbia	4
Table 2: Project Scope (In Scope and Out of Scope)	9
Table 3: Work Breakdown Structure.....	9
Table 4: Project Gantt Chart.....	11
Table 5: Key Project Stakeholders	11
Table 6: Resource Allocation Overview	12
Table 7 Risk Analysis.....	12

REOPENING OF HIGHWAY 5 AFTER THE 2022 FLOODING IN BRITISH COLUMBIA

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BA (HONS) LEADERSHIP AND MANAGEMENT SKILLS IN THE WORKPLACE

INTRODUCTION

In November 2022, very heavy rain and flooding damaged Highway 5 in British Columbia. Bridges and roads were broken by landslides. This highway connects the Lower Mainland with the rest of Canada. Because of the damage, transport stopped and communities were cut off. This project will rebuild the road and make it stronger for the future.

PROJECT AIM AND OBJECTIVES

Aim:

- To rebuild Highway 5 safely and quickly after the floods.

Objectives:

- Fix bridges and damaged road sections.
- Improve drainage to stop future floods.
- Use strong and eco-friendly materials.
- Finish the project in 12 months and stay on budget.

REFERENCES

- British Columbia Ministry of Transportation and Infrastructure (2023) Highway 5 Recovery Report.
- PMI (2021) PMBOK® Guide – 7th Edition. Project Management Institute.
- BBC News (2022) Canada Floods: British Columbia Faces Supply Chain Crisis.
- Walker, A. (2021) Project Management in Construction. 8th ed. Wiley-Blackwell.

PROJECT METHOD

The project uses the **PRINCE2** method. This means good planning, teamwork, and control of time and money.

Main steps:

- Start and plan the work.
- Design and buy materials.
- Build and repair.
- Test and check safety.
- Review and finish the project.

PROJECT SCOPE

In Scope:

- Rebuild damaged parts of Highway 5.
- Repair bridges and drainage systems.
- Work with local authorities and builders

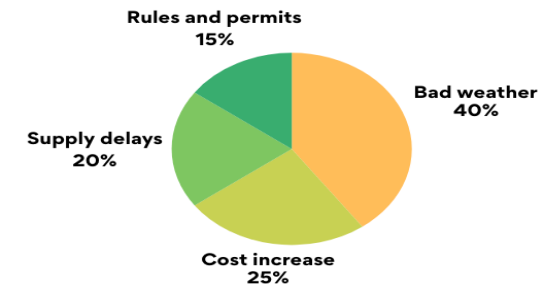
Out of Scope:

- Future maintenance after completion.
- Making the highway bigger.
- Work outside the damaged area.

EXPECTED RESULTS

- Highway 5 will reopen for safe travel.
- Local businesses can work again.
- Jobs for local people.
- A stronger, safer road for future floods.

MAIN RISKS AND SOLUTIONS



PROJECT COST (EST.)

Indicative cost estimate based on post-flood highway reconstruction projects:

- Labour & specialist contractors: £12–15m
- Materials, drainage & structural repairs: £18–22m
- Heavy equipment & site operations: £6–7m
- Safety, environmental compliance & contingency: £6–7m

Total estimated project cost: £42–51m

CONCLUSION

Reopening Highway 5 is very important for the people and economy of British Columbia. With good planning, teamwork, and safe materials, this project will reconnect communities and make transport stronger for the future.

RECOVERY • SAFETY • RESILIENCE • CONNECTION

Reflection on Feedback

This reflection discusses the feedback received from the tutor and peers following the project proposal poster presentation on the reopening of Highway 5 after the 2022 flooding in British Columbia. The feedback was valuable in identifying both the strengths of the project and the areas that required improvement. Reflecting on this feedback has supported the development of a more professional and realistic Project Management Plan.

Overall, the feedback confirmed that the structure of the poster was clear and well organised. The tutor indicated that the layout of the poster allowed the key elements of the project, such as the project aim, scope, risks and timeline, to be easily understood. The choice of project was also viewed positively, as the reopening of Highway 5 was considered a realistic and relevant response to the flooding scenario provided in the assessment brief. In addition, the visual presentation of the poster was effective, particularly the use of concise sections which helped communicate the project idea within a limited space.

However, several important areas for improvement were highlighted during the feedback session. One key issue raised by the tutor was the need to present the project with greater confidence and clarity. It was noted that while the project content was appropriate, stronger communication skills were required to convincingly justify the project in a professional setting. The tutor emphasised that a project manager must be able to clearly explain decisions and demonstrate confidence when presenting a proposal to stakeholders.

A significant point of feedback related to the use of the PRINCE2 methodology. When questioned about PRINCE2, it became clear that the explanation provided during the presentation was not sufficiently detailed. The tutor stressed that PRINCE2 is a widely used and important project management methodology, particularly for public sector and infrastructure projects. A lack of clear understanding could reduce the credibility of the project if it were presented to a real organisation. This highlighted the importance of fully understanding key project management terms and methodologies before applying them within a project proposal.

Further feedback was provided regarding the project schedule. Although the circular Gantt chart offered a useful high-level overview, it was suggested that a larger and more detailed Gantt chart would improve clarity and demonstrate stronger planning and time management

skills. This feedback highlighted the need to balance visual presentation with sufficient detail when communicating project timelines. In response to the feedback, several improvements have been incorporated into the final Project Management Plan. Additional research has been undertaken to develop a clearer understanding of the PRINCE2 methodology and its relevance to infrastructure recovery projects. This has strengthened the methodological justification of the project. Cost estimation has also been added to improve financial realism, and greater detail has been included in the project schedule and risk management sections. Overall, the feedback supported professional development and helped ensure the project is presented in a manner suitable for a real organisational environment.

PROJECT MANAGEMENT PLAN

1. Introduction

In 2022, British Columbia experienced severe flooding caused by extreme weather conditions, resulting in significant damage to transportation infrastructure. Flood events are known to have major impacts on road networks and regional connectivity (Government of British Columbia, 2022). Highway 5 plays a critical role in the movement of goods and people, and its closure led to economic disruption and logistical challenges.

Effective project management is essential for the successful recovery of infrastructure following natural disasters, particularly in managing time, cost, risk, and stakeholder expectations (PMI, 2021). This Project Management Plan outlines a structured approach to reopening Highway 5, ensuring the project is delivered safely, efficiently, and within budget.

2. Project Description

Infrastructure reconstruction projects require coordinated planning, technical expertise, and strong governance to ensure safety and compliance with regulations (APM, 2019). This project focuses on the repair and reopening of Highway 5 following flood-related damage, including road surface reconstruction, drainage system repair, and structural reinforcement.

Public infrastructure projects are often complex due to the involvement of multiple stakeholders and high levels of risk, particularly in post-disaster environments (Turner, 2016). As a result, a structured project management approach is required to support effective decision-making and delivery.

3. Project Scope

Clearly defining the project scope is essential to prevent scope creep and to maintain control over project objectives, time, and resources (PMI, 2021).

Table 2: Project Scope (In Scope and Out of Scope)

In Scope	Out of Scope
Road surface reconstruction	Repairs to residential or commercial buildings
Drainage system repair and improvement	Repairs to commercial buildings
Installation of safety barriers and signage	Reconstruction of other highways
Structural repairs to flood-damaged sections	Long-term regional infrastructure development
Environmental protection measures	Not applicable

4. Work Breakdown Structure (WBS)

A Work Breakdown Structure (WBS) is a project management tool used to breakdown a project into manageable components, supporting effective planning, scheduling, and control (Kerzner, 2017). Developing a clear WBS helps ensure that all project activities are identified and aligned with project objectives.

Table 3: Work Breakdown Structure

Phase	Description
Project initiation and planning	Project approval, stakeholder identification, and initial planning activities
Design and engineering	Technical assessments, engineering design, and safety evaluations
Procurement	Sourcing and purchasing materials, equipment, and services
Construction and repairs	Road reconstruction, drainage improvements, and structural repairs
Testing and inspection	Safety inspections, quality checks, and regulatory approvals

Project closure and reopening	Final review, documentation, and reopening of Highway 5
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This WBS provides a structured overview of the project and supports effective coordination, scheduling, and resource allocation throughout the project lifecycle.

5. Quad Chart

The quad chart provides a high-level summary of the project by presenting four key aspects: objectives, timeline, cost, and risks. This tool is commonly used to support decision-making and stakeholder communication (APM, 2019).

- **Objectives:** Safely reopen Highway 5 and restore transport connectivity
- **Timeline:** Estimated project duration of 12 months
- **Cost:** Estimated budget of £42–51 million
- **Risks:** Adverse weather, cost overruns, and safety risks

The quad chart supports a clear overview of the project and aligns strategic objectives with operational planning.

6. Gantt Chart

Gantt charts are widely used in project management to visualise schedules, task durations, and dependencies (APM, 2019). The Gantt chart developed for this project outlines the timeline across the main project phases, including planning, design, construction, and final inspection.

The use of a detailed Gantt chart improves time management and allows stakeholders to track progress against key milestones. This addresses the feedback received regarding the need for clearer and more detailed project scheduling.

Task	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
<i>Project Planning & Approval</i>	X	X										
<i>Design & Engineering</i>		X	X									
<i>Procurement</i>			X	X	X							
<i>Construction & Repairs</i>					X	X	X	X	X			
<i>Testing & Safety Inspection</i>									X	X		
<i>Reopening & Project Closure</i>											X	X

Table 4: Project Gantt Chart

7. Stakeholder Involvement

Stakeholder involvement is critical to the success of public infrastructure projects, particularly those delivered in post-disaster environments (Freeman, 2010). This project involves multiple stakeholders with varying levels of interest and influence.

Key stakeholders include government authorities, construction contractors, engineers, local communities, and transport organisations. Effective communication strategies are required to ensure alignment, manage expectations, and reduce conflict throughout the project lifecycle.

Table 5: Key Project Stakeholders

Stakeholder	Role / Interest	Level of Influence	Engagement Approach
Government of British Columbia	Project sponsor and regulatory authority	High	Regular progress reports and formal approvals
Construction contractors	Delivery of construction and repair works	High	Contract meetings and performance reviews
Engineers and consultants	Technical design and inspections	Medium	Design reviews and technical meetings
Local communities	Affected by road closure and reopening	Medium	Public updates and community communication
Transport and logistics companies	Depend on Highway 5 for operations	Medium	Stakeholder briefings and updates

Identifying stakeholder roles and influence supports effective communication planning and helps align project objectives with stakeholder expectations.

8. Resource Allocation

Resource allocation involves the effective management of human, material, and financial resources to support project objectives (Kerzner, 2017). This project requires skilled labour, construction equipment, and specialised materials such as concrete, steel, and drainage components.

Financial resources have been allocated based on an indicative cost estimate to ensure the project remains within budget. Proper resource planning supports productivity, cost control, and schedule adherence throughout the project.

Resource Type	Examples
Human resources	Project manager, engineers, construction workers, safety officers
Materials	Concrete, steel, drainage systems
Equipment	Excavators, cranes, road paving machinery
Financial resources	Project budget (£42–51 million)

Table 6: Resource Allocation Overview

9. Risk Analysis

Risk management is a core element of project management and involves identifying, analysing, and mitigating risks that could impact project success (PMI, 2021). Post-flood reconstruction projects face increased uncertainty due to environmental and operational challenges.⁹

Risk	Probability	Impact	Mitigation Strategy
Adverse weather	High	High	Flexible scheduling and contingency planning
Cost overruns	Medium	High	Budget contingency and cost monitoring
Supply delays	Medium	Medium	Multiple suppliers and early procurement
Safety incidents	Low	High	Strict health and safety controls

Table 7 Risk Analysis

10. Conclusion

The reopening of Highway 5 following the 2022 flooding is a critical infrastructure project that requires structured planning and effective management. This Project Management Plan demonstrates how established project management tools and techniques can be applied to support safe, timely, and cost-effective project delivery.

By clearly defining scope, allocating resources effectively, managing risks, and engaging stakeholders, the project can be successfully delivered. The implementation of this plan will restore essential transport links and contribute to economic recovery in British Columbia (Turner, 2016).

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