7 Management Case

7.1 Introduction

The delivery of A4440 Worcester Southern Link Road Improvements, including Phase 4, is a priority for WCC, the Worcestershire LEP, Herefordshire and Worcestershire Chamber of Commerce, local Members of Parliament and the Worcestershire District Authorities. The programme is aligned with agreed priorities, in particular in terms of supporting economic growth in Worcestershire.

The scope of the scheme includes:

- Construction of an additional carriageway adjacent to the existing single carriageway to form a 1.2 mile dual-2 carriageway from Ketch Roundabout to Powick Roundabout.
- Two new bridge structures to carry the additional 2 lane carriageway, at Carrington Bridge and at Powick Common viaduct;
- Capacity Improvements and junction revisions to allow dual carriageway connections at Ketch Roundabout;
- Widening of the existing footway to accommodate a shared pedestrian/cycle route on northern side;
- New road markings, some widening of carriageway on west approach to accommodate movements to new dual carriageway section at Powick Roundabout;
- Upgrade of dedicated left hand turn to Malvern to fully segregated facility at Powick Roundabout;
- Provision of a foot/cycle bridge linking the north and south cycle routes, located on the west approach, at Powick Roundabout; and
- Upgrade of grade separated pedestrian route for north to south movements at Ketch Roundabout.

This section sets out how WCC proposes to deliver the A4440 Worcester SLR Phase 4 scheme. It explains:

- The capability and capacity of the authority to deliver the scheme, drawing on evidence from other similar projects (section 7.2);
- The way in which the project complements other schemes (note the scheme is not dependent on any other works) (section 7.3);
- Arrangements for project governance, including organisational structure and allocation of roles, decision-making powers and project management (section 7.4);
- The planning strategy (section 7.5);
- The project programme, which has been carefully planned to ensure that it is realistic and deliverable (section 7.6);
- The process being used to ensure that all the necessary assurance and approvals are obtained in a timely and efficient manner, and associated reporting (Sections 7.7, 7.9, 7.10);
- The strategy for effective communication and stakeholder management (section 7.8);
- The strategy and approach adopted to ensure effective risk management including key issues for implementation (section 7.11);
- Monitoring and evaluations (Section 7.12);
- Benefits realisation strategy (section 7.13);
- Contingency plan for the Common Land De-Registration Delay (section 7.14);
- Summary of the management case (section 7.15).

7.2 Evidence of similar projects

WCC has considerable experience of:

- Delivering major transport schemes on time and on budget;
- Successfully obtaining consents for major infrastructure schemes;
- Developing and maintaining good working relationship with key partners and stakeholders; and
- Resourcing and governance requirements for major schemes.

The scheme is a component part of the WTS, which is described in the strategic case. The WTS is divided into two phases:

- WTS Phase 1: The appraisal showed it to deliver strong positive benefits across DfT appraisal criteria (this phase included the sustainable measures in the City and A4440 Worcester Southern Link Road Phase 1 and Phase 2 schemes); and
- WTS Phase 2: The case for the subsequent phase of the WTS is as robust as Phase 1 in terms of the value for money offered (this phase includes the A4440 Worcester Southern Link Road Phase 3 and Phase 4 schemes).

Phase 2 of the WTS is now being implemented, as a series of sub-phases, when funding permits. Worcester Southern Link Road improvements are part of the Phase 2 works, and have been split into four phases. These are shown on Table 7.1.

Phase	Scheme	Status
Phase 1	Whittington Junction minor Improvements	Completed
Phase 2	Ketch Junction improvements and provision of 600 metres of dualling towards Norton Roundabout	Completed
Phase 3	Norton Roundabout improvements and completion of dualling between Whittington and Ketch junctions.	To be completed 2019/2020
Phase 4	Further capacity enhancements between Powick Junction and the M5 including dualling between Powick and Ketch junctions	To be implemented by 2021 – subject of this FBC

Table 7.1: A4440 Worcester Southern Link Road Phasing

Phase 1 of the A4440 SLR improvements were completed in July 2012 and consisted of capacity enhancements to the Whittington Roundabout. Phase 2 works were completed in 2016 at the Ketch Roundabout and dualling of the A4440 to 300 metres from Norton Roundabout.

Examples of schemes implemented by WCC include the following:

- Hoobrook Link Road Phase 2, in South Kidderminster Enterprise Park. The £16 million scheme became operational in 2016;
- Worcester Southern Link Road Phase Dualling Phase 3– Norton to Whittington . The dualling is complete with work on pedestrian and farm bridges underway for installation 2019/20;.
- Extension to Railway Bridge (as part of SLR Phase 3) successfully installed in May 2018
- Evesham Abbey Bridge, completed in 2014;
- Middle Hollow Drive/Woodgreen Drive in Worcester, scheme completed in 2015;
- Worcester Southern Link Road Phase 1 Whittington Roundabout; and
- Worcester 6 Access Road.

- WTS Phase 1 (£19.56) including:
 - Intelligent Transport Systems (ITS) scheme Variable Message Signing (VMS) implemented on key approaches to the City (complete);
 - Public realm improvements in Lowesmoor (complete);
 - Improvements to Worcester Foregate Street and Malvern Link Railway Stations (complete);
 - Ketch Roundabout Improvements (complete).
- Multi-Modal Corridor enhancement schemes along two key radial corridors in Worcester (both implemented in 2010/11);
- Newtown Road Corridor, funded through LTP2 & Section 106;
- Bromyard Road Corridor funded through Communities Infrastructure Funding Round 2 (CIF2);
- Walk & cycle schemes, implemented as part of Worcestershire's Safer Routes to School programme;

These projects were complex and demanding and required new ways of working with partners and stakeholders.

7.3 Project dependencies

Physical project dependencies are described in the Strategic Case. In the Management Case the relationship and third party project dependencies are described.

A number of decisions and deliverables have been identified that are required from other parties in order for the A4440 Worcester SLR Phase 4 scheme to progress. These require permissions and/or legal processes in order to allow the project to progress. The issues are detailed in Table 7.2.

Issue	Nature of dependency	Action being taken
Obtaining Large Local Major Funding	Final Approval is required to progress the scheme to Stage 2 (Detailed Design and Construction)	Submission of this business case to DfT in line with guidance
SLR Phase 3	Full benefit of Phase 3 will not be realised if Phase 4 is not complete	Construction of Phase 3 is well progressed with dual- 2 lanes open in both directions.
Land ownership	Land acquisition is required for the scheme. The land is anticipated to be acquired by negotiation and negotiations are well advanced including terms agreed. A CPO has been made, no objections remain and it is confirmed that a Public Inquiry is NOT required.	Negotiation with land owners in final stages & CPO made - awaiting confirmation
Common Land	Common Land is in the process of being de-registered. After consultation with the Commoners and the relevant landowner appropriate Exchange Land has been identified and is being secured through legal processes.	After consultation with the Commoners and the relevant landowner appropriate Exchange Land has been identified, is being secured through legal processes and is in the process of being de- registered.
Planning permission and discharge of conditions	Planning permission is required for the proposed scheme and was granted in April 2018.	Work continues to discharge planning conditions. Details are provided in an extract of the latest Register of Environmental Actions and Commitments in Appendix M.
Commencement of Stage 2 of the ECI contract	WCC and ECI contractor to commit to Stage 2 of the contract (D&B)	Preparation of contract is well advanced. Advance work covered within Stage 1a and 1b contracts. Stage 2 contract will be ready to commence on confirmation of full funding

Table 7.2: Project Dependencies

7.4 Governance, Organisation Structure/Roles and Project Management

The management for the A4440 Worcester SLR Phase 4 project is based on PRINCE2 principles. Specific attention has been given to governance, to provide a clearly defined structure for the role of the Programme Board, Project Board, Project Manager and Project Teams, as set out in the WCC Project Operating Model shown in section 7.7 and Figure 7.3.

It has been specifically tailored to meet the requirements of the scheme and its component projects and is based on the structure successfully adopted for recent WCC major projects including Worcester Transport Strategy Phase 1, A4440 Worcester SLR Dualling Phase 3, Hoobrook Link Road Phase 2 and Worcestershire Parkway. The Project Management Plan summarises the following key areas:

- Project Organisation and Responsibilities involved parties and their roles;
- Presentation of Project deliverables, division into work units and time plan;
- Project Planning and Control technical approval, progress measurement and monitoring; and
- Communications Plan meetings, decisions & action logs, highlight reports and open issues log.

7.4.1 Cabinet

WCC's Cabinet has ultimate authority for the project and approved the scheme on 2nd February 2017. The Cabinet meets on a monthly basis and regular updates are provided to the Cabinet Member with Responsibility for Economy and infrastructure and through WCC corporate routes. The Cabinet comprises:

Name	Responsibility
Simon Geraghty	Leader of the Council and Cabinet Member with Responsibility for Finance
Alan Amos	Cabinet Member with Responsibility for Highways
Adrian Hardman	Cabinet Member with Responsibility for Adult Social Care
Marcus Hart	Cabinet Member with responsibility for Education and Skills
Lucy Hodgson	Cabinet Member with Responsibility for Communities
Karen May	Cabinet Member with Responsibility for Transformation and Commissioning
Tony Miller	Cabinet Member with Responsibility for Environment
Ken Pollock	Cabinet Member with Responsibility for Economy and Infrastructure (and infrastructure projects)
Andrew Roberts	Cabinet Member with Responsibility for Children and Families
John Smith	Cabinet Member with Responsibility for Health and Well-being

Table 7.3: Members of Cabinet

7.4.2 Project Board

The scheme development is being overseen by a Project Board. The Project Board role is one of governance, accountability and decision making. The Project Board comprises officers with responsibility for delivery of the A4440 Worcester SLR Phase 4. Officers from a wide delivery team are involved in a number of elements of the project including the risk workshop, package sifting and public consultation. The Project Board meet regularly and will meet at key milestones throughout the life of the project to ensure Project Assurance objectives are met. The composition of the board will evolve as the scheme progresses and others are asked to report to the board as required, e.g. land and legal specialists.

Membership of the Board is detailed in Table 7.4.

Name	Role	
Rachel Hill	Senior Responsible Officer & Chair	
Nigel Hudson	Head of Strategic Infrastructure and Economy	
Andrew Baker	Transport Planning Manager	
Emily Barker	Strategic Planning Manager	
Stephanie Walton	Procurement Manager	
Sally Everest	Network Manager	
Nick Twaite	Asset Manager	
Jo Dalton	Communications Manager	
Abhi Bhasin	Business Case Manager	
Mark Broomby	Project Manager	
Richard Bruten	Contractor's Project Director	

Table 7.4: Membership of Project Board

7.4.3 Project Manager

The Project Manager leads the management and delivery teams providing an interface between the various approval boards and delivery teams in accordance with WCC Project Operating Model (POM). They monitor and evaluate project progress against milestones, assess outcomes and provide support and direction to the work package managers. The Project Manager is a member of the Project Board.

The role of the Project Manager is to:

- Lead and coordinate the project team and its work-streams;
- Ensure appropriate resources and technical expertise are in place for the project;
- Make decisions and approve changes within agreed tolerances or seek authorisation if required;
- Procure consultants and contractors;
- Prepare and report project budgets;
- Manage project risks and issues;
- Report to and receive feedback from the responsible officer; and
- Produce periodic progress reports to relevant committees.

7.4.4 Project Teams

The Project Manager is supported by a project team covering all related disciplines. In most cases a discipline has a lead manager who is, where relevant, supported by a co-ordinator and wider team. The high level Project Organogram is shown in Figure 7.1; Figure 7.2 provides a more detailed overview of the Client Agent and Contract Administration structure whilst Figure 7.3 details the structure the detailed design and construction.

Figure 7.1: High Level Project Organogram

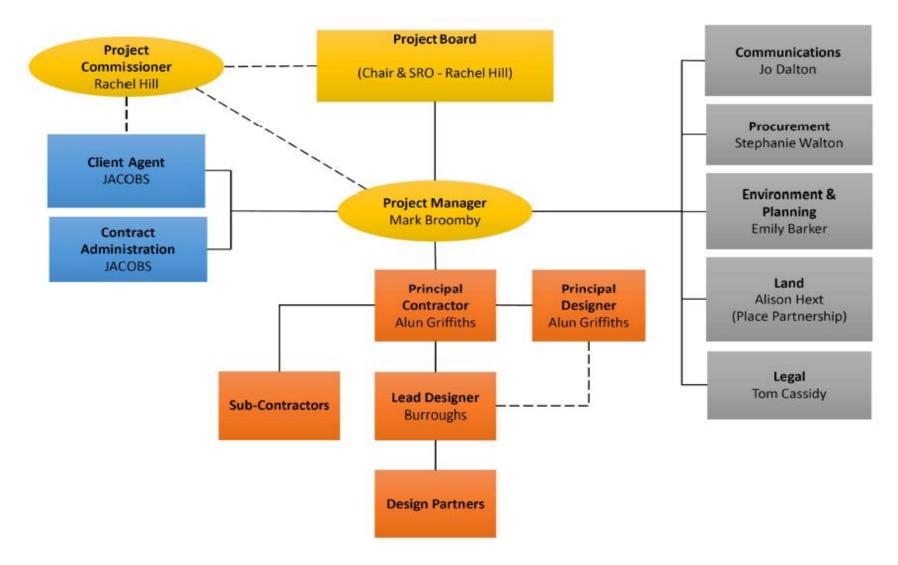


Figure 7.2: Project Organogram (Client Agent and Contract Administration)

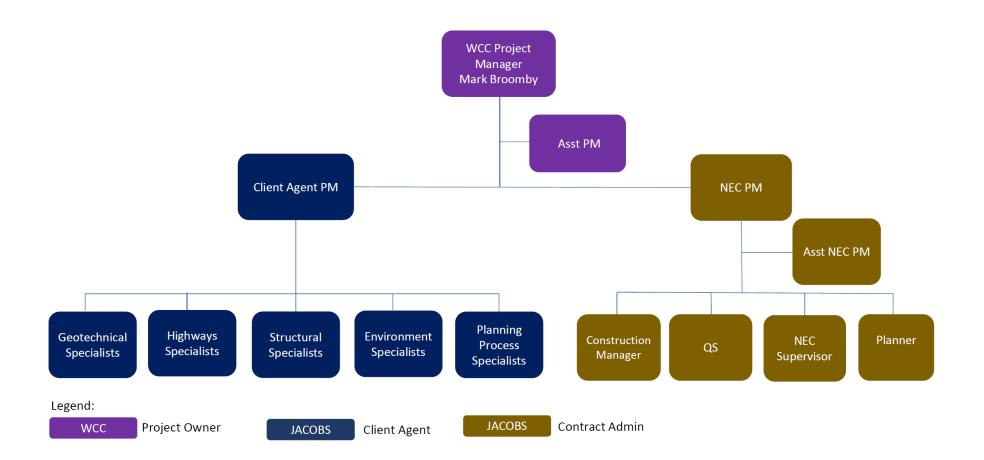
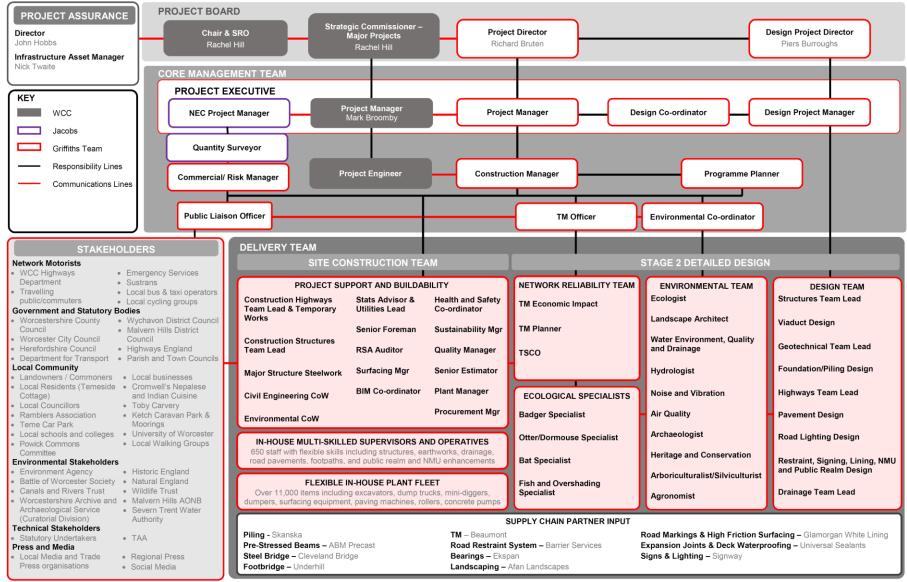


Figure 7.3: Project Organogram (Detailed Design and Construction)



7.5 Planning strategy

Worcestershire County Council is responsible for planning applications and lawful development certificates for:

- The County Council's own developments;
- Waste Developments;
- Minerals Developments.

Planning consent for the scheme was granted by Worcestershire County Council on 5th April 2018. The planning application was subject to an Environmental Impact Assessment (EIA) due to the size of the project and the proximity of the River Teme SSSI. Planning permission was granted with certain conditions which are provided in Appendix M. These planning conditions include, among others, that:

- A Community Liaison Group (CLG) be established;
- The development must begin within 3 years of the date that planning permission has been granted; and
- The development is carried out in accordance with the drawings available in Appendix A.

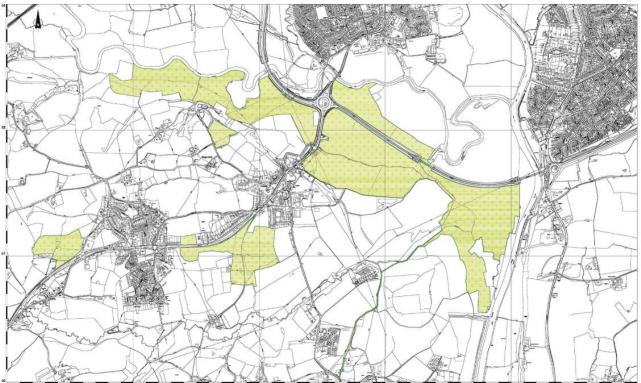
The exact extent of the land required to be achieved to deliver the scheme is fully known and negotiations to acquire the land are well advanced. As a backup to negotiations, a Compulsory Purchase Orders (CPO) was made in May 2018. There was one objection to the to the CPO, which has now been withdrawn, consequently the Planning Inquiry has been cancelled.

Part of the scheme is located in the Powick Hams Common. The original area of Common Land is 177 Hectares and there are 59 registered rights over the land, all of which are rights to pasture. The Common Land predominantly adjoins agricultural land. Figure 7.4 shows the Common Land around the scheme.

After consultation with the Commoners and the relevant landowner appropriate Exchange Land has been identified and is being secured through legal processes. Common Land is in the process of being deregistered through Section 16 applications and the Planning Inspectorate has confirmed that a Planning Inquiry is not needed for the land to be de-registered between Ketch and Powick Roundabout. Further details of the planning strategy are set out in Appendix M.

9

Figure 7.4: Powick Hams Common



In addition to the land acquisition (draft contracts agreed in principle), planning consent (secured) and deregistering of Common Land (well in progress), the following are required:

- Temporary Traffic Regulation Order's; and
- Badger Protected Species Licence (obtained).

7.6 Project plan

A project plan has been developed for delivery of the A4440 Worcester SLR Phase 4 scheme, setting out the main project stages between Programme Entry and full scheme completion and their anticipated timescales. The plan defines key milestones, dates, identifies dependencies between work streams and approvals and highlights the Critical Path. The high level and detailed project plans are shown in Appendix O.

A number of key principles have been determined, which provide the overall framework for the programme. These are the DfT approvals process, Gateway Review stages, scheme design, procurement processes, publishing Traffic Regulation Orders and the construction period. The Table below outlines the key dates to scheme opening. The programme for the scheme is being kept under review to reflect ongoing progress. However, the overall scheme implementation programme and most notably opening date has a strong political intent and the project team is charged with addressing the project issues as they arise with the intention that the opening date is achieved.

Table 7.5: Project Programme

Milestone	Target completion date
Strategic Outline Business Case	25/01/2016
Outline Business Case (including Addendum for TEMPRO update)	31/03/2017
Stage 1a Contract Awarded	04/05/2017
DfT Programme Entry notified	09/11/2017
Planning decision	05/04/2018
DfT Full Approval	18/02/2019
Stage 2 commencement (Detailed Design & Main Construction) - excludes advanced Detailed Design & enabling works for critical path items undertaken under Stage 1b	01/03/2019
Scheme Opening	31/03/2021

7.7 Assurance and approvals plan

The Project Board is responsible for Project Assurance, ensuring that the project remains on target in terms of business, user and technical objectives. This includes conducting Gateway Reviews at key stages in the project life cycle to determine whether or not the project can proceed to the next stage.

Project Board members receive regular Highlight Reports from the Project Manager to aid them in this process. The scheme will also be subjected to regular Peer Review by the Directorate of Economy and Infrastructure Programme Board which includes Senior Officers from a range of disciplines including business, strategic and technical officers. Key gateway decision points such as proceeding to detailed design and construction will be made by the Strategic Infrastructure Group in accordance with Worcestershire County Council Project Operating Model (POM) as detailed in Figure 7.5.

In addition to the Project Board Assurances, Gateway reviews have been undertaken prior to the OBC and FBC submission independently of the project team, the outcome of these reviews is appended to the business case Appendix T. The most recent Gateway Review was a Stage 3 Gateway Review carried out by Local Partnerships on 21-23rd November 2018. In summary, they found that:

"The project is well run and under control"

"The project should deliver the majority of the benefits sought"

"There are challenging timeframes but these are largely mitigated and plans (if not already in place) will need to be developed to deal with the key risks:

- Weather . Flooding;
- Brexit / Supply Chain impacts;
- Delays due to public inquiry, CPO and other associated legal acquisition matters......"

The Review Team made five recommendations, these are summarised below:

- Responsibility for DfT liaison should be vested within the delivery team.
- Re-circulate ToR and membership details and schedule of CLG meetings early to ensure the group provides a positive contribution to the scheme development going forward.
- Ensure all legal matters are concluded as a matter of urgency to ensure there is no slippage in the programme and the submission of the FBC to DfT is not delayed. It is also advisable to reconfirm the target submission date for the FBC with DfT.

- Review project capacity and resources to ensure greater project resilience and knowledge transfer is achieved.
- Better definition should be given to the outcomes so that they can be monitored and evaluated. A process for monitoring and evaluation should be put in place, in particular. Social Value delivery and reporting at key project milestones

In addition, the Review Team commented as follows:

In relation to Governance: "This system does appear to function well as there is good knowledge of the project and its status / progress at all levels both politically and amongst officers."

In relation to Delivery: "The project programme is continuously reviewed, monitored and updated to reflect the project status at the Project Board and through a series of sub-group meetings. There is a high level of confidence in the SRO to oversee a successful outcome to deliver the scheme."

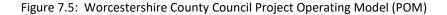
In relation to Stakeholder Management and Engagement: "The approach to the management of key stakeholders does seem to be effective as the project was viewed by all those interviewed to be top-priority for the Council with political support found to be strong.

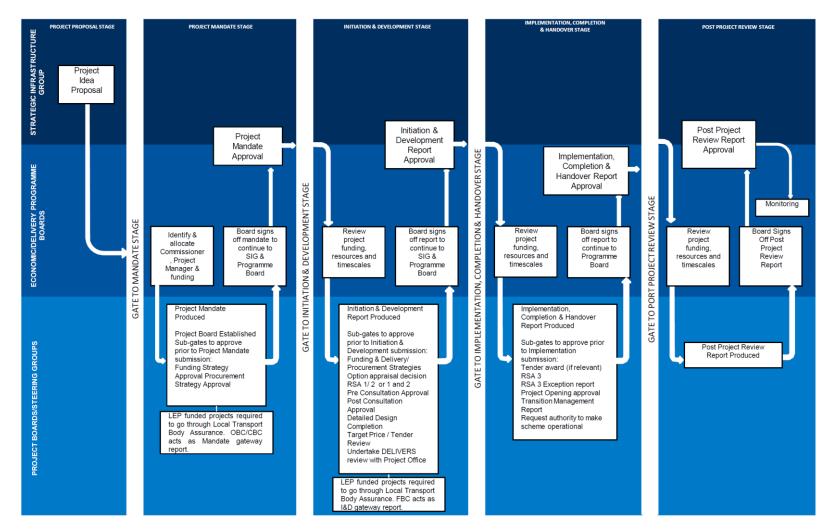
There was evidence of very strong working relationships with the LEP and, in particular, the partnering districts to the South of the County."

In relation to Communications: "Following useful experience gained on previous phases and other major projects the Communications Strategy is robust, multi-functional, engaging on different platforms and reaches a wide audience."

In relation to the Contractor: "The Contractor has a robust supply chain in place and they have a pro-active approach to this project in all aspects."

In relation to Risk Management: "The Review Team found that there is a comprehensive approach to risk management with a detailed risk register that identifies most of the expected range of risks. Risks are regularly reviewed by the working groups and reported to the Project Board. The process is supported by strong risk management policy and risks appear to be well understood by all those interviewed."





7.8 Communication and Stakeholder Management

7.8.1 Overview

Having a Stakeholder Management and Engagement Plan in place is an essential component of good project management. The Stakeholder Management and Engagement Plan presented in Appendix C identifies key stakeholders and helps explain how, throughout the project they will be informed, what the purpose of the communication will be, the method for communication, who will do the communicating, and the frequency of the communication.

Communication is often a very effective way to solve problems, deal with risks, and ensure that tasks are completed on time. Successful plans will leave nothing to chance. According to best practice, 75%-90% of a Project Team's time is spent communicating. Since communications is a significant aspect of the Project Team's job, having a Stakeholder Management and Engagement Plan is essential.

The Stakeholder Management and Engagement plan presented in Appendix C contains information on:

- Stakeholder Analysis
- The Communications Challenge
- Communications Strategy
 - Strategy
 - Audiences
 - Objectives
 - Key Messages
- Implementation
- Media
- Timeline / Action Plan
- Budget
- Key Project Contacts
- Project Communications Toolkit

The key elements of the ongoing communications challenge are:

- Creating an environment where project parties (particularly the County Council) provide an open and consistent approach to stakeholder management and communications through a clear and up to date Stakeholder Management and Engagement Plan;
- Promoting advocacy for the proposals from key external stakeholders by engaging on an ongoing basis as the project progresses, communicating and promoting the benefits and dealing with any concerns in a timely way;
- Publicising the project within the context of wider improvements;
- Ensuring users and residents are aware of any planned disruption as a result of the works, in good time to be able to plan alternative travel if necessary;
- Carrying out sufficient early consultation to ensure a smooth passage of delivery, having first considered any reasonable requests for mitigation measures pertaining to the scheme; and
- Presenting a united front between WCC and stakeholders on the scope, delivery and ultimate operation of the facility.

The Stakeholder Management and Engagement Plan has been put together to pinpoint the communication channels that should be utilised to ensure all relevant parties are kept informed as the project develops.

Communications will be tailored to meet the needs of each stakeholder and will take into consideration the objectives for the scheme.

The key audiences for the Stakeholder Management and Engagement Plan strategy will be:

- Worcestershire County Council (Councillors/Staff)
- Worcestershire Local Enterprise Partnership
- Herefordshire and Worcestershire Chamber of Commerce/Federation of Small Businesses/Institute of Directors
- Worcester Business Improvement District
- Department for Transport
- Secretary of State for Transport
- Worcester City Council
- Wychavon District Council
- Malvern Hills District Council
- Local Councillors
- Parish and Town Councils
- Herefordshire Council
- The Marches Local Enterprise Partnership
- Highways England
- Environment Agency
- Developers
- Education establishments (e.g. sixth forms, University of Worcester)
- Local Members of Parliament
- Local residents
- Commuters
- Local businesses
- Local media and Trade Press organisations
- Road Haulage Association
- Sustrans and local cycling promotion groups
- Living Streets
- RoSPA
- Ramblers Association
- Campaign for Protection of Rural England
- Open Space Society
- Natural England
- Historic England
- Wildlife Trust
- Canals and Rivers Trust

• Bus/taxi Operators

7.8.2 Engagement undertaken to date

Key stakeholders have been engaged though a range of engagement activities, in particular as part of the development of the second, third and fourth Local Transport Plans (LTP2/3/4), the SWDP, the WTS and the Sustainable Travel Town ("Choose how you move") research. These documents are publicly available on the WCC website. Stakeholders have also been engaged during the delivery of a number of major schemes.

A summary of the engagement/consultation exercises undertaken is provided below:

- Worcester Transport Strategy (including A4440 Worcester SLR Improvements), 2010. Over 1000 responses were received via workshops, exhibitions, web and focus groups;
- Local Transport Plan 3, 2011. 577 responses received;
- South Worcestershire Joint Core Strategy, 2007-2010. 6505 written responses, 8476 attendees at exhibitions, events and workshops;
- South Worcestershire Development Plan Preferred Options, 2011 to 2016. Total comments 12,939 from 3,286 Consultees;
- Department for Transport, Local MP's and key Stakeholders: Ongoing engagement;
- Local Transport Body Bid, May 2013;
- Land owners have been briefed with regard to the need for CPO and are being actively engaged;
- Public information exhibitions. One month commencing June 2013. Local community and interested parties could express their opinions and gain information about the scheme.
- Engagement with County, District and Parish Councilors, September 2014;
- Public engagement on full dualling of SLR undertaken as part of the SLR Dualling Phase 3;
- Public and key stakeholder engagement on major scheme delivery (Worcester Transport Strategy, Evesham Abbey Bridge and the Hoobrook Link Road);
- Local Transport Plan 4, 2017. 358 questionnaire responses and 130 written responses received;
- Public and key stakeholder engagement ahead of planning submission, June-Sept 2017;
- Southern Link Road Phase 4 Community Liaison Group established in accordance with planning condition.

A summary of responses from the public engagement that took place in the Summer 2017, can be found in Table 7.6**Error! Reference source not found.** Main comments from statutory and key local stakeholders were:

- The increased use of different transport modes and improvements to paths and cycle routes.
- Equally important was to have historic and environmental research teams involved in the
- planning and completion of the Scheme to ensure important features are retained or enhanced.
- The benefits of reduced congestion and air pollution and increased employment potential.

Comments from local residents and users included:

- Would like to see a sympathetic design, with the design fitting into its setting
 - \circ $\,$ The new Hams Way Foot and Cycle Bridge has been designed to fit the local area while being aesthetically pleasing
- The concern regarding noise pollution was raised
 - \circ $\;$ The team have spoken directly the concerned party to resolve the issue.
- A request for lighting the NMU routes

- Lighting will be provided in these areas where appropriate (e.g. due allowance of bat routes).
- A number asked for increased availability and quality of public transport within the area.
- Views should be enhanced not reduced
 - Native trees will be planted along the embankments to help the Scheme blend into its environment
 - o There will be improvements to the Ketch Viewpoint
- Comments regarding the foot/cycle way were to incorporate it into the design and create a good quality surface
 - This is being proposed
 - The existing footway will be upgraded to a footway/cycleway
- Flooding risk/worsening was mentioned
 - A detailed Flood Risk Assessment has been carried out for the Scheme and appropriate mitigation agreed with the Environment Agency
- Congestion, most comments regarding the improvements that the Scheme will produce and one with concerns that it may not improve the situation
 - \circ $\,$ A detailed traffic assessment has been carried out for the Scheme
- There was a concern for the overall funding enabling the Scheme to be completed
- A comment regarding the construction make up
 - This has been designed since the consultation
 - Land ownership concern
 - Land owners are known, and negotiations are nearing completion.

More detail on the public information exhibitions can be found within the Planning Statement (October 2017) available on the Worcester County Council Web APAS website¹.

Response	Number of responses		
Sympathetic Design	1		
Noise Pollution	2		
Lighting	1		
Public Transport	3		
Views	1		
Cycle/Footway	2		
Flooding	1		
Congestion	3		
Funding	2		
Land Ownership	1		
No Issue/Support	5		

Table 0.6 Summary of responses from June 2017 public engagement

Engagement about the scheme continues via the Community Liaison Group (CLG) which is a tried and tested mechanism for engagement with local stakeholders that has been employed by the County Council on other major projects. The CLG is chaired by the Chairman of Worcestershire County Council's Planning and Regulatory Committee. Membership of the CLG includes one County Councillor from each of the three County Council electoral divisions that the scheme falls within, one District Councillor from each of the three District Wards, one Parish Councillor from each of the three Parish Councils and key members of the Project Team. The CLG adopted Terms of Reference at its inaugural meeting in September 2018. It's primary role is to ensure that local stakeholders are kept informed about progress with the scheme and to make them aware of forthcoming work that might be of particular interest to the local community. It also provides a

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mechanism for stakeholders to ask questions or make comments via the CLG members in addition to the other channels such as the County Council's dedicated Major Projects email address which is promoted in a variety of places including the County Council's website.

Key Stakeholders Support

Appendix Q contains letters of support from:

- Joint MP letter to the Secretary of State for Transport
- Robin Walker MP
- Harriett Baldwin MP
- Nigel Huddleston MP
- Highways England
- Norton Juxta Kempsey Parish Council
- Worcestershire Royal Hospital NHS
- Worcestershire Regulatory Services

Business Support (in alphabetical order)

- Advised in Worcester
- Alimenti Food Sciences Ltd
- Bosch Thermotechnology Ltd
- BPI consumer Packaging
- Counterpoint Courses Ltd
- David Middler Brands
- Delta XML
- Deutscheparts
- Dominic Tunnell Opticians
- ECO2 Solar, Electrical Innovation
- Embrace
- Fortis Living
- Gallery Candles
- Harris Lamb Property Consultant
- Individual Tailoring Ltd
- Industrial and Tractor Ltd
- Joy Global Eurasia
- Malvern Hills Science Park Ltd
- Natwest, Worcestershire Commercial Banking
- Malvern Instruments Ltd
- Microferm Ltd
- QinetiQ
- Quantum Construction Consultants Ltd
- Specsavers Opticians
- Sutcliffe and Co, Insurance Brokers
- Thursfields Solicitors
- "You", Friar Street
- Worcestershire Enterprise Limited

- Worcestershire LEP
- Marches LEP
- Herefordshire Council
- Worcester City Council
- Malvern Hills and Wychavon District Councils
- St Peter's Parish Council
- H&W Chamber of Commerce
- Wychavon District Council
- Heart of Worcestershire College

During the project development phase, consultation was undertaken with a number of key stakeholders. These include:

- Discussions with Statutory Undertakers (C3 Estimates) National Grid (Nov 2016); Severn Trent Water (Dec 2016); CLH (Oil Pipeline) (Nov 2016); BT Openreach (Nov 2016);
- Discussions with Western Power Distribution regarding pylon relocation process now relocated;
- Environment Agency Consultation regarding Flood Risk Assessment (mitigation approved);
- Environment Agency Consultation regarding Flood Modelling Assessments (mitigation approved);
- Place Partnerships ongoing liaison with main land owner for land affected by scheme and commoners;
- Meeting with WCC Development Control Re Planning Application requirements in relation to Environmental scoping;
- As part of Environmental Assessment, meetings undertaken with Malvern Hills District Council; County Ecologist, County Archaeologist, Environment Agency, Worcestershire Regulatory Service, Historic England, Natural England, Worcester City Council, Worcestershire Wildlife Trust, the Severn River Trust, the Canals and Rivers Trust.

Further details on the above consultations has been reported within Appendix H – Environmental Assessment Report (Chapter 4).

7.9 Project reporting

For each phase, a Project Initiation Document (PID) is established by WCC and approved by the A4440 Worcester SLR Phase 4 Project Board. This is a 'working document' which defines:

- What the project intends to achieve;
- Who is responsible;
- How it will be achieved;
- When it will be delivered.

The PID includes a detailed project plan, which captures the 'key tasks' to be achieved prior to the project proceeding to the next stage.

The Project Board's role is to ensure that the project is developed and managed in accordance with the PID and to provide oversight and advice to the Project Manager to enable progress in a timely fashion.

The Board typically meet every four weeks and its decisions are recorded and communicated to provide appropriate project governance for the project and its development. In advance of the Project Board, the Project Manager, submits a 'highlight' report monthly, detailing progress in accordance with the PID. The Project Board occasionally invite a wider audience to attend when deemed beneficial to the current stage of the project. Whilst these bodies will not have responsibility for the project, their attendance and participation is key to successful delivery.

In addition to Project Board, project progress and issues are reported to the Strategic Commissioner / Head of Major Projects and the Director of Economy & Infrastructure via monthly WCC Major Infrastructure Project Review Meetings. Other senior officers are kept abreast of the scheme via the monthly Delivery Programme Board that oversees the full programme of projects currently under delivery within the E&I Directorate. Information is further reported to the Cabinet Member with Responsibility through regular meetings with the Senior Responsible Officer.

From our wider team's experience of working with DfT, we are aware that for previous large schemes funded by DfT, there is a requirement to complete Quarterly Monitoring Returns to demonstrate progress against key milestones and to record spend against budget. These returns are prepared by the Project Manager and submitted quarterly in line with DfT's request. From time to time it may be appropriate for a

verbal or face-to-face progress meeting with DfT. These will be arranged at a time of mutual convenience, with the Project Team travelling to London if required.

7.10 Contract management

In line with the commercial case, 3-stage Early Contractor Involvement contracts (NEC3) have been agreed with the preferred supplier, Alun Griffiths. The contracts are staged as follows, with opportunities and options to break or proceed at each stage:

- Stage 1a Design development and consultation up to planning submission (completed);
- Stage 1b Statutory processing to prepare scheme for delivery (in progress); and
- Stage 2 Detailed Design and Construction (Awaiting Final Approval of Full Business Case).

Since the outset of advertising and preparing the 3-stage contract, the project delivery team has been involved in development of the contracts and this has continued throughout the project life as each stage is prepared and executed. The contract management arrangements are outlined in the organograms presented in Figures 7.1 and 7.2.

7.11 Risk management strategy

The accurate evaluation and pro-active mitigation of risk is critical to the success of the project. To ensure that all risks were captured a Quantified Risk Assessment has been undertaken and updated for the scheme. Relevant owners have been allocated for each risk and progress on the management of the key risks is discussed at each Project Board meeting. A copy of the A4440 Worcester SLR Phase 4 Quantified Risk Assessment is included in Appendix P.

The risk register logs the full spectrum of potential risks to the planning and delivery of the scheme.

The risk register ranks each individual risk according to its likely impact and probability of occurring. The management strategy then looks to avoid or reduce the risk. In many cases additional technical work or surveys, or early discussions with partners have already been undertaken in order to reduce or mitigate the risk.

Risk management is embedded into the project delivery. The risk register will continue to be reviewed on a regular basis. Delivery and contractor teams will be responsible for managing their risks and reporting any newly identified risks to the Project Manager. Risks escalated to Medium or High which could impact on the progress or financial position of the project will be referred by the Project Manager to the Project Board.

A Quantitative Risk Assessment (QRA) was undertaken for the A4440 Worcester SLR Phase 4 scheme. The main purpose of QRA is to support the scheme costing by predicting the level of risk contribution, having a defined level of confidence, to cover the construction of the scheme.

For the risk model of this project the following were used as inputs:

- Baseline capital expenditure figures estimated cost of £62m;
- Risk register developed by group consensus at various workshops;
- Quantifications of the risks Cost Impact Estimates and Probability/Likelihood.

The Quantified Risk Assessment process estimated the risk value to be $\pm 9,354m$ (pre-inflation). This was subsequently validated by an @Risk analysis which produced a P_(MEAN) value of $\pm 9.312m$. The top ten risks are shown in Table 7.7.

Table 0.7: Top Ten Risks

Rank	Risk Ref	Description
1	Risk 025	Scheme costs greater than allocated in Stage 2 Target Price and Proposed Evaluation Events.
2	Risk 065	Resurfacing of existing carriageway (A4440 Temeside Way) with Low-noise surfacing to meet planning condition more costly than anticipated.
3	Risk 028	Slippage of programme so that spending profile not achieved with consequential impact on budget (e.g. inflation) and reputation
4	Risk 052	Major flooding occurs during construction phase, resulting in access restrictions to the site, major impact on programme
5	Risk 037	Adverse Ground conditions affecting scheme costs post GI
6	Risk 026	Scheme cost inflation uncertainty leading to higher than expected out-turn costs resulting in inadequate budget available.
7	Risk 024	Construction costs realised from Risk 003 (Project Sponsor/key stakeholder key decisions affect programme delivery (e.g. amendments to scheme scope).
8	Risk 054	Potential impact from BREXIT leading to increase in material prices/ability to agree costs with sub- contractors/delay to material delivery.
9	Risk 055	Risk of potential adjustment to scope to future proof A4440 Hams Way approach to Powick RB for potential future dualling increasing scheme costs
10	Risk 042	Underestimation of costs associated with the works related with the STW syphon on A38 South and cost to develop design (in additional to generic contingency for SU overspend)

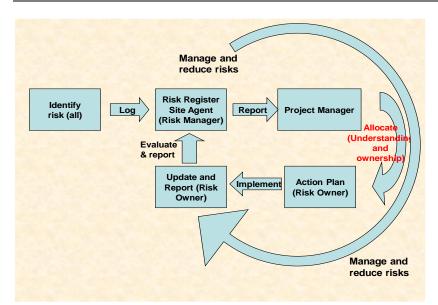
The Council has an overall framework for managing risk. Primary responsibility for managing risk on a day-today basis rests with those operational/strategic/project managers who are closest to the service/project and responsible for its delivery. In projects and other specific areas of work, risk registers identifying key risks and mitigating actions are used as a record and tool for monitoring this work. At Head of Service and Directorate level there are aggregated risk registers which identify the top risks at that level, and the actions in place to address these risks. From these is drawn a Corporate level Risk Register which identifies the top risks for the Council and actions in place. These top level risk registers are reviewed on a quarterly basis, and a report on the Corporate Risk Register is taken to Cabinet and the Audit and Governance Committee twice a year.

The contractors, Alun Griffiths, have their own risk management policy which is outlined below. The objective of this policy is to 'ensure that all parties are aware of the potential risks in the project and that sufficient mitigation measures are in place to reduce the impact of any risk.'² As part of this risk management policy, the Site Agent will help to identify and manage project specific risks and arrange a risk control register, as well as holding regular reviews, reviewing objectives against mitigation measures and reporting to the monthly Progress Meeting. Figure 7.6 shows an overview of this Risk Management process.

Figure 0.6 Summary of Alun Griffiths Risk Management Strategy Process

² Alun Griffiths Risk Management Policy

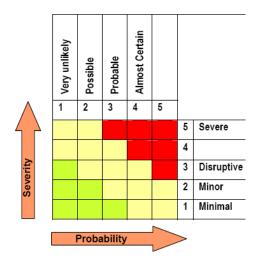
SECTION 0 7 MANAGEMENT CASE



The overall approach to the risk strategy will be discussed between the Site Agent, Project Manager and Designers before works commence. A register will be used to manage all risks, which will be available to all parties to input into, amend and assesses throughout the project. The Site Agent and a Quantity Surveyor will record and manage the risk ownership, mitigation measures and any residual risk. Opportunities will also be recorded in the register.

Mitigation measures will aim to reduce the reduce categorisation of a risk from High to Low based on the matrix in Figure 0..

Figure 0.7 Alun Griffiths (Contractors) Ltd Risk Assessment Matrix



The risk register is reviewed each fortnight and is a 'live' document, which can be checked at any time by relevant staff. This is to ensure that final out turn cost/value can be predicted and management action triggered at any time should trends become adverse.

The Site Agent will be responsible for reporting progress to the Project Manager at agreed intervals. Other site staff will also be involved in this process so that all parties are aware of new risks that arise and that existing risks are being managed effectively. Where necessary joint action can be taken in order to mitigate risks.

Overall, the process of managing project risk will be overseen and managed by WCC and the risk management approach implemented by Alun Griffiths will be embedded within the council's own risk management policies.

The contractor and their design partners have been actively engaged in this project for 18 months therefore implementation stage risks are not reported separately but rather the QRA has been developed based on a collaborative approach to create a combined comprehensive risk register refined over a series of Risk Workshops as the design developed and risks and potential mitigations became better understood.

7.12 Evaluation and Monitoring Plan

The A4440 Worcester SLR Phase 4 Monitoring and Evaluation Plan, has been prepared to show how the impacts of the scheme deliver the desired benefits and overarching objectives. It incorporates the scale and type of the scheme plus the resources available. Appendix R contains the Monitoring and Evaluation document.

A monitoring plan has been developed to provide details about whether the project is on time and to budget, whether the predicted benefits were achieved and what lessons could be learnt for future WCC transport strategies.

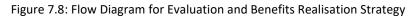
7.13 Benefits Realisation Strategy

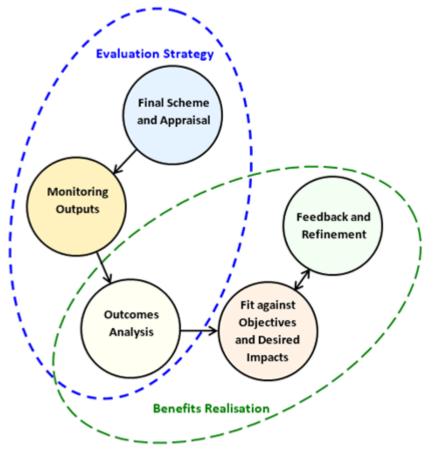
The proposed Benefits Realisation approach is designed to assess whether the outputs and impacts of the scheme deliver the desired benefits and overarching objectives. The approach reflects the scale and type of scheme, plus the resources available to complete an evaluation providing a strong evidence base to feed into the benefits realisation assessment.

The approach to assessing scheme outcomes and benefits realisation is defined in terms of the following stages, as shown in

Figure 7.8.

- Outputs defined in the Evaluation Monitoring Plan (labelled M1 to M7);
- Outcomes defined in the Evaluation outcomes (labelled O1 to O6) and feeding into the Benefits Realisation; and
- Desired Impacts as defined in the Business Case submission (labelled D1 to D6), to match to actual
 impacts and to check strategy fit, feedback and refinement to ensure lasting and long term realisation of
 benefits.





Appendix R lists the data collation and collection will be required to provide inputs to the data monitoring outputs, in the format as specified in the September 2012 monitoring guidance. The areas of data collection are as below:

- M1: Traffic Flows
- M2: Junction Operation
- M3: Journey Time Data
- M4: Stakeholder Feedback
- M5: Development Applications
- M6: Accident Data
- M7: Environmental monitoring data

7.13.1.1 Monitoring Outputs and Desired Outcomes

The Outcome Analysis (defined as O1 to O6) to be derived from the data collated and collected as part of the monitoring exercise is summarised below. These outcomes are the main benefits derived in the Business Case:

• O1 - Travel Time Savings – Are there changes to car journey times, including peak and off-peak times and variation in travel times, as a result of the Phase 4 SLR scheme? Comparison will be made between data collected post scheme opening and the predicted outcome stated in the Full Business Case.

- O2 Traffic Flow Are there changes to traffic flow on key corridors and SLR as a result of the Phase 4 SLR scheme? On the key corridors and SLR route traffic count data will be collected, and compared to general traffic growth in Worcester. This will include data collected, as part of standard monitoring, on radial routes not impacted by the scheme to establish levels of traffic growth and act as control sites.
- O3 Improved Performance– Are there changes to journey time reliability and delay as a result of the Phase 4 SLR scheme? Journey time reliability and delay (queue length) data will be used to compare to the predicted outcome stated in the Full Business Case.
- O4 Access to Strategic Network Is there better access to the Strategic Road Network as a result of the Phase 4 SLR scheme? - Feedback from stakeholders and the attractiveness of neighbouring development will be established to assess how the improvement has improved access to the strategic road network.
- O5 Access to Key Hubs Is there better access to Key hubs as a result of the Phase 4 SLR scheme? Stakeholder feedback and statistics on changes in local employment, retail and office occupancy that link to the wider impacts of the scheme and the local economy will be used.
- O6 Contribute to Environmental Objectives Have environmental objectives been met as part of the Phase 4 SLR scheme? Data collected as standard monitoring consider changes to traffic flows in the City centre will be used.

Table .8 shows how the different data monitoring outputs (M1 to M7) will be used to feed the outcome analysis (O1 to O6).

Monitoring Outputs (M) by Outcome Analysis (O)	01 – Travel Time Savings	02 - Traffic Flow	03 – Improved reliability performance	04 – Access to Strategic Network	O5 – Access to Key Hubs	O6 - Contribute to Environmental Objectives
M1: Traffic Flows						
M2: Junction Operation						
M3: Journey Times						
M4: Stakeholder Feedback						
M5: Developer Applications						
M6: STATS19 Accidents Data						
M7: Environmental monitoring data						

Table 7.8: Mapping of Monitoring Outputs and Outcomes Analysis (showing primary links only)

Table 9 shows the linkage between Outcome Analysis (O1 to O6) and the Desired Outcomes (D1 to D15), so completing the loop of the outputs, outcomes and impacts. The loop is iterative and the approach to the monitoring process and analysis allows for refinement to optimise benefits, assess all impacts and ensure the full benefits of the package are realised.

Given the benefits may be limited at 1 year after full package opening, the assessment of outcomes will look at the longer term benefits impacts and any minor remedial measures required to ensure the benefits of the package remain captured over a longer period of time. Such measures may include linkages to other proposed transport schemes and policies for the Worcester area.

Outcome Analysis (O) by Desired Impacts (D)	O1 – Travel Time Savings	O2 - Traffic Flow	O3 – Improved reliability	04 – Access to Strategic Network	O5 – Access to Key Hubs	06 - Contribute to Environmental
D1: Provide transport improvements which make a positive contribution to local air quality, road safety, accessibility and traffic congestion						
D2: Reduce current congestion issues at the Powick, Ketch, Norton and Whittington Roundabouts						
D3: Improve the resilience of the transport network to extreme weather events and unforeseen disruptions						
D4: Supporting the delivery of the planned growth set out in SWDP up to 2030 and some capacity for post 2030 growth						
D5: Improve the performance and attractiveness to users of the A4440 Worcester SLR as a bypass for Worcester City centre, thereby helping to better manage traffic conditions in the constrained central area						
D6: Improve access to the Strategic Road Network from areas to the west and north west of Worcester, including Malvern Hills District, Herefordshire and parts of the Welsh Marches						
D7: To reduce transport-related emissions of carbon dioxide and other greenhouse gases in Worcester City centre						

Table 7.9: Mapping of Desired Impacts and Outcome Analysis (showing primary links only)

7.14 Contingency Plan: Common Land De-Registration

The period for representation for the Section 16 application to deregister the land between Ketch and Powick roundabouts (dualling section of the scheme) has ended and it has been confirmed that there is no need for a Public Inquiry. The period for objections/representations for the Section 16 application for changes to the Common Land to the West of Powick Roundabout is due to conclude shortly and although it is not anticipated that there will be a significant delay to completion of the process, to mitigate any potential for delay, we have reviewed the programme and looked at ways to maintain the programme on sections 2 to 6 (outlined below) without a major delay to the overall delivery of the Scheme. The scheme contingency plan is as follows.

Firstly, the Scheme has been split into 6 sections, working from West to East;

- Section 1 Powick roundabout, including the Hams Way footbridge
- Section 2 Powick roundabout to Powick common viaduct
- Section 3 Powick common viaduct
- Section 4 Powick common viaduct to Carrington Bridge
- Section 5 Carrington Bridge
- Section 6 Ketch roundabout

The current programme shows access to all sections in Spring 2019, with works planned to be completed in Spring 2021. This requires all land negotiations to be completed and the common land to be registered with the change of designation.

For sections 2 to 6 the deadline for representation for the Section 16 application has passed with no Objections and the Planning Inspectorate has confirmed that no Public Inquiry is required.

The process of registering the common land is well underway with the Planning Inspectorate, and we are hopeful to have the issue closed without delay to the project. This would mean that we could carry out site clearance in April 2019 and commence the construction of the foundations in July 2019. The main bridge structure and ramps would then be erected in January 2020.

For Section 1 (west of Powick Roundabout), the S16 application was slightly delayed due to the need to first update the Commons Register to reflect changes from an historical scheme. If there is any delay with the access to section 1, we have looked at scenarios A & B;

- A. Maximum 6 months delay in entering section 1
- B. Over 6 months delay in entering section 1

7.14.1.1 Scenario A - maximum 6 months delay in entering section 1

As this activity in Section 1 (construction of the proposed foot/cycle bridge) isn't critical we have sufficient float in the programme to delay the foundation operations for up to 6 months without causing a delay to the overall scheme. This would allow sufficient time to conclude the registration and progress the construction in line with minimal disruption.

7.14.1.2 Scenario B - over 6 months delay in entering section 1

This scenario is unlikely due to the progress with the Planning Inspectorate, but if we were delayed then we would instigate scenario A up to 6 months, and then start to review the mitigation. Methods of mitigation could include;

- Increase to the construction programme beyond the current end date of Spring 2021 although this would not affect the main dualling of the scheme which would open as planned.
- Provision of a temporary crossing point on the Hams Way link
- Site clearance outside of preferred season.

7.15 Summary of management case

The Management Case demonstrates that WCC has the necessary resources and proven expertise to deliver the A4440 Worcester SLR Phase 4 scheme in accordance with the programme and budget. It shows that the necessary consultation and engagement are being planned. It also shows that WCC has the necessary processes to ensure that decisions are made at the appropriate level and ensure that agreed assurance procedures are followed.

The case shows that WCC has considered the risks, the need for contingency planning, monitoring and evaluation of the scheme.

In summary:

- The Council has a proven track record in the delivery of major transport schemes and has the resource, capability and processes required to deliver A4440 Worcester SLR Phase 4 successfully, to time and budget;
- The project benefits from a strong governance structure and framework;
- There is a robust and effective Risk Management plan which is strengthened by inputs from the contractor;
- There is considerable support from local businesses for the A4440 Worcester SLR scheme for the scheme;
- Significant consultation has been undertaken as part of the development of the project;

- There is a plan in place to ensure benefits set out in the economic case are realised; and
- The latest Gateway Review found that "The project is well run and under control" and "The project should deliver the majority of the benefits sought".