

Net Zero Public Sector Buildings Standard- Pathfinder Journey

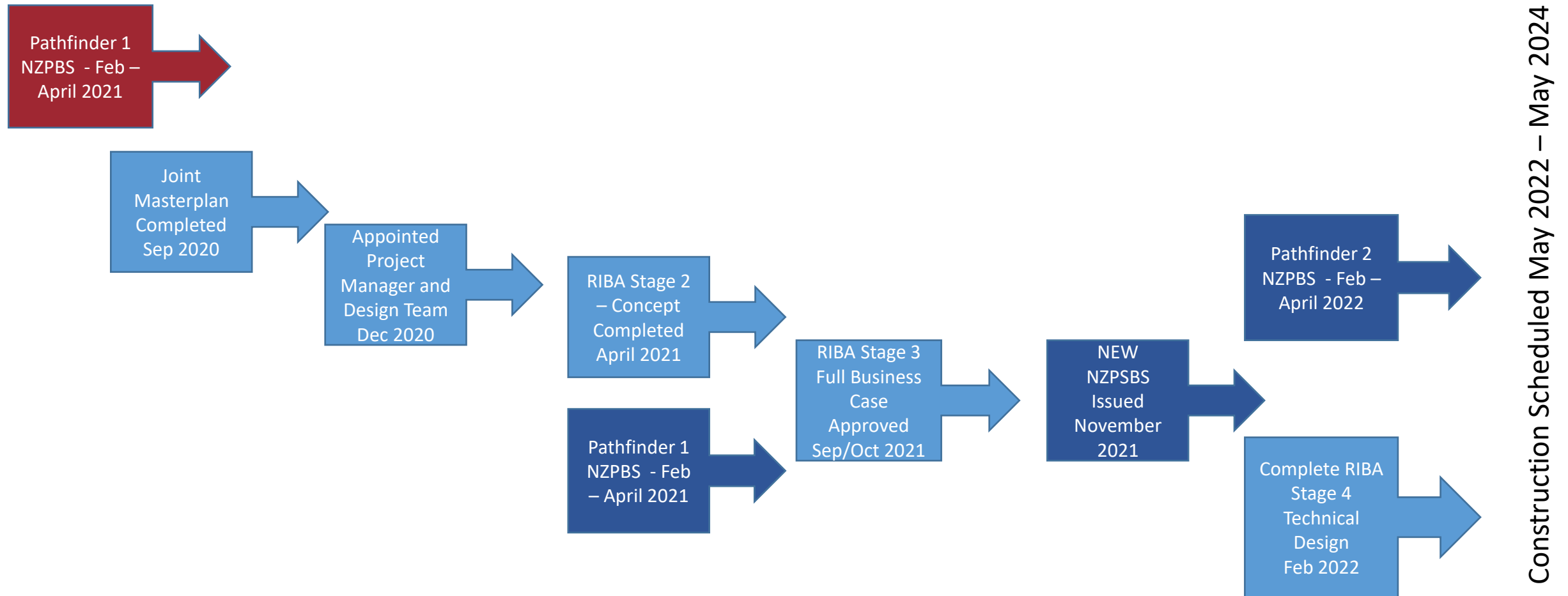


Funding announced in 2018 for a new **Dunfermline Learning Campus** (2 x Schools and a College) coming together on the same site.

Joint College & Council Masterplan Feasibility Study
Undertaken: Jan 2020 – Sep 2020 to identify the footprint, adjacencies and scope of the projects.

The Scottish Government is committed to all buildings achieving Net Zero emissions by 2045.
(Climate Change Act 2019- net zero emissions of all greenhouse gases by 2045)

Fife College – Net Zero Public Sector Buildings Standard- Pathfinder Journey.. So Far....



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Pathfinder 1 – RIBA Stage 2 - What did this involve?

A series of meetings with the SFT and Peer review team; Zero Waste Scotland, Mott McDonald and engagement with the College Design Team:

- Atelier 10 - M&E
- Woolgar Hunter – Structural and Civils
- Reiach and Hall - Architects
- Horner & McLennan – Landscape Architects

- ☐ Objective 1 – Inclusive NZC Economy Outcomes
- ☐ Objective 2 – Construction Embodied Carbon
- ☐ Objective 3 – Operational Energy Carbon Impacts
- ☐ Objective 4 – Whole Life Carbon
- ☐ Objective 5 – Indoor Environmental Quality
- ☐ Objective 6 – Other Environmental Impacts

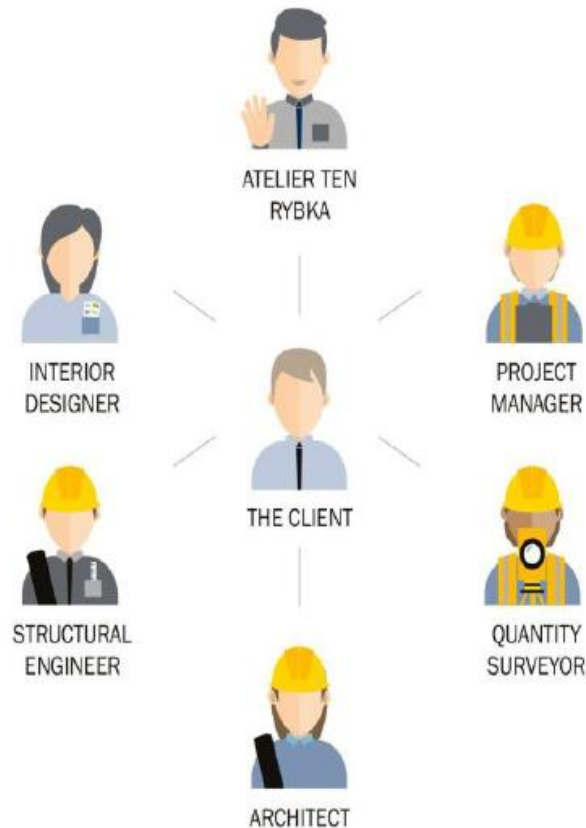
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| Key Pathfinder Elements | Challenges | Rewards /Opportunities |
|---|---|--|
| Engaging with pathfinder project team at the same time as the RIBA Stage 2 Concept Design | Initial engagement of the entire design team to commit time/resource and enthusiasm | Positive validation of the design team assumptions, whilst challenging comfort zones to “do better” |
| Engaging the team with the importance of embodied carbon | Inconsistent understanding of embodied carbon. Conflicting priorities, around carbon, fire safety, cost, quality, insurance, materials availability etc. | Embodied carbon training was provided. The whole team adopted a consistent approach to undertaking a cost/ benefit carbon decision. This approach became the driver for the net zero design. |
| Identifying the embodied and operational carbon targets at RIBA Stage 2 – Concept | Limited understanding of how to set targets at an early stage, prior to the design concept & with limited benchmarking info. | Developing targets early helped focus the whole team on the journey College project will become a benchmark for future HE/FE projects |
| Inclusive Net Zero Champion | Design Team input competent for the INZC role, however no clear role for in house post occupation management of operational carbon or carbon assessment of refurb/future projects. | Engagement with the in-house Estates Team to develop a College wide Net Zero Strategy, across all campus sites. Provided feedback to SFT to help address the wider use of the INZC role and consistent competencies for future use of the Standard. |
| Funding | Our project funding was announced in 2018, pre NZPBS and Climate Change (Emissions Reduction Targets) Scotland Act 2019. This presented a challenge to deliver the best NZ outcomes. | The Pathfinder allowed us to re-evaluate the approach to Net Zero and identify the best carbon measures in line with our budget. This formed part of our Business Case which was approved in October 2021. |
| General Information around District Heat Systems | Insufficient information on district heat systems; both present and future; what this might look like; what might be the liability, programme and cost of such systems being available. | Whilst we were not able to include this in our project, there is an national requirement to further develop information, on feasibility and viability, to offer future projects this opportunity. |

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DLC Collaboration

- Utility Strategies agreed and being progressed
- External Lighting being developed collaboratively
- Common Wi-Fi Networks technically feasible joint workshop to be set-up with interested parties
- Common security strategies being assessed collaboratively
- Surveys and studies being shared
- Design Solutions discussed and commonality in approach
- Continuing collaboration with SFT on the NZC role and the Pathfinder Activity Tracker



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pathfinderprojectdunfermlinelearningcampuscollege.pdf (scottishfuturestrust.org.uk)



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What next ?– Pathfinder Phase 2

- Continue to record all design decisions on the activity and compliance tracker
- Develop our Energy Options report in line with RIBA Stage 4 and Employer Requirement (ERs) – understand the detail for FFE and the link to Operational Energy Target (OET) and Embodied Carbon
- Independent Verification (CMVP) of Obj 3 and validation of evidence and target setting
- Continue to measure Embodied Carbon as part of the construction phase
- Measure Operational Carbon as part of the 3 year soft landing operational phase
- Identify and address inconsistencies in targets v actual carbon
- Continue to report with our annual Carbon Management Plan review and our annual Public Bodies Climate Change Duties Reporting

- **Timeline:** Financial Close July 22 – Construction up to June 2024 – Occupancy August 2024

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College & Council Design – September 2021



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College & Council Design – Design Illustration September 2021

