

1 Economic Impact Assessment

This report has been prepared by Ekos during November 2023 to support the preparation of an Outline Business Case for Derbyshire County Council's County Hall in Matlock.

1.1 Additionality

1.1.1 Defining the Routes to Impacts

The additional economic activity (benefits) will be generated through two areas of investment activity - these can be considered as the 'routes to impact':

- Public sector funded construction activity.
- follow-on development activity within Matlock (private sector led) Defining the Economic Indicators

The economic indicators are considered as:

- **one-off construction impacts** - construction impacts are measured in Person Year Equivalent (PYE) jobs. This method allows the number of people on-site over the whole construction period (which will vary over the period between full-time, part-time, permanent, temporary and contract) to be estimated as a proportion of an annual equivalent post.

Construction jobs are calculated by dividing the total capital cost by a turnover per employee construction sector co-efficient i.e. the amount of construction spend that will support one job for a period of one year.

- **follow-on development activity impacts** - the development will create jobs in retail, the hotel and through household expenditure from new housing units.. These jobs are measured as Full Time Equivalent (FTE) posts and are assumed to be ongoing.
- **Gross Value Added - (GVA)** is a measure of the economic output generated and is defined as the value of output minus the value of intermediate consumption. In an economic development context, it can capture the contribution that an intervention will/did make to aggregate economic activity. GVA impact is estimated by applying a relevant sector GVA per employee co-efficient to the estimated employment impact.

The GVA and turnover per employee co-efficients have been sourced from ABS 2021 and adjusted for PYE/FTE positions. All costs and benefits inflated to 2023 prices to derive a Constant Price. The

household spend figures are calculated based upon on a weighted average of relevant sectors¹ based upon ONS household expenditure data², **Table 1.1**.

Table 1.1: Average GVA and Turnover per Employee Coefficients

Type of jobs created	GVA per employee	Turnover per Employee
Construction	£85,000	£233,000
Household spend	£50,000	£167,000
Office	£59,000	£98,000
Hotel	£25,000	£45,000
Retail	£38,000	£183,000

1.1.2 Calculating Additionality and Net Impacts

The approach described above calculates the gross impacts of the project, which simply shows the change in economic activity over a defined time period.

However, in order to measure the value of 'new' economic activity that is forecast to be generated through the activity we need to measure the net additional economic activity. The additionality factors have been applied based on a review of available market intelligence and professional judgement.

Deadweight - the proportion of impacts or project activity that would likely occur in the absence of the activity. This considers the counterfactual that would have happened without the project intervention and therefore helps define the level of economic activity that can be directly attributed. The deadweight is therefore considered as the 'do nothing' option where current council functions are retained in Matlock.

Leakage - the proportion of gross impacts (jobs) that accrue outside of the target region, considered as local (Matlock) and regional (Derbyshire).

- construction impacts: it is likely that the bulk of the contractors used in construction will likely be based in Derbyshire. However, it is likely that leakage will be high at the local level, with most contractors coming from outwith Matlock.

¹ Retail, primary industries, motor vehicle trades, real estate, education & health, arts & recreation, information & communication and food & accommodation.

²

<https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/datasets/detailedhouseholdexpenditurebycountriesandregionsuktablea35>

- operational impacts - leakage will be high at the local level of household spend and office impacts as it is likely that much of the household spend will take place outwith Matlock and many office workers are resident elsewhere. Leakage is lower at the Derbyshire level as it is likely more of this impact is retained in the region. Hotel and retail leakage was judged to be lower as much of this will come from visitors to the region who are likely to spend time locally.

Table 1.2 presents the leakage factors that have been applied.

Table 1.2: Leakage

Sector	Matlock	Derbyshire
Construction	80%	20%
Household spend	60%	30%
Office	90%	10%
Hotel	30%	10%
Retail	30%	10%

Displacement - the negative effect on non-beneficiaries due to competitive market effects operating through product, factor, and investment markets. This considers whether the economic activity supported is new/additional or will be offset to some extent by losses for other market actors.

- Displacement will likely be moderate to low at the Matlock level and low at the regional and national level as it will likely involve some construction workers forgoing other construction activities.
- operational impacts - Despite there being an approximate increase in the population of 150 through the construction of new housing, it is likely that many of these come from the existing Matlock and Derbyshire population through house moves and new household formation. However, it is also likely that many new residents will come from outwith the region. Displacement for operational impact has therefore been judged to be moderate as it is likely that some impacts are displaced from elsewhere in the region from existing hotels and retail businesses. Displacement is 100% for office impacts as they are existing jobs.

Table 1.3 presents the displacement factors that have been applied.

Table 1.3: Displacement

Sector	Matlock	Derbyshire
Construction	20%	5%
Household spend	30%	50%
Office	0%	0%
Hotel	25%	40%
Retail	25%	40%

Multipliers which come about due to beneficiaries increasing their demand for goods and services from supplier businesses and the spending of those employed through direct or supplier linkage effects.

Multipliers have been sourced from the UK Government Input-Output analytical tables³.

- Derbyshire - multipliers are estimated at 50% of the national multiplier.
- Matlock - multipliers are estimated at 25% of the national multiplier.

Table 1.4 presents the multiplier factors that have been applied. As with the GVA and turnover coefficients outline above, the household spend multipliers has been calculated based on a weighted average of relevant sectors.

Table 1.4: Multipliers

Sector	Matlock	Derbyshire
Construction	1.32	1.63
Household spend	1.16	1.32
Office	1.14	1.28
Hotel	1.12	1.25
Retail	1.12	1.23

³ Input-Output tables, see [here](#)

1.2 Benefits

Economic benefits which arise from each option have been calculated from four sources:

- One-off construction impacts arising from the construction of each option.
- One-off impacts arising from the furnishing and decoration of new homes by new residents.
- Ongoing household spend impacts from new residents occupying the new housing.
- Ongoing impacts associated with staff occupying office space.
- Ongoing impacts associated with the new hotel and retail units.

1.2.1 Construction Impacts

The construction activity associated with the design, site preparation, build, and fit-out of each option will generate additional economic value for the economy in the form of new capital/construction investment opportunities. Capital Costs are presented in **Table 1.5**.

It should be noted that Optimism bias has been applied to these costs at 31% in the case of hotel and retail costs and 20% for public sector and residential costs.

Table 1.5: Indicative Capital Costs

Option	Total Capital Costs	Public Sector Costs	Private Sector Costs
Option 1	£127m	£127m	£0
Option 2b	£240m	£21m	£219m
Option 3a	£239m	£43m	£193m
Option 3b	£242m	£45m	£193m
Option 4b	£198m	£25m	£171m

Our analysis of construction employment is derived from dividing the total capital costs by the average annual turnover required to sustain one annual FTE job in the construction industry in the East Midlands.

Table 1.6 presents the gross construction impacts.

Table 1.6: Gross Construction Impacts

		Option 1	Option 2b	Option 3a	Option 3b	Option 4b
Project Construction	PYE Jobs	530	1,030	1,030	1,040	850
	GVA	£37m	£83m	£82m	£83m	£68m

Taking account of displacement, leakage and multiplier effects, the net direct construction impacts are presented in **Table 1.7**.

Table 1.7: Net Construction Impacts

			Option 1	Option 2b	Option 3a	Option 3b	Option 4b
Project Construction	Matlock	PYE Jobs	110	220	220	220	180
		GVA	£8m	£18m	£17m	£18m	£14m
	Derbyshire	PYE Jobs	660	1,280	1,280	1,290	1,060
		GVA	£46m	£103m	£103m	£103m	£85m

1.2.2 Ongoing Impacts

Ongoing impacts are generated by both one-off and ongoing household spend from residents occupying the new houses as well as the ongoing staffing of offices, the hotel and retail units.

One off household spend accounts for expenses associated with moving into a new home, including purchasing new furniture and white goods as well as initial decoration, etc. This can be highly variable based on the circumstances of the person moving into the property, but we have estimated levels based on the size of the house as outlined in **Table 1.8**.

Table 1.8: One off household spend

	Spend per household
2 Bedroom	£4,500
3 Bedroom	£5,000
4 Bedroom	£5,500
5 Bedroom	£6,000

Source: EKOS Estimates

Using Turnover and GVA coefficients, this provides gross impacts as outlined in **Table 1.9**.

Table 1.9: Gross One-off Household Spend Impacts

	Option 1	Option 2b	Option 3a	Option 3b	Option 4b
Total one-off spend	£0	£0.4m	£0.4m	£0.4m	£0.4m
PYE Jobs	0	30	30	30	30
GVA	£0	£1.6m	£1.6m	£1.6m	£1.6m

Taking account of displacement, leakage and multiplier effects, the net direct one-off household spend impacts are presented in **Table 1.10**.

Table 1.10: Net One-off Household Spend Impacts

		Option 1	Option 2b	Option 3a	Option 3b	Option 4b
Matlock	FTE Jobs	0	10	10	10	10
	GVA	£0m	£0.3m	£0.3m	£0.3m	£0.3m
Derbyshire	FTE Jobs	0	40	40	40	40
	GVA	£0m	£2m	£2m	£2m	£2m

Ongoing Household expenditure impacts take account of the spending of people occupying the new homes that are built as a result of the various options.

Household spend was based upon average household spend figures from ONS⁴. After adjusting to 2023 prices and making assumptions around house size, average annual spend per household is presented in **Table 1.11**.

Table 1.11: Annual Household Spend

	Spend per household	% Housing at Development
2 Bedroom	£20,826	25%
3 Bedroom	£23,603	50%
4 Bedroom	£27,768	25%

4

<https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/datasets/detailedhouseholdexpenditurebycountriesandregionsuktablea35>

Using Turnover and GVA coefficients, this provides gross impacts as outlined in **Table 1.12**.

Table 1.12: Gross Annual Household Spend Impacts

	Option 1	Option 2b	Option 3a	Option 3b	Option 4b
Total annual spend	£0m	£2.2m	£2.2m	£2.2m	£2.2m
FTE Jobs	0	15	15	15	15
GVA	£0m	£0.7m	£0.7m	£0.7m	£0.7m

Taking account of displacement, leakage and multiplier effects, the net direct one-off household spend impacts are presented in **Table 1.13**.

Table 1.13: Net Annual Household Spend Impacts

		Option 1	Option 2b	Option 3a	Option 3b	Option 4b
Matlock	FTE Jobs	0	5	5	5	5
	GVA	£0m	£0.2m	£0.2m	£0.2m	£0.2m
Derbyshire	FTE Jobs	0	5	5	5	5
	GVA	£0m	£0.3m	£0.3m	£0.3m	£0.3m

Hotel and retail impacts take account of the spending on the operation and maintenance of hotel and retail developments

Using Turnover and GVA coefficients, this provides gross impacts as outlined in **Table 1.14**.

Table 1.14: Gross Hotel and Retail Spend Impacts

	Option 1	Option 2b	Option 3a	Option 3b	Option 4b
FTE Jobs	0	110	110	110	110
GVA	£0	£3.2m	£3.2m	£3.2m	£3.2m

Taking account of displacement, leakage and multiplier effects, the net direct hotel and retail impacts are presented in **Table 1.15**.

Table 1.15: Net Hotel and Retail Spend Impacts

		Option 1	Option 2b	Option 3a	Option 3b	Option 4b
Matlock	FTE Jobs	0	70	70	70	70
	GVA	£0	£2m	£2m	£2m	£2m
Derbyshire	FTE Jobs	0	75	75	75	75
	GVA	£0	£2.1m	£2.1m	£2.1m	£2.1m

Office impacts take account of the spending on the operation and maintenance of public sector office employment. At the gross level, the economic impact of this would be zero, given that these office jobs are already located in Matlock. Similarly, at the net level for Derbyshire, the economic impact is zero as these jobs are already all located within Derbyshire. At the Matlock level however, for option 2b and 4b, there will be a negative economic impact as jobs are moved outwith Matlock

Using Turnover and GVA coefficients and taking account of displacement, leakage and multiplier effects net direct office spend impacts are presented in **Table 1.16**.

It should be noted that at the Matlock level for options 2b and 4b, office impacts are subtracted (50% in the case of option 4) to account for the loss of economic impact from Matlock to elsewhere in Derbyshire.

Table 1.16: Net Office Spend Impacts

		Option 1	Option 2b	Option 3a	Option 3b	Option 4b
Matlock	FTE Jobs	0	-50	0	0	-25
	GVA	£0m	-£3m	£0m	£0m	-£1.5m
Derbyshire	FTE Jobs	0	0	0	0	0
	GVA	£0m	£0m	£0m	£0m	£0m

1.3 Long-Term GVA Impacts

Over the 30-year appraisal period, the total present value net GVA impacts, including construction impacts, operational impacts and household spend impacts⁵ are presented in **Table 1.17**.

Table 1.17: Cumulative 30-Year Impacts

	Option 1	Option 2b	Option 3a	Option 3b	Option 4b
Matlock	£8m	£3m	£56m	£56m	£26m
Derbyshire	£46m	£147m	£146m	£147m	£128m

⁵ Cumulative effects expressed as Present Value (PV) which represents the estimated GVA and salaries generated by the one-off construction and continuous 'on-site' and 'off-site' activity, discounted at 3.5% (HM Treasury's Social Time Preference Rate). Data presented to nearest £m.

1.4 Cost Benefit Analysis

Value for money is determined by the Benefit Cost Ratio (BCR). Net additional GVA is divided by the overall present value cost of each option, including capital and operational costs over the 30 year lifetime of the project. A BCR of greater than one, indicates a positive VfM e.g. a BCR of 2.0 means a £2 return in net additional GVA for every £1 of money invested.

In order to calculate BCR we must adjust the deadweight. Normally this involves subtracting the do-nothing option from each option, as well as calculating the net additional costs by subtracting the do-nothing costs from each options costs. However, given that the do nothing option is more expensive than the other options, this would result in negative net costs for each option, making calculating BCRs difficult.

Instead we have presented net direct BCRs instead of net additional for comparison, **Table 1.18**.

Table 1.18: Net Direct Public Cost Benefit Ratios

		Total Present Value Costs	Present Value Net GVA	BCR
Option 1	Matlock	£104m	£8m	0.1
	Derbyshire	£104m	£46m	0.4
Option 2b	Matlock	£21m	£3m	0.1
	Derbyshire	£21m	£147m	7.1
Option 3a	Matlock	£43m	£56m	1.3
	Derbyshire	£43m	£146m	3.4
Option 3b	Matlock	£45m	£56m	1.2
	Derbyshire	£45m	£147m	3.3
Option 4b	Matlock	£25m	£26m	1.0
	Derbyshire	£25m	£128m	5.1

Option 1 offers a poor return on investment, whilst all other options provide positive BCRs at the Derbyshire level.

Options 2b and 4b provide very low returns on investment at the Matlock level but produce comparatively higher BCR at the Derbyshire level due to lower costs.

Options 3a and 3b are the only options which provide a positive BCR at the Matlock level, they do, however produce lower BCRs at the Derbyshire level than Option 2b and 4b.