

# Investment appraisal



**Project name** Columbus  
**Date:** 30<sup>th</sup> August 2016  
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**Version:** 0.2

## Revision History

Date	Summary of changes	Version
20.06.2014	Initial draft	0.1
30.08.2016	Discount factors increased to three decimal places	0.2

## Approvals

Name	Version	Date	Approval context	Signature

## Distribution

Distributed to:	Version	Date	Signature
Initiation team	0.1	23.06.2014	JW
Initiation team	0.2	30.08.2016	JW



## Introduction

Initial research for the Columbus project has identified three possible locations for the new retail outlet. This document describes the characteristics of each location; provides detailed financial benefit analysis and recommends the optimum choice based on a combination of the characteristics and financial data.

## Options

### Option 1 - The Cascades shopping centre

The Cascades has a compact layout and has attracted the interest of a large number of leading retail outlets. The local authority is keen to attract new business to the centre.

The site is located off the main street but is designated by the planning authorities as a high street premise. It is well maintained and is a thoroughfare between the main street and the bus station. It has a high volume passing traffic.

The site needs considerable refurbishment. There is a problem with damp that has been uncovered during the initial survey - the result of the building standing empty for three years.

### Option 2 - The Village quarter

The Village quarter is regarded by locals to be the best retail area in the town. There has been a great deal of investment and the latest development of four restaurants is now complete. The centre now houses over 50 outlets. There is full disabled access the local authority claims that this has substantially increased the attractiveness of the area for shoppers.

Loading facilities are available to the rear of the premises.

The site is a newly built premise offering ample space and a particularly attractive wide frontage suitable for product display. The Village quarter is popular with tourists visiting the town. The additional restaurants have proved to be very successful bringing increased traffic.

### Option 3 - Town Square

Town Square is recognised as a good shopping area but has a main road running through it that prevents easy car parking. The area, however, attracts both shoppers and sightseers, being located on a picturesque stretch of the local canal.

Many of the buildings within the square are of architectural interest and as such the local authority exercises careful control over shop fronts. In some instances it has fully dictated the colour and

presentation of the exterior. Early discussions with the planning authorities have, however, been encouraging.

The square has a strong tradition with local shopping with the fruit and vegetable and farmers market being held on Wednesday and Saturday of each week.

The site is the ground floor of a Victorian style building in which the ground floor is split-level because the premise is built on a bank leading to the canal. Some difficulties may be encountered in providing wheelchair access to the premises.

## Financial data

Marketing has provided sales estimates. Initial cost estimates cover acquisition, refurbishment and launch costs.

Although the project is only required to acquire, refurbish and launch the new shop, the business case needs to reflect longer term benefits.

Therefore, this investment appraisal extends four years beyond the likely completion of the project and will be included in handover documentation at the end of the project.

## Option 1 – The Cascades

Initial investment = £595k

Year	Income £k	Outgoing £k
1	900.00	500.00
2	954.00	544.00
3	1011.00	575.00
4	1071.00	600.00
5	1136.00	650.00

## Option 2 – The Village Quarter

Initial investment = £693k

Year	Income £k	Outgoing £k
1	900.00	529.00
2	954.00	550.00
3	1011.00	572.00
4	1071.00	595.00
5	1136.00	619.00

## Option 3 – Town Square

Initial investment = £725k

Year	Income £k	Outgoing £k
1	900.00	450.00
2	954.00	495.00
3	1011.00	525.00
4	1071.00	588.00
5	1136.00	630.00

## Analyses

### Option 1: The Cascades

#### 1 - Payback period

Year	Income £k	Outgoing £k	Net cash flow £k	Cumulative net cash flow £k
0	0	595	-595	-595
1	900	500	400	-195
2	954	544	410	215
3	1,011	575	436	651
4	1,071	600	471	1,122
5	1,136	650	486	1,608

**Payback period = Less than 2 years (1.48 years)**

#### 2 - Net Present Value

Year	Net cash flow £k	Discount factors @ 8%	Discounted net cash flow £k
0	-595	1.000	-595.00
1.000	400	0.926	370.40
0.926	410	0.857	351.37
0.857	436	0.794	346.18
0.794	471	0.735	349.19
0.735	486	0.681	330.97
	0.681		<b>1,153.11</b>

## 3 - Accounting rate of return

Annual profit =  $2,203k / 5 = 440.6k$   
 Initial investment = 595k  
**Accounting rate of return =  $440.6 / 595$**   
**= 74.1%**

## 4 - Benefit/Cost Ratio

Benefits = 5,072k  
 Costs = 3,464k  
**Benefit / Cost Ratio =  $5,072 / 3,464$**   
**= 1.46**

## Option 2: The Village Quarter

### 1 - Payback period

Year	Income £k	Outgoing £k	Net cash flow £k	Cumulative net cash flow £k
0		693	-693	-693
1	900	529	371	-322
2	954	550	404	82
3	1,011	572	439	521
4	1,071	595	476	997
5	1,136	619	517	1,514

**Payback period = Less than 2 years (1.8 years)**

## 2 - Net Present Value

Year	Net cash flow £k	Discount Factors @ 8%	Discounted net cash flow £k
0	-693.00	1.000	-693.00
1	343.55	0.926	343.55
2	346.23	0.857	346.23
3	348.57	0.794	348.57
4	349.86	0.735	349.86
5	352.08	0.681	352.08
<b>NPV =</b>			<b>1,047.28</b>

## 3 - Accounting rate of return

Annual profit = 2207k / 5 = 441.4k

Initial investment = 693k

**Accounting rate of return = 441.1/693**

**= 63.7%**

## 4 - Benefit/Cost Ratio

Benefits = £ 5072k

Costs = £ 3558k

**Benefit / Cost Ratio = 1.43**

## Option 3: Town Square

### 1 - Payback period

Year	Income £k	Outgoing £k	Net cash flow £k	Cumulative net cash flow £k
0	0	725	-725	-725
1	900	450	450	-275
2	954	495	459	184
3	1,011	525	486	670
4	1,071	588	483	1,153
5	1,136	630	506	1,659

**Payback period = Less than 2 years (1.6 years)**

### 2 - Net Present Value

Year	Net cash flow £k	Discount factors @ 8%	Discounted net cash flow £k
0	-725	1.000	-725.00
1	450	0.926	416.70
2	459	0.857	393.36
3	486	0.794	385.88
4	483	0.735	355.01
5	506	0.681	344.59
<b>NPV =</b>			<b>1,170.54</b>

### 3 - Accounting rate of return

Annual profit =  $2,384k / 5 = 476.8k$

Initial investment = 725k

**Accounting rate of return =  $2,384 / 725$**

**= 65.8%**



## 4 - Benefit/Cost ratio

Benefits	= 5,072k
Costs	= 3,413k
<b>Benefits / Cost Ratio</b>	<b>= 5,072 / 3,413</b>
	<b>= 1.49</b>

## Consolidated appraisal

The attached table combines financial and non-financial information extracted from the analyses and background on each site.

Each criteria is weighted to indicate its relative importance on a scale of 1 to 5. The score for each criterion (also on a scale of 1 to 5) is multiplied by the weighting. The total is then calculated for each option with the highest scoring being the recommended option.

Criteria	Weight	Option 1		Option 2		Option 3	
		Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Prime location	2	3	6	4	8	1	2
Premises can reflect corporate image	3	3	9	5	15	3	9
Disabled access	5	5	25	4	20	1	5
Payback	2	4	8	4	8	4	8
ARR	3	5	15	4	12	4	12
Benefit/cost ratio	2	3	6	4	8	5	10
NPV	4	3	12	4	16	5	20
<b>Total</b>			<b>81</b>		<b>89</b>		<b>66</b>

**Recommended option:** The Village quarter (option 2) scored highest overall in the selected criteria and is therefore the recommended option.