

Module title: Project Management
Module code: LCLM5003
Student Name: Sanda Dobre; 2415765
Lecturer Name: Matieni Xavier



Building a Greener Future, Together Sustainable Redesign to Meet Net-Zero Transport Objectives

1. Project background & rationale

Climate change and urban growth demand a transport hub that reduces emissions and supports sustainable mobility. A sustainable redesign will future-proof the hub, improve air quality, enhance resilience and align with net-zero goals.

2. Quad Chart

Project	Stakeholders
Redesign the transport hub sustainably to achieve net-zero emissions and support climate resilience.	- Local Authority - Transport Operators - Community & Environment - Investors & Funders - Design & Construction
Essential Needs	Measures & Benefits
- Reduced carbon footprint - Enhanced air and environmental quality - Increased use of public transport - Improved energy efficiency - Enhanced community resilience	- Net-zero carbon target 75% renewable energy - Increased public transport - Reduction in energy consumption - Enhanced biodiversity

3. Scope & boundaries

- | In scope | Out of scope |
|--|--|
| <ul style="list-style-type: none"> Green building design and materials Renewable energy systems (solar, wind) Electric vehicle (EV) charging infrastructure Sustainable drainage and water management Green spaces and urban landscaping Smart energy management systems Community engagement | <ul style="list-style-type: none"> Commercial property development Operations outside the transport hub Existing infrastructure |

4. Stakeholder

Local Authority
Transport Operators
Community & Environment
Investors & Funders
Design & Construction Teams

5. Work breakdown structure (WBS)

Sustainable Transport Redesign Project



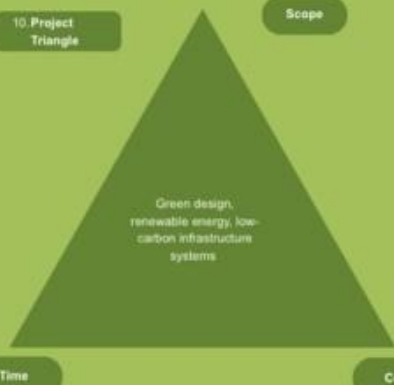
6. High-level risks & trade-offs

Risk	Impact	Mitigation Strategy
High construction cost	High	Value engineering, green grants, phased investment
Technology integration challenges	High	Early testing, expert consultation, and robust planning
Weather conditions	Medium	Seasonal planning, weather monitoring, flexible scheduling
Stakeholder resistance	Medium	Regular engagement, communication, and awareness programs
Regulatory changes	Medium	Continuous monitoring, compliance updates
Supply chain delays	Medium	Multiple suppliers, early procurement, contingency plans

7. Strategy value

- Achieves net-zero emissions and supports climate goals
- Enhances health and quality of life
- Drives economic growth through green jobs
- Creates a resilient, future-ready transport hub for generations to come

10. Project Triangle



Scope

8. Project aims & objectives

Aim:

To redesign the transport hub sustainably to achieve net-zero emissions and improve environmental and community outcomes.

Objectives:

- Reduce carbon emissions and energy use. Integrate renewable energy and low-carbon technologies.
- Promote a sustainable transport model (active travel, public transport).
- Enhance green spaces and biodiversity.
- Ensure long-term economic and social sustainability.

9. Stakeholder analysis (Power vs Interest)



11. Gantt Chart (High-Level Schedule)

Task/ Phase	Duration (Weeks)	1	10	15	20	23	35	40
1. Initiation	4	█						
2. Planning	6		█					
3. Design & Development	12			█				
4. Construction & Implementation	14				█			
5. Testing & Handover	6					█		
6. Closure	2						█	

Conclusion

The Sustainable Redesign to Meet Net-Zero Transport Objective will create a modern, efficient and environmentally responsible transport hub that supports climate goals and community well-being. Through innovative design, stakeholder collaboration and sustainable practices, this project will deliver long-term benefits for people, the economy and the planet.

References

- Project Management Institute (2021). *The standard for project management and a guide to the project management body of knowledge*.
- Association for Project Management (2021). *APM body of knowledge*. Revised with minor corrections 2020 knowledge.
- Karjane, H (2026). *Project management: a system approach, scheduling, and controlling*. Fourteenth edition.



Sustainable Redesign of the Central Transport Hub to Meet-Zero Transport

Student Name: Sanda Dobre

Student Number: 2415765

Module Title: Project Management

Module Code: (LCLM5003)

Lecturer Name: Matieni Xavier

Part B – Reflection on Feedback

During the presentation of my project proposal poster on the Sustainable Redesign of the central transport hub, I received useful feedback from the tutor and my peers. This reflection identifies the main strengths, the areas that need improvement, and how the feedback will shape my final Project Management Plan.

One clear strength was the visual organisation of the poster. Peers said the Work Breakdown Structure, Gantt chart and risk table made the project easy to understand. The tutor also noted that the project rationale was well linked to climate goals and the urgent need to restore transport capacity. The inclusion of a Power/Interest stakeholder matrix was highlighted as a good early use of project management tools.

Several areas for improvement were identified. The risk analysis was considered too high-level and lacked clear prioritisation and ownership. Some objectives were relevant but not specific enough. Peers also felt that community engagement was mentioned but not fully developed.

This feedback will directly improve Part C. I will expand the risk section with a scored risk matrix (Likelihood × Impact), named risk owners and contingency plans. Project objectives will be rewritten using the SMART framework so they are clearer and measurable. I will also add a stronger stakeholder engagement plan that shows how the local community and businesses will be involved throughout the project. These changes will make the final plan more robust and professional. Overall, the feedback confirmed that the core idea of a net-zero redesign is strong, while showing where greater depth and clarity are needed. Addressing these points will result in a stronger and more credible Project Management Plan.

Required Report Structure (Part C)

- 1. Introduction**
- 2. Project Description**
- 3 . Scope**
- 4. Work Breakdown Structure (WBS)**
- 5. Quad chart**
- 6 Gantt Chart**
- 7. Stakeholder Involvement**
- 8. Allocation of Resources**
- 9 . Risk Analysis**
- 10. Conclusion**
- 11. References**

1 .Introduction

This project is needed because the central transport hub of a major UK city was closed in November 2025 after a structural inspection found it no longer met modern safety and accessibility standards. The closure has disrupted commuting, supply chains and local businesses. The project solves the immediate loss of transport capacity while addressing longer-term environmental challenges. A simple rebuild would miss the chance to create low-carbon, climate-resilient infrastructure. A sustainable redesign will restore services and at the same time reduce emissions, integrate renewable energy and support cleaner travel. The project is important because transport hubs affect daily life and the city's economy. Delivering a modern, net-zero hub will improve air quality, create green jobs and show practical progress on climate goals.

2. Project Description

The project redesigns the closed central transport hub to achieve net-zero operational emissions. It includes green building materials, solar and wind energy, electric vehicle charging, sustainable drainage, smart energy systems and improved green spaces. The hub will remain a multimodal interchange for rail, bus and freight, but will be safer, more accessible and environmentally responsible

3. Scope

In scope: Green design and materials, renewable energy systems, EV charging, sustainable drainage, smart energy systems, green spaces, community engagement, testing and handover.

Out of scope: Commercial development outside the site, major changes to the wider transport network, and day-to-day operations after handover.

4. Work Breakdown Structure (WBS)

- a) Initiation – Feasibility, stakeholder engagement, funding, Project Charter**
- b) Planning- Sustainability assessment, risk planning, schedule and resources**
- c) Design & Development – Detailed design, Environmental Impact Assessment, renewable energy design**
- d) Construction & Implementation- Site preparation, construction, green systems installation, quality checks.**
- e) Testing, Handover & Closure- System testing, training, lessons learned, formal closure**

5.Quad Chart

Purpose	Objectives
Redesign the hub to restore capacity and achieve net-zero emissions	Reduce carbon and energy use; integrate renewables and EV charging; promote sustainable travel; enhance green spaces; deliver long-term social and economic benefits
Key Stakeholders	Expected Benefits
Local Authority, Transport Operators, Community, Environmental Agencies, Investors, Design & Construction Teams	Net-zero hub, better air quality, green jobs, resilient infrastructure, improved community well-being

6. Gantt Chart (High-Level)

Phase	Duration	Timing	
Initiation	4 weeks	weeks	1-4
Planning	6 weeks	weeks	5-10
Design &Development	12 weeks	weeks	11-22
Construction & Implementation	14 weeks	weeks	23-36
Testing Handover & Closure	6 weeks	weeks	37-42

Total 42 Weeks. Contingency included for weather delays.

7. Stakeholders Involvement

Local Authority- Sponsor; managed closely via Project Board

Transport Operators- Service continuity, regular joint meetings

Community & Commuters-Kept informed through consultations and digital updates

Environmental Agencies-Compliance reviews

Investors-Progress reports

Design & Construction Teams- Daily coordination

A Power/Interest matrix guides engagement levels. A formal engagement plan will define communication methods and frequency.

8. Allocation of Resources

People: *Project manager, architects, sustainability specialists, engineers, environmental consultants, community liaison and specialist contractors.*

Physical: Sustainable materials, solar/wind equipment, EV chargers, site facilities.

Finance: Local authority budgets, government green grants and possible private investment. Cost control through regular reporting and value engineering.

9. Risk Analysis

Risk	Likelihood	Impact	Score	Mitigation	Risk Owner	Contingency
High construction costs	3	5	15	Green grants, Value engineering	Project manager	Funding reserve
Technology integration issues	3	4	12	Early testing, expert advice	Design Lead	Alternative technologies
Adverse weather	3	3	9	Seasonal planning , monitoring	Construction Manager	Programme buffer
Stakeholder resistance	3	3	9	Regular engagement and communication	Community Liaison	Escalation Board
Regulatory changes	2	4	8	Continuous monitoring	Project Manager	Design flexibility
Supply chain delays	3	3	9	Multiple suppliers Early procurement	Procurement Lead	Buffer stock

Risks are recorded in a live Risk Register, reviewed at every Project Board meeting and assigned to named owners. High-scoring risks receive priority attention. Contingency plans are prepared in advance and residual risk is reassessed after mitigation.

10. Conclusion

The sustainable redesign of the central transport hub successfully addresses the urgent need to restore essential transport capacity following the closure of the existing facility. At the same time, it delivers significant environmental, social and economic benefits that align with wider net-zero and sustainability goals. By applying a structured project management approach — including a clearly defined scope, a detailed Work Breakdown Structure, a realistic and carefully planned schedule, active and ongoing stakeholder engagement, thoughtful allocation of resources, and rigorous risk management — the project can be delivered efficiently and effectively. Once completed, the new hub will stand as a modern, low-carbon and climate-resilient transport facility. It will not only support the daily needs of the city and its communities but also provide lasting value for future generations.

11. References

Association for Project Management (2021). *APM Body of Knowledge* (7th edition).

Kerzner, H. (2020). *Project Management: A Systems Approach to Planning, Scheduling, and Controlling* (14th edition).

Project Management Institute (2021). *A Guide to the Project Management Body of Knowledge (PMBOK Guide)* (7th edition).

Pinto, J.K. (2020). *Project Management: Achieving Competitive Advantage* (5th edition). Pearson.

Silvius, G., Schipper, R., Planko, J., van den Brink, J. and Köhler, A. (2017). *Sustainability in Project Management*. Gower Publishing.



Thank you !