Transport and Environment Committee

10.00am, Thursday, 25 April 2024

Edinburgh Tram York Place to Newhaven Project Delivery

Executive/routine	**Routine**
Wards	**11 – City Centre; 12 – Leith Walk; 13 - Leith**

1. Recommendations

1.1 Transport and Environment Committee are asked to note:

1.1.1 The contents of this report and the lessons learned;

1.1.2 That APOG and Ward member briefing groups disbanded;

1.1.3 That the project will update Committee by exception from this point forward; and

1.1.4 That the handover plan and ongoing oversight of project will be progressed by the Head of Major Projects and Commissioning.

Paul Lawrence

Executive Director of Place

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THE CITY OF EDINBURGH COUNCIL

Report

Edinburgh Tram York Place to Newhaven Project Delivery

2. Executive Summary

2.1 The Edinburgh Tram York Place to Newhaven project was commissioned by the City of Edinburgh Council in 2019 to complete a tramline from the Airport to Newhaven. This report sets out the position of the project at it approaches final close out, additional actions to be taken, handover plans and recommendations for learning.

3. Background

3.1 Construction of a tramline from Edinburgh Airport to Newhaven originally commenced in 2008, but encountered significant difficulties in delivery, with costs rising in excess of the approved budget and delay to the programme. As a result of these difficulties, the Council resolved to focus delivery only on the section of tramway from Edinburgh Airport to York Place. That section opened for revenue service in May 2014.

3.2 A Final Business Case for the completion of the line to Newhaven was approved in March 2019. This followed the standard Treasury green book five case model, outlining the Strategic, Economic, Financial, Commercial and Management case for project delivery. An update to the Final Business Case, which considered the impact of COVID 19 on project delivery, was considered by the Council in November 2020.

3.3 The completed line to Newhaven opened for revenue service in June 2023.

Project Delivery Framework

3.4 In order to assess the delivery of the Trams to Newhaven project, it is important to consider the terms of the Final Business Case and the 2020 update to understand whether the project delivered the benefits anticipated within the parameters approved by the Council.

3.5 It is also important to consider the wider context of the project. The Trams to Newhaven project forms part of delivery of the Edinburgh Tram Network and relies on planning permission and powers granted under the Edinburgh Tram (Line One)

Act 2006 (the "2006 Act"). The 2006 Act was granted based on a business case development process assessed using the Scottish Transport Appraisal Guidance (STAG).

3.6 The 2006 STAG report set out parameters for monitoring and evaluation of the completed system. An evaluation report for the line from the Airport to York Place was prepared for the Council in 2016.

3.7 In general terms, the Strategic, Economic and Financial Cases considered the policy drivers for tram completion, the economic benefits that the Council should expect to derive from that completion, the investment required and mechanisms for meeting that investment. In preparing this report, the high level the case for change has been considered in the current policy context along with an early appraisal of the economic benefits and financial parameters.

3.8 As a result of the difficulties encountered in delivery of the tramline from Edinburgh Airport to York Place, an independent public inquiry was commissioned by Scottish Ministers to examine the causes and consequences of the difficulties in delivery and to make recommendations for future projects. The Inquiry Report was considered by the Council in December 2023.

Approach

3.9 At this stage, a comparison of projected benefits compared to observed benefits has been prepared but an independent evaluation of the line should be commissioned at the appropriate time.

3.10 In preparing this report, officers have reflected on project delivery and considered the lessons which should be taken into account in future project delivery to enable future learning and embed a culture of continuous learning and improvement in project delivery.

3.11 In general terms, the Commercial and Management chapters of the Final Business Case considered the procurement and commercial strategy for delivery and set out how it would be delivered. The information below considers whether the project was delivered in line with these chapters. In addition, project delivery has implications for future delivery of major infrastructure and therefore a series of lessons learned have been prepared for consideration in future project delivery.

4. Main report

Assessing delivery against the Final Business Case and 2020 Business Case Update

Strategic Case

4.1 The completion of the line to Newhaven has delivered the strategic benefit outlined in the Final Business Case. It provides a direct link for the people of Leith and Newhaven to access the city centre and the airport, connecting residents to major

employment and travel hubs along the route. By improving access, the tram has also enhanced the attractiveness of Leith and Newhaven as destinations.

4.2 The completed line to Newhaven has also unlocked sustainable brownfield development around Leith Dock for housing development which, while zoned for development for some time, has now been brought forward into construction.

4.3 The line to Newhaven connects three of the Council's four priority investment zones (West Edinburgh, the city centre and the Waterfront area), maximising their potential for investment with a high capacity public transport scheme.

4.4 The completion of the tram to Newhaven underpins further strategic investment in public transport in Edinburgh, enabling consideration of further tram lines and growth of the bus network to support sustainable growth in Edinburgh and the wider city region.

Economic Case

4.5 The Final Business Case projected an increase of 7m journeys per annum as a result of the opening of the line to Newhaven. At the time of approval of the Final Business Case, journeys on the existing system were projected to be 8.7m journeys and on the completed system 15.7m journeys in total, assuming 11 months of service.

4.6 Public transport patterns were radically altered during the COVID-19 pandemic and the updated business case considered by the Council in November 2020 projected a range of possible future demand scenarios. The scenarios contained in the update outlined the possible impact of the pandemic on the Final Business Case.

4.7 The patronage on the completed line for the period from the opening of the line to Newhaven in June to December was 6.6 million. It is difficult to make a direct comparison with the COVID-19 update scenarios as tram patronage is higher than projected in the Final Business Case for journeys to the Airport. However, the city zone is lower than was projected in the Final Business Case which reflects the impact of COVID-19 on commuter working practices. It is too early to draw a conclusion on which scenario will be realised.

4.8 Patronage continues to grow on the line and officers are working with Edinburgh Trams to fully update the financial model and to understand the long-term effects of COVID-19 on travel patterns. Patronage budgeted by Edinburgh Trams for 2024 is circa 11.2m passengers, although performance in the first two periods of this year is exceeding this target.

Financial Case

4.9 For the Final Business Case, the project cost estimates were updated based on the outcome of the design consultation, the tendered prices, revised detailed quantitative cost and schedule risk assessments, support for business proposals and further work in relation to optimism bias.

4.10 As a result of this work, the final outturn cost of the Trams to Newhaven project was budgeted at £207.3million. The final account for the Trams to Newhaven project

Infrastructure and Systems contract has not yet been settled, and discussions are still ongoing on some outstanding compensation events. Therefore, a further report on the final account will be presented to committee when this is complete.

4.11 In addition to the analysis of the completion of the line for the purposes of the economic assessment, the costs and revenues associated with the completion of the tramline were assessed to analyse the affordability of completion of the tramline to the Council. This demonstrated that the additional borrowing costs for the line to Newhaven could be met from additional patronage on the completed line. Since the Final Business Case was approved, an additional £6.95m per annum has been approved by the Council through the budget framework from 2024/25 onwards to offset the impact of COVID-19 on tram patronage.

4.12 More generally, the financial model that supports the total cost of the tramline (lifecycle, operation, financing and maintenance) is being reviewed by Council officers and Edinburgh Trams to consider the cost of tram operation to the Council in the medium term.

Commercial Case

4.13 The commercial case set out the procurement strategy takes account of lessons learned from the first phase of tram delivery. The strategy included the award of the utilities and below ground obstruction contracts separately to the Infrastructure and Systems Contract, and to nominate the systems sub-contractor to the Infrastructure and Systems Contractor. In addition, a period of Early Contractor Involvement (ECI) was allowed for prior to commencement of construction. The contractual risk apportionment was also set out at a high level.

4.14 The procurement strategy was executed prior to Final Business Case approval, and so the project was approved in line with the strategy that was implemented.

4.15 The procurement approach was understood and implemented throughout project delivery by the project team, supported by the board. This was a key lesson learned during project development and is reflected in the findings of the Hardie Inquiry (where departure from the agreed procurement strategy was identified as a contributor to the difficulties in the first phase of tram delivery). The contract structure and risk apportionment was broadly successful in delivery of the project aims. As this is a key aspect of project delivery, a lessons learned exercise has been undertaken in relation to it and a lessons learned report is attached at Appendix A.

4.16 The project maintained a consistent approach to risk throughout the project with monthly risk meetings and quarterly Quantitative Risk Analysis (QRA). This meant that the project team considered and discussed all project risks in detail monthly, reporting them to board and highlighting any changes. A quantification of the project risk was also analysed and reported to the board quarterly. The project approach to risk was subject to an ongoing agile audit by Internal Audit throughout the project and therefore, although this was a key project activity, no separate lessons learned exercise has been conducted to avoid duplication. No

management actions in relation to risk management were identified by Internal Audit.

Management Case

4.17 The management case considered the approach of the project to governance, supplementary projects, stakeholder and communications and contractor insolvency. It also recommended the approach to traffic management and Support for Business throughout construction.

4.18 The project benefited from strong governance throughout. A dedicated client team was established, co-located within the project office, with a detailed and in depth understanding of project delivery and challenges. At board level, the project board comprised senior officers from across the Council. This was supported by dedicated sub boards to scrutinise Finance and Risk and, latterly, Ready for Operations. This formed part of the agile audit conducted by Internal Audit and allowed the Council to anticipate and understand barriers to delivery early and act, greatly contributing to successful project delivery.

4.19 Prior to project commencement, in depth briefings to elected members ensured an understanding of delivery throughout. Although the election during project delivery meant that new elected members had not had the benefit of those briefings, sessions were offered to incoming councillors to give them an understanding of the project and the decisions already taken.

4.20 An All-Party Oversight Group and Ward Members group were established, and strong relationships built at ward level to answer queries and pro-actively advise of issues arising.

4.21 Stakeholder engagement, communications and Support for Business was a key workstream and the project greatly benefited from dedicated support in this area alongside a one team approach from client, consultants and contractors.

4.22 A series of lessons learned sessions were held to consider the impact of the approach taken by the project in key areas as follows:

4.22.1 Stakeholder Engagement, Communications and Support for Business (Appendix B);

4.22.2 Design implementation (Appendix C);

4.22.3 A lessons' learned report on the Ready for Operations workstream (attached at Appendix D); and

4.22.4 Owner Controlled Insurance Policy (Appendix E)

Hardie Inquiry

4.23 Following the opening for revenue service of the tramline in Edinburgh from Edinburgh Airport to York Place, Scottish Ministers announced a public inquiry into the project, with the following Terms of Reference:

4.23.1 To inquire into the delivery of the Edinburgh Tram project (the project), from proposals for the project emerging to its completion, including the procurement and contract preparation, its governance, project management and delivery structures, and oversight of the relevant contracts, in order to establish why the project incurred delays, cost considerably more than originally budgeted for and delivered significantly less than was projected through reductions in scope;

4.23.2 To examine the consequences of the failure to deliver the project in the time, within the budget and to the extent projected; and

4.23.3 To otherwise review the circumstances surrounding the project as necessary, in order to report to the Scottish Ministers making recommendations as to how major tram and light rail infrastructure projects of a similar nature might avoid such failures in future.

4.24 The Inquiry findings were not available when the Council considered the Final Business Case for the Trams to Newhaven project in 2019. Therefore, the project outlined those lessons it considered were relevant and set out its approach to resolving them in the Final Business Case.

4.25 The Inquiry report was issued in September 2023. In a report to the Council on 14 December 2023, the approach of the Trams to Newhaven project team to the recommendations made by Lord Hardie was considered.

4.26 The response of the Council to the Hardie Inquiry was also considered at the meeting of Council on 14 December 2023 when the recommendations of the Hardie Inquiry relevant to the Council were accepted with the exception of Recommendation 13 in relation to utilities.

4.27 Lord Hardie made specific recommendations in relation to the procurement strategy for utilities diversions as follows:

4.27.1 The procurement strategy should include a requirement that the route of the track should be exposed and cleared of utilities well in advance of the infrastructure contractors commencing their work;

4.27.2 The procurement strategy should specify the period that should elapse between the exposure and clearance of the route and the commencement of construction, to ensure that the contractors have unrestricted access to the construction site and may proceed with the infrastructure works unencumbered by the presence of utilities; and

4.27.3 In fixing the period mentioned above, the procurement strategy should take into account the length of the route to be constructed, past experience of the time taken for the diversion of utilities in light rail projects in other parts of the UK and any additional constraints peculiar to the project such as an embargo on work to divert utilities during particular periods such as the festive season or special events (e.g. the Edinburgh Festival).

4.28 The procurement strategy adopted by the project in relation to utilities was not that recommended by Lord Hardie. A key lesson learned identified from the first phase of tram delivery was that roads should be opened up only once and that all works should be completed prior to reinstatement. For the project from York Place to Newhaven, the approach taken was that utilities were cleared from a Tram Infrastructure Clearance Zone (TICZ) immediately in advance of infrastructure delivery. Importantly, dimensions of the TICZ were specified by the Infrastructure and Systems Contractor which mitigated a significant risk of utilities being diverted without the spatial design being completed. The road was not reinstated between the utility diversions being completed and installation of the infrastructure. The risk of unforeseen utility diversions was mitigated in the following ways:

4.28.1 Collaborative working between the client and both contractors underpinned by contractual provisions;

4.28.2 A cost plus contract for utility diversion delivery allowing the client to closely manage the required works; and

4.28.3 Use of large worksites and close working with utility companies.

4.29 This approach effectively discounted the recommendation made by Lord Hardie from consideration. The strategies that were considered are outlined in detail at paragraphs 6.9 to 6.20 of the Final Business Case.

4.30 The strategy adopted with the associated risk mitigations noted above was effective in diverting the utilities efficiently and avoiding the conflicts that impacted delivery of the first phase of tram construction. While the procurement strategy recommended by Lord Hardie is a legitimate possible approach, the successful strategy implemented on the Trams to Newhaven project highlights that it is not the only possible approach. Therefore, it is considered that the approach to utilities for the Trams to Newhaven was legitimate and should be an option considered in future projects.

Handover Plan

4.31 The Trams to Newhaven project team were dedicated to project delivery. Therefore, it is necessary to ensure that tram asset and public realm are handed over to Edinburgh Trams and colleagues in the Council as necessary for management going forward. A handover plan has been produced to facilitate the handover of the tram asset in a way which provides continuity from project delivery into asset ownership and management and facilitates Edinburgh Trams and the Council in managing and maintaining the new asset, along with close out of any ongoing contractual deliverables.

4.32 The plan is structured to provide and note (for each relevant part of the Council) a guide to the asset being acquired, the information associated with that and a management handover process to ensure smooth transfer of the asset to the Council along with associated actions.

4.33 Prior to Completion, a series of meetings were set up between the project team and Council officers. The meetings were intended to advise colleagues on aspects of the line to Newhaven that will need to be considered prior to handover of maintenance responsibilities and to provide an opportunity to request information.

4.34 Edinburgh Trams were embedded in the project to ensure that the tram was brought into operational service in line with all safety requirements. The evidence file has now been handed over to Edinburgh Trams and is managed in line with an operation and maintenance agreement for the full line.

4.35 A copy of the Handover Plan is attached at Appendix F.

Defect Resolution

4.36 The project team are continuing to support the execution of the contracts and defect resolution for the project. It is anticipated that this support will remain in place until the end of the defect resolution period.

4.37 Throughout the project, a detailed programme of quality control was implemented. This included a Quality Control Inspector employed by the Council to review works undertaken, alongside quality checks undertaken by Turner & Townsend (as project manager). Separately the contractor implemented a management regime to assure quality and manage its subcontractors.

4.38 In total, 872 contractual defects were raised on the project, of which 69 remain open. In total, 651 have been corrected and 152 have been accepted by the client with a commercial resolution pending.

4.39 A note of the open defects is attached as Appendix G. Council officers continue to work closely with the contractor to rectify outstanding defects and a programme of works is being agreed.

Ongoing design/implementation issues

4.40 Separate to the contractual defects, there are a number of ongoing issues being monitored in conjunction with discussion with local stakeholders as follows:

4.40.1 Picardy Place saturation and operation;

4.40.2 London Road left turn ban;

4.40.3 Montgomery Street/Elm Row loading provision;

4.40.4 Elm Row pedestrianisation;

4.40.5 Brunswick Street closure and loading provision; and

4.40.6 Landscaping along the route from Picardy Place to Newhaven.

4.41 These are issues where there is consistency across ward councillors, the contact centre, community councils and colleagues and are ongoing. Proposals are currently being developed to address these issues and will be reported to Committee in May and June 2024.

4.42 Design development and delivery are a key lesson learned, especially in light of the development of policy during the period between project approval and delivery. Therefore, a lessons learned report has been completed which can be found at Appendix C.

4.43 A number of locations shown on the published landscaping plans are still outstanding or have been descoped as part of contractual contractor proposals. These locations include:

4.43.1 Newhaven Tram stop - This has been descoped to allow possible future tram stabling to be installed by Edinburgh Trams. This area will be seeded.

4.43.2 Hawthornvale Path - This has been descoped and will now form a part of the Lindsay Road Bridge (Pride Bridge) project.

4.43.3 Trees at Fingal Carpark – There are ongoing discussions with the contractor regarding the planting of trees at this location.

4.43.4 Trees on new Forth Ports access road - Harbour Homes is developing the adjacent site and may require this area for ingress/egress. Further planting in this area will be part of the Harbour Homes development.

4.43.5 Trees at Newkirkgate House – There are on-going discussions with the contractor regarding the planting of trees at this location.

4.43.6 Entrance to 165 Leith Walk / NHS building – descoped due to development works scheduled at former tram depot location.

4.43.7 Montgomery Street footway - Contractor proposal to descope this from the project was accepted however the footway has subsequently deteriorated.

4.43.8 Return of benches to Gayfield Square - Benches are scheduled to be refurbished before being returned to their original location.

5. Next Steps

5.1 Implementation of the Handover plan will continue with colleagues across the Council and working closely with Edinburgh Trams.

5.2 Reports on the issues outlined in paragraph 4.40 are expected to be presented to Committee in May and June 2024. A further report on the financial close of the project will be reported to the Council when complete.

5.3 On-going risk will be managed in accordance with the Council's risk framework. Community engagement will also continue.

5.4 A further independent report should be commissioned to assess the benefits delivery for the completed line.

6. Financial impact

6.1 Existing resources of the Council will continue to be utilised to progress with the ongoing handover and close out of the project, with continued support from Edinburgh Trams and colleagues in operational areas.

6.2 It is anticipated that a further report on the financial close of the project will be reported to the Council when complete.

7. Equality and Poverty Impact

7.1 Transport was highlighted by the Edinburgh Poverty Commission as a key issue in combatting poverty in the city. The Trams to Newhaven project has improved access to trams and provided an opportunity for recast of the bus network, improving access to public transport more generally.

8. Climate and Nature Emergency Implications

8.1 Completion of the tram line to Newhaven is an action contained within the City Mobility Plan. Greater efficiency and development of public transport in Edinburgh is key to growth of public transport in Edinburgh, helping to reduce carbon emissions from transport. Risk, policy, compliance, governance and community impact.

8.2 There is an ongoing risk to the project throughout the defects and handover process and while the new asset is established for ongoing management. This is mitigated by the establishment of a Major Projects and Commissioning team to provide ongoing oversight of the process.

8.3 Ongoing risk will be managed through the Council's corporate risk framework.

8.4 In addition, ongoing community engagement is required to resolve outstanding concerns raised by the local community.

9. Risk, policy, compliance, governance and community impact

9.1 There is an ongoing risk to the project throughout the defects and handover process and while the new asset is established for ongoing management. This is mitigated by the establishment of a Major Projects and Commissioning team to provide ongoing oversight of the process.

9.2 Ongoing risk will be managed through the Council's corporate risk framework.

9.3 In addition, ongoing community engagement is required to resolve outstanding concerns raised by the local community.

10. Background reading/external references

10.1 Final Business Case

10.2 COVID 19 update

10.3 Hardie Inquiry report

10.4 Council's response to Hardie Inquiry

11. Appendices

Appendix A Contract Structure and Risk Apportionment

Appendix B Stakeholder Engagement, Communications and Support for Business

Appendix C Design Implementation

Appendix D Ready for Operations sub group

Appendix E Insurance

Appendix F Handover Plan

Appendix G Open Defects

Contract administration and risk apportionment

Overview

A key aspect of project delivery for the Trams to Newhaven project was the contractual structure and risk apportionment adopted. Due to the applicability of contract choice and the administration of the contract to other projects, alongside the need to anticipate and manage risk, this element of project delivery will be relevant to future projects, and therefore forms part of the lessons learned exercise.

Background

The contract structure adopted was to let two contracts, one for the delivery of Infrastructure and Systems and the other for utilities diversions. The NEC construction contract package was adopted. For the Infrastructure and Systems contract (ISC) an NEC Option C contract with a target price and pain/gain share mechanism was chosen and an Option E cost reimbursable contract chosen for the Swept Path Contract (SPC).

Attendees

Hannah Ross
Chris Wilson
Robert Armstrong
Rebecca Andrew
Thomas Stokes
Steve Jackson
Rob Leech

Contract administration	
Contract administration (CEMAR) software was utilised by all parties for the administration of the contract.	The use of contract administration software gave a full record of the contract being managed and the communications issued to us. The software was easy to use and adopted by all parties. This helped with the management of the contract and also provided a full record during contract close out to help to facilitate handover. We would recommend the use of contract administration software again.
A dedicated project management and commercial team was procured to support the Council in delivery who had experience in managing complex projects and in the use of NEC contracts	The administration of the NEC contract was complex and the contract required active management. This was particularly true of the SPC contract which was chosen on the basis that the risk would remain with the client and close management would be required to manage this risk. Understanding the burden of contract administration and the risk associated with it allowed the project to procure appropriate support from the

	outset which was retained throughout delivery.
Site Access and Possession	
The two contract structure was reliant upon the Council managing the interface between the contractors.	The contract gave us the flexibility to manage the interface between the contractors and this this was a key tool in programming and in managing utilities diversions. In future, the Council should ensure that where it has accepted risk it has retained contractual powers to enable it to manage that risk effectively. The use of the ECI period and the co location in a single office is also notable in allowing relationships to develop which allowed the interface to be managed effectively.
The risk of obtaining Traffic Management approvals was with the contractor, but the client team had significant involvement in obtaining Traffic Management Review Panel (TMRP) approvals and out of hours possessions.	The Council could have better defined the TMRP requirements. A more detailed Terms of Reference for the TMRP would have helped the Contractors to understand at an earlier stage the requirements of the TMRP and also set out the role and responsibilities of members of the TMRP. In future, the Council should consider including the Terms of Reference for the TMRP in the contract and requesting sign off of the Terms of Reference from members of the TMRP, for example the Council, public transport companies and emergency services.
Swept Path works contract structure	
Two contracts were utilised, with the Council retaining a significant of control and risk on utility diversions.	The Council could have utilised an alternative contract structure, for example asking ISC to take utility risk, or the approach recommended by the Hardie Inquiry (to divert utilities well ahead of ISC delivery). Considered that the approach taken to utilities diversion and that the definition of the Tram Infrastructure Clearance Zone during ECI was appropriate and was delivered in line with the project plan. One advantage of the approach taken was that the client had management of how to deal with utilities. The client was able to select whether to undertake a utility diversion or to redesign the infrastructure and dependent on best value. While this was an advantage for the client and was built into the contracts, we should have been clearer during tender that the intention of the client was that both options would be available.
The site access and boundaries were defined in the contract with private accesses set out.	During construction a private access was stopped up without adequate warning. The

However, the ISC did not have the same on the ground knowledge as the project team.	project team should have walked the route with bidders at tender stage to distil our knowledge and ensure they were fully aware of the restrictions of the site and the requirement for agreements with owners of private accesses and for additional land for lay down areas.
Site investigation and warranted information	
The geotechnical information was provided as reference information rather than warranted.	In this case the geotechnical information was from the previous tram project. Therefore, it was appropriate in this case that the information was provided only as reference information. In future this should be considered on a case by case basis. Noted that the ECI period gave an opportunity for additional site investigations which improved the design approach and identified savings. Consider that during ECI more site investigations could have been completed which would have given greater price certainty and an opportunity for greater forward planning.
It was a requirement of the contract that the contractor was to complete condition surveys, with the type of survey dependent on listing.	The contract did not prescribe how the survey should have been carried out. In general, they were external only and often only of the ground floor. In addition, they were photographic only with no schedule of condition. There was an expectation from residents that the surveys would be more in depth. Noting that an in depth external or internal survey for all of the properties along the route would have been prohibitively expensive, we should have been clearer in the contract on what our expectations were for survey completion, to be informed by the insurer. In addition we should have been clearer with residents along the route on what survey information was available at the outset. To consider if the survey information should have been commissioned by the Council instead of by the Contractor, though noting the Contractor may seek to undertaken its own surveys anyway. Also note lessons learned from insurance that survey methodology requires insurer/loss adjustor input prior to taking place to ensure claims defensibility is maximised.
Vibration monitoring was installed along the route at key points. However, the monitors were not always available and this led to	While the requirement for vibration monitoring was written into the contract there was no direct loss if the vibration

concerns from residents about site monitoring.	monitoring was not undertaken. In future, we should introduce Key Performance Indicators with penalties so that contractual obligations which are a reputational issue are associated with a penalty to drive performance and compliance.
Out of hours working was often notified late with little opportunity to meaningfully engage with residents prior to out of hours working.	There was a disconnection between the Council's Environmental Health team requirements, the Code of Construction Practice and the needs of the project. This led to conflicts in undertaking out of hours working. We should have ensured that the contractor was fully aware of the needs of Environmental Health and that was written into the contract at the outset. In addition, compliance should form part of Key Performance Indicators in future with penalties and incentives for compliance.
There was free issue equipment available from the previous tram project which was not utilised. The reason it was not utilised was because the lifetime of the free issue material did not accord with the design life of the project.	Although an unlikely event, if free issue equipment is available, the Council should consider if it will survey and warrant that equipment itself in future, rather than asking the Contractor to take the risk.
Consents and approvals	
The project relied on the Tram Acts obtained in the previous project	The Tram Acts were drafted well and did not require us to go back to for powers which was a key risk mitigation in project delivery. Care should be taken obtaining powers in future to ensure that they will enable full project delivery.
There were some difficulties in the prior approvals process with a disconnection between the requirements of the Council as Planning Authority and the opinion of the ISC in what was involved.	We provided in the contract documents the previous project's contract documents so that the ISC could understand what was required for contract award. The ISC should have known what information would be required for prior approvals. ISC did not appoint a planning advisor until relatively late in the process. We could have raised this at tender stage to ensure that the contractor was aware of the need to obtain the prior approvals.
Construction	
The connection to and protection of existing utilities was passed to the contractor, but in reality this was managed by the client through the project manager.	Consider that this should have been a client management issue given that we have built up relationships with utility companies. In addition, some utility companies will also only deal with the client e.g. Scottish Water.
Management of pedestrian access was contractor risk but a reputational issue for the Council where it failed.	As noted above, key performance indicators should be developed to ensure continued

	compliance with the requirements of the TMRP in relation to pedestrian access.
The decision was taken in 2020 to instruct the ISC to stop working due to COVID 19. In doing so, the Council accepted the cost and time impact of COVID 19.	The instruction to the contractors allowed us to instruct to stop on street but to also instruct them to continue to work remotely, and to work with us to mitigate the impact on programme. Given the profile of the project it would have been difficult to have continued with construction in March 2020. If the risk had been pushed to the ISC it is possible that they would have become more commercially aggressive in other areas. We consider that this was a reasonable approach to take. Noted that pandemic is now specifically included in many contract negotiations.
Progress reporting, regulations and records	
We prescribed how we wanted progress to be reported	We set out our requirements in detail in this area and it worked well. Consider that clear progress metric reporting should be included in future project set up.
Requirements for safety case were prescribed	Again, this was set out clearly and the requirements for the safety case worked well.
Compliance with Code of Construction Practice (CoCP)	Although the contract put the obligation to comply with the CoCP on the contractors they were not penalised or incentivised for compliance. This should be included in a future project.
The ISC had to comply with the commissioning and acceptance regime, with the risk of provision of trams on the client.	The commissioning period worked well with input from Edinburgh Trams. ISC, client team and Edinburgh Trams worked well together during testing and commissioning. We could have allowed a longer lead in period to the testing and commissioning and note lesson learned from the Ready for Operations subgroup that the subgroup could have been established earlier to greater benefit.
Protection of damage to the installation between removal of Herras fencing and completion of project	Tension between removal of traffic management and protection of the works. If the Contractor had the risk of damage they would have been incentivised to keep the road closed until completion, which would have led to greater inconvenience to residents and businesses. Sectional completion process could have been more robust with completion of all items, though this would not have mitigated the risk of damage to the installation.
Sub contractors	

Siemens were directly contracted to the Council during ECI and then a subcontractor to ISC during delivery. The relationship between Siemens and ISC was productive but there was a lot of reliance on client in discussions between them.	To consider if in future we should let the Siemens package as a separate package of works and to manage the interface between the infrastructure and systems provider. Systems provider for the authority is a longer term partnership and so this would give an opportunity to enter into a longer term contract to include maintenance.
Management of sub contractors is a contractor responsibility. Sub contractors played a key role in delivery of the project and it would have been helpful to have greater input to the appointment of the sub contractors given their role in project delivery.	KPIs around performance of supply chain should be considered in future, and greater involvement of the client in selection of sub contractors could have been achieved by strengthening the role in the scope documentation.
Defects	
Timescales for defect resolution are post completion for the entire project, with further timescales post completion. The length of time taken for defect resolution has given rise to frustration from residents and stakeholders.	Given use of sectional completion in this project, we should have considered using separate defects timescales relative to sectional completion. In addition we should consider introducing shorter timescales for defect rectification post completion with associated step in, and have set out in the scope document how operational defects will be resolved.

Appendix B - Stakeholder Engagement, Communications and Support for Business Lessons Learned overview.

Overview

Stakeholder engagement, communications and support for business were key workstreams of the Trams to Newhaven project. This paper reviews the key activities and provides recommendations for large scale projects that the City of Edinburgh Council undertakes in the future.

Consultations 2018

To inform the final design along the route, public consultation and stakeholder workshops were undertaken. A report detailing the findings of these consultations can be found on the Trams to Newhaven project website which includes details of how the design changed based on feedback including the introduction of the cycleway on Leith Walk, increased parking and loading provision on Leith Walk, and the relocation of the tram stop at Balfour Street.

Consultation	Further detail	Improvement / Recommendation
Extensive consultation was undertaken during 2018 in order to inform the Final Business Case that was approved in March 2019. At the time, this consultation generated the second largest number of comments that Council had received for a consultation.	These consultations gave residents, businesses and stakeholders the opportunity to feedback on the proposed designs. As a result, there were significant changes to the final design.	Despite the consultations and workshops that took place, during construction there were complaints about the final design. Consideration should be given to the creation of a regular newsletter / communication update issued to responders. The increased use of the Consultation Hub should make this task easier going forward.

Staffing

Following the approval of the Final Business Case in March 2019, a six-month period of Early Contractor Involvement (ECI) took place ahead of construction starting in November 2019.

Prior to the ECI period, the communications and engagement function had been undertaken by the Council employees and representatives from Turner and Townsend and Anturas Consulting.

During the ECI period, the communications and engagement function set up was finalised which included dedicated personnel from the Council, Turner and Townsend, Anturas, Sacyr Farrans Neopul (SFN) and Morrison Utility Services (MUS). All personnel were co-located to ensure all activities were coordinated, and that messaging was timely, concise and consistent. As the project developed, the set up was altered – for example, a Business Development Manager was brought in from Edinburgh Chamber of Commerce to support the delivery of the support for business package, and two employees from Edinburgh Trams to support interactions with residents and businesses along the route.

Staffing	Further detail	Improvement / Recommendation
Given the complexity of the project there was a requirement to have a dedicated communications and engagement function that also administered the support for business package.	Co-locating this team within the wider project team ensured cooperative working, access to key construction personnel to help inform communications and engagement and helped deliver a consistent communications message to all stakeholders.	A project of this scale requires a dedicated communications and engagement team. It is important to ensure that in a small team resilience is built into the communications and engagement function. The project engaged with the Edinburgh Guarantee initiative to employ an intern. Following the completion of the intern's six-month placement, they were offered a fixed terms contract to continue working until the tram became operational. The individual brought a specific skill set around social media that proved invaluable and using major projects to give young people in the city employment experience is recommended.

Communications and Engagement Strategy Development

To ensure that all organisations involved in the project understood the importance of communications and engagement, the Council Client Team developed a Stakeholder and Engagement Communications Strategy.

This document covered the following areas:

1. Project background, rationale, objectives, risks, language and key messaging
2. Communication and engagement protocols
3. Communications planner
4. Stakeholder management programme
5. Project charter
6. General Data Protection Regulation (GDPR) on the project
7. Customer Contact Centre
8. Support for Business package
9. Trams to Newhaven construction identity outline
10. Social media approach
11. Tone of voice

Key components of this included:

Communications	Further details	Improvement / recommendation
A **dedicated website** was developed in-house on a 'galaxy' site that was connected to the Council's main site.	The website was a one stop shop for all information relating to the project. The main sections were: - Construction - Final designs - FAQs - Support for Business - Community Benefits - Newsletter - Document archive - Related projects - News - Search function It was also a useful tool in responding to Freedom of Information requests.	The website was an important communications tool for the project. Creating it as a 'galaxy' site to the main Council site meant that the only cost was staff time and ongoing maintenance was part of the Council's contract with JADU. Functionality of the site was more limited than would have been available with an external site however the format was fit for purpose. Depending on the scale of future projects and the ongoing development of the Council's web platform, consideration should be given for dedicated project websites for future major projects.
An **electronic fortnightly newsletter** was produced via the Mailchimp platform. This provided a regular update to subscribers on progress along the route and was an opportunity to promote businesses and community benefit initiatives	The newsletter was issued second Friday throughout the duration of construction. The newsletters were archived on the project website and physical copies were displayed at information points along the route.	The newsletter provided a regular update on progress to almost 2,500 subscribers. As the Council's JADU system did not have a newsletter function, the cloud based Mailchimp system was used. As with other projects that the Council is delivering, this is a useful way in ensuring the sharing of information. Given the number of important projects in the city, further discussion is required with Information Technology colleagues on an in-house newsletter option.
Given the nature and history of the project, there was significant **media** interest in the project. Proactive media releases were issued to coincide with key milestones and committee reports while reactive communications was	Media was handled by the Council's Corporate Communications Team, working closely with members of the dedicated project team.	Given the importance of the project to the city's future aspirations, the Council's Corporate Communications Team were the appropriate route for dealing with all media issues and should be resourced appropriately.

developed in response to issues raised by the media.		For this to be effective, a close working relationship between the project and Council colleagues was essential and should be implemented on any future projects. It should be noted that prior to any major proactive media release, the All Party Oversight Group, local ward members, local MPs / MSPs, and key stakeholders groups received a written briefing to advise them of the release and it is recommended this process continues to be adopted on any future major projects.
Following discussions with the colleagues in the Council's Corporate Communications Team, it was agreed that Trams to Newhaven project would have **dedicated social media accounts** to provide updates on progress.	It was agreed that the following platforms would be used: - Twitter (now X) - Instagram - Linkedin Any Facebook postings would be done via the Council's Facebook account.	Given the importance of social media it was important that dedicated platforms were developed. By the end of the project these platforms had the following number of followers: - Twitter (now X): 3,787 - Instagram: 1,613 - Linkedin: 1,100 The project responded to any direct messages that were received but did not engage in open conversations with multiple individuals. Social media accounts were monitored to pick up any concerns / issues / misunderstanding in order to inform future communications through other project communication channels. Given the fast-changing nature of social media, any future major projects should carefully consider appropriate platforms with which to communicate and ensure appropriate resources are in place to support this.
At the start of any major construction phase, **letters**	A local distribution company with knowledge of the area	The project was adopting a 'digital first' approach, in line

were delivered to all businesses and residents in the impacted area. These letters would detail the nature of the works, start date, and give details on where further information could be found, and how to contact the project and sign up to the electronic newsletter (see above) in the event of any queries.	was employed to distribute these letters.	with the Council's strategy. However, the issuing of letters was an important way of highlighting upcoming works and where residents and businesses could find further information. These letters, as part of the overall communications mix, were an important part of highlighting major changes to the construction programme and played a key role in delivering against the Council's accessibility, equality, and diversity requirements.
The **briefing** of key stakeholders on future initiatives helped ensure there was a consistency of message coming from the project.	Key stakeholders included the All-Party Oversight Group, local ward members, local MPs/MSPs, Community Councils Together on Tram, business groups, etc.	The choreography and timing of these briefings was very important to ensure the appropriate individuals had the relevant information at the right time and should be adopted on major projects going forward.
While the project followed the Council's lead in adopting a 'digital first' approach, its nature and complexity meant that **in person events / resident meetings**, were an important way of dealing with concerns and issues.	Through the contact centre (see below), the project could respond to individual queries and concerns. However, creating opportunities to engage with resident groups was an important way to deal with collective issues at key locations and provided an opportunity to discuss complex issue in detail.	The COVID 19 pandemic made in person meetings / events difficult. While resource intensive, there is no doubt that in person meetings facilitates discussion on complex issues and develops relationships between the project and residents along the route. (See business section below for analysis of in person meetings with businesses)
Regular communication meetings with colleagues in **Edinburgh Trams and Lothian** Communications Teams	This provided an opportunity to share information with key transport providers and the future operators of the line.	These meetings became increasingly important as the project transitioned into operations. Joined up working with Edinburgh Trams and Lothian as part of future major projects is recommended, particularly given the closer integration of the two companies in the future to provide a fully integrated transport system for the city.
Endeavouring to create a 'one team approach' was at the forefront of delivering **internal**	There were a number of organisations involved in the project which each had their	On future major projects where organisations are co-located, early consideration

communications for all members of the project team.	own internal communication processes. However, the creation of the Project Charter and regular communications from the Senior Responsible Officer to all project team members helped deliver embed the 'one team approach.'	should be given to the internal communications approach nd ashould be agreed as part of the Early Contractor Involvement process.
The creation of a Trams to Newhaven **construction identity** was agreed as part of the Communications Strategy. The identity was implemented during construction and ceased being used once Edinburgh Trams began operations in June 2023.	The identity was developed by the Council's Corporate Communications Team and used green to blue and lines to waves in the logo to represent land to sea. Its development was sympathetic to the Edinburgh Trams logo. Trams to Newhaven Edinburgh Trams The City of Edinburgh Council branding was also used alongside to ensure Council's role as the client / sponsor of the project was visible.	The development and application of a construction identity should be considered on projects of scale to ensure all organisations involved are seen as being part of one team. Early discussions with colleagues in Corporate Communications Team should take place to explore options for the use of the Future Edinburgh brand. Ensuring recognition of the Council must also form part of any future project construction identity development.
The procurement scope required the main contractor (SFN) to provide a **contact centre** that would respond to phone, email and social media queries relating to the project. Discussions took place with the City of Edinburgh Council's Customer Contact Manager to explore whether the Council's Contact Centre would be appropriate to manage queries. The Council's Contact Centre was in the process of transferring to a new Customer Relationship Management (CRM) system (Verint) therefore it was agreed that the project appoint an external contact centre to handle queries. Following a review of the market, RSVP was appointed who used Freshdesk as their CRM system.	The Freshdesk CRM system worked well for the project. It allowed approved individuals from the organisations involved in the project access to the system to allow input into the resolution of queries / complaints from residents and businesses. Clear processes and escalation routes were created to ensure queries were directed to the right individual for answer / resolution. Weekly update reports were issued to RSVP to allow them to resolve as many queries as possible at the first point of contact. More complex queries / issues were escalated to appropriate personnel on the project.	The contact centre function was crucial managing public queries. It provided data on number of tickets, items with the most queries, locations with the most queries, etc. This helped the project deal with queries as they came in, identify issues that were beginning to surface and helped inform future communications activities. Future major projects should have early discussions with the Council's Contact Centre team to identify what type of contact centre provision is required.

	A review of the contact centre set up in 2022 identified a more cost-effective way of delivering this function. This resulted in email and social media queries being dealt with by the project team and phone calls being handled by an external agency in South Queensferry (Aquarius). With the Newhaven line now open, Edinburgh Trams Customer Service team are handling all queries. While the majority of these relate to operational issues, queries relating to outstanding works or defects are escalated to the Trams to Newhaven team for investigation and resolution. Edinburgh Trams also use the Freshdesk system. The project ensured that the Council's Contact Centre was provided with regular update reports.	
Construction programme updates were issued on a regular basis. The route was split into 17 individual sections.	Given the complex nature of the project, the timescale for completion in individual sections was subject to change. The project adopted a year, season, month, week, date approach to communicating the construction programme, highlighted extensions in sections affected, and gave reasons for the extension.	Timescales for completion were of great interest to residents and businesses and any extension to programme required project wide and localised communications. The use of year, season, month, week, date worked well and the recommendation would be for other future major projects to adopt this approach. Consideration should be given to including a contingency timescale in programme in order to avoid 'over promising and under delivering' which led to complaints from residents and businesses.
Finalised design plans were hosted on the project website and were shared with	Following the consultation in 2018, the project team reviewed what type of format	While the principle around providing simplified versions was sound and all elements

stakeholders, business collectives and residents.	should be used to highlight the final designs. It was felt that some of the illustrations contained too much information and was difficult to interpret. In response to this, a simplified version of the designs was posted on the project website. While these drawings were marked up 'proposals', residents and businesses understandably assumed this was what was to be implemented which wasn't always the case.	were compliant with the Edinburgh Street Design Guidance, not showing these on the simplified designs led to complaints from residents and businesses relating to the placement of planters, benches, signs, lighting, OLE poles, etc. Future major projects should consider making more detailed plans available and make clear that these designs may be subject to change due to unforeseen circumstances, for example utility conflicts.
The project had in place an **Insurance Claims Process** for residents or businesses who believed their properties / possessions had been damaged as a result of construction works.	The project website explained how the process worked. It was made clear that it was very important that claimants made their own insurance company aware of the claim that was being submitted. Once a claim was initiated it was explained to claimants that this was now a legal process and that project members could not comment further and that any future correspondence should be directed to the independent loss adjuster appointed to review the claim.	Despite explaining the process, the project continued to receive queries on progress from claimants. These were handled on an individual basis. There were frustrations from claimants at the length of time claims took to be resolved and at the lack of communications and updates from the loss adjuster. In terms of claimant engagement, future major projects should discuss this with the Council's Insurance Team in order to mitigate reputational damage and ensure clear processes and procedures are in place. In addition, it is important that the contractor's role in providing necessary information relating to claims is made clear.
The project undertook **drone filming** of the route at various points during construction.	The use of drone footage (film and photograph) was well received by the public and media and was a good way of demonstrating progress of the project.	The use of film, video and photographs should be used for key milestones on future projects as they proved to be a positive in engaging with residents, businesses and stakeholders. Early discussion with the contractor should take place to ensure timely content to demonstrate progress.

Given the scale and sensitivity of the project, a number of **Freedom of Information** (FOI) requests were received.	The project followed the City of Edinburgh Council's Freedom of Information process and policies to respond to requests from the public. Total number of FOIs to date are listed below: 2024: 9 2023: 48 2022: 16 2021: 17 2020: 12 2019: 3	Outputs from FOI requests should be used to inform future communications where it is appropriate to do so. Project websites should provide a link to the FOI disclosure log on the Council website. Clear instruction should be given to the contractor on their role in delivering information to respond to FOIs.
The project ensured compliance with the **General Data Protection Regulation (GDPR)**	The project followed the City of Edinburgh Council's GDPR processes and procedures.	Close working with colleagues in Policy and Insight to ensure GDPR compliance is essential on future projects.
The project undertook an **Integrated Impact Assessment (IIA)** in advance of construction start.	The project followed the City of Edinburgh Council's IIA processes and procedures to ensure those with protected characteristics are considered as part of the communications plan.	Close working with colleagues in Policy and Insight to ensure IIA compliance is essential on future projects.

The Council's Internal Audit team carried out an agile audit on the Communications and Stakeholder function to ensure:

Clear stakeholder and citizen engagement and communication plans have been developed with progress/outcomes monitored and reported as required.

The agile audit concluded no management actions were required.

Support for Business

As part of the initial tram project, a large amount of construction work had been undertaken in Leith, including digging up the carriageway on Leith Walk to allow utility diversions to take place. Due to financial constraints, the first phase of tram terminated at the temporary tram stop at York Place which resulted in the carriageway of Leith Walk being returned to its previous state.

As a result of businesses in Leith having endured this disruption without realising the benefit of a tram system, it was agreed that a bespoke Support for Business package should be created for businesses along the route and in adjoining side streets.

The aim of the Support for Business scheme is outlined below:

Our aim is to maintain the vibrancy, desirability and accessibility of the streets affected by the Trams to Newhaven Project

Businesses were consulted on proposals drawn up by the project in 2018 and £2.4m was set aside for this initiative as part of the Final Business Case approved in March 2019. Details of the final package

are listed below. Due to financial rules, the Support for Business package was funded through the revenue budget and not capitalised.

Business support	Further details	Improvements / recommendations
Logistic hubs	Five logistic hubs were created along the route to support at the following locations: - Mitchell Street - Foot of the Walk - Dalmeny Street - Albert Street - Montgomery Street These locations were identified following a survey of all businesses along the route to establish delivery trends, types of vehicles used, timings of deliveries, etc. The logistic hubs also helped with domestic deliveries of bulky items eg: washing machines, sofas, etc. Logistic Officers undertook litter picking around the hubs. As the project progressed and roads re-opened, the logistic hubs were removed.	The logistic hubs were well received by businesses with praise given to logistic officers. Over 75,000 individual deliveries were facilitated. There has been interest from colleagues in the Council and from other cities on how their operational arrangements. It should be noted that the running of these logistic hubs was costly.
Mural painting and street design	The project appointed Tactical Media to source local artists to paint utility boxes. Examples of the artwork produced can be viewed on the project website. In addition, Tactical Media sourced artwork from local young artists for four panels to be attached the newly formed South Leith Parish Church Wall. Please note this is a listed structure. A larger Eduardo Palozzi inspired mural on Brunswick Road on the side of the Tesco Metro building is also being developed. Both initiatives are going through the planning process at the time of writing.	The street art was well received by the public. It should be noted that there will always be subjectivity around artwork. In order to support the Council's aspirations around graffiti and street art, early engagement should take place with colleagues in Place to discuss opportunities for graffiti walls on future major projects.
Street cleaning	Due to heras fencing being in place, Waste and Cleansing	Keeping the pavements clean during construction was an

	colleagues were unable to deploy mechanical cleaners on the pavements. To maintain a level of cleanliness during construction, the project paid for a barrow operative to keep Leith Walk and Constitution Street clean.	important initiative and dedicated resource should be considered as part of future major projects if required.
Open for business campaign	The project used Spirit Media, the Council's media buying agency, to run general open for business campaigns for the Leith area. This included billboards, bus sides, and digital advertising. The campaign centred on the diverse nature of the businesses on Leith Walk and Constitution Street. 	It is important that future major projects consider incorporating open for business campaigns during construction. This should be developed in consultation with affected businesses.
Business Continuity Fund	The Trams to Newhaven Business Continuity Fund was established to provide a means of support for businesses that suffer short-term cash flow issues during the construction of the project. A specific set of criteria was agreed for businesses to be eligible, and the details businesses had to share were in line with other public sector funding applications. All businesses along the route were visited in person to highlight the fund. All applications were reviewed by the Business Development Manager who made a recommendation to the Stakeholder and Communications Manager on whether to pay or not to pay	In general, the Business Continuity Fund was welcomed by businesses affected by the trams. The project worked very closely with individual businesses on their application. There were differing views on how onerous the process was however it was important that a robust and fair process was in place to ensure monies were paid to businesses that were experiencing hardship due to the tram works. As a result of the extension of works on Constitution Street and Leith Walk and, following discussions with the Constitution Street Business Collective and representatives from Leith Walk businesses, it

	based on the information received. If an application was successful, colleagues in Finance processed the payment. In the event of an appeal if there was a recommendation for non-payment this was reviewed by the Senior Responsible Officer and a member of the Internal Audit Team.	was agreed additional applications could be made. There was feedback from businesses querying the flat £3,000 max grant per application. The suggestion was that it should reflect the turnover of individual businesses. It should be noted that the Council is not required to compensate businesses during major construction works.
Voucher scheme	A review of the market identified Itison as providing the best and most cost-efficient way of delivering a voucher scheme for businesses along the route. This provided £10 worth of spend when purchasing a £5 voucher. The additional £5 was funded by the project. A maximum of three vouchers were costing £15 were permitted to be bought at any given time, giving spend amount of £30. Two schemes were set up: Constitution Street – each participating business had its own set of vouchers. Leith Walk – a 'currency' model was adopted whereby general vouchers could be used in participating businesses. Itison also marketed the scheme which helped with the general messaging around Leith being open for business with a diverse range of businesses.	The scheme was well received by those businesses that took part. Itison worked hard to promote the scheme and provided dedicated help to any businesses experiencing issues redeeming vouchers. As the vouchers were electronic, Itison were able to contact purchasers directly to encourage them to redeem their vouchers. Approximately 80% of the vouchers purchased were from the EH6 / EH7 postcodes. When the voucher scheme ended, there was a total of 31,391 vouchers were sold with 2,985 unredeemed (9%). The total number of Leith Walk vouchers sold was 18,330 with 1,834 unredeemed (10%) The total number of Constitution Street vouchers sold was 13,061 with 1,061 unredeemed (8%). Following discussions with the Constitution Street Business Collective, the money from the unredeemed vouchers was donated evenly to South Leith Parish Church and St Mary's Star of the Sea to fund

		their respective food bank initiatives. Following discussion with representatives from Leith Walk business, the money from the unredeemed vouchers was donated to Leith Chooses and funded an arts festival at the Police Box on Leith Walk.
Cargo bikes / trailers	Sustrans provided cargo bikes for use in the area. It had been envisaged that businesses would be trained on their use however the COVID 19 pandemic meant this did not take place. The trailers were used by logistic officers at the logistic hubs.	The trailers proved very useful in facilitating deliveries for businesses along the route. The Council still has these trailers which are now being used by colleagues in the Children, Education, and Justice Services.
Business development	A Business Development Manager was seconded in from Edinburgh Chamber of Commerce. Part of his remit was to provide business development opportunities along the route, paid for by the project. This included a series of training sessions on running small businesses, marketing for small businesses, financial management for small businesses and networking events. In addition, free membership of the Edinburgh Chamber of Commerce was available during construction.	The trainings sessions were well received by businesses that took part. Future major projects should consider developing business development training.
Community funds	As part of the consultation with businesses there was a request for funds to support community initiatives during construction. Additional monies were secured through the scrapping of old tram tracks. Monies were provided to support initiatives including Leith Chooses, Leith Gives and arts events.	A community fund should be considered as part of any future major projects.
Marketing materials	Marketing materials were developed by the Council's Corporate Communications Team and were displayed along the route, including scrim that	Windy weather conditions resulted in instances of heras fencing being pulled down and the contractor felt that this was as a result of the

	was attached to the heras fencing. In response to business feedback, the scrim was see-thought to allow people to see across the work site. In addition, bamboo coffee cups and canvas bags were produced and distributed to businesses to give out to customers promoting supporting local businesses. In addition signs were created highlighting how to get in contact with the project and also giving an overview of the project's construction strategy.  	scrim despite the design and material used being approved for use. Early discussion with contractors on materials to be used should take place on future major projects.
Business health monitoring	The project appointed the Local Data Company to provide twice yearly updates on the business health of Leith and how that compared to other areas on Edinburgh, Edinburgh as a whole, Scotland and the UK. The updates gave details on: - Vacancy rates - Persistent vacancy rates - Openings vs closures - Details on individual businesses	The data showed that Leith proved itself to be resilient during the construction period. Leith also is experiencing an increase in Leisure outlets at the expense of retail, which is a reflection of trends across the UK. The data identified that Leith has a higher persistent vacancy rate which suggests an over-provision in the area. The project has commissioned the Local Data Company to provide further updates on business health now that the tram is operational along the route. Future major projects should consider using this model as it gives valuable insight into the overall performance of the area where construction is taking place. Careful consideration should be given to how this information is presented publicly.

Trader survey	A trader survey was undertaken in 2019 prior to construction start for insight into the operational arrangements of all businesses along the route including deliveries, opening times, type of vehicle used, etc. The project achieved a 97% response rate.	This information helped inform the location of the logistic hubs along the route to best serve businesses.
Construction programme	As mentioned previously, the project gave regular updates on the construction programme. There was strong feedback from businesses stating the need for certainty around completion dates for sections to allow them to effectively plan around the construction.	Given the complexity of the project, at times it was difficult to provide the level of certainty that businesses were asking for. All members of the project team worked hard to try to deliver against projected completion dates but there were times when we over-promised and under-delivered and that has an impact on businesses and residents. Future major projects in densely populated areas should consider the inclusion of additional contingency when communicating estimated completion dates.
Business Collectives	Following the announcement of construction start in November 2019, businesses on Constitution Street created the Constitution Street Business Collective. Initially this collective met fortnightly and invited members of the project team along to give an update on plans and an opportunity for businesses to raise issues / concerns. The collective was chaired by a business representative. Given the scale it was not possible to recreate this model on Leith Walk. However, discussions took place with individual businesses and there were business meetings hosted at Out of the Blue and the project office at 165 Leith Walk	The project was very grateful that businesses along the route gave up their own time to engage with the project. There is no doubt that the Constitution Street Business Collective worked well and meetings continued on a regular basis throughout the construction process and into the operational phase of tram. The fact that the meeting was chaired and convened by businesses in the area and that the project team was invited along worked well. Future major projects should engage early with businesses that will / may be affected by construction works to put in place a mechanism for information share.

	with representatives from Leith Walk businesses.	
Non-Domestic Business Rates	The project approached the Lothian Joint Valuation Board (LJVB) regarding non-domestic rates and the opportunity for a reduction in this payment during the construction project.	There was some confusion around the project / Council's role in non-domestic rates given that the Council is responsible for the billing and collection. LJVB attended meetings with businesses to explain the process and worked well with the project to engage with businesses and resolve any issues. Future major projects should consider early engagement with LJVB on this issue.
Engagement with colleagues in **Forever Edinburgh** and **Business Champion Network**	The project engaged with Forever Edinburgh to ensure update information was available to promote Leith. In addition, the project facilitated introductions to Leith representatives to the Council's Business Champion Network	Future major projects should engage early with other initiatives that the Council and partners are involved in to help promote businesses during construction period.

The Council's Internal Audit team carried out an agile audit on the Support for Business workstream function to ensure:

A clear framework is in place to support the Support for Business workstream, with adequate governance and oversight of budgets and decision making.

The agile audit concluded no management actions were required.

Community Benefits

The delivery of community benefits to the local area and Edinburgh formed part of the procurement process in advance of contractors being appointed. All key organisations on the project, including the City of Edinburgh Council through the Community Fund as part of the Support for Business package, contributed to the delivery of the community benefits workstream.

The Community Benefits workstream included archaeology and school programmes.

Detailed below is a summary of the community benefits delivered as part of the project.

Initiative	Results
Local recruitment, training, mentoring and supported employment	Employing unemployed: 25 Employing college/university students: 13 Employing modern apprentices: 5 Employing graduates: 2 Employing new entrants: 7

	Training weeks: 48,828
Support to schools, colleges / universities and employment providers	Primary school Safety Sam Presentations: 8 Career advice involvement: 21 Site visits: 12 STEM teacher insight visits: 7
SME / Third Sector Support	Meet the buyer events: 2 Supply chain briefings: 4
Volunteering in the community	Events: 4
Use of community venues	Venues used: 4
Community enhancements	Litter picks: 72 Engagement with local artists: 6
Outreach / Education Opportunities	Workshop with those experiencing homelessness: 4
Community consultation / engagement	Public drop-in events: 4 Presentations to local interest groups: 65 Donation of deliberators: 2 Donation of planters: 12 Donation of IT equipment for refurbishment Food bank donations Christmas and Easter engagement with local schools
Financial contributions	Included Leith Chooses, Leith Gives, One City Trust, Leith Athletic, Pilmeny Project Developments, and ReDrawing Edinburgh

The Council's Internal Audit team carried out an agile audit on the Communications and Stakeholder function to ensure:

Effective supplier management arrangements (including sub-contractor) are in place to monitor delivery progress and payments against project timelines and in line with contract terms and conditions, including delivery of community benefits.

The following management actions were identified:

1. Contract design for major projects, should include clauses to ensure that contractors are aware of, and are mandated to comply with, the requirement to update Cenefits with details of progress towards meeting delivery of community benefits as agreed in the terms of the contract.

2. In line with the Council's Contract Management Manual and Toolkit, a Contract Handover Report should be prepared, with support from Commercial and Procurement Services, that details agreed Community Benefits to ensure that these are recorded, managed and reported on Cenefits. Changes to agreed Community Benefits targets must be approved by the Senior Responsible Officer and reported to an appropriate governance forum.

3. As part of project close and lesson learned, a report should be prepared which details the community benefits set out to be delivered in the full business case and contract, the changes that occurred to delivery targets during the project, the reasons for the changes, and the final position of community benefits delivered a project close.

The project is engaging with the Procurement team on these above actions.

Appendix C

Trams to Newhaven design

Overview

The design of the Trams to Newhaven project and the approach taken to the design, development and implementation has been the subject of scrutiny and debate. It is appropriate for the Trams to Newhaven project to reflect on the design and implementation process and to recommend lessons for future delivery.

Background

The initial design for the Trams to Newhaven project issued for consultation was originally developed for phase 1 of tram delivery. Following consultation in 2018, the design was amended to include active travel provision and to take account of the views of the community on access across and along Leith Walk for pedestrians and cyclists.

During construction and following completion concerns were raised by a range of stakeholders on aspects of the delivered design. Three lessons learned workshops were undertaken as follows.

Attendees

Workshop 1: Development of performance specifications and design requirements document for tender

Hannah Ross (CEC)
Chris Wilson (CEC)
Robert Armstrong (CEC)
Colin Kerr (ET)
Steve Jackson (T&T)
Rob Leech (Anturas)

Workshop 2: Post contract award design development process

Colin Kerr (Edinburgh Trams)
Robert Armstrong (CEC)
Ana Palestina (SFN)
Chris Wilson (CEC)
Steven Spowart (Atkins)
Steven Macdonald (Atkins)

Workshop 3: To consider with elected members the final design and the design process

Hannah Ross (CEC)
Chris Wilson
Sanne Dijkstra Downie
Katrina Faccenda
Chas Booth
Amy McNeese Mechan

Jack Caldwell
Jule Bandel

Early Contractor Involvement (ECI) design works	
Observation	**Lesson identified**
The Trams to Newhaven Project (TTNP) retained the existing system so did not have a requirement to fully design the system.	This System Strategy meant that TTNP could utilise the existing system verification. This was an advantage to the project overall. This is a factor for consideration in future system procurement strategies.
During ECI the Infrastructure and Systems Contractor designed and specified the dimensions of a Tram Infrastructure Clearance Zone which would have to be cleared by the Swept Path Contractor.	It was appropriate that the dimensions of the Tram Infrastructure Clearance Zone (TICZ) were fixed during the ECI period. The layout of the TICZ was utilised but there was additional detail developed during ECI that was not used. It would have been helpful for the Swept Path Contractor to have specified the level of detail that was required for them to have been able to clear the TICZ, which would have brought greater focus to what was actually required. If the same level of detail is required in future consideration should be given to extending the period of ECI to ensure that there is sufficient time for delivery.
The Swept Path contractor was not using the Building Information Management (BIM) system. The Infrastructure and Systems contract was using the BIM system.	In future, all contractors working on the same job should use the same systems for design so that it is easier to compare across the systems.
Design validation	
Observation	**Lesson identified**
Scope, technical performance specification, and site and reference information were developed at tender stage. In order to ensure that the requirements of the project were fully met, the client, operator and consultants met together to develop detailed documents and to 'page turn' the performance specification. The performance specification drafting was preceded by meetings with each of the disciplines e.g. track slab, drainage etc. TTNP agreed at these meetings what level of control the Council wanted and that was then used to develop the performance specification.	Agreed that this was a valid exercise and the approach taken to development of the technical information was robust and appropriate. There was enough expertise around the table, including the Operator, to understand and challenge the information given. Overall, this was a valuable process and should be replicated. It would have been helpful to have a formal sign off process to the performance specification within the Council to ensure that different departments were signed up to the performance design at an early stage and this should be undertaken in a future project.

A technical audit of the Scope document was undertaken by an independent expert. The Independent Advisor to the board also led a workshop where the technical team presented the technical specification with challenge from industry experts.	The audit and independent check was a valuable exercise and should be replicated in future. The Council should ensure that all disciplines are represented in a multi disciplinary workshop including Council departments and the Operator. Actions arising from a workshop should be formally recorded in line with the sign off process.
Edinburgh Street Design Guidance was being developed in parallel with the contract documentation. The guidance gives options for delivery and is not prescriptive, so giving flexibility in the approach to public realm which the Council may wish to retain greater control over. Some guidance documents were updated during the project delivery for example Cycling by Design and Edinburgh Street Design Guidance.	It was recognised that the Edinburgh Street Design Guidance is a relevant and helpful document. However, the Guidance should be viewed as client design guidance, which forms the basis of a Tram Design specification, alongside other policy documentation for example the Edinburgh Standard Details. This would allow the Council to retain greater control of ultimate public realm delivery including landscaping and also to create a document which identifies emerging requirements at the time a contract is let. Detailed discussion at an early stage would reduce the need for resolution of design issues during delivery. It is important to ensure in a multi year project that the end product is as up to date as possible. Development of a Tram Design specification should therefore also include horizon scanning to try to identify emerging design requirements across disciplines.
As TTNP was developing the project with an existing operator in place, the Operator was available throughout the design process.	It was helpful to have an existing Operator to work with to provide support and challenge to project delivery. The Operator considers that the design process was satisfactory. They would have preferred greater involvement in the design development post contract award. For example, involvement in the performance specification was good, but it would have been beneficial for the Operator to have greater involvement in development of detailed design to challenge and also to aid understanding through testing and commissioning.

	In future, the Operator should be involved in the entire design process including development of detailed design.
Interface with Council departments was hindered by the fact that the project did not have an interface manager for a period of time. In addition, some design changes were requested at an advance stage which were difficult to accommodate.	The Technical Working Group did not meet while we did not have an Interface Manager in place. This meant that there was not a forum for discussion on how competing guidance would be resolved. In future, it should be recognised that the Interface Manager is a key role and consideration given to ensuring that it is staffed throughout project delivery with succession planning in place. A future tram project should also clearly set out timescales by which decisions must be made, making clear the early stage at which tram design will be closed out. In future the performance specification process should be formalised with a sign off process and clear recording of decisions by the project and by future asset owners.
After project delivery the asset is transferred to the Operator and Council for maintenance, and how maintenance will be procured and managed should be considered as part of project delivery.	While maintenance manuals are provided at handover, a maintainability scope would have been a helpful addition to the contract to allow us to manage the future maintenance burden and should be incorporated in a future project.
Design development process	
Observation	**Lesson identified**
Design was an iterative process and in terms of the base line information there was a good amount of information across various packages. However, the Traffic Regulation Order was not completed until relatively late in the design.	Future projects should try to fix key elements at an earlier stage, especially in light of the number of different requirements on space. The development of the Traffic Regulation Order (TRO) was an iterative process with input from a number of different Council departments. There was pressure for space on Leith Walk and the final requirements were not confirmed until the TRO process was complete. This was managed ultimately but it would have been preferable to have these issues resolved at an early stage.
The contractor did not fully appreciate the interaction of traffic modelling and the signals design outlined in the scope. This led to additional work and time while the process for development of the signals design was agreed.	Future tram projects need to be more prescriptive in the scope about how the city traffic model and the tram will interact with each other. Future projects should also include the Operator and the owner of the city traffic model in the appropriate Working Group discussions alongside the Council's signals team, rather than advising them separately.

During delivery a number of issues were raised by members of the community specific to them, for example location of TEC cabinets near residential properties	It would have been helpful to have reviewed the design during development with a view to identifying locations where there may be issues for owners of individual properties. Therefore, in future the design process should include a review not only from a technical perspective but also with the communications and stakeholder team to try to identify potential issues early so that specific engagement can take place with the community.
TTNP was able to get the Office of the Rail Regulator involved in the project at an early stage which assisted with development of the safety case.	The fact that the Office of the Rail Regulator engaged with the project through the Operator meant that there was an existing relationship and track record of safety delivery. This allowed TTNP to involve the ORR at key points. This should be replicated on future projects.
Audits were taken at various stages including at ECI, developed and detailed design. Atkins, safety assurance and the client were represented providing challenge to the Infrastructure and Systems contractor.	Design audits were helpful for everyone involved and welcomed by the contractor. Helpful and constructive process and this should be replicated with consideration on how these interact with busy stages in the programme, and whether the audit process could be improved by including more audits at key stages, while taking account of the capacity of the delivery team.
Engagement with the community	
Observation	**Lesson identified**
TTNP made landscape drawings available to the community. These were selected as they were the easiest drawings to understand, but as landscape drawings they did not include all detail. This meant that the community was unable to fully understand the design. For example, the landscape drawings did not include the final location of bin hubs and parking and loading.	Future projects should consider how to make design information publicly available in a way that can be understood but with showing the final street design. As detailed design progresses consideration should also be given to updating these drawings.
Consultation took place on design with input from the community, but design changes were made after consultation which did not include those groups.	The lack of an interface manager at a key stage meant that an opportunity was missed to keep some groups up to date. Ensuring design drawings are up to date would also assist with keeping the community informed.
The use of street space is recognised as complex. There are inevitably competing	Future project delivery should include consideration with members of the active

issues in trying to design a street that works for all needs and uses.. However, the cycle way was not in the form anticipated by members of the active travel community and has been criticised. Concerns have been raised about the location and extent of loading provision andthere have been instances where the interaction between parking and the tramway has impacted tram operations.	travel community of what could be done differently in future and to input that to a Tram Design manual. The recently approved Circulation Plan and Streetscape Design Guidance will help inform this. A future project team should also engage more with the business community to understand and anticipate requirements for loading provision. There was significant work undertaken to understand requirement for loading during construction and this should be replicated in future for the final design. It may be helpful to make available a pot of funding to allow changes to be made to street scape after delivery and this should be considered in future. If considered appropriate, this pot would have to be part of the overall project funding but not available for project delivery so that it is ringfenced for post project changes. Learning from other cities on public realm to be as important as learning on tram delivery itself. For example, to look to other European cities on how to introduce blue green infrastructure, street trees and street design alongside tram delivery. To consider (1) how to encourage behavioural change and (2) how to enforce behavioural change alongside design when designing streetscape and routing, in order that future projects can proactively manage routing changes for motorists when changes are made.
It is considered that the landscaping on the project could have been more ambitious and opportunities should have been taken to incorporate blue/green infrastructure.	Landscaping is part of the placemaking element of the project. Future project delivery should consider how to design this including consideration of retaining this element in Council, or through a direct contract. Future project delivery should also consider long term maintenance of e.g. landscaping by Council departments in a way that is sustainable for the future and to consider how to fund that.

While traffic has reduced on Leith Walk it has been observed by members of the community that traffic flow has increased on neighbouring streets.	Use of Circulation Plan in future will allow greater consideration of neighbouring streets. Future tram projects should take account of these streets. Future projects should consider how to engage with neighbouring streets during consultation. While it is recognised that traffic modelling has a role to play in understanding impact on neighbouring streets, future projects should take advantage of local knowledge during development of design alongside traffic modelling.
TTNP procured street art and created a new installation on Leith Walk to keep the Pilrig wheels on Leith Walk.	It is considered that the street art was well received and should be replicated in future. Opportunities to engage with the heritage of the area should be sought in future, similar to the Pilrig wheels. There should be a local connection to any art installations, and a future project team should consider how to include local stories and heritage in street art in order for it to be successful and have the support of the local community.
The project installed benches in line with Council policy, but these were not always well received in form or location	Proactive communications on benches would have been helpful with neighbours and in addition design drawings issued should include the location of benches. Given the impact of benches on public realm the Council should specify the form and design of benches in any Tram Design manual that is developed.

Appendix D

Edinburgh Tram Board

Report on the work of the Tram Ready for Operations Sub-Group

1. Introduction

The establishment of the Tram Ready for Operations Sub-Group (RfOSG) for the Newhaven extension was agreed by the Tram Board, on the basis of Terms of Reference that had been prepared by T & T and circulated to the Board in January 2022. As the Project Consultant I was asked to chair the Sub-Group which held its inaugural meeting on March 1st 2022; some 15 months before the opening of the extension. Subsequently meetings have been held every month (apart from at Christmas/New Year). I have been in the chair for all but one of these meetings.

The structure and responsibilities of RfOSG were based on six Groups covering the main workstreams (CEC Handover; Systems Delivery; OM Working Groups; Testing and Commissioning; SV and Assurance; Maintenance Handover and Close Out) which were outlined in T & T's analysis. At the inaugural meeting a seventh Group was added covering Street Cleaning and Snow Clearance.

Each of these Groups had had their own internal procedures and means of tracking progress. The main role of RfOSG has been to ensure visibility of progress with these at monthly intervals and to ensure that any linked or corresponding actions were being taken in other workstreams.

The Sub-Group held its last meeting on 23rd May 2023, two weeks before the extension opened for revenue service.

This report examines the experience of the Sub-Group up to that time and is based largely on a very productive 'lessons learned' meeting of the main Working Group leaders on 23rd June 2023.

The full details of the RfOSG's work over the past 15 months are set out in the official Minutes of its meetings

For ease of reference, the observations in this report have been grouped under a series of headings rather than exactly as they were raised at the recent meeting.

2. Communications

It was generally agreed that communications within the team had worked well, although the Operator (ET) felt that at times they had had difficulty engaging with the Contractor. From a SV point of view it was felt that difficulties had arisen when meetings had been held between ET and the Contractor without the MDU being present. Sometimes during these, observations made by ET had been taken as instructions by the Contractor. Conversely ET felt that opportunities for improved solutions had been lost because the they had not been

involved in some key meetings. The stabling arrangements at Newhaven were cited as an example of this.

It was agreed that there should have been more meetings between ET and the Contractor and that the MDU should have been present at all of them. This would be on the strict understanding that any change that might arise from such meetings could only be processed by means of a formal instruction from the MDU.

Communication with the Contractor had become easier and less confused once the MDU single point of contact had been used more consistently.

It was noted that at a working level useful meetings had taken place regularly between the MDU and ET since the beginning of the project. Communication had been made easier by the fact that key participants in SV and ET had been known to each other before the project commenced.

3. General Points

COVID - It was agreed that this had had an impact on the joint working arrangements and communications. Inevitably, meetings had been less frequent than would otherwise have been the case and informal communication within the team at that time had been less effective than it would otherwise have been.

Operational build-up – The question was raised as to whether this could have been done any better. For ET it was felt that there should have been more time between tests as delays inevitably led to a concertina effect with the result that items that were desirable for ET became undeliverable. On the subject of testing, it was noted that Siemens' position as a subcontractor had raised some issues particularly in relation to their availability for testing. On occasion they had left site by the time a re-test had been arranged. It was noted that the relationship between SFN and Siemens had not been a good one and that Siemens were not used to being a sub-contractor. The question of whether the Project should have managed this interface directly was discussed.

Traffic Signals – This area had raised a number of issues. It was explained that for ET traffic signals were always a fundamental issue. It was noted that since it was not part of the contract, SPRUCE had tended to be overlooked, while supply chain issues had made it critical. It was argued that the traffic signals interface should have been part of the project and ET considered that an overall 'system integrator' should have been identified.

Equipment Upgrades – ET considered that the approach that had been adopted with TVMs, which had been upgraded system-wide to a common standard, had worked very well but with hindsight other opportunities could have been looked at. Should the PIDS on the existing system have been replaced by new units like those used on the extension, for example? This might have resulted in a better price being obtained for the increased quantity than might be the case when a smaller number of replacement units are eventually required for the original line. MDU suggested that the ET rolling renewals plan should be incorporated into the project scope at the outset for future projects. This would have prevented such opportunities being missed.

Parking Bays – These were identified as an operational problem but it was not clear that the RfOSG could have done anything to pre-empt this. ET said that the instances of poor parking obstructing the tramway had been very few, but that the delays had been substantial when it has occurred. They were considering a strategy for minimising future impact and shop owners on the frontage were also being asked to check how and where those who were delivering to them have parked.

4. Terms of Reference

The question was raised of whether or not the project had sufficient operational input from the outset. There was a consensus that the RfOSG should have been established from the beginning of the project to ensure that there was sufficient operational input and a defined framework for examining it. It was agreed that it would only have been required to meet a few times at the outset and then infrequently, until the last 12 months or so of the project. At that stage monthly meetings would always have been required. This would have ensured that operational issues were covered from day one.

5. Personal Observations

The RfOSG worked well from the outset. The agenda for each meeting was set, in effect, by the MDU's ongoing analysis of the actions that had been taken or were outstanding since the previous meeting, together with the status of the different workstreams and the areas where action was required. All the parties have input in a positive and professional manner at each stage and it has always been clear that any issues were there to be resolved.

Traffic signals remained a constant issue until virtually the opening date. Although they haven't impeded the start of operations, work on UTC and SPRUCE to bring them fully into operation, is still ongoing alongside a satisfactory level of tramway operation. This may be expected to improve further when this work has been completed.

Modifications and upgrades to the existing tram fleet and its interfaces with the new route equipment have also caused some concern at times and have had to be managed carefully.

The radio system became a significant issue both in terms of the siting of the additional aerial to cover the extension and the replacement of the original system in conjunction with Lothian Buses and also the indicated licence expiry. The nature of the problem evolved over time, especially once it was discovered that the existing installation provided adequate coverage for the extension. All the issues were subsequently resolved successfully.

The testing programme looked very challenging earlier this year but was handled successfully, though not without many issues that have had to be dealt with in a timely manner and without detriment to the project.

Edinburgh was very fortunate in having an existing tram system in operation prior to the start of the process. This has meant that a committed and knowledgeable management team has been in place throughout – something that has often been completely absent elsewhere. ET has planned its own input to the RfOSG process in considerable detail and this has run alongside the other workstreams and been integrated with them as necessary.

A similar level of detailed planning and commitment appears to have been applied in all other areas including within the internal structure of the City of Edinburgh Council.

Generally, RfOSG meetings have been fairly brief because all the necessary action has been carried out in advance within the constituent parts of the project team. There is absolutely no doubt that that a huge amount of work has been carried out within the various Groups 'behind the scenes' to ensure that the extension was ready for operation when required.

Committee Services have provided their full support to the Sub-Group at each stage of its work, particularly in terms of the arrangements for meetings together with the production of meeting Minutes and Agendas.

6. Conclusion

A senior member of the project team, with extensive experience of other UK projects, commented at the end of the process that, despite all the problems and challenges, the extension of the tramway to Newhaven had been carried out "100% better than any of the others".

I would thoroughly endorse this comment.

John Baggs

Appendix E

Insurance

Workshop objectives

- To underline the importance of learnings identified from the project and others to provide feedback and in order that good practice or improvements can be incorporated into future project delivery
- To provide a forum for discussion for learnings – what worked well and what improvements are required
- Identify success themes that future project delivery should embed
- Identify improvements that we should recommend for future project delivery
- Agree key actions related to success and improvement for development and embedment in future project delivery.

Agenda

Workshop introduction

Project overview and approach to insurance e.g. use of Owner Controlled Insurance policy, “one team” approach

Discussion: Selection of OCIP policy, did it meet expectations?

Discussion: Use of “one team” approach and relationships across the project;

Discussion: Information flow between contractor, Council and insurer

Discussion: claims experience and expectations

Discussion: recommendations

Thanks and close

Attendees

CEC: Chris Wilson, Ruth Kydd, Alice Harrison

Aon: Oliver Wilson, Callum Rugg

Charles Taylor Loss Adjusting: Mark Armour, Russell Ball

Apologies: Hannah Ross

Agenda Item	Discussion	Lessons Learned / Future considerations
Owner Controlled Insurance Programme (OCIP)	• Choice of OCIP appropriate for project due to management of risk and cover provided. CCIP (Controller Controlled Insurance Programme) not appropriate as risks to the Council much higher in the event of insolvency (project insurance would cease) • Whilst the contract was put in place by former employees of CEC and Aon, the wording reflected the market norms and the cover available at that time. Likely to be different for future projects given the current challenges with the insurance market (eg limits of cover, advanced loss of profits etc). The wording of the policy for the Trams to Newhaven (TTN) is no longer the norm • Keep the exclusions for Employers Liability (these reside with contractors) and the Motor cover (as it is individual to the contractor) • Use of London market – Lloyds market / syndicates will generate additional interest and scheduled cover. Future projects unlikely to be one insurer (as with the TTN) as construction costs will be higher and market has changed significantly since the insurance was placed in 2018 • Policy has responded as expected to the claims that have been received, therefore no uninsured risks to be funded by the Council • Change of insurance personnel outlined gaps (claims process, DPIA and contract with the loss adjustor) after contract implementation for insurance	• Placement of cover will need to be into specialist markets based in London (as with the current operational covers) as public sector insurance frameworks do not provide specialist construction cover for projects such as TTN • Full contracts for insurance and claims processes with contractors to be implemented at outset of contractual agreement/s, with consideration for post completion requirements too • Claims protocol to be shared as part of the tender / bid process with contractors
One team approach	• Council was co-located with contractors in one office to promote collaboration. Early Construction Involvement (ECI) period resolved potential issues with the project. • One insurance meeting discussion was held but no processes agreed at outset of project. Lack of clarity around provision of documentation, processes etc	• Insurance processes (information, contact and public facing documentation) to be outlined as part of an ECI with insurance prior to start of project
Information flow	• Information for claims not always available as quickly as required. • Lack of understanding that whilst project may have ended June 23, there is a further 5 years for claims to be presented to the TTN project • Challenging to engage with the contractor, took time to send information to loss adjustor	• Key Performance Indicators (KPIs) to be agreed in advance of works starting to ensure no delay to claims investigation/s
Claims experience	• Gathering information at a specific time is key: as the project evolves, essential to capture the information that was accurate at the time (eg placement of vibration monitors, changes to roads layouts etc). • Incidents notified: incidents likely to become claims could be triaged early to ensure that the information is accurate and contemporaneous • Reputational risks where information not provided and financial risks where claims have to be paid as they cannot be defended • Where a relationship manager is in place, needs to confirm as per TTN that claims cannot be discussed and ensure the claimants own insurers are aware • Political involvement significant in some claims (Cllr and MSP) without knowledge and / or awareness of the requirements of the OCIP policy,	• Project branded claims process and leaflet / guidance to be updated for claimants and briefing note/s for politicians • Monthly meeting to triage reported incidents to assess claims information is required • Briefing note to all Cllrs (and MSPs where involved) to confirm what involvement is permitted as this is a legal process and not automatic compensation

	potentially prejudicing the cover in place and (worst case) invalidating the OCIP in place • Given the numbers of claims submitted and paid, the project clearly had good practices and processes in place to assist in the defence of claims • When CTLA on site, at times the contractors actions did not assist in the frustration expressed by claimants) – ie changing layout, leaving fencing up longer with no works being undertaken • Weather events and actions taken to mitigate need to be captured (possible CCTV requirement too?) • Surveys (internal and external) methodology needs to be clear to prevent challenge. External surveys carried out by Douglas Baillie not always useful for defending claims as video footage as opposed to full survey. Risk of Victorian buildings needing to be captured along the route (not just selected ones). This added to claimants frustration with the claims process • Cyclist claims – very few intimated within a year of the incident. Essential that vulnerable road user claims triaged early to ensure all information is captured (includes placement of barriers and route directions to mitigate risks). Without this, risk of having to settle more claims • Vibration monitors used throughout the project and positioning of them needs to have methodology to ensure claims can be defended. Project should document locations and when they are moved: in some occasions, they were too far away to assist in the defence of claims, in others they were too near to the machinery being used. Details of ground conditions / make up required and assessment of impact on any readings required. Where batteries are used, the vibration monitors should use technology and / or regular checks to ensure that these are working. Number of monitors likely to need increasing for future projects to ensure defence of claims.	• Ensure similar practices for recording of project information in place – additional requirements to improve defensibility • Survey methodology requires insurer/loss adjustor input prior to taking place to ensure claims defensibility is maximised • Vibration monitor methodology requires insurer/loss adjustor input prior to placement to ensure claims defensibility is maximised
Claims Expectations	• Complaints received in relation to length of time to investigate claims, with some complaints being brought back to the project. • Difference between personal lines claim (ie own home insurance) and response times to those for a liability claim (where negligence has to be proven and claims can take several months to be investigated as a process has to be followed) • Claimants must correspond directly with the loss adjustor and not through the Council, once the claim is submitted	• Clear documentation on the internet outlining claims process, route to appeal etc required for future projects to prevent queries and also ensure transparency of claims process

EDINBVRGH
THE CITY OF EDINBURGH COUNCIL

March 2024

CEC Handover Plan

Click here to enter title

Edinburgh Tram York Place to Newhaven – CEC Handover Plan
City of Edinburgh Council

City of Edinburgh Council
Edinburgh Tram York Place to Newhaven – CEC Handover Plan

Contents

City of Edinburgh Council
Edinburgh Tram York Place to Newhaven – CEC Handover Plan

Rev	Status	Originator	Approved	Date
1	00	Robert Armstrong	Robert Armstrong	26/11/2023

City of Edinburgh Council
Edinburgh Tram York Place to Newhaven – CEC Handover Plan

1 Background and Purpose of Plan

1.1 Project Name

Edinburgh Tram York Place to Newhaven, externally known as Trams to Newhaven.

1.2 The Employer

The City of Edinburgh Council (CEC)

1.3 Project Details

Trams to Newhaven will add 4.69 kilometres / 2.91 miles of track in both directions connecting Leith and Newhaven to the current end of the Edinburgh tram line at York Place with eight new tram stops and two new substations, see Figure 1 below. This will offer residents and businesses access to a high-capacity light rail which will sit alongside the existing bus service as well as improving cycling and walking infrastructure along the route.

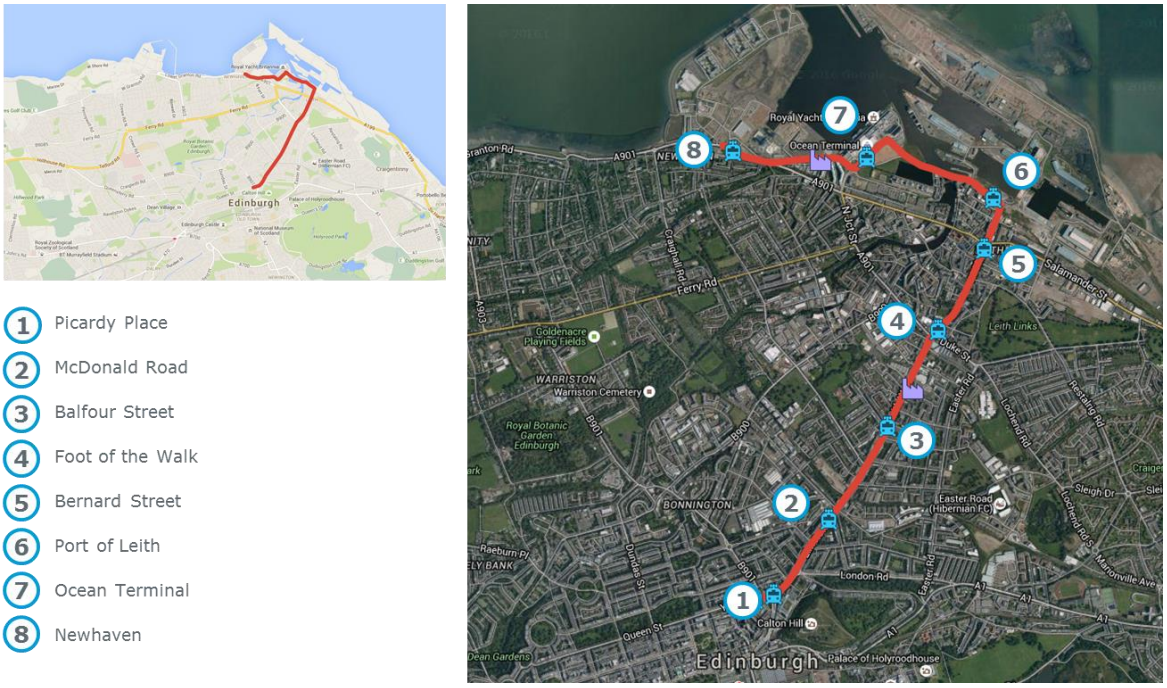


Figure 1 – Trams to Newhaven Extension

1.4 Purpose of the Plan

This plan has been produced to facilitate the handover of the tram extension asset from the project team to CEC in a way which provides continuity from project delivery into asset ownership and management and facilitates CEC in managing and maintaining the new asset, along with close out of any ongoing contractual deliverables.

The plan is structured to provide and note for each relevant part of CEC a guide to the asset being acquired, the information associated with that and a management handover process to ensure smooth transfer of the asset to CEC along with associated actions.

2 Meetings

2.1 Overview

Prior to Completion a series of meetings were set up between the project team and CEC department heads and team leaders. The meetings were intended to advise CEC on aspects of the extension that they will need to consider prior to taking over maintenance responsibilities and to provide CEC an opportunity to request information they require from the project.

Figure 1 below sets out the meeting hierarchy for the handover process and the escalation routes.

The tables below list the meetings taking place, their purpose and attendees required.

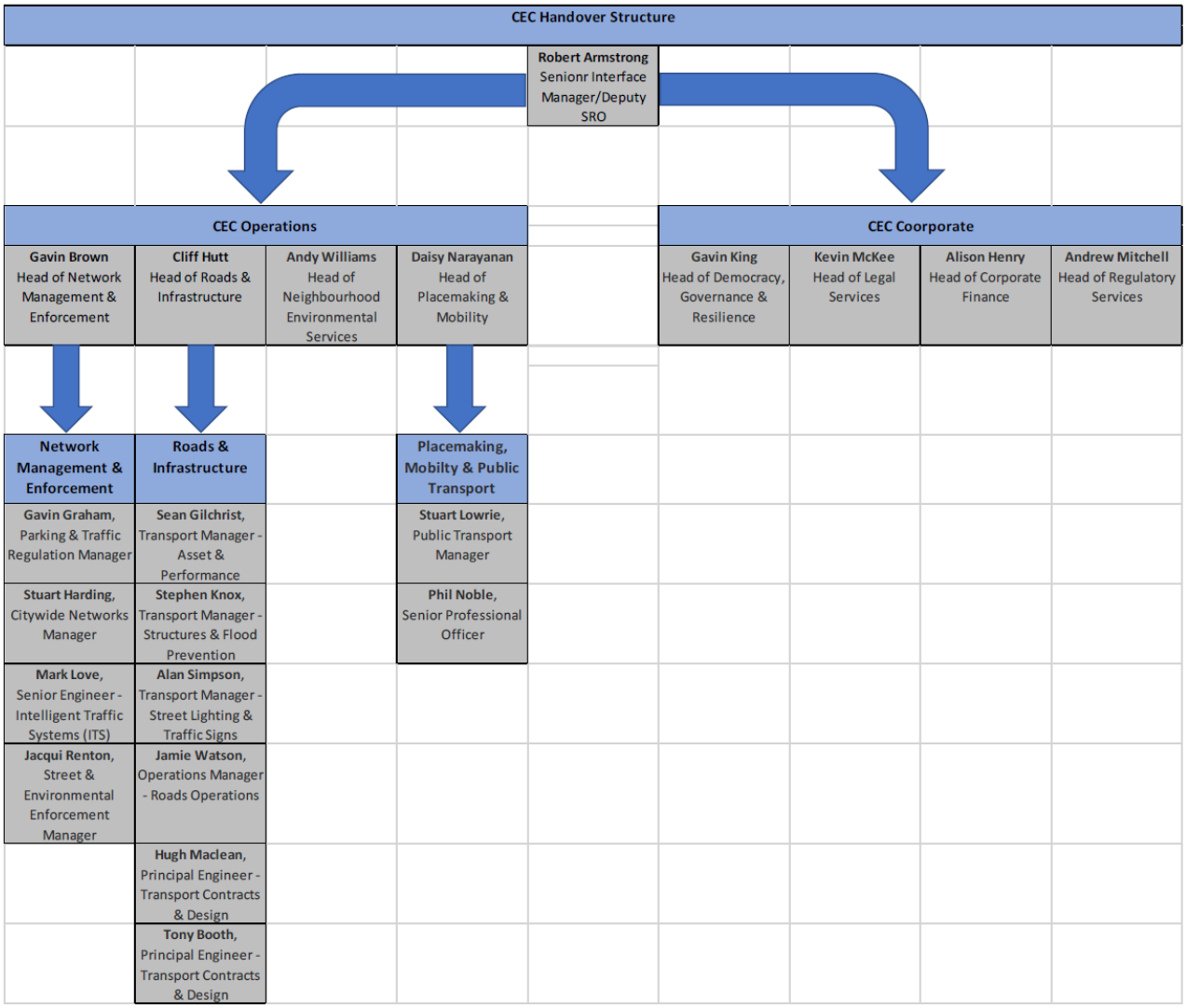


Figure 1 – Meeting Hierarchy

2.2 CEC Corporate Meeting

Chair	Robert Armstrong	**Membership** CEC Senior Interface Manager MDU Project Manager Head of Democracy, Governance and Resilience Head of Legal Head of Corporate Finance Head of Regulatory Services
Location	165 Leith Walk	
Frequency	Monthly	
Duration	As Required	
Purpose	To discuss and agree what project information should be handed over to the Council Body Corporate departments. Discussion on how CEC will continue to liaise with Key Stakeholders. Discussion on how CEC will carry out Post Project Appraisal. Discussion on how CEC will manage the Owner Controlled Insurance Programme following the Defects Correction Period. Discussion on how CEC will address outstanding actions from disbanded project sub-boards following the Defects Correction Period.	
Standard Agenda Items	Minutes of last meeting	
Decisions	Agreement on documentation to be handed over. Agreement on remaining items noted above. Identification of issues for escalation.	
Escalation	Ready for Operations Sub Board	
Reporting Route	MDU and Client Meeting	

2.3 CEC Operations Group

Chair	Robert Armstrong	**Membership** CEC Senior Interface Manager MDU Project Manager Head of Roads and Infrastructure Head of Networks and Enforcement Head of Neighbourhood and Environmental Services Head of Placemaking and Mobility
Location	165 Leith Walk	
Frequency	Monthly	
Duration	As Required	
Purpose	To discuss and agree what project information should be handed over to the Roads and Infrastructure Department. Discussion on how BIM model will be issued and CEC resources for managing it. Agreement on how CEC will continue to liaise with Key Stakeholders. Agreement on who will be responsible for addressing outstanding commitments to third parties following the Defects Correction Period.	
Standard Agenda Items	Minutes of last meeting	
Decisions	Agreement on documentation to be handed over. Agreement on how BIM model will be issued and CEC resources for managing it. Identification of issues for escalation.	
Escalation	Ready for Operations Sub Board	
Reporting Route	MDU and Client Meeting	

2.4 Roads and Infrastructure Meeting

Chair	Robert Armstrong	**Membership** CEC Senior Interface Manager MDU Project Manager Head of Roads and Infrastructure Asset and Performance Manager Structures and Flood Prevention Manager Street lighting and Traffic Signs Manager Roads Operations Manager Transport Contracts Principal Engineers
Location	165 Leith Walk	
Frequency	Monthly	
Duration	As Required	
Purpose	To discuss and agree what project information should be handed over to the Roads and Infrastructure Department. Discussion on how BIM model will be issued and CEC resources for managing it. Agreement on how CEC will continue to liaise with Key Stakeholders. Agreement on who will be responsible for addressing outstanding commitments to third parties following the Defects Correction Period.	
Standard Agenda Items	Minutes of last meeting	
Decisions	Agreement on documentation to be handed over. Agreement on how BIM model will be issued and CEC resources for managing it. Identification of issues for escalation.	
Escalation	Roads and Operations Group	
Reporting Route	MDU and Client Meeting	

2.5 Network Management and Enforcement Meeting

Chair	Robert Armstrong	**Membership** CEC Senior Interface Manager MDU Project Manager Head of Network Management and Enforcement Parking and Traffic Regulation Manager Citywide Networks Manager ITS Senior Engineer Environmental Enforcement Manager
Location	165 Leith Walk	
Frequency	Monthly	
Duration	As Required	
Purpose	To discuss and agree what project information should be handed over to the Network Management and Enforcement Department. Discussion on whether additional parking enforcement measures are required post Completion.	
Standard Agenda Items	Minutes of last meeting	
Decisions	Agreement on documentation to be handed over. Identification of issues for escalation.	
Escalation	Roads and Operations Group	
Reporting Route	MDU and Client Meeting	

2.6 Neighbourhood Environmental Services Meeting

Chair	Robert Armstrong	**Membership** CEC Senior Interface Manager MDU Project Manager Head of Neighbourhood Environmental Services
Location	165 Leith Walk	
Frequency	Monthly	
Duration	As Required	
Purpose	To discuss and agree what project information should be handed over to the Neighbourhood Environmental Services Department. Agreement on whether additional resources will be required for waste collection along the tram extension.	
Standard Agenda Items	Minutes of last meeting	
Decisions	Agreement on documentation to be handed over. Identification of issues for escalation.	
Escalation	Roads and Operations Group	
Reporting Route	MDU Meeting and Client Meeting	

2.7 Placemaking and Mobility Meeting

Chair	Robert Armstrong	**Membership** CEC Senior Interface Manager MDU Project Manager Head of Placemaking and Mobility Public Transport Manager Senior Professional Officer
Location	165 Leith Walk	
Frequency	Monthly	
Duration	As Required	
Purpose	To discuss and agree what project information should be handed over to the Council Body Corporate departments. Discussion on how CEC will continue to liaise with Key Stakeholders. Discussion on how CEC will address outstanding actions from disbanded project sub-boards following the Defects Correction Period.	
Standard Agenda Items	Minutes of last meeting	
Decisions	Agreement on documentation to be handed over. Agreement on remaining items noted above. Identification of issues for escalation.	
Escalation	Roads and Operations Group	
Reporting Route	MDU Meeting and Client Meeting	

3 Contract Administration

3.1 Introduction

During the tram two-year Defects Correction Period (7th June 2023) and CEC one year Defect Correction Period (5th November 2023), a team will remain in place. Initially, this will include a client team until 31st March 2024 to facilitate the handover into the Council and Edinburgh Trams Table 1 below sets out the proposed team.

Until 31st March 2024
Role
CEC SRO
CEC Deputy SRO
CEC Comms Manager

Table 1 – Defects Correction Period Team

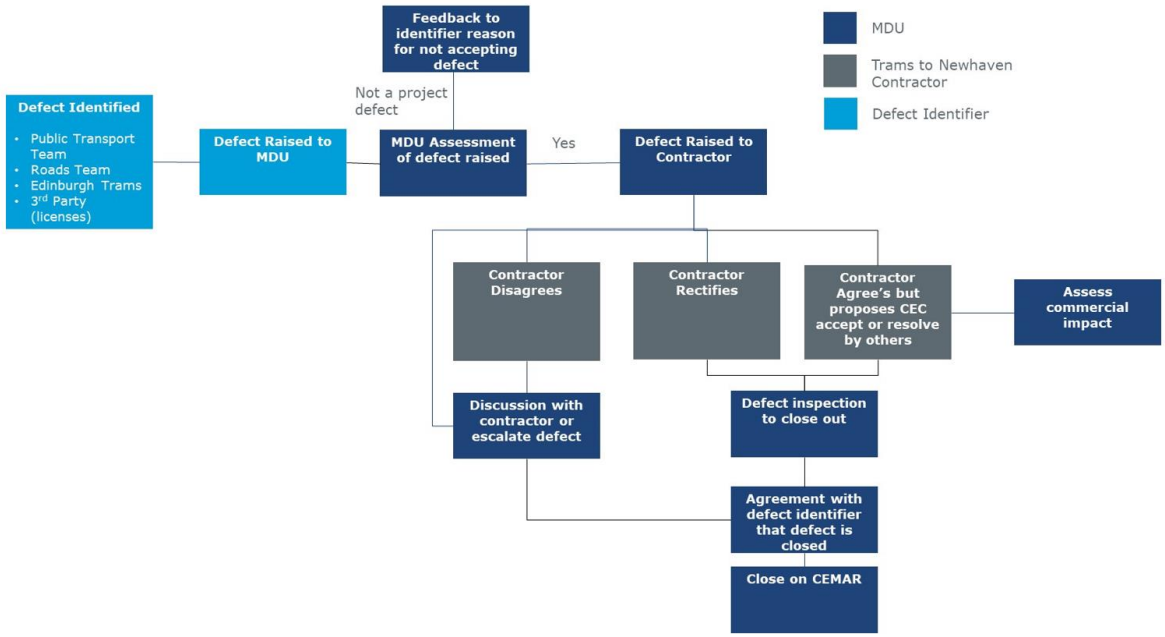
The Defects date is 2 years for ET and 1 year for CEC after completion of the works with the defect correction period being 5 weeks or such other period as reasonably necessary to facilitate the contractor's compliance with the contract clause 44.4.

3.2 Contract Management and Payments Post Completion

It is anticipated that there will be three main activities post project completion. These are defects close out, payments and contract administration.

Defects close out

The following process has been designed for the defect's correction period.



Edinburgh Tram have requested tripartite agreement between SFN, ET and CEC, to allow ET to access the line and repair defects which are safety or operationally critical. To take this forward with SFN. Note need to preserve warranty and ensure compatible with change process.

Payments and change

Process –

The SRO shall have authority to approve changes which are required up to a limit of £50,000 individually, or £250,000 cumulatively, in a single quarter and seek retrospective approval.

Anything that may exceed the above tolerances must be referred to the Board for approval. If an urgent requirement occurs which exceeds the limits set out above, the SRO may approve the change with the approval of the Director of Place and Head of Finance, and seek retrospective approval from the Board.

Assessing and making payments will also be required for ISC however, it's not envisaged that there will be outstanding payments for SPC following Completion. The Project Manager assesses the amount due at each assessment date. Assessment dates occur until either the Supervisor issues the Defects certificate or the Project Manager issues a termination certificate. The Project Manager certifies a payment within one week of each assessment date and the Project Managers certificate includes details of how the amount due has been assessed. The Project Manager makes an assessment on the final amount due and certifies a final payment no later than four weeks after

the Supervisor issues the Defects Certificate or thirteen weeks after the Project Manager issues a termination certificate.

Contract administration

The contract administration of both contracts is administered always using CEMAR software with up-to-date contractual registers available. Therefore, access to CEMAR will be required along with knowledge of how to use it post Completion and this will be managed by T&T. For the ISC all contractual submissions such as programmes, designs, early warnings, payment certificates etc will be via CEMAR.

Read only access to CEMAR will be provided to Edinburgh Trams and CEC Key Personnel outlined below;

- Alan Simpson - Transport Manager Street Lighting and Traffic Signs
- Sean Gilchrist - Transport Manager - Asset & Performance
- Stephen Knox - Transport Manager - Structures & Flood Prevention
- David Wilson - Operations Manager - Transport Contracts & Design
- Mark Love - Senior Engineer - Intelligent Traffic Systems (ITS)
- Darren Wraight – Transport Manager – Roads Operations
- Robert Armstrong – Senior Interface Manager Trams to Newhaven.

Separately, it is recognised that Edinburgh Trams maintain the asset register for the tram line, known as Agility. Edinburgh Trams will take information on defects raised from CEMAR to keep Agility updated and will provide information from Agility to T&T to close out defects on CEMAR when they are closed out on Agility – if Edinburgh Tram have rectified any defects.

City of Edinburgh Council utilise Confirm as their asset register. The Council will take information on defects raised from CEMAR to keep Confirm updated.

Table 2 illustrates the contract duties will be required to be resourced for ISC:

ISC	
Clause	**Duty**
Clause 31.3	Acceptance/rejection of programme
Clause 43	Searching for and notifying Defects.
Clause 44	Correcting Defects

ISC	
Clause	**Duty**
Clause 45	Accepting Defects
Clause 46	Uncorrected Defects
Clause 50.1	Assessing amount due
Clause 51.1	Certifying payment
Clause 53.1	Making final assessment
Clauses 54.1, 54.3 & 54.4	Assessing Contractor's share
Clause 62.3	Response to CE quotation
Clause 64.1	Assessing Compensation Events
Clause 64.3	Notifying Contractor of PM assessment
Clause 66.1	Implementing Compensation Events
X22.7(1), (2) & (3)	Calculating incentive payment

Table 2 – ISC Contract Duties

Scope S1205 and Condition of Contract Clause 26 require the Contractor to submit subcontractors for acceptance.

The Contractor will be required to submit the Sub Contractor's cost in each cost report. Analysis of:

a Current certified value

b Accruals within the certified value

c Contract Value

d Implemented Compensation events

e Open Compensation events

Table 2 illustrates contract duties will be required to be resourced for SPC:

SPC	
Clause	**Duty**
Clause 31.3	Acceptance/rejection of programme
Clause 43	Searching for and notifying Defects.
Clause 44	Correcting Defects
Clause 45	Accepting Defects
Clause 46	Uncorrected Defects

Table 3 – ISC Contract Duties

3.3 Training Provision

As the Defects Correction Period team will be required to utilise CEMAR for processing payments and defects and Viewpoint for accessing the Health and Safety File, training is to be provided for the use of these systems if required.

3.4 Contractor Solvency Strategy

Further to the liquidation of Carillion plc and due to the risk inherent in the construction industry, a number of protections are being put in place to protect CEC in the event of Contractor failure for this project which will continue during the Defects Correction Period. Therefore, the Defects Correction Period team will also need to continue to maintain the Solvency Strategy alongside CEC Finance and ensure that project insurances are maintained.

The following protections are built into proposed contractual and financial arrangements:

Regular financial checks – Contractors have undergone financial checks during procurement and the project has contracted with organisations that met CEC's criteria for a high-risk contract of this size. However, these checks were based on historic data and can rapidly become out of date. To counteract this, desktop checks will be performed at six monthly intervals during the contract so that CEC can put contingency plans in place which will include convening a meeting with the Contractor's senior management to discuss any concerns and report back to CEC Executive Director.

Performance bond – The contracts require that Contractor's put in place a performance bond to be an amount equal to 10% of the total prices on Notice to Proceed for the ISC. This would

be paid out to CEC in the event of Contractor failure and can be used to help offset additional costs associated with re-procurement, inflation, and defects remediation

Parent Company Guarantee – Where the Contractor is not the parent company itself, then a parent company guarantee is required. This means that if the subsidiary company fails, the parent will be obliged to undertake the subsidiary's obligations. This measure gives no protection if the ultimate parent fails.

Joint & Several Liability – With regards to the ISC any formally constituted joint venture will be joint and severally liable, this is a requirement set out in the ISC. In the event of one member of the joint venture becoming insolvent, the other joint venture members would be obliged to complete the works at no additional cost to CEC.

Collateral warranties – The contract requires the key Sub Contractors to provide collateral warranties, enabling CEC to step in and directly manage all key subcontracts.

3.5 Owner Controlled Insurance Programme

As part of the project, CEC currently operates an Owner Controlled Insurance Programme (OCIP) to address claims from third parties. The OCIP is in place until Project completion and Defects Resolution Period is complete.

Third parties have a period of five years after property damage occurs to make a claim for damage or loss and three years after personal injury to make a claim. The project OCIP covers the Council and the contractors against claims. Therefore, a claim could be intimated against the Council or any of the contractors named on the insurance policy.

Insurance process:

1. Claim is received either through CEC contact centre of Edinburgh Trams contact centre and immediately intimated to CEC insurance team;
2. CEC insurance team advise insurers;
3. Loss adjuster is instructed to investigate claim;
4. Request for information to project team
5. Insurer decides on settlement/repudiation of claim.

3.6 Key Stakeholders and Communications

Throughout the project the team has built relationships with a number of key stakeholders and these relationships will be closed out as part of the project completion. However, there are also ongoing limited commitments made which will need to be closed out and the project is completing commitments register. During the Defects Correction Period, commitments will be closed out by the Defects Correction Period team and following the Defects Correction Period they will be closed out by CEC.

The project has also utilised a helpdesk phone number and email address and these will have to be closed out as part of the completion process

Following discussions with Edinburgh Trams it was agreed that the information from the contact centre will transfer to them from August 2023. In addition, Jack Forrest, who was seconded into the Trams to Newhaven project team from Edinburgh Trams and has been responsible for the project contact centre, will also return to Edinburgh Trams on 1 June 2023. To note, both the project and Edinburgh Trams use the same contact centre system (Freshdesk) so it is envisaged that the transfer of data will be relatively simple. Further works and the creation of a data sharing agreement is in place.

Regular contact will be maintained between the remaining client team and Edinburgh Trams to ensure a smooth transition.

The Edinburgh Trams contact centre will become the gatekeeper for all Trams to Newhaven enquiries from August 2023. Operational queries will be dealt with by them. Any queries relating to the contract, snagging and defects, etc will be passed from the Edinburgh Trams contact centre to the CEC contact centre for resolution.

3.7 Project Board and Governance Close Out Plan

The project board and associated sub-groups will be disbanded as part of the project close out. A project close-out report will be prepared by the MDU. Records from each of the boards and sub-boards will form part of the project information for retention. Any outstanding actions will be allocated to the Defects Correction Period team during Defects Correction Period and to CEC after the Defects Correction Period for close out.

Other close out reports from the following but not limited to will be provided:

- Each of the utility companies.
- Both the ISC and SPC Contractors
- Each of the testing and commissioning Operational Milestones (OM's)

Separately, the project has been the subject of an ongoing agile audit process which will have to be reported on and closed.

The Project Board will convene in August 2023, November 2023 and thereafter every six months to receive change reports and updates on defect rectification along with any other competent business. It is anticipated that the Project Board in August 2023 will replicate the board membership to date, but that thereafter the Project Board membership will reflect the reduced work and decision making on the project.

The political liaison groups being the All Party Oversight Group and the ward councillors' briefing will also be disbanded. Going forward any updates required will be taken to the Transport and Environment Committee or the Transport and Environment Committee briefing.

3.8 Project Bank Account Administration and Close Out

A Project Bank Account (PBA) for both ISC and SPC was opened for the purposes of holding money in trust for the benefit of named beneficiaries and dispersing payment direct to those named

beneficiaries. The account has been opened in the joint names of CEC and the Infrastructure & Systems Contractor or Swept Path Contractor in the capacity of trustees.

On creation of a trust under Scots law, once the money is deposited in the account, CEC and the Main Contractor would hold the money as trustees for the benefit of named beneficiaries. If the Main Contractor were to become insolvent the money in the PBA would not form part of the insolvent estate and would therefore be protected for the benefit of the named beneficiaries.

During the Defects Correction Period, the Project Bank Account will be used to make regular payments to the Contractor and to facilitate the final payment. The Project Bank Account will be administered by City of Edinburgh Council's finance team as it has been throughout the project. At the end of the Defects Correction Period the Defects Correction Team and the finance team will work together to close the Project Bank Account. The SPC PBA is to close post project completion and any further residual costs paid directly to the SPC.

3.9 Third-Party Agreement Interface and Commitments

The project has a number of third-party agreements with landowners and utility companies affected by the works. All outstanding commitments under the third-party agreements will be outlined in the register of commitments for ownership and close out.

4 Handover Documentation

4.1 Introduction

There is a range of documentation, plans, systems and associated material to hand over from the Trams to Newhaven Project from the Project Team to CEC as well as provisions that will need to be in place following Completion.

4.2 Health and Safety File

The Health and Safety (H&S) File is being prepared in accordance with the Construction Design and Management (CDM) Regulations 2015 to ensure that those who may carry works on the tram extension (such as cleaning, repairs, maintenance, construction or demolition), are made aware of the significant health and safety risks which may be encountered. The Trams to Newhaven H&S File is being compiled on Viewpoint. Figure 2 illustrates the information that will be provided and how it will be organised. The H&S File will also include design submission and acceptance documentation. Once complete, this will be downloaded on to two hard drives and issued to CEC and Edinburgh Trams (ET).

City of Edinburgh Council
Edinburgh Tram York Place to Newhaven – CEC Handover Plan

HEALTH & SAFETY
OPERATION & MAINTENANCE

LEVEL 4	LEVEL 3	LEVEL 2	LEVEL 1
CONTRACTOR DRAWINGS	**O & M MANUALS**	**HEALTH AND SAFETY FILE**	**SUMMARY FILE**
Drawing Register	Description of Scope of Works	Project Criteria: - History of Structure - Details of Contractors & Subcontractors	Structure of the Health & Safety File Information
As built drawings Including variations from construction issue drawings and any comments	Emergency Procedures: - Details of Emergency Procedures - Details of Emergency Contacts	Description of Scope of Works: - Details of interface responsibilities - Annotated drawings.	Description of Project
Client Design Drawings	Operating Instructions Project specific instructions, including start up and shut down procedures, together with information for diagnostic checking.	Design Criteria: - Design Philosophy - Access Philosophy - Fire Strategy - Safety Features - Key Design Assumptions - Design Loading.	Details of Project Team Members
	Specific residual risk information: - Task / operation specific instructions.	Register of Residual Risks: - Materials - Maintenance - Repair - Demolition	Hazard Log: - Identification of residual risks
	Schedules: - Schedules of plant and equipment identifying specific units to locations.	Materials: - Materials Information. - Product Safety Data Sheets	Register of supporting documentation: - Health & Safety Files - O&M Manual - Contractor Drawing - Design Team Drawings
	Maintenance Instructions: - Project specific instructions.	Information on installed equipment: - Removal or dismantling of installed plant & equipment. - Equipment provided for cleaning or maintaining the structure.	Miscellaneaous: - Overall survey Information - Reference to miscellaneous Information.
	Cleaning Instructions: - Project specific instructions.	Operation / Maintenance and Repair: - Listing of O & M Manuals. - Listing of Maintenance Requirements.	
	Manufacturers' Literature: - Manufacturers' technical literature - project specific literature only - Materials Information - Product Safety Data Sheets	- Drawings and Plans: - Design Team & Contractor Drawing Register - Drawings. (e.g. as built drawings, means of access, fire compartmentation)	
	- Maintenance Requirements. - Maintenance Schedules - Maintenance Star Charts	- Services and Utilities: - Incoming Services location and isolation points - Emergency and Fire Fighting Systems	
	Spares: - Listing of spares to be held - Listing of all spares	Miscellaneous: - Specific survey Information - Miscellaneous Information	
	Special tools & test equipment: - Details of special tools and test equipment e.g. calibration requirements, storage requirements.	Miscellaneous: -Construction Verification Documentation	
	Drawings and Plans: - Contractor Drawing Register. - Drawings		
	Specialist Information: - Any relevant information that is not included in another section e.g. EMC.		
	Safety records and test certificates		

Figure 2 – Health and Safety File Information

4.3 Safety Assurance

The safety assurance documents in Figure 3 are being compiled from the information in the H&S File and the Evidence File is being compiled from the safety assurance documents. As per the ISC, the safety assurance documents and Evidence File is being compiled on Viewpoint. As with the H&S File, these will be downloaded on to two hard drives and issued to CEC and Edinburgh Trams (ET). It is a legal obligation for CEC to transfer the safety assurance documents and Evidence File to ET under the Railways and Other Guided Transport (Safety) Regulations 2006 (ROGS) and for the information to be searchable.

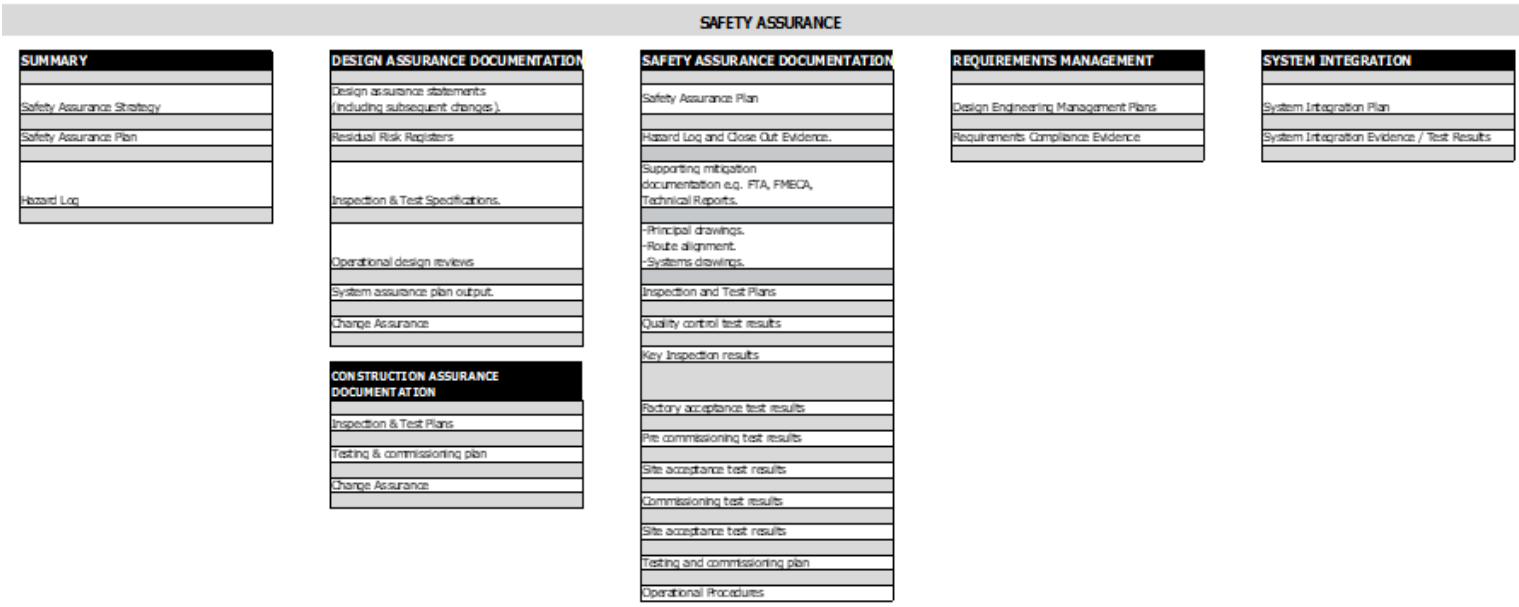


Figure 3 – Safety Assurance Documentation

4.4 Spares Provision

A Spares Provision List is currently being prepared and spare materials will be provided to CEC and Edinburgh Trams following Completion. Edinburgh Trams and CEC to store materials at their respective depots.

4.5 BIM Model

A BIM model has been developed as part of the design process for the project. An As-Built version of the BIM model will be provided to ET following Completion. CEC will be able to request access to the model from ET if required.

4.6 Maintenance Schedules and Responsibility

The project team has prepared a maintenance matrix with CEC colleagues and ET which is attached as Appendix A, allocating responsibility for maintenance of assets between Edinburgh Trams and the CEC.

For each asset, as built drawings, health and safety file, manufacturer's guarantees, contractor warranties and maintenance manuals will also be available.

4.7 Landscaping

SFN are required to record maintenance visits for soft landscaping and provide records of maintenance during the Defects Correction Period. A joint inspection of the soft landscaping with the Contractor is required before the end of the Defects Correction Period. MDU will liaise with CEC to arrange the joint inspection at the end of the Defects Correction Period.

4.8 Other

Culture & Wellbeing – the project has created a number of new cultural assets including public art. It is also working with local artists to maintain a graffiti wall on a more permanent basis. This will require ongoing management and consideration of how these assets can be promoted. This includes the tower clock at Elm Row, the pigeon statues at Elm Row, the Pilrig Wheels at Iona St and new statues at Picardy Island.

5 Information migration to Council

5.1 Overview

For each of the scope items above there is a requirement to migrate the documentation, plans, systems and associated material to CEC as a single entity and in some instances to specific CEC departments. To facilitate this, Table 4 below identifies the recipients and sets out which scope items identified in section 2 above pertain to that department. For the purposes of this plan, Democracy, Governance & Resilience; Legal Services; Corporate Finances and Regulatory Services are included in the "Council Body Corporate" column. Table 5 below has been produced in discussion with CEC's senior management.

City of Edinburgh Council
Edinburgh Tram York Place to Newhaven – CEC Handover Plan

	Defects Correction Period Team (T&T)	Council Body Corporate	Asset & Performance	Structures & Flood Prevention	Street Lighting & Traffic Signs	Roads Operations	Transport Contracts	Parking & Traffic Regulation	Citywide Networks	Intelligent Traffic Systems	Street & Environmental Enforcement	Neighbourhood Environmental Services	Placemaking Mobility & Public Transport
Health and Safety File (including design submission and acceptance documentation)	•	•	•	•	•	•	•	•	•	•	•	•	•
Spares Provision			•	•	•	•	•			•			
Training Provision	•	•											
Safety Assurance	•	•	•	•	•	•	•			•			•
BIM Model (Access via Edinburgh Trams)			•	•	•	•	•			•			•
Contract Management and Payments (including copies of the ISC & SPC documentation and CEMAR download)	•	•											
Owner Controlled Insurance Programme	•	•											
Key Stakeholders and Communications	•	•	•	•	•	•	•			•			•
Post Project Appraisal	•	•	•	•	•	•	•	•	•	•	•	•	•

City of Edinburgh Council
Edinburgh Tram York Place to Newhaven – CEC Handover Plan

Close Out Reports	•	•	•	•	•	•	•			•			•
Project Board and Governance. Close Out	•	•	•	•	•	•	•			•			•
Project Bank Account Administration and Close Out	•	•											
Third-Party Agreements and Commitments	•	•	•	•	•	•	•			•			•
Lessons Learned	•	•	•	•	•	•	•	•	•	•	•	•	•
Maintenance Schedules and Responsibility	•	•	•	•	•	•	•	•	•	•	•	•	•

Table 4 – CEC Documentation Issue

Appendix A – CEC and Edinburgh Trams Maintenance Matrix

Event Id	Ref	Title	Status
887	DEF-874	Elm Row Tactile Paving	CURRENT
886	DEF-873	Arthur Street Trip Hazard	CURRENT
885	DEF-872	Newhaven/Balfour Crossovers	CURRENT
884	DEF-871	OLE rusted building fixings	CURRENT
883	DEF-870	Constitution Street Welds	CURRENT
882	DEF-869	OLE Design and Construction	CURRENT
881	DEF-868	Leith Walk - Platform ponding	CURRENT
880	DEF-867	Leith Walk - Tram "look both way" signs trip hazards	CURRENT
879	DEF-866	Leith Walk - Tactile paving ponding (Cycleway outside Beveridge & kellas)	CURRENT
878	DEF-865	FoTW - Cyclelane Ponding (outside Central Bar)	CURRENT
877	DEF-864	OLE Cover removed	CURRENT
876	DEF-863	FoTW - tactile paving ponding (outside W/Spoons)	CURRENT
875	DEF-862	Stevedore Place - Tactile Paving ponding tram stop (east end)	CURRENT
874	DEF-861	Stevedore Place - Tactile Ponding Tram stop (west end)	CURRENT
873	DEF-860	Stevedore Place - Tactile Ponding (East end crossing)	CURRENT
872	DEF-859	Ocean Drive - Tactile Ponding (On tram stop island at OT main entrance)	CURRENT
871	DEF-858	Ocean Drive corner - tactile ponding (Dogga day care crossing))	CURRENT
870	DEF-857	Ocean Terminal Tram stop tactiles (Looking towards Rollerpark)	CURRENT
869	DEF-856	77 Ocean Drive - Tactile Ponding	CURRENT
868	DEF-855	Melrose Drive - Pavement Ponding (North Leith Sands Garden)	CURRENT
867	DEF-854	Melrose Drive - Pavement Ponding (across from Forth Port cruise terminal)	CURRENT
866	DEF-853	17612 - Proud cover at OT	CURRENT
865	DEF-852	15170 - Proud NAL socket	CURRENT
864	DEF-851	18010 Ponding Chandelot	CURRENT
863	DEF-850	17974 ponding at substation	CURRENT
858	DEF-845	16182 Ponding at drop kerb	CURRENT
852	DEF-839	16880 Ponding at drop kerb	CURRENT
851	DEF-838	16162 - drop kerb too high, ponding	CURRENT
850	DEF-837	15756 Ponding at kerb	CURRENT
846	DEF-833	14890 water standing	CURRENT

843	DEF-830	Ch14+347 pedestrian crossing failing	CURRENT
842	DEF-829	ch14+608 2 Manholes failing and needing tarring	CURRENT
836	DEF-825	ch17+630 - water ponding on road surface	CURRENT
833	DEF-822	Ch17+560 & ch17+550 - water ponding on footway	CURRENT
817	DEF-806	Ch15+726 - poor surface course placement causing water to pond rather than flow into	CURRENT
813	DEF-805	Ch15+695 to ch15+720 white chain in cyclelane surfacing rather than red	CURRENT
802	DEF-791	Ch15+756 - large pool of ponding water on footway outside of surgery	CURRENT
791	DEF-780	ch18+023 - water ponding on road surface	CURRENT
760	DEF-749	CH16384 Minor damage to Benches - Street Furniture	CURRENT
713	DEF-705	Leith Sands substation - External rainwater gutter leaking at rear of building.	CURRENT
712	DEF-704	Leith Sands Substation - Signage error.	CURRENT
710	DEF-702	Leith Walk Substation - Trip hazard on floor after snagging work to MG01.	CURRENT
667	DEF-659	Ocean Terminal - water ponding at drop kerb - F244244.427 - 17633	CURRENT
666	DEF-658	Ocean Terminal - water ponding on concrete infill between track slab, drop kerb at pede	CURRENT
663	DEF-655	Ocean Terminal - Water ponding on road - F244244.525 - 17620	CURRENT
661	DEF-653	Ocean Terminal - Water ponding at drop kerb between gullies - F244244.354 - 17313	CURRENT
655	DEF-647	Manderston St to Annandale St - Poor surfacing on cyclelane - F244244.606 - 14360	CURRENT
646	DEF-638	Newhaven - Damage to retaining wall at Newhaven - F244244.594 - 18310	CURRENT
595	DEF-587	Ocean Terminal to Rennie's Isle - PC quadrant kerb moved during placements/compact	CURRENT
551	DEF-543	Foot of the Walk to Coatfield Lane - Constructed levels don't tie in with existing - F2745	CURRENT
547	DEF-539	Manderston St to Foot of the Walk - gully set too high - F133528.291 - 15560	CURRENT
511	DEF-502	Stray Current Testing	CURRENT
443	DEF-435	Tower St to Baltic St - ponding water on footway F244244.219	CURRENT
441	DEF-433	Tower St to Baltic St - water ponding on footway F244244.217	CURRENT
377	DEF-369	Arthur St to Pilrig - road marking too close to kerb F244244.152	CURRENT
348	DEF-340	FoTW to Jane St - ponding water at drop kerb F244244.95	CURRENT
346	DEF-338	Ocean Terminal - water ponding at drop kerb F244244.93	CURRENT
315	DEF-309	Arthur St to Pilrig St - ponding water at cycle lane F244244.50	CURRENT
313	DEF-307	McDonald Rd to Middlefield - water ponding at pedestrian crossing F244244.48	CURRENT
309	DEF-303	McDonald Rd to Middlefield - water ponding on the cycle lane F244244.44	CURRENT
306	DEF-300	McDonald Rd to Middlefield - Ponding water at pedestrian crossing F244244.41	CURRENT

239	DEF-233	York Place Tie-in - Temporary concrete infill on the cycle lane	CURRENT
187	DEF-181	QCS to Baltic St - Water ponding at the pedestrian crossing	CURRENT
163	DEF-157	York Place Tie-in - Cycle lane mortar staining	CURRENT
151	DEF-145	Laurie St to Coatfield Lane - East footpath ACO DrainKerb	CURRENT
64	DEF-65	Scottish Water Apparatus	CURRENT
65	DEF-61	Carrier Pipes in Catchpit	CURRENT