



SCARBOROUGH BOROUGH COUNCIL

**Business Case Approval Record for
Whitby Wayfinding and Gamification**

Summary Document Submission Date

12 January 2022

DOCUMENT CONTROL

Author	
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Regeneration Programme Delivery Board Decision		30/11/2021
AGREED: 1. The Board accepts the Whitby Wayfinding and Gamification Business Case 2. The Board recommends that the council approves the submission on the Summary Document for the Whitby Wayfinding and Gamification Business Case		
Cabinet acceptance of RPDB recommendations and permission to submit Summary Documents		14/12/2021
Or ICM acceptance of RPDB recommendations and permission to submit Summary Documents		
Town Deal Board endorsement of Business Case		16/12/2021

SUBMISSION OF SUMMARY DOCUMENT

		Date
Town Deal Board Authorisation	Barry Harland	06/01/2022
	Chair	
SBC Authorisation	Mike Greene	06/01/2022
	Chief Executive	
Date of Submission		12/03/2022

Item 4

Whitby Town Deal Board - 16 Dec 2021

Whitby Wayfinding Full Business Case Summary

1 PURPOSE OF THE REPORT

- 1.1 This report presents the Full Business Case (FBC) for Whitby Wayfinding to the Whitby Town Deal Board. The Board should consider whether to support the acceptance of the FBC and recommend the submission of the Summary Document to the Department of Levelling Up, Housing and Communities (DLUHC).

2 BACKGROUND

- 2.1 The Whitby Wayfinding project will provide a new wayfinding physical signage and digital app development scheme for Whitby. New finger posts, information maps and markers will replace the existing old scheme and the development of digital wayfinding trails, games and point to point navigation will enable visitors to easily find key landmarks and attractions.

The overall aim of the project is to ensure that visitors to the destination have a good experience, can easily find key landmark attractions, stay longer in the destination, spend more and return.

3 PROJECT APPRAISAL

- 3.1 At the outset of project planning it was thought that the scheme would need five digital monoliths. Through further analysis it was found that by removing these from the scheme, the project objectives were still met through the inclusion of the digital app and therefore the scheme would be affordable and create both financial and social benefits.
- 3.2 The Strategic Case makes the Case for Change by highlighting a need to improve connectivity, wayfinding and animation of tourism assets, a need to diversify Whitby's tourism offer and visitor profile through attracting a younger demographic and to provide a more accessible and interactive app and physical signage.

- 3.3 The project contributes towards the Town Investment Plan by contributing to the development of Whitby Town Centre and helping to connect east and west sides of the town.
- 3.4 The project contributes towards the following strategies: National Planning Policy Framework, UK Industrial Strategy, Covid-19 Recovery Strategy, Up Digital Strategy, UK Tourism Action Plan, Visit England five year Strategy, UK Cycling and Walking Investment Strategy
- 3.5 The Economic Case shows that the best value for money option was concluded to be a renewal of all the physical signage and the creation of the app. Social benefits were identified and categorised alongside the economic benefits to identify the best option.
- 3.6 The Commercial Case explains that three procurement exercises are planned for this project:
- Professional services contract to manage the project at a value of £27,298
 - Supply and installation of way-marking signs at a value of £164,918
 - Development of digital information at a value of £35,000
- Procurement will be done in compliance with Scarborough Borough Council procurement rules.
- 3.7 In the Financial Case, the analysis was completed by reviewing the capital and revenue implications. It was found that the project can be delivered within the identified funding package.
- 3.8 The Management Case shows robust arrangements have been developed to aid delivery, monitoring and evaluation of the project. The management case demonstrates that the preferred option can be successfully delivered. There is a clear governance structure with vigorous accountability plans for both the development and delivery of the project.

4 RECOMMENDATIONS

- 4.1 Whitby Town Deal Board is recommended to endorse the FBC for the Whitby Wayfinding project and the submission of the Summary Document to DLUHC.

5 ADDITIONAL INFORMATION

- 5.1 Full Business Case for the Whitby Wayfinding Project.





Whitby Way-finding Green Book Business Case

ARUP



FUTUREGOV

copper

 Grant Thornton



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Executive Summary

The Whitby Way Finding project will provide new wayfinding physical signage and digital app development scheme for Whitby. New finger posts, information maps and marker scheme to replace existing old scheme. The development of a digital wayfinding trails, games and point to point navigation which will enable visitors to easily find key landmarks and attractions.

The overall aim of the project is to ensure that visitors to the destination have a good experience, that they can easily find key landmark attractions, stay longer in the destination spend more and return.

Strategic Case

Whitby is an extremely popular tourism destination that attracts visitors from far and wide, the connection with the coast and the sea is a vital part of the town's identity. Whitby is accessible to all and a joy to explore with the historic town centre, harbour, waterfront, promenade and beaches all eminently walkable. There are wonderful exploring opportunities in this compact town, with a lovely network of old lanes housing independent shops, attractions and a market square.

The case for change highlights a need to improve connectivity, wayfinding and animation of tourism assets, a need to diversify Whitby's tourism offer and visitor profile through attracting a younger demographic and to provide a more accessible and interactive app and physical signage.

The objectives of the Town Investment Plan is to create the conditions for sustainable long-term economic growth which responds to local development needs and delivers inclusive growth. The strategy for Whitby has been developed to respond to its circumstances including both the challenges it faces and the strengths of opportunity.

Economic Case

The economic case will be used to generate and appraise delivery options on the benefit, cost and risk basis. It will look to appraise the options against the project objectives and critical success factors to show the optimal available solution. This will be complete by comparing the tangible and social impacts from the options and identifying the scheme that provides the greatest value for money to be recommended for implementation.

Financial Case

The total capital cost of the project will be £256,754. Work has been completed on the required changes and robust capital cost estimates included, based on planned proposals and tender quotes received.

Professional service and management fees have been agreed at fixed price.

Revenue costs for the project are minimal, including cleaning and maintenance on physical assets and annual software and license costs for the digital application, which have been included in the cash flow model.

The financial case shows a Scarborough Borough Council match funding requirement of £56,170 over 5 years; comprising £19,754 capital and £36,416 revenue costs. This funding has been approved, with the revenue costs being funded via existing revenue budgets and the capital funding being funded via s106 monies. An additional match funding allocation of £5,246 is available for the project if required from the same s106 contributions. This will be held in the Local Authority reserve until the project is finalised.

Commercial Case

Scarborough Borough Council Contractual procedures are in place to deliver the project in line with the tendering process. Placemarque have been contracted to project manage the Whitby Wayfinding feasibility work and installation of the signage

Management Case

The Whitby Town Deal Investment Plan has been driven by stakeholders from across the borough, representing anchor institutions, our communities and our businesses.

The Whitby Town Deal Board was established to develop and agree a programme of interventions, approve a capacity funding expenditure plan; oversee its delivery; approve the approach to communication and engagement associated with the Whitby Towns Deal and; oversee its implementation.

Whitby Wayfinding project is within the Governance of the Whitby Towns Deal Board. The Board have played an active role in the development of the project priorities that have been put forward.

STRATEGIC CASE

Introduction

Clear s, signage has a central role in making a place accessible and visitor and user friendly. A recent review of existing signage in Whitby has identified how the town could have a more consistent and uniformed approach to the signage, the current signage is outdated and incorrectly marked. Creating new wayfinding signs would mean that directional signs within the town could offer more information and be coherent. This project sets out a framework to deliver signage in the town, seeking to achieve a standard format to all existing and future signage within the town.

Signage is important because in all its formats, it is an element that guides residents, businesses and visitors around the town centre and to some of the more remote locations off the honeypot areas, regardless of the means of transport. It can have an impact upon the attractiveness and visitor experience of the town. It is vital that wayfinding and directional signage is up to date and relevant, in turn good signage can contribute to a positive economic impact.

Case for Change

The current signage in the area is not situated in the most prominent locations, they are not clear and their position does not allow them to be easily seen. The signs that are currently in place are outdated, damaged in some instances and do not include all key locations and therefore not fit for purpose. The current signs have no distance to attractions included on them which can hinder their purpose of directing to local areas of interest. The current signs also don't provide accessibility information. It is hoped in addition to the signage, to develop a digital wayfinding app which can be easily updated with relevant information to promote walking trails, games and promote attractions and offers in the area. Changes in routes and assets in the town, advancements in available technologies, and changes in social behaviours and public expectations have led to the current wayfinding infrastructure in the town becoming outdated and no longer fit for purpose.

Wayfinding data across the town has previously been reviewed and updated in a piecemeal manner – this has led to inefficiency and low usability of the signage as a wayfinding system. The tourism and visitor strategies highlighted the need for a strategic review of the assets in the town, as a key enabler of an increased and improved visitor experience to the area

The case for change demonstrates:

A need to improve connectivity, wayfinding and animation of tourism assets (TIP)

A need to diversify Whitby's tourism offer and visitor profile through attracting a younger demographic (TIP)

To provide a more accessible app and physical signage

What are the existing arrangements?

- There are three different style of maps in the town
- The current signage is not situated within the most prominent locations
- Data visibility is low and information is not clear or inclusive
- Information content is outdated and does not include key areas of interest
- Signage is dated and in poor condition creating negative impacts to the look and feel of the town
- Mapping is not pedestrian focused, it does not encourage walking or show local transport links clearly

What issues does this present?

Poor condition of physical assets poses an increasing risk to public safety

Incorrect information on signage can cause distress and discourage visitors from future visits

Inconsistent data creates confusion and usability of the system

Areas of interest and key destinations in the town are not being utilised to their potential

Lack of information clarity and destinations promoted create areas of concentration in the town – increasing crowding, distress and public health issues

Lack of accessible information reduces the usability to certain user groups

Does not encourage use of public transport or walking in the town, resulting in increased traffic congestion, road safety concerns and negative environmental impacts

Doesn't provide distance to attractions

Doesn't offer digital mapping options, trails or gamification or interactive opportunities to integrate businesses into trails and games.

What are the change elements required?

Mapping on new signs will be heads up rather than north up, which enables the user to build a mental map in their head of the town thus encouraging greater exploration with confidence

Digital tourism applications to engage younger audiences in the town offer

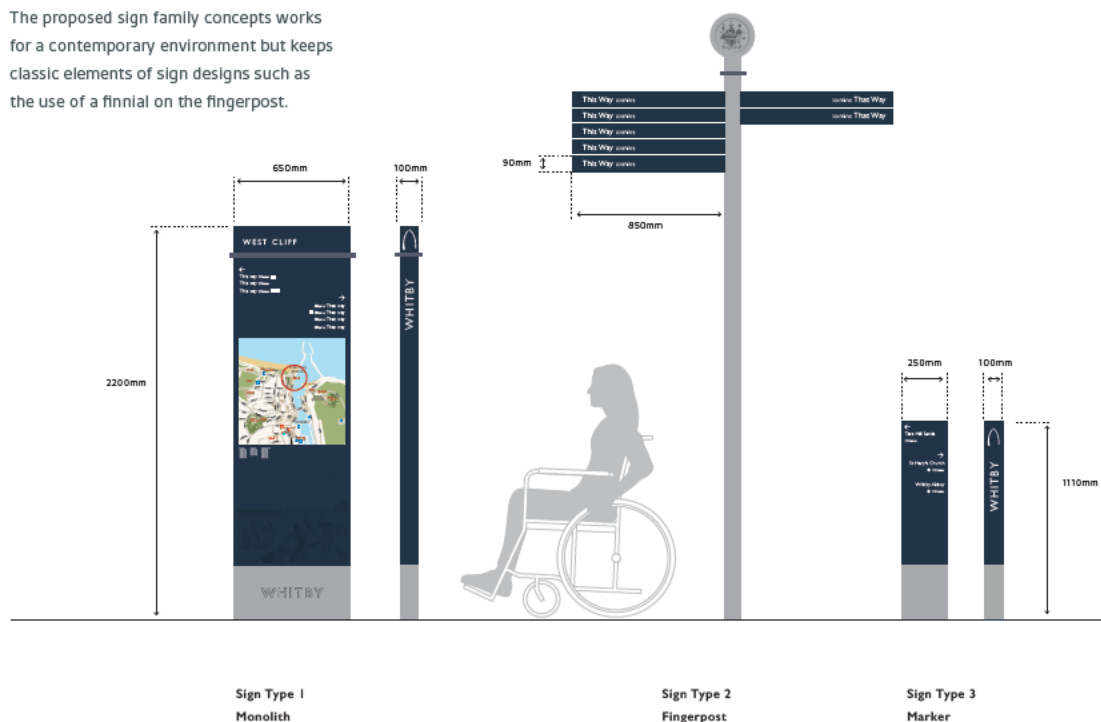
Wide range of physical and digital infrastructure to ensure accessibility to everyone

Figure 1

Wayfinding Design

SIGN FAMILY CONCEPT

The proposed sign family concepts works for a contemporary environment but keeps classic elements of sign designs such as the use of a finial on the fingerpost.



Policy alignment

Strategies linked to the Way-finding and Wi-Fi connectivity that compliment and align the national policy are:

Policy	
National Planning Policy Framework	The signage and app will contribute to the achievement of sustainable development.
UK Industrial Strategy	Work towards supporting the local economy both through adding to the development of a prosperous communities and encouraging tourism to secure jobs.
Covid-19 Recovery Strategy	This project will contribute to the infrastructure and economic recovery strategy by creating clear pathways within the town center.
Up Digital Strategy	The app will support the digital innovation and offer an additional experience within the town.
UK tourism Action Plan	The project has worked together with the local community to promote what Whitby has to offer through clear signage and interaction with the digital element of the app.
Visit England five year Strategy	Ensuring that there is clear wayfinding with an interactive app will promote tourism and support the less mainstream attractions through clear signposting.
UK Cycling and Walking investment Strategy	Clear signposting will encourage town goes to use cycling and walking as a preferred option, clear links and identified accessibility as part of the project will contribute to the encouragement of alternative transport.

Local policy includes Scarborough Borough Councils “Building a Better Borough” initiative which envisages a vibrant culture and heritage offer, bringing communities together and attracting visitors and business by creating a place where people want to live work and visit.

As part of the Whitby Blueprint there is a drive to create a walkable town to better connect all that is on offer, through better utilisation of the limited space available in the historic layout of the town and offering more comfortable space for pedestrians. Physical and digital wayfinding interventions will improve legibility, promote key destinations and offer new platforms for visitor communication.

Vision and objectives

The overall aim of the project is to ensure that visitors to the destination have a good experience, that they can easily find key landmark attractions, stay longer in the destination spend more and return. Creating a walkable town, to better connect all that is on offer, the wayfinding project will provide detailed information on landmarks, attractions and locations and the app will provide trails games and historic information all of which will encourage movement across the town and opportunities for businesses to take part in interactive games

The digital element of the project provides an important requirement for the modern tourist which is predominately the ability to access tourism information digitally, the project will integrate in with

the existing Destination Management System which will avoid the need for two information channels to be updated separately. The initial term for the way-finding app will include 4 interactive games, the use of these can be measured.

The Town Investment Plan (TIP) seeks to accelerate delivery of priorities from the emerging strategic master plan for the borough with a particular focus on the Whitby town centre, its key gateways and harbour. The new signage will be accessible to all users and not limited, this will be achieved by clear definition in the signs, links to the local disability action group who will offer input to ensure inclusivity. The Disability Action Group have been consulted throughout the process and have been asked to identify user feedback within the first 12 months to evaluate the how user friendly they are.

Visitors will be able to use the signs to guide their time and experience in Whitby, this will be achieved by including the distance to and attraction on the sign and accessibility. These two added elements will encourage ease of planning and limit disappointment in accessing the attraction. This will also increase time at attractions, with the potential to contribute to economic growth within the town.

Ensuring that the signs are well placed and easy to read and with relevant information will contribute to easing congestion of pedestrian traffic. Bottle necks that may have previously been caused through ill-placed, difficult to read or out of date directions will be eliminated

A further impact of clear signage and directions is to encourage walkers and cyclists within the town, which provides a positive impact on health and Wellbeing and the environment. The evaluation of future footfall numbers will be completed using 2019 as a baseline.

Project Objectives

- 1) Create easier navigation for the community and visitors
- 2) Link landmarks on routes to encourage visitors to explore new areas of the town
- 3) Be an inclusive system ensuring the needs of all user groups are incorporated
- 4) Fit with the culture of the town enhancing and promoting Whitby Town brand
- 5) Be flexible and sustainable to incorporate future changes
- 6) Promote walking and cycling in the area and use of public transport
- 7) Encourage younger audiences to explore and enjoy the town
- 8) Enable interaction and engaging experiences
- 9) Showcase town heritage, culture and sites of interest

Constraints

- Revenue implication for maintenance for Scarborough Borough Council which will need to be supported within their existing revenue budget
- Resource requirements to ensure app is refreshed regularly
- Planning permission for new locations.

Investment Aims

Short term

- Increased use of the town centre and tourism assets

Medium term

- Improved experience for visitors
- Increased visitor satisfaction and repeat visits
- Increased visitor spending
- Improved perception of place

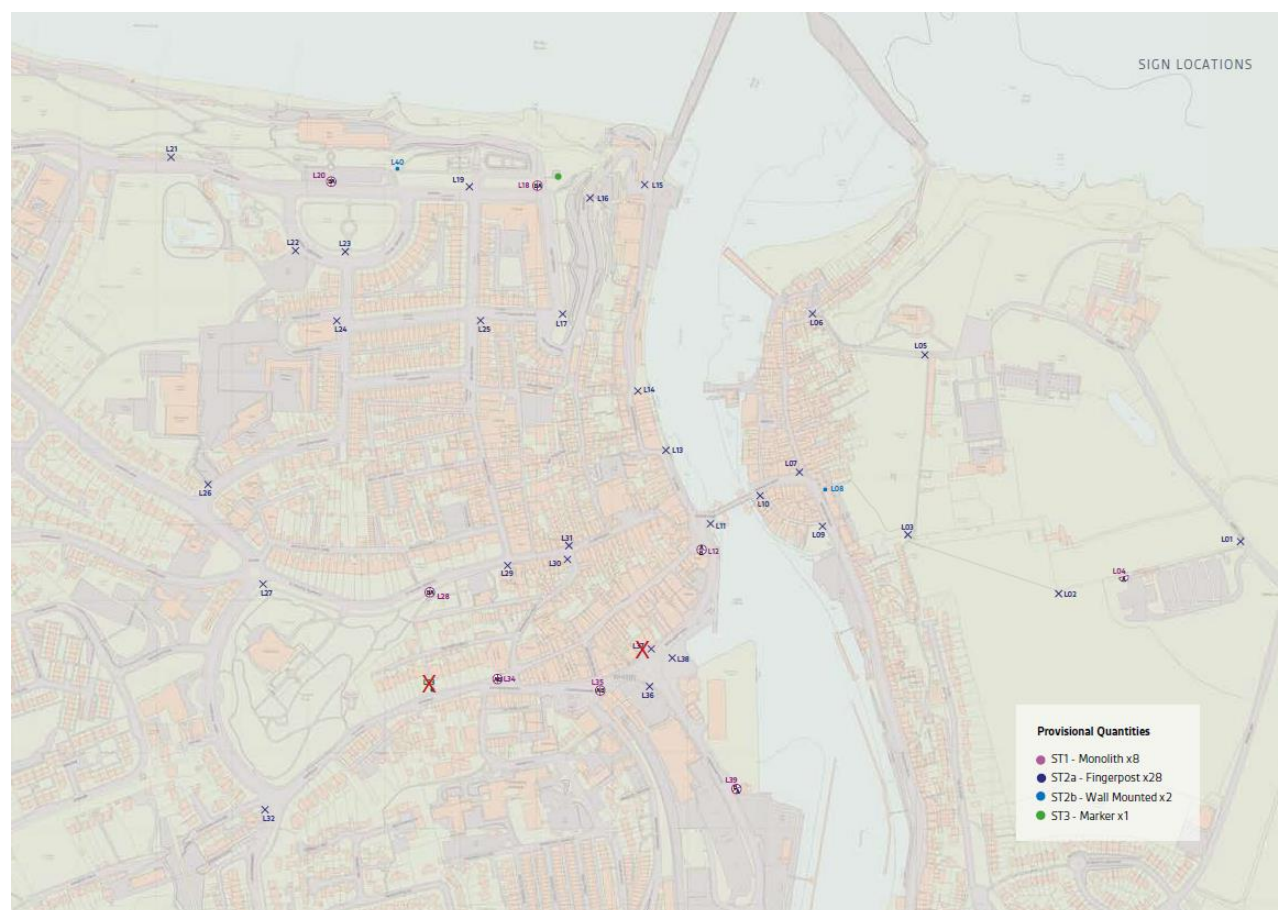
Long term

- Reduced deprivation
- Increased prosperity among Whitby residents

Investment objectives

- Creating a wayfinding system that enhances the look and feel of the area and fits with the local culture of the town and maximises the promotion of key locations.

Figure 2



Proposed Preferred Scheme and outputs

Signage	Quantities
Monolith with 2 maps	6
Monolith with 1 map	2
Fingerpost (including 5 collars & finial)	28
Fingerpost Slat	199
Finger slats on to existing lamp post	3
Wall Mounted Panel	2
Marker	1
Printed vinyl maps to go into existing cases - approx. dim 1500mm (w) x 1000mm (h) * from supplied PRINT ready artwork*	4
Spare monolith glass for future updates	6

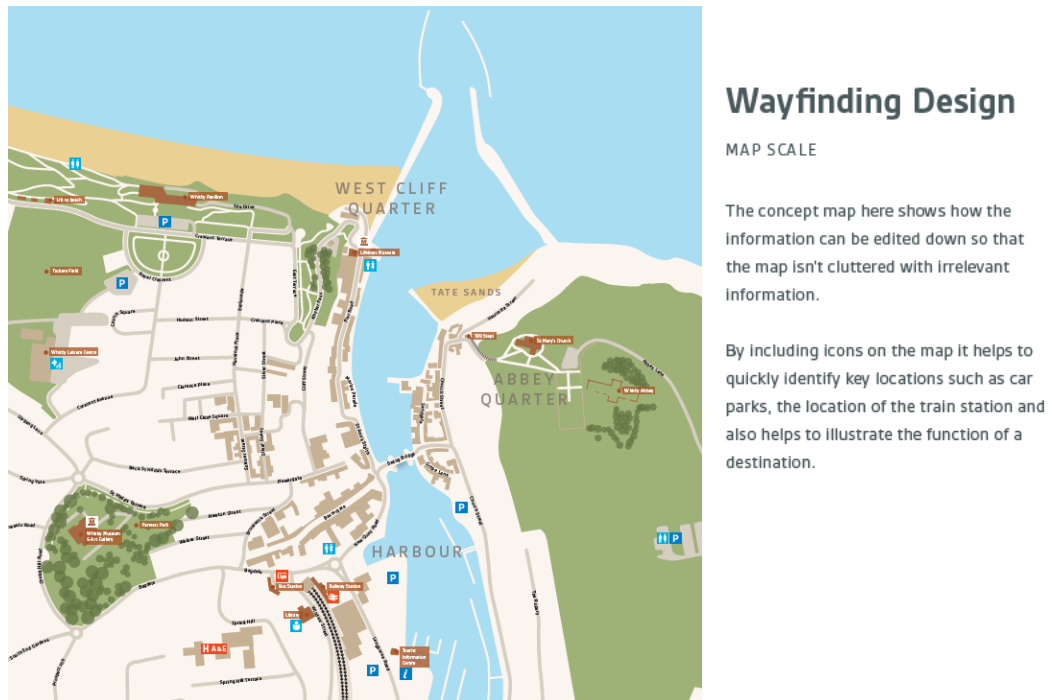
Additional costs

Map boards to be removed	2
Map boards to be moved to new location	3
Finger posts to be completely removed	27

Digital Application

The digital element of the project provides an important requirement for the modern tourist who predominately access tourism information digitally, the project will integrate in with the existing Destination Management System which will avoid the need for two information channels to be updated separately.

Figure 3



Key project characteristics

The new signage will be accessible to all users and not limited, this will be achieved by clear definition in the signs, links to the local disability action group who will offer input to ensure inclusivity. Mapping and directional information will include icons to show facilities which helps the older demographic and those with learning/literacy issues, and international visitors

Mapping style drawn to be more pedestrian focussed highlighting footpaths not just roads, and highlighting retail areas, as well as destinations and key landmarks. This way pedestrians are encouraged to walk more as they have more useful information to gain knowledge and confidence of what the town has to offer.

Ensuring that the signs are well placed, easy to read, with relevant information will contribute to easing congestion of pedestrian traffic.

Visitors will be able to use the signs to guide their time and experience in Whitby, this will be achieved by including distance to and attraction on the sign and accessibility. These two added elements will encourage ease of planning and limit disappointment in accessing the attraction. This will also increase time at attractions, with the potential to contributing to economic growth within the town.

A further impact of clear signage and directions is to encourage walkers and cyclists within the town, which provides a positive impact on health and wellbeing and the environment.

The digital element of the project provides an important requirement for the modern tourist which is predominately access tourism information digitally, the project will integrate in with the existing Destination Management System which will avoid the need for two information channels to be updated separately

Equality inclusion in the project

The needs of disabled people are often overlooked when planning the provision of and changes to goods and services.

The Equality Act 2010 imposes a duty to make reasonable adjustments to buildings and the provision of goods and services:-

- where a provision, criterion or practice puts a disabled person at a substantial disadvantage in relation to a relevant matter in comparison with persons who are not disabled, to take such steps as it is reasonable to have to take to avoid the disadvantage;
- Where a physical feature puts a disabled person at a substantial disadvantage in relation to a relevant matter in comparison with persons who are not disabled, to take such steps as it is reasonable to have to take to avoid the disadvantage;
- where a disabled person would, but for the provision of an auxiliary aid, be put at a substantial disadvantage in relation to a relevant matter in comparison with persons who are not disabled, to take such steps as it is reasonable to have to take to provide the auxiliary aid.

Street signs, nameplates and finger posts, electronic information points and maps, can compete with one another, and rather than providing useful, clear information it can in fact cause confusion. Traditionally, street signage has not taken into account the needs of disabled people, either by being unclear, unreadable, or indeed misdirecting people if the directional signs get moved. Street signage invariably does not indicate gradients, steps, uneven surfaces or alternative routes.

The result is that people cannot properly plan their visits to Whitby, decide not to visit Whitby because they assume it is completely inaccessible, or they arrive making assumptions about access, or even that Whitby is flat, with no steps etc. (the latter view not helped by celebrity holiday programmes which haven't really showed the true layout of the town). Anecdotally, Whitby DAG is aware of the number of people who stay along the harbour side, not exploring the rest of the town, because they do not know how, or whether, they will be able to get around. Or they get caught out because they didn't know about alternatives to, for example, stepped access.

Information is key, and this Wayfinding Project provides the opportunity to update signage, position it in accessible places and provide information about the terrain and alternative routes at key points.

The proposed signage and information options apply the four basic principles in sign design:-

- signs should be used only when necessary
- sign location should be part of the process of planning buildings and the environment
- messages should be short, simple and easily understood
- signs should be consistent, using prescribed typefaces, colours and contrasts

(June Fraser, Sign Design Society – “Sign Design Guide” 2004)

No single signage and directional system will be fully accessible to all disabled people. However, when linked to the proposed App and Discover Yorkshire Coast website, and using QR codes, the improved signage will benefit residents and visitors alike. They will be able to navigate the town, they will be able to decide which routes to take, and have an understanding of the location and extent of gradients and steps. Provision of information will enable people to explore the town independently, so disabled people will not lose out, and the whole visitor experience will be greatly improved.

Stakeholders

Key stakeholders have been identified and consulted to help understand the problem and define opportunities to shape the vision, scope and benefits to align with national, regional and local policy/strategy aims and objectives.

Engaging with local stakeholders, harnesses local knowledge and will help buy in as the signs are for locals as well as visitors. Also including accessibility groups ensures the scheme will take account of their wayfinding needs

Project to be developed in line with consultation of:

- Relevant Scarborough Borough Council Members
- Town Centre Businesses
- Whitby Town Deal Team Board
- North Yorkshire County Council Highways Authority
- Wider business and resident community
- Tourism Advisory Board

Stakeholders have been engaged throughout the process, they have shaped the project and signs, including locations. One addition that was a direct result of the steering group was to add a further 8 fingers posts to highlight the location of the public toilets.

ECONOMIC CASE

Introduction

The development of the economic case requires a wide range of realistic options to be appraised for a project (the 'long-list'), in terms of how well they meet the project aims, spending objectives and critical success factors. This appraisal is used to produce a reduced number of possible options (the 'short-list') which will be examined in further detail.

The 'short-list' will include the business as usual option also known as the do nothing option and a realistic and achievable 'do minimum' that meets essential requirements of the scheme, along with do something options. These options will be subjected to cost-benefit analysis including both monetary and social impacts, to identify the option that offers best value to achieve the objectives of the strategic case.

Approach to economic case

The Whitby Wayfinding economic case aims to generate and appraise available options for the project on a benefit, cost and risk basis. This will include appraising options against the project objectives and critical success factors, including both tangible and social impacts. The appraisal aims to identify the scheme that provides the greatest value for money to be recommended for implementation.

Project Objectives

- 1) Create easier navigation for the community and visitors
- 2) Link landmarks on routes to encourage visitors to explore new areas of the town
- 3) Be an inclusive system ensuring the needs of all user groups are incorporated
- 4) Fit with the culture of the town enhancing and promoting Whitby Town brand
- 5) Be flexible and sustainable to incorporate future changes
- 6) Promote walking and cycling in the area and use of public transport
- 7) Encourage younger audiences to explore and enjoy the town
- 8) Enable interaction and engaging experiences
- 9) Showcase town heritage, culture and sites of interest

Critical success factors - are the attributes of the project that must be met to achieve successful delivery of the objectives

Affordable and deliverable

Must be able to be delivered within the funding levels allocated and the future revenue budget envelopes. All assets and skills required for the scheme are available and able to be accessed

Location and visibility

Assets need to be placed in suitable locations to allow good visibility and usability of products.

Suitability and consistency

Assets must be suitable for the environment and available space, with consistent characteristics showcasing branding and promoting use

Inclusive and promote equality

The scheme should incorporate a range of wayfinding products and communication methods to ensure it promotes equality and encompasses all user needs

Relevant information

Signs must have clear, concise and up to date information, showing key points of interest

Include route information and distance indicators

To promote walking and other methods of transport in the town

Facilitate Interaction and digital inclusion

Allow interactive and adaptable experiences to be created to engage more young people

A Long list of options has been created to help identify a wide range of realistic and possible options for the delivery of the project. This includes 11 options including a do nothing option, a do minimum option and several do something options with various levels of infrastructure possibilities.

The long list of options were considered by the steering group and agreed upon for assessment against the identified critical success factors and desired benefits. Table 1 below: presents a summary of the options considered demonstrating a brief description of each option with a conclusion of the long list analysis. A full assessment of the appraisal is shown in appendix (1)

Table 1

Option	Details	Considerations	Taken to Short list
1	Do nothing	This option fails 5 of the 7 identified CSF's, including information suitability. It is not considered a fit for purpose option	Yes - For comparison
2	Update the existing assets to show correct route information only	This option avoids incorrect information given to visitors but still fails 4 for the 7 CSF's.	No
3	Replace current signage with new like for like assets	This option meets 4 of the 7 SCF - allowing benefits of appearance and information improvements but does not meet location or accessibility requirements	No
4	Refurbish existing assets where there is no change in location. Install new assets where required - excluding digital upgrades	This option meets 5 of the 7 CSF, it excludes the digital interaction and brand impacts	No
5	Renew all assets to create the proposed signage system. No digital inclusion	This option meets 6 out of 7 CSF but excludes the major transformational elements of the scheme	No
6	Renew all the signs to the proposed plan – including app development. No digital maps	This is the minimum scheme to meet all CSF except the number of digital screens	Yes
7	Implement recommended plan from study - full digital fleet of monoliths	This is the high tech big transformational option - it fails to meet all the CSF due to the affordability of the option.	No

8	Renew all the signs to the proposed plan – including app development. 5 new Single screen digital monoliths	This option represents the initial ideas for the project - but fails affordability	Yes - For comparison
9	Use existing assets where there is no change in location. Install new assets where required including digital solutions	This option fails 2 of the 7 CSF on the consistency and affordability criteria	No
10	Undertake minimum recommended improvements from consultant study with digital monolith where identified	This option represents the desired scheme identified from the wayfinding study, but does not meet the affordable criteria	Yes - For comparison
11	Undertake minimum recommended improvements from consultant study with digital monolith where identified - larger double sided	This option is based on the above with enhanced digital screen. It fails the CSF on affordability and does not bring significant enhancements in benefits from other alternatives	No

The options selected and agreed to be taken forward for shortlisting are summarised in table 2 below

Table 2: Options selected for shortlisting	
1. Do nothing:	
6. Do Minimum: Undertake recommended improvements to physical signage and app creation	
8. Do Something: Undertake recommended improvements with initial digital upgrade targets and app creation	
10. Do Something: Undertake recommended improvements with digital upgrades on recommended sites app creation	

Economic Benefits

The economic benefits of a Wayfinding Signage program are well documented. The signs direct visitors to places that provide local economic benefits, and when visitors can easily travel between points of interest their overall experience is improved. “Legible” cities are known to experience increased repeat visits to primary and secondary attractions by 30%.

Recognised benefits linked to the wayfinding solutions include:

- Improved satisfaction of visitors to destination, increased footfall in key areas, improved visitor insights and knowledge of the destination and key attractions and landmarks. Return visits and image
- Increased visitor economy spend within destination through improved visibility of attractions and key destination locations, visitors staying longer and spending more

- Attract new younger markets by offering gamification, trails and experiences
- Increase visitor satisfaction through increased opportunities to explore destination and learn more about heritage, culture and art through wayfinding app trails, games and audio.
- Bring Whitby to life through storytelling, augmented reality via the app – Whitby ghost walk, Alice in wonderland trail, Dracula trail
- Provide educational fund opportunities through inter school app challenges – encourage schools to visit destinations and walk whilst having fun through countryside app
- Support delivery of the Visitor Economy objectives which identifies new market needs in relation to experiences
- Encourage exploration of the destination of foot supporting the health and wellbeing agenda
- Increased awareness of attractions that are hidden such as Whitby Museum and Pannett Art Gallery and shopping streets that are away from key honeypot areas such as Skinner Street, Silver Street.
- Ease congestion in terms of road and pathways creating a health and environmental impacts to visitors and the town
- Improved town image and brand identity

There are many different forms of wayfinding solutions and different physical signs available. In assessing the optimal scheme for a specific town a number of factors need to be considered. This includes reviewing the town demographics, users, visitor profile, available space, and available infrastructure and future flexibility in the town.

A proposed plan has been created for the project encompassing a range of wayfinding infrastructure available and the specific characteristic they bring to the scheme. Which has been reviewed in terms of the town users, culture and project objectives to form a proposed wayfinding plan. An overview of these is shown in Table 3.

Table 3

Measure	Description	Finger post	Monolith Double side	Monolith single side	Map	Digital non interaction	Digital interaction
User Efficiency	How many people can view the information at a time, how long does it take to retrieve and understand the information	5	4	3	2	3	1
Information level	How much information is available for the visitor, direction, route, environmental info , public transport, traffic, site information opening times price, accessibility	1	3	2	2	4	5
Information clarity	how clear are the messages / directions. Are they easily visible and understandable to wide user groups	5	4	4	3	4	3
Flexibility	How easy (quickly / cheaply) can the information be changed to keep the system working and current	4	1	2	3	5	5
uses	is the asset versatile can it be used for marketing and commas and/or public messages	1	3	3	2	5	4
Visibility	are the signs noticeable, and easy to recognise	3	4	4	2	4	4
Size and location	is the asset versatile and able to be used in small spaces without causing issues or clutter	4	2	2	3	2	2
Cultural Fit	how much do the signs fit into the style culture and feel of the area	5	3	3	4	2	1
mitigate contact and contamination risks (COVID)	does the asset allow for minimal contact by users	5	4	4	3	2	1

Project Benefits

Benefits have been identified by looking at the key drivers of change, thought direct and indirect impact areas of the project parts. These have been linked to the social effects through the theory of change, showing how the benefit flows through the change levels shown in Appendix 2 .Using this method we were able to see various ways different drivers are being impacted from the project and assess relative the strength of the change force to the wider social impacts.

Direct benefits expected from the project are linked to specific project components. The benefits are qualitative and not readily quantifiable, a description of each primary impact has been included in table 4 – along with the benefit drivers. This enables the benefits to be assessed alongside the economic costs of the shortlisted options allowing a complete appraisal between the short listed options to identify the best value for money option. . As you can see from the table 4 all of the shortlisted options meet the key project benefits – therefore the economic cost variations will identify the greatest VFM option.

Table 4

	Option 1	Option 6	Option 8	Option 10
Creates easier navigation in the town				
infrastructure Easy to identify	No	Yes	Yes	Yes
information is accurate and relevant	No	Yes	Yes	Yes
information is consistent across signs	No	Yes	Yes	Yes
signage is in the correct locations	No	Yes	Yes	Yes
Wayfinding system is inclusive				
uses a variety wayfinding methods	Yes	Yes	Yes	Yes
information is accessible for all user groups	No	Yes	Yes	Yes
identifies accessible routes to destinations	No	Yes	Yes	Yes
engages a younger audience	No	Yes	Yes	Yes
increase the look of the area and branding				
attractive infrastructure	No	Yes	Yes	Yes
consistent look across the town	No	Yes	Yes	Yes
fits with the culture of the town	Yes	Yes	Yes	Yes
includes heritage symbols	No	Yes	Yes	Yes
Increased awareness of attractions				
greater number of attractions identified	No	Yes	Yes	Yes
distance between locations included	No	Yes	Yes	Yes
key destinations linked on maps	No	Yes	Yes	Yes
improved visitor insights and knowledge of the destination	No	Yes	Yes	Yes
identify key land marks and attractions	No	Yes	Yes	Yes
Promotes more walking around the town				
include walking routes	No	Yes	Yes	Yes
include walking time and distance	No	Yes	Yes	Yes
modernise wayfinding systems				
create interaction ability	No	Yes	Yes	Yes
create trails and games from the maps	No	Yes	Yes	Yes

Economic Costs

Economic costs have been calculated using real time values over a 20 year period, including operating and maintenance costs where relevant. Costs have been profiled across the 20 year period according to the expectation of the liabilities and discounted at the social preference rate of 3.5%. Details on assumptions used within is in the relevant cost elements given in table 5

Table 5

Option	Description	Physical wayfinding assets	Wayfinding Application costs	Project management	Total capital development costs	Contingency 10%	Optimism bias	Total Capital	Economic cost (20 years)
1	Do nothing	0	0	0	0	0	0	0	0
6	Renew all the signs to the proposed plan – including app development. No digital maps	164,918	35,000	27,298	227,216	22,722	6,816	256,754	358,939
8	plan – including app development. 5 new Single screen digital monoliths	259,408	35,000	27,298	321,706	32,171	9,651	363,528	603,239
10	Undertake minimum recommended improvements from consultant study with digital monolith where identified	222,503	35,000	27,298	284,801	28,480	8,544	321,825	504,978

Capital costs:

Capital costs have been estimated based on infrastructure quotes received. With adjustments made for location numbers and site work requirements.

Risk allocation has been included at a 10% contingency rate, assessed in terms of the specific project risks at 5% plus additional 5% for construction labour supply and inflation on goods and commodities

Operating costs:

Costs have been estimated on a per asset basis, against the status quo (do nothing option) using the below assumptions

Table 6

	Cleaning & general maintenance	Operation costs	Reactive maintenance provision
Fingerpost & markers	Available in current resources	5% of fingers on posts to be replaced/changed every 3 years	1.5% of capital per year
Monolith	Available in current resources	Map changes required every 5 year at £500 per unit.	5% capital per year (to cover min 1 spare

			glass panel cost)
Digital signs single screen	Based on 2 year forward cost quote of £2415 per unit plus £500 licence - reducing by 10% per unit added for service efficiencies	covered in maintenance	covered in maintenance
Digital signs single screen	Based on 2 year forward cost quote of £1915 per unit plus £500 licence - reducing by 10% per unit added for service efficiencies	covered in maintenance	covered in maintenance
App	Cost taken from existing service in town £4,940 Pa - reduced by 30% estimated economies of scale	No operational changes expected. App services include direct update links to central data management system	

Optimism bias

Due to the project works being low risk and assumptions based on quotes received optimism bias has been included 3% capital expenditure risk allowance and a 4 week duration adjustment applied to project estimates. This falls within the lower levels of the standard civil engineering adjustment recommendations listed in the treasury green book – shown below.

Table 7

Project Type	Optimism Bias (%)			
	Works Duration		Capital Expenditure	
	Upper	Lower	Upper	Lower
Standard buildings	4	1	24	2
Non-standard buildings	39	2	51	4
Standard civil engineering	20	1	44	3
Non-standard civil engineering	25	3	66	6
Equipment/development	54	10	200	10
Outsourcing	n/a	n/a	41*	0*

* Optimism bias for outsourcing projects is measured for operating expenditure.

Value for Money Assessment

The economic appraisal identified the best value for money option to be the do minimum option – incorporating the proposed wayfinding plan and the development of an application. A summary of the each scheme is given below

The do nothing option:

The current arrangements are not fit for purpose. The information is inconsistent and outdated, assets are in a poor condition, date, and visibility is low and does not allow for all user groups.

The preferred option:

This is the only affordable option to meet all the project critical success factors, it allows for all required improvements and digitalisation through the application development

Other options:

The other options considered the proposed scheme with enhanced digital solutions in the form of digital monoliths. The analysis showed the capital and operational costs for these assets to be significantly greater than the alternative with only marginal project benefits added. This therefore reduced the cost benefit value of the investment.

FINANCIAL CASE

Introduction

A financial case has been completed for the project which demonstrates the affordability of the preferred option. The results of the financial assessment are summarised below (based on a 5 year period) and full detail shown in appendix 1 - including the high level financial impacts in terms of cash flow, income statement and balance sheet adjustments

Financial Case Summary

Table 8

Costs	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	£256,754						£256,754
Revenue							£36,416

Funding	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Town Fund	£237,000						£237,000
SBC Match							£56,170

Approach to financial case

Whitby wayfinding project was identified as a key town improvement project in the town investment plan, it encompasses a wide range of benefits and acts to facilitate and enhance other town investment projects.

Capital Costs

Work has been complete on the required changes and robust capital cost estimates included, based on planned proposals and tender quotes received. Estimates have allowed for both a upper margin in required assets and a 10% contingency on costs to account for, materials and labour cost risks along with any ground work issues or uncertainties that could arise. These provisions have been identified based on a recent comparable scheme and are thought to be at a prudent level for the project risk

Professional service and management fees have been agreed at fixed price.

All capital works will be complete in a short time frame so no variable inflation adjustments have been included to the project development costs.

The project will require Scarborough Borough Council capital match funding of £19,754. This funding has been approved and will be funded from s106 monies. An additional match funding allocation of £5,246 is available for the project if required from the same s106 contributions, this will be held in the Local Authority reserve until the project is finalised.

Revenue costs

Revenue costs for the project are minimal, including cleaning and maintenance on physical assets and annual software and license cost for the digital application, which have been included in the cash flow model below. These costs are similar to those incurred on the existing obsolete wayfinding assets that are being replaced and will be picked up with existing service operations

and be funded via existing Scarborough Borough Council revenue budget provision. Service operations of the application additional features will be merged with existing operations for Scarborough creating service efficiencies so no additional material costs are expected.

Inflation has been included at 2% per annum.

Capital usage costs for physical assets is included as depreciation assuming a straight-line method over a 40 year UEL period. Comparable costs for software are excluded due to annual license renewals

COMMERCIAL CASE

Introduction

Three procurement exercises are planned for this project:

- 1, Professional services contract to manage the project at a value of [REDACTED]
- 2, Supply and installation of way-marking signs at a value of [REDACTED]
- 3, Development of digital information at a value of [REDACTED]

Procurement will be done in compliance with Scarborough Borough Council procurement rules.

Procurement Strategy

Scarborough Borough Councils contract procedure rules state:

- Contracts with a value up to £5,000 – at least one quote shall be sought and evidenced in writing.
- Contracts with a value between £5,001 and £50,000 at least three written quotations shall be requested upon an invitation to quote.
- Contracts with a value above £50,001 shall be procured upon an invitation to tender with a minimum of 5 contractors being invited to tender.
- Contracts are let using SBC's standard terms and conditions

Placemarque were granted an exemption from the Councils Financial and Contract regulations to project manage the installation of the wayfinding signage for Whitby Town Deal Funding project. Placemarque were involved in carrying out the feasibility study, and have been involved in the development of the tender and the design of the signs. Placemarque have been involved in the development of the Scarborough Fast Track Project. They have extensive knowledge of materials to be used, the background knowledge to understand the requirements of the project and are able to meet the deadlines. Any delay in delivery of the project would put it at significant risk.

Scarborough Borough Council went out to Tender to undertake a feasibility study for wayfinding signage across the Borough. Placemarque tendered and was awarded the tender in 2019. Following this once funding was secured an exemption for Placemarque to project manage the wayfinding project was awarded. In May 2021 an additional exemption was awarded to Placemarque to manage the Whitby Wayfinding project to the value of [REDACTED]. The contract includes managing the contract, developing tender documents and managing through to installation.

Purchasing of the equipment will be subject to the Council's normal open tendering process in line with the Council contract regulations. Procurement has taken place through a framework, with a mini completion embed into the process. It was decided to go to tender to establish the costings for the signage and to determine if the project was affordable. The overall funding for the project through towns fund was £237,000 with an addition of support through £25,000 SBC match funded.

A competitive open tendering exercise was undertaken to select the contractor based on a price and references to determine the best supplier. In this instance, we conducted a further competition through the Eastern Shires Purchasing Organisation (ESPO) Signs framework (ref 344_14) – Lot 2. All four suppliers on the lot were invited to bid, of which three submitted a return. The tenders were subject to predetermined evaluation criteria which was set up as quality rating 60% and Price weighting as 40%

Using the ESPO framework ensures that the buying process is fully compliant with EU and UK procurement legislation and all suppliers listed on the framework have been assessed for their financial stability, track record, experience and professional ability.

Contractor site supervision will be undertaken by Placemarque, who have an experienced team that have been involved with a similar project within Scarborough Town Centre and successfully supervised the delivery.

Where possible local companies will be invited to quote to undertake works/services with an aim to have a positive effect on social value in the area creating opportunities to support local employment and the supply chain. This procurement strategy will help to promote strong local ownership of the development and help local business thrive in the town and wider Borough.

The procurement for developing the App will be done by Spraytar Ltd.

Risk Mitigation

As the majority of works are planned to be undertaken over the spring period the project will seek to pass on weather related risk to the contractor. Contractors will also be encouraged to provide early warns of possible compensation events as soon as possible to allow the project team the opportunity to mitigate risk where possible.

MANAGEMENT CASE

Introduction

A robust set of arrangements has been developed to aid delivery, monitoring and evaluation of the project. The management case demonstrates that the preferred option can be successfully delivered. There is a clear governance structure with a vigorous accountability plans for the development and delivery of the project.

This Town Deal Investment Plan has been driven by stakeholders from across the borough, representing anchor institutions, our communities and our businesses.

The Town Deal Board was established to develop and agree a programme of interventions, endorse a capacity funding expenditure plan; oversee its delivery; approve the approach to communication and engagement associated with the Whitby Towns Deal and; oversee its implementation.

Whitby Wayfinding is within the Governance of the Whitby Towns Deal Board. The Board have played an active role in the development of the project priorities that have been put forward.

Project Manager for this project is Janet Deacon, Head of Tourism and Culture at Scarborough Borough Council, Janet managed a similar project which was delivered in Scarborough Town Centre, and has previously worked with the consultants, Placemarque who have been engaged to work alongside this project.

The project supports key objectives in the Visitor Economy Strategy, Cultural Strategy, and Build a Better Borough Strategy.

Method of delivery:

Once the business case has been submitted the following method of delivery will be followed:

Stage 1:

Planning Application submitted for those signs that require them

Consultation on sites, scheme with wider business community and residents

Planning Application to be submitted for those signs that require them

Selection of preferred option and Business case development to include:

Capital cost of scheme

Programme for delivery

Revenue implications inc. maintenance and upkeep

Consenting and licences

Consultation and communications plan

Stage 2:

Cabinet approval to proceed on basis of business case

Apply for and secure consents.

Procurement of material and works

Contractor to carry out works.

Project Milestones:

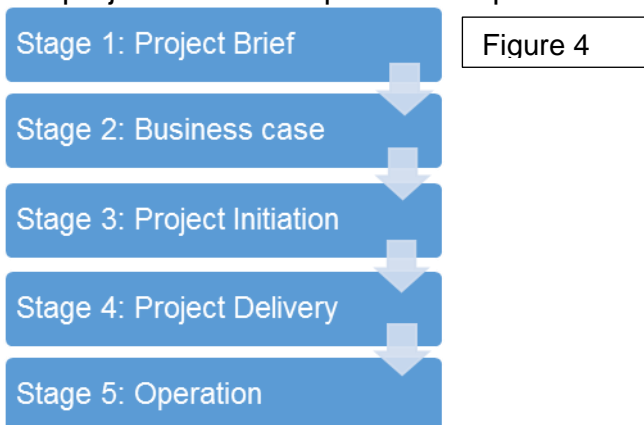
Milestone	Date
Shop drawing of signs	Dec-21
Map Proof Prints	Dec-21
Agree Shop Drawings	Dec-21
Enabling works to start	Feb-22
Installation	Apr-22

Assurance

The team at SBC have significant experience in implementing capital projects of this nature.

Scarborough Borough Council is the accountable body (as identified in the Town Investment Plan) for the Whitby Town Deal and will be responsible for implementing and monitoring the programme. All projects will be governed by the Council's internal project assurance processes and procurement rules.

The project assurance process is split into the following stages;



At each stage of the assurance process, the required project documents will be presented to the Council's Capital Strategy Working Group (CSWG) for comment and approval. The CSWG will make recommendations to the Council's Programme Governance Board once they are satisfied the documentation presented for approval meets the standards required.

Each project has been assigned a Project Contact from the Regeneration Service to support and guide projects through the Project Assurance Process. Project contacts will set up monthly meetings with project leads and will discuss progress against the agreed milestones, output and outcomes, financial profile and risks.

Individual project milestones and indicators will be agreed with each project lead. Performance against these will be used to maintain the programme risk register using the Council's Pentana Risk System throughout the lifecycle of the project. Project and

programme reports will be generated from the Pentana system on a monthly basis identifying key areas of

- Progress (against pre-established millstones)
- Financial management (against BC budget plan)
- Outcomes and Output movement (against plan)
- Risks (management and movement)

Formal quarterly Progress Reports will be required from each project which will be reviewed by SBC officers and be reported through to the Programme Governance Board.

The Town Deal Boards will have an ongoing oversight role and any significant changes to projects and the Project Summary Document at Full Business Case completion will be presented to the quarterly Town Deal Board meetings following approval by SBC. The SBC Project contacts for each project will provide updates on the progress of the project to the Town Deal Boards on a regular basis throughout the lifecycle of the project.

Scope Management

Installation of physical signage to include fingerposts, information map monoliths, markers and the development of a new wayfinding point to point navigation, trails and experiences.

A report has been produced to scope and analyse the existing wayfinding and pedestrian issues in Whitby. The aim is to improve wayfinding and to encourage better visitor engagement with the offer of better navigation and exploration so that people are encouraged to stay longer, spend more and return.

Part of the scope was to consult with key stakeholders from local businesses and council members. A legibility study was carried out, this has helped to form the basis of the wayfinding scheme, from sign locations the spread of destinations, content to direct to and signs that are needed within the town. A further element of the scope was to understand the hierarchy of information to avoid signing everything from everywhere, destinations should be broken down.

Concept ideas have been developed following stakeholder engagement. With recommendations to take forward the project in line with the project outcomes. The project will provide new wayfinding signage and a digital app development scheme for Whitby. New finger posts, information monoliths and markers will be installed to replace the existing dated finger posts. The installation of new map monoliths will provide much more information on landmarks and key tourist attractions. The signage will be complimented by the development of digital wayfinding trial and point to point navigation map enabling visitors to easily find key landmarks and attractions to tell the story of Whitby's cultural heritage.

The outputs of the project will be:

- Create signage that is up to date and offers clear and easy to read directions to local tourist attractions and destinations

Signage	Quantities
Monolith with 2 maps	6
Monolith with 1 map	2
Fingerpost (including 5 collars & finial)	28
Fingerpost Slat	199
Finger slats on to existing lamp post	3
Wall Mounted Panel	2
Marker	1
Printed vinyl maps to go into existing cases - approx. dim 1500mm (w) x 1000mm (h) * from supplied PRINT ready artwork	4
Spare monolith glass for future updates	6

- Create a digital app that supports the new wayfinding signage and connects digitally.

Risk and Opportunities Management

Risk management strategy is part of the Governance process, ensuring that risks are identified and mitigated against. Following a risk being identified a risk assessment is undertaken, with a risk control in place, documenting the risk and monitoring and reviewing as part of project management and followed up in programme review.

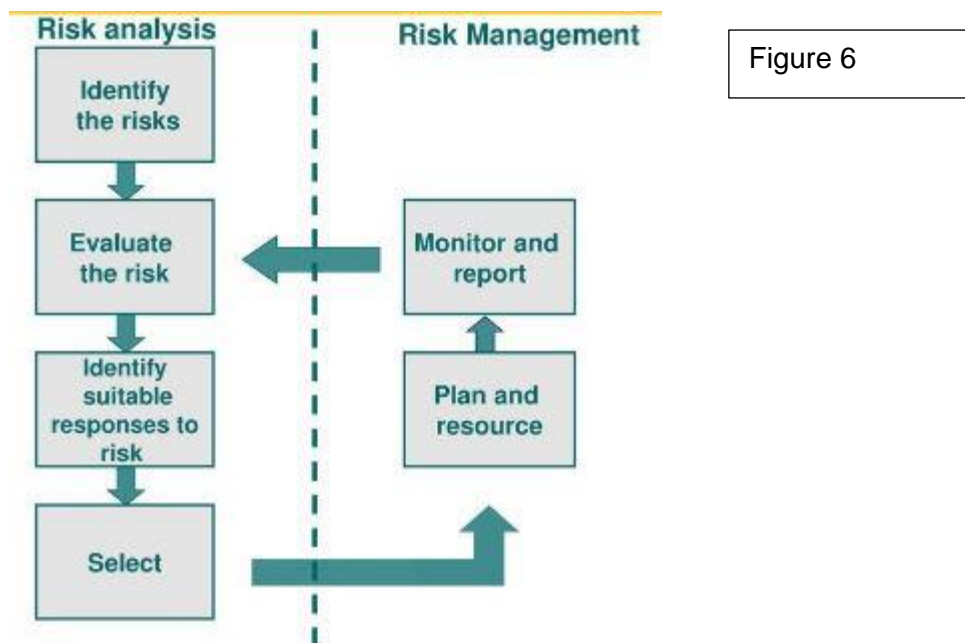


Figure 6

Project risks and issues will be addressed in line with PRINCE2 methodology to determine their impact on the project. All project issues and risks raised will be logged and any activities required to accommodate or resolve them will be managed and documented.

Table 8 presents a summary of the key risks and current mitigation approach. Contactors will be encouraged where possible to aid the delivery team to reduce project risk, uncertainty and to explore opportunities. Opportunities to gain from possible industry productivity initiatives will be explored if relevant.

Town Deal Fast Track - Wayfinding and Gamification									
Project Risk Matrix									
DRAFT V1 CREATED 14/12/2020									
No.	Date	Issue/Risk	Consequences if allowed to happen	Likelihood	Impact	Mitigation	Resp	Mitigated Likelihood	Mitigated Impact
R1	25/03/2021	Insufficient Funding for project	Project reduced	D	3	Priorise project element and select most important within budget	JD	C	3
R2	25/03/2021	Failure to procure signage in time	Delays to project	C	3	Ensure ordered in good time	JD	B	2
R3	25/03/2021	Failure to procure App	Reduction of project	B	3	Ensure ordered in good time	JD	B	2
R4	25/03/2021	Delays in manufactory/shipping of the street furniture	Project may be delayed and installation may not occur in time	C	4	Stress time critical risk when ordering. Ensure the items are ordered in good time. Double check that orders have been received and manufacture is schedules	JD	B	3
R5	25/03/2021	Failure to gain highway consent	Project could not happen	A	5	Work with NYCC Highways in project development and ensure consent is gained early	JD	A	3
R6	25/03/2021	Objections from business owners/member of the public	Reputational damage to the project	C	3	Consult with stakeholders on location plan	JD	B	2
R7	25/03/2021	Brexit	May cause delays in shipping	C	3	Seek reassurance that the correct permits have been put in place	JD	B	2
R8	25/03/2021	Failure to procure street furniture installation contractor	Procurement exercise will need to be repeted leading to delays	B	3	Start procurement exercise in good time	JD	A	2
R9	25/03/2021	Delays in installation	Project element may fall outside eligible window leading to lost funding	D	3	Close scrutiny of programme	JD	C	3

Considerations

There are existing maps with contractual arrangements that will need to be included in the plan

There will be planning requirements of some sites which will need to be factored to the plans and subject to approvals

- Public realm and landscaping works will be required
- Project covers land owned/operated from both NYCC and SBC
- Ongoing costs and operational requirements may differ to that currently available

Benefits, Monitoring and Evaluation

Improved satisfaction of visitors to destinations, increased footfall in key areas, improved visitor insights and knowledge of the destination and Key attractions and landmarks

Increased visitor economy spend within destination through improved visibility of attractions and key destination locations.

Attract new younger markets by offering trails and experiences

Increase visitor attraction through increased opportunities to explore destination and learn more about heritage, culture and art through wayfinding app trails, games and audio

Bring Whitby to life through storytelling, augmented reality via the app.

Provide educational fund opportunities through inter school app challenges – encourage schools to visit destinations and walk whilst having fun through country wide app.

Support delivery of the Visitor Economy objectives which identifies new market needs in relation to experiences

Encourage exploration of the destination of foot supporting the health and wellbeing agenda

Increased awareness of attractions that are hidden such as Whitby Museum and Pennetta Art Gallery and shopping streets that are way from key “honey” pot areas such as Skinner Street and Silver Street.

Provide visitor information to support the relocation of Whitby Tourist information centre and act as visitor information when the Centre is closed during the winter and out of hours

APPENDIX 1

<u>Option</u>	<u>Detials</u>	<u>considerations</u>	<u>Taken to Short list</u>
1	Do nothing	This option fails 5 of the 7 identified CSF's, including information suitability. It is not considered a fit for purpose option	Yes - For comparison
2	Update the exisiting assets to show correct route information only	This option avoids incorrect information given to visitors but still fails 4 for the 7 CSF's.	No
3	Replace current signage with new like for like assets	This option meets 4 of the 7 SCF - allowing benefits of appearance and information improvements but does not meet location or accessibility requirements	No
4	Refurbish existing assets where there is no change in location. Install new assets where required - excluding digital upgrades	This option meets 5 of the 7 CSF, it excludes the digital interaction and brand impacts	No
5	Renew all assets to create the proposed signage system. No digital inclusion	This option meets 6 out of 7 CSF but excludes the major transformational elements of the scheme	No
6	Renew all the signs to the proposed plan – including app development. No digital maps	This is the minimum scheme to meet all CSF except the number of digital screens	Yes
7	Implement recommended plan from study - full digital fleet of monoliths	This is the high tech big transformational option - it fails to meet all the CSF due to the affordability of the option.	No
8	Renew all the signs to the proposed plan – including app development. 5 new Single screen digital monoliths	This option represents the initial ideas for the project - but fails affordability	Yes - For comparison
9	Use existing assets where there is no change in location. Install new assets where required including digital solutions	This option fails 2 of the 5 CSF on the the consistancy and affordability criteria	N
10	Undertake minimum recommended improvements from consultant study with digital monolith where identified	This option represents the desired scheme identified from the wayfinding study, but does not meet the affordable criteria	Yes - For comparison
11	Undertake minimum recommended improvements from consultant study with digital monolith where identified - larger double sided	This option is based on the above with enhanced digital screen. It Fails the CSF on affordability and does not bring significant enhancements in benefits from other alternitives	N

APPENDIX 2

Input	Theory of change		Primary impacts		Promotes walking	Better connect areas	Wider visitor displacement	Increase knowledge of area	Easier navigation	improved look of area
			Visitor diversity	Equality improvements						
App implementation	Trails & games	Tell the story of Whitby's cultural heritage	1	0	1	1	1	1	0	0
	enable targeted information	increase their customer base for sites	0	0	0	1	1	1	0	0
	Point to point navigation map	Enable visitors to easily find key landmarks and attractions	0	0	1	1	1	1	1	0
	modern, intelligent system		1	0	0	0	0	0	0	0
	Audio Features		1	1	0	0	0	0	0	0
			3	1	2	3	3	3	1	0
Physical signage	Information content	Distance and walking time to destinations	0	0	1	1	1	1	1	0
		Accessible routes identified	1	1	0	1	0	0	1	0
		increased destinations destinations included	0	0	0	1	1	1	0	0
	Reviewed locations	wider area covered	0	0	0	0	1	0	0	0
		less space between signs	0	0	1	1	0	0	1	0
	New assets	improved visibility of content	0	1	0	0	0	1	1	0
		inclusion whitby logo	0	0	0	0	0	1	0	1
		consistency of design	0	0	0	1	0	0	1	1
			1	2	2	5	3	4	5	2
			4	3	4	8	6	7	6	2

APPENDIX 3

Discount rate - Social preference rate			0.035																				
PVF			1	0.966184	0.93351	0.90194	0.87206	0.841442	0.813501	0.785991	0.759412	0.733731	0.708919	0.684946	0.661783	0.639404	0.617782	0.596891	0.576706	0.557204	0.538361	0.520156	0.502566
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Project cash flows	Total	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
Capital cost	256,754	256,754																					
Finger post operational	12,094				2,016			2,016			2,016			2,016			2,016			2,016			
Reactive maintenance	27,507		1,132	1,155	1,178	1,201	1,225	1,250	1,275	1,300	1,326	1,353	1,380	1,408	1,436	1,464	1,494	1,524	1,554	1,585	1,617	1,649	
Monolith	17,200						4,000				4,200						4,400					4,600	
Reactive maintenance	30,411		1251.6	1,277	1,302	1,328	1,355	1,382	1,410	1,438	1,466	1,496	1,526	1,556	1,587	1,619	1,651	1,684	1,718	1,753	1,788	1,823	
App costs	84,020		3458	3,527	3,598	3,670	3,743	3,818	3,894	3,972	4,052	4,133	4,215	4,300	4,386	4,473	4,563	4,654	4,747	4,842	4,939	5,038	
Annual cashflow nominal value		256,754	5,842	5,959	8,093	6,199	10,323	8,465	6,579	6,710	8,860	11,181	7,121	9,279	7,409	7,557	14,124	7,862	8,019	10,195	8,343	13,110	
Cumulative Cash flow Nominal value		256,754	262,596	268,554	276,648	282,847	293,170	301,635	308,214	314,924	323,784	334,966	342,087	351,366	358,774	366,331	380,455	388,317	396,336	406,532	414,875	427,985	
Annual cashflow present value		256,754	5,644	5,562	7,300	5,402	8,692	6,887	5,171	5,096	6,501	7,927	4,877	6,141	4,737	4,668	8,430	4,534	4,468	5,489	4,340	6,589	
cummulative present value cashflows		256,754	262,398	267,961	275,260	280,663	289,354	296,241	301,412	306,508	313,008	320,935	325,813	331,953	336,690	341,359	349,789	354,323	358,792	364,281	368,620	375,209	
Balance sheet impact		256,754	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	-6,419	
Fixed asset value		256,754	250,335	243,916	237,498	231,079	224,660	218,241	211,822	205,403	198,984	192,566	186,147	179,728	173,309	166,890	160,471	154,052	147,634	141,215	134,796	128,377	

