



CBA Builder Simple Worksheet 4: Redevelopment Project

You are required to perform a project appraisal which considers three options for a redevelopment project of a derelict factory site in a city centre, which has become a local problem associated with anti-social behaviour. In your group you need to consider each of the options below and order them as first, second and third choice depending on your findings. The project options all have associated costs and benefits which need to be considered in appraising the options. There are also a number of further considerations which you will have to account for in your final appraisal (and choice of project) which are not explicitly listed below. Use a discount rate of 3% throughout. Calculate costs and benefits for the full 20 year period.

Option 1: Enterprise Training Centre (ETC)



The first option being considered by the City Council is to redevelop the current building into an enterprise training centre (ETC). The ETC will be housed inside the current factory building, requiring a number of alterations to the main structure. The idea of the ETC is popular with the City Council as it will be used to train local young people and help them to start up their own businesses with the guidance of skilled staff at the centre.

The costs and benefits associated with option 1 are as follows:

- Building costs: £2.8m (occurring in year 0)
- Staffing for ETC: £0.2m per year (beginning in year 1)
- Training benefits and job creation: £0.25m per year (beginning in year 2)
- Building maintenance: £10,000 per year (beginning in year 1)
- Multiplier effect on local economy: £5.2m (one-off estimate provided by local economists)

Option 2: Luxury Apartments

The second option being considered is to convert the factory into luxury urban apartments and sell them. This option requires some major structural changes to the building, but uses the existing outer shell of the building. This option is popular with the City Council as it should create substantial revenues in the short term.

The costs and benefits associated with option 2 are as follows:

- Building costs: £4.2m (occurring in year 0)
- Advertising and estate agents costs: £40,000 (occurring in years 0-3)
- Income received from sale of apartments: approximately £2.35m per year (occurring in years 1-3). Note: the exact value is dependent on speed and value of sales.
- Multiplier effect on local economy (from consumption of individuals living in apartments): £1.5m (one-off estimate provided by local economists)

Option 3: New Industrial Units

The third option is to demolish the current structure and build eight industrial units on the site. These will be rented to businesses including mechanics, logistics, and others. The idea of the industrial units is popular with the City Council as it is seen as the cheapest option available, and should create jobs in the local area. However, it is likely to result in substantial congestion, noise and air pollution.



The costs and benefits associated with option 3 are as follows:

- Demolition costs: £200,000 (occurring in year 0)
- Building costs: £2m (occurring in year 0)
- Job creation: £0.3m per year (occurring in years 1-5)
- Income from business rates: £270,000 per year (beginning in year 1)
- Unit maintenance: £100,000 per year (beginning in year 1)
- Multiplier effect on local economy: £2.2m (one-off estimate provided by local economists)

Questions:

(1) Calculate the NPV and BCR of each project. Which project should be chosen given the costs and benefits provided?

(2) What other impacts need to be considered?

(3) How is the outcome of option 2 affected if only £1.7m per year is received from sales of the apartments?

(4) How are the project option outcomes affected if the discount rate is 4%?

(5) What if the estimates for one or more costs or benefits are incorrect e.g. building costs? How might this impact the outcomes of each project, and therefore the choice of option?