ZED PODS Limited

Social Value Impact Economic Appraisal Report

Project: St Andrews House, Cullompton

March 2025

PODS

In partnership with

Mid Devon DISTRICT COUNCIL

Contents

1 Overview

Economic appraisals form a critical part of the HMT Green Book business case methodology (being the standard approach adopted by local authorities and the public sector when seeking approval for their capital projects).

Public sector landlords require a robust evidence base to demonstrate the social impact of their development projects and evidence the wide-ranging benefits that a partnership with ZED PODS can achieve in designing and building zero-operational carbon MMC-led new developments.

The purpose of this economic appraisal is to appraise the social, environmental and economic costs, benefits and risks for the options of a project and identify the option most likely to offer the best social value for delivery of the project.

By preparing an economic appraisal that demonstrates, quantifies, and monetises the benefits of using ZED PODS housing solutions, alongside the whole lifecycle costs and reduced risks of the product, this robust evidence base will support public sector landlords in the development of their business cases for the project and demonstrate the best social value for money option when compared to other possibilities.

This economic appraisal following Green-Book methodology model has been prepared by Global City Futures, who are a team of Better Business Case Practitioner Accredited consultants (the Government's gold standard training accreditation) working in partnership with ZED PODS Limited.

2 Background

ZED PODS deliver revolutionary cost-effective, eco-friendly, affordable housing solutions through the utilisation of volumetric offsite MMC technology. Predominantly partnering with local authorities and other public sector organisations, ZED PODS look to not only optimise the use of underutilised and constrained public sector land but also keep the lowest possible utility and lifetime costs.

This social value economic model aims to quantify and detail the wider social benefits that are delivered both in implementation and through the lifecycle of the ZED PODS product. This will support Local Authorities to navigate their governance and approval processes by generating an output that can be used to inform the Economic Appraisal.

3 Social Impact

A partnership with ZED PODS will have a wide range of positive effects on communities, individuals, and society at large, which can be demonstrated by this social impact economic model. The output of the economic model is a dashboard which provides a snapshot of the overall social impact of the project.

3.1 The Economic Appraisal

ZED PODS' bespoke economic appraisal model helps public sector landlords to identify and quantify the benefits arising from a development project. The model provides a robust evidence base to demonstrate the social impact and the wide-ranging benefits that a partnership with ZED PODS achieves. The economic appraisal conducted includes the four benefit classes as laid out in HM Treasury guidelines:

1. **Cash Releasing Benefits**
2. **Non-Cash Releasing Benefits**
3. **Societal Benefits**
4. **Unmonetisable Benefits**

When assessing the benefits of a project or policy, the HMT Green Book categorises them into four main types:

1. Cash-Releasing Benefits

These benefits result in direct financial savings that can be reinvested or used elsewhere. They involve actual reductions in expenditure, such as:

*   Lower operating costs from energy efficiency measures
*   A reduction in staff costs due to automation
*   Savings from reduced procurement costs

These are tangible and measurable in monetary terms, directly impacting budgets.

2. Non-Cash-Releasing Benefits

These benefits generate efficiencies or cost savings, but they don't immediately free up cash for other uses. Instead, they may allow organisations to do more with the same resources. Examples include:

*   Increased productivity from improved processes
*   Reduced maintenance needs extending asset life
*   Time savings for staff, allowing them to focus on other tasks

While they improve value for money, they don't necessarily translate into direct budget savings.

3. Societal Benefits

These are broader benefits that improve social and economic well-being, often affecting communities, businesses, and the environment. Examples include:

- Reduced carbon emissions improving public health
- Increased employment opportunities supporting local economies
- Better living conditions that contribute to enhanced wellbeing

These benefits often justify public investment, even if they don't directly impact government budgets.

4. Unmonetisable or Qualitative Benefits

Some benefits are difficult to quantify in financial terms but are still important for decision-making. These include:

- Improved quality of life or well-being
- Increased biodiversity from environmental initiatives
- Enhanced reputation or public trust in government services

While harder to measure, these benefits should be considered alongside financial impacts when evaluating a project's overall value.

3.1.1 Discounting in Economic Appraisal

When evaluating a project or investment, we need to compare costs and benefits that occur at different points in time. However, money today is worth more than the same amount in the future due to factors like inflation, risk, and the opportunity cost of capital. Cost discounting helps us fairly compare future costs and benefits by adjusting them to reflect their present value. The key reasons for Using Cost Discounting are:

- ❖ **Reflecting Time Value of Money**
  - o A pound today can be invested and grow over time, making it more valuable than the same pound received years later.
  - o Discounting adjusts future values to account for this, ensuring fair comparisons.
- ❖ **Accounting for Risk and Uncertainty**
  - o The further into the future a cost or benefit occurs, the greater the uncertainty.
  - o Discounting reduces the weight of future values to reflect this risk.
- ❖ **Supporting Better Decision-Making**
  - o Helps policymakers and businesses choose options that deliver the best long-term value.
  - o Ensures that projects with early, high-value benefits are not treated the same as those with delayed or uncertain returns.

How It Works

A discount rate is applied to future costs and benefits, reducing their value to what they would be worth today (Present Value). This ensures that long-term investments are appraised in a way that reflects real economic value. By using cost discounting, we make more informed and efficient investment decisions, ensuring public funds and business resources are used wisely.

4   Dashboard

From the economic model a dashboard has been developed to highlight the benefits of the project **"St Andrews House"**, which can be seen in Figure 1 below.

Location   St. Andrews Estate, Cullompton, EX15 1JA

Client: Mid Devon District Council (MDDC)

Principal Contractor: ZED PODS Limited

Architect: ZED PODS Limited

Scope of works: Full turnkey package RIBA stages 0-7 undertaken by Zed Pods Limited

Project Description: St Andrews House, a pioneering six-unit zero-operational-carbon, social-rented modular homes on a challenging council-owned brownfield site (garage site) in Cullompton using Volumetric Modular Construction (Category 1).

Start Date (Design & Planning): August 2021

Start Date (Built phase) Summer 2023

Completion Date: Spring 2024

Figure 1 Model Dashboard

Zed Pods Housing Model Benefits Appraisal

St Andrews

Project Details	
Region	South West
Development Start Year	2023
Practical Completion Year	2024
Acquisition Costs	£0
Development Costs	£1,000,000
Size Area (Ha)	0
Number of Units	6

Benefits

Total Discounted Benefits	£8,154,809

Benefit Class	Total	Total Discounted Benefits
Cash Releasing	£2,672,949	£1,164,562
Non Cash Releasing	£0	£0
Societal	£16,347,777	£6,990,247
Unmonetisable	£0	£0
Total	£19,020,726	£8,154,809

Benefits by Class: Cash Releasing 14%, Societal 86%, Non Cash Releasing
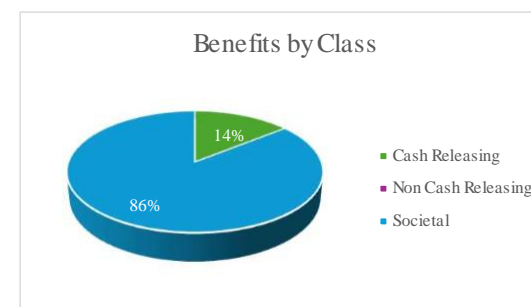
Metrics

Total Discounted Benefits	£8,154,809
Total Discounted Costs (assumed incurred Yr 0)	£1,000,000
Benefit / Cost Ratio	8.15
Net Present Social Value	£7,154,809
Payback Year	2028

Unmonetisable Benefits

Climate Resilience
Improvement of anti-social behaviour and increased community cohesion
Efficiencies in regard to brownfield site management
Provision of low carbon living training to residents

5   Sources

5.1   GMCA Cost Benefit Analysis (CBA) Model

Source:

https://www.greatermanchester-ca.gov.uk/what-we-do/research/research-cost-benefit-analysis/

Description: The CBA model is used to understand the value for money provided by an intervention, particularly in terms of the use of taxpayers' money and the extent to which new delivery models might generate improved outcomes and related savings compared to 'business as usual'. The CBA model also enables the wider 'economic case' or public value to be articulated, quantifying economic benefits that accrue to individuals and businesses, and social benefits in terms of improved individual health and well-being.

5.2   Land Value Estimates

Source Land Value: https://www.gov.uk/government/publications/land-value-estimates-for-policy-appraisal-2019

Description: MHCLG land value estimates for policy appraisal from 2019, valuations averaged by region and costs.

Source Indexation: https://www.bankofengland.co.uk/monetary-policy/inflation/inflation-calculator

Description: To inflate the MHCLG land values from 2019 to the 2024 base year.

5.3   Carbon Valuation

Source:

https://www.gov.uk/government/publications/valuing-greenhouse-gas-emissions-in-policy-appraisal/valuation-of-greenhouse-gas-emissions-for-policy-appraisal-and-evaluation#annex-1-carbon-values-in-2020-prices-per-tonne-of-co2

Description: Greenhouse gas emissions values ("carbon values") are used across government for valuing impacts on GHG emissions resulting from policy interventions. They represent a monetary value that society places on one tonne of carbon dioxide equivalent (£/tCO2e). They differ from carbon prices, which represent the observed price of carbon in a relevant market (such as the UK Emissions Trading Scheme).

5.4   Quality Adjusted Life Years (QALY)

5.4.1   Source Green Book QALY Valuation:

The Green Book (publishing.service.gov.uk) Page 87

Description: Monetary valuations of QALYs are available for the UK. The current monetary Willingness-to-Pay (WTP) value for a QALY is £74,000 in 24/25 prices. Further information on the basis for the value of a QALY can be obtained by contacting the Department of Health and Social Care. The amount of Value of a QALY effects should be discounted at the health rate of 1.5%, declining after 30 years. The value of 0.084 represents the improvement in Pain/Discomfort from Moderate to No Problem resulting from access to warm accommodation.

5.4.2   Source QALY calculation:

https://www.gov.uk/guidance/cost-utility-analysis-health-economic-studies

Description: "QALYs attempt to combine the effects of your product on both mortality (how long people live for) and morbidity (how well people are). One QALY represents one year of life in full health. To calculate QALYs, you will need to measure:

- life years

- health-related quality of life (HRQL or QoL)

Life years are estimates of how far an intervention extends life. HRQL reflects an individual's perceptions of their own health, shown as specific health states or dimensions."

5.4.3   Source HRQL measure:

https://euroqol.org/wp-content/uploads/2024/01/ENG_value-set_STATA.txt

Description: "Measures QoL in 5 dimensions: mobility, ability to self-care, ability to carry out usual activities, pain/discomfort. Each dimension is rated at one of 5 levels: no problems / slight problems / moderate problems / severe problems / extreme problems or unable."

5.5   WELLBY

Source:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005388/Wellbeing_guidance_for_appraisal_-_supplementary_Green_Book_guidance.pdf

https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/datasets/personalwellbeingandprotectedcharacteristics

https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/personalwellbeingfrequentlyaskedquestions

Description: WELLBY assesses the wellbeing impact for an individual. Improvements in the measurement of wellbeing measurement in the second half of the twentieth century have enabled consideration of wellbeing as part of the microeconomics of social welfare.

5.6   Prisoners Building Homes Programme

Source:

https://www.gov.uk/government/statistics/proven-reoffending-statistics-january-to-march-2022/proven-reoffending-statistics-january-to-march-2022

Description: Data shows the national reoffending rate, ranging from 25.1% to 55.5%.

Source: https://bristoltogether.co.uk/social-impact/

Description: Bristol Together CIC (an employer on the Programme and established in 2011 with the specific goal of employing and training ex-offenders) have supported over 130 former prisoners into employment

through their work and have seen a reoffending rate of less than 10% for prisoners employed under their organisation

Source:

https://www.fpe.org.uk/the-cost-of-prisons/

Description: For 2021/22, the process costs of imprisoning someone typically costs £65,000

Source:

costs-per-prisoner-individual-prison-2022-2023.ods

Description: For 2022/23, once inside prison, the estimated cost of a prison place is £51,108 per year

Source Indexation:

https://www.bankofengland.co.uk/monetary-policy/inflation/inflation-calculator

Description: To inflate the MHCLG values from to the 2024 base year.

5.7 Cost of Retrofit

Source:

The-costs-and-benefits-of-tighter-standards-for-new-buildings-Currie-Brown-and-AECOM.pdf

Description: A report for the Committee on Climate Change

5.8 Fuel Poverty

Source:

https://assets.publishing.service.gov.uk/media/65ccecba1d939500129466a9/annual-fuel-poverty-statistics-report-2024.pdf

Description: 13% of households in fuel poverty

5.9 Roles in Construction

Source:

https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/averageweeklyearningsbyindustryearn03

Description: Average earning ONS - roles in Construction