Major Infrastructure Delivery

To:	Audit and Accounts Committee
Date:	31st May 2022
From:	Steve Cox, Executive Director Place & Economy
Electoral Division:	All
Outcome:	To provide an update of the improvements in the Major Infrastructure and Delivery service (now the Project Delivery service)
Recommendations:	a) note and comment on progress to date;
	b) delegate the final matters for closeout to the Executive Director Place & Economy;
	c) note that a follow up audit of the implementation of the actions will be carried in Q3 of this year;

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1.   Background

1.1   Cambridgeshire County Council (the Council) has continued to be successful in attracting funding for long standing and ambitious projects to support sustainable growth. This has created a significant forward programme of capital projects.

1.2   During the Summer 2020 an internal review of Highway Capital Delivery was commissioned to understand the effectiveness of capital programme management and the overall control environment. This included a detailed investigation of four major infrastructure projects through which the audit report identified common themes where project management and delivery could be improved.

1.3   Additional projects were investigated by the service in late 2020 and early 2021, to identify any recurring themes on schemes wider than those included in the initial audits.

1.4   The reviews highlighted the significant increase in the programme of work being delivered across the Major Infrastructure and Delivery service, and the scale of the forward programme and multimillion pound projects including new roads, bridges, road safety schemes and ambitious schemes to transform how people travel. The projects varied from large high value single projects with engineering and technical complexities, to programmes of smaller more simple projects.

1.5   The review highlighted the areas for improvement, including the importance of developing the skill base of teams involved in project delivery, supporting staff to effectively manage scheme complexities.

1.6   As part of the review a new Interim Group Manager for Major Infrastructure and Delivery was appointed in October 2020 being a qualified civil engineer with significant experience of programme and major project delivery. The Group Manager provided direct expertise in leading the programme of major projects, including developing project teams and resources in light of new and growing demands and funding commitments. This included the implementation of Project and Programme Boards across all projects to ensure visibility and accountability, ensuring consistent processes and governance were adopted.

1.7   In October 2020 a task and finish Project Assurance Group (PAG) was formed, led by the Group Manager. The PAG brought together permanent staff, interims and consultant resources with the relevant expertise relating to project management, forms of contract, procurement, financial control and audit. The group met fortnightly from its inception, initially identifying areas for improvement relating to all aspects of project delivery and control and developing a system to manage and track improvements aligned with the audit recommendations. The outputs of this group are detailed later in the report.

1.8   An update on progress was reported to this committee through the Internal Audit and Risk Management report dated 31st May 2021 which stated, "following a review last summer of four significant Major Infrastructure and Delivery projects and the associated governance framework, Internal Audit is providing ongoing support to the implementation of the new Major Infrastructure and Delivery, and wider Place and Economy, governance framework and supporting procedures".

1.9   During the Summer 2021 a restructuring of the Place and Economy Directorate led to the introduction of a Director of Highways and Transport solely dedicated to Cambridgeshire County Council. Three new assistant director roles were also introduced, including an Assistant Director Project Delivery position dedicated to the delivery of projects, and oversight of the Highways Major Contracts team. This role has been covered to date by the former Interim Group Manager of Major Infrastructure and Delivery, however further to a successful recruitment campaign a permanent appointment will take up the role from July 2022, and will continue to build on the improvements and development of the Project Delivery service that have taken place since the audits in Summer 2020.

2.   Main Issues

2.1   The review of project design, development, delivery and control through the Project Assurance Group identified three key themes for improvement in early 2021:

   a)   strengthen systems and processes to provide an adequate control environment;
   b)   supporting change in managing successful teams and projects;
   c)   project reporting and risk management;

A summary of the requirements and progress to date is provided in the next three sections of the report.

Systems and Processes

2.2   The review highlighted the key areas listed below:

2.3   **Project Governance** – A review of project governance demonstrated a lack of consistency in governance, accountability and decision making across projects. A governance organogram was developed (shown in Appendix A), supported by a 'Governance for Infrastructure Projects' user guide. Both are based on the established principles of Prince 2 project management and designed to ensure a consistent and compliant control environment, where all individuals involved with delivery of major projects understand their responsibility, accountability and delegated authority relating to delivery of infrastructure projects.

2.4   **Project Gateway Framework** – A project gateway process and an accompanying user guide for project managers has been developed and rolled out across projects in the Project Delivery service area. All projects are now required to satisfy a series of gateways ensuring effective project management based on Prince 2 project management, providing transparency and a record of decision making within the project as well as oversight for managers and support services such as finance, procurement and commissioning. The gateway process is summarised in Appendix A showing the eight gateways from project inception to delivery.

2.5   **Project Online Web App (POWA)** – Project Delivery are early adopters of these IT programme management systems, as part of a wider corporate IT programme roll out. The IT system is designed for project and programme management, to improve

programming, delivery, risk management, cost control, resource planning and reporting. The projects within the Project Delivery service are now operating within POWA, providing a consistent, transparent and compliant process for project management and delivery. The system is also cloud based with shared documents to support, providing greater resilience. The standardised system also allows resources and staff to move seamlessly between projects, to deal with peaks in demand.

2.6   Financial Control – Where necessary projects were re-baselined and/or re-scoped to ensure all project budgets were realistic to meet the agreed project outcomes. A process and project costing template has been implemented adopting industry best practice for applying costed risk, optimism bias, inflation and contingency to ensure initial project estimates are realistic. The maturity and certainty of costs is refined as the project progresses through the gateway process, and the expectation of all projects currently within Project Delivery is that they will be managed and delivered within their project budget. The service has benefitted from commercial review and support across all its projects. Recent inflationary pressures running at over ten percent since the Ukraine conflict are a challenge for all involved in delivering new infrastructure, and these cost risks are being managed and mitigated as far as possible within the service, as elsewhere across the Council.

2.7   Procurement & Contract Management – Prior to the audit the Term Service Contract with Milestone had become the preferred route for design and delivery of most major projects due to ease of access and familiarity. Following the audit and subsequent reviews, further engagement through PAG was undertaken with the Council's procurement and contract experts. The procurement and contract leads are also regular attendees at Programme and Project Boards, to ensure projects have a clear and appropriate procurement route and commissioning process, from the outset. Further decisions and appropriate time for procurement and commissioning choices are designed into the Project Gateway Framework process. The wide range of procurement choices available to the Council for the delivery of infrastructure projects are shown in Appendix B. This process has introduced the opportunity for a broader range of procurement solutions, with a greater number of projects now taking advantage of the Joint Professional Services and Eastern Highways Alliance Frameworks, in addition to the Term Service Contract. There has also been some price benchmarking across projects, to ensure works commissioned from the various routes delivers value for money.

Supporting change- "Managing Successful Teams and Projects"

2.8   From the outset the PAG, working closely with Council Learning and Development and Human Resources colleagues, identified the nature and extent of change required within the workforce to ensure effective, compliant and timely delivery of projects.

2.9   In response, a change programme was developed during Winter 2020/21 titled "Managing Successful Teams and Projects". The training programme was led by the Executive Director Place & Economy who undertook an introductory session for each

cohort, explaining the importance of the training programme from the outset. The programme included one to one coaching over eight weeks, as well as the delivery of five Training Modules delivered weekly listed below:

a) Module 1   Governance & Project Gateway Frameworks
b) Module 2   Power Programme Management IT System
c) Module 3   Financial Control, Processes & Accountability
d) Module 4   Commissioning, Procurement & Contract Management
e) Module 5   Managing Teams with Resilient Agility

2.10   Council management staff involved in delivery of infrastructure projects across Project Delivery, Highways & Transport and wider across the Place and Economy Directorate went through the programme in a series of seven cohorts that concluded in November 2021. Each cohort had a sponsor from the Place and Economy Leadership Team, to provide shared visibility of the programme and ensure buy in at all levels within the directorate. The training programme provided a feedback mechanism, providing the opportunity to continually improve the content and delivery of the programme over the seven cohorts. This represented a major investment in time and resources for the directorate.

2.11   A streamline version (without coaching and module 5) was designed and delivered to interims and consultants working across Project Delivery, to ensure they also fully understood and were compliant with the improved and emerging requirements of project delivery and the control environment.

2.12   Further cohorts are proposed for 2022 to include newly appointed Council staff and rolling out Modules 1-4 of the programme to members of staff that are not managers.

2.13   Due to challenges in permanent recruitment and a high reliance on interim staff and consultants, the service has committed to develop a "Grow our Own" programme aligned with the Council's apprenticeship programme. Through this the Council will create posts to recruit applicants who show potential to develop, such as local school and college leavers, graduates, mature students and those seeking a change in career. Supported by the Apprenticeship Levy, the programme will enable apprentices and graduates to develop the appropriate skills, knowledge and experience through on-the-job training and off-the job formal learning, to gain a nationally recognised qualifications, targeted to meet areas of challenge within the service.

Project reporting and risk management

2.14   As provided in the Governance Organogram shown in Appendix A, the control environment requires that Project and Programme Boards seek approval and report key issues to finance, corporate Directors and committees. These governance arrangements have been universally adopted for all projects delivered by the Project Delivery service.

2.15   There are eight gateways identified in a project lifecycle. To enable a balance between timely and efficient delivery of projects with appropriate Member control and oversight, three gateways were identified as critical points to obtain committee approval. The three gateways listed below were approved at the Highways and Transport Committee in March 2021, deemed to be the appropriate points for Members to make decisions to proceed to the subsequent gateway, providing an appropriate balance for efficient and timely project delivery and effective control and project oversight:

   a)   Gateway 2- Commence Consultation
   b)   Gateway 4- Approve the Preliminary Design
   c)   Gateway 6- Allow Delivery and Construction

2.16   A Project Delivery control environment has been implemented to capture and record project risks relating to: design, land, budget, programme, procurement and delivery. The projects are also given an overall project status of High Risk (H), Medium Risk (M) and Low Risk (L). The criteria for the risk rating of projects is proposed as:

   a)   Low Risk (L) - no or minor issues being manged under existing project resources and controls
   b)   Medium Risk (M) - a risk that is being managed under existing project controls but is not considered to risk the overall project in terms of programme and/or budget
   c)   High Risk (H) - a risk that has the potential to put the project programme and/or project budget at risk or the project failing to deliver its agreed and expected delivery outcomes. Intervention and mitigation will be underway by the respective Project Team to reduce the risk and re-align the project to programme and cost or re-baseline the project where this is not possible.

   The Project Delivery Control Environment Summary for all programmes and projects being delivered within the service is provided in Appendix C.

2.17   The process of identifying and capturing risks within the Project Delivery service, and ensuring appropriate intervention, mitigation and escalation is currently captured from a combination of the Programme Management Office, Project Managers Highlight reports to Project and Programme Boards, outputs from the POWA programme management IT system and oversight from Team Leaders working closely with the Assistant Director Project Delivery.

2.18   The Programme Management Office provide support and guidance relating to all aspects of the project and programme management including POWA, programme, risk, cost management and design reviews to ensure compliance with the control environment and to support projects meeting their agreed outcomes.

2.19   The Programme Management Office has developed the following documents, guides and processes to promote best practices and consistent procedures relating to all aspects of project and programme management.

   a) Project and Programme Governance protocols

b) Programme and Project Management Framework
c) Gateway Framework User Guide
d) Programme Management Office Toolkit
e) Risk Management Guidance Manual
f) Cost and Commercial Management Guidance Manual

2.20   Technical staff in the Project Management Office, under a newly created Team Leader position, has delivered continuity and resilience in the service, and continues to develop a centre of project excellence that can be drawn upon and utilised by all staff involved with project delivery.

2.21   Appendix C provides a summary, and short narrative of the 45 projects and programmes currently being delivered with the Project Delivery service. The projects are at various stages from business case development to construction and closeout. The output of this table at Appendix C is captured in the visual chart at Appendix D.

2.22   Appendix D demonstrates the significant and sustained improvement for projects and programmes within the new control environment. As well as the sustained reduction in projects marked with a High Risk status over the last 18 months, the number of projects along with their value has increased significantly since the audits were undertaken. At the time of writing the report there were 45 projects that are being managed within new the control environment with a total value of £163M.

2.23   Aligned with further development of POWA programme management IT system, the Project Highlight Reports and risk management are evolving to be visible on a "real time" basis by all those involved with project delivery through Power Bi Premium which the Project Management Office are developing.

Audit Compliance and Matters for Closeout

2.24   Appendix E captures the detailed work of the Project Assurance Group since October 2021 in the form of a tracker. The spreadsheet was developed and reviewed regularly in consultation with the Audit Team, to provide assurance that the "Agreed Actions" (agreed with the Audit Team in 2021) had been satisfactorily addressed, supported by evidence.

2.25   The RAG status and notes demonstrate the vast majority of actions have been satisfactorily addressed (coloured green), with agreed mitigation implemented. There are no remaining actions highlighted red, and the few remaining actions remaining are highlighted amber summarised as:

a) Achieve full compliance of the Project Gateway Framework within POWA of all Project Managers;
b) Communicate to Members, in addition to the Highways and Transport committee Members (already undertaken) the new processes and procedures that have been introduced within the service relating to the control environment and decision-making processes associated with delivering infrastructure projects;

c) Progress challenges relating to recruiting and training members of staff in the Project Delivery service;

d) Hard wire all financial virement and escalation processes established in Project and Programme Boards, along with the development of POWA for additional assurance;

e) Develop a performance reporting process to benchmark design work across the various design organisations in consultation with the Highways Contracts and Commissioning Team;

f) Assess whether external expert commercial and contract support on some major high value projects, such as the "NEC Project Manager" role for major contracts, can be developed and delivered by Council employees rather than consultants.

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Way Forward

2.26 As detailed in the report, improvement and further development will remain ongoing as part of continual improvement towards service excellence in all aspects of project and programme management. It is proposed the matters remaining to be closed out identified as A-F above, are delegated to the Director of Place and Economy to ensure satisfactory and timely close out.

3. Appendices

Appendix A: Governance Organogram
Appendix B: Procurement Choices for delivery of Infrastructure Services
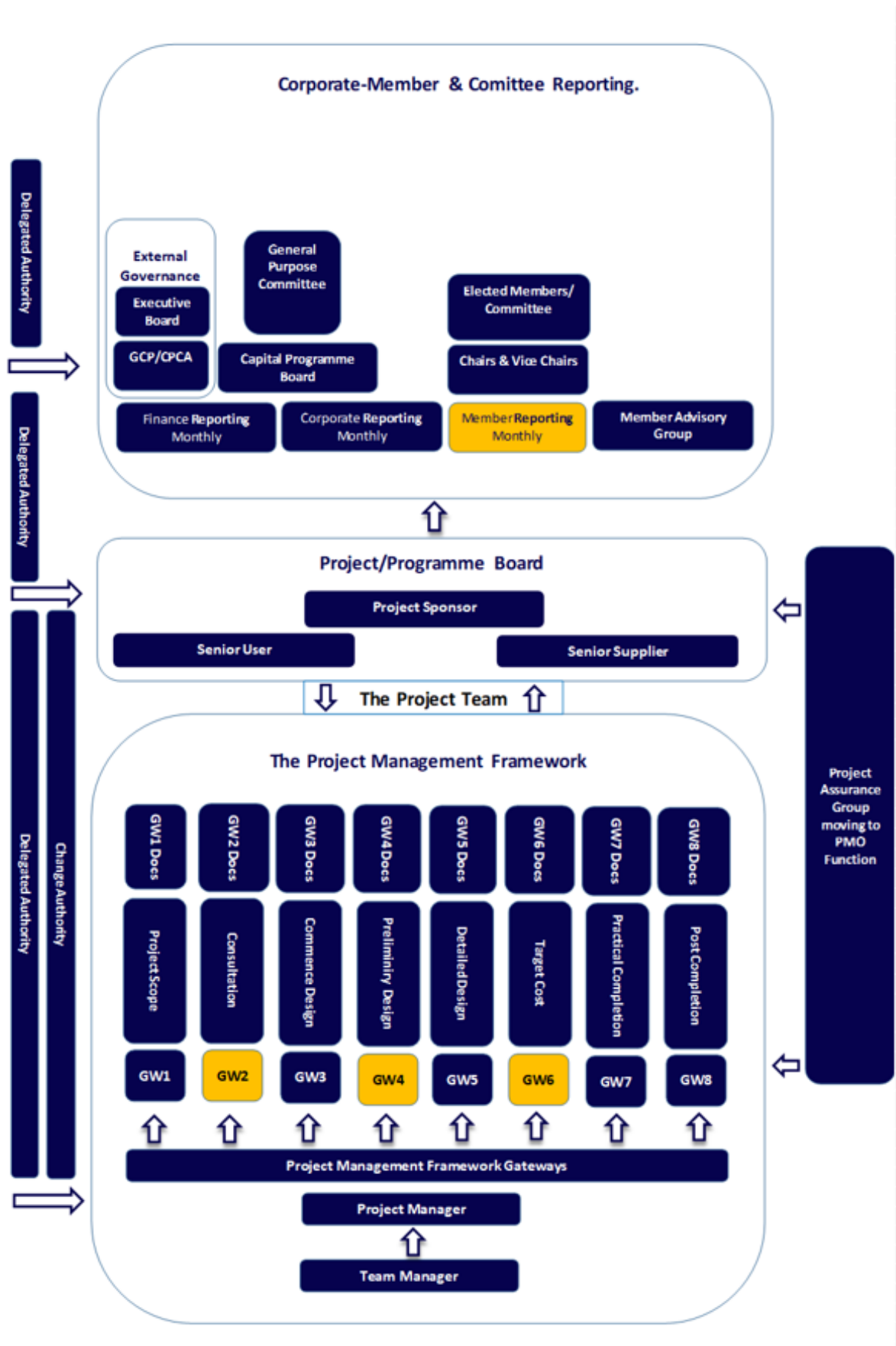Appendix C: Project Delivery Control Environment Summary
Appendix D: Project Summary Output of the Project Delivery Control Environment
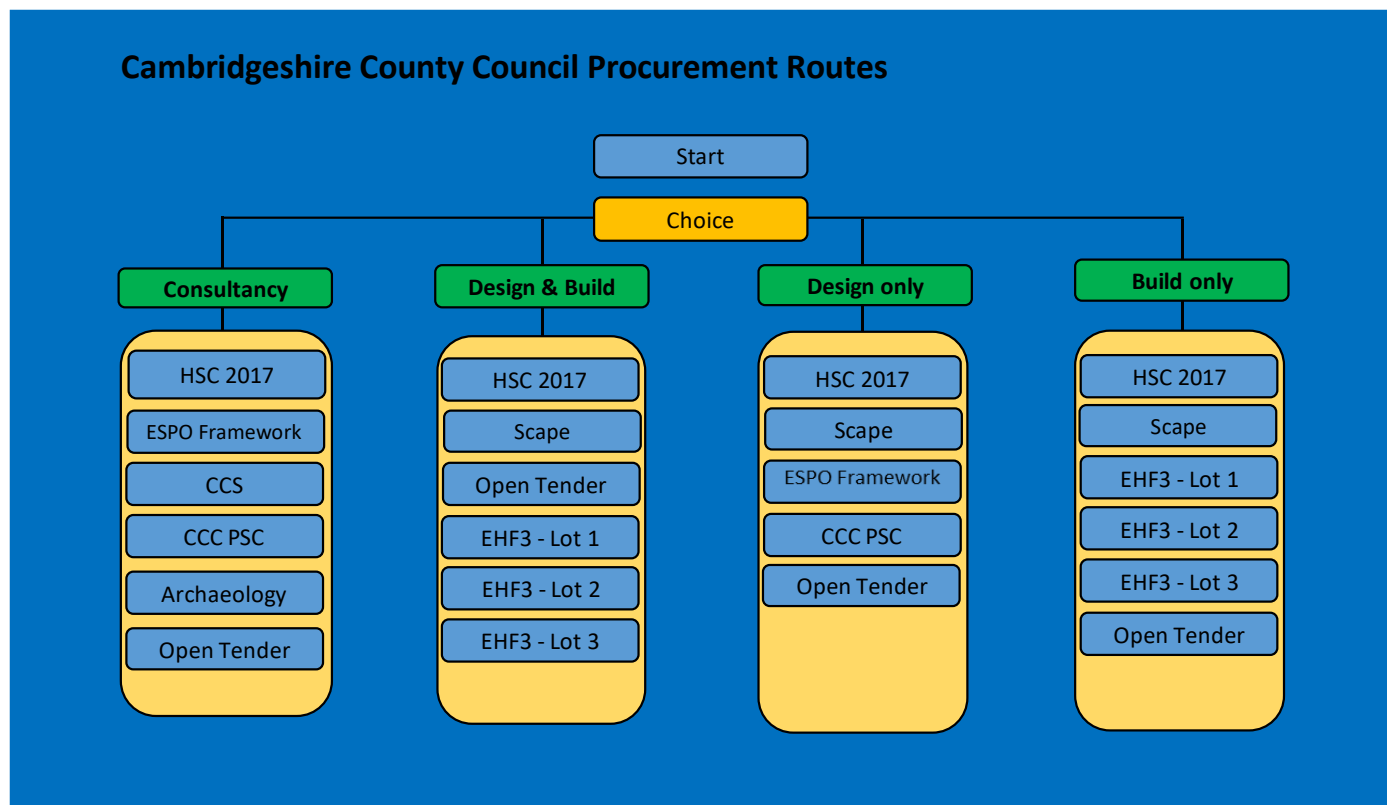Appendix E: Project Assurance Group & Audit Compliance Tracker

4. Source documents

4.1 None

APPENDIX A: Governance Organogram

APPENDIX B: Procurement Choices for delivery of Infrastructure Services

Cambridgeshire County Council Procurement Routes

Start → Choice

Consultancy
- HSC 2017
- ESPO Framework
- CCS
- CCC PSC
- Archaeology
- Open Tender

Design & Build
- HSC 2017
- Scape
- Open Tender
- EHF3 - Lot 1
- EHF3 - Lot 2
- EHF3 - Lot 3

Design only
- HSC 2017
- Scape
- ESPO Framework
- CCC PSC
- Open Tender

Build only
- HSC 2017
- Scape
- EHF3 - Lot 1
- EHF3 - Lot 2
- EHF3 - Lot 3
- Open Tender

APPENDIX C: Project Delivery Control Environment Summary

Scheme Name	Design	Land	Budget	Prog	Delivery	Overall	Summary of key issues	Mitigation / Intervention (where required)
A10 Ely to A14	L	L	M	L	L	**L**	Source resources and project structure to develop OBC	Funding Agreement to be put in place with CPCA
A141 & Huntingdon & St Ives Improvements	L	L	M	L	L	**L**	Source resources and project structure to develop OBC	Funding Agreement to be put in place with CPCA
Active Travel Programme 2	L	L	M	M	M	**M**	Programme to be confirmed, communicated and delivered by Autumn 2022	Top Up funding to be secured with CPCA Business Case
Alconbury Village link MNU2	L	L	M	L	L	**L**	Early options and design work underway	Scheme development, delivery and programming depending on NH bidding process

Bar Hill to Longstanton NMU1	L	M	M	M	M	**M**	Land issues and access to the network are holding up delivery	Engagement underway with Streetworks, land owners and developers
Boxworth to A14 NMU2	L	L	M	L	L	**L**	Early options and design work underway	Scheme development, delivery and programming depending on NH bidding process
Buckden to Brampton NMU2	M	M	L	L	L	**M**	Early options and design work underway	Scheme development, delivery and programming depending on NH bidding process
Cherry Hinton Road	L	L	L	L	L	**L**	Design funded and underway	Funding for construction will need to be sourced and secured
Chisholm Trail Coldhams Common Package Part A (footbridge & link)	L	L	L	L	L	**L**	Completed subject to snagging and final account	Not required
Chisholm Trail Coldhams Common Package Part B (footway widening / culvert / NR)	L	L	L	L	L	**L**	Completed subject to snagging and final account	Not required
Chisholm Trail Fenn Road Package	L	L	L	L	L	**L**	Completed subject to snagging and final account	Not required
Chisholm Trail Phase 1	L	L	M	L	L	**L**	Route opened December 2021 to public, minor final items being closed out. Final account needs settling with Tarmac	Not required
Dry Drayton NMU2	L	M	L	M	M	**M**	Early options and design work underway. ITB funding being utilised.	Scheme development, delivery and programming depending on NH bidding process
Ely Stuntney Cycleway	L	L	M	L	L	**L**	Section installed to allotments	Second phase requires funding to be sourced

Scheme							Status	Action
Girton Footpath 4 & 5 Upgrade NMU2	M	M	L	L	M	**M**	Early options and design work underway	Scheme development, delivery and programming depending on NH bidding process
Girton to Oakington NMU1	M	M	M	M	M	**M**	Phase 1 under construction & Further phases require engagement with land owners and additional funding	Engage with land owners and progress funding opportunities including s106 & NH
Hilton to Fenstanton NMU2	L	L	M	L	L	**L**	Early options and design work underway	Scheme development, delivery and programming depending on NH bidding process
Huntingdon railway station to Alconbury Weald NMU2	L	M	L	L	M	**L**	Early options and design work underway	Scheme development, delivery and programming depending on NH bidding process and engagement with Urban Civic
Kings Dyke	L	L	M	L	L	**M**	Works are on programme with pressures around budget due to Compensation Event regarding Star Pit	Legal Advice being sought ref Star Pit
Lancaster Way Roundabout	L	L	L	L	L	**L**	Scheme completed to programme and budget subject to RSA3, Cadent Gas protection, trees and landscaping	Not required
Lancaster Way NMU Permeability	L	L	M	L	L	**L**	Establish project team, Project Manager and undertake cost assessment	Set up Project Board with Project Sponsor the CPCA
Local Highway Projects Programme 2021/22	M	L	L	M	M	**M**	Programme and resource challenges	Seek additional design and project management resources and seek improvements from MWG

Local Highway Projects Programme 2022/23	M	L	L	M	M	**M**	Programme and resource challenges	Seek additional design and project management resources and seek improvements from MWG
March Broad Street Project	L	L	M	M	M	**L**	Pressures on programme for early start with design works and ground investigations	Requires forward funding from CPCA being sought by board
March Future High Street Project	M	L	L	M	M	**M**	Scope revised within budget / programme is challenging / District Council is consulting	District Council are arranging comms and stakeholder engagement running in parallel to design process
March Major Highway Projects	L	M	L	L	L	**L**	Initial works underway to review costs and programme to feed into Business Case	Not required
March Minor Projects	L	L	L	L	M	**L**	Delivery delayed for completion until June 2022	Ensure effective communication with local Members and residents
March Northern Link Road	L	M	L	L	L	**L**	Significant land take required / Initial works underway to review costs and programme to feed into Business Case	Design options being considered
March Pedestrian & Cycling Strategy Projects	L	L	L	L	L	**L**	Initial schemes being reviewed and worked into programme	Programme Board being established and Project Manager identified
Northstowe Bus Link	L	L	L	M	L	**L**	Additional funding secured via s106	Consider alternative options for delivery to reduce construction costs
Oakington to A14 NMU2	L	L	M	L	L	**L**	Early options and design work underway	Scheme development, delivery and programming depending on NH bidding process

Offord Cluny to Godmanchester NMU2	L	L	M	L	L	**L**	Early options and design work underway	Scheme development, delivery and programming depending on NH bidding process
Papworth to Cambourne NMU1	L	L	L	L	L	**L**	Completed April 2022, subject to snagging	Not required
Paxton to St Neots NMU2	M	M	L	L	L	**M**	Early options and design work underway	Scheme development, delivery and programming depending on NH bidding process
Ring Fort Path	L	M	L	M	M	**M**	Design being finalised with NH / protracted land acquisition with one land owner	Engagement underway with land owner and NH
Spencer Drove Soham- access to Arts Centre	L	L	M	L	L	**L**	Scope and project agreed for delivery Summer 2022. Small contingency for any cost increases	Not required
St Johns Street Rising Bollard	L	L	L	L	L	**L**	Initial scoping, design and consultation underway	Not required
St Ives Local Improvements	L	L	L	L	L	**L**	Initial scoping and programming to commence	Establishing Programme Board with CPCA
St Neots Future High Street Transport Programme	L	L	L	M	M	**M**	Scope revised within budget / programme is challenging / District Council is consulting	District Council are arranging comms and stakeholder engagement running in parallel to design process
Swaffham Heath Road Crossroads	L	M	L	M	M	**M**	Delays over land acquisition on one quadrant are risk to programme	Engagement underway with land owner
WAS Broadend Road/A47 rbt (BER2)	L	M	L	L	L	**L**	Design and land acquisition to be secured by Summer 2022	Funding for procurement and construction being sourced
WAS Elm High Road/A47 (EH1)	L	M	L	L	L	**L**	Design and land acquisition to be secured by Summer 2022	Funding for procurement and construction being sourced

WAS Elm High Road/Weasenham Ln rbt (EH7B)	L	M	L	L	L	**L**	Design and land acquisition to be secured by Summer 2022	Funding for procurement and construction being sourced
Wheatsheaf Crossroads	L	L	L	L	L	**L**	Project being scoped, options appraisal, then move to design	Engagement with land owners required
Wood Green A1198 to Godmanchester NMU2	L	M	L	L	M	**L**	Early options and design work underway	Scheme development, delivery and programming depending on NH bidding process

APPENDIX D: Project Summary Output of the Project Delivery Control Environment