

City Chambers
DUNDEE
DD1 3BY

24th June, 2022

TO: ALL MEMBERS OF THE TAY
CITIES REGION JOINT COMMITTEE

Dear Sir/Madam

TAY CITIES REGION JOINT COMMITTEE

Will you please attend a MEETING of the **TAY CITIES REGION JOINT COMMITTEE** on Friday, 1st July, 2022 at 10:00am, to be held remotely.

Please submit any apologies to Veronica Thomson, Committee Services Officer on telephone (01382) 434205 or by e-mail at veronica.thomson@dundee.gov.uk.

Members of the Press or Public wishing to join the meeting should contact Veronica Thomson, Committee Services Officer on telephone (01382) 434205 or by e-mail at veronica.thomson@dundee.gov.uk by **12 noon on 29th June, 2022**.

Yours faithfully

ROGER MENNIE

Clerk to the Joint Committee

1 INTERIM CHAIR

Clerk to the Joint Committee or nominee.

2 WELCOME AND APOLOGIES

3 DECLARATIONS OF INTEREST

4 MEMBERSHIP OF TAY CITIES REGION JOINT COMMITTEE

The Joint Committee is asked to note the following appointments made by each of the three constituent Councils: -

Angus Council - Appointed Members (3)

Councillor Beth Whiteside
 Councillor Ronnie Procter
 Councillor Bill Duff

Dundee City Council - Appointed Members (3)

Councillor John Alexander
 Councillor Mark Flynn
 Councillor Georgia Cruickshank

Perth and Kinross Council - Appointed Members (3)

Councillor Grant Laing
 Councillor John Duff
 Councillor Eric Drysdale

Fife Council - Appointed Members (3)

Cllr David Ross
 Cllr Alycia Hayes
 Cllr Jonny Tepp

The Joint Committee is also asked to note the membership of the following non-elected members: -

Alison Henderson, Dundee and Angus Chamber of Commerce, Enterprise Forum Chair
 Member current vacancy, second Enterprise Forum representative
 Gordon McGuiness, Skills Development Scotland
 Hayley Mearns, Voluntary Action Angus
 Iain Gillespie, University of Dundee, HE/FE Forum Chair
 Rhona Allison, Scottish Enterprise

5 APPOINTMENT OF CONVENER

In terms of Clause 12 of the Minute of Agreement, and Article II of the minute of meeting of this Joint Committee of 18th May, 2018, the Joint Committee is requested to appoint a Convener from Angus Council, for the period of June 2022 to November 2022.

Convener takes the Chair.

6 APPOINTMENT OF VICE CONVENER

In terms of Clause 12 of the Minute of Agreement, and Article II of the minute of meeting of this Joint Committee of 18th May, 2018, the Joint Committee is requested to appoint a Vice-Convener from Perth and Kinross Council, for the period of June 2022 to November 2022.

7 APPOINTMENT OF CLERK AND TREASURER

The Joint Committee is asked to note that the Clerk and Treasurer are Roger Mennie, Head of Democratic and Legal Services, Dundee City Council, and Robert Emmott, Executive Director of Corporate Services, Dundee City Council, respectively.

8 GOVERNANCE AGREEMENT AND STANDING ORDERS - REVIEW

The Joint Committee is asked to note that the Clerk and Treasurer are reviewing the above documents in consultation with relevant Officers from the Constituent Councils and any proposed revisions will be reported to the Joint Committee for approval as necessary in due course. In the meantime, it is recommended that the Joint Committee approve and adopt the current Standing Orders.

9 CO-OPTED MEMBER - TACTRAN

On a reference to Article V of the minute of meeting of this Joint Committee of 9th November, 2018 and in terms of Clause Three of the Governance Agreement among Angus Council, Dundee City Council, Perth and Kinross Council and Fife Council, the Leadership Group recommend that the Chair of TACTRAN be co-opted for a period not exceeding two years as an additional non-voting member of the Joint Committee.

The Joint Committee's instructions are requested.

10 MINUTE OF MEETING OF 11TH MARCH, 2022 - Page 1

(Copy enclosed).

11 TAY CITIES REGION DEAL UPDATE

(Update by Mo Saunders, Programme Manager, PMO).

12 TCD008 LOW CARBON TRANSPORT & ACTIVE TRAVEL HUBS PROGRAMME OBC FOR APPROVAL - Page 6

(Report No TCRJC9-2022 enclosed and introduced by Barbara Renton, Management Group Sponsor and presentation by Project Lead Michael Figures).

13 TCD008 LOW CARBON TRANSPORT & ACTIVE TRAVEL HUBS PHASE 1 PROJECT FBC FOR APPROVAL - Page 35

(Report No TCRJC10-2022 enclosed and introduced by Barbara Renton, Management Group Sponsor and presentation by Project Lead Michael Figures).

14 AOCB

15 DATE OF NEXT MEETING

Friday, 16th September 2022, to be held remotely.

At a MEETING of the **TAY CITIES REGION JOINT COMMITTEE** held remotely on Friday 11th March, 2022.

Present: -

Angus Council

Councillor Bill DUFF
Councillor David FAIRWEATHER
Councillor Angus MACMILLAN DOUGLAS

Dundee City Council

Councillor John ALEXANDER
Councillor Lynne SHORT
Councillor Richard McCREADY

Fife Council

Councillor David ROSS
Councillor Tim BRETT
Councillor Karen MARJORAM

Perth & Kinross Council

Councillor Colin STEWART
Councillor Murray LYLE

Non-Elected Members

Michael WRIGHT, Scottish Enterprise
Gordon MCGUINNESS, Skills Development Scotland
Councillor Andrew PARROTT, TACTRAN
Alison HENDERSON, Dundee and Angus Chamber of Commerce

Also Present

Robin PRESSWOOD, Dundee City Council
Greg COLGAN, Dundee City Council
Robert EMMOTT, Dundee City Council
Alison SMITH, Angus Council
Mark Davidson, Angus Council
Steve GRIMMOND, Fife Council
Keith WINTER, Fife Council
Thomas GLEN, Perth and Kinross Council
Ronnie PALIN, Skills Development Scotland
Roger MENNIE, Tay Cities Deal Legal Officer
Steve BELL, Tay Cities Deal Comms
Jonathan PADMORE, TACTRAN
Grant RITCHIE, Dundee & Angus College
Jim BROWN, Dundee & Angus College
Paul DUTHIE, Scottish Enterprise
Lauren HOLLAS, Tay Cities Deal Project Manager
Mo SAUNDERS, Tay Cities Deal Programme Manager

Councillor David FAIRWEATHER, in the Chair.

I APOLOGIES

Apologies had been intimated from Councillor Grant Laing, Hayley Mearns, Professor Nigel Seaton, Margo Williamson, Mark Speed and Barbara Renton.

II DECLARATIONS OF INTEREST

There were no Declarations of Interest.

III MINUTE OF MEETING OF 10th DECEMBER 2021

The minute of meeting of 10th December 2021 was submitted and approved.

IV TAY CITIES REGION DEAL UPDATE

A presentation by Programme Manager, Morag Saunders, was given to the Joint Committee outlining the current position with regards to the Tay Cities Region Deal.

The updated Business Cases and Deal and timetables were tabled, specifically for years 2 and 3, along with a timeline for their submission to the Joint Committee for approval. It was reported that the Partnerships first Annual Conversation was held on 10th February 2022, with the Partnership being commended on their first year of delivery. In particular, both Governments highlighted the importance of the Skills Programme having a realistic and deliverable profile going forward. and it was noted that the Final Annual Performance report was due to be published at the end of March 2022.

The current Risk Register was tabled for the information of members.

The Joint Committee were then given an opportunity to seek clarity on points raised in the presentation after which the Chair thanked Ms Saunders for her presentation on behalf of the Joint Committee.

V TCD024 REGIONAL SKILLS & EMPLOYABILITY DEVELOPMENT PROGRAMME OBC FOR APPROVAL

There was submitted Report No TCRJC3-2022 by Ronnie Palin, Management Group Sponsor, seeking approval of the Outline Business (OJC) for Regional Skills and Employability Development Programme.

A presentation was also given to supplement the report, which was circulated to the Joint Committee after the meeting.

The Joint Committee agreed to: -

- (i) consider the report and the Programme OBC for TCD024 Regional Skills & Employability Development Programme, including the BJC for- the Programme Manager post, available via Sharefile on request;
- (ii) approve the Programme OBC and Programme Manager BJC (2 approvals); and
- (iii) agree the Projects recommended within the OBC.

VI TCD025 TAY CITIES ENGINEERING PARTNERSHIP FBC FOR APPROVAL

There was submitted Report No TCRJC4-2022 by Alison Smith, Management Group Sponsor, seeking approval of the Full Business Case (FBC) for the Full Business Case (FBC) for TCD025 Tay Cities Engineering Partnership (TCEP).

A presentation was given to the Joint Committee by Jim Brown, Project Lead, to supplement the report, which was circulated to the Joint Committee after the meeting.

The Joint Committee agreed to: -

- (i) consider the report and the executive summary of the FBC at Appendix 2 (a copy of the FBC was available to the Committee on request);
- (ii) Note that the Management Group had recommended for approval the FBC for TCD025 Tay Cities Engineering Partnership on 24 February 2022;
- (iii) Approve the FBC, noting that the conditions contained within the Scottish Government approval had now been addressed; and
- (iv) Note that there was a forecast underspend for 2021/22, which was currently reallocated to 2029/30 as per the Partnership's Deal Programme management.

VII TCD007 5G DIGITAL TESTBEDS BJC

There was submitted Report No TCRJC1-202 by Robin Presswood, Management Group Sponsor, confirming that the Business Justification Case (BJC) for TCD007 5G Digital Testbeds had been approved by both Governments and providing an overview of the amendments that were made at the request of both Governments.

This project was awarded up to £2 million in the Heads of Terms Agreement dated 22 November 2018. The Business Justification Case was approved by the UK and Scottish Governments on the 21 December 2021.

Reference was also made to Article VI (i) of the minute of meeting of the Joint Committee of 17th September 2021 which stated "The Joint Committee agreed to approve the BJC subject to final joint Government approval" the project is, therefore, now approved and can commence drawing down funding through the approved claims process.

The key project information was detailed Appendix 1 to the report.

The Joint Committee agreed to: -

- (i) Note the BJC for TCD007 5G Digital Testbeds had now been approved by the Scottish and UK Governments, with the agreed amendments set out in the report (the full BJC was available via Sharefile, on request); and
- (ii) Remit the Executive Director of City Development, Dundee City Council, to provide periodic briefings to members of the Joint Committee as individual use cases are delivered.

VIII TCRD BENEFITS REALISATION PLAN

There was submitted Report No TCRJC6-2022 by Morag Saunders, Tay Cities PMO Programme Manager, seeking the approval of the Tay Cities Region Deal Joint Committee for the Benefits Realisation Plan, noting that Management Group approved the Plan on 24th February 2022.

It was noted that the UK Government and Scottish Government had both indicated that they were content with the principles and overall approach to monitoring and evaluation for the Tay Cities Region Deal, as set out in the Benefits Realisation Plan. The Scottish Government had requested clarification on a few points of detail, and further discussions were underway about associated amendments. These are likely to be relatively minor and would not affect the overall intention or design of the Plan.

A presentation was also given to the Joint Committee by Lauren Hollas, Tay Cities Project Manager, to supplement the report, which was circulated to the Joint Committee after the meeting.

The Joint Committee considered the report and agreed to:

- (i) agree the approach set out in the Benefits Realisation Plan (Appendix 2) for ongoing monitoring and evaluation of the Deal and its Programmes/Projects;
- (ii) note the timescales for further development of the Plan and core components;
- (iii) approve the Benefits Realisation Plan, subject to relatively minor further amendments and final agreement from the Scottish Government; and
- (iv) remit final sign-off of the Benefits Realisation Plan to be delegated to the Management Group during the pre-election period.

IX TCRD ANNUAL PERFORMANCE REPORT

There was submitted Report No TCRJC7-2022 by Morag Saunders, Tay Cities PMO Programme Manager, providing an update for the Joint Committee on the final Annual Performance Report (Appendix 1 to the report) and seeking approval.

A presentation was also given to the Joint Committee by Lauren Hollas, Tay Cities Project Manager, to supplement the report, which was circulated to the Joint Committee after the meeting.

The Joint Committee considered the report and agreed to approve the final Annual Performance Report for publication at the end of March 2022.

X PROGRAMME MANAGEMENT OFFICE REVENUE (PMO) OPERATIONAL BUDGET 2022/23 AND PROVISIONAL BUDGET 2023/24 AND 2024/25

There was submitted Report No TCRJC8-2022 by Morag Saunders, Tay Cities PMO Programme Manager, seek approval from the Joint Committee, following Management Group's recommendation, of the Programme Management Office (PMO) agreed operational budget for 2022/23 and provisional operational budget for 2023/24 and 2024/25.

The Joint Committee approved: -

- (i) the 2022/23 Revenue Budget for the Tay Cities Region Project Management Office (PMO) as detailed in Appendix A to the report; and
- (ii) the provisional budgets for 2023/24 and 2024/25.

XI CLEAN GROWTH INTRODUCTION & PRESENTATION

Paul Duthie, Scottish Enterprise & Clean Growth Working Group Lead and Michael Wright, Management Group Sponsor gave a presentation on Clean Growth.

Paul Duthie gave a brief overview of the aims of the Clean Growth Working Group, noting its ambition to assist partners to capture and develop a regional vision proposition and route map to help deliver Clean Growth jobs and investment. Current projects which met this criteria were outlined and future steps such as the development of an Action Plan and Website discussed. It was also proposed that a further update be given to the Joint Committee later in 2022, and that a copy of the presentation would be circulated to members after the meeting.

Thereafter, the Chair thanked Paul Duthie, on behalf of members of the Joint Committee, for his presentation.

XII AOCB

The Joint Committee noted that there were no other matters which required to be brought to the attention of the Joint Committee.

XIII DATE OF NEXT MEETING

Friday, 17th June, 2022, to be held remotely.

David FAIRWEATHER, Chair.



REPORT TO: TAY CITIES REGION JOINT COMMITTEE

REPORT ON: TCD008 LOW CARBON TRANSPORT & ACTIVE TRAVEL HUBS PROGRAMME

REPORT BY: BARBARA RENTON, EXECUTIVE DIRECTOR (COMMUNITIES), PERTH AND KINROSS COUNCIL

REPORT NO: TCRJC9-2022

1. PURPOSE OF REPORT

- 1.1. This report seeks approval of the Programme Outline Business Case (OBC) for the TCD008 Low Carbon & Active Travel Hubs programme.

2. RECOMMENDATIONS

- 2.1. The Joint Committee is asked to:
- i. Consider this report for TCD008 Low Carbon Transport & Active Travel Hub Programme OBC for Phase 1: Broxden Low Carbon Transport Hub project; Phase 2: Perth – Active Travel Hubs project and Phase 3: Perth – Hydrogen Refuelling Station project. The Programme OBC is available via Sharefile on request.
 - ii. Note that the Management Group approved the Programme OBC on 27th January 2022.
 - iii. Approve the Programme OBC.
 - iv. Note that matched funding from ERDF for Phase 1: Broxden – Low Carbon Transport Hub, is time constrained to 31st October 2022 (ERDF time extension approved by EST/Transport Scotland in Feb 2022).

3. INTRODUCTION

- 3.1. The Local Carbon Transport & Active Travel Hubs project was awarded up to £3.5m in the Heads of Terms Agreement dated 22 November 2018. Per the Deal Document the Scottish Government will commit up to £3.5 million to support three complementary transport developments. These innovative, low carbon technologies aim to improve the range of available sustainable travel options and to improve workforce mobility, social inclusion and environmental impact.
- 3.2. As the different elements are progressing at different paces and not all the information is available for Phase 2 and Phase 3, it was agreed with the Partnership and Scottish

Government that the project would be developed as a Programme type business case to enable phase 2 and 3 to be worked on without holding up phase 1.

- 3.3. The attached OBC is for the overall Programme OBC. The overall targets and amount awarded will remain the same as agreed in the Programme OBC, approved at Management Group on 27th January 2022. The key Programme information is in Appendix A.

4. DESCRIPTION OF PROGRAMME

- 4.1. The aim of these three linked phases of the Programme is to help decarbonise transport systems in and around Perth and contribute to meeting the Scottish Governments climate change targets, with each phase of the Programme tackling different aspects of the decarbonisation of road transport systems.

- 4.2. The Programme is to be delivered in three phases:

- Phase 1: Broxden Low Carbon Travel Hub (Broxden-LCTH)
- Phase 2: Perth Active Travel Hub (Perth-ATH)
- Phase 3: Perth Hydrogen Refuelling Station (Perth-HRS)

- 4.3. The aim of the Low Carbon Transport & Active Travel Hubs programme of projects is to create a network of easily accessible, low carbon and active travel infrastructure, facilities, and services across Perth. These will complement and enhance other low carbon facilities and developments in the Tay Cities region and beyond.

- 4.4. The programme of projects will be developed and deployed to help meet Scottish Government targets to decarbonise transport systems. The intention of the programme is to broaden the range of sustainable travel choices available to residents, workers, and visitors to the region, thereby providing opportunity to improve workforce mobility, social inclusion, and environmental impact, all drivers of economic growth.

5. FINANCIAL IMPLICATIONS

- 5.1. The Programme has been awarded up to £3.5m as part of the Tay Cities Region Deal, as shown in the table below.

Year	1	2	3	4	5	6	7	8	9	10
	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30
TCRD Funding £'000	0	635	632	633	0	0	0	720	792	88

- 5.2. However, please note, the £635,000 allocated to the project by the Tay Cities Region Deal fund was unable to be drawn down in 2021/22 due to a delay in getting the Project business case approved by the Governments and the Partnership. It is therefore now placed in year 10, as shown below.

Year	1	2	3	4	5	6	7	8	9	10
	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30
TCRD Funding £'000	0	0	632	633	0	0	0	720	792	723

- 5.3. Of the £3.5m allocated to the Programme, the Phase 1 project is allocated up to £635,930 of capital funding from the Deal. The funding profile and projected TCRD drawdown for each of the phases of the Programme is detailed below: –

Source of Funding Profile – Capital £000		22/23
Phase 1 – Broxden Low Carbon Transport Hub		
Agreed TCD fund	636	632
ERDF*	424	424
Total	£1,060	£1,056

- 5.4. There is £632k allocated to the project in 2022/23. This is a shortfall of approximately £4k for the project; however, there is already a forecasted underspend of £73.5k in 2022/23.

Source of Funding Profile – Capital £000		2024 - 2026
Phase 2 – Perth Active Travel Hub		
Agreed TCD fund	1,263	1,263
Sustrans	400*	400*
Total	£1,663	£1,663
* Sustrans are supplying £400k for a concept design for Active Travel infrastructure and services in and around Perth as part of the Perth, People, Place project (which will be coordinated with the TCD Perth – Active Travel Hubs project. On approval of the design, up to £6m will be available for implementation.		

Source of Funding Profile – Capital £000		2027 - 2029
Phase 3 – Perth – Hydrogen Refuelling Station		
Agreed TCD fund	1,600	1,600
Total	£1,600	£1,600

- 5.5. Phase 1 will lever in additional funding of £424,000 (ERDF)
- 5.6. Phase 2 will lever in additional funding of £400,000, with another £6,050,000 (Sustrans) available on approval of the Perth, People, Place, active travel design.
- 5.7. Total Leverage - £824,000 (with a potential of £6,874,000) for Phases 1 & 2.

6. IMPLEMENTATION PLAN

- 6.1. From the Implementation Plan, the key risks are noted below, and explored further at 6.8.
- 6.2. Each phase of the programme will develop their own detailed implementation plans. Below is therefore a high level overview of the implementation of the programme.
- 6.3. Phase 1 – Broxden – Low Carbon Transport Hub: The 1st Phase of the project at Broxden was unable to start in 2020 due to the 1st Covid lockdown and the disruption the Covid pandemic caused throughout 2020 and in the first half of 2021. Approval has been received to extend the ERDF funding to 31st October 2022 for phase 1 implementation. The delays and disruptions have delayed project implementation and has required an extension to the ERDF timeline further into 2022 and would also require a request for change of the TCD drawdown for phase 1. A request for a further extension to 31st October 2022 has been approved by EST/TS. Expenditure profile and drawdown will be over 21/22 and 22/23.

- 6.4. Tenders for project elements have been revised and updated and completed to a high technical standard (April 2021) and the main project tender was published in Sept 2021 and awarded in Dec 2021. A tender for external project and cost management consultants has been awarded (May 2021) to oversee project delivery. Internal contract management was appointed in May 2021 to liaise and manage the external project and cost management consultants.
- 6.5. In January 2020 PKC had agreed to underwrite the TCD side of the project in lieu of TCD funding in order to meet the ERDF timeline. PKC has re-confirmed (March 2021) the allocation of PKC funds in lieu of TCD funding being approved.
- 6.6. Phase 2 – Perth – Active Travel Hubs project, to be coordinated and implemented with the Sustrans, Perth, People, Place project. Concept design for the Perth, People, Place project is scheduled to start later this year and be completed in early 2023. Phase 2 and the Perth, People, place project are expected to be delivered between 2024 and 2026.
- 6.7. Phase 3 – Perth – Hydrogen Refuelling Station project will be informed by a feasibility study to be commissioned in 2025 to review hydrogen refuelling technologies, hydrogen transportation or distribution technologies and give insight into the hydrogen road transport market development. Confirmation of the location for the Hydrogen station at the new Tibbermore Junction (part of the Perth West proposals) is expected in 2023.
- 6.8. From implementation plan, the variances are noted below:
- ERDF funding deadline extended to 31st October 2022 – approved by EST / Transport Scotland Feb 2022. Due to the Covid pandemic anticipated ERDF funding moved from 2020/21 to 2021/22 & 2022/23.
 - When the Programme OBC was shared with the Management Group in Jan 2022, Phase 2 (Perth – Active Travel Hubs) had implementation dates of 2022-24, which the Management Group approved. However please note that the implementation dates for Phase 2 are now 2024-26 to keep in line with the proposed implementation dates of the related Sustrans project, Perth, People, Place that Phase 2 will be coordinated and delivered with.
- 6.9. Milestones

Phase 1 – Broxden – Low Carbon Transport Hub			
Deliverable	Due Date	Status	Variance
Approval of the Phase 1 Full Business Case by Tay Cities Joint Committee	June 2022	FBC submitted for review 9 th Sept 2021 and updated Nov 2022. Reviewed by Management Group – Jan 2022	Previously Nov/Dec 2021
Planning Consents achieved	May/June 2022	System design underway – planning application has been lodged. Application to upgrade sub-station has been lodged.	System design and Planning applications part of design and build contract for main project tender/contract - Moved from 2021/22 to 2022/23

Energy management platform, renewables, battery storage and EV chargers upgrade completed	Sept 2022	Design and preliminary work underway	Moved from 2020/21 to 2022/23
Virtual Broxden low carbon hub web site delivered	Oct 2022	Not started	Moved from 2020/21 to 2022/23
Civil works site closure & signage	June – Oct 2022	Not started	Moved from 2020/21 to 2022/23
Low Carbon Installations operational	Sept / Oct 2022	Not started	

6.10. **Phase 2: Perth - Active travel Hub** – to be delivered in 2024-26.

Milestone	Due Date
Public consultation on cycle/walk/wheeling routes in and around Perth and active travel infrastructure	Jan 21 – Jun 22
Feasibility Study – best location of active travel hub(s) and best methods for maximising usage and benefits	July – Dec 2022
Development of project tenders	Jan - Sept 2023
Publication of project tenders	Oct 23 – Jan 2024
Tender Awards	Feb – Apr 2024
Installations	May 24 – Mar 2025
Start of Operations	April 25 – June 2025

6.11. **Phase 3: Perth - Hydrogen Refuelling Station** – to be delivered in 2027-29.

Milestone	Due Date
Confirmation of HRS site (Tibbermore Junction)	Jun 2023
Feasibility Study – H2 production, distribution, transportation & H2 market, size and trends	Feb - Jun 2025
Development of project tenders	Aug 25 – Feb 26
Publication of project tenders	Mar 26
Tender Awards	May/June 26
Installations – Hydrogen Refuelling station	Jul 27– Mar 2028
Start of Operations – Hydrogen Refuelling station	April/May 2028

6.12. Key Outcomes and Targets - Phase 1 – Broxden – Low Carbon Transport Hub (full list and Benefit Realisation plan and tables detailed in FBC – Appendix F.)

Targets	Baseline	Target Uplift	Date	Variance
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Phase 1 – Construction jobs	n/a	2.5	2022	Moved from 2021-22 to 2022
New/safeguarded jobs	n/a	1.5	2022	Moved from 2021-22 to 2022
To increase the usage of low carbon EV charging infrastructure at the Broxden Park & Ride site by 100% from baseline by 2027	2022	20% increase in EV Charging sessions per year	2027	Baseline moved from 2021 to 2022.
Reduction in Carbon Dioxide emissions	2022	Approx. 8,900 tCO ₂ e (medium estimate) saved over 5 years	2027	Baseline moved from 2021 to 2022. Uplift date moved from 2026 to 2027
Demonstrate evidence of Equal opportunities and non-discrimination; Equality between men and women in the use of the Low Carbon Travel Hubs	2022	Disabled access EV charging provision now included in project – to be deployed 2021/22	2027	Baseline moved from 2021 to 2022 Uplift date moved from 2026 to 2027
Leverage other investment through Tay Cities investment	n/a	£0.424m	2022	

* To Note – For Phases 2 & 3 – Full list of Outcomes and Targets to be detailed in phase 2 and 3 FBC's.

6.13. Key Project Risks and Mitigations

Risks and mitigation updated since deal – other project risks detailed in FBC risk register.

Risk	Mitigation
1. Insufficient Governance, unable to fully resource Project.	<p>Perth & Kinross Council has robust governance and accountability systems in place. The Council will set up the management structure and ensure that there are sufficiently available and skilled resources within the project. This will include external consultants where necessary.</p> <p>Mitigation (Phase 1 – Broxden-LCTH) - PKC has recruited external consultancy (Urban Foresight) to develop tenders for this phase of the programme that are well defined and technically robust. Project & Cost management consultancy has been commissioned (IBI Group) to oversee the delivery of this phase of the programme within a defined timescale and within a defined budget. PKC has also appointed an internal contract manager to liaise with the external Project and Cost Management to ensure effective delivery of this phase of the programme.</p>

	<p>Phase 2 – Perth-ATH – the PKC Mobility board will have oversight of the phase 2 programme. The mobility board will also have oversight for the related project, the Sustrans – Perth, People, Place project. Both of these projects will be coordinated and delivered by the same internal project delivery team and will utilise external consultants to ensure effective and timely delivery of this phase of the programme.</p> <p>Phase 3 – Perth-HRS – a project board has not been established for this phase of the programme as yet but is likely to fall under the remit of the PKC Mobility Board. Given the highly technical nature of this phase of the programme it will require external expertise to help define the technical requirements and develop the specialised tenders required. External consultants will also be used to assist in the effective delivery of this phase of the programme</p>
<p>2. Costs - due to the emerging nature of the technology, the final cost of the infrastructure is higher than originally forecast.</p>	<p>Phase 1 - An extensive market sounding exercise has been undertaken to provide market cost information and give early warning of the various tenders and proposed operating models for each element of infrastructure to ensure optimal outcomes for the project. External Cost Management has been recruited to ensure project delivery within a specified budget.</p> <p>Phase 2 – As the partner project, Perth, People, Place becomes more defined the phase 2 project outputs will be refined to ensure coordination and integration of the infrastructure and facilities to be deployed by both projects. Market sounding will continue to inform cost analysis of the programme elements and give early warning to the market of the coming tenders. External cost management will be recruited to ensure project delivery within a specified budget.</p> <p>Phase 3 – A feasibility study will be carried out in 2025 to look at the technical developments of hydrogen refuelling stations and methods of generating or distributing or transporting hydrogen. This will inform the potential costs of hydrogen station configurations and the potential cost of hydrogen production, distribution or transportation. External expertise will be needed to understand the hydrogen road transportation market and trends and help develop robust and highly technical tenders.</p>
<p>3. The quality of the infrastructure does not meet the Project's Outcomes.</p>	<p>Phase 1 - Careful review of what technology is available on the market and precise specification in the procurement documentation. By providing outcome-focused requirements suppliers will be more innovative, but there are minimum requirements that must be met. All low carbon infrastructure installed will be evaluated by Tactran to ensure impartial assessment of quality and operational effectiveness.</p> <p>Phase 2 – All proposed infrastructure will be consulted on and carefully considered, precisely specified to develop robust and detailed tenders. All infrastructure, facilities and services will</p>

	<p>be informed by the feasibility study and input from external consultants and all deployments subject to post deployment evaluation to ensure effective delivery of project components and they meet functional and operational requirements and standards.</p> <p>Phase 3 – All proposed infrastructure will be consulted on and carefully considered, precisely specified to develop robust and detailed tenders. All infrastructure, facilities and services will be informed by the feasibility study and input from external consultants and all deployments subject to post deployment evaluation to ensure effective delivery of project components and they meet functional and operational requirements and standards</p>
<p>4. Time - Not enough time to implement the project within the time constraints of the ERDF funding – 31st October 2022.</p>	<p>Phase 1 - A request for a further extension for ERDF funds to 31st October 2022 has been approved by EST/TS. Discussion have been held with EST (admin for the ERDF funding) about the possibility of extending the current ERDF timeline. They have highlighted that other ERDF projects have been affected by the Covid pandemic and are now running to June 2023.</p> <p>Phase 2 and Phase 3 do not include ERDF funding and are not time constrained.</p> <p>Phase 1 - External Project and Cost Management tender published (Mar 21) and awarded (May 21). Internal contract delivery management appointed (May 21).</p> <p>Phase 1 - Main project tender published 6th Sept 2021. Tenders received – awarded in Dec 21.</p>
<p>5. Time/Finance - Delay to the TCD deal process could delay project implementation.</p>	<p>PKC has agreed to underwrite TCD side of project for Phase 1 at Broxden in lieu of access to TCD funds. Allocation of PKC funding in lieu of TCD funding re-confirmed March 2021.</p>
<p>6. Time/Finance - Covid-19 impact may delay or disrupt project delivery.</p> <p>Potential impact on internal PKC resources as PKC addresses large backlog of work due to the pandemic,</p> <p>Potential disruption to supply chains,</p>	<p>PKC is working hard to deliver the programme within the European Regional Development Funding time constraints and potential impacts to that delivery will be closely monitored. However, the on-going Covid pandemic has the potential to further delay or disrupt the project delivery of Phase 1. This potential is being closely monitored however Phase 1 is currently on track to be delivered within the ERDF timeline of 31st Oct 2022.</p>

6.14. Variance – Impact of the Covid-19 pandemic and potential for further delays or disruption to the projects Implementation – Risks 5 & 6 added above.

7. DECISION PATHWAY

- 7.1. The project has met the decision pathway milestones as set out below and the next steps are also indicated.

Decision pathway milestones and planned timeline			
Stage	Milestone	Planned date	Date achieved
Programme OBC	Governments' approval	February 2022	25/02/2022
	Thematic Board recommendation	2 nd February 2022	2 nd February 2022
	Management Group recommendation	27 th January 2022	27 th January 2022
	Joint Committee approval	1 st July 2022	

8. DEPENDENCIES

- 8.1. ERDF for phase 1 of the project, the Broxden Low Carbon Transport Hub, is time constrained to 31st October 2022.

9. POLICY IMPLICATIONS

- 9.1. This report has been subject to an assessment of any impacts on Equality and Diversity, Fairness and Poverty and Environment. Equality and Fairness Impact Assessment submitted with the Phase 1 FBC. The revised EQIA concluded that Phase 1 of the proposed project contributed to the elimination of discrimination, harassment and victimisation. Advanced equality of opportunity and helped foster good relations between people who share a relevant protected characteristics and people who do not.
- 9.2. Phases 2 & 3 will each develop an EQIA as part of their FBC development.

10. CONSULTATIONS

- 10.1. The following have approved the presentation of the Programme OBC and phase 1 project business case:

Local Authority Project Management Officer: Alison Seggie
 Responsible Finance Officer: Stewart MacKenzie
 Management Group Sponsor: Barbara Renton

Report author: Michael Figures
 Title: Business Development Projects Officer at Perth & Kinross Council
 Email address: MFigures@pkc.gov.uk
 Phone number: 07584 619072
 Date: 26/05/2022

APPENDIX 1

Project Information		
Project number	TCD008	
Project name	Low Carbon Transport & Active Travel Hubs Programme	
Project owner	Michael Figures	
Project Finance Director	Stewart MacKenzie	
Management Group Sponsor	Barbara Renton	
Award amount under TCD	Up to £3.5m	
Jobs: Target number of jobs to be created	60 construction jobs	2-4 New/safeguarded jobs
Leverage to be achieved	£824,000 (with a potential of £6,874,000)	

TCD008 – Low Carbon Transport & Active Travel Hubs Programme

Executive Summary

Introduction

The Low Carbon Transport and Active Travel Hubs programme is a conversion of the single Low Carbon Transport and Active Travel Hubs project from three separate, although linked projects, into a single programme of projects to be delivered in three phases.

It is therefore proposed that for each phase of the programme a separate project business case will be submitted for consideration and evaluation by government and the TCD Joint Committee. This programme business case details the combined programme as the umbrella framework for three separate, although linked phases of delivery.

The Low Carbon Transport and Active Travel Hubs programme will contribute to the Tay Cities region shared vision and objectives by improving sustainable connectivity, workforce mobility and innovation. It will enhance the region's first-class quality of life through a more liveable urban and rural environment and act as a catalyst for economic growth. It aims to improve integration between different modes of public and private transport, promote a modal shift from car to shared or public transport and active travel options, and provides sustainable renewable energy via EV charging systems. It will provide better access to jobs and skills opportunities for the region's growing population, while minimising the impact on the region's exceptional natural environment and air quality.

Note that when the Programme OBC was shared with the Management Group in Jan 2022, Phase 2 (Perth – Active Travel Hubs) had implementation dates of 2022-24, which the Management Group approved. However please note that the implementation dates for Phase 2 are now 2024-26 to keep in line with the proposed implementation dates of the related Sustrans project, Perth, People, Place that Phase 2 will be coordinated and delivered with.

Programme Description

The aim of the Low Carbon Transport & Active Travel Hubs programme of projects is to create a network of easily accessible, low carbon and active travel infrastructure, facilities, and services across Perth. These will complement and enhance other low carbon facilities and developments in the Tay Cities region and beyond, such as the Castlevie Park and Ride mobility hub in Stirling and the Princess Street advance EV charging hub in Dundee. The programme of projects will be developed and deployed to help meet Scottish Government targets to decarbonise transport systems.

The intention of the programme is to broaden the range of sustainable travel choices available to residents, workers, and visitors to the region, thereby providing opportunity to improve workforce mobility, social inclusion, and environmental impact, all drivers of economic growth.

The projects are as follows:

- Phase 1: Broxden Low Carbon Travel Hub (Broxden-LCTH)
- Phase 2: Perth Active Travel Hub (Perth-ATH)
- Phase 3: Perth Hydrogen Refuelling Station (Perth-HRS)

Description of Programme Phases

The aim of these three linked phases of the programme is to help decarbonise transport systems in and around Perth and contribute to meeting the Scottish Government's climate change targets. With each phase of the programme tackling different aspects of the decarbonisation of road transport systems.

Transport Scotland's vision is to have a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. To achieve this, it will be necessary to grow the Low Emission Vehicle market, promote the widespread adoption of low carbon vehicles and provide credible active travel options.

Phase 1 – Broxden-LCTH – To support and promote the up-take of Electric Vehicles.

In the first phase of the programme, we aim to tackle one of the largest decarbonisation problems, the transition of fossil fuelled transport to zero emission transport. The aim of phase 1 is to help decarbonise road transport by providing expanded electric vehicle re-charging facilities at the Broxden Park & Ride site, which serves both Perth city and the Scottish trunk road network and motorway interchange at the M90/A9.

The first phase of the programme will create an innovative Low Carbon Transport Hub at a key strategic site, Broxden Park and Ride, on the western edge of Perth city. At this site, a range of refuelling charging speed options for Electric Vehicles (EVs) will be provided to accommodate the different usage patterns of EV users, including the first Disabled access EV charger in the area.

With the existing EV chargers at the site and the proposed expansion of EV charging stations in this first phase of the programme, there would be 41 EV charging spaces available at Broxden. This development of low carbon infrastructure would help confirm Broxden as a significant EV charging hub on this central node of the Scottish trunk road network, close to the motorway interchange between the M90 and A9.

The increasing demand for EV charging puts an increasing demand on the electricity supply network (grid) of the region/country. To meet Scottish Government's announcement of phasing out the need for new petrol and diesel cars and vans in the UK to 2030, it will be necessary to dramatically increase the up-take of low emission vehicles (Battery Electric Vehicles and Fuel Cell Electric Vehicles) over the next few years. The cost of the electric grid re-enforcement work required to support a largely electric transportation system is in the hundreds of millions for Scotland alone. To help tackle this issue and align with Tactran's Regional EV Strategy aim of supporting EV charging from a resilient and decarbonised energy network, we plan to develop an innovative solution. A combination of on-site renewable energy generation from solar

carport canopies and a battery storage unit will be deployed to sustainably support the EV charging systems at the site.

The development of sustainable support for EV charging systems will increase local generation of renewable energy, reducing the council's carbon footprint, reducing the strain on the national grid and reduce the costs of supporting these EV charging stations. It also opens up the possibility of developing an income stream for councils through the utilisation of battery storage assets to create flexibility for the grid and selling grid services such as Demand-Side Response services or at scale, Frequency Response services.

Phase 2 - Perth – ATH - To provide Active Travel alternatives to using private cars and to improve the sustainable mobility of non-car owners.

The aim of the Active Travel phase of the programme is to support the sustainable travel hierarchy and create an active travel hub and network of low carbon and shared and active travel facilities across Perth. With the aim of providing credible alternatives to using private cars and for non-car owners by developing and deploying active travel facilities, services and infrastructure in and around Perth.

In line with the NTS2 vision for a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors, the phase 2 of the programme will encourage and priorities sustainable transport solutions and create active travel options by developing and improving walking, wheeling and cycling routes in and around the city and providing active travel infrastructure, facilities and services including deployment of bike hire facilities across Perth and a car club.

To prioritise and encourage active travel and to reduce car usage and improve health and well-being, an Active Travel Hub will be created in or near the city centre. The Sustrans Perth, People Place project, that the Active Travel hub phase of the programme will be coordinated with, will be conducting a feasibility study to determine the best placement for an Active Travel hub in Perth and the best methods of maximising demand and benefits of the hub. The Mill Street site (opposite the cinema) is under consideration along with Thimblelow carpark or potentially directly off the Dunkeld road.

The Phase 2 - Perth-ATH project will be coordinated with the Sustrans, Perth, People, Place project that will be developing active travel routes, infrastructure, facilities and services in and around Perth. The Sustrans Perth, People, place project has been awarded £400k to develop a concept design for active travel infrastructure, facilities and services. On approval of the concept design another £6.05m will be available for project implementation. Delivery of the Sustrans project will be coordinated and integrated with the delivery of the Perth-Active Travel phase of the programme.

Phase 3 – Perth – HRS - To support and promote the uptake of hydrogen vehicles.

In the third phase of the programme the aim is to deploy the first publicly accessible hydrogen refuelling station in the Tayside region to support the uptake of hydrogen transport and contribute to a regional and national hydrogen refuelling network.

The Scottish government is keen to stimulate the hydrogen economy to unlock the potential for hydrogen as an energy source for a range of applications. Developing Hydrogen as a fuel for transport is a key element in the governments' strategy. It is the Scottish governments' ambition to increase the use of Hydrogen as a fuel for transport over the next few years. Aberdeen and Dundee councils have pursued this initiative with Hydrogen bus projects, and Fife council has also developed hydrogen transport infrastructure at its Bankhead depot in Glenrothes.

It is the intention of the Council to develop a publicly accessible hydrogen refuelling station in the Broxden area as a third phase of the programme in 2027-2029. This Hydrogen development will assist the governments' aims for Hydrogen and broaden the range of alternative low carbon transport fuels available. This would be the first in the Tay Cities area and would provide an important component of Hydrogen refuelling infrastructure at this strategic node on the Scottish motorway network.

Programme Phase Funding Requirements

Each phase of the programme will develop and produce its own business case, which will detail all elements of that phase of the programme.

Phase 1 – Broxden – LCTH (Low Carbon Transport Hub) – 2022

The first phase of the programme will be the development of the Low Carbon Transport hub at the Broxden Park & Ride site on the western edge of Perth. Due to the Covid pandemic this work has been delayed and is now scheduled from early 2022 to the Autumn of 2022. To Note – the potential for delay to the start of the implementation for phase 1 has been discussed with EST (administrators of the ERDF funding) and as other ERDF projects are now running to June 2023, largely due to delays due to the Covid-19 pandemic, they did not see an issue with applying to extend the ERDF funding to beyond its current date of 31st March 2022. A formal change request applying to extend the ERDF funding timeline to 31st Oct 2022 was submitted to EST in early Jan 2022 and approved in Feb 2022.

Approximately **£424,000** of this cost has been awarded (May 2017) as a grant from the European Regional Development Fund's (ERDF) Low Carbon Travel and Transport (LCTT) fund, administered by the Energy Savings Trust on behalf of Transport Scotland.

To access the grant award from the ERDF, LCTT fund, the Council is required to provide match funding. Therefore, the remaining approximately **£636,000** of this cost is being sought as part of the submission to the Tay Cities Region Deal.

–**NB:** The risk management costs (£65k) are included in the Phase 1 specification however Optimism Bias is not. ERDF funding does not allow a contingency and as Optimism Bias is a form of contingency it is not allowed under ERDF rules.

Phase 2 – Perth – ATH (Active Travel Hub) – 2024-26

The second phase of the programme will be the development of the Perth Active Travel hub. This work will be coordinated with the Community Links plus project – Perth, People, Place and is scheduled to begin in 2023/24 and is projected to be completed in 2025/26. This part of the programme is entirely funded through the TCD, with the Council seeking **£1.263m** from the Tay Cities Deal. To ensure coordination of these two projects, the Sustrans Community Links Plus – Perth, People, Place project and the Perth – Active Travel Hubs project. The governance of both of these linked projects will come under the same project board (PKC Mobility board) and will be delivered by the same Project Delivery team.

The Perth – Active Travel Hubs phase of the programme in-line with the Scottish Governments' National Transport Strategy (NTS2), will aim to reduce inequalities and promote and support the development of a sustainable, inclusive, and accessible transport systems in Perth. NB – an Equalities Impact Assessment (EQIA) will be developed for each phase of the programme to highlight inclusive growth and equality issues for each phase of the programme.

Engagement with a variety of stakeholders is on-going to promote and consult on Active travel options for Perth. The Perth, People, Place Sustrans Community Links project has been actively consulting on active travel infrastructure with community groups, businesses and the general public and will commission a feasibility study in 2022 to look at the most appropriate locations for the hub and the best methods to maximise usage and the benefits of the active travel infrastructure and services to be deployed.

Phase 3 – Perth-HRS (Hydrogen Refuelling Station) - 2027-29

Phase three of the programme will be the development of the Perth Hydrogen Refuelling Station in the Broxden area (new Tibbermore Junction – Perth West) in collaboration and coordination with regional and national partners. Work is on-going to develop these regional and national partnerships for the development and deployment of hydrogen infrastructure in the Tay Cities region. A feasibility study will be commissioned in 2025 to gauge the technology developments for hydrogen production, distribution and transportation and evaluate the hydrogen road transportation market, its size and trends.

It is envisaged that the hydrogen development will take place between 2027 and 2029. The Council is seeking **£1.6m** TCD funds to go towards this phase of the programme.

Strategic Objectives of Programme

Phase 1 – Broxden-LCTH

SO1 – To provide easily accessible low carbon EV charging infrastructure and to increase the usage of low carbon EV charging infrastructure at the Broxden Park & Ride site by 100% from baseline by 2027

SO1 Context - To meet the projected increasing demand for EV charging as a result of the shift from fossil fuelled vehicles to battery electric vehicles in line with Scottish Government climate change targets (phasing out of the need for new petrol and diesel cars and vans by 2030)

Specific	To increase the usage of low carbon EV charging infrastructure at the Broxden Park & Ride site by 100% from baseline by 2027
Measurements	EV charging sessions and consumption data;
Achievable Targets	20% increase in EV Charging sessions per year;
Relevant	Reduces greenhouse gas emissions from road transport and helps tackle climate change.
Timings/costs	Data usage and consumption analysis, Monthly & Yearly Report 2022 - 2027. No cost - Internal PKC process

Responsibility for delivery of SO1 - Broxden-LCTH project team / PKC Transport Planning Team / PKC Environmental Health team.

Programme Outputs - Expansion of EV charging facilities at Broxden Park & Ride.

SO2 – To utilise at least 90% of the on-site generated renewable energy in support of the EV charging systems at the site per year.

SO2 – Context - To provide locally generated renewable energy of approximately 55-65,000kWh per year to support the EV charging infrastructure. To support and contribute to a decarbonised energy network.

Specific	To utilise at least 90% of the on-site generated renewable energy in support of the EV charging systems at the site per year.
Measurements	Amount of on-site generated renewable energy being used by the EV charging systems
Achievable Targets	90+% on-site renewable energy used to support EV chargers

Relevant	Contributes towards a decarbonised energy network
Timings/costs	Usage Data analysis - Monthly & Yearly Report 2022-2027. No cost - Internal PKC process

Responsibility for delivery of SO2 - Broxden-LCTH project team / PKC Energy Team

Programme Outputs - Development of on-site renewable energy generation and battery system, controlled and managed by a Smart energy management system to support EV charging systems.

Phase 2 – Perth-ATH

SO3 - Improve the mobility of non-car owners and providing credible low carbon alternatives for car owners by increasing bike hire usage by 50% from baseline by 2030 (5 years), increase car club usage by 50% from baseline by 2030 (five years), increase usage of MaaS app by 50% from baseline by 2030 (five years).

SO3 – Context -To improve the sustainable mobility and travel options of non-car owners and provide credible low carbon alternatives to using private cars and contribute to the reduction of car usage and congestion in the city.

Specific	Improve the mobility of non-car owners by increasing bike hire usage by 50% from baseline in 5 years, increase car club usage by 50% from baseline in five years, increase usage of MaaS app by 50% from baseline in five years.
Measurements	Usage data for Bike Hire scheme, car club and MaaS app.
Achievable Targets	10% increase in Bike Hire usage per year; 10% increase in Car Club usage per year; 10% increase in MaaS App usage per year.
Relevant	Provides credible sustainable mobility options for non-car owners and contributes to the reduction of air pollution and congestion in the city
Timings/costs	Usage Data analysis - Monthly & Yearly Report 2025-30. No cost - Internal PKC process

Responsibility for delivery of SO3 – Perth-ATH project team / PKC Transport Planning Team

Programme Outputs – Introduction of a city-wide bike hire scheme in Perth.

Introduction of a car club (using only EV's). Upgrade and development of cycle/walk/wheeling routes in and around Perth; development of a MaaS app low carbon journey planner.

SO4 – Contribute towards the improved health and well-being of citizens by increasing bike hire usage by 50% from baseline by 2030, increase in path usage by 50% from baseline by 2030.

SO4 – Context - Contribute towards the improved health and well-being of citizens

Specific	Contribute towards the improved health and well-being of citizens by increasing bike hire usage by 50% from baseline in 5 years, increase in path usage by 50% from baseline in five years
Measurements	Bike Hire usage data, Path usage data,
Achievable Targets	10% increase in Bike Hire usage per year, 10% increase in path usage per year,
Relevant	Increased use of active travel facilities and services will help improve citizens health and well-being.
Timings/costs	Usage Data analysis, Air quality data analysis– Monthly & Yearly Report. 2025-30 No cost - Internal PKC process

Responsibility for delivery of SO4 – Perth-ATH project team / PKC Transport Planning Team

Programme Outputs - Introduction of a city-wide bike hire scheme in Perth. Upgrade and development of cycle/walk/wheeling routes in and around Perth

Phase 3 – Perth-HRS

SO5 – To increase the usage of low carbon hydrogen refuelling infrastructure by 50% from baseline by 2034.

SO5 – Context - To provide easily accessible low carbon hydrogen refuelling infrastructure – To encourage uptake of hydrogen zero-emission vehicles in line with Scottish Government climate change targets (phasing out of the need for new petrol and diesel cars and vans by 2030)

Specific	To increase the usage of low carbon hydrogen refuelling infrastructure by 50% from baseline in five years.
Measurements	Hydrogen refuelling sessions and consumption data;

Achievable Targets	10% increase in hydrogen refuelling sessions per year;
Relevant	Reduces greenhouse gas emissions from road transport and helps tackle climate change.
Timings/costs	Data usage and consumption analysis, Monthly & Yearly Report 2029 - 2034. No cost - Internal PKC process

Responsibility for delivery of SO5 – Perth-HRS project team / PKC Transport Planning Team.

Programme Outputs – Introduction of hydrogen refuelling infrastructure near Broxden.

All Phases - Phase 1 & Phase 2 & Phase 3

SO6 – To Increase awareness of low carbon and active travel infrastructure, facilities and services by 50% from baseline in five years for each programme phase. Phase 1 Broxden-LCTH by 2027, Phase 2 by 2030 and Phase 3 by 2034.

SO6 -Context - To promote and improve knowledge and awareness of low carbon and active travel infrastructure, facilities and services.

Specific	Increase awareness of low carbon and active travel infrastructure, facilities and services by 50% from baseline in five years.
Measurements	Surveys at locations across Perth to understand perceptions and awareness of low carbon and active travel infrastructure, facilities and services.
Achievable Targets	10% increase in awareness of low carbon and active travel infrastructure, facilities and services per year.
Relevant	Raising awareness of the low carbon and active travel infrastructure, facilities and services to be introduced and deployed will help encourage usage.
Timings/costs	Phase 1, 2 & 3 - Yearly Surveys 2022-34 – Cost (approx.) £1,500 - 2,500 per year

Responsibility for delivery of SO6 - Broxden-LCTH project team / Perth-ATH project team / Perth-HRS project team / PKC Transport Planning Team

Programme Outputs - Development of the virtual Broxden hub web site, marketing & outreach campaigns to business and communities to raise awareness and promote usage.

Programme Benefits:

Phase 1 – Broxden-LCTH

B1 – Support the uptake of Electric Vehicles through the increased provision of EV charging facilities and contribute towards meeting the Scottish Government climate change targets (phasing out of the need for new petrol and diesel cars and vans by 2030). Relating to SO1

B2 – Not increasing the use of grid energy (in support of EV charging). Relating to SO2

B3 - Reduction of cost of energy to support EV chargers. Relating to SO2

Phase 2 – Perth-ATH

B4 – Improvement in the mobility and sustainable travel options for non-car owners and credible low carbon alternatives for car owners and increase the proportion of trips by more sustainable modes of transport. Relating to SO3

B5 – Improvement in the health and well-being of citizens. Relating to SO4

Phase 3 – Perth-HRS

B6 - Support the uptake of Hydrogen Vehicles through the provision of a publicly accessible Hydrogen refuelling station and contribute towards meeting the Scottish Government climate change targets (phasing out of the need for new petrol and diesel cars and vans by 2030). Relating to SO5

All Phases 1, 2 & 3

B7 – Improvement in the knowledge and awareness of low carbon and active travel options. Relating to SO1, SO3, SO4, SO5 & SO6

B8 - Job Creation & New / Safe guarded jobs – approx. 60 construction jobs to be supported through the implementation of this programme and 4.5 jobs created or safeguarded.

Programme Outputs

Phase 1 – Broxden-LCTH

The creation of a Low Carbon Transport Hub at the Broxden Park and Ride site, consisting of:

- 6 x additional Rapid (43kW-50kW) EV charging stations
- 1 x Disabled / Mobility Impaired access Rapid (43kW-50kW) EV Charger
- 8 x 7kW EV charging stations
- 2 x E-Bike chargers & Secure storage for private bikes
- Approx. 40 Solar Car ports (Approx. 80kW - to feed on-site generated renewable energy to the battery storage system).
- Upgrade of electricity sub-station (500kva – 1Mva)

- Battery Storage system (to hold on-site generated electricity).
- Smart Energy Management and control system to optimise the use of electricity in support of the EV chargers.
- EV Booking system – (for 4 7kW EV chargers) – to utilise on-site generated renewable energy
- Transport Information Display Unit (Real-Time Bus information & timetabling)
- Broxden - Low Carbon Transport Hub web site
- Marketing and Outreach Campaigns (to raise awareness of the new low carbon facilities).

Phase 2 – Perth-ATH

Creation of an Active Travel Hub (Exact site to be confirmed after feasibility study – 2022) consisting of:

- Main Bike Hire Station
- Bike Hire booking system
- 30 Bikes (66% E-Bikes – with bikes distributed in bike hire stations across city at 4 other locations, Broxden Low Carbon Transport Hub, Perth College /UHI, Perth Royal Infirmary & Bells Sports Centre)
- Secure storage for private bikes
- Transport Information mobile app - to provide multi-modal journey planning and access and integration to low carbon and active travel facilities and services.
- Cycle way improvements will be carried out to create cycle “Golden-Routes” to link the Low Carbon Transport Hub and the Active Travel Hubs as well as from the Active Travel Hubs to key destinations around the city.
- Cycle “Golden-Routes” including path upgrades, signage, and promotion for the key routes – part of on-going public consultation.

A Car Club with approximately 10 vehicles will be set up to support the Active Travel hub and residents and businesses in Perth City centre. All the vehicles used will be zero emission electric vehicles. This will create: -

- 10 x Car Club parking spaces
- A Car Club booking system
- Provision of Car Club vehicles (either provided by Car Club, leased (Low Emission Vehicles) and utilised from the Council fleet, depending on fleet capacity)
- 6-8 EV Charging stations to support EV’s used in the Car Club

Phase 3 – Perth-HRS

To develop a hydrogen refuelling station at the proposed new Tibbermore Junction to be developed as part of the Perth West project consisting of:

- Hydrogen Refuelling Station
- Dispensing hydrogen at 350 and 700 bar to support heavy and light hydrogen vehicles

Summary - Benefits Realisation table – meeting Strategic Objectives

Strategic Objective	Benefit	Programme Outputs
SO1 - To provide easily accessible low carbon EV charging infrastructure and to increase the usage of low carbon EV charging infrastructure at the Broxden Park & Ride site by 100% from baseline by 2027	B1 – Support the uptake of Electric Vehicles through the increased provision of EV charging facilities and contribute towards meeting the Scottish Government climate change targets (phasing out of the need for new petrol and diesel cars and vans by 2030).	Expansion of EV Charging infrastructure at Broxden;
SO2 - To utilise at least 90% of the on-site generated renewable energy in support of the EV charging systems at the site per year.	B2 – Not increasing the use of grid energy. B3 - Reduction of cost of energy to support EV chargers	On-site solar array and battery system supported by a smart energy management system
SO3 - Improve the mobility of non-car owners and providing credible low carbon alternatives for car owners by increasing bike hire usage by 50% from baseline by 2030 (5 years), increase car club usage by 50% from baseline by 2030 (five years), increase usage of MaaS app by 50% from baseline by 2030 (five years).	B4 – Improvement in the mobility and sustainable travel options for non-car owners and credible low carbon alternatives for car owners and increase the proportion of trips by more sustainable modes of transport	City wide bike hire scheme, improvement and development of cycle / walk / wheeling routes around Perth, Car club, Integration and access of services through MaaS app
SO4 - Contribute towards the improved health and well-being of citizens by increasing bike hire usage by 50% from baseline by 2030, increase in path usage by 50% from baseline by 2030.	B5 – Improvement in the health and well-being of citizens	City wide bike hire scheme, improvement and development of cycle / walk / wheeling routes around Perth
SO5 - To increase the usage of low carbon	B6 - Support the uptake of Hydrogen Vehicles	Introduction of hydrogen refuelling infrastructure

hydrogen refuelling infrastructure by 50% from baseline by 2034.	through the provision of a publicly accessible Hydrogen refuelling station and contribute towards meeting the Scottish Government climate change targets (phasing out of the need for new petrol and diesel cars and vans by 2030)	
SO6 - To Increase awareness of low carbon and active travel infrastructure, facilities and services by 50% from baseline in five years for each programme phase. Phase 1 Broxden-LCTH by 2027, Phase 2 by 2030 and Phase 3 by 2034.	B7 – Improvement in the knowledge and awareness of low carbon and active travel options.	Virtual Broxden hub web site, marketing & outreach campaigns to business and communities to raise awareness and promote usage.

Strategic Case

The aim of the Low Carbon Transport & Active Travel Hubs programme of projects is to create a network of easily accessible, low carbon and active travel infrastructure, facilities, and services across Perth. That will complement other low carbon facilities and developments in the Tay Cities region and beyond such as the Castleview Park and Ride mobility hub in Stirling and the Princess Street advance EV charging hub in Dundee. The programme of projects will be developed and deployed to help meet the Scottish Government targets to decarbonise transport systems.

The deployment of low carbon infrastructure and facilities will be aligned to the vision and objectives of the Tactran Regional Transport and Regional EV Strategies and will support the transition to a low carbon transport future. It will support the uptake of Electric vehicles in the region by providing the charging infrastructure required and will ensure there is credible low carbon and active travel transport options for businesses, residents and visitors to the region and promote continued economic growth.

The case for change

Public infrastructure is needed to support this change, to develop active travel facilities and services and keep pace with both the growing demand for EV charge points, and the emergence of hydrogen transportation. Without investment in low carbon and active travel infrastructure, the transition to low carbon transport solutions will be difficult to achieve in the timescales proposed by both the Scottish and UK Governments. If there is no hydrogen station at this key node at the heart of the Scottish motorway network, there will be no zero-emission hydrogen transport in the

area and little chance of developing this important zero emission transport mode across the Tay Cities region.

The Scottish and UK Governments has announced its intention to the phasing out of the need for new petrol and diesel cars and vans in the Scotland to 2030. These ambitious targets have made the need to increase the provision of low carbon and active travel infrastructure and facilitate the uptake of low carbon vehicles more urgent. To have the best chance of meeting these targets, the uptake of both electric and hydrogen zero carbon emission vehicles should be promoted and provisioned with easily accessible supporting refuelling infrastructure. It is also important to improve the active travel choices available in the area, to give people a credible alternative to using private cars.

In Phase 1 the carbon savings from the displacement of petrol and diesel sales by EV's is estimated at 8,900 tCO₂e saved over 5 years.

Economic Case

To meet the strategic needs of the Scottish Government and Transport Scotland's vision to provide a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors and decarbonise transport in Scotland. It will be necessary to reduce greenhouse gas emissions from transport, increase the uptake of alternatively fuelled low carbon vehicles, decrease the levels of air pollution, and encourage, facilitate, and support active travel modes. These measures are required to tackle a market failure from the existing transport industry as currently the market is largely only providing low carbon transport systems in densely populated urban centres. This programme is needed therefore to meet the Scottish Government's strategic objectives to reduce greenhouse gas emissions and air pollutants from road transportation and address the failure of the market to meet these requirements.

NPV of the individual phases of the programme will be detailed in each of the individual project's business case.

Carbon Costs & Savings

Phase 1 – Broxden-Low Carbon Transport Hub:

Total Embodied & Operational Carbon Costs for Phase 1 - Broxden-LCTH: **579.8 tCO₂e (Low); 614.8 tCO₂e (Predicted); 650 tCO₂e (High).**

Total Carbon Savings for Phase 1 - Broxden-LCTH: **6,679 tCO₂e (Low); 8,906 tCO₂e (Predicted); 11,144 tCO₂e (High).**

Phase 2 – Perth – Active Travel Hubs:

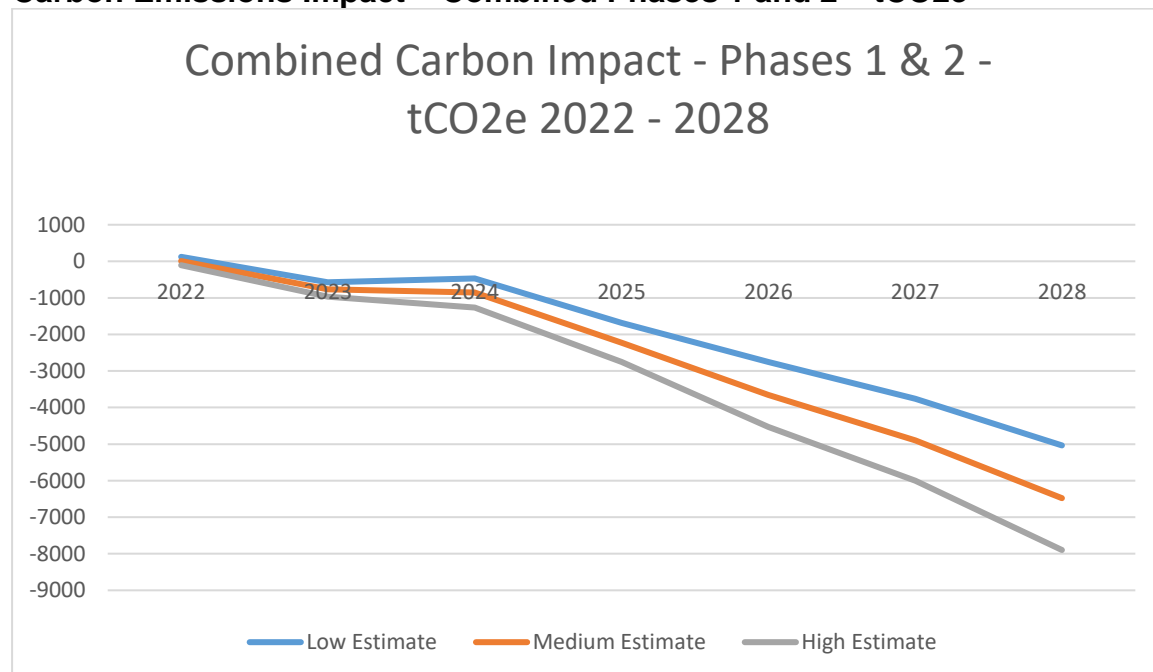
Total Embodied & Operational Carbon Costs for Phase 2 (2024-2028) – Perth-ATH: **655.1 tCO₂e (Low); 657.2 tCO₂e (Medium); 661 tCO₂e (High).**

Total Carbon Savings for Phase 2 – Perth-ATH: **508.8 tCO₂e (Low); 754.3 tCO₂e (Medium); 1,131.6 tCO₂e (High).**

Phase 3 – Perth – Hydrogen Refuelling Station

As the exact configuration of the hydrogen station is not known at this distance and we were not able to accurately model the hydrogen road transport market in 2027; we have been unable to calculate the carbon costs and savings of deploying a hydrogen refuelling station. A feasibility study will be commissioned in 2025 that will inform these calculations and will be detailed in Phase 3's full business case.

Carbon Emissions Impact – Combined Phases 1 and 2 – tCO₂e



Benefits realisation

Programme Benefits – Phase 1 – Broxden-LCTH (5yrs):

£2,163,273 (Net change in carbon emissions)¹; +
 £ 82,170 (Net air quality impact)²; +
 £ 130,870 (Displacement of grid energy by on-site renewables – 5yrs) +
 £ 61,370 (Battery revenue over 5 years); +

£2,437,683 Phase 1 benefits over 5yrs

Programme Benefits – Phase 2 – Perth-ATH (5Yrs):

£2,420,070 (Active travel - Carbon emission reduction, health and wellbeing)

¹ Carbon values derived from the new traded carbon values published by BEIS 6th Sept 2021

² Values for net air quality impact derived from BEIS IAG spreadsheet tool for valuing changes in greenhouse gas emissions

improvements, on 4:1 ratio of cycle and walkways and Bike hire interventions)³

£2,420,070 Phase 2 benefits over 5yrs

Programme Benefits – Phase 3 – Perth-HRS

Unable to accurately model the hydrogen road transport market in 2029 and therefore unable to estimate the displacement of petrol and diesel by hydrogen to calculate this phase's benefits.

Commercial Case

A procurement strategy has been developed for the programme phase 1 at Broxden (2022), to outline the procurement process and inform tender development. The tender for the major project elements for phase 1 has been completed and was published in early Sept 2021. The tenders have been evaluated and awarded and work is due to begin in Jan 2022.

For phase 2 (2024-2026) the Active Travel hubs, procurement will be coordinated with the Perth, People, Place project and informed by the feasibility study to be carried out into active travel services, locations and methods for maximising usage and benefits (2022/23).

For phase 3 (2027-2029) the Hydrogen Refuelling Station development, close market monitoring into the developing technology for hydrogen production, distribution and transportation will continue and the final procurement strategy will be informed by a feasibility study in 2025 to determine the most appropriate hydrogen technologies to meet requirements.

Procurement will be by open tender published on the Scottish Governments Public Contracts Scotland web site and promoted to the relevant business communities. All suppliers will be asked to provide details of all carbon costs associated with the manufacture and operation of their products or services and work to improve carbon management such as by adopting and using the PAS 2080 carbon management process.

Stakeholder engagement

All phases of the programme will engage with appropriate stakeholders as each phase of the programme is developed. Details of the stakeholder engagements will be described in each of the individual programme phases business cases.

³ <https://www.gov.uk/government/publications/economic-case-for-active-travel-the-health-benefits>

Financial Case

The infrastructure to be delivered for phases 1 & 2 of the programme is specified in [Appendix C](#) (in Programme OBC) Capital Costs and Funding sources. The approximate total capital cost of the programme is shown in the Table below.

Programme Funding

Programme	Funding			Totals
	ERDF	TCD	Other	
Phase 1 – Low Carbon Transport Hub	£423,920	£635,930	n/a	£1,059,850
Phase 2 – Active Travel Hub	n/a	£1,263,650	£400,000*	£1,663,650
Phase 3 -Hydrogen Refuelling Station	n/a	£1,600,000	n/a	£1,600,000
Totals	£423,920	£3,499,580	£400,000*	£4,323,500

* **Note** – *Sustrans - Community Links Plus – Perth, People, Place project – This has been awarded £400k to develop a concept design for active travel infrastructure, facilities and services in and around Perth. This concept design will be developed to integrate with the phase 2 deployments for active travel hubs in the city centre. On approval of the concept design a further £6.05m of Sustrans funding will be available to implement the Perth, people, Place project which will be delivered and coordinated with the TCD008 Programme Phase 2 – Perth Active Travel Hubs project.

Approximately £424,000 of Phase 1 at Broxden has been awarded as a grant from the European Regional Development Fund via the Low Carbon Travel and Transport (LCTT) fund, administered by the Energy Saving Trust on behalf of Transport Scotland.

Management case

For many years, Perth and Kinross Council has successfully managed projects supported by UK, Scottish Government and EU funds including ERDF and ESF projects. These include “East of Scotland Renewables – Rural Supply Chain Development” (Lowlands and Uplands ERDF) and the rural tourism project “Unlocking the Economic Potential in Rural Perth and Kinross” (Lowlands and Uplands ERDF). In both instances, Perth and Kinross Council was the lead authority for the partnership project. The Council is currently the accountable body in respect of Rural Perth and Kinross LEADER Programme (having been a partner in previous Rural Tayside LEADER programmes in partnership with Angus Council) and is a delivery agent in respect of the ERDF 2014 – 20 Operational Programme Strategic Intervention: Scotland’s 8th City – the Smart City.

The Council has developed its monitoring and evaluation systems in line with national rules and is aware of the requirements in terms of claims cycles and reporting. It has developed its project managements processes accordingly and has robust governance and accountability systems in place. The recording and tracking of outputs, financial information and associated record keeping are of paramount importance and the Council can demonstrate through its track record in other projects, that it has sound systems in place and readily complies with the requirements in respect of claims, reporting, verification and audit requirements.

Phase 1 – Broxden-LCTH: For the first phase of the programme at Broxden, PKC has procured external low carbon and EV hub development experts Urban Foresight to develop the tenders for the main body of works. To ensure that the tenders are technically detailed and robust. PKC has also procured Project and Cost Management consultancy from IBI Group (Engineering & Technical procurement framework - Scotland Excel) to ensure timely and appropriate delivery of the project and to support the project delivery at Broxden Park & Ride during 2022.

An internal project delivery team has been set up for phase 1, to liaise and coordinate delivery of the project with external consultants and contractors and to report to the PKC project board and the TCD administrators and thematic board. The programme delivery team and programme manager report directly to the PK Smart Project Board and all project related issues and decisions are evaluated and ratified by the PK Smart project board.

Phase 2 – Perth-ATH: The PKC Mobility Board is the designated project board for this phase of the programme. The PKC Mobility board will also oversee the Sustrans, Perth, People, Place project that phase 2 will be coordinated and delivered with. An internal project delivery team will be set up to oversee this phase's delivery and to liaise with external consultants (Project & Cost Management) brought in to help deliver this phase of the programme.

Phase 3 – Perth-HRS: A project delivery team and project board have not been set up as yet for this phase of the programme but will be by 2025 to oversee this phase's development and implementation in 2027-29

Carbon Management

The whole life carbon management of the infrastructure to be deployed by the three phases of the project will be supported through adoption of the PAS 2080 carbon management process.

Post project evaluation arrangements

All three phases of the programme will be evaluated for at least 5 years from the implementation of each phase. Details of post-evaluation of each phase of the programme will be detailed in each phases' business case.

Hydrogen Refuelling Station development - Note

The hydrogen transport market is young and developing and the technology that supports this market is evolving. PKC, in coordination with regional partners, intends to commission the most appropriate hydrogen technologies to develop a regional network of hydrogen refuelling sites. However, how the hydrogen market will develop is not yet clear.

PKC is committed to developing a Hydrogen Refuelling Station in the Broxden area as part of a regional hydrogen network. As we believe that the low emission transport market (and the Scottish Motorway network) will greatly benefit from a hydrogen station at Broxden and an expansion in the use of fuel-cell (hydrogen) electric vehicles. The proposed site of the hydrogen refuelling station is the new Tibbermore Junction which will be developed as part of the Perth West project developments. The landowner (John Dewar Lamberkin Trust) is supporting this proposed location for deployment of a hydrogen refuelling station.

In order to understand the hydrogen transport market and the potential development routes to providing hydrogen refuelling infrastructure, PKC intends to commission a feasibility study in 2025 to ascertain the developments in hydrogen refuelling technologies and refuelling configurations to meet the programmes strategic objectives and to understand the size and trends in the hydrogen road transport market.

This will inform the development of a separate business case for this phase of the programme.



REPORT TO: TAY CITIES REGION JOINT COMMITTEE

REPORT ON: TCD008 LOW CARBON TRANSPORT & ACTIVE TRAVEL HUBS PROJECT – PHASE 1: BROXDEN LOW CARBON TRANSPORT HUB FULL BUSINESS CASE

REPORT BY: BARBARA RENTON, EXECUTIVE DIRECTOR (COMMUNITIES), PERTH AND KINROSS COUNCIL

REPORT NO: TCRJC10-2022

1. PURPOSE OF REPORT

- 1.1. This report seeks approval of the TCD008 the Full Business Case (FBC) for Phase 1: Broxden Low Carbon Transport Hub Project.

2. RECOMMENDATIONS

- 2.1. The Joint Committee is asked to:
- i. Consider this report for Phase 1 of the TCD008 Low Carbon Transport & Active Travel Hub Programme for the FBC for Phase 1: Broxden Low Carbon Transport Hub project. A copy of the business case is available on request via ShareFile.
 - ii. Note that the Management Group approved the Phase 1 FBC on 26th May 2022.
 - iii. Approve the Phase 1 FBC – Broxden – Low Carbon Transport Hub.
 - iv. Note that matched funding from ERDF for Phase 1: Broxden – Low Carbon Transport Hub, is time constrained to 31st October 2022 (ERDF time extension approved by EST/Transport Scotland in Feb 2022).

3. INTRODUCTION

- 3.1. The Local Carbon Transport & Active Travel Hubs project was awarded up to £3.5m in the Heads of Terms Agreement dated 22 November 2018. Per the Deal Document the Scottish Government will commit up to £3.5 million to support three complementary transport developments. These innovative, low carbon technologies aim to improve the range of available sustainable travel options and to improve workforce mobility, social inclusion and environmental impact.
- 3.2. As the different elements are progressing at different paces and not all the information is available for Phase 2 and Phase 3, it was agreed with the Scottish Government that the project would be developed as a programme type business case to enable phase 2 and 3 to be worked on without holding up phase 1.

- 3.3. The attached FBC is for Phase 1 – Broxden Low Carbon Transport Hub. The key Phase 1 project information is in Appendix A.

4. DESCRIPTION OF PROJECT

- 4.1. Phase 1 – Broxden Low Carbon Transport Hub will be delivered as follows:
- 4.2. A Low Carbon Transport Hub will be built near Perth on the motorway network and will bring together solar energy generation and battery storage to provide sustainable electric vehicle (EV) charging. This will reduce barriers to EV ownership and encourage people to leave cars at the edge of the city and travel to the centre by public transport or cycling. The use of solar generation and battery storage will reduce the burden on the national grid. The Hub will include approx. 36 Solar Car ports where a car can be charged using stored solar electricity. Charging can be fast (while you wait) or slow – designed to allow the driver to leave their car and cycle or take public transport into the city centre. Transport Information display unit and secure storage for private bikes will support this.

5. FINANCIAL IMPLICATIONS

- 5.1. Phase 1 was profiled to spend a total of up to £635,930 capital from the Tay Cities Deal funding. The funding is anticipated to be drawn down as follows:

- 5.2. Funding profile and projected TCRD drawdown is shown in the table below.

Source of Funding Profile – Capital £000	21/22
Agreed TCD fund	636
ERDF*	424
Total	£1,060

- 5.3. Please note, the £635,000 allocated to the project by the Tay Cities Region Deal fund was unable to be drawn down in 2021/22 due to a delay in getting the Project business case approved by the Governments and the Partnership. It is therefore now placed in year 10.

- 5.4. There is £632k allocated to the project in 2022/23. This is a shortfall of approximately £4k for the project; however, there is already a forecasted underspend of £73.5k in 2022/23. The table below reflects the change to the Project's allocated funding.

Source of Funding Profile – Capital £000	21/22	22/23
Agreed TCD fund	0	632
ERDF*	0	424
Total	0	£1,056

- 5.5. Also, to note, there has been a move of ERDF funding from 2020/21 to 2021/22 as the project was unable to start in 2020 and 2021 because of the Covid pandemic. A request for a further extension to 31st October 2022 has been approved by EST/TS. Expenditure profile and drawdown are likely to be over 21/22 and 22/23.

- 5.6. Phase 1 will lever in additional funding of £424,000 (ERDF).

6. IMPLEMENTATION PLAN

- 6.1. From the Implementation Plan, the key risks are noted below, and explored further at 6.9.
- 6.2. The 1st Phase of the project at Broxden was unable to start in 2020 due to the 1st Covid lockdown and the disruption the Covid pandemic caused throughout 2020 and in the first half of 2021. Approval has been received to extend the ERDF funding to 31st October 2022, as the ongoing Covid pandemic and the 3rd Covid lockdown that began in Jan 2021, has further delayed and disrupted phase 1 implementation. This further disruption has impacted PKC as it begins to address the large volume of internal work delayed or disrupted over the last year and a half which has affected the availability of internal resources for the project.
- 6.3. With the on-going global pandemic external supply chains may also be impacted. The potential of further delays or disruption to the phase 1 project delivery has required the rescheduling of project implementation further into 2022. The delays and disruptions have delayed project implementation and has required an extension to the ERDF timeline further into 2022 and would also require a request for change of the TCD drawdown for phase 1. A request for a further extension to 31st October 2022 has been approved by EST/TS. Expenditure profile and drawdown are likely to be over 21/22 and 22/23.
- 6.4. Tenders for project elements have been revised and updated and completed to a high technical standard (April 2021) and the main project tender was published in Sept 2021 and awarded in Dec 2021. A tender for external project and cost management consultants has been awarded (May 2021) to oversee project delivery. Internal contract management was appointed in May 2021 to liaise and manage the external project and cost management consultants.
- 6.5. In January 2020 PKC had agreed to underwrite the TCD side of the project in lieu of TCD funding in order to meet the ERDF timeline. PKC has re-confirmed (March 2021) the allocation of PKC funds in lieu of TCD funding being approved.
- 6.6. From implementation plan, the variances are noted below:
- ERDF funding deadline extended to 31st October 2022 – approved by EST / Transport Scotland Feb 2022. Due to the Covid pandemic anticipated ERDF funding moved from 2020/21 to 2021/22 & 2022/23.
- 6.7. Milestones

Phase 1 – Broxden – Low Carbon Transport Hub			
Deliverable	Due Date	Status	Variance
Approval of the Phase 1 Full Business Case by Tay Cities Joint Committee	June 2022	FBC submitted for review 9 th Sept 2021 and updated Nov 2022. Reviewed by Management Group – Jan 2022	Previously Nov/Dec 2021
Planning Consents achieved	May/June 2022	System design underway – planning application has been lodged.	System design and Planning applications part of design and build contract for main

		Application to upgrade sub-station has been lodged.	project tender/contract - Moved from 2021/22 to 2022/23
Energy management platform, renewables, battery storage and EV chargers upgrade completed	Sept 2022	Design and preliminary work underway	Moved from 2020/21 to 2022/23
Virtual Broxden low carbon hub web site delivered	Oct 2022	Not started	Moved from 2020/21 to 2022/23
Civil works site closure & signage	June – Oct 2022	Not started	Moved from 2020/21 to 2022/23
Low Carbon Installations operational	Sept/Oct 2022	Not started	

6.8. Key Outcomes and Targets (full list and Benefit Realisation plan and tables detailed in FBC – Appendix F.)

Targets	Baseline	Target Uplift	Date	Variance
Phase 1 – Construction jobs	n/a	2.5	2022	Moved from 2021-22 to 2022
New/safeguarded jobs	n/a	1.5	2022	Moved from 2021-22 to 2022
To increase the usage of low carbon EV charging infrastructure at the Broxden Park & Ride site by 100% from baseline by 2027	2022	20% increase in EV Charging sessions per year	2027	Baseline moved from 2021 to 2022.
Reduction in Carbon Dioxide emissions	2022	Approx. 8,900 tCO ₂ e (medium estimate) saved over 5 years	2027	Baseline moved from 2021 to 2022. Uplift date moved from 2026 to 2027
Demonstrate evidence of Equal opportunities and non-discrimination; Equality between men and women in the use of the Low Carbon Travel Hubs	2022	Disabled access EV charging provision now included in project – to be deployed 2021/22	2027	Baseline moved from 2021 to 2022 Uplift date moved from 2026 to 2027
Leverage other investment through Tay Cities investment	n/a	£0.424m	2022	

6.9. Key Project Risks and Mitigations

Risks and mitigation updated since deal – other project risks detailed in FBC risk register.

Risk	Mitigation
1. Insufficient Governance, unable to fully resource Project.	<p>Perth & Kinross Council has robust governance and accountability systems in place. The Council will set up the management structure and ensure that there are sufficiently available and skilled resources within the project. This will include external consultants where necessary.</p> <p>Update Oct 2021 – PKC Project board with oversight of project now under the Smart PK Project Board. External Project and Cost Management consultants (IBI Group) appointed May 2021 – to oversee delivery of the project and track and monitor project costs against budget. Internal PKC contract delivery management appointed to liaise with external project management for the delivery of the project.</p>
2. Costs - due to the emerging nature of the technology, the final cost of the infrastructure is higher than originally forecast.	<p>An extensive market sounding exercise that provides market cost information, early warning of the various tenders and proposed operating models for each element of infrastructure has been carried out and will continue during the project, to ensure optimal outcomes for the project.</p> <p>Update May 2021 - External Project Cost management appointed to oversee delivery of project within specified budget.</p>
3. The quality of the infrastructure does not meet the Project's Outcomes.	<p>Careful review of what technology is available on the market and precise specification in the procurement documentation. By providing outcome-focussed requirements, suppliers will be more innovative, but there are minimum requirements that must be met. All low carbon infrastructure installed will be evaluated by Tactran to ensure impartial assessment of quality and operational effectiveness.</p>
4. Time - Not enough time to implement the project within the time constraints of the ERDF funding – 31 st October 2022.	<p>Preparation of project tenders completed in early 2020 and have been revised and updated Feb/Mar 2021 by external consultants Urban Foresight to ensure robust specifications of project tenders.</p> <p>External Project and Cost Management tender published (Mar 21) and awarded (May 21). Internal contract delivery management appointed (May 21).</p> <p>Main project tender published 6th Sept 2021. Tenders received – awarded in Dec 21.</p> <p>Update - A request for a further extension for ERDF funds to 31st October 2022 has been approved by EST/TS.</p>

5. Time/Finance - Delay to the TCD deal process could delay project implementation.	PKC has agreed to underwrite TCD side of project for Phase 1 at Broxden in lieu of access to TCD funds. Allocation of PKC funding in lieu of TCD funding re-confirmed March 2021.
6. Time/Finance - Covid-19 impact may delay or disrupt project delivery. Potential impact on internal PKC resources as PKC addresses large backlog of work due to the pandemic, Potential disruption to supply chains,	PKC is working hard to deliver the project within the European Regional Development Funding time constraints and potential impacts to that delivery will be closely monitored. However, the on-going Covid pandemic has the potential to further delay or disrupt the project delivery which may require a further application to extend the ERDF timeline into 2022. Other ERDF projects are running to June 2023. Update - A request for a further extension to 31 st October 2022 has been approved by EST/TS.

6.10. The impacts of the Covid-19 pandemic and potential for further delays or disruption to the project's implementation have been added in addition to those in the Implementation Plan.

7. DECISION PATHWAY

7.1. The project has met the decision pathway milestones as set out below and the next steps are also indicated.

Decision pathway milestones and planned timeline			
Stage	Milestone	Planned date	Date achieved
OBC	Governments' approval		19 th Feb 2021
	Thematic Board recommendation		31 st May 2021
	Management Group approval		24 th June 2021
	Joint Committee informed	-	-
Phase 1 Project FBC	Submission of FBC (to PMO who forward to governments)	2 nd Dec 2021	
	Governments' approval		6 th June 2022
	Thematic Board recommendation	June 2022	15 th June 2022
	Management Group recommendation		26 th May 2022
	Joint Committee approval	1 st July 2022	

8. DEPENDENCIES

8.1. ERDF for phase 1 of the project, the Broxden Low Carbon Transport Hub, is time constrained to 31st October 2022.

9. POLICY IMPLICATIONS

9.1. This report has been subject to an assessment of any impacts on Equality and Diversity, Fairness and Poverty and Environment. Equality and Fairness Impact Assessment submitted with the FBC. The revised EQIA concluded that Phase 1 of the proposed project contributed to the elimination of discrimination, harassment and victimisation. Advanced equality of opportunity and helped foster good relations between people who share a relevant protected characteristics and people who do not.

10. CONSULTATIONS

10.1. The following have approved the presentation of the Programme OBC and phase 1 project business case:

Local Authority Project Management Officer: Alison Seggie

Responsible Finance Officer: Stewart MacKenzie

Management Group Sponsor: Barbara Renton

Report author: Michael Figures
Title: Business Development Projects Officer at Perth & Kinross Council
Email address: MFigures@pkc.gov.uk
Phone number: 07584 619072
Date: 26/05/2022

APPENDIX 1

Project Information		
Project number	TCD008	
Project name	Phase 1: Broxden Low Carbon Transport Hub	
Project owner	Michael Figures	
Project Finance Director	Stewart MacKenzie	
Management Group Sponsor	Barbara Renton	
Award amount under TCD	Up to £636,000	
Jobs: Target number of jobs to be created	2.5 Construction jobs	1.5 New/safeguarded jobs
Leverage to be achieved	£424,000	

Low Carbon Transport & Active Travel Hubs Programme: Phase 1: Broxden Low Carbon Transport Hub Project Executive Summary

Introduction

The Low Carbon Transport and Active Travel Hubs programme is a series of related sustainable mobility projects that will contribute to the Tay Cities region shared vision and objectives by improving sustainable connectivity, workforce mobility and innovation. They will enhance the regions first class quality of life through a more liveable urban and rural environment and act as a catalyst for economic growth. Their aim is to improve integration between different modes of public and private transport, promote a modal shift from car to shared or public transport and active travel options, and provides sustainable renewable energy via EV (electric vehicle) charging systems. They will provide better access to jobs and skills opportunities for the region's growing population, while minimising the impact on the region's exceptional natural environment and air quality.

PKC were awarded £3.5m in the TCD Heads of Terms for this programme of projects. The programme will be delivered in three phases by three related but separate projects.

This FBC is for the first phase of the programme, the Broxden Low Carbon Transport hub project, where PKC is seeking an investment of £636k from the Tay Cities Deal to match with £424k from ERDF.

The intention of the project is to broaden the range of low carbon EV charging infrastructure available to residents, workers, and visitors to the region. It is estimated that approx. 8,900 tCO₂e (predicted estimate) will be saved over 5 years from the low carbon developments proposed by this first phase of the project at Broxden Park & Ride.

A major consideration for purchasing low carbon vehicles is the availability of refuelling infrastructure. By increasing the EV charging infrastructure in Perth we can help reduce the barriers to owning an EV. As Broxden is a significant, central node on the Scottish motorway network this has implications beyond Perth and the Tay Cities region.

It is an aim of the project to ensure the infrastructure and services proposed will be accessible to all, including the mobility impaired and the disabled. To support the requirements for inclusive growth a new disabled access EV charger station will be introduced for the mobility impaired at the Broxden site. PKC has agreed to work with the Centre for Inclusive Living in Perth to help guide us on the requirements for a disabled access EV charging station and to evaluate the provision once deployed. The ambitious Scottish government targets to remove the need for new fossil fuelled cars and light vans by 2030 will require a massive expansion of the take up of electric vehicles. The expansion of EV charging infrastructure to meet this growth will place an increasing strain on an already old and often constrained national grid. The cost of

the grid re-enforcement work required to accommodate this growth in EV's has been estimated in the hundreds of millions for Scotland alone. There is a need therefore to meet the predicted growth in EV's in a sustainable way.

This project provides a potential means to do this. By combining on-site generation of renewable energy and battery storage to sustainably support and efficiently manage the energy flows required. Such a set-up would also provide energy assets that could be incorporated into a smart energy system. PKC is currently working on the development of smart energy systems as part of a Can-Do Innovation Challenge fund / Innovate UK funded project, the PKC-SEN (Smart Energy Network) project. This has the aim of reducing the council's energy costs by optimising the use of electricity and maximising its value within the PKC estate, reducing the council's carbon footprint, and developing income streams from the utilisation of battery storage assets.

This project and the PKC-SEN project have the potential to provide a model of sustainable EV charging hubs and a smart energy management system that can sustainably support EV charging infrastructure and reduce total energy costs, carbon emissions and develop a new income stream for public organisations.

Funding Requirements for Phase 1 (Broxden-LCTH) of the programme of projects

Phase 1 – Broxden – LCTH (Low Carbon Transport Hub) – 2021/22

The first phase of the programme will be the development of the Low Carbon Transport hub at the Broxden Park & Ride site on the western edge of Perth. Due to the Covid pandemic this work has been delayed and is now scheduled from Jan 2022 to October 31st 2022.

Approximately **£424,000** of this cost (40%) has been awarded (May 2017) as a grant from the European Regional Development Fund's (ERDF) Low Carbon Travel and Transport (LCTT) fund, administered by the Energy Savings Trust on behalf of Transport Scotland.

To access the grant award from the ERDF, LCTT fund, the Council is required to provide match funding. Therefore, the remaining approximately **£636,000** of this cost is being sought as part of the submission to the Tay Cities Deal.

To Note 1 - The risk management costs (£65k) are included in the Phase 1 specification however Optimism Bias is not. ERDF funding does not allow a contingency and as Optimism Bias is a form of contingency it is not allowed under ERDF rules.

Project Description

The 'Broxden - Low Carbon Transport Hub' Project will create an innovative, low carbon transport hub at a key, strategically important site and central node on the Scottish motorway network, Broxden. The intention of the project is to broaden the range of refuelling facilities and transport modes available and to provide sustainable travel options to local residents, businesses and visitors to the region. The Project includes the expansion of

existing electric vehicle charge points to provide a range of EV charging speeds to accommodate a variety of EV usage patterns.

Solar carport canopies, integrated with a battery storage system to hold on-site generated renewable energy, managed and controlled by a smart energy management system. Will be developed to provide sustainable support for the EV charging stations. To encourage active travel, Broxden will host new secure bike storage facilities and a public transport information display. To improve integration between different modes of private and public transport and promote a modal shift from car to low carbon and public transport and active travel options. It will contribute to the provision of an integrated, effective, efficient and low carbon transport system for Perth city and the region.

The Broxden-Low Carbon Transport Hub project have the potential to provide a model of sustainable EV charging hubs and an energy management system that can sustainably support EV charging infrastructure and reduce total energy costs, carbon emissions and develop a new income stream for public organisations.

The above work at Broxden is the first phase of the Low Carbon & Active Travel Transport Hub programme, funded by the ERDF (40%) and Tay Cities Deal (60%). The total cost of the project is £1,060,000 with the contributions of £636,000 from the Tay Cities Deal (requested) and £424,000 from the ERDF (secured).

Project Outputs

The creation of a Low Carbon Transport Hub at the Broxden Park and Ride site, consisting of:

- 6 x additional Rapid (43kW-50kW) EV charging stations
- 1 x Disabled / Mobility Impaired access Rapid (43kW-50kW) EV Charger (Blue Badge Holders only)
- 8 x 7kW EV charging stations
- 2 x E-Bike chargers & Secure storage for private bikes
- Approx. 40 Solar Car ports (Approx. 80kW - to feed on-site generated renewable energy to the battery storage system).
- Upgrade of electricity sub-station on (500kva – 1Mva)
- Battery Storage system (to hold on-site generated electricity).
- Smart Energy Management and control system to optimise the use of electricity in support of the EV chargers.
- EV Booking system – (for 4 7kW EV chargers) – to utilise on-site generated renewable energy (The EV booking system is a pilot sub-project to test the public's appetite for bookable EV charging spaces and for these bookable EV charging spaces to utilise on-site renewable energy in their provision of EV re-charging. If they prove popular with the public then this option for bookable EV charger spaces can be increased to offer more bookable EV chargers at the site and can provide a template for such services to inform future developments of other EV charging hubs).
- Transport Information Display Unit (Real-Time Bus information & timetabling)
- Broxden - Low Carbon Transport Hub web site

- Marketing and Outreach Campaigns (to raise awareness of the new low carbon facilities.

Strategic Objectives of Phase 1 – Broxden-LCTH Project

SO1 – To provide easily accessible low carbon EV charging infrastructure and to increase the usage of low carbon EV charging infrastructure at the Broxden Park & Ride site by 100% from baseline by 2027.

SO1 Context - To meet the projected increasing demand for EV charging as a result of the shift from fossil fuelled vehicles to battery electric vehicles in line with Scottish Government climate change targets (phasing out of the need for new petrol and diesel cars and vans by 2030)

Specific	To increase the usage of low carbon EV charging infrastructure at the Broxden Park & Ride site by 100% from baseline by 2027
Measurements	EV charging sessions and consumption data;
Achievable Targets	20% increase in EV Charging sessions per year;
Relevant	Reduces greenhouse gas emissions from road transport and helps tackle climate change.
Timings/costs	Data usage and consumption analysis, Monthly & Yearly Report 2022 - 2027. No cost - Internal PKC process

Responsibility for delivery of SO1 - Broxden-LCTH project team / PKC Transport Planning Team / PKC Environmental Health team.

Programme Outputs - Expansion of EV charging facilities at Broxden Park & Ride.

SO2 – To utilise at least 90% of the on-site generated renewable energy in support of the EV charging systems at the site per year.

SO2 – Context - To provide locally generated renewable energy of approximately 55-65,000kWh per year to support the EV charging infrastructure. To support and contribute to a decarbonised energy network.

Specific	To utilise at least 90% of the on-site generated renewable energy in support of the EV charging systems at the site per year.
Measurements	Amount of on-site generated renewable energy being used by the EV charging systems
Achievable Targets	90+% on-site renewable energy used to support EV chargers

Relevant	Contributes towards a decarbonised energy network
Timings/costs	Usage Data analysis - Monthly & Yearly Report 2022-2027. No cost - Internal PKC process

Responsibility for delivery of SO2 - Broxden-LCTH project team / PKC Energy Team

Programme Outputs - Development of on-site renewable energy generation and battery system, controlled and managed by a Smart energy management system to support EV charging systems.

SO6 – To Increase awareness of low carbon infrastructure and facilities by 50% from baseline in five years. Phase 1 Broxden-LCTH by 2027,

SO6 -Context - To promote and improve knowledge and awareness of low carbon infrastructure and facilities.

Specific	Increase awareness of low carbon infrastructure and facilities by 50% from baseline (2022) in five years.
Measurements	Surveys at locations across Perth to understand perceptions and awareness of low carbon infrastructure and facilities.
Achievable Targets	10% increase in awareness of low carbon infrastructure and facilities per year.
Relevant	Raising awareness of the low carbon infrastructure and facilities to be introduced and deployed will help encourage usage.
Timings/costs	Phase 1, - Yearly Surveys 2022-27 – Cost (approx.) £1,500 - 2,500 per year

Responsibility for delivery of SO6 - Broxden-LCTH project team / PKC Transport Planning Team

Programme Outputs - Development of the virtual Broxden hub web site, marketing & outreach campaigns to business and communities to raise awareness and promote usage.

Phase 1 – Broxden-LCTH Project Benefits:

B1 – Support the uptake of Electric Vehicles through the increased provision of EV charging facilities and contribute towards meeting the Scottish Government climate change targets (phasing out of the need for new petrol and diesel cars and vans by 2030). Relating to SO1

B4 - Reduction in the use of grid energy. Relating to SO2

B5 - Reduction of cost of energy to support EV chargers. Relating to SO2

B7 – Improvement in the knowledge and awareness of low carbon infrastructure and travel options. Relating to SO1 & SO6

B8 - Job Creation & New / Safe guarded jobs – approx. 2.5 full-time equivalent jobs from construction to be supported through the implementation of this programme and 1.5 job created or safeguarded.

Notes on Jobs - Relevant Type I and Type II employment multipliers have been identified from the Scottish Input/Output tables produced by the Scottish Government and have been used to calculate values. Jobs safe guarded or created equate to the maintenance requirements of the EV charging systems, the Battery system, the Smart Energy Management system, Solar carports and the back office of the EV charging systems, EV booking system and Broxden – Low Carbon Transport Hub web site.

Summary – Benefits Realisation table

Strategic Objective	Benefit	Programme Outputs
SO1 - To provide easily accessible low carbon EV charging infrastructure and to increase the usage of low carbon EV charging infrastructure at the Broxden Park & Ride site by 100% from baseline by 2027	B1 – Support the uptake of Electric Vehicles through the increased provision of EV charging facilities and contribute towards meeting the Scottish Government climate change targets (phasing out of the need for new petrol and diesel cars and vans by 2030).	Expansion of EV Charging infrastructure at Broxden;
SO2 - To utilise at least 90% of the on-site generated renewable energy in support of the EV charging systems at the site per year.	B2 – Not increasing the use of grid energy. B3 - Reduction of cost of energy to support EV chargers	On-site solar array and battery system supported by a smart energy management system
SO6 - To Increase awareness of low carbon and active travel infrastructure, facilities and services by 50% from baseline in five years for each programme phase. Phase 1 Broxden-LCTH by 2027, Phase 2 by 2029 and Phase 3 by 2034.	B7 – Improvement in the knowledge and awareness of low carbon and active travel options.	Virtual Broxden hub web site, marketing & outreach campaigns to business and communities to raise awareness and promote usage.

Strategic Case

Transport Scotland's vision as expressed in the National Transport Strategy 2, is to have a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors.

This first phase of the programme at Broxden will align with the strategy's four main priorities. Reduces inequality by providing disabled/mobility impaired EV charging at the site (the first in the PKC area). Takes climate action by providing charging infrastructure to support the uptake of zero-emissions vehicles. Supports inclusive economic growth through innovation of energy management to reduce carbon emissions and costs in the provision of energy for the EV chargers. Improves the health and wellbeing by helping to reduce air pollution by supporting the increased use of zero-emission vehicles.

To achieve this, it will be necessary to grow the Low Emission Vehicle market and promote the widespread adoption of low carbon vehicles. Public infrastructure is needed to support this change, to develop low carbon facilities and keep pace with the growing demand for EV charge points. Without investment in low carbon infrastructure, the transition to low carbon transport solutions will be difficult to achieve in the timescales proposed by both the Scottish and UK Governments.

It is also a primary aim of the project to support the provision of low carbon transport infrastructure by sustainable means. If all energy required to support an expanding Electric Vehicle (EV) market had to come from the national grid, the cost of grid reinforcement work to accommodate this expansion would be very significant (estimates for Scotland alone are in excess of £500m). It is therefore important that EV charging provision is met in a sustainable way. This project aims to do this by developing on-site generated renewable energy from solar, combined with a battery storage system that will employ a smart energy management system to manage and control those inputs, to supply the energy required for the EV charging points from a sustainable energy source that does not rely on taking all energy requirements from the already over-strained national grid.

Inclusive Growth

The Broxden – Low Carbon Transport Hub project aims to support the National Transport Strategy (2) stated aims of improving inclusive growth to enable people fair and affordable access to reach the jobs where they can be most productive and boost both business growth and household incomes through improving access to employment.

For phase 1 – Broxden – Low Carbon Transport Hub project the aim is to provide equitable access to EV charging facilities at a strategic location on the western edge of Perth. That serves both Perth City and surrounding area as well as motorway users from the nearby motorway exchange between the M90 and A9. It will also use the community benefits generated from the procurement of project outputs to support employment and training/work experience opportunities in the area.

Will support businesses and support improved mobility to access employment by providing the re-charging infrastructure to support businesses and communities that may not have the space or the funding to develop their own EV charging facilities and will also provide reliable EV charging support to visitors to the area.

The location of the low carbon transport hub at Broxden Park & Ride will provide EV Charging infrastructure to support local businesses and citizens of Perth and motorway visitors to the area or passing through. Giving people opportunity to access a large EV charging facility (41 EV charging spaces) for those that do not have access to EV charging infrastructure at their homes or their businesses.

The expansion of EV charging facilities at Broxden Park & Ride to 41 EV charging spaces (including 4 bookable EV charging spaces) will give confidence to travellers that the facilities needed to complete their journeys will be available to them at Broxden Park & Ride. Where high-quality, reliable and proven EV charging infrastructure will be available to all to use.

An innovative solution is being provided that will incorporate on-site renewable generation of electricity, that will be optimised by means of a smart energy management and battery system to reduce the carbon footprint of the EV charging infrastructure and reduce the costs of providing energy to support the facilities.

The Case For Change

The Scottish Government has announced its intention to phase out the need for new petrol and diesel cars and vans from Scottish roads by 2030. This ambitious target has made the need to increase the provision of low carbon infrastructure and facilitate the uptake of low carbon vehicles more urgent.

The Scottish Government's Climate Change Action Plan sets a target of a 75% reduction in carbon emissions by 2030: a reduction of 90% by 2040 and to be net-zero carbon by 2045. The transport sector will need to make a significant contribution towards meeting this target. Transportation accounts for 36.8%¹ of the total Scottish carbon emissions. The Scottish Government's Climate Action Plan has brought forward plans to phase out the need for new petrol and diesel cars and vans in Scotland by 2030. With public bodies to phase out the need for any new petrol and diesel cars and light commercial vehicles by 2025. This is supported by Transport Scotland who stated in their 2013 Switched on Scotland Roadmap the vision that: "by 2050 Scottish towns, cities and communities will be free from the damaging effects of petrol and diesel fuelled vehicles".

To have the best chance of meeting this target, the uptake of electric zero emission vehicles should be promoted and provisioned with easily accessible supporting refuelling infrastructure.

Carbon savings from the displacement of petrol and diesel sales by EV's is estimated at 8,900 tCO₂e saved over 5 years. Actual carbon savings, from the displacement of

¹ [Carbon Account for Transport No. 11: 2019 Edition](#)

petrol and diesel by EV's will be monitored, recorded, and reported throughout the life cycle of the project.

Economic Case

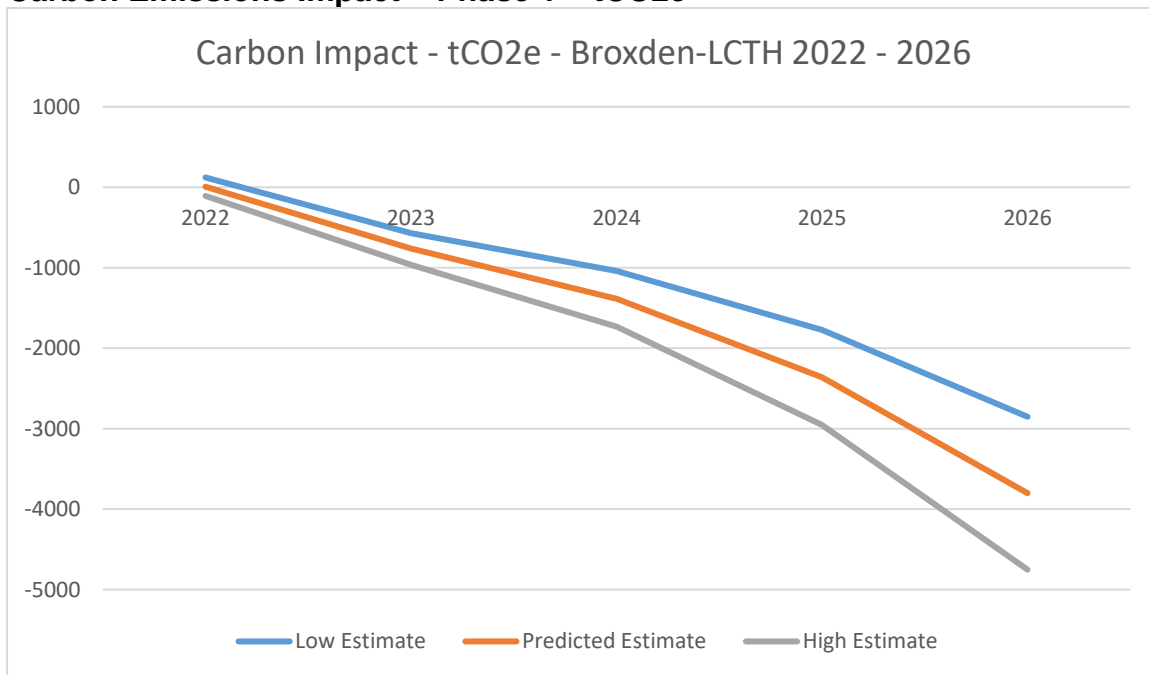
To meet the strategic needs of the Scottish Government and Transport Scotland's vision to decarbonise transport in Scotland it will be necessary to reduce carbon emissions, increase the uptake of alternatively fueled vehicles, decrease the levels of air pollution and encourage, facilitate and support low carbon travel modes.

Key findings

Short-listed options	NPV
Option 3 – Broxden-LCTH	(+) £735,094

Carbon Costs & Savings

Carbon Emissions Impact – Phase 1 – tCO2e



Phase 1 – Broxden-Low Carbon Transport Hub:

Total Embodied & Operational Carbon Costs for Phase 1 - Broxden-LCTH: **579.8 tCO2e (Low); 614.8 tCO2e (Predicted); 650 tCO2e (High).**

Total Carbon Savings for Phase 1 - Broxden-LCTH: **6,679 tCO2e (Low); 8,906 tCO2e (Predicted); 11,144 tCO2e (High).**

Benefits realisation

Benefits – Option 3 (Preferred Way Forward)

- Broxden-LCTH Benefits (5Yrs):

£2,163,273 (Net change in carbon emissions)²; +
 £ 82,170 (Net air quality impact)³; +
 £ 130,870 (Displacement of grid energy by on-site renewables – 5yrs) +
 £ 61,370 (Battery revenue over 5 years); +

£2,437,683 Project benefits over 5yrs

Overall findings: the preferred way forward

Option 3 provides the best EV charging capacity to meet expected growth in EV usage throughout the project to 2026 and beyond. The Option 1 - Business as Usual option would run into capacity issues by 2023/24 and the Option 2 - Do Minimum option would reach capacity by 2025/26, assuming growth rates rebound from the 2020/2021 Covid dip to pre-Covid levels of growth.

Commercial Case

The elements for the Broxden Low Carbon Transport Hub have been extensively researched, and engagement with suppliers and manufactures has been carried out. This has given a greater degree of certainty on the specification and associated costs of the project elements for this phase of the programme. The tenders for the main project elements of the first phase at Broxden have been updated and revised by Urban Foresight and was published in early Sept 2021. The tender for the external Project and Cost Management was published in March 2021 and was awarded in early May to IBI Group. An internal PKC Contract Manager was appointed in May and an internal project delivery team established.

Each EV user will be saving between £10-£25 per EV charging session while the PKC EV chargers remain free to use. In 2019 there were 7,809 EV charging sessions, this represents between £78,000 and £195,000 of direct savings for EV owners in 2019.

Stakeholder engagement

For the Broxden Low Carbon Transport Hub phase of the project, the project requirements have been confirmed and potential partners and landowners identified and engaged. We have identified and consulted with many interested parties to inform them of the technical requirements of the proposed project elements and in preparation for the tendering process.

² Carbon values derived from the new traded carbon values published by BEIS 6th Sept 2021

³ Values for net air quality impact derived from BEIS IAG spreadsheet tool for valuing changes in greenhouse gas emissions

Procurement strategy

Procurement will be by open tender published on the Scottish Governments Public Contracts Scotland web site and promoted to the relevant business communities. All suppliers will be asked to provide details of all carbon costs associated with the manufacture and operation of their products or services and work to improve carbon management such as by adopting and using the PAS 2080 carbon management process.

Phase 1 - The Broxden Low Carbon Transport Hub development at the Broxden Park & Ride site was to be implemented and completed by March 31st, 2022 (ERDF deadline). However, with the disruption of the Covid pandemic it has become clear we will not be able to implement the project within that time frame. Discussions have been held with EST (administrators for the ERDF funds on behalf of Transport Scotland) and a formal change request was submitted to EST in early Jan 22 to extend the ERDF timeline to 31st Oct 2022 (which has been approved). External Project and Cost management were appointed in early May 21, with the main project tenders to be published in early Sept 21. The main project tender – Contract 1 for the RES (Renewable Energy System), EV charging systems, the BESS (Battery Energy Storage System) and Smart Energy Management platform/system, E-Bike chargers & bike storage, sub-station upgrade and Civil works; will be awarded in Dec 21, followed by a system design by the contractor commissioned for the main project contract. With detailed design set to begin in January 22 and project deployment to be completed by October 2022.

Contract 2 for the virtual hub web site and EV Booking System, will be published in Feb 22, with development provisionally set to begin in April 22 and be completed by Aug/Sept 2022.

Contract 3 for the Transport Information Display unit is an extension to an existing contract and will be commissioned in May 22, with testing in June and to go live in July 22.

Financial Case

The infrastructure to be delivered under the project is specified in [Appendix C](#) (in FBC) Capital Costs and Funding sources. The approximate total capital cost of the project is shown in the Table below.

Project Funding

Programme	Funding			Totals
	ERDF	TCD	Other	
Phase 1 – Low Carbon Transport Hub Project	£423,920	£635,930	n/a	£1,059,850

Approximately £424,000 of Phase 1 at Broxden has been awarded as a grant from the European Regional Development Fund via the Low Carbon Travel and Transport

(LCTT) fund, administered by the Energy Saving Trust on behalf of Transport Scotland.

The original ERDF grant award in May 2017 was for £784,000. With the time constraints of this funding we are no longer able to deploy a hydrogen station during the first phase of the project. After discussions with Transport Scotland on the best way to progress, we have re-scoped the project in line with Transport Scotland guidance. This re-scoping of the project and its budget has been approved as has the extension to the ERDF funding timeline to 31st March 2022. (To note – a formal change request has been submitted to EST (Jan 2022) to extend the ERDF timeline for this project to 31st Oct 2022 – which was approved in Feb 2022). This re-scoping of the Broxden phase of the project has meant a proposal to adjust the ERDF grant award, reducing it from £784,000 to £424,000 – approved by EST/Transport Scotland in 2019.

Management case

The Council has developed its monitoring and evaluation systems in line with national rules and is aware of the requirements in terms of claims cycles and reporting. It has developed its project managements processes accordingly and has robust governance and accountability systems in place. The recording and tracking of outputs, financial information and associated record keeping are of paramount importance and the Council can demonstrate through its track record in other projects, that it has sound systems in place and readily complies with the requirements in respect of claims, reporting, verification and audit requirements.

PKC has commissioned external expertise (Urban Foresight) in developing the specialised tenders to ensure that they are technically detailed, have a clearly define budget and timescale and are robust. Urban Foresight have extensive experience in the development and deployment of EV charging systems having helped develop Tactran's Regional EV Strategy and from working with Dundee City Council on a number of EV charging hub developments in the city.

PKC has also commission IBI Group as external Project and Cost Management consultants to provide the project management for the physical delivery of the project within a defined timescale and Cost management to ensure the project is delivered within a defined budget. IBI Group were commissioned through an open procurement from the Engineering & Technical procurement framework (Scotland Excel).

Project team and project board for Phase 1 – Broxden low carbon transport hub was originally convened in the summer of 2017 and has been revised twice, in Feb 2020 and in Aug/Sept 2020. When the Broxden-LCTH project was incorporated into the new combined Smart PK project board for smart clean growth projects.

Carbon Management

The whole life carbon management of the infrastructure to be deployed by this first phase of the programme of projects will be supported through adoption of the PAS 2080 carbon management process.

Project management arrangements

Phase 1 – Broxden-LCTH - PKC has commissioned external expertise (Urban Foresight) in developing the specialised and highly technical tenders. To ensure that they are technically detailed and are robust.

PKC has commissioned external Project and Cost Management consultants IBI Group to oversee the physical delivery of the project, adhering to all safety and CDM regulation. PKC has appointed an internal Contract Manager and project delivery team to liaise with the external project management in the delivery of the project.

The main contractor commissioned to carry out the project work will be tasked with the principle detail system design for the projects infrastructure deployments and documenting arrangements for carrying out risk assessments capable of supporting safe methods of work and reliable contract delivery.

Evaluation of the project's infrastructure deployments will be led by Tactran (Tayside and Central Scotland Transport Partnership).

Broxden-LCTH (Phase 1) - Risk Management:

Risk management - £65,000 (Phase 1)

Phase 1 – Broxden-LCTH - £65,000 has been allocated for project and Cost Management to mitigate risk for this phase of the project. External project and cost management have been commissioned from the Engineering & Technical procurement framework (Scotland Excel) to oversee the delivery of the 1st Phase of the programme at Broxden and manage the project delivery risks.

Post project evaluation arrangements

The Broxden Low Carbon Transport Hub project will be evaluated for 5 years past the projects close in October 2022. Surveying against baseline at the site to measure project outcomes are scheduled yearly till 2027.

SO1 – To provide easily accessible low carbon EV charging infrastructure, to meet the projected increasing demand for EV charging, as a result of the shift from fossil fuelled vehicles to battery electric vehicles in line with Scottish Government climate change targets (phasing out of the need for new petrol and diesel cars and vans by 2030) .
Targets - To increase the usage of low carbon EV charging infrastructure at the Broxden Park & Ride site by 100% from baseline by 2027

Measurement & Reporting - EV charging data usage and consumption analysis, Monthly & Yearly Report 2022 – 2027.

SO2 – To provide locally generated renewable energy to support the EV charging infrastructure, to support and contribute to a decarbonised energy network.

Targets - To utilise at least 90% of the on-site generated renewable energy in support of the EV charging systems at the site per year.

Measurement & Reporting - On-site renewable energy generation, battery and EV charger usage data analysis - Monthly & Yearly Report 2022-2027.

SO6 – To promote and Improve knowledge and awareness of low carbon infrastructure and facilities.

Targets - Increase awareness of low carbon infrastructure and facilities by 50% from baseline in five years.

Measurement & Reporting - Yearly Surveys at site and in locations across Perth & Kinross 2022-27.

This data and usage data from the deployed systems will be collated with on-line feedback from the virtual Broxden Low Carbon Hub web site to provide a picture of users' perceptions of the site and its low carbon infrastructure. The Broxden-LCTH project will be closely monitored in terms of the usage of low carbon infrastructure that will be deployed. This will monitor and evaluate the usage of EV chargers to be deployed, including the disabled access EV charger, so we can evaluate when other disabled parking spaces should be converted into disabled access EV charging spaces.

Recommendation

From the appraisal of the project options we believe Option 3 – Preferred Way Forward best meets the project requirements for the available budget in terms of the Broxden low carbon transport hub. It will provide capacity of EV charging systems at Broxden well beyond the timeline of the project and will support this provision in a sustainable way by utilising on-site generated renewable energy, supported by battery systems and smart energy management control system. This will ensure a significant and sustainable EV charging facility to serve Perth and the surrounding area as well as at a strategically important central node on the Scottish motorway network.