Item No. 14.1

Report of:	**Head of Economic Prosperity**
Contact Officer:	**Dean Piper / Debbie Harris**
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Portfolio Leader:	**Economic Development & Planning**
Key Decision:	**Yes**
Report Track:	**Cabinet: 28/01/21**

Cabinet

28 January 2021

Cannock Railway Station

1 Purpose of Report

1.1 The report presents to Cabinet the Strategic Outline Business Case (SOBC) for a transformational upgrade of Cannock Railway Station and sets out the implications and potential next steps.

1.2 The report also provides Cabinet with an update on a set of planned improvements to enhance the Station in the short-term which the Council is implementing in partnership with Staffordshire County Council, West Midlands Rail and West Midlands Trains.

2 Recommendation(s)

2.1 That Cabinet notes the Strategic Outline Business Case (SOBC) for the transformational upgrade of Cannock Railway Station as attached at Appendix 1.

2.2 That Cabinet agrees that Options A and C as set out in the SOBC should be selected as the two shortlisted options to be developed further.

2.3 That Cabinet authorises the Head of Economic Prosperity in consultation with the Portfolio Leader for Economic Development and Planning, to work in partnership with West Midlands Rail Executive and Staffordshire County Council to develop the Outline Business Case and delegate authority to the Head of Economic Prosperity to decide on the timing and procurement strategy for this work.

2.4 That Cabinet authorises the Head of Economic Prosperity in consultation with the Head of Finance and the Portfolio Leader for Economic Development and Planning to submit relevant bids for external funding to secure investment to support the upgrade of the Station.

2.5 That Cabinet notes the package of short-term enhancements to Cannock Railway Station as set out at paragraph 5.15 which will improve the Station environment.

3 Key Issues and Reasons for Recommendations

Key Issues

3.1 In December 2018, Cabinet agreed that the Council should provide funding towards the cost of developing a Strategic Outline Business Case (SOBC) to secure a transformational upgrade of Cannock Railway Station. The case for upgrading the Station is linked to the opening of the McArthurGlen Designer Outlet and the anticipated increase in demand for rail services along the Chase Line.

3.2 The Council has worked with West Midlands Rail Executive (WMRE) and Staffordshire County Council (SCC) to commission consultants to develop and produce the SOBC and the SOBC has been prepared in consultation with West Midlands Trains (the operator) and Network Rail, as well as a range of other key stakeholders. The purpose of the SOBC is to establish the case for change for an upgrade of Cannock Railway Station and is the first stage of the business case process required to secure investment in a transport project.

3.3 In parallel with the development of the SOBC for the wider upgrade of the Station, the Council has worked with WMRE, SCC and West Midlands Trains to identify a package of shorter term enhancements to the Station which will improve the look and feel of the Station environment ahead of the Designer Outlet opening in February 2021. These enhancements are funded principally from Section 106 funds linked to the Mill Green Planning Application. This report updates Cabinet on the progress made to date.

Reasons for Recommendations

3.4 To determine a way forward for the potential transformational upgrade of Cannock Railway Station.

4 Relationship to Corporate Priorities

4.1 This report supports the Council's Corporate Priorities as follows:

(i) **Promoting Economic Prosperity -** This report will contribute specifically to 'Promoting Prosperity' by maximising the benefits of the new McArthurGlen Designer Outlet and encouraging further use of sustainable transport, potentially reducing road traffic and providing better accessibility for residents to employment, leisure and cultural activities.

5 Report Detail

Transformation upgrade – Strategic Outline Business Case

5.1 In December 2018, Cabinet agreed that the Council should provide funding towards the cost of developing a business case for the transformational upgrade of Cannock Railway Station and authorised the Head of Economic Prosperity to

work with partners to commission consultants to develop the Strategic Outline Business Case (SOBC) and design for a transformed Railway Station at its existing location.

5.2 The Council agreed to work with West Midlands Rail Executive (WMRE) and Staffordshire County Council (SCC) to progress the project and form a client team. The vision for the project agreed by the client team is as follows:

"*To create an exciting and inviting gateway into Cannock securing a transformational upgrade of the Station that provides a positive asset to the local community, whilst transforming the passenger experience, future proofing the Station for growth and significantly improving the access to the Station".*

5.3 WMRE agreed to procure suitable consultants to develop the SOBC which is structured in accordance with the Department for Transport's (DfT) guidance on Transport Business Case and HM Treasury Green Book. In October 2019, SNC-Lavalin Atkins (Atkins) were appointed to develop the SOBC on behalf of the client team.

5.4 The SOBC is the first stage in any transport project and forms part of a three-stage business case decision making process and is used to inform investment decisions by DfT and other public sector funders. The SOBC follows the framework of the HM Treasury Green Book using the Five Case Model to identify the best value for spending public sector money considering the direct and indirect benefits of the proposals. At this stage of the project, the Strategic and Economic Cases are expected to be the most developed. The Strategic Case is used to set out the strategic fit of the project to national, regional and local strategies and policies. The Economic Case presents an initial view of the Value for Money of the project.

5.5 The development of the SOBC has involved an assessment of the current usage of the Station, predicted future demand linked to McArthurGlen and local housing growth and has incorporated specific requirements for an upgrade from the Council, key partners and users of the Station. A long list of design options was developed for consideration and these options were assessed and prioritised by the client team and stakeholders at workshops facilitated by Atkins. Four options have been shortlisted and for each option scheme costs and benefits have been produced. The SOBC also provides an indication of likely funding options and commercial considerations.

5.6 A copy of the final version of the SOBC produced by Atkins is attached at Appendix 1 of this report. The SOBC is a comprehensive document with a lot of technical detail but in summary, the key points identified are as follows:

(i) The facilities at Cannock Station are basic in terms of what could be reasonably expected at a Station of Cannock's size and the usage of the Chase Line however, they are yet to be improved to accommodate current and expected growth.

(ii) The poor Station environment impacts negatively on the passenger experience, safety and security, reducing the attractiveness of the Station, deterring potential rail use and creating an unwelcome gateway into Cannock.

(iii) The opening of the McArthurGlen Designer Outlet and local housing growth up to 2038 will create a significant opportunity to drive the growth of rail passenger numbers (assuming rail demand returns to normal once the COVID-19 pandemic has ended).

(iv) The anticipated growth in demand will have a significant impact on crowding at the Station, with crowding have a negative effect on safety within the next 5 to 10 years.

(v) Without improvement, passengers will continue to experience poor journey quality and safety / security at Cannock Station, and the area would fail to realise the potential of the McArthurGlen Designer Outlet and this in turn would continue to become a car dependent development.

(vi) Addressing the challenges and issues facing Cannock Station will benefit rail users, encourage use of the Station and generate additional environmental benefits to reduce carbon emissions within the District and the wider West Midlands region.

5.7 Within the SOBC, a long list of design options is proposed, all of which incorporate platform widening and broad improvements to station facilities and the car park. Following stakeholder workshops facilitated by Atkins, four options were shortlisted for further consideration by the Client team. The four options are outlined below with a brief description and estimated capital cost:

Option	**Description**	**Estimated Capital cost (2020 prices)**
Option A – Transformational Upgrade max	This option features a new gateway, step-free access and community hub. It provides enhanced capacity and improved passenger experienced and promotes active travel with improved facilities. This option is the most ambitious scheme.	£17.1m
Option C – Transformational Upgrade	This option has the same facilities and provisions as Option A; however, the gateway and community hub elements are less developed. This option is less ambitious than Option A but does provide a significant improvement to the Station.	£15.7m
Option G – Enhanced Upgrade	Similar to Option C, however, the improvement to passenger experience is likely to be limited by lack of shelter and some station facilities, such as WCs. This option provides a moderate impact on the Station and does not provide for platform lengthening which would have capacity and safety benefits.	£12.9m

Option J – Core upgrade	The basic station improvement option will lack a gateway and community hub, and improvements to the passenger experience will be limited by a lack of facilities, such as café, canopy and WCs. This option is unlikely to change the perception of the Station or have any transformative impact.	£10.9m
NB Common to all options: (i) Platform widening, improved audio-visual management systems (including CCTV), improved customer information systems and way finding, improved lighting, ticket machine to the Northbound platform, free wi-fi, improvements to the car park and provision of PRM (persons of reduced mobility) compliant footpath/ramp. (ii) 60-year operational cost of maintaining / renewal of station facilities, equipment etc is estimated at £6.1m (2020 prices).		

5.8 The SOBC considers each of the four options against the 'five-case' criteria. The conclusions for each case are set out below:

- **Strategic case –** overall Option A performs the strongest when assessed against strategic fit with the national, regional and local strategies and plans. Option C performs moderately in terms of strategic fit. Options G and J perform poorly, especially for promoting sustainable transport infrastructure and creating an attractive gateway.

- **Economic case –** each option has been assessed in terms of its performance on value for money, considering monetised and non-monetised impacts and benefits. Options A and C perform the best in terms of the benefit to cost ratio (BCR) indicator with BCRs of 1.42 and 1.54 respectively. The SOBC suggests that there is a reasonable prospect of either of these options delivering a scheme that is value for money whilst delivering a transformative upgrade of the Station and improving passenger experience.

- **Financial case –** a long list of potential funding options has been identified and prioritised as part of the SOBC. It is likely that a mix of funds will need to be secured from public and private sources to fund the scheme, with potential sources including Government funding including DfT Rail Network Enhancement Pipeline, West Midlands Combined Authority and Local Enterprise Partnerships. Local contributions could include an allocation of funding from the Council's Community Infrastructure Levy (CIL) fund.

- **Management case –** As part of the SOBC, a high-level project structure is set out and a project plan prepared. The project would need to comply with the Network Rail Governance for Railway Investment Projects (GRIP) Process.

- **Commercial case –** the SOBC sets out outline details of the potential procurement route for the scheme, which is then subject to further analysis at the Outline Business Case (OBC) stage. It is likely that the procurement route for much of the scheme will be aligned to Network Rail's processes.

5.9 Within the SOBC, Atkins recommend that an upgrade of Cannock Station is required to address the identified challenges and opportunities identified by the Council and key stakeholders and to ensure that it can cope with the expected uplift in rail demand arising from the opening of the McArthurGlen Designer Outlet and future housing growth. Without improvements at Cannock Station, the case is made that in the future there will be capacity and safety concerns, the Station will not fulfil its role as a gateway into Cannock and people will be deterred from using rail services and this will increase the reliance on car use. Whilst it is not possible to fully predict whether rail demand will recover during 2021, it is anticipated that passenger numbers will resume to pre COVID-19 levels and the strategic need for the project will still apply.

5.10 Based on an assessment of the four shortlisted options against the business case criteria – it is recommended by the consultants that Options A and C are progressed to the next stage of the Transport Business Case process as these meet the strategic objectives of the project and provide the highest value for money. Options G and J present a lower value for money and should be discounted.

5.11 In terms of the next steps, Cabinet needs to decide whether it wishes Officers to proceed with the second stage of the Business Case process – the Outline Business Case and GRIP 2 / 3 of the Network Rail governance process. This stage of the process moves towards the selection of a single preferred option which if approved then proceeds to detailed design and implementation.

5.12 There are several considerations for Cabinet in making this decision:

- Impact of COVID-19 on current and future rail demand – whilst it is expected that rail demand will return to pre COVID-19 levels, it is not certain as to how quickly this will happen during 2021.

- Impact of McArthurGlen Designer Outlet on the local economy and infrastructure.

- Funding options – at this stage there are limited funding routes, however during 2021, there is the potential for new Government funding streams to be available i.e. Levelling Up Fund, UK Shared Prosperity Fund.

- Capacity of the Council to support the project financially and with Officer resource – taking the project forward to the next stage will require additional officer input and the Council is highly unlikely to be able to make a direct financial contribution to the total cost of the scheme.

5.13 Although the SOBC identifies that an upgrade to the Station is essential to meet future capacity and safety concerns and desirable in providing facilities to users of the Station, improving the overall experience for passengers and creating an attractive gateway into Cannock – both of the preferred options will require significant levels of investment (£15m plus) and at this stage, there is no certainty of funding from any of the identified sources.

5.14 Whilst it is possible that the project could secure funding, members will need to be aware that assembling a funding package to deliver the scheme in its entirety could take many years and will also require further Officer capacity to be released

to support project development. Cabinet should be aware that the scheme is not 'shovel ready' and will need to be viewed as a medium to long term priority for the Council and its partners.

5.15 Taking into account the information and evidence set out in the SOBC and the Council's wider ambition to support the economic recovery of the District, it is recommended that the Council works with WMRE and Staffordshire County Council to move to the second stage of the Business Case process. However, it is requested that Cabinet delegate authority to Officers to determine the timing of commissioning this work and that this is likely to be during summer 2021 at the earliest.

Short term enhancements

5.16 The Section 106 agreement linked to the planning application for the McArthurGlen Designer Outlet provides for £90,000 of funding for station improvements. In parallel with the work on the SOBC, Officers have been progressing work to scope and deliver a package of enhancements that will improve the look and feel of the Station. The timing of these works is designed to coincide with the opening of the Designer Outlet. Whilst the enhancements will improve the Station environment, they are modest in nature and should not be viewed as an alternative to the transformative options outlined in the SOBC. The enhancements are set out as follows:

(i) Installation of 25 metres of DDA compliant handrail on the exit walkway from platform 2 – to address safety of passengers and to avoid a short cut being taken down the existing steep grass verge.

(ii) Provision of two wayfinding monolith totems. To provide directional signage and up to date local maps. Examples shown in Appendix 2.

(iii) Installation of a 2 tier 10 cycle storage facility and 1 additional CCTV camera. To replace an existing unused cycle locker with modern up to date user friendly storage. CCTV dedicated in compliance with security guidelines. Will be connected back into Council's CCTV control room. Examples shown in Appendix 3.

Cost: **£55k** collectively for items 1,2 & 3 to be delivered by Amey (Staffordshire County Council's retained transport contractor).

(iv) Installation of 85 murals to fencing along platforms 1 & 2 and the station access/egress walkways and entrances. Prior to the installation date, wooden fences along the platforms and walkways will be re-painted. Installation to commence mid-January 2021. Installation of 7 lockable display poster cases to be utilised for displaying community artwork.

Cost: **£24k**. Enhancements required to create a more attractive environment for passengers/visitors utilising the station and potentially the Outlet. Examples shown in Appendix 4.

(v) Landscaping and planting of x10 circular planters – Costs to be confirmed – Required to enhance the approaches and visual impact.

Please note a contingency is needed for unforeseen elements /cost over-runs. If not utilised can be redirected towards further cosmetic improvements.

5.17 Separate to the Section 106 monies, the Station car park will be resurfaced through a joint venture between CCDC and Rail Industry Partners. With the CCDC contribution of £12,900 being met from existing car park maintenance budgets. It is proposed that the works will commence in mid-January.

5.18 All improvements are expected to be carried out to coincide with the opening of the McArthurGlen Designer Outlet which is planned for February 2021. On-going Maintenance obligations to be met by either the Council (for the car park) or West Midlands Trains (for the Murals).

6 Implications

6.1 Financial

The Council has committed £231,000 of funding towards the total cost of preparing the Outline Business Case for the upgrade of Cannock Railway Station, with £129,000 of funding committed from Staffordshire County Council (Joint Investment Fund) and £40k from WMRE and West Midlands Trains.

The cost of WMRE commissioning Atkins to undertake the SOBC and GRIP1 work was approximately £200k and there is a balance of £200k available to move to Stage 2 of the Business case process (Outline Business Case and GRIP 2 / 3 report).

To date, the Council has contributed £180,000 (being approximately half of its funding contribution including the Joint Investment Fund) towards the cost of the Atkins commission, with the balance remaining from the £231,000 agreed by Cabinet in December 2018.

The Section 106 funding for rail station enhancements in relation to the Mill Green Planning application for £90,000 has been received by the Council. In relation to the CCDC contribution towards resurfacing costs budgetary provision exists within the car park revenue maintenance budgets for 2020-21.

6.2 Legal

The Council has entered in a Funding Agreement with West Midlands Rail Executive to covers its financial contribution to the cost of developing the Outline Business case for Cannock Railway Station. As part of this agreement, WMRE is responsible for the procurement of consultants to undertake this work in line with EU Procurement Regulations and any procurement must be in accordance with ‘Best Value’ principles.

6.3 Human Resources

There are no human resources implications arising from this report.

6.4 **Risk Management**

The key risks for the Transformational upgrade project at this stage are outlined on Page 97 and 98 of the SOBC report.

6.5 **Equality & Diversity**

The development of the business case and proposed design solution for the station will seek to positively address the needs of the community and station users. The opportunity to positively improve accessibility onto the platforms should provide an enhanced experience for people with mobility issues.

6.6 **Climate Change**

The proposal to develop a transformational upgrade of Cannock Railway Station will have a positive impact on the Council's ambition for the District to be net carbon neutral by 2030. An improved Station will promote sustainable transport infrastructure and encourage a mode shift from use of vehicle to rail, reducing road congestion and carbon emissions.

7 Appendices to the Report

Appendix 1: Cannock Railway Station Re-development – Strategic Outline Business Case Final Report – Atkins (December 2020)

Appendix 2: Example of the wayfinding monolith

Appendix 3: Example of the Apollo 2 tier cycle shelter

Appendix 4: Murals installed at Platform level

Previous Consideration

Cannock Railway Station	Cabinet	13 December 2018

Background Papers

None

Item No. 14.10

Appendix 1

ATKINS

Member of the SNC-Lavalin Group

Cannock Station Redevelopment

Strategic Outline Business Case

23 November 2020
Final Report

Notice

This document and its contents have been prepared and are intended solely as information for and use in relation to the Strategic Outline Business Case for Cannock Station

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This document has 97 pages including the cover.

Document history

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Draft SOBC Skeleton	PI	PI			04/12/12
1.1	Draft Report – SC, FC	OR	PI	AT		24/04/20
1.2	Draft Report – SC, FC	OR	PI	AT		22/05/20
1.3	Draft Report - SOBC	various	PI	AT		18/09/20
1.4	Final Report	various	PI	AT		23/11/20
2.0	CLIENT COPY	AP				Jan 2021

Client signoff

Client	
Project	Cannock Station Redevelopment
Job number	5193346-ATK-50.61-00001
Client signature / date	

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Executive Summary

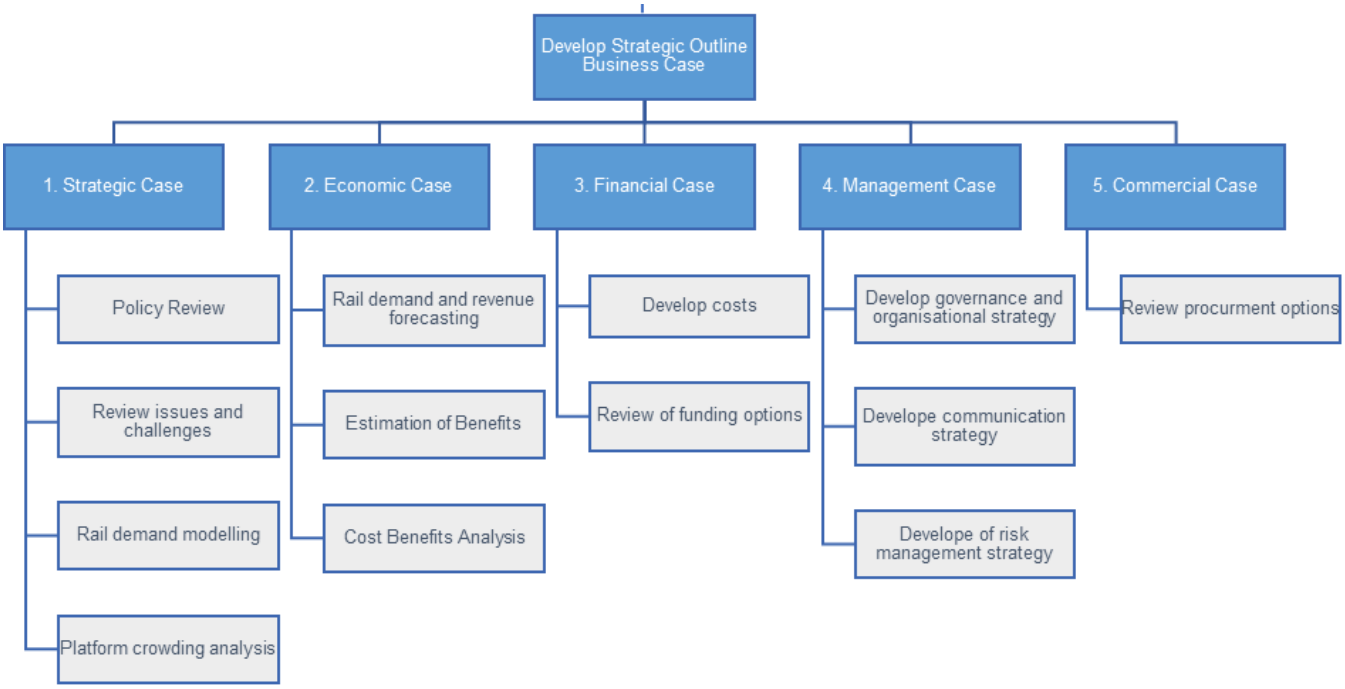
Introduction

Cannock station currently provides basic passenger facilities for train services operating on the Chase Line between Birmingham and Rugeley Trent Valley. The services provide passenger connections to a range of key locations in the West Midlands including Walsall and Birmingham. Planned housing growth coupled with the opening of the £160m McArthurGlen Designer Outlet Village in spring 2021 is expected to have a significant catalytic effect on growth in Cannock Chase District and the wider region. These changes mean Cannock requires a new gateway which will provide a welcoming space for visitors and residents to access both current and new opportunities in the area. A new station would also provide current and future Cannock residents with a station to be proud of whilst offering a safe and pleasant environment to access the wider opportunities of the West Midlands.

Whilst the COVID pandemic has resulted in a decline in train use, the long-term demand for train travel is expected to return. The anticipated growth in demand from the arrival of the McAuthurGlen outlet as well as other developments coming forward in Cannock is expected to have a significant impact on crowding at the station. Train travel will provide a key tool in the battle to reduce carbon emissions from transport in the region. Providing facilities which support economic growth and sustainable access will play an important role in the growth and development of Cannock, the McArthurGlen Designer Outlet and the economic and environmental prosperity of the wider area as the area seeks to level up and build back better as part of a low carbon, green economy.

The purpose of this Strategic Outline Business Case (SOBC) is to establish the case for change and the need for the redevelopment of Cannock station. This SOBC builds on station design work to help establish an evidence led approach to decision making about the preferred proposal and forms the first phase of the decision-making process and outlines the next steps in scheme development.

The SOBC consists of five cases - Strategic, Economic, Financial, Management and Commercial. At this stage of development, the Strategic and Economic cases are expected to be the most developed. The Strategic Case is used to set out the strategic fit of the project including how strategic and policy objectives are to be achieved. The Economic Case presents an initial view of the Value for Money proposition. The figure below summarises the analysis and tasks undertaken as part of the SOBC Stage.



Cannock station and the current situation

Cannock's railway station was reopened in 1989, as a low cost, basic station to serve a new passenger train service on the Chase Line from Walsall to Hednesford. Since reopening, the station has seen a significant increase in passenger numbers to 258,000 in 2019, driven by the improvements in rail services and developments in the town. In 2018 the Chase Line benefitted from a £100m investment to include electrification of the line between Walsall and Rugeley, line speed improvements, re-signalling and new platform extensions to enable 4 car trains to operate at Cannock station. Only small-scale improvements have been made to/planned for the Cannock station since re-opening including upgraded CCTV, new weather shelters, real-time travel information, new wayfinding totems, installation of pedestrian handrails and installation of a cycle storage rack.

The facilities at Cannock Station are basic in terms of what could reasonably be expected at a station of Cannock's size and the usage of the Chase Line however, they are yet to be improved to accommodate current and expected growth. Currently, the station does not provide basic facilities like toilets, waiting room/wind shelter or Wi-Fi. There are no refreshment or retail opportunities in the station. The station does not provide a staffed ticket booth and there is only one ticket machine located on the southbound platform. The lack of ticket machines on the northbound platform means passengers wishing to buy tickets must walk up the ramp to the southbound platform from Lichfield Road (A5190) and then back on themselves, under a bridge along Lichfield Road before returning to the northbound platform. This inevitably leads to ticket evasion and lost revenue and a poor passenger experience. The platforms themselves are narrow and lighting is poor. Access to both platforms are steep and non-DDA compliant which restricts access. There is a lack of clear wayfinding and information to encourage multi-modal transport and sustainable travel. Current unmaintained cycle storage facilities and provision discourage active travel. The poor station facilities impact negatively on the passenger experience, safety and security, reducing the attractiveness of the station, deterring potential rail use, and creating an unattractive and unwelcoming gateway to a rapidly growing town.

The future of Cannock and the need for intervention

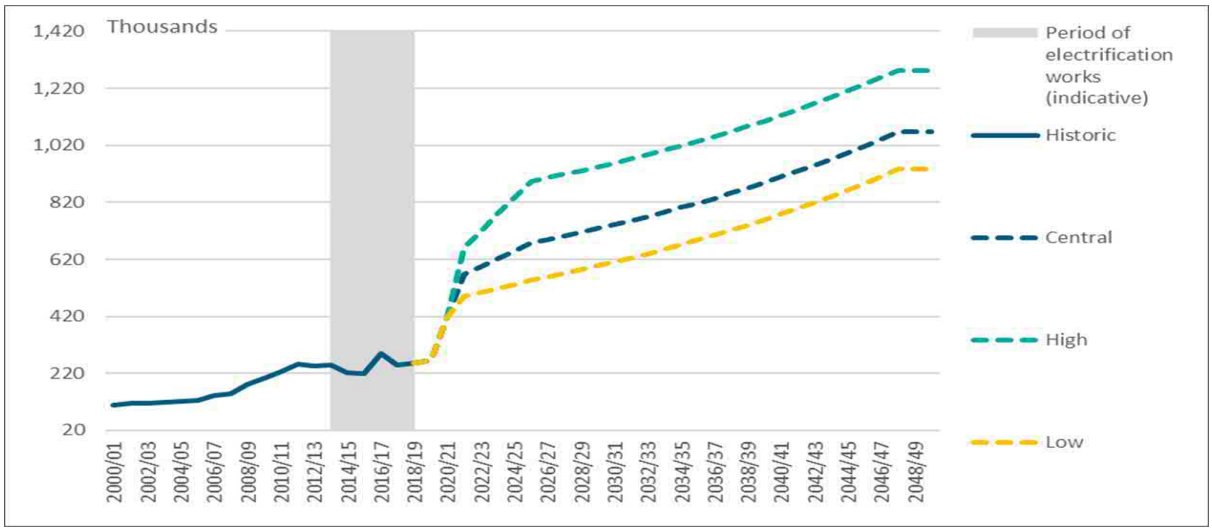
The opening of the £160m McArthurGlen Designer Outlet in spring 2021 will mark a significant opportunity for growth in the leisure and tourism industry and resulting economic prosperity for Cannock Chase District and the wider region. As of summer 2020, Phase 1 of the McArthurGlen Designer Outlet Village (MGDOV) in Cannock is expected to open in early 2021, creating 80 high quality retail units, over 1,000 new jobs and attracting 3.5 million visitors per year to the district.

McArthurGlen Designer Outlet Village (MGDOV) – at a glance

- £160 million designer outlet with 285,000 sq ft of retail, plus leisure and other spaces
- 3.5 million visitors per year
- Good provision of customer parking
- Phase 1 to provide 80 high quality units and over 1,000 new jobs (completion by early 2021)
- Phase 2 to provide 50 additional units and 500 additional new jobs
- Walkable from Cannock station, with shuttlebus connection being planned

Cannock Chase District Council (CCDC) is currently reviewing the Local Plan and is planning for further housing growth up to 2038. Based upon current standard methodology the Districts' local housing growth for the plan period of 2019-2038 would be 5,004 net dwellings (278 net dwellings per annum) – this represents an uplift of 3% on recent housing delivery rates which are anticipated to lead to further demand for rail from Cannock Station.

The arrival of the McArthurGlen outlet, together with the on-going planned development for Cannock is expected to play a significant part in driving the growth in rail passenger numbers and supporting regeneration. Beyond 2019, passenger demand at Cannock station is expected to grow considerably from approximately 215,000 to 569,000 annual entries and exits in 2020/21, after the opening of the MGDOV, as shown in the Figure below. In the Central Scenario, passenger demand is expected to continuing growing, exceeding 1 million entries and exits by 2045/46. There is a strong Strategic Case for Cannock station's redevelopment, with a clear local context and case for change, driven primarily by the existing station's poor facilities and by the need to accommodate growing demand for the station as a result of planned economic regeneration and housing growth around Cannock, and the new Designer Outlet Village.



The anticipated growth in demand from the arrival of the McArthurGlen outlet as well as other developments coming forward in Cannock is expected to have a significant impact on crowding at the station. Platform crowding analysis suggests that the platform area per passenger will reduce quickly to less than the recommended guideline of 0.93sqm[1] in the Worst Case (High) Scenario soon after the opening of the MGDOV in 2021 this will reduce to well below half of the minimum area recommended beyond 2025. Even in the Best Case (Low) scenario the recommended level would be breached in 2030/31. This capacity constraint is expected to raise issues with safety on the platform (especially with visitors carrying luggage/shopping bags), generate poor train performance and poor customer satisfaction. If not addressed, the uplift in demand cannot be accommodated sufficiently and current issues will not be addressed which could bring about the following related outcomes:

- Passengers continue to experience poor journey quality and safety and security at Cannock station, with the possibility of being deterred from using the station altogether due to overcrowding;
- Cannock fails to realise the potential of the MGDOV, with visitors deterred from arriving/leaving at the existing Cannock station. MGDOV becomes a car-dependent development, with total capacity constrained by those unwilling to access via Cannock station and by the capacity of car parking spaces at the development;
- Accessibility, including step-free access, at Cannock station remains poor and deters passengers from using the station despite increased demand from those with mobility constraints, amongst other groups;
- Passengers interchanging continuing their journey after arriving at Cannock station continue to use private car, whilst bus patronage and levels of walking and cycling remain lower than they should be;
- Visitor numbers, especially tourists, to Cannock remain lower than potential; and
- Cannock station cannot be future-proofed, or plan, for changes in demand and investment programmes for further improvements.

Addressing the challenges and issues facing the Cannock Station will benefit rail users, encourage use of the station and generate additional environmental benefits as the West Midlands strives to reduce carbon emissions from transport.

The scheme options

In order to overcome these challenges, the proposed Scheme comprises the redevelopment of existing station facilities at Cannock including platform widening and broad improvements to station facilities and car park. Four options were shortlisted for further consideration. These are outlined and described below:

- **Option A (Transformational Upgrade Max):** This option features a new gateway, step-free access and community hub. It will provide enhanced capacity and improved passenger experience and promote active travel with improved facilities;

[1] Network Rail, Station Capacity Planning Guidance, November 2016

- **Option C (Transformational Upgrade):** This option will have the same facilities and provisions as Option A; however the gateway and community hub elements will be less developed;
- **Option G (Enhanced Upgrade):** Similar to Option C, however the improvement to passenger experience is likely to be limited by lack of shelter and some station facilities such as WCs; and
- **Option J (Core upgrade):** This basic station redevelopment option will lack a gateway and community hub, and improvements to the passenger experience will be limited by a lack of facilities, such as café, canopy and WCs.

Common to all options are platform widening, improved audio- visual management systems (including CCTV), improved customer information systems and wayfinding, improved lighting, ticket machine to the Northbound Platform, free Wi-Fi, improvements to car park and provision of PRM (persons of reduced mobility) compliant footpath/ramp.

Strategic objective and policy alignment

The proposed improvements directly support the delivery of the key existing and emerging Local Plans, the Staffordshire Rail Strategy and the Cannock Chase District Integrated Transport Strategy.

The Staffordshire Rail Strategy (April 2016)

- "Improve general station quality, safety and security with the provision of consistent and high-quality passenger information"
- "To secure the continued development of the Chase Line rail services and infrastructure as the preferred means of transport to Walsall and Birmingham, in the existing and post 2015 franchise"
- to achieve improvements to public transport, walking and cycling, including access for all sections of the community to work, shopping, health, education, leisure, valued environments and other facilities.

Cannock Chase District Council, Integrated Transport Strategy (2013 – 2028)

- "Improve public transport connectivity to the West Midlands conurbation to help provide access to employment and labour market opportunities, reduce potential peak hour inter-urban congestion and carbon emissions"
- "Improve public transport connectivity, infrastructure and quality of life for local communities"

The Strategic Objectives for the project align closely with the established policies and plans of CCDC and Staffordshire County Council (SCC), and have been defined to directly address the challenges and opportunities identified for the station and wider area. These include:

- enhancing journey quality by improving safety, accessibility, reliability and technology for communities in Cannock District;
- future-proof Cannock for further investment and ensure it is fit to accommodate growth;
- promote sustainable transport infrastructure and promote a greener future for Cannock and its environment;
- creating an attractive town centre that encourages a vibrant local economy and workforce; and
- support housing delivery and development in the District.

An assessment of the options against these Strategic objectives suggest that overall, Option A (Transformational Upgrade max) performs the strongest and is expected to have large impacts on the passenger experience and on creating a better gateway for the town. Option C (Transformational Upgrade) performs moderately against the Strategic Objectives across the board but not as strongly as Option A. Option J (Core Upgrade) performs poorly against the Strategic Objectives, especially for promoting sustainable transport infrastructure and creating an attractive gateway. Its lack of notable improvement to the station and its facilities will fail to change its perception and transformative impacts on housing and future-proofing for further change will be negligible.

Scheme costs

Atkins has produced Capital costs (Capex) and Operational Cost (Opex) estimates over a 60-year appraisal period for each of the four short-listed options.

Station Design	Estimated Cost, 2020 prices	
	Capex[2]	Opex
Option A (Transformational upgrade Max) - High Cost option	£17.1m	£6.1m
Option C (Transformational upgrade) - High cost option	£15.7m	£6.1m
Option G (Enhanced upgrade) - Medium cost o	£12.9m	£6.1m
Option J (Core upgrade) - Low cost option	£10.9m	£6.1m

Value for Money (Economic Case)

The ratio of benefits to the impact on the broad transport budget presents an "initial BCR" and associated perspective on VFM.

Option A		Option C		Option G		Option J	
BCR: 1.42	**VFM: Low**	**BCR: 1.54**	**VFM: Medium**	**BCR: 1.37**	**VFM: Low**	**BCR: 1.38**	**VFM: Low**
Broad Transport Budget (£,000s 2010 prices, discounted)							
Total	**£11,134**	**Total**	**£10,259**	**Total**	**£9,697**	**Total**	**£9,055**
For all options, the Present Value of Costs (PVC) to the public accounts includes the Capex, Opex, Farebox revenue and a small subsidy to the transport operator to cover the small difference between the revenue uplifts and operating costs of the new station.							
Monetised Benefits (£, 000s 2010 prices, discounted)							
Total	£15,795	**Total**	£15,795	**Total**	£13,241	**Total**	£12,492
The analysis of monetised impacts follows WebTAG, with monetised impacts calculated based on a 60-year appraisal period from scheme opening and expressed as discounted 2010 Present Values in market prices. The Economic Appraisal considered a range of scheme impacts including station user impacts from reduced crowding and improved facilities; non-station user impacts from highway decongestion, and operator revenue impacts. The Present Value of Benefits (PVB) is positive across all options ranging from the lowest level of benefits for Option J (£12.5m), to the highest level of benefits for Options A and C (£15.8m). In all options, the bulk of benefits arise from walking-time savings and journey quality benefits, including reductions in platform crowding, due to the station upgrade. The largest differences in PVB elements are in the journey quality, where, as expected, the lowest cost Option J with the lowest provision of station facilities offers the lowest levels of journey quality benefits. This assessment suggests that Options A and C would offer the highest journey quality impacts overall, but the lower capital costs for Option C naturally places it above Option A in terms of Value for Money.							
Other Non-monetised Impacts							
Social and Distributional: The scheme is expected to offer beneficial impacts in terms of personal security, accessibility and potentially also physical activity. As the scheme develops and details of the full package of measures to integrate Cannock Station facilities with active travel opportunities, the scheme's social impacts would be considered further, and impact assessments would be carried out where applicable. **Environmental**: A high-level desktop assessment of the existing environmental baseline to identify environmental constraints and an ecology walk over survey has been undertaken at this stage Further							

2 Estimates based at the 80% confidence level, i.e that there is an 80% probability that the redevelopment option could be provided at or below the stated cost.

Economic Impact assessment (in line with Network Rail's ENVO15 should be undertaken at the next stage of development to understand the scale of impacts.
Next Steps to improve the Value for Money Assessment
The four options considered in this SOBC have been carefully specified to represent a broad range of potential solutions. Options A (Transformational Upgrade max) and C (Transformational Upgrade) present the highest BCRs of **1.42** and **1.54** respectively and provide the relative Value for Money position. These options secure a transformational upgrade of the Station by providing an exciting and inviting gateway into Cannock, whilst transforming the passenger experience, future proofing the Station for growth and significantly improving access to the station. The initial BCRs at this stage represents a conservative view of the Value for Money as it does not include monetised benefits from safety benefits from reduced platform crowding, public realm improvements, wider economic impacts, physical activity or any health benefit. These benefits whilst have not been quantified at this stage should be taken into consideration when deriving the Value for Money presented for the scheme. The combination of the initial BCR and the qualitative non-monetised impacts would suggest that there is a reasonable prospect of the Scheme delivering a **Medium Value for Money.** Potential avenues to be explored to improving the economic Case and VfM performance through the development phase going forward include: • Maintaining a focus in design development on the key benefits driving the scheme and ensuring they are secured. • Adopting appropriate value engineering and value management analysis and challenge in design development to enhance and optimise the cost effectiveness and value delivery of the chosen preferred solution. • Seek to secure and maximise 3rd party private sector contributions to potentially reduce the burden on the broad transport budget. Such as revenue from commercial rental (such as a café) or further contributions from private developers who stand to benefit from this scheme (such as McArthurGlen).

Delivering the scheme (Management Case)

The project is not dependent on any other schemes. An indicative high-level project plan has been prepared in consultation with WMRE, CCDC and SCC. It anticipates commencement of the station construction works in July 2024 and completion in December 2025. Governance for the Cannock Station Redevelopment is provided through the sponsor WMRE and the supporting partners. The project will need to comply with Network Rail Governance for Railway Investment Projects (GRIP) processes.

Financial considerations (Financial Case)

A long list of potential funding sources have been identified and a RAG rating exercise has highlighted the following potentially viable public and private sources of funding. Whilst no funding has been secured at this stage of development, the following options are currently being considered:

- Government funding including Department for Transport's Rail Network Enhancement Pipeline, WMCA/TfWM/WMRE, Local Enterprise Partnership (LEPs) and Towns Fund;
- Station-related funding including station sponsoring/naming rights, in station advertising and rental;
- Rail-related funding including TOC contribution from passenger revenue uplift; and
- Business and property including contribution from developer (such as McArthurGlen Designer Outlet), Retail property sales / rental, Residential property sales / rental and Community Infrastructure Levy apportionment.

In 2020 MGDOV provided £90,000 as part of S106 funding to secure a number of enhancements to Cannock station. This will deliver the installation of surface mounted images from across the Cannock Chase area, installation of two monolith style wayfinding totems, installation of a pedestrian handrail from the Platform 2 exit, installation of a cycle storage rack, and removal of vegetation. However, such improvements are insufficient to addressing all of the challenges faced by Cannock station. For example, these improvements will not materially improve station facilities, deal with passenger crowding at platform level arising from demand uplifts or improve accessibility to the Station. In order to realise the full gateway potential for the scheme and the benefits this will generate, further funding will be needed to realise the vision of project stakeholders.

Commercial considerations (Commercial Case)

The majority of outputs relate to or interface with the operational railway. As such the procurement route for much of the scheme would be aligned to Network Rail's processes, most likely a Design & Build route via existing supply chains which offers a ready-made and competitive route to market with a track record of delivering similar station works.

Recommendations

The redevelopment of Cannock station will address the identified challenges and opportunities raised by stakeholders, and it will also prepare the station for any further challenges and opportunities posed by the project's key 'Driver for Change': the expected uplift in demand from the MGDOV and Cannock's other developments. Without improvements at Cannock station, the identified challenges and opportunities cannot be addressed which will limit the gateway potential of the station, raise safety concerns and constrain the attractiveness of rail for the area. Given the current environmental challenges facing the West Midlands every effort needs to be made to promote the use of rail and reduce reliance on private car use.

The business case has considered each option against the 5 Business Case criteria – Strategic fit, Value for Money, Affordability, commercial viability and achievability. It is recommended that Option A and C are progressed as these meet the strategic objectives and provide the highest value for Money. Option G and J present a lower Value for Money.

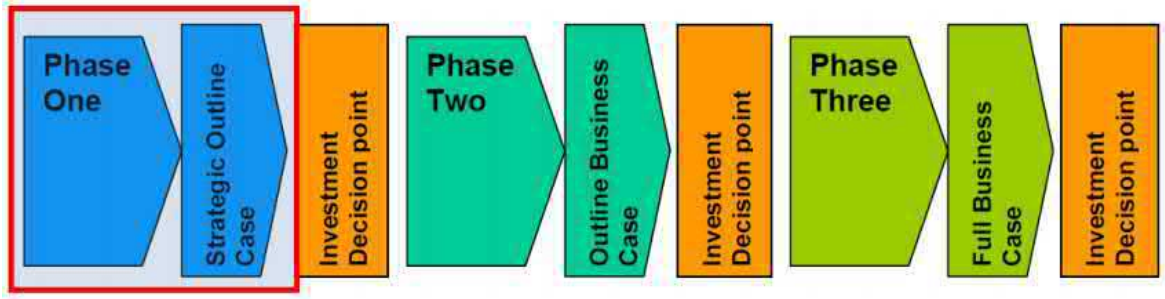
In light of the current pandemic, we are convinced that the scheme will contribute to encouraging the use of rail by providing the added capacity on platform that is needed to accommodate expected demand and encourage social distancing (if required). It is anticipated that in the long term, passenger numbers will resume to pre-COVID-19 levels and so the strategic need for the project will still apply.

1. Introduction

1.1. The Purpose of the SOBC

The purpose of the SOBC is to establish the case for change and the need for the redevelopment of Cannock station, providing a suggested way forward to further develop the case for the scheme. It will provide evidence-based information in relation to decision making about the preferred proposal. This Business Case has been prepared by SNC-Lavalin Atkins, working with Cannock Chase District Council (CCDC), Staffordshire County Council (SCC) and the West Midlands Rail Executive (WMRE). The SOBC forms the first part of the decision-making process, within which there are phases for investment decisions. Figure 1-1 sets out the three phases of investment decisions as part of the business case process.

Figure 1-1 - The Three Stages of Business Case Decision Making



Specifically, the role of the SOBC is to also set out the need for investment for a preferred transport intervention at Cannock station to:

"Create an exciting and inviting gateway into Cannock securing a transformational upgrade of the station that provides a positive asset to the local community, whilst transforming the passenger experience, future proofing the Station for growth and significantly improving the access to the station"

The Strategic Case, as with the other cases, was developed pre Covid-19 pandemic and as such, all forecasts, assumptions and judgements have not considered its impacts.

1.2. Structure of the SOBC

The SOBC is structured in accordance with the Department for Transport's guidance on Transport Business Case and the HMT Green Book. The remainder of the document is structured as follows:

- Chapter 2 - the **Strategic Case**
- Chapter 3 - the **Economic Case**
- Chapter 4 - the **Financial Case**
- Chapter 5 - the **Management Case**
- Chapter 6 - the **Commercial Case**

2. Strategic Case

2.1. Introduction

The Strategic Case is a key focus within the SOBC and is used to set out the strategic fit of the project within achieving strategic and policy objectives, as well as assessing the short list of intervention options against these objectives and Critical Success Factors.

The structure of this Strategic Case is as follows:

- Geographical and strategic Context (Section 2.2)
- Challenges and opportunities Identified - Evidence Base (Section 2.3)
- Strategy and policy alignment (Section 2.4)
- Summary of strategy and policy alignment with challenges and opportunities (Section 2.5)
- The case for intervention (Section 2.6)
- Strategic objectives, Critical Success Factors and desired Outputs and Outcomes (Section 2.7)
- Consideration of options for intervention (Section 2.8)
- Constraints and dependencies (Section 2.9)
- Complementary measures (Section 2.10)
- Strategic Case conclusion (Section 2.11)

This Strategic Case has been prepared and based upon a pre-Covid-19 scenario, and therefore any statements, evidence, forecasts and assessments have not considered potential impacts of the pandemic.

2.2. Geographical and Strategic Context

2.2.1. Cannock

Cannock is a market town with a population of 29,018 (97,462 in the whole district)[3] and it is located 20 miles north-west of Birmingham, 80 miles south-east of Manchester, and 130 miles north-west of London (see Figure 2-1).It is located close to the M6, M6 toll and M54 motorways, lying to the north of the West Midlands conurbation and to the south of the Cannock Chase Area of Outstanding Natural Beauty (AONB). Cannock sits within the southern part of Staffordshire and is part of the Stoke-on-Trent and Staffordshire Local Enterprise Partnership (SSLEP) and Greater Birmingham and Solihull LEP (GBSLEP). Furthermore, Cannock Chase District Council is a non-constituent member of the West Midlands Combined Authority. Bus services in Cannock are operated by Arriva Midlands, linking the town with other adjacent towns and villages including Stafford, Penkridge, Lichfield, Walsall, Hednesford and Rugeley.

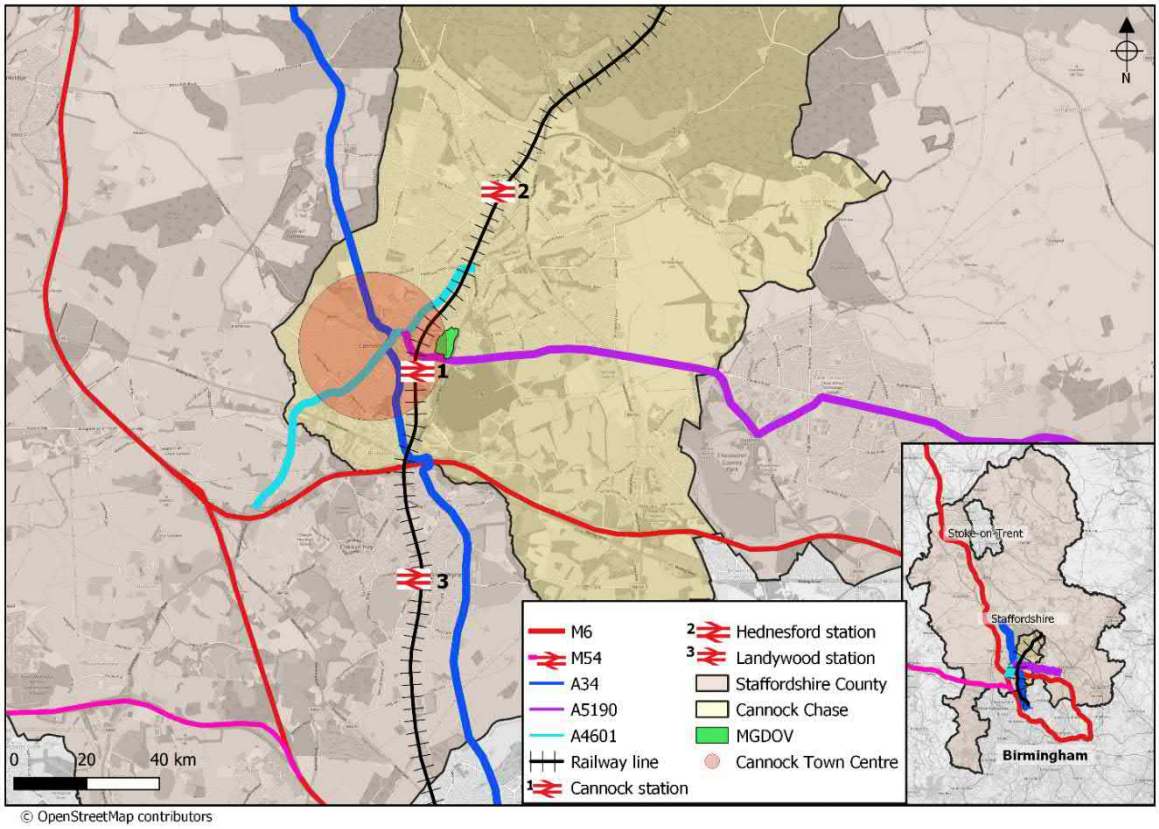
The early development of Cannock was defined around the point where roads from Penkridge, Rugeley, Walsall and Wolverhampton converge, and was used as a stopping town for coaches travelling between London and Liverpool. Significant mining activity took place around the town, providing a source of wealth during the late 19th and 20th Century, although the town changed little in size despite the arrival of the railway in 1858.

Cannock started to expand onto former agricultural fields in the 1950s and an industrial area was developed south-west of the town in 1956. By 1957 Cannock was expanded significantly by suburban residential development to the west and south, and further out Chadsmoor and High Town developed as a mining area. This created a near continuous urban area between Cannock and Hednesford and a greater catchment population for Cannock town centre, establishing a case for improved public transport provision

In the 1970s Cannock changed considerably as the town's bus station was constructed and its Ringway ring road was established around the town centre. In the 1980s the Cannock Shopping Centre and the Forum were constructed within the Ringway, creating a retail centre in Cannock but also creating mobility barriers for neighbourhoods.

[3] Office for National Statistics, Census 2011

Figure 2-1 - Location of Cannock



2.2.1.1. McArthurGlen Designer Outlet Village (MGDOV)

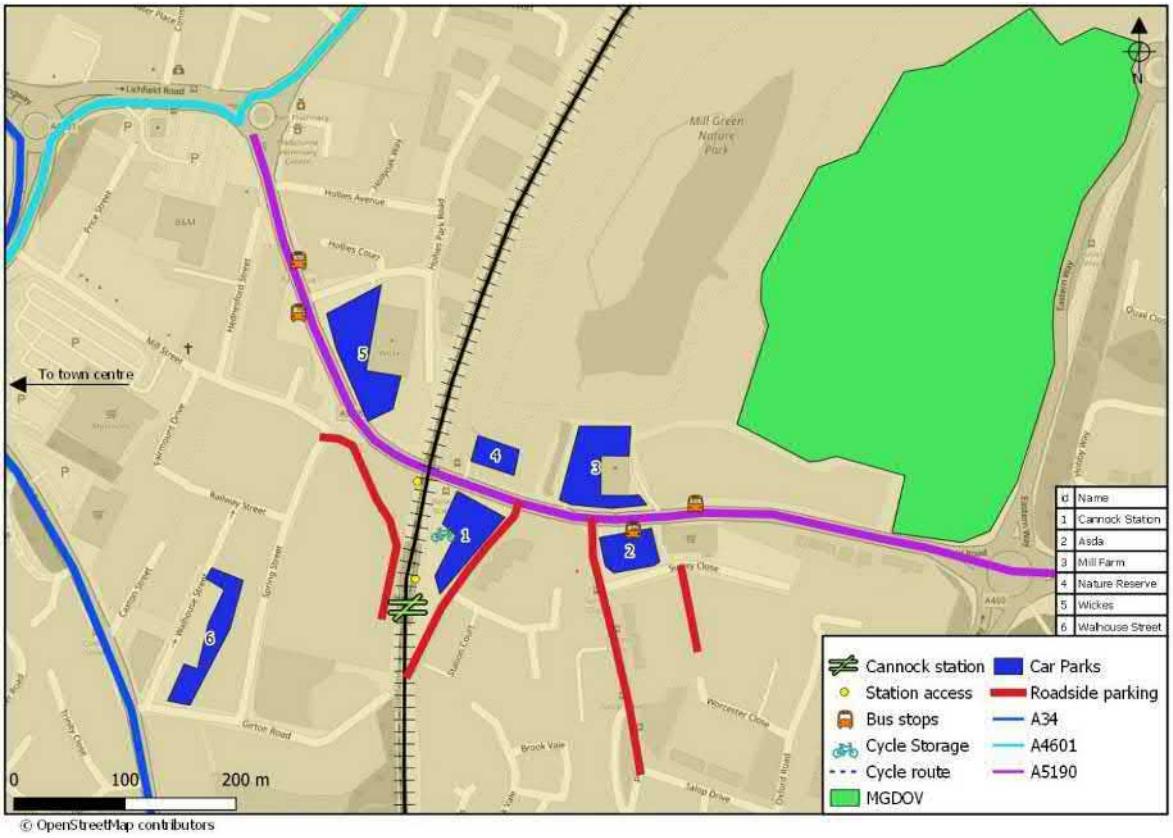
McArthurGlen Designer Outlet Village – at a glance

- £160 million designer outlet with 285,000 sq ft of retail, plus leisure and other spaces
- 3.5 million visitors per year
- Good provision of customer parking
- Phase 1 to provide 80 high quality units and over 1,000 new jobs (completion by early 2021)
- Phase 2 to provide 50 additional units and 500 additional new jobs
- Walkable from Cannock station, with shuttlebus connection in planning

The £160 million designer outlet will feature 285,000 sq. ft of retail space across two phases. Phase 1 of the McArthurGlen Designer Outlet Village (MGDOV) in Cannock is expected to open in early 2021, creating 80 high quality retail units, over 1,000 new jobs (with an additional 500 anticipated in Phase 2) and attracting 3.5 million visitors per year to the district. The MGDOV, shown below in Figure 2-2, is in close proximity to Cannock station and it is forecast that a significant number of visitors to the outlet will travel by train. Key features of MGDOV include:

- Attractive retail and leisure developments;
- Contemporary design applied to traditional architectural forms;
- A high-quality landscaped development;
- A variety of squares and spaces;
- High quality shop fronts and feature buildings;
- Play areas;
- Mainly single storey units with easy accessibility;
- Good provision of customer parking;
- Separate customer and service vehicle access to create a safe, welcoming retail and leisure offer; and
- Excellent links to the wider area

Figure 2-2 - Cannock Station Location with Respect to McArthurGlen Designer Outlet



2.2.1.2. Other developments coming forward in Cannock

Engagement with CCDC has identified a number of opportunity sites in Cannock town. The Council has approved a Development Prospectus for Cannock Town Centre which identifies nine opportunity sites owned by the Council suitable for re-development purposes. Table 2-1, on the page below, summarises the sites their potential uses, including floorspace and number of dwellings.

These developments will all undergo significant changes from their current uses. With them coming forward in the short and medium term, demand for Cannock station would be expected to increase further beyond that expected from the MGDOV and background growth. This is especially true for developments which are likely to attract more people to live in Cannock, such as housing developments, and those which are likely to attract more people to work and visit Cannock, such as mixed-use developments like cinemas, hotels and shops.

The developments and their delivery timescales referred to below reflect discussion with CCDC in early 2020. Whilst they do not reflect the situation having arisen as a result of the Covid-19 pandemic, including potential downturns in demand and appetite for development and investment, CCDC is still working towards its ambition of delivering 2,445 new dwellings between 2012/13 and 2027/28 in Cannock town alone. This includes a net annual need of approximately 200 homes between 2019/20 and 2021/22, and approximately 66 homes per year beyond that to 2027/28. The delivery of additional homes is required throughout the rest of the district over the same period. There are also ambitions to increase job density and provide more jobs in financial, professional and high-quality engineering sectors throughout the district. Delivery of the key development s below is important in achieving this.[4]

CCDC is currently reviewing the Local Plan and is planning for further housing growth up to 2038. Based upon current standard methodology the Districts' local housing growth for the plan period of 2019-2038 would be 5,004 net dwellings (278 net dwellings per annum) – this represents an uplift of 3% of recent housing delivery rates. Therefore, it can be anticipated that the growth of the District will lead to further demand for rail services and Cannock Station. It should be noted that the developments in Table 2-1 below are those considered to be key by CCDC based on discussion in early 2020, and as noted, do not consider the impacts of the Covi-19 pandemic.

[4] Cannock Chase Council, Local Plan (Part 1), 2014

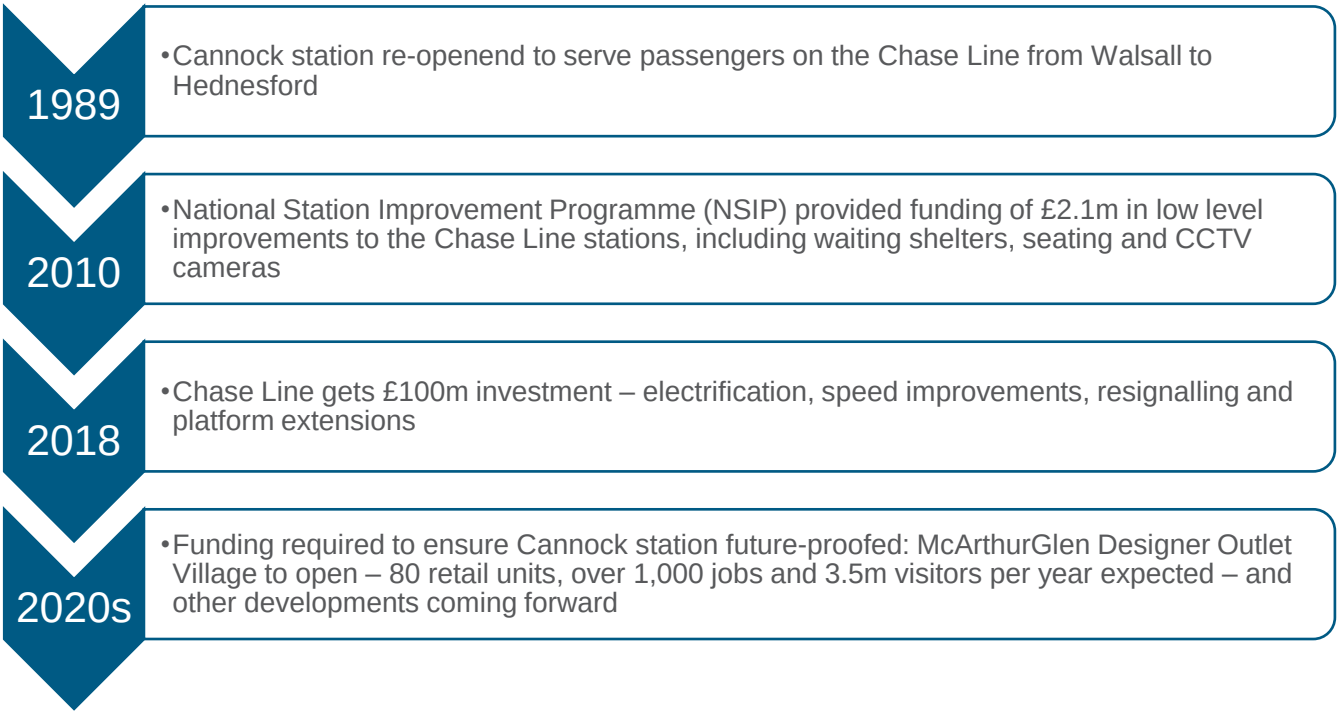
Table 2-1 - Key Developments in Cannock

Site	Description	Uses: Dwellings / Floorspace (sqm) etc
Church Street	**Change of use:** Currently a disused multi-storey car park, and an indoor market hall which is due to close in November 2020, this site along with adjoining retail units has potential to create a new key destination leisure and cultural development. To include leisure use (cinema), food and beverage and some complementary retail. Possible integration of residential apartments, a hotel or office space at upper levels would complete the reinvigoration of the attractive streetscape along Church Street	17,000 sqm floor space plus 5,000 sqm retail space and 5 screen cinema. Options for 40-50 1-3 bedroom homes and 4,000+ sqm office space
Bus Station	**Change of use:** This level site currently operating as a bus station includes vehicular access from the Ringway and direct pedestrian access to Cannock Shopping Centre. The site's accessibility and prominence would be of benefit to hotel and conferencing facilities but there is also potential for a variety of residential uses	1,650+ sqm floor space plus 50+ bedroom hotel (or 15-20 1-3 bedroom homes)
Beecroft Road Car Park	**Change of use:** This surface car park site adjacent to the Ringway and with connectivity to the Town Centre retail area and the proposed Church Street leisure scheme beyond, has the potential to provide a mixed use redevelopment to include residential, retail or commercial office use, and a new decked car park	300+ parking spaces plus 35-40 1-3 bedroom homes (or 3,500 sqm of office space
Allport Road	**Change of use:** A 1-storey former dwelling, the site is accessed off Allport Road and adjoins Site C, Beecroft Road Car Park. The area is characterised predominantly by detached and semi-detached houses and is suited for residential development; a large detached dwelling or two semidetached dwellings	220+ sqm floor space plus 2-3 3-4 bedroom homes
Danilo Road Car Park	**Change of use:** Danilo Road car park is a level site sitting between semi-detached housing and the rear of the leisure uses fronting High Green. Given its proximity to the Conservation Area and the existing residential character of the area to the south, the site is suited to provide a quality infill residential scheme; apartments or senior living	1,900+ sqm floorspace plus 20-30 1-3 bedroom homes
Backcrofts Car Park	**Change of use:** Backcrofts surface level car park to the rear of Market Place and facing Avon Road Park is ideally suited to residential use but could provide for a mix of potential uses including offices, ancillary retail and leisure.	1,900+ sqm floorspace plus 20-30 1-3 bedroom homes
Park Road	**Partial change of use:** This Victorian terrace of six former 2-storey houses now used for offices is located on the northern side of Park Road, beyond which is Cannock Park. The location is predominantly residential in character and the site is suited for infill residential, terraced family housing, retirement living or apartments	2,200+ sqm floorspace plus 25-35 1-3 bedroom homes
Police Station Car Park	**Change of use:** The car park site to the rear of Cannock Police Station which has direct access to High Green and the attractive conservation area has potential for a high-quality apartment or senior living scheme	2,200+ sqm floorspace plus 25-35 1-3 bedroom homes
Avon Road / Hallcourt Lane	**Change of use:** The site currently incorporates a municipal car park; a small area of recently cleared wasteland on the corner of Hallcourt Lane and Hunter Road; Victorian 2-storey and 3-storey buildings fronting the A34 comprising a mix of commercial and retail use. A new development comprising a mixture of residential accommodation with small, specialist leisure facilities, or a retail / F&B led scheme would transform this run-down area into a key Town Centre site	1,800+ sqm of retail and leisure units (or 40-50 1-3 bedrooms or 200-220 bedroom hotel)

2.2.2. Cannock Station

Cannock's railway station was reopened in 1989, as a low cost, basic station to serve a new passenger train service on the Chase Line from Walsall to Hednesford. The previous station was active 1858-1965, closing as a result of the Beeching Reports. The station and all trains serving it are operated by West Midlands Trains, with trains travelling between Birmingham New Street and Rugeley Trent Valley. The station serves the old market town of Cannock, and the station lies just to the east of the town centre which is 10-15 minutes' walk away. Figure 2-3 below outlines the history of Cannock station. This is followed by further detail of the station's history, facilities and passenger demand.

Figure 2-3 History of Cannock Station



In 2010, the National Station Improvement Programme (NSIP) funded by Network Rail resulted in a number of low-level improvements to the station in terms of CCTV at platform level, new shelters, and customer information systems. The programme also included help points, enhanced lighting, better signage and new ticket machines, with the council listening carefully to the Cannock Chase Rail Promotion Group and to the needs of passengers.

However, the station facilities were and are still basic in terms of what could reasonably be expected at a station of Cannock's size and the usage of the Chase Line. It does not include any toilets or waiting rooms, which the scheme will address, or ATM machines. There is step free access up to the Birmingham Platform via a ramp, which has to be accessed via the 260m route via the street and underneath the road underbridge to Stafford. The station is not staffed, although information is available from staff via help points on both platforms. Passengers wishing to interchange with bus services at Cannock station must take a short walk east or west along Lichfield Road to access bus stops. Those wishing to park bicycles at the station must leave them in the cycle storage area, which is limited in space and is rundown. The car park has space for 90 vehicles and includes two spaces for disabled parking/blue badges, but this is often underutilised as a result of uncontrolled use of adjacent car parks and uncontrolled parking in adjacent residential streets. The facilities and characteristics of Cannock station are discussed in more detail in Section 2.3.

In 2018 the Chase Line benefitted from a £100m investment to include electrification of the line between Walsall and Rugeley, line speed improvements, re-signalling and new platform extensions to enable 4 car trains to operate at Cannock station. Electric trains are quieter and more environmentally friendly and enabling faster and more frequent services to run on the line. The service improvements have included extensions of the half-hourly service beyond Birmingham New Street to Birmingham International (Airport/NEC) and to London Euston via interchange at Birmingham New Street. However, disruptions and early terminations on the line led rail chiefs to pull the plug on the, originally planned, direct trains between London Euston and Rugeley Trent Valley which began after the electrification of the line was completed in May 2019.Train services now include a

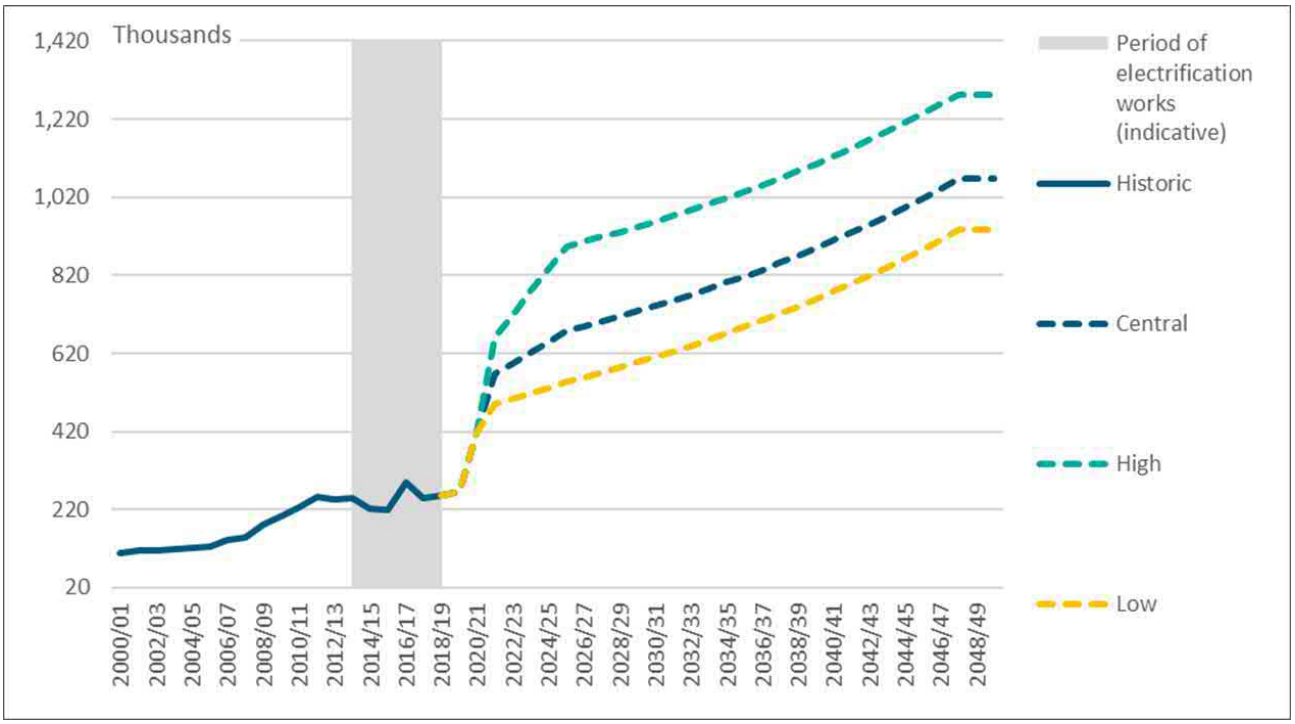
change at Birmingham to avoid knock-on delays and early terminations, and the direct extended service to London has been lost. This is further evidence that upgrades and improvements at Cannock station have proved insufficient and hence other interventions are required to improve passenger journeys and experience.

In 2020 MGDOV provided £90,000 as part of S106 funding to secure a number of enhancements to Cannock station. This will deliver the installation of surface mounted images from across the Cannock Chase area (to be installed along the entrance and exit of walkways, as well as along the two platform fences), installation of two monolith style wayfinding totems, installation of a pedestrian handrail from the Platform 2 exit, installation of a cycle storage rack, and removal of vegetation. Again, such improvements will be insufficient to addressing all of the challenges faced by Cannock station. For example, these improvements will not materially improve station facilities, deal with passenger crowding at platform level or improve accessibility to the Station.

It is estimated that the economic benefit of the Chase Line electrification project, including platform extensions will be significant, with £113m of Gross Value Added boosting the economy each year and 1,400 new jobs created[5]. However, the Cannock station is a two platform, unstaffed station with basic facilities. It is owned and maintained by Network Rail, and its pay & display car park is owned by the Council.

Since the station opened in 1989 there has been a significant increase in passenger numbers, especially since 2000 from which demand has grown from 110,000 annual passengers to 258,000 in 2019, driven by the improvements in rail services and the developments in the town. There is a potential for this figure to be significantly increased as rail services on the Chase Line improved and the area benefits from faster and more frequent services and improvements to the rolling stock. There is a direct train from Rugeley Town to Cannock station. The number of new dwellings, the ease of travel and the new designer outlet would suggest increased demand on Cannock station. Beyond 2019, passenger demand at Cannock station is expected to grow considerably from approximately 215,000 to 569,000 annual entries and exits in 2020/21, after the opening of the MGDOV, as shown below in **Figure 2-4** (central case).

Figure 2-4 - Cannock Station Passenger Usage Forecast



In the Central Scenario, passenger demand is expected to continuing growing, exceeding 1 million entries and exits by 2045/46.Passenger demand forecasts are based on exogenous factors such as economic activity and population growth, trip generation outputs from the MGDOV Transport Assessment, and demand induced from station improvements, based on rail industry research. Demand for 2018/19 has been presented as forecasted demand as data was not available for 2018/19 at the time of the development of the SOBC. The different scenarios forecast similar gradient increases in demand uplift as they are based on 2% rail mode share of

[5] Economic assessment produced by KPMG on behalf of Centro, 2012

MGDOV demand at Cannock station. More information on the approach to demand forecasting is set out in further detail in the Economic Appraisal Technical Note.

2.3. Challenges and Opportunities

This section outlines the current and anticipated challenges and opportunities posed by Cannock station's characteristics and performance and evidences the need for transport intervention. Section 2.4 sets out the strategic and policy alignment for each of these challenges and opportunities.

The challenges and opportunities have been identified through stakeholder interviews, workshop and independently delivered focus groups, complementing our understanding of the station's physical attributes. Key stakeholders include:

- Cannock Chase District Council;
- Staffordshire County Council;
- West Midlands Rail Executive;
- McArthurGlen;
- Transport for the West Midlands;
- Network Rail;
- West Midland Trains; and
- Arriva UK Bus

These stakeholders have been consulted as part of the scheme's development.

A comprehensive site visit and gap analysis was undertaken in 2018 as part of the West Midlands Station Alliance Pilot Project[6], which outlined station development plans for Chase Line stations. This SOBC has used this study, alongside other key strategies and policies, to inform the identification of key challenges and opportunities. A recent site visit in early 2020 has also supported the analysis.

Following these site visits and stakeholder consultation the following key issues have been identified with the current station facilities.

- Lack of station facilities impacting negatively on passenger experience, safety and security;
- Need to accommodate future demand growth as a result of the improved rail services now operating alongside significant new developments in the town including MGDOV;
- Poor station accessibility, including non-compliant step-free access;
- Poor public transport interchange;
- Unmaintained cycle storage discouraging active travel;
- Unattractive gateway to Cannock Chase District for visitors;
- Underutilised car parking provision; and
- Station not in a position attract further investment in the future

All of these issues are felt to be reducing the attractiveness of the station, deterring potential rail use, and creating an unattractive and unwelcoming gateway to this rapidly growing town.

2.3.1. Lack of station facilities impacting negatively on passenger experience, safety and security

In 2010, small scale improvements were made to the Cannock station platforms including upgraded CCTV, new weather shelters and real-time travel information, however the facilities are still inadequate. Currently, the station does not provide basic facilities including toilets, a waiting room, Wi-Fi or an ATM, most of which the scheme will provide. There are no refreshment or retail opportunities in the station; the closest retail space is ASDA located 350m east of the station. Passengers wanting to cross between platforms have to exit the station and walk under a bridge along Lichfield road A5190, as is shown in Figure 2-5. The platforms themselves are narrow and lighting is poor. Whilst a future upgrade to the station may not directly solve the issue of the walk between platforms, the lack of ticket machines on the northbound platform mean some passengers may have

[6] GHD/Weston Williamson + Partners, West Midlands Station Alliance Pilot Project, March 2018

to undertake the walk just to buy a ticket, and inevitably some will not bother. This leads to ticket evasion and lost revenue, which could be addressed with sufficient facilities on both platforms.

Figure 2-5 - Photos Showing Basic Facilities at Cannock Station.

Cannock station does not provide a staffed ticket booth and there is only one ticket machine located on the southbound platform. This results in a long circuitous route for northbound passengers wishing to buy paper tickets and must walk up the ramp to the Southbound platform from Lichfield road A5190 and then back on themselves, along Lichfield road before returning to the Northbound platform. For less abled persons, this can significantly increase overall journey time. If the ticket machine was out-of-service, which was observed whilst onsite in January 2020 during a one-day site visits, passengers using the station would have no option but to use mobile tickets, whilst some passengers may even attempt to dodge fares altogether. Despite the use of mobile tickets becoming increasingly popular, the uptake in the over 60 population (26.3% in Cannock town[7]) will be slower and inaccessible (with 36%, 4.2 million people, of those aged 65+ in the UK being offline, lapsed or having never used the internet.[8]) Thus, the addition of a second ticket machine on the northbound platform will assist those who use paper tickets and avoid the long, unnecessary routes described above and address ticket evasion and loss of revenue The lack of appropriate weather shelters results in hazardous, slippery platforms in the winter and exposure to intense sun during the summer months.

Figure 2-6 - Additional Photos Showing Basic Facilities at Cannock Station

Figure 2-6 shows additional photos of the basic facilities at Cannock station. As Cannock station is unstaffed, access to facilities that are fit-for-purpose will ensure that passengers travel comfortably and feel safe. The improvements in 2010 and 2018, including platform facilities and extensions have increased safety at the station but further improvements would further enhance passengers' perception of safety and overall experience.

[7] CCC, Cannock Town Centre Vision Area Action Plan, January 2017
[8] Age UK, Digital Inclusion Evidence Review, November 2018

2.3.2. Need to accommodate future demand growth as a result of the McArthurGlen Designer Outlet and rail service improvements

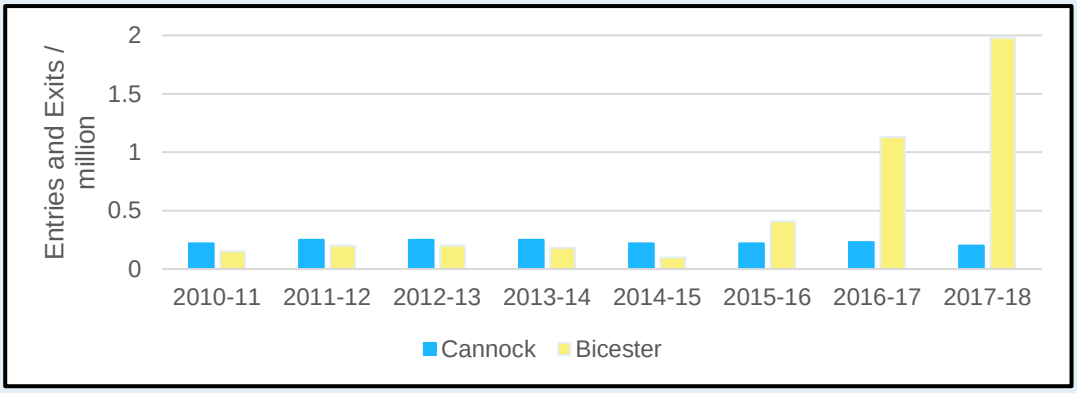
The opening of the £160m McArthurGlen Designer Outlet in spring 2021 will mark a significant opportunity for growth in the tourism industry and resulting economic prosperity for Cannock Chase District and the wider region. A projected 3.5 million annual visitors[9] are expected to shop at the outlet upon completion of the 130 retail spaces after Phase 2 is delivered, with 2% projected to arrive by rail (an additional 60,000 passengers per year [10]). This would follow continuous passenger growth which Cannock station has accommodated since its reopening. As Phase 1 of the Designer Outlet is expected to be complete in spring 2021, Cannock station is likely to see more increase in passenger demand upon its opening. It should be noted here that the demand forecasts have been made without considering the impacts of the Covid-19 pandemic.

As a result, Cannock town centre will also see a boost in visitor numbers who may also link trips to other local attractions whilst shopping at the Designer Outlet. Potential sites of interest include Cannock Chase AONB, the Prince of Wales theatre and Cannock Shopping Centre. With close links to Birmingham and Stafford, the station redevelopment will encourage visitors to travel by rail and spend the entire day visiting the McArthurGlen Designer Outlet and surrounding attractions.

Case Study – Bicester Village

Bicester Village is a Designer Outlet located in Oxfordshire which has recently been refurbished to contain 162 retail spaces, compared to the 130 in the McArthurGlen Designer Outlet in Cannock. From assessing the impacts of the Designer Outlet on Bicester Village train station, it is possible realise the opportunities that could be available to Cannock station as a result of the McArthurGlen Designer Outlet. Both stations have two platforms and are located less than 0.5 miles away from a Designer Outlet. Bicester Village has been particularly successful in attracting customers from London, who can reach the Outlet within an hour. The McArthurGlen Designer Outlet will have 11 million consumers within a 90-minute catchment area, including the 30-minute train to Birmingham, which highlights the potential consumer base for the Outlet Village.

Figure 2-7 - Total Number of Entries and Exits at Cannock Station (Blue) and Bicester Village Station (Yellow)



The period between 2010-15 shows similar levels of demand for both Cannock and Bicester, with a small reduction in demand in Bicester during 2015 when the station was being redeveloped. Upon the opening of station in October 2015 and completion of the Bicester Village refurbishment in October 2017, there has been a significant increase in the demand for rail travel at Bicester Village station. It should be noted that Bicester Village station is immediately adjacent to the Outlet, whilst Cannock station is a short walk or trip from the MGDOV

In addition to the 3.5 million annual visitors which will arrive in mid-2021, the Designer Outlet will also support up to 1,000 new jobs in the local area, with the majority in the retail industry.[11] This is will provide a large boost in local employment rates, particularly for 16-18 year-olds and by attracting specialised retail personnel. The local Walsall college has launched an 'Access to Retail Employability Programme' that is designed to prepare

[9] WYG, Transport Assessment: Mill Green Designer Outlet Village Cannock Chase, January 2015
[10] Mill Green Designer Outlet Village Travel Plan Framework (January 2015)
[11] West Midlands Designer Outlet, available at: https://www.mcarthurglen.com/en/outlets/uk/designer-outlet-west-midlands/news/new-retail-academy-connects-jobseekers-to-opportunities-at-mcarthurglen-designer-outlet/

and connect jobseekers to the opportunities at the McArthurGlen Designer Outlet.[12] Some of those who take up jobs at the MGDOV will arrive in Cannock by train and will require connections to the development (either via bus or by walking), strengthening the argument for the station and its facilities to be improved.

In addition to the Designer Outlet, demand for rail travel is anticipated to continue to grow as a result of the electrification and platform extensions on the Chase Line. The new electric trains introduced in May 2019 have provided increased capacity by offering four-car trains. The new timetable announced in December 2019 saw the frequency of the Monday-Saturday evening service from Birmingham New Street doubled from hourly to half-hourly and new services to economic hubs such as Birmingham International, London Euston (via interchange at Birmingham New Street) and Wolverhampton (via interchange at Birmingham New Street).

The redevelopment of the station will provide modern and accessible facilities that support Cannock's growing tourism industry and anticipated increase in rail demand, particularly as a result of the MGDOV opening. Bicester Village station has recently completed its refurbishment of the station in line with the Bicester Village Designer outlet and has been used in a case study below.[13] It should be noted that the case study is not to be interpreted as a like-for-like comparison with Cannock station and MGDOV. It is outlined below as an example of demand uplift following the opening of a Designer Outlet and an adjacent train station with the capacity to accommodate such uplift.

2.3.3. Poor station accessibility, including step-free access

At present, the northbound station platform is accessible via a sloped footpath from Remington Drive/Lichfield Road with no vehicle access. The southbound platform is accessible via the Cannock station car park off Girton Road with two marked sloped footpaths and an uneven, desired footpath shown in Figure 2-8 A. This shows how the station currently does not support the needs of those who use it frequently. The steep unpaved footpath will frequently become a safety hazard for station users as a result of cold or wet weather conditions.

Figure 2-8 - Poor Station Access to the Southbound Platform

Despite access to both north and southbound platforms being step-free, the pathways are steep and non-DDA compliant resulting in the platforms being inaccessible and unappealing for disabled passengers or those with pushchairs or luggage. The northbound platform entrance route, shown in

Figure **2-9** B, has no handrails to support passengers to the station. Overall, Cannock station is currently inadequate for disabled passengers with a lack of accessible facilities including a toilet, ticket machine, wayfinding signs and shelters in addition to non-compliant access ramps, facilities which will be delivered by some of the scheme's options.

[12] Walsall College, available at: https://www.walsallcollege.ac.uk/news/new-retail-academy-connects-jobseekers-to-opportunities-at-mcarthurglen-designer-outlet/
[13] Office for Road and Rail, Estimates of Station Usage (2017-2018)

Figure 2-9 – Poor Station Access to the Northbound Platform

2.3.4. Poor public transport interchange

Providing a clear and intuitive transport interchange network with clear wayfinding and updated information is the key to encouraging multi-modal transport and sustainable travel, both within Cannock town centre and the wider Staffordshire region. Multi-modal changes from Cannock station is low at 2%[14] however the provision for future modal share is optimistic, particularly with the opening of the McArthurGlen Designer Outlet, which will provide opportunity to walk or interchange to access the development, bringing in visitors from outside Cannock district.[15] As described in section 2.3.1 there is a lack of WI-FI available at the station, which will inhibit some passengers from connecting with other forms of public transport.

Bus – The existing bus services run east-west along Lichfield Road with two bus stops located 2 minutes' walk from the station. Bus service 3/3A runs between Cannock Bus Station and Walsall Bus Station every 30-45 minutes, Monday to Saturday. Bus service 61/61A runs between Lichfield Bus Station and Cannock Bus Station every hour, Monday to Saturday. There are no known buses that run along these routes on a Sunday. At the time of writing, onward travel information from the station does not include times of departure, live or digital information and was last updated in July 2019 (seven months previously). Figure 2-2 shows the location of the bus stops nearest to Cannock station.

Walking – A high proportion of Cannock town centre is within a 10-minute walk from the train station, as shown in Figure 2-2. The lack of wayfinding and onward travel information may discourage station users from using multi-modal forms of transport to reach their destinations, as shown in Figure 2 -10.

Rail – Wayfinding and intuitive signs are not only needed for passengers alighting from trains, but they are also needed to guide visitors to the correct platform on their return journey. Currently, there is a lack clear signage to guide visitors to the correct platforms, as shown in Figure 2 -10, where there are no arrows to indicate which direction is platform 1 or 2.

There will be short-term cosmetic changes at the station to improve its appearance, including the additions of artwork and photographic boards. These will come from the Section 106 funding from MGDOV in 2020.

In addition, modal share for rail also includes commuters using the train to link with the wider strategic rail network including links to Birmingham, Coventry, Stafford and London. Rail modal share is popular for commuter routes into Birmingham (22%) and other long-distance commuting journey's.[15] As commuter trains are becoming more frequent due to the electrification and platform extensions on the Chase Line and its subsequent increased capacity, it is likely that demand of commuter trains will increase too.

[14] Mill Green, Mill Green Designer Outlet Village, Transport Assessment (January 2015)
[15] Chase Line West Midlands, Station Alliance Pilot Project (March 2018)

Within Cannock town, 27.6% of households have no access to a car (national average is 25%) and 26.3% of the population are registered as over 60.[7] National rail infrastructure projects including HS2 and East West Rail, accessible via interchange from Cannock, will open up a wide range of network opportunities, including those to major airports. This presents an excellent opportunity to encourage Cannock residents to use multi-modal transport, particularly those who do not have access to a car.

Figure 2 -10 – Lack of Clear Wayfinding at Cannock Station

With the £1.5 million package the MGDOV has agreed to provide there will be support for local projects within Cannock town centre. £900,000 is expected to be invested into creating a new footpath, cycle course and signs running through the Mill Green Nature Park. As the Nature Park runs adjacent to the station, the additional signs and pathways will benefit passengers of Cannock station as well. This is additional to the MGDOV Section 106 funding which will deliver two monolith style wayfinding Totems, the installation of a pedestrian handrail from platform 2 exit, and the installation of surface mounted images from across the Cannock Chase area. These will be installed along the entrance and exit walkways, as well as along the 2 platform fences.

Cannock station can be accessed by walking, cycling, bus and rail however there is discontinuity between modes of transport and lack of information to passengers. The full benefits of the MGDOV can be realised if the links between the station, the development, the town and tourist attractions can be improved.

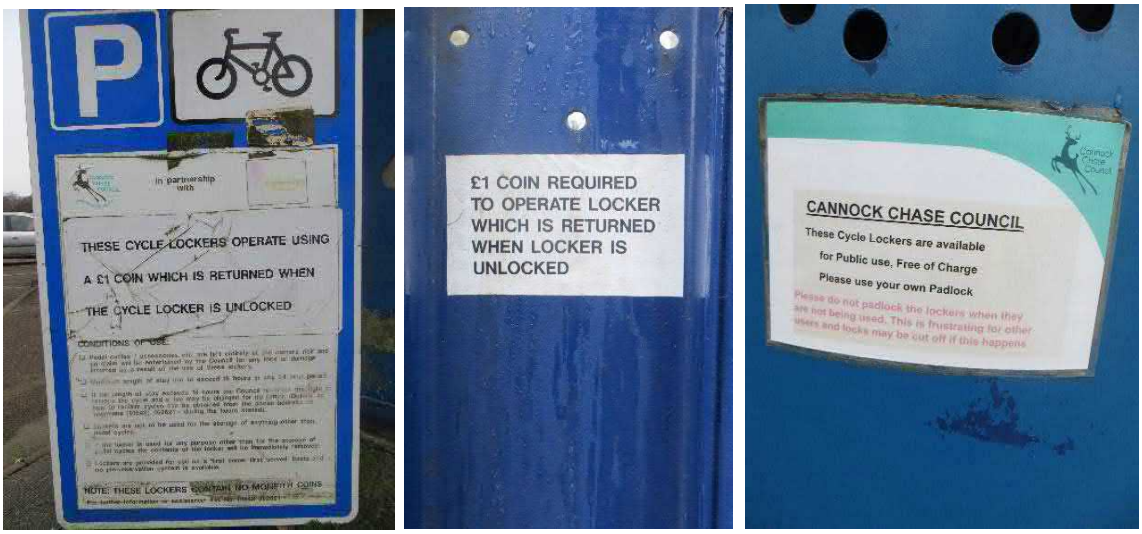
2.3.5. Unmaintained cycle storage discouraging active travel

Current cycle storage facilities, as shown in Figure 2-11, are located within the Cannock station car park, adjacent to one of the path entrances to the southbound platforms. There is provision to cater for four individual bicycles if the passengers provide their own padlocks. Existing bicycle parking looks unkept and not well used and lacks CCTV coverage to provide adequate security. Cycle paths to and from the station are clearly marked

as part of the Cannock Chase heritage trail however there are no National Cycle networks in the Cannock district. There is currently no provision for bicycle parking near the northbound platform and so cyclists must walk their bicycles around to the southbound platform to park them in the designated storage area.

Aside from the MGDOV Section 106 funding which will deliver a cycle storage rack, the Cannock station redevelopment aims to further improve the facilities for bicycle parking at the station in order to encourage active travel and promote cycling. In addition to health benefits provided by active transport, the movement will reduce the immediate over-crowding of the station car park that is regularly busy.

Figure 2-11 - Existing Cycle Storage at Cannock Station



2.3.6. Unattractive gateway to Cannock Chase District for visitors

Cannock station reopened in 1989 as a low cost station serving the re-opened Chase Line. Since then it has not received the enhancements and maintenance expected for a station of its size, despite minor improvements to the platforms in 2010. As a result, the station and its facilities are uninviting to visitors and are negatively impacting passenger experience. The current station is structurally sound but has been vandalised with graffiti.[15] This portrays the wrong image of the historic town centre and surrounding AONB and could deter future investments. The station lacks an overarching theme resulting in disjointed and dull facilities shown in the photos below. Figure **2-12** shows an uninspiring entrance to the station (A), an example of the unkept plants in the car park (B), an example of the litter piles that are scattered around the station site (C), and an example of graffiti and the underpass (D). In anticipation to growth in passenger demand from the recently completed electrification of the Chase Line and the opening of the MGDOV, Cannock station would benefit from an aesthetic uplift to provide an attractive gateway to Cannock Chase district. Visually appealing facilities and station access routes will provide an enhanced passenger experience for both regular users of the station and visitors. However, these measures are short-term, and are not long-term solutions.

Figure 2-12 - Unattractive Features of the Current Cannock Station.

2.3.7. Enhancing car parking utilisation

Cannock station car park currently offers 90 spaces, including two disabled bays for blue badge holders, on a pay-and-display ticket system. Analysis of historic ticket sales indicates that the car park is utilised below capacity which is likely a result of the availability of free uncontrolled parking on the surrounding residential streets, the adjacent ASDA car park and the council-owned nature reserve car park (see Figure 2-2), meaning the car park's capacity and potential is not fully utilised. This puts unnecessary pressure on the surrounding roads and limits the attractiveness of the station to rail users. There is provision for a small number of drop-offs/pick-ups within the car park, but the drop-off area is not officially designated.

The car park currently lacks adequate CCTV to provide security for both vehicles and bicycles. An online survey raised comments that there is not enough lighting between the station platforms and the car park, resulting in an unsafe and unwelcoming environment.[15]

Better parking provision will encourage Cannock residents to use rail for longer journeys, helping to reduce congestion and enhancing the environment. By boosting the number of commuter journeys made by rail, Cannock residents will have improved access to high-wage and high-skilled jobs in economic hubs such a Birmingham and Stafford.

With the redevelopment of Cannock station and its car park there is also the opportunity to provide electric charging points for passengers to park and charge their electric vehicles.

2.3.8. Station not in a position to attract further investment in the future

The anticipated increase in visitors to Cannock town as a result of the opening of the McArthurGlen Designer Outlet is likely to cause overcrowding on the station platforms. The 2% of visitors to the Designer village equates to an additional 70,000 annual visitors to Cannock station (of 3.5 million annual visitors). As the popularity of the Designer Outlet increases and upon completion of its Phase 2 construction in 2021, there is

the potential to increase rail demand. To ensure Cannock station is fit for the future, provision to extend the width or length of the platforms by up to 160m will be needed to ensure all passengers remain a safe distance from the edge of the platform, particularly during peak hours, providing passive provision for further lengthening.

To attract further investment in the future, Cannock station will need to have greatly improved facilities in order to manage increased rail demand and be able to provide an inviting environment for potential investors.

2.4. Strategy and Policy Alignment

The following subsections identify the key local, regional and national policies aligned to addressing the challenges and opportunities set out in Section 2.3 above.

2.4.1. Lack of station facilities impacting negatively on passenger experience, safety and security

The Department for Transport has a clear strategic vision that focuses on providing passengers with excellent customer service and access to digital information and Wi-Fi[16]. Providing additional ticketing machines and Wi-Fi on the platforms will align Cannock station with the Department for Transport's strategic vision for rail and assist with mobile ticketing initiatives.

The Single Network Vision outlined in the West Midlands Rail Executive Strategy focuses on promoting a digital outlook helping customers plan their journey, provide intuitive connections and clear signage to aid multi-modal changes.[17] The collaboration between train operating companies and invested stakeholders aims to provide one network that is characterised by innovation and is resilient to change. The redevelopment of Cannock station aims to provide facilities that supports Cannock town centre and create a modern and inviting gateway to future economic investments.

Staffordshire's Rail Strategy aims to '*improve general station quality, safety and security with the provision of consistent and high quality passenger information*.' [18] The Cannock station redevelopment will align with this policy objective and will help to ensure that the new facilities are modern and fit-for-purpose.

2.4.2. Need to accommodate future demand growth as a result of the McArthurGlen Designer Outlet and rail service improvements

Growth in passenger demand is expected to continue beyond the opening of the MGDOV, with national demand for rail travel set to increase by 40% by 2030.[19] The Department for Transport's Transport Investment Strategy outlines objectives to support the increase in demand by future-proofing infrastructure in a sustainable manner. This will help build a stronger, more balanced economy and will positively impact the daily lives of all those who use the transport network.

Stoke and Staffordshire's strategic economic plan sets ambitious targets to grow the economy by 50%, generating 50,000 new jobs over a 10-year period, the 50:50:10 model.[20] Whilst the McArthurGlen Designer Outlet will help to achieve this target, the importance is focused on how its opening can support the wider Cannock economy. The majority of the 1,000 new high-wage, high-skilled retail jobs are expected to be filled by Cannock residents, supporting around £20 million of additional employment every year.[11] The additional high-skilled jobs will aim to boost the productivity of the Cannock area whilst improving the skills base and allowing local residents to seize these opportunities[21].The MGDOV will also attract highly skilled workers into the region during construction of the Designer Outlet and highway upgrades.

The recently adopted Cannock Chase District Council Economic Prosperity Strategy[22] focuses on capitalises on the MGDOV opening, and Commonwealth Games in 2022 (which will see Cannock host cycling events), to support Cannock Chase taking on a larger share of the region's tourism economy. As part of this ambition, the Council desire to manage the additional visitors in a sustainable way whilst ensuring the railway infrastructure portrays the right first impression for visitors in the area.

[16] Department for Transport – Connecting People: a strategic vision for rail (November 2017)
[17] West Midlands Rail Executive Strategy Single Network Vision (June 2017)
[18] Staffordshire Rail Strategy (April 2016)
[19] Department for Transport, Exogenous Demand Growth Estimator (July 2017)
[20] Stoke-on-Trent and Staffordshire LEP, Strategic Economic Plan (April 2018)
[21] Stoke-on-Trent and Staffordshire Strategic LEP, Economic Plan Delivery Plan (2019-2020)
[22] Cannock Chase District Council, Economic Prosperity Strategy (2020-2030)

2.4.3. Poor station accessibility, including non-compliant step-free access

Ensuring transport infrastructure is designed and constructed to be inclusive for all is a key objective in a wide variety of regional and national strategic documents. The Department for Transport aims to create a '*better connected transport network that works for the users who rely on it'* including those with both visible and non-visible disabilities.[19] The Inclusive Transport Strategy (2018) highlights that while the majority of people travel from between destinations with relative ease, the ageing population and those who identify as having a disability find it considerably more difficult when using public transport.[23] The importance of providing a clear, easy to use, inclusive station, with useful wayfinding, is particularly important for unstaffed stations such as Cannock.[23] Future technology should be designed and implemented with disabilities in mind giving less abled users the confidence to travel further afield. As travelling with a disability becomes easier in the future, further demand is expected on transport networks resulting in a wider consumer base for businesses and supporting economic growth.

Staffordshire County Council hopes that those who live within its communities have safe and easy access to everyday facilities. For those using the rail network as part of a commute, the redevelopment of Cannock station, including installation of accessible toilets in some scheme options, an additional ticket machine and improved access to the station, will result in a substantial increase in journey quality on a daily basis.[18]

2.4.4. Poor public transport interchange

The Cannock Chase Local Plan highlights the use of sustainable transport as one of its key themes to prioritise. Improving the quality of services and information for public transport interchange will help to deliver their objectives of improving access to public transport for all sections of the community to work, shop, for education, leisure and other facilities alongside promoting the continued development of the Chase Line rail services and infrastructure as the preferred means of transport to Birmingham and wider regional destination[24].

The commitment to network upgrades, new connections and extra capacity forms the core of many government strategic policies with HS2 and East West Rail contributing to connectivity and growth for the UK economy. [1916] The Chase Line provides excellent interchange links with Birmingham New Street, Birmingham International and HS2 once completed.

To achieve the Stoke-On-Trent and Staffordshire 50:50:10 target, the right infrastructure is needed to support economic growth where everyone has equal access to jobs, leisure activities and attractive places to live.[20] With improved facilities, it is predicted that more people will be attracted to using public transport, resulting in reduced congestion across the road networks and health benefits from reduced air and noise pollution. [19]

2.4.5. Unmaintained Cycle Storage Discouraging Active Travel

The long-term Government strategy to encourage walking and cycling *for 'short journeys or as part of a longer journey'* by 2040 will be aligned with the Cannock station development plan by providing well maintained, secure cycle parking facilities to encourage active travel. Better safety is a key aim of the strategy which ensures a *'safe and reliable way to travel for short journeys'*. This extends to ensuring peace of mind for passengers who lock their bike away during the working day or at the weekend. Better mobility for those using the network will boost physical and mental wellbeing and allow active travel to *become 'easy, normal and enjoyable'*. [25]

The long-term Cannock Town action plan supports a vibrant town centre that has walking and cycling at their heart. Pedestrians will be prioritised over cars and active travel will be safe for all members of Cannock town.[7] Sustainability is a driving policy for all the action plan policies which aims to avoid contributing to climate change whilst allowing for its impacts. The anticipated movement towards active travel will help achieve local and national objectives.

This is supported by the objectives of the Staffordshire Strategic Plan which aims to ensure that Staffordshire is a '*healthy place to live with an environment that promotes wellbeing for all.'*[26]Incorporating improved cycling facilities within the Cannock station redevelopment will encourage the community to take control of their health and use active travel as a realistic and exciting alternative to private vehicles. The anticipated movement towards active travel will help achieve local and national objectives.

[23] Department for Transport, The Inclusive Transport Strategy (2018)
[24] Cannock Chase District Council, Local Plan (2014)
[25] Department for Transport, Cycling and Walking Investment Strategy (April 2017)
[26] Staffordshire County Council, Strategic Plan (2018-2022)

2.4.6. Unattractive gateway to Cannock Chase District for visitors

The draft Cannock Chase Town Centre Area Action Plan (AAP) identifies that the town centre has an *attractive, distinctive environment* demonstrated by the historic buildings and characteristic architecture.[7] Although the redevelopment of Cannock station cannot reproduce the historical building designs, there is an opportunity to incorporate elements into the redevelopment to link the station to the town centre. This will provide a consistent theme and inclusive structure that integrates with Cannock and results in an inviting gateway to visitors. This ambition is also supported by the Cannock Chase District Council Economic Prosperity Strategy which supports the development of the railway and the regeneration of the town centre to ensure Cannock Chase remains vibrant and sustainable, acting as a hub for leisure and cultural uses, residential opportunities and community activities.[27]Enhancing Car Parking Provision

The Cannock station redevelopment is an opportunity to support the objectives of the Single Network Vision[17], where consistent standards of car parking will be expected at each station within the West Midlands rail network. These include comprehensive CCTV coverage, appropriate space provided for disabled parking and an app for real time information on space availability.

Enhancing car parking provision at Cannock station will support the TfWM's and WMCA's Movement for Growth Transport Plan by addressing parking standards in new development in relation to public transport accessibility, as well as to walking and cycling provision. There could also be an opportunity to further support the Plan with additional improvements outside of the scheme to improve electronic displays and traffic information to give advance warnings of car park capacity at Cannock station.[28]

The Cannock Chase District Council area action plan focuses on accessibility through all modes of transport, with a focus on promoting sustainable modes. For those passengers who cannot use sustainable or active modes of transport, they rely on cars to use the rail network. To provide suitable provision within the car park will reduce pressure on the surrounding residential roads and adjacent car parks. This aligns with the Cannock Chase area action plan to *enhance and maintain a high-quality physical environment.*[7]

2.4.7. Station not in a position to attract further transport investment in the future

The National Infrastructure Assessment focuses on digital infrastructure and having the provision for 5G networks across the country. The continuity of Wi-Fi services between the train and platform is becoming increasingly common however Cannock is unable to provide basic Wi-Fi services on the platforms. Real time data from urban centres such as Birmingham, Liverpool and London can be relayed to passengers which will encourage multi-modal transport and reduce the stress that many passengers have when travelling long distances. The use of real time digital information boards will improve the public perception that Staffordshire is prepared for a digital future, using technology to connect, inform and support their citizens. This is one of the key principles outlines in the Staffordshire Strategic Plan[29] and will be supported by the redevelopment of Cannock station.

Over the past five years, significant investment has been made to the Chase Line including line speed upgrades and more frequent services to Birmingham and Coventry. The £100m Network Rail investment to the Chase Line, including electrification, is likely to foresee the increase in demand for rail across Staffordshire in the future. The redevelopment of Cannock station will complement this investment and support Cannock town in attracting further investment. The Cannock Chase District Council Economic Prosperity Strategy aims to support Cannock Chase in becoming one of the best locations in the West Midlands to start and grow a business, which will be reinforced through a strong and resilient transport infrastructure that is fit for purpose.[30]

The Stoke-On-Trent and Staffordshire Strategic Economic Plan has set a target of growing the economy by 50%, generating 50,000 new jobs over the 10 year period 2014 to 2024 (the 50:50:10 model).[31] Transport infrastructure will be at the heart of supporting this thriving economy and skilled workforce in the future whilst accommodating for future growth in rail demand. This is supported by the delivery of c.1264 new dwellings and 88 hectares of new employment land created by 2028.[32] National event and infrastructure projects such as the 2022 Commonwealth Games and HS2 will support the connectivity of Cannock and the increase in rail demand.

[27] Cannock Chase District Council, Economic Prosperity Strategy (2020-2030)
[28] Transport for West Midlands/West Midlands Combined Authority, Movement for Growth Transport Plan (2017-2026
[29] Staffordshire County Council Strategic Plan (2018-2022)
[30] Cannock Chase District Council Economic Prosperity Strategy (2020-2030)
[31] Stoke-on-Trent and Staffordshire Strategic Economic Plan (April 2018)
[32] Cannock Chase District Integrated Transport Strategy 2013-2028

2.5. Summary of Strategy and Policy Alignment with Challenges and Opportunities

Table 2-2 below summarises the alignment of the identified challenges and opportunities with the key national, regional and local strategies, showing that a redevelopment of Cannock station would have a strong and far-reaching strategic fit.

Table 2-2 - Summary of Strategy and Policy Alignment with Challenges and Opportunities

Challenges and Opportunities	DfT – Connecting People: a strategic vision for rail (Nov 2017) (Adopted)	DfT Transport Investment Strategy (July 2017) (Adopted)	National Infrastructure Assessment (2018) (Adopted)	DfT Cycling and Walking Investment Strategy (2017) (Adopted)	DfT The Inclusive Transport Strategy (2018) (Adopted)	West Midlands Rail Executive Strategy single network vision (2017) (Emerging)	West Midlands Local Industrial Strategy Plan (2019) (Adopted)	WMCA Transport Plan (2016 - 2026) (Adopted)	Stoke-on-Trent and Staffordshire strategic economic plan (April 2018) (Adopted)	Stoke and Staffordshire LEP delivery plan 2019-2020 and Infrastructure Delivery Plan (Adopted)	Staffordshire Walking and Cycling Strategy (Emerging)	Staffordshire County Council Strategic Plan 2018-2022 (Adopted)	Staffordshire Rail Strategy (April 2016) (Adopted)	Cannock Chase District Integrated Transport Strategy 2013 – 2028 (Adopted)	Cannock Town Centre Area Action Plan (August 2017) (Adopted) and Local Plan (2014) (Adopted)	Cannock Chase District Council Economic Prosperity Strategy (2020 – 2030) (Emerging)
Lack of station facilities impacting negatively on passenger experience, safety and security	✓					✓	✓	✓					✓			
Need to accommodate future demand growth as a result of the McArthurGlen Designer Outlet		✓							✓	✓						✓
Poor station accessibility, including non-compliant step-free access		✓			✓						✓		✓			
Poor public transport interchange	✓	✓	✓								✓				✓	
Unmaintained cycle storage discouraging active travel				✓							✓	✓			✓	
Unattractive gateway to Cannock Chase District for visitors															✓	✓
Underutilised car parking provision						✓									✓	
Station not fit for purpose to attract further transport investment in the future							✓		✓			✓		✓		✓
			National Policies				**Regional Policies**			**Local Policies**						

2.6. The Need for Change

Further improvement of the Chase Line is a strategic priority for both Cannock Chase District Council and Staffordshire County Council, with both authorities strongly supporting the recent enhancements, and recognising the line's potential for increased growth. The redevelopment of Cannock station will address the challenges and opportunities outlined in section 2.3, and it will also prepare the station to accommodate the forecast uplift in demand driven by increased propensity of people to travel by rail, new development in the area (particularly from the outlet village and Cannock's other development) and rail improvements.

In addition to supporting the proposed developments and addressing challenges/opportunities outlined in section 2.3, it is anticipated that the station redevelopment will support mode shift to rail and improve access to high-wage and high-skilled jobs in economic hubs such as Birmingham and Stafford.

2.6.1. Addressing the identified challenges

Currently, Cannock Station is a two platform, unstaffed station on the Chase Line between Birmingham New Street and Rugeley Trent Valley (via Walsall) offering a very basic level of facilities to passengers and presents an unattractive gateway to Cannock Chase district. It is in need of upgrade and investment to provide a modern and inviting facility for rail passengers and visitors, complementing the exciting prospect of the MGDOV development and the development of Cannock, the growing population and making travelling by train to and from Cannock a more attractive experience for everyone. This is the only way to ensure Cannock is well-positioned for further investment in the future. It should be noted that the challenges have not considered the Covid-19 pandemic.

2.6.2. Demand Uplift as the Key 'Driver for Change'

There is a key 'Driver for Change' at play here, with a significant uplift in demand expected from MGDOV (with forecasts assuming a flat 3.5 million visitors a year with a rail mode share of 2%-6%[33]) and other developments coming forward in Cannock which will support demand growth. This would have significant impacts on crowding at the station, as can be seen below in Figure 2-13, which shows the area per passenger reducing quickly to less than one square metre in the Worst Case Scenario soon after the opening of the MGDOV in 2021 and reducing to below half a square metre per passenger beyond 2025, with the recommended Level of Service (LoS) B/C[34] at 0.93 square metres[35]. The crowding analysis below is presented for the busiest hour of a typical week, and it factors in observed station counts captured as part of the survey undertaken on 21st January 2020.

Even in the 'Best Case' scenario the recommended level would be breached in 2030/2031. This would be due to a combination of growing MGDOV demand, at 3.5 million visitors a year, and background growth at 3.6% per annum. These estimates have been based on both of these factors, as well as on recent survey results from 2020[36] which confirm that platforms at Cannock station are currently busy at peak times and can often be overcrowded already at these times. These results further reinforce the need for increase platform capacity to accommodate demand through Cannock station.

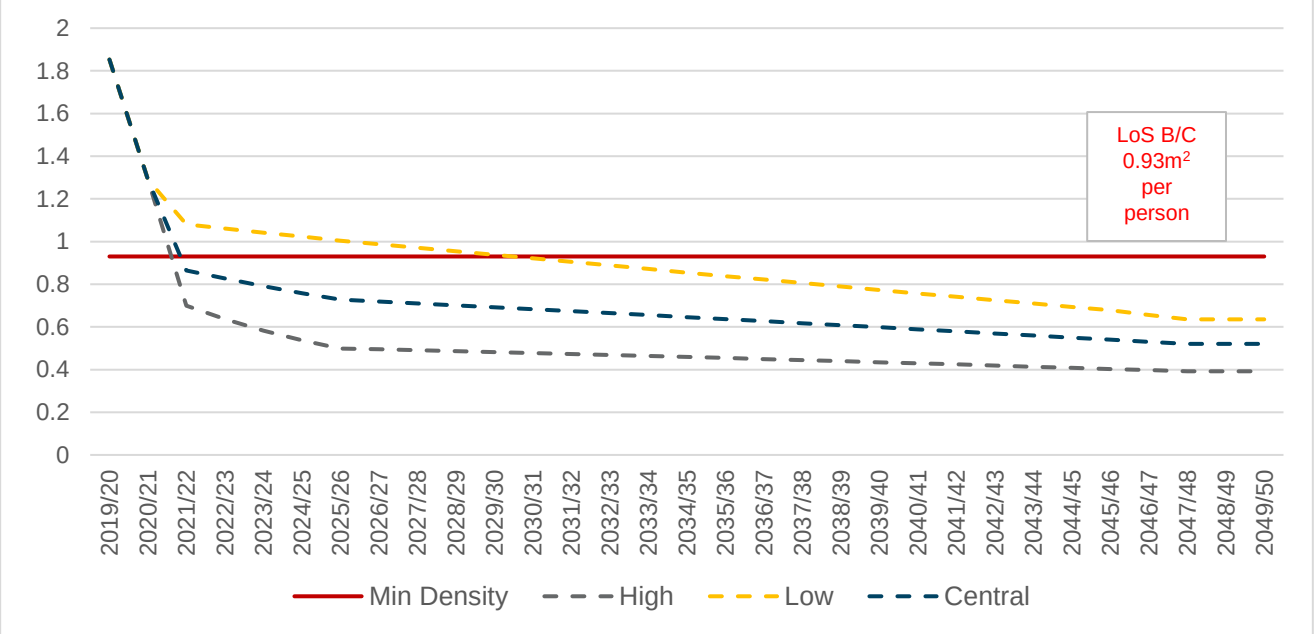
[33] Transport Assessment for Mill Green Designer Outlet Village Cannock Chase. The traffic generation is based on 3.5 million visitors per year

[34] LoS is "Level of Service" and "B/C" relates to Network Rail's aspiration of providing station layouts that offer 'adequate' comfort in terms of crowding, without making stations overly large/expensive. To set the B/C 'adequate' scoring in context, it relates to the Fruin Levels of Service A-F, where A means there's enough space for everyone to move around freely, and F is the other end of the scale of 'crowdedness'.

[35] This situation is worsened with rail passengers carrying travelling or shopping bags as is expected for MGDOV visitors.

[36] Station survey undertaken on the 21st of January 2020, capturing numbers of passengers boarding and alighting at both platforms at Cannock station. A total of 83 passengers were observed to be boarding and alighting the busiest train on this day which translates to a platform density of 1.1m^2 per person. This analysis assumes 83% of passengers boarding and alighting at Cannock station would do so on the southbound platform.

Figure 2-13 - Platform Crowding at Cannock Station



It is clear that if unaccommodated (as part of a 'Do Nothing' case) the uplift in demand cannot be accommodated sufficiently and this could bring about the following related outcomes:

- Passengers continue to experience poor journey quality and safety and security at Cannock station, with the possibility of being deterred from using the station altogether due to overcrowding;
- Cannock fails to realise the potential of the MGDOV, with visitors deterred from arriving/leaving at the existing Cannock station. MGDOV becomes a car-dependent development, with total capacity constrained by those unwilling to access via Cannock station;
- Accessibility, including step-free access, at Cannock station remains poor and deters passengers from using the station despite increased demand from those less-abled, amongst other groups;
- Passengers continuing their journey after arriving at Cannock station continue to use private car, whilst bus patronage and levels of walking and cycling remain lower than they should be;
- Visitor numbers, especially tourists, to Cannock remain lower than potential; and
- Cannock station cannot be future-proofed, or plan, for changes in demand and investment programmes for further improvements.

2.7. Strategic Objectives, Critical Success Factors and Desired Outputs and Outcomes

2.7.1. Strategic Objectives

The strategic objectives have been defined to directly address the challenges and opportunities discussed in Section 2.3 and are focussed on strategic benefits and outcomes for passengers, communities and businesses being sought from the intervention. They align closely with the established policies and plans of CCDC and SCC. Delivery of the scheme's outputs and outcomes, which are outlined in Table 2-3, will meet these strategic objectives.

- **Enhancing journey quality by improving safety, accessibility, reliability and technology for communities in Cannock District;**
- **Future-proof Cannock for further investment and ensure it is fit to accommodate growth**
- **Promote sustainable transport infrastructure and promote a greener future for Cannock and its environment;**
- **Creating an attractive town centre that encourages a vibrant local economy and workforce;** and
- **Support housing delivery and development in the District**

2.7.2. Cannock Station redevelopment Outputs and desired Outcomes

The station redevelopment, complying with current design standards, will deliver the following outputs and outcomes outlined in Table 2-3, helping meet the strategic objectives. These outputs and outcomes correspond with the scheme's core requirements, established by CCDC and SCC as detailed in the Client Requirements document.

Table 2-3 - Cannock station Redevelopment Outputs and Desired Outcomes

Outputs	Core Requirements	Outcomes
Create an exciting and inviting gateway	CRD_27	• Better access to Cannock town centre, Cannock Chase and to the McArthurGlen Designer Outlet Cannock development • Better access to leisure opportunities
Provide enhanced capacity throughout the station from electrified train service and platform extensions, whilst supporting future timetable and providing passive provision for platform extension	CRD_4 CRD_5 CRD_7	• Accommodate future growth and passenger capacity • Future proof for further train service improvements • Support local regeneration initiatives
Deliver and provide safe, secure, accessible, modern station facilities, complying with the standards baseline – including weatherproof platform waiting areas, enhanced ticketing facilities, refreshment/retail facilities, real-time customer information, interchange options, and wayfinding.	CRD_1 CRD_2 CRD_3 CRD_18 CRD_21 CRD_26	• Improved passenger experience for all • Improved passenger safety and security for all • Improved visual environment
The station will be operable and manageable during all hours, even in degraded mode[37], and will be carbon neutral	CRD_8 CRD_9 CRD_10 CRD_14 CRD_25	• Efficient operation and management of the station • Improved local air quality
Provide community hub facilities	CRD_27	• Improved staff support for passenger and visitor requirements • Support delivery of housing and development
Improving car parking provision and improving drop off/pick up facilities	CRD_23	• Encourage growth in Park & Ride
Enhance step-free access facilities	CRD_6	• Improved station accessibility for all
Provide active travel facilities	Aligns with non-core requirements	• Encourage active travel and healthier lifestyles • Improved local air quality
Support interchange with local transportation links	Aligns with non-core requirements	• Better local connections from the rail station to Cannock town centre and the Mill Green outlet

37 Network Rail's COMPASS system, now termed DMWS (Degraded Mode Working System), is a system whereby, in the event of a signalling problem, an instruction can be given to a train driver that it is safe to proceed beyond the failure locality to a distant position determined by the signaller

2.7.3. Critical Success Factors

In addition to the strategic objectives and the scheme's outputs and outcomes which help meet these, a set of critical success factors (CSF) have also been identified that reflect criteria that will also need to be met if successful delivery of an intervention at Cannock station is to be realised. These are presented below in Table 2-4.

Table 2-4 - Critical Success Factors

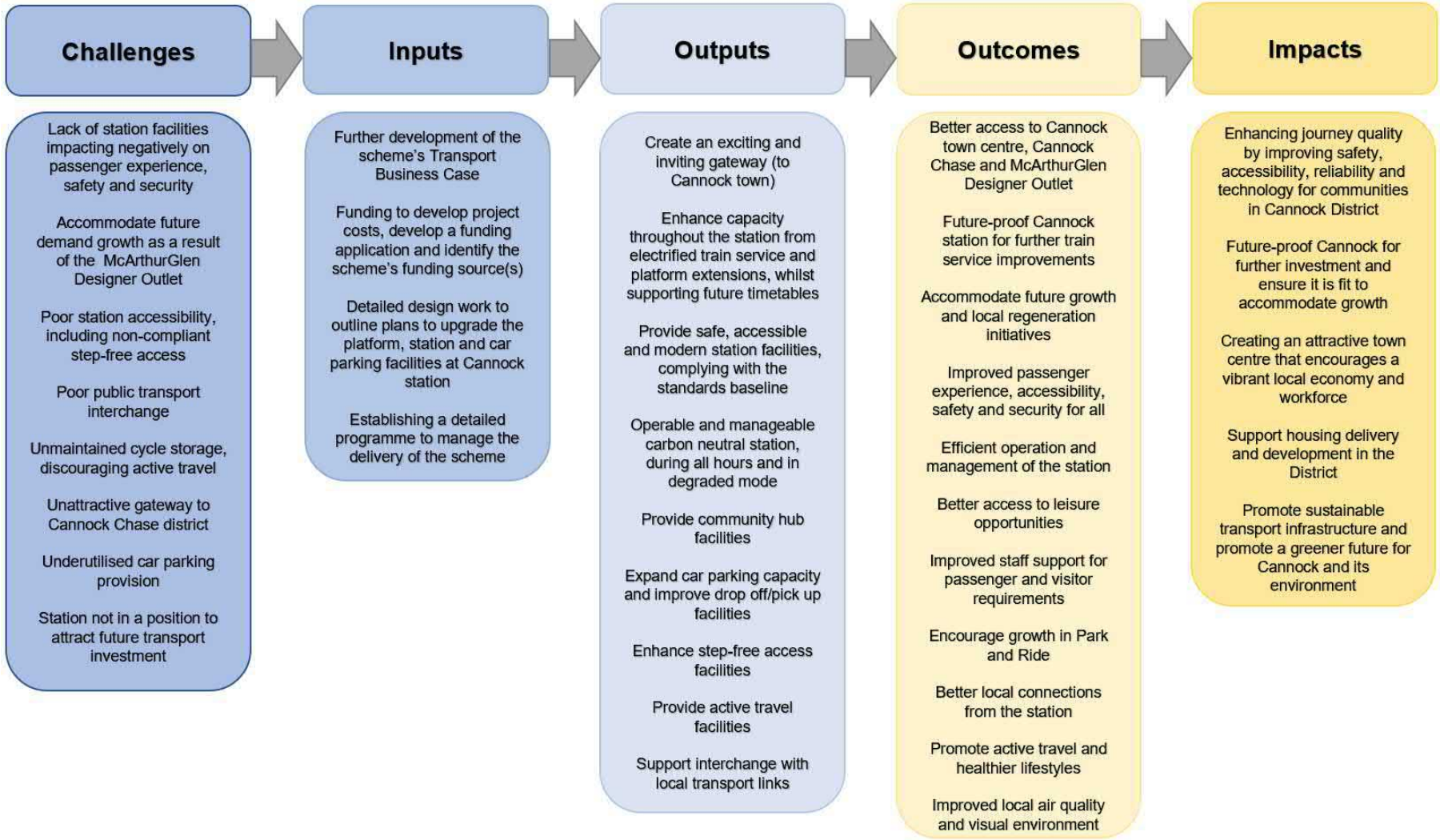
Critical Success Factor	Description
Value for Money	Intervention must represent satisfactory overall value for money to the UK tax payer
Affordability	Intervention must be affordable and have realistic funding prospects
Infrastructure delivery	Intervention must be considered technically feasible and deliverable at a satisfactory level of risk
Implementation disruption to transport network	Disruption impacts to transport network associated with implementation should be considered acceptable
Operational delivery	Intervention should be operationally feasible and deliverable at a satisfactory level of risk
Resilience to future demand and investment	Intervention should offer reasonable resilience to future demand and future investment
Environmental impact	Intervention must be deliverable at an acceptable level of environmental impact
Land property impacts	Intervention must be deliverable at an acceptable level of land and property impact
Programme	Intervention should be deliverable within a timeframe that aligns to the strategic objectives
Stakeholder acceptability	Intervention should have the support or acceptance of the stakeholders required to facilitate delivery

The combination of strategic objectives and CSFs provides the framework for overall strategic performance assessment of options, presented below in Section 2.8

2.7.4. Logic Map

Figure 2-14 sets out the Logic Map for this SOBC, which links the challenges and opportunities identified to the strategic objectives and the scheme's outputs and outcomes. This has been developed in line with DfT's logic mapping guidance.

Figure 2-14 - Cannock station Redevelopment SOBC Logic Map



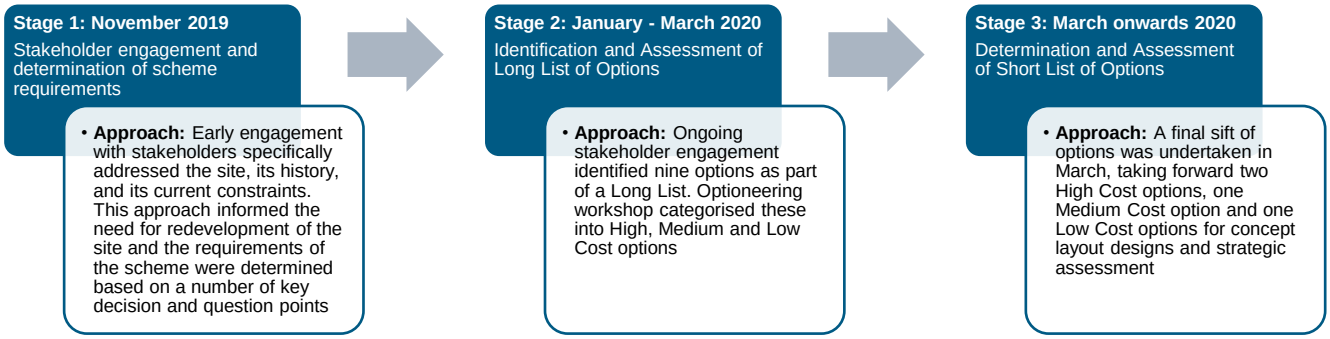
2.8. Consideration of Options for Intervention

This section outlines the stages of consideration of options for intervention at Cannock station, which culminated in the Short List of options for full SOBC appraisal.

2.8.1. Stages of considering and assessing Options

Figure 2-15 below outlines the key three stages to the consideration of options for Cannock Station's redevelopment.

Figure 2-15 - Option Consideration and Assessment Approach



2.8.2. Stage 1 – Stakeholder engagement and determination of Scheme requirements

Stakeholder Meetings

A number of stakeholder meetings were held between October 2019 and March 2020, with CCDC, SCC, WMRE and Network Rail, amongst other stakeholders. The purpose of the earlier meetings, those taking place between October and December, was to discuss the site upon which Cannock station will undergo a redevelopment. Specifically, the site's history and existing constraints, including those referred to in Section 2.2, were carefully considered. This approach informed the specifics of the need for a redeveloped station, and the requirements of the site.

Scheme Requirements Capture Workshop

The discussions based around the site itself progressed to the exploration of a number of question and decision points about the requirements of a redeveloped Cannock station. These were explored in a workshop on 29th January 2020, with CCC, SCC, WMRE and Network Rail. These question and decision points are set out below in Table 2-5.

Table 2-5 - Key Decision Points and Questions to Capture Scheme Requirements

Decision Points	Questions
Is a manned station needed?	Will the Outlet Village have a presence at the station?
Will there be a crossing outside of the station?	What work has already been agreed to start at the station? (i.e. what changes have been agreed?)
How much of an impact should the station make?	How much do CCDC want to provision for future technology and ways of operating?
Is a station building needed?	What is being done by WMRE on "How to make the railway accessible for the last mile?"
Does additional land need to be purchased?	Is the aim for the station to be carbon natural? what is the applicability?
Does Girton Road need to be opened to allow buses to use it?	Is there a need to link to the outlet village for access, e.g. a shuttle?

Is a bus stop needed outside of the station?	How is on street parking affected by parking charges?
Do highways surrounding the station need to be modified?	Who uses the car park?

A list of core and aspirational requirements was then developed by CCDC, SCC, WMRE and Network Rail. These correspond with the outcomes set out in Section 2.7.2. Upon development of the scheme requirements, nine options were established as part of the Long List.

2.8.3. Stage 2 – Identification and assessment of Long List of Options

The Station's Functional Components

Individual components of the station were assessed separately to identify a range of distinct option components as summarised in Table 2-6 below.

Table 2-6 - Cannock Station's Functional Components

Station's Functional Component	Option Components[38]
Platforms	Widen Platforms (WP) New Shelter (NS) Compliant Ramps/Footpath/Lift/Stairs, Person with Reduced Mobility (PRM) Ticket Machine (TM) Elevated Plaza (EP) New Canopy (NC) Platform lengthening and screen (PL) Partial platform widening (PW) Demolish building (CPO)
Car Park	Re-plan exiting car park (CP) Kerb adjustment for set-down (KA) Retaining wall to facilitate new parking layout (RW)
Station Building	New shelter (NS) Ticket machine at platform level with hood (TM) Enclosed pavilion with café serving hatch at ground level (PC) Station building with ticketing facility and café (with toilets and BOH areas at ground level (ST) Mobile catering provision at ground level (MC)

Identification of High, Medium and Low Cost Options

The components were then aggregated to generate nine longlisted options. The nine longlisted options were categorised by 'High Cost, 'Medium Cost' and 'Low Cost', and each assessed against the project outputs outlined in Section 2.7.2. The following categorisation by expected cost was confirmed and presented in an optioneering workshop on 3rd March 2020.

- **High Cost** options – A, B, and C;
- **Medium Cost** options – D, E, and F; and
- **Low Cost** options – G, H, and J

Details of the longlisted options are detailed in the Cannock Station Redevelopment Options document (5193346-ATK-50.51-00001).

[38] Abbreviations correspond with design options in the Cannock Station Redevelopment Options document (5193346-ATK-50.51-00001)

2.8.4. Stage 3 – Determination and assessment of Short List of Options

Final Sifting of Options

The final sifting process, to determine a short list of options, took place between 4th – 20th March 2020. Four options were selected across the expected cost categories to be taken forward, with at least one option being chosen from each category. These are outlined and described below:

- **Option A (Transformational Upgrade Max):** This option features a new gateway, step-free access and community hub. It will provide enhanced capacity and improved passenger experience and promote active travel with improved facilities;
- **Option C (Transformational Upgrade):** This option will have the same facilities and provisions as Option A; however, the gateway and community hub elements will be less developed;
- **Option G (Enhanced Upgrade):** Similar to Option C, however the improvement to passenger experience is likely to be limited by lack of shelter and some station facilities such as WCs; and
- **Option J (Core upgrade):** This basic station redevelopment option will lack a gateway and community hub, and improvement to passenger experience will be limited by lack of facilities, such as café, canopy and WCs.

Common to all options are improved audio- visual management systems (including CCTVs), improved customer information systems and wayfinding, platform widening, improved lighting, ticket machine to the Northbound Platform, free Wi-Fi, improvements to car park and provision of PRM-compliant footpath/ramp.

Assessment of Short List and Identification of Preferred Option

Table 2-7 presents a strategic case overview of the assessment of each option's potential to meet the strategic objectives and outcomes.

Option A is the most ambitious scheme for a new, redeveloped Cannock station. It scores highest for its forecasted impacts on all aspects of journey quality and passenger experience, and highly for future-proofing the station and the town for future investment, for promoting sustainable transport infrastructure and creating an attractive gateway and town centre, and thus scores well for housing delivery. As the most ambitious and expensive option there is understandably greater risk associated with deliverability, disruption, and environmental impact, however these are outweighed by the scheme's forecasted positive impacts for the purposes of this assessment. Impacts on Value for Money and Affordability will be assessed upon completion of the Economic and Financial Cases.

Table 2-7 - Strategic Assessment of Short List of Options against Strategic Objectives and Critical Success Factor

Objectives	Key Outcomes/Benefits Sought	Scoring Framework	Option A	Option C	Option G	Option J
Enhancing journey quality by improving safety, accessibility, reliability and technology for communities in Cannock District	• Improved passenger safety and security for all • Improved station accessibility got all • Improved passenger experience for all • Improved staff support for passenger and visitor requirements	+4 = very large impact forecast +3 = large impact forecast +2 = moderate impact forecast +1 = modest impact forecast 0 = negligible impact forecast	+4	+3	+2	+2
Future-proof Cannock for further investment and ensure it is fit to accommodate growth	• Future proof for further train service improvements • Accommodate future growth and passenger capacity at Cannock station	+4 = very large impact forecast +3 = large impact forecast +2 = moderate impact forecast +1 = modest impact forecast 0 = negligible impact forecast	+3	+2	+2	+2
Promote sustainable transport infrastructure and promote a greener future for Cannock and its environment	• Improved visual environment • Encourage active travel and healthier lifestyles • Better access to leisure opportunities • Improved local air quality • Support Park & Ride	+4 = very large impact forecast +3 = large impact forecast +2 = moderate impact forecast +1 = modest impact forecast 0 = negligible impact forecast	+3	+2	+2	+1
Creating an attractive town centre that encourages a vibrant local economy and workforce	• Better access to Cannock town centre, Cannock Chase and to the McArthurGlen Designer Outlet Cannock development	+4 = very large impact forecast +3 = large impact forecast +2 = moderate impact forecast +1 = modest impact forecast 0 = negligible impact forecast	+3	+2	+2	0
Support housing delivery and development in the District	• Support delivery of housing and development • Support local regeneration initiatives	+4 = very large impact forecast +3 = large impact forecast +2 = moderate impact forecast +1 = modest impact forecast 0 = negligible impact forecast	+2	+2	+2	+1
Critical Success Factors						

Value for Money	Intervention must represent satisfactory overall value for money to the UK tax payer	VfM score reflecting AST: +4 = Very high; +3 = High; +2 = Medium; +1 = Low; -1 = Poor; -2 = Very Poor	-1	1	-1	-1
Affordability	Intervention must be affordable and have realistic funding prospects	Scale of affordability challenge: -3 = High; -2 = Moderate; -1 = Low	-3	-3	-2	-1
Infrastructure delivery	Intervention must be considered technically feasible and deliverable at a satisfactory level of risk	Technical feasibility risk level score: -3 = high; -2 = moderate; -1 = low	-3	-2	-2	-1
Implementation disruption to transport network	Disruption impacts to transport network associated with implementation should be considered acceptable	Disruption risk level score: -3 = high; -2 = moderate; -1 = low	-2	-2	-2	-1
Operational delivery	Intervention should be operationally feasible and deliverable at a satisfactory level of risk	Operational risk level score: -3 = High; -2 = moderate; -1 = low	-3	-2	-2	-1
Resilience to future demands and investment	Intervention should offer reasonable resilience to future demand and future investment	Future resilience score: +3 = High; +2 = Medium; +1 = Low	+3	+3	+2	+1
Environmental impact	Intervention must be deliverable at an acceptable level of environmental impact	Environmental impact risk level score: -3 = high; -2 = moderate; -1 = low	-2	-2	-2	-2
Land property impacts	Intervention must be deliverable at an acceptable level of land and property impact	Land & Property impact risk level score: -3 = high; -2 = moderate; -1 = low	-3	-2	-1	-1
Programme	Intervention should be deliverable within a timeframe that aligns to the strategic objectives	Delivery alignment to strategic need score: +2 = well aligned; +1 = partially aligned; -1 = poorly aligned	+2	+2	+2	+2
Stakeholder support	Intervention should have the support or acceptance of the stakeholders required to facilitate delivery	Support score: +2 = strong; +1 moderate; -1 = poor	+2	+1	+1	-1

The following provides a summary of performance against the Strategic Objectives and the Critical Success Factors:

Strategic Objectives

- **Enhancing journey quality by improving safety, reliability and technology for communities in Cannock District –** Option A performs the highest for this objective with its extensive range of new components and facilities. Specifically, widened platforms, PRM-compliant footpath and ramp, and new ticket machine, canopy, and café will improve safety and technology for communities. Options C and G perform moderately due to limited new station facilities when compared to Option A, however it is Option J that performs the poorest against this objective. This is because it offers no real improvement to station and car park facilities beyond a new ticket machine, basic shelter, footpath/ramp and platform widening;
- **Future-proof Cannock for further investment and ensure it is fit to accommodate growth –** Options C, G and J perform well against this objective as they all provide the opportunity to increase station capacity through platform widening and shelter areas. However, Option A performs stronger as it offers more capacity within an improved station building;
- **Promote sustainable transport infrastructure and promote a greener future for Cannock and its environment –** Whilst all options offer relocated bus stops, Options A and C also relocate the pedestrian crossing and therefore perform stronger than Options G and J. Option A performs the strongest as its waiting areas within the new station building, canopy and café will encourage more passengers to wait within the station not only for rail services but for interchanging bus services;
- **Creating an attractive town centre that encourages a vibrant local economy and workforce –** Option A provides an attractive gateway and introduction to the town with its new station facilities, components and features. Options C and G do this to some extent, whilst Option J provides no improvement to perception of the town with its limited changes and therefore; and
- **Support housing delivery and development in the District –** Options A, C and G are all expected to have a moderate impact on housing delivery and development in the District, closely linked to the improvement of Cannock's gateway and its perception as a nice place to live and work. Option J, due to not providing an improvement to perception of Cannock, is expected to only have a small impact on housing delivery and development

Critical Success Factors

- **Value for Money –** All Options except option C have a Benefit Cost Ratio (BCR) in the 'Low' Value for Money (VfM) category;
- **Affordability –** Options A and C perform poorly with high capital costs, Option G performs moderately for affordability, whilst Option J remains the most affordable option;
- **Infrastructure delivery –** As the most ambitious option, Option A is considered to be more technically challenging to deliver, with greater levels of risk than Option C. Options G and J are considered the most technically feasible to deliver and score strongest for this CSF, mainly due to the lack of platform elevation and new buildings;
- **Implementation disruption to transport network –** Options A and C will require substantial changes to platforms, canopy, bus stops and pedestrian crossings, and are therefore expected to have moderate disruption to the local transport network. Options G and J are expected to have low disruption without such substantial changes;
- **Operational delivery –** Option A is expected to require the most operation and maintenance costs as it is introducing or changing the most components, such as the formal station building and its new facilities. Options C and G are expected to require some operation and maintenance, whilst Option J is expected to require limited additional operation and maintenance;
- **Resilience to future demands and investment –** Options A and C score strongest as the improvements planned for each will accommodate increased capacity and support further plans for increased capacity and investment. Option G will have a medium impact on the ability to offer reasonable resilience whilst Option J will have a low impact;
- **Environmental impact –** All options are expected to have a negative environmental impact; however the scoring will be made upon completion of the environmental assessments;
- **Land property impacts –** Option A scores weakest for this CSF. Option C scores fairly poorly.

- **Programme –** all options are expected to be deliverable within the timeframe at this stage and therefore they all align well with this CSF; and
- **Stakeholder support –** Option A is best aligned to the Strategic Objectives and is likely to have the most support and acceptance from stakeholders. Options C and G would be well-received by stakeholders as notable improvements to the station, and therefore score moderately. Option J is likely to have poor stakeholder support as it does not offer a notable improvement

2.9. Constraints and Dependencies

A number of constraints and dependencies exist for the scheme and these have been considered with planned mitigation throughout the scheme's development.

2.9.1. Constraints

Table 2-8 below outlines the scheme's key constraints. This includes environmental and geographic constraints, as well as those related to utilities, land access, and residential properties.

Table 2-8 - Cannock Station Redevelopment Key Constraints

Constraint	Impact	Timeframe	Planned Mitigation
Gas governor kiosk located north east of the station	Relocating the gas governor kiosk would incur costs on the project	Medium-term	A decision has been made not to seek utility records or contact Cadent Gas about the kiosk at this stage
Station located on historic gas works	A gas main runs beneath the station, and it is likely an easement or a wayleave would be required to check or move the main	Medium-term	CCDC to liaise with Cadent Gas about the nature and timeframes of any easements or wayleaves required
Utilities located near the footway	Potential relocation would be required if the footway was to undergo works	Short-term	CCDC to liaise with utilities companies
Mill Green and Hawks Green Valleys Local Nature Reserve located immediately north of the station	Construction activity could encroach on the nature reserve, and its access for visitors could be restricted	Short-term	Construction plans to consider environmental receptors, minimising or removing impact where possible
Poor condition of culvert under Lichfield Road	Would require remedial works if affected by the scheme	Short-term	Mitigation for this constraint is yet to be determined at this stage
Significant tree coverage on the site	Trees may have to be removed during construction of the scheme	Short-term	None of the trees are noted to be of high value so their removal should not pose significant issues
Site located on an embankment	A large proportion of the site is located on an embankment, so a retaining wall should be considered with the new works	Short-term	Mitigation for this constraint is yet to be determined at this stage
Existing Network Rail assets	Construction works in the car park may disrupt existing Network Rail assets	Short-term	Mitigation for this constraint is yet to be determined at this stage
Electrification Masts – Mid Point Anchor	A mid-point anchor structure is located the north end of the platforms.	Short-term	This substantial structure would require relocation or replacement to enable northbound platform extensions.

Constraint	Impact	Timeframe	Planned Mitigation
Electrification Masts – Other Structures	Other overhead electrification masts are located within the vicinity of the station. These would locally limit any potential platform widening	Short-term	it is envisaged that a compliant platform width could still be achieved at any pinch points
Network Rail Access	An Existing Vehicular Access Point exists at the northern end of the Northbound platform	Short-term	This would require relocation to accommodate platform lengthening of the Northbound Platform
Residential Properties	Residential Properties are located to the North of the Northbound Platform. These limit the land available for development.	Medium-term	Explore whether third party land could be acquired to facilitate transformation option.
Level Difference	A significant level difference exists between the Lichfield Road and Platform Level. The embankment is approximately 6.2m above car park level.	Short-term	Appropriate ramping /step-free access will be required

There are also a number of environmental constraints, all within 2.1km of the scheme, which were identified as part of the Stage 1 High-Level Environmental Review and Preliminary Ecological Appraisal. Further information can be found in the reports:

- **Cultural Heritage**: including two Grade II listed buildings close the scheme;
- **Landscape and Visual**: residential receptors and Public Right of Way routes within 300m of the scheme;
- **Ecology**: priority habitat, Sites of Special Scientific Interest (SSSI), Cannock Town Centre Conservation Area, on-site habitats and invasive species all within close proximity of the scheme;
- **Noise and Vibration**: Noise Important Area (NIA) and line side residential receptors within 300m of the scheme;
- **Water Environment**: Ridings Brook main river, secondary A aquifer underneath the scheme;
- **Geology and Soils**: several mine entries and potential contaminants underneath and in close proximity to the scheme; and
- **Air Quality**: Cannock Chase Air Quality Management Areas (AQMA) and line side residential receptors in close proximity to the scheme

2.9.2. Dependencies

The scheme's success is not dependent on any other known schemes, aside from the MGDOV. It must be noted that many of the issues with the existing station facilities will worsen as demand increased beyond its current levels.

2.10. Complementary Measures

In conjunction with the designer outlet, McArthurGlen are also paying £15 million to improve the highways in the local area, as well as S106 funding to improve bus interchange, cycling, walking and wayfinding. [39] The improvements are designed to improve access to the new retail development. These are focused on the A460 Eastern Way and include:

- "Widening of the eastern and western arms to dual carriageway to provide on and off slip roads to the Outlet Village;

[39] SCC, Highway Improvements, available at: https://www.staffordshire.gov.uk/Newsroom/Articles/2018/11-November/15-million-highway-improvements-programme-set-to-begin-in-Cannock.aspx

- Construction of an underpass and associated retaining walls;
- Improvements to the Lichfield Road roundabout;
- New access off the Hayes Way roundabout;
- A new section of footway/cycleway through the Mill Green Nature Reserve to provide links to the Outlet Village;
- Amendments to road markings, signing, drainage, road lighting; and
- Diversion works associated with statutory undertaker's equipment."

There will also be a number of other general improvements to road infrastructure in the local area, including:

- Upgrade of Eastern Way to dual carriageway (east and westbound);
- Additional toucan crossings installed on Eastern Way;
- Upgrades to Churchbridge North and Lodge Lane roundabouts; and
- Additional right lane onto the roundabout added to Orbital Way.

2.11. Strategic Case Conclusion

There is a strong Strategic Case for Cannock station's redevelopment, with a clear local context and case for change, driven primarily by the existing station's poor facilities and provision and by the arrival of the MGDOV. The logic for the Strategic Case story, from the identification of specific Cannock challenges and opportunities to the delivery of a scheme with targeted impacts, is documented in the Logic Map The key challenges and opportunities are set out further down in this conclusion.

The arrival of the huge development in Cannock will change the look and nature of the town. The £160 million designer outlet will feature 285,000 sq. ft of retail space across two phases, Phase 1 of the MGDOV in Cannock is due to open in spring 2021, creating 80 high quality retail units, over 1,000 new jobs and attracting 3.5 million visitors per year to the district once complete. Phase 2 is set to create an extra 500 jobs and is expected to open in 2021 as well. The MGDOV is in close proximity to Cannock station and it is forecast that a significant number of visitors to the outlet will travel by train. There is a potential for this figure to be significantly increased as rail services on the Chase Line improved and the area benefits from faster and more frequent services and improvements to the rolling stock.

There are also a number of other key housing and mixed-use developments coming forward in Cannock, and demand for Cannock station would be expected to increase further beyond that expected from the MGDOV and background growth. Beyond 2019, passenger demand at Cannock station is expected to grow considerably from approximately 215,000 to 569,000 annual entries and exits in 2020/21 (in the central case), after the opening of the MGDOV. As noted, the demand forecasts and assumptions have not considered the impacts of the Covid-19 pandemic.

The following are Cannock station's key challenges and opportunities. There is a robust evidence base and strong policy and strategic alignment for a scheme to address each challenge and opportunity:

- Lack of station facilities impacting negatively on passenger experience, safety and security;
- Need to accommodate future demand growth as a result of the MGDOV;
- Poor station accessibility, including non-compliant step-free access;
- Poor public transport interchange;
- Unmaintained cycle storage discouraging active travel;
- Unattractive gateway to Cannock Chase District for visitors;
- Enhancing car parking provision; and
- Station not in a position to attract further transport investment in the future

The redevelopment of Cannock station will address the identified challenges and opportunities, and it will also prepare the station for any further challenges and opportunities posed by the project's key 'Driver for Change': the expected the uplift in demand from the MGDOV and Cannock's other developments. Without improvements at Cannock station, the identified challenges and opportunities cannot be addressed. This would have significant impacts on crowding at the station on a regular basis, with the area per passenger reducing

quickly to less than the recommended guideline of 0.93sqm [40] in the Worst Case (High Demand) scenario soon after the opening of the MGDOV in 2021 and reducing to well below half of the minimum area recommended beyond 2025. Even in the best case scenario the recommended level would be breached in 2030/31.

The Strategic Objectives have been defined to directly address the challenges and opportunities and they align closely with the established policies and plans of CCDC and SCC. Delivery of the scheme's outputs and outcomes will meet these strategic objectives. These include the specific things the scheme will deliver, such as safe, secure, accessible and modern station facilities, improved car parking provision, compliant step-free access, encouragement of active travel, and creating an exciting and inviting gateway to Cannock, all whilst future-proofing the town and the station for future demand and investment.

- Enhancing journey quality by improving safety, accessibility, reliability and technology for communities in Cannock District;
- Future-proof Cannock for further investment and ensure it is fit to accommodate growth
- Promote sustainable transport infrastructure and promote a greener future for Cannock and its environment;
- Creating an attractive town centre that encourages a vibrant local economy and workforce; and
- Support housing delivery and development in the District

The three-stage approach to option identification and assessment has determined a short list of options, based on stakeholder engagement, optioneering workshops and a final sift of the High, Medium and Low cost options. The final stage assessed has four shortlisted options: Option A, Option C, Option G and Option J. A summary of their performance against the Strategic Objectives and Critical Success Factors is provided below:

Option A (Transformational Upgrade Max)

- As the most ambitious scheme Option A performs the strongest against the Strategic Objectives and is expected to have large impacts on passenger experience and on creating a better gateway and town. It will future-proof the station for further passenger growth and investment in the future; and
- Option A scores the weakest against the CSFs, notably poor against affordability and infrastructure delivery criteria due to the ambition and complexity of the project. Whilst scoring strongly as a scheme which would be resilient to future demand and investment.

Option C (Transformational Upgrade)

- Option C performs moderately against the Strategic Objectives across the board but not as strongly as Option A. This is because it offers less facilities and components but still offers a significant improvement to the station; and
- Against the CSFs Option C performs slightly better than Option A, due mainly to less perceived risk associated with delivery and operation of the scheme.

Option G (Enhanced Upgrade)

- This option performs moderately against the Strategic Objectives but, similar to Option C, not as strongly as Option A. Option G ranks third out of the four options, differentiating itself from Option C because it does not offer platform lengthening and widening which would bring capacity, reliability and safety benefits; and
- Option G is the strongest performing option against the CSFs, notably performing strongly with low affordability, infrastructure delivery and disruption risk.

Option J (Core Upgrade)

- Option J performs poorly against the Strategic Objectives, especially for promoting sustainable transport infrastructure and creating an attractive gateway. Its lack of notable improvement to the station and its facilities will fail to change its perception and transformative impacts on housing and future-proofing for further change will be negligible; and
- Against the CSFs Option J performs moderately mainly due to the perceived low risks around affordability, infrastructure delivery and disruption to the local transport network. Low stakeholder support, due to low ambition and lack of perceived improvement, means this Option ranks below Option G when assessed against the CSFs.

[40] Network Rail, Station Capacity Planning Guidance, November 2016

Overall, Option A scores highest against both the Strategic Objectives and the Critical Success Factors, with Option C scoring slightly lower overall. Option J scores the lowest of all the options against the Strategic Objectives and Critical Success Factors.

The Strategic Case sets out in detail the scheme's constraints, which range from environmental receptors, to the proximity of utilities and residential properties. All of these issues will have to be mitigated before the scheme can be delivered successfully. As for dependencies, the scheme's success is dependent on the delivery of MGDOV and underlying rail growth coming forward, which will determine whether the scheme delivers Value for Money and affordability, as well as meeting all of its wider objectives.

In light of the current pandemic, we are convinced that the scheme will contribute to encouraging the use of rail by providing the added capacity on platform that is needed to accommodate expected demand and encourage social distancing if required. It is anticipated that in the long term, passenger numbers will resume to pre-COVID-19 levels and so the strategic need for the project will still apply.

3. Economic Case

3.1. Introduction

The primary aim of this Economic Case is to set out a robust body of evidence and corresponding case that presents the potential economic, social and environmental impacts of the Cannock redevelopment and the consequent emerging prospects for the investment to offer satisfactory value for money (VFM). The approach taken to developing the Economic Case is consistent with the DfT's TAG and Business Case and Value for Money guidance.

The economic case is set out in the following sections:

- **Section 3.2** summaries the options appraised and detailed in the Strategic Case
- **Section 3.3** discusses the Value for Money approach and assumptions underpinning the Economic Case.
- **Section 3.4** summarises the approach and results from the demand and revenue modelling underpinning the benefit assessment.
- **Section 3.5** summarises the approach and results from the assessment of monetised station user impact
- **Section 3.6** summarises the approach and results from the assessment of monetised non-station user impacts
- **Section 3.7** presents the scheme costs including the Capex and Opex
- **Section 3.8** summarises the approach and results from the Cost Benefit Analysis
- **Section 3.9** discusses the impact of alternative scenarios on the Cost Benefit Analysis
- **Section 3.10** provides a high-level assessment of social and distributional impacts
- **Section 3.11** provides a high-level assessment of environmental impacts
- **Section 3.12** provides the Value for Money statement

3.2. Options Appraised

The assessment considers the relative costs and benefits of a 'Do Something' scenario against a 'Do Minimum' status quo – i.e. no station upgrade. At this stage of scheme development, there are four proposed options, each forming a 'Do Something' scenario. The four 'Do Something' scenario options appraised are summarised as follows and described in more detail in the Strategic Case.

- **Option A (Transformational Upgrade Max):** This option features a new gateway, step-free access and community hub. It will provide enhanced capacity and improved passenger experience and promote active travel with improved facilities.
- **Option C (Transformational Upgrade):** This option will have the same facilities and provisions as Option A; however, the gateway and community hub elements will be less developed.
- **Option G (Enhanced Upgrade):** Like Option C, however the improvement to passenger experience is likely to be limited by lack of shelter and some station facilities such as WCs.
- **Option J (Core upgrade):** This basic station redevelopment option will lack a gateway and community hub, and improvement to passenger experience will be limited by lack of facilities, such as café, canopy and WCs.

All options will include improved audio-visual management systems (including CCTVs), improved customer information systems and wayfinding, improved lighting, ticket machines on both platforms, free Wi-Fi and provision of PRM-compliant footpath/ramp.

3.3. Value for Money (VFM) Approach and Assumptions

The Value for Money assessment has been undertaken in line with DfT TAG which sets out the requirements of HM Treasury's Green Book for transport schemes. The Green Book, especially, is used across Government for investment decisions through the option identification, selection and appraisal processes.

At the heart of the approach to assessing the Value for Money potential of the scheme has been the economic appraisal which consider the benefits and costs of the scheme and enables the quantification of the Benefit to Cost Ratio (BCR). This has firstly been undertaken on a Core Scenario set of assumptions that could be considered to reflect a prudent outcome. This Core Scenario BCR provides an 'initial' perspective on overall VFM performance, using the DfT's VFM framework categories presented in Table 3.1. Further sensitivity tests are then undertaken to consider key areas of uncertainty including alternative demand growth scenarios and how these may impact on the BCR and Value for Money position.

Table 3.1: DfT Value for Money Categories

VfM Category	Implied by
Very High	BCR greater than or equal to 4
High	BCR between 2 and 4
Medium	BCR between 1.5 and 2
Low	BCR between 1 and 1.5
Poor	BCR between 0 and 1
Very Poor	BCR less than or equal to 0

3.3.1. Economic Appraisal overview

The appraisal considers transport user benefits, operator benefits (revenue) and the costs (including capital, operating & maintenance costs). The station user benefits assessment includes journey time savings, benefits from station facility and platform widening improvements. Non station user benefits include highway decongestion impact, revenue generated from the car park and the farebox revenue from on rail services. Benefits from urban realms improvements have not been included at this stage. The appraisal considers the principle of TAG unit A1 - Cost Benefit Analysis and an overview of the process is presented in Figure 3-1.

The Economic Appraisal has been broken down into the following components:

Monetised station user impacts

- **Station access Journey time impacts** – changes in journey time and journey costs attributable to changes in station layout and accessibility.
- **Platform crowding impacts** – elements of journey time and journey cost impacts attributable to increased platform capacity.
- **Journey quality, ambience and Station facilities impacts** – perceived user benefits from improved station facilities.

Monetised non-station user Impacts

- **Highway decongestion impacts** – marginal external impacts of mode shift from car to rail.

Operators revenue impacts

- **Car park revenue** – consideration of potential demand-related changes station car park revenues[41]
- **Rail farebox revenue** – demand-related changes in rail fare revenues

Scheme Costs

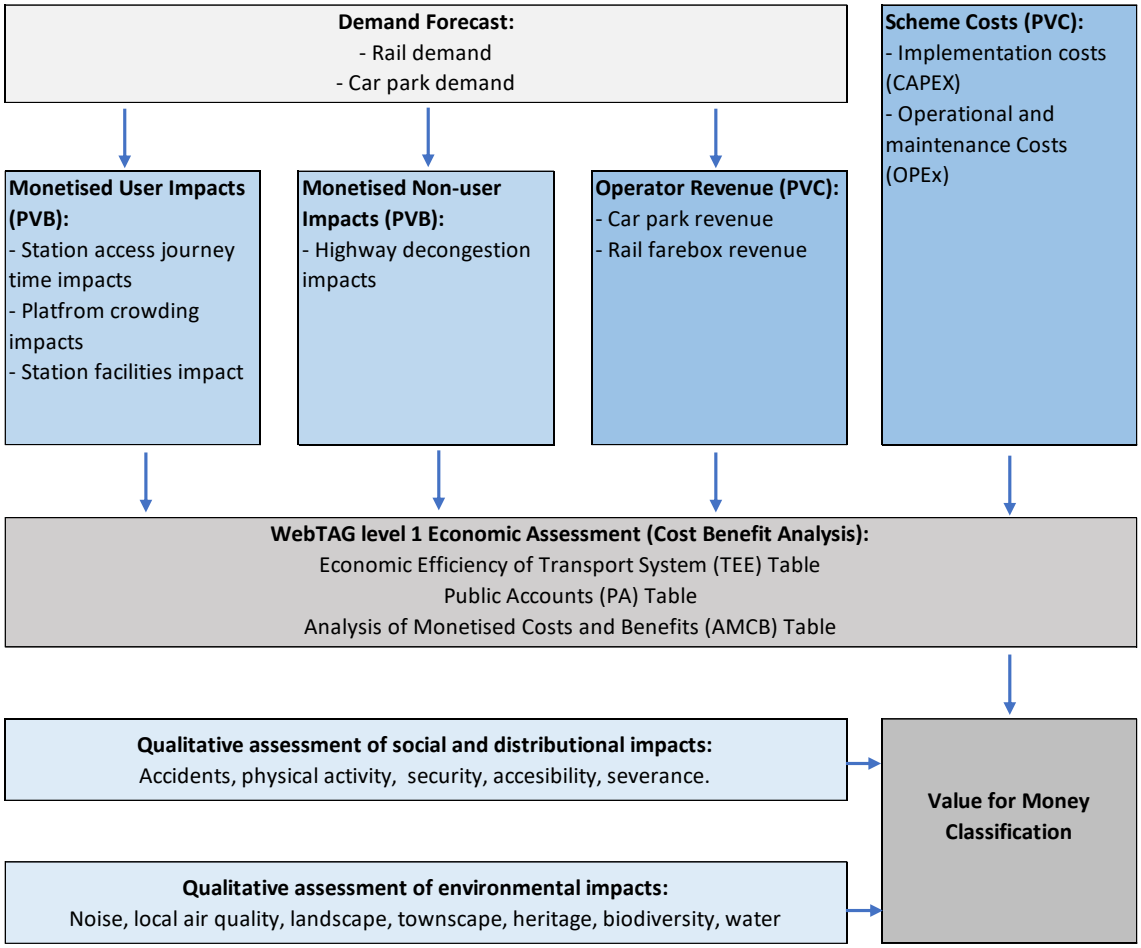
- **Capital costs** (Capex) – costs associated with implementation of the scheme
- **Operational costs** (Opex) – costs associated with operating the station post redevelopment

Finally, high-level consideration of social and distributional impacts and environmental impacts are discussed qualitatively with respect to the scheme options.

The impacts are captured for the four shortlisted options and are assessed compared to a consistent Do Minimum reference case. The benefits and costs are calculated in terms of changes from the Do Minimum reference case.

[41] The potential for car park revenue was considered and assessed at high-level, as part of the demand forecasting and economic appraisal, but ultimately, in economic appraisal terms, there is no net gain in car park revenue attributable to any of the scheme options.

Figure 3-1 – Economic Appraisal



3.3.2. Key assumptions

The analysis of monetised impacts follows WebTAG, with monetised impacts calculated based on a 60-year appraisal period from scheme opening and expressed as discounted 2010 Present Values in market prices.

The derivation of rail demand, revenue and benefits requires a range of assumptions to be made. Table 3.2 summarises the assumptions that underpin the quantification of benefits and costs/revenue.

Table 3.2: Scenario Assumptions

Parameters	Assumptions
Demand growth Scenario	3.6% p.a. rail demand growth[42], capped at 30 years
Capital expenditure inflation	Included in 66% cost contingency at this stage
Operating costs	At this stage there is little to no significant variation in the operating cost requirements between the options, therefore for the purposes of SOBC, the same operating costs have been applied across all options.
Optimism Bias	Capex cost contingency of 66% included cost estimates Opex optimism bias of 41%
Discounting rate and year	2010 base year, discounted 3.5% p.a. up to 30 years from 2020 and 3% thereafter, in line with WebTAG
TAG Databook	July 2020 v1.13.1

[42] 3.6% CAGR based on 2000/01 to 2017/18 data for Cannock station entries and exits.

Period of Construction	Implementation costs are assumed to be incurred between 2021 to 2025
Scheme Opening Year	2025
Appraisal Period	60-year period
Journey Purpose	Non MGDOV: Commute 43.4%, Business 7.8%, Leisure – 48.7% (PDFHv6) MGDOV: Leisure – 3.5m visitors p.a., Commute – 364k employee trips p.a.
Journey Type	Long distance – 15%, Short distance – 85%
Farebox yield	Low scenario - £3.00, Medium scenario - £4.50, High scenario - £6.00[43]
Farebox yield indexation	2.9%
Car park growth factors	usage – 2.5%, revenue – 2.6%, yield – 0.1%[44]
Rail mode share	Low: visitors – 2%, employee – 2% increasing to 6% at end of Y5 Central: visitors – 2% increasing to 3.5% at end of Y5, employee – 2% increasing to 6% at end of Y5 High: Visitors & employee – 2% increasing to 6% at end of Y5

The analysis at this stage has assumed Grant or subsidy only to the extent necessary to zero out transport operators' impacts.

3.4. Overview of Demand and Revenue Modelling

3.4.1. Rail demand

The station usage forecasts consider three layers associated with demand growth which are summarised in the following sub-sections and detailed in the Economic Appraisal Technical Note

- Exogenous / background growth.
- Trip generation from MGDOV.
- Induced demand.

Exogenous / background growth

Analysis of historic ORR station use data indicates an average annual growth rate of 3.6% from 2000/01 to 2017/18[45]. In view of the anticipated trip generation arising from ambitious development and growth plans in and around Cannock, in addition to the committed development growth at MGDOV, this appraisal applies a simplifying assumption that exogenous growth in rail travel demand at Cannock Station would continue to grow, on average, at approximately the same rate in the medium term. Figure 3-2 below shows a plot of the historic entry and exit totals from Cannock Station, with a forecast to the current year.

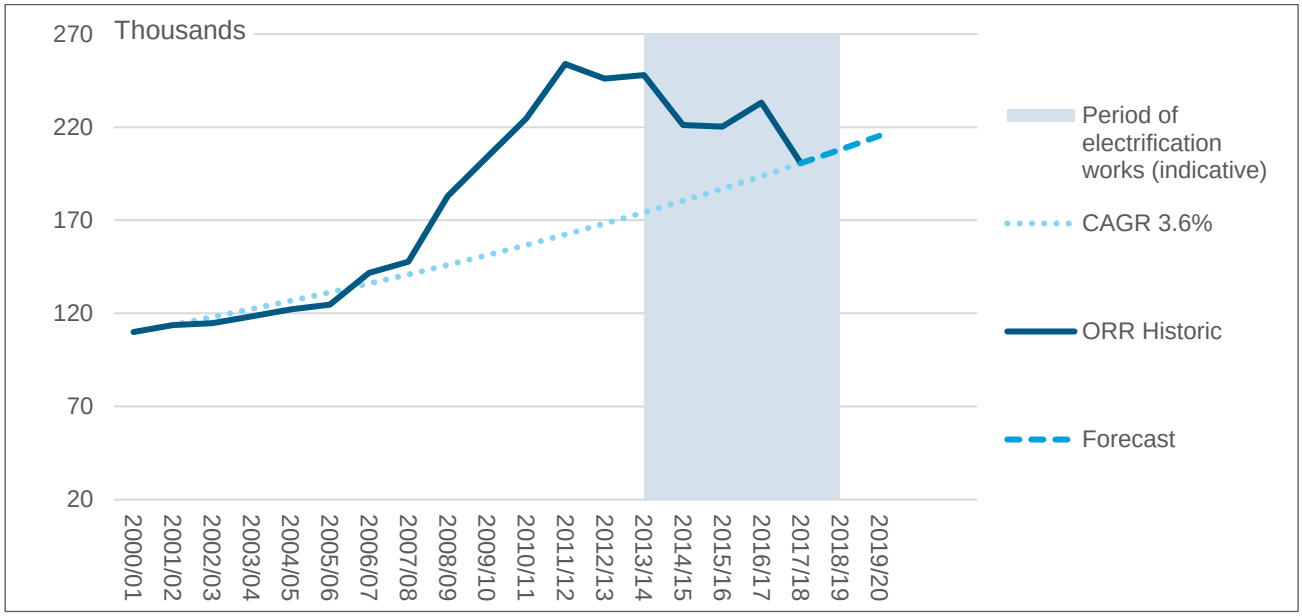
In view of the anticipated trip generation arising from ambitious development and growth plans in and around Cannock, in addition to the committed development growth at MGDOV, this appraisal applies a simplifying assumption that exogenous growth in rail travel demand at Cannock Station would continue to grow, on average, at approximately the same rate in the medium term, extrapolating the 3.6% growth rate for 30 years starting with the 2017/18 level of baseline demand. Zero background growth is assumed thereafter.

It should be noted that this simplified approach is adopted for this SOBC instead of explicitly modelling exogenous growth, which would traditionally be capped at 20 years, followed by background growth in line with population growth only. Considering that baseline demand has started from a relatively low point, and with the assumption of 0% impact from population growth beyond 30 years, the simplified approach to demand forecasting in this SOBC is likely to represent a cautious estimate.

[43] In the absence of LENNON data, yield assumptions have been based on peak and off-peak rail fares from Cannock to Birmingham (Any) - £6 and £2.50, respectively. Average/medium scenario yield assumed as £4.50.
[44] Consideration of car park revenue has been included in anticipation of potential changes to station car parking however at this stage of design the scheme includes only cosmetic changes to the car park. Therefore, in appraisal terms the car park impacts are neutral in this SOBC.
[45] ORR data for 2018/19 was not available in early 2020 when the demand analysis was undertaken, though it is noted that this data has since been published. ORR data for 2019/20 remains unpublished as of September 2020. Any assessments in the next stages of appraisal should consider including any new data.

The rail demand forecasting also considered the potential numbers of ticketless travellers, based on station survey and passenger counts. Note it has been assumed the current levels of ticketless travel at Cannock Station would continue with no change since the station proposals do not include ticket barriers or other revenue protection measures. Therefore, ticketless traveller numbers would inform the assessments of transport user impacts but would not contribute to future changes in fare revenue.

Figure 3-2 – Historic demand at Cannock Station (ORR data and extrapolation)



Trip generation from MGDOV

The rail demand forecasting for MGDOV trips has adopted the outputs of the MGDOV Transport Assessment, undertaken as part of the MGDOV planning process. The key metrics taken directly from the MGDOV Transport Assessment are the total estimated 3.5m visitors per year, 364k employee trips per year, and rail mode share scenarios ranging from 2%-6%.[46]

Induced demand

Given the scheme options will involve a upgrade to the existing station facilities, the demand forecasting includes a high-level estimation of rail travel demand uplifts based on demand elasticities derived from the PDFC research and outlined in the Passenger Demand Forecasting Handbook (PDFH). Table 3-3 presents a high-level summary of the station quality attributes as outlined in PDFH, which are applicable to the proposals for Cannock Station. It should be noted that the assessment of induced demand in this appraisal has not considered the potential demand uplifts from improved accessibility, where further demand growth could potentially be quantified based on reductions in end-to-end generalised journey times.

Table 3-3 – Station facilities summary for demand forecast

	Option A	Option C	Option G	Option J
Shelter				n/a
Waiting facilities, seats				
Retail facilities				n/a
Ticket machines on both platforms				
Information screens				

[46]Transport Assessment for Mill Green Designer Outlet Village Cannock Chase. The traffic generation is based on 3.5 million visitors per year

CCTV upgrades				
Cleanliness				

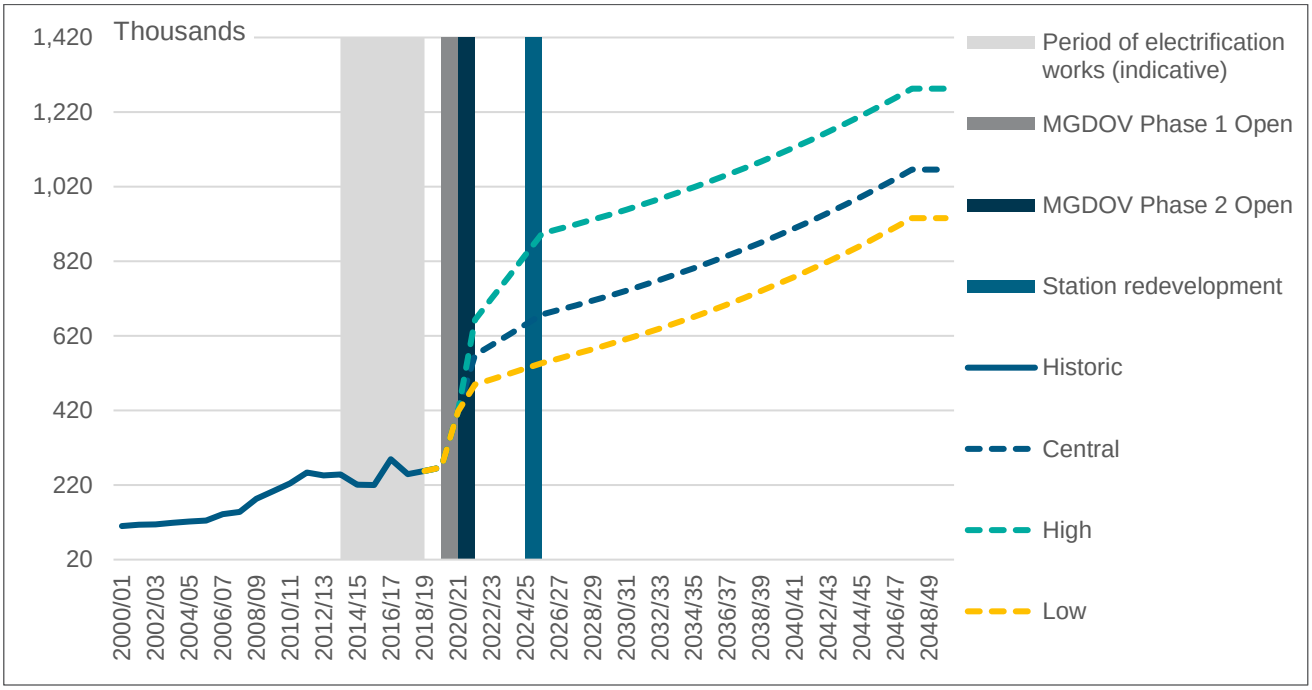
Key: Dark green indicates higher quality of provision. Pale green indicates basic quality of provision

It should be noted that the Do Something options A and C do not differ in terms of demand and farebox revenue as the options regarding station enhancements are modelled in the same way. Do something Option G differs from Options A and C in that the shelter, waiting facilities are slightly more modest, and the potential shop/café opportunity would be smaller in scale. Option J does not provide 'Retail Facilities' and, although seats will be provided, the upgraded station would not provide the same areas protected from weather as the other three options. This results in lower uplifts for demand which causes lower entries and exits and therefore farebox revenue.

Demand summary

Figure 3-3 shows the core scenario demand forecast, including exogenous growth at 3.6% for 30 years, MGDOV mid-level demand growth upon opening in 2020/21, and induced demand from station upgrades in 2025/26.

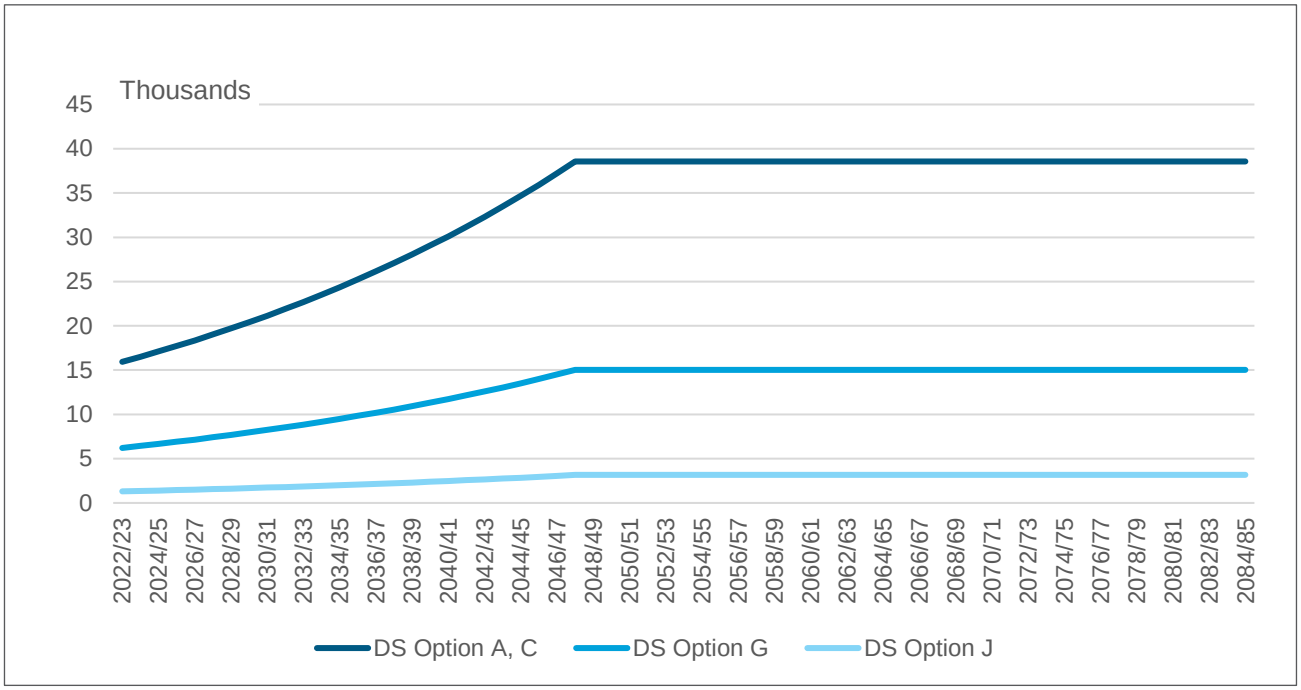
Figure 3-3 – Historic and forecast demand at Cannock Station (annual entries and exits)



Net changes in rail demand

For appraisal purposes, the three elements affecting demand are combined to consider the total rail passenger demands and the net differences between Do Something and Do Minimum demand forecasts. Figure 3-4 presents the profiles of net additional entries and exits by option, with demand growth capped at 30 years from the 2017/18 baseline. Options A and C do not differ in terms of demand as these options have similar quality attributes as summarised in Table 3-3.

Figure 3-4 – Net additional entries and exits by option



It should be noted that this net change in rail demand at Cannock Station largely[47] represents the scale of induced demand due to improved station facilities and amounts to a sizeable uplift on baseline demand by around 10%. It is also important to reiterate that the induced demand has not considered the potential additional demand from marginal reductions in Generalised Journey Times.

3.4.2. Farebox revenue

The farebox revenue for the purposes of this appraisal has assumed a common yield across all journey purposes: Business, Commuter, and Leisure travellers. It is estimated based on forecast entries & exits (discussed in Section 3.4.1) and station farebox yield estimates. Station farebox yield estimates are based on analysis from published fares and historic rail ticket yield. Three yield estimates are provided to forecast low, medium, and high scenarios. No fare demand response is modelled as fare change is nominal only. Table 3-4 summarizes the high-level yield estimates applied to the revenue calculations.

Table 3-4 – High-level yield estimates

Scenario	Estimated Yield (Nominal, all journey purposes)
Low	£3.00
Medium	£4.50
High	£6.00

Farebox revenue is presented in real 2019/20 prices and therefore an indexation is applied to the yield. The indexation is based off an annual fare increase assumption of 2.9%. Figure 3-5 presents the profile of farebox revenue in 2019/20 prices over the appraisal period and Figure 3-6 shows the present values for appraisal.

[47] The calculation of delta from facilities improvements is also very slightly influenced by the volumes of exogenous and development-related demand change.

Figure 3-5 – Net additional farebox revenue by option (2019/20 prices)

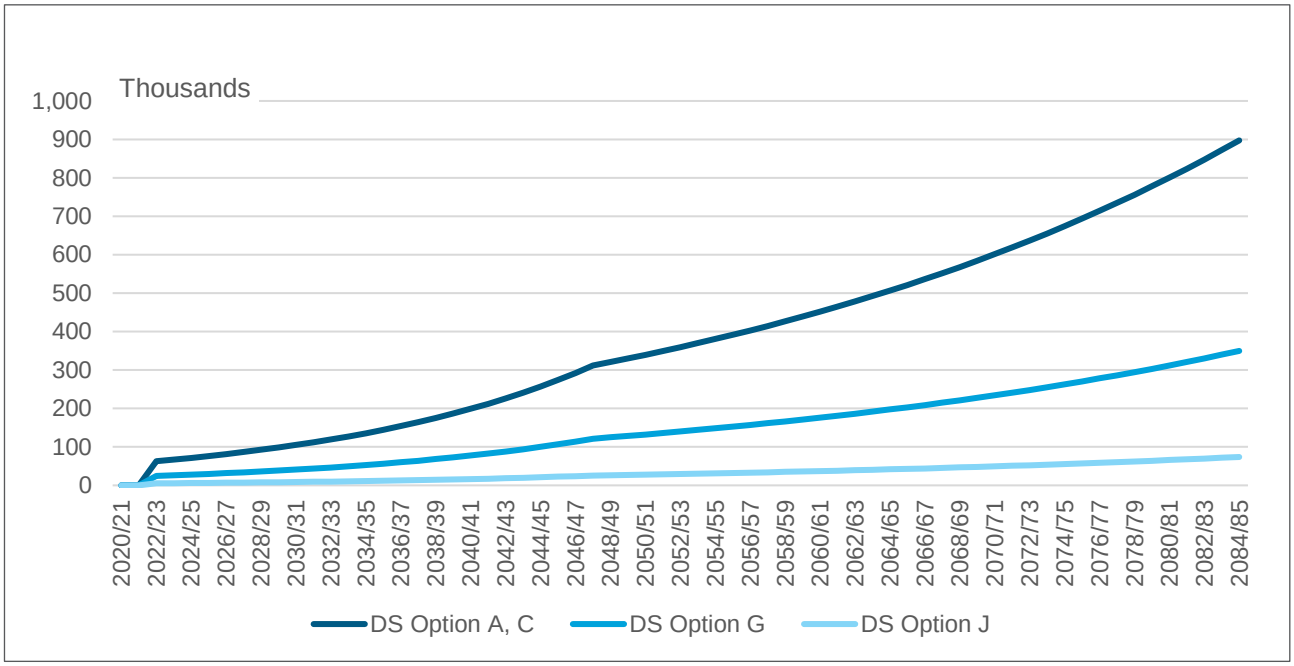


Figure 3-6 – Net additional farebox revenue by option (2010 prices discounted)

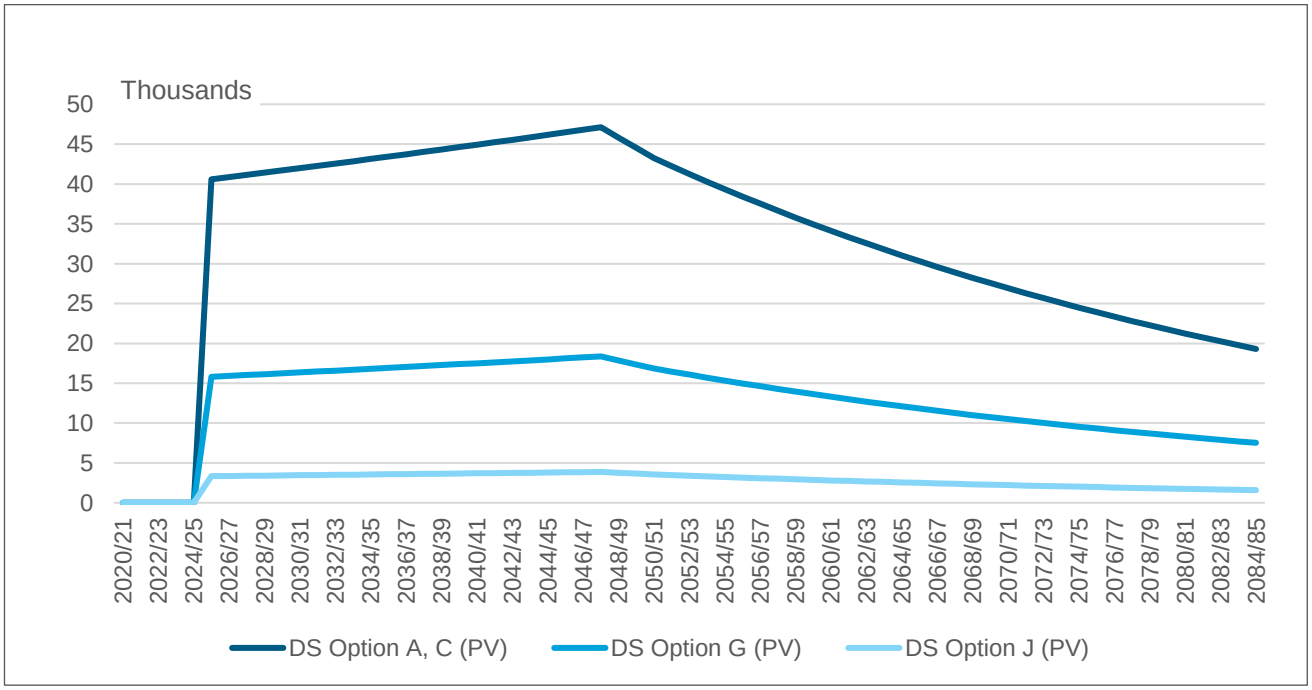


Table 3-5 summarises the present value of revenue over the appraisal period.

Table 3-5 – Revenue impacts (£,000s 2010 prices, discounted)

	Option A	Option C	Option G	Option J
Farebox revenue	£2,127	£2,127	£829	£175

3.4.3. Station car park revenue

The station car park revenue impacts are based on analysis of actual annual car park data, which covered the period between 01/04/2016 to 24/12/2019. This historical data is summarised in Table 3-6.

Table 3-6 – Historic car park usage

Historic Data	2016/17	2017/18	2018/19
Car Park Income	£ 27,410	£ 33,594	£ 34,468
Car Park Sales	12,245	14,561	14,928
Car Park Yield	£ 2.24	£ 2.31	£ 2.31

A simple historic growth analysis is based on the last two full years of this data to extract an expected year-on-year usage increase, which is summarised in Table 3-7. The year-on-year growth rates are applied to the 2018/19 figures and extrapolated over the forecast period to determine overall car park usage (sales) and revenue (income).

Table 3-7 – Growth factors for car park usage

Forecast	Year-on-Year Growth between 2017/18 and 2018/19
Car Park Income	2.6%
Car Park Sales	2.5%
Car Park Yield (implied from delta of sales and income)	0.1%

Considering that the current station options do not envisage changes to the existing car park capacity, for the purposes of this assessment, a conservative assumption that the impacts of induced rail demand arising from the improved station facilities would not have a material impact on station car parking demand is applied[48]. Therefore the forecast for car park usage is not based on the entries and exits data used to calculate the station demand and it is not affected by other demand factors that are apparent in the model, such as induced demand uplifts from Station Facility Enhancement. Consequently, in economic appraisal terms, there is no net gain in car park revenue in any of the Do Something scenarios – a conservative assumption.

At the next stage of development, there may be value in considering the use of TROs to minimise on-street parking, encourage full utilisation of the station car park benefiting from the expected demand uplifts and consequently increase car park revenue.

3.5. Monetised Station User Impacts

A series of assessments have been undertaken to quantify the benefits to station users. The benefits have been calculated based on rail demand forecasts over the appraisal period and the assessments are described in more detail in the following sections.

3.5.1. Station access journey time impacts

The assessment of station access improvements is based on users' free flow journey time benefits within the new station. This benefit is based on changes in walking distances between key station nodes and monetised in terms of values of time. A simple high-level approach to assessment is summarised as follows.

- For baseline and DS options, determine O-D distances between exits/entrance and platforms located in the station (only two platforms) also between the ticket machine(s) and platforms (there is currently only one ticket machine at Platform 1 (southbound to Birmingham and London).
- Estimate walking journey times based on assumed average walking speed of 4.2km/hr[49].

[48] Note: The forecast car parking demand is around 17,000 cars per year in the opening year; and around 29,000 cars per year in the demand-cap year. A very high-level conservative estimate of a theoretical maximum annual car parking capacity amounts to a car park capacity of 32,760 cars parked per year (90 car park spaces x 1 car/day x 364 days). In actuality, it is likely that the 90-space car park could accommodate more than 90 cars per day, given 'churn' or turnover. On this basis it is considered likely that the car park could accommodate this scale of demand growth.
[49] NTS 2016.

- Multiply the changes in walking times by the station demand to obtain total free flow times and monetise against TAG Values of Time.

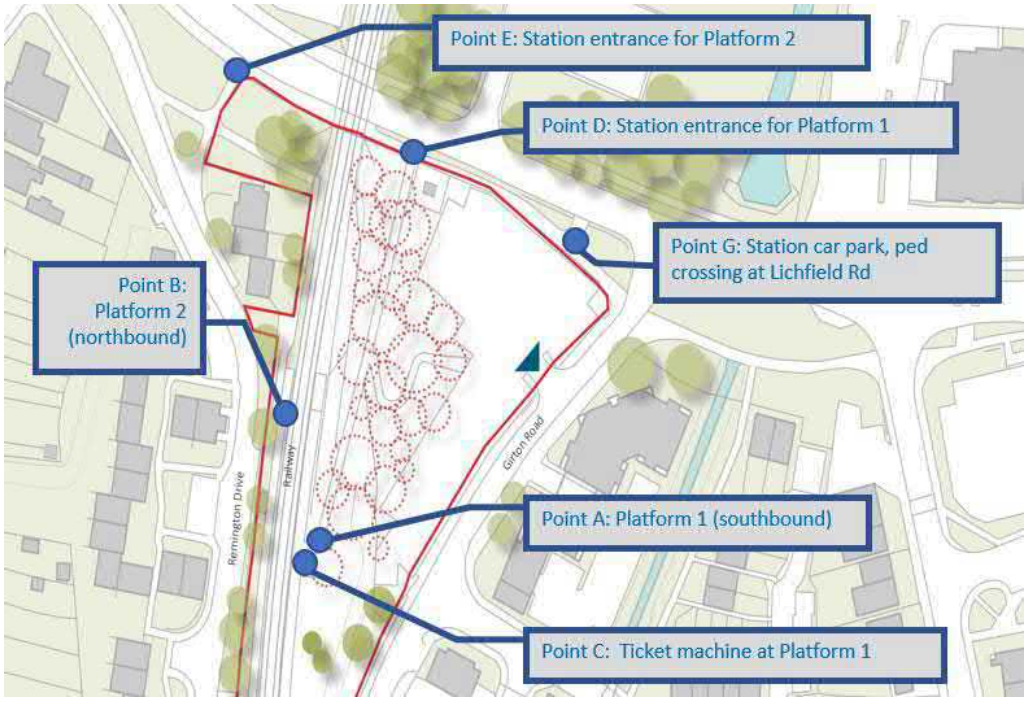
Walking distances

For the purposes of this assessment, walking distances have been measured from architects' plans of the DM and all DS station layouts; and have considered the distances between key nodes representing the two station platforms, ticket machine, and station entrances.

For this high-level assessment, the assumed walking distances have considered the typical movements of a passenger needing to purchase a ticket:

- A northbound passenger's journey would require walking to Point C (ticket machine on platform 1), then walking to Point B (platform 2), via Point E (station entrance);
- A southbound passenger's journey would require walking from Point D (station entrance) to Point C (ticket machine on platform 1).

Figure 3-7 – Walking distance nodes



A schematic diagram of the key nodes considered is presented in Figure 3-7; and summaries of the walking distances are presented in matrix form in Table 3-8.

Table 3-8 – Assumed typical walking distances, by platform

Walking distances (m)	To/from Southbound Platform	To/from Northbound Platform
Do Minimum	98	338
Option A	96	97
Option C	96	97
Option G	96	97
Option J	96	97

Similar to the findings from the demand and revenue assessments that the four station options would not be significantly differentiated simply in terms of their assigned PDFH station quality attributes, it is important to note that the assessment of rail passengers' walking distances through the station have not been significantly differentiated between the four proposed options. Therefore, for the purposes of this high-level assessment, the journey time aspects of station facilities improvements have been based on a simple comparison between the 'Do Minimum' and a generalised 'Do Something', which could be considered to be reasonable representations of each of the individual Options.

Key assumptions behind how these estimated typical walking distances are factored against rail passengers' values of time are summarised as follows.

- 50:50 split has been assumed between passengers using the southbound (Platform 1) or northbound (Platform 2) platforms, daily, on the simplifying assumption that station users will generally be making return trips.
- Rail users' journey purposes (B/C/L) have been based on the demand forecasts; and forecast future purpose splits have incorporated the expected increases in the proportions of leisure trips, based on the 'medium' level expected trip generation associated with the MGDOV.

The monetised values of time spent walking and moving through the station in each option are based on the changes in walking distances between key nodes, and the benefit values over the appraisal period are summarised in Table 3-9.

Table 3-9 – Rail passengers' station access impacts (£,000s 2010 prices, discounted)

	Option A	Option C	Option G	Option J
Business	£413	£413	£405	£401
Commuting	£2,602	£2,602	£2,575	£2,565
Leisure and other purposes	£2,315	£2,315	£2,293	£2,281
Total	**£5,331**	**£5,331**	**£5,273**	**£5,247**

The station access impacts are broadly the same for all options, because the walking distances within each station layout are similar. The user impacts for Option J are very slightly lower than Options A, C and G, based on the slightly lower levels of new rail travel demand that could be 'induced' by the lower quality of station facilities provided in Option J.

3.5.2. Station facilities impacts

Station user benefits related to improvements to station facilities and resulting in an increase of passenger Willingness to Pay (WTP). For the purposes of quantifying the station facilities improvements at SOBC stage the approach considered the PDFH WTP values for station facilities. Table 3-10 summarises the key features and differences between the station options, which have informed the station quality impacts assessment.

Table 3-10 – Station facilities summary

	Option A	Option C	Option G	Option J	Description
Shelter					New Canopy in option A, C & G
Stairs and/or lifts					Lift provided in Options A & C
Seats					Assumed no seat in DM - seats provided in DS
Toilets					w/c provided in options A & C
Shop/café					Café space provided in options A, C & G

Wi-Fi					No Wi-Fi in DM - Free wife provided in DS
Secure cycle storage					No change in existing facilities
Ticket machines on both platforms					Ticket machine assumed to exists in DM - no change in DS
No staff					Assume no staff in DM - Staff & patrol available for option A & C
Security lighting retained/upgraded					Security lighting available in DM - no change in DS
Emergency help points retained/upgraded					CCTV & emergency help point in DM - no change in DS

Key: Dark green indicates higher quality of provision. Pale green indicates basic quality of provision

The colour coding in Table 3-10 suggests that facilities to be offered in Option A and Option C, are broadly similar in scope and quality and this similarity suggest that these two options would offer the greatest beneficial impacts from the point of view of passengers' station experience; and that the two options are broadly indistinguishable from the point of view of journey quality impacts.

Research summarised in PDFH indicates WTP values for rail station attributes and facilities. Table 3-11 lists the 'willingness to pay' values, on a 'per journey' basis which broadly indicate the relative differences in journey quality impacts and suggest that Option A and Option C are likely to offer the greatest values in terms of passenger experience.

Table 3-11 – Summary values of PDFH rail station attributes (£/journey, 2000 prices)

	Do Minimum	Option A	Option C	Option G	Option J
£ per journey	0.30	0.63	0.63	0.50	0.46
Net increase		**0.33**	**0.33**	**0.20**	**0.16**

Factoring the 'willingness to pay' values against the forecast annual station entry and exit totals for each station Option leads to a measure of the quantified station facilities benefits experienced by existing and new users. The benefits for each option are summarised in Table 3-12.

Table 3-12 – Station facilities impacts (£,000s 2010 prices, discounted)

	Option A	Option C	Option G	Option J
Station facilities	£6,012	£6,012	£3,571	£2,876

The station facilities benefits are broadly commensurate with the WTP values, and Options A and C would offer the greatest levels of benefits in terms passengers' experience in using the station. This is due to the extensive upgrade to the station facilities in options A and C. Option J presents the lowest station facilities benefits.

3.5.3. Platform crowding impacts

The assessment of platform crowding benefits is based on an understanding of the severity of platform crowding conditions under the do-minimum scenario versus the do-something scenario and the perceived benefits associated with reduced platform crowding. The assessment approach considers:

- Platform load – based on a set of 'on-site' spot surveys and the station demand forecasts.
- Platform crowding density and factors based on industry research.
- Perceived benefits felt from waiting on a platform in crowded versus less-crowded conditions, monetised for the purposes of this assessment as 'time penalties' perceived while waiting in crowded conditions.

3.5.3.1. Platform load

Platform load was assessed based on a station usage survey, which recorded passenger numbers boarding and alighting per train and, wherever possible, passengers' journey purposes, origins/destinations, and trip frequencies.

These surveys provided empirical data to inform directional splits of passenger demands between the two platforms, and further informed the high-level approach to disaggregating annual station entries/exits totals into typical 'per train' passenger loads. Details and analysis of the disaggregation of rail demand data is provided in the Cannock Economic Appraisal Technical Note.

3.5.3.2. Platform crowding density

The estimated peak hourly and peak service passenger numbers are then assessed in terms of the physical platform dimensions in the existing station layout (following the advice set out in Network Rail's Station Capacity Planning Guidance) to determine the platform crowding density. The Network Rail Station Capacity Planning Guidance sets out advice on minimum requirements for platform dimensions in relation to passenger flow volumes and in consideration of any specific activities in a given station. Figure 3-8 shows an excerpt from this guidance.

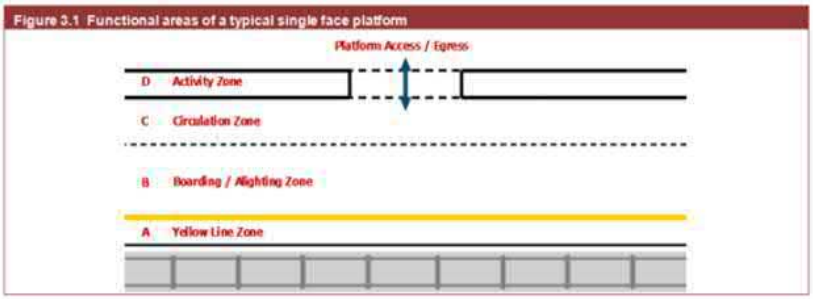
Figure 3-8 – Extract from Network Rail Station Capacity Planning Guidance

A. Yellow Line Zone is a safety requirement to mitigate the risks of aerodynamic effect from passing trains at some stations and commonly used in dispatch operations.

B. Boarding and Alighting Zone shall accommodate all boarding and alighting passengers at a density of 0.93m² per person (queuing LoS B/C).

C. Circulation Zone shall allow circulating passengers to walk through un-impeded at a maximum flow rate of 40 passengers per minute (walkways LoS C).

D. Activity Zone accounts for platform furniture, footprint of vertical circulation infrastructure, station buildings and retail.



$$Density = \frac{Width\ of\ boarding\ and\ alighting\ zone \times Block\ length}{Block\ load}$$

Block length = Length of each carriage based on appropriate rolling stock

Block load = Max number of passengers boarding and alighting the individual car located within the carriage block

For this assessment of Cannock Station, the 'Circulation' and 'Activity' zones are omitted in order to represent a conservative assessment of platform crowding. Therefore, it is considered that the key parameter for Cannock Station will be the 'Boarding and Alighting Zone', Zone B, which would comprise each platform's typical width, less the minimum 0.5m width allowance for the 'Yellow Line Zone'.

Also based on the guidance excerpted in Figure 3-8, the threshold to be applied in this assessment of platform crowding is 0.93m² per person. For Cannock Station, this space threshold is applied to the peak platform load.

Platform functional loading area

Existing and future operations at Cannock Station will be served by Class 350 trains, which are 4 car sets, each car 20.4m in length. The existing station platforms measure an average of 2m in width (tapers from 2.1m to 1.9m) and approximately 86m in length; and the key parameters for assessing platform crowding are summarised in Table 3-13.

.

Table 3-13 – Assumed platform dimensions for crowding assessment

	DM	A	C1	G	J
Average full width of platform[50]	2m	3m	3m	3m	3m
Platform width for boarding and alighting (zone B)	1.5m	2.5m	2.5m	2.5m	2.5m
Length of busiest 25% of the platform	Class 350 train single car **block length of 20.4m**				
Critical area of the platform for crowding assessment	30.6m^2				

Train block load

The Block load represents the maximum number of passengers boarding/alighting the individual car located within the carriage block. Further guidance from the Rail Safety and Standards Board suggests that the platform sizing methodology should recognise that passengers may not be distributed evenly along the platforms, and cites the following assumption:

> *"at the busiest part of the platform, it is assumed that 35% of the platform load occupies 25% of the platform. The formula requires the consideration of the 'average platform load per headway (that is the average number of passengers waiting for a train at the height of the peak, plus the number of passengers alighting from the train)"* [51]

Cannock Station is served by 4-car sets, so 25% of the platform relates to a single car in the carriage block and 35% of the 'per train' passenger load is assumed to board/alight from the busiest car - representing the Block load. Based on a high-level assessment to disaggregate the annual station entries and exits totals into an estimated typical 'per train' passenger load, the block load is calculated as 35% of this.

3.5.3.3. Perceived benefits of reduced crowding

The estimated peak hourly and peak service passenger numbers are assessed in terms of the physical platform dimensions in the existing station layout, and following the advice set out in Network Rail's Station Capacity Planning Guidance as explained in Section 3.5.3.2. The valuation of crowding impacts is based on research undertaken by RailCorp NSW[52] which refined a crowding function based on a combination of stated preference surveys of rail users in Sydney, Australia, together with crowding density measures developed by Fruin (1972), London Underground Limited, and Westin (1993). In summary, the crowding function aims to provide a 'penalty factor' upon typical waiting times in rail stations weighted by the crowding density (in numbers of passengers per square metre).

For the purposes of this appraisal, the valuation of platform crowding applies high-level estimates of typical waiting times on platforms for rail passengers using Cannock Station. These typical waiting times on platforms are factored by the platform crowding factor, based on the typical passenger numbers per service and the existing and proposed new station platform dimensions. The results represent the 'perceived' waiting times on platform as a function of crowding – i.e. the perceived waiting times increase as platform crowding increases. The perceived waiting times are monetised in terms of transport users' values of time, by journey purpose, as set out in TAG Table A1.3.2, Forecast values of time per person; and any reductions in perceived waiting times are treated as a journey quality benefit to station users.

Journey quality benefits associated with platform crowding can be quantified from the monetised values of waiting in varying levels of platform crowdedness. The platform crowding values for each option are summarised in Table 3-14.

Table 3-14 – Platform crowding impacts (£,000s 2010 prices, discounted)

	Option A	Option C	Option G	Option J
Benefits from reduced platform crowding	£4,361	£4,361	£4,361	£4,361

[50] The existing station platforms are effectively the same; and at this stage of concept design, the design provision for both northbound and southbound platforms are also expected to be essentially the same.
[51] Rail Safety and Standards Board Limited. (2010). Guidance on Station Platform Geometry, GN92.
[52] Douglas, N., Karpouzis, G. Estimating the Passenger Cost of Station Crowding.

The platform crowding impacts would be differentiated primarily by the platform dimensions. It is assumed that design could be optimised such that each option would offer similar platform widening,

3.6. Monetised Non-station User Impacts

Any net increases in rail travel demand induced solely by improvements to the station facilities are assumed to represent mode shift in existing travel demand. Some proportion of this new rail demand would represent mode shift from highways to rail (whether as 'main mode' or as part of a 'park & ride' journey), and the consequent impacts such as reduced highways congestion can be assessed as marginal external impacts. The marginal external impacts attributable to this mode shift away from car, or rerouting of car trips due to park & ride are monetised following the principles and guidance set out in DfT WebTAG Unit A5-4 – Marginal External Costs. Table 3-15 presents an overview of each element of the marginal external costs which have been monetised within this economic appraisal.

Table 3-15 – Overview of marginal external impacts from mode shift

Impact	Description
Road decongestion (indirect tax element)	Marginal reductions in indirect tax attributed to reduced highways congestion due to mode shift from road to active modes, i.e. those continuing to travel by road will have slightly lower fuel costs as a result of decongestion
Road decongestion (user element)	Marginal changes in road users travel times due to changes in road congestion
Other infrastructure investment	Reductions (or increases) in local or central government expenditure on highways maintenance, due to reduced (or increased) wear and tear on highways, due to reductions (or increases) in vehicle kilometres travelled
Accidents	Marginal changes in the frequency of road collisions due to changes in vehicle kilometres travelled
Local air quality, Noise, Greenhouse gases	Marginal changes in air quality, noise and greenhouse gas emissions due to changes in vehicle kilometres travelled

The calculations of marginal external costs are based on our estimate of reductions in highway vehicle km, which have been derived from the forecast change in rail demand, as follows:

- 30% of new rail trips have shifted from highways modes[53].
- On average, each highway trip that switches to rail would equate to 8.7 fewer vehicle-miles (or just over 14km) being driven on the road network[54]. Noting that average rail trip distances are longer, this is likely to be a conservative assumption.

3.6.1. Highway decongestion impacts

The impact of the scheme on highway decongestion has been assessed using a spreadsheet model. The results of the assessment indicated that benefits delivered by the scheme are presented in Table 3-16.

Table 3-16 – Marginal External Impact Values (£,000s 2010 prices, discounted)

Marginal External Cost Category	Option A	Option C	Option G	Option J
Infrastructure	£2	£2	£1	£0
Congestion	£79	£79	£31	£6
Accident	£15	£15	£6	£1
Local Air Quality	£2	£2	£1	£0
Noise	£0	£0	£0	£0

[53] Rail flow to car vehicle kilometre diversion factor of 30% for Non-London Inter-Urban trips, TAG Table A5.4.5 Car Diversion Factors by Flow Category; https://www.gov.uk/government/publications/tag-data-book.
[54] Average trip length (miles) for car or van drivers and passengers, in England, in 2019, National Travel Survey Table NTS101; https://www.gov.uk/government/collections/national-travel-survey-statistics

Greenhouse Gases	£13	£13	£5	£1
Total	**£110**	**£110**	**£43**	**£9**

The marginal external impacts are derived solely from the mode shift between highways and rail. For this scheme, the mode shift between highways and rails is driven entirely by the level of provision of station services and facilities. Since the differences in facilities in the Do Something options A and C do not differ in terms of their impact on induced rail demand, the mode shift impacts are effectively the same for options A and C, as expected. The marginal external impacts assessed for Options G and J are in line with the smaller amounts of mode shift induced by the more modest scales of station facilities improvements.

Indirect taxation

Highways decongestion also has indirect impacts on the total fuel duty collected by the treasury. In this case, where mode shift away from highways travel leads to reductions in total vehicle-mileage, the marginal external impacts calculations represent the reductions in fuel consumption and the related reductions in fuel duty. Table 3-17 summarises the estimated reductions in fuel duty over the appraisal period.

Table 3-17 – Indirect taxation element of marginal external impacts (£,000s 2010 prices, discounted)

Marginal External Cost Category	Option A	Option C	Option G	Option J
Indirect Taxation	-£17	-£17	-£7	-£1

Since Options A and C are estimated to induce a similar level of mode shift away from highways, while Options G and J are expected to induce smaller amounts of mode shift; and the scales of these impacts are reflected in the indirect tax impacts.

3.7. Scheme Costs

The appraisal of costs follows the approach set out in TAG Unit A1.2 – Scheme Costs. The treatment of capital and operating expenditure is discussed in the following sections.

3.7.1. Capex

Capital cost estimates for the construction of the station options have been provided by F&G using industry rates and standard GRIP process allowances to build up a base price. The general assumptions relevant for the economic assessments are summarised as follows.

- Base price date is Q1, 2020.
- Costs are provided excluding VAT, i.e. in factor prices.
- Estimated spend profiles have been assumed to span four years, i.e. from 2021/22 to 2024/25.
- A 'risk adjustment' of 66% has been applied to account for cost and scope uncertainty at this early design stage.

The anticipated expenditure profiles and total final costs are summarised in Table 3-18.

Table 3-18 – Capital costs (£,000s Q1 2020 prices, including risk)

	2021/22	2022/23	2023/24	2024/25	Total
Spend profile %s	5%	10%	83%	2%	100%
Option A	£854	£1,707	£14,168	£341	**£17,070**
Option C	£786	£1,573	£13,052	£315	**£15,725**
Option G	£643	£1,286	£10,674	£257	**£12,860**
Option J	£543	£1,087	£9,018	£217	**£10,865**

For the purposes of this appraisal, in line with rail network enhancement projects at GRIP Stage 1[55], the cost-estimated risk allowance of 66% has been applied in lieu of optimism bias. The total capital costs are rebased

[55] https://www.gov.uk/government/publications/webtag-tag-unit-a5-3-rail-appraisal-may-2018

to 2010 prices using the GDP deflator, discounted and converted to market prices in line with WebTAG guidance[56]. The capital costs have been rebased to 2010 prices using the GDP deflator, adjusted to market prices and discounted to give Present Value Costs (PVC) as summarised in Table 3-19.

Table 3-19 – Capital costs (£,000s)

	Capital costs (Q1 2020 prices)	Present Value Costs (2010 prices, discounted to 2010)
Option A	£17,070	£11,096
Option C	£15,725	£10,221
Option G	£12,860	£8,359
Option J	£10,865	£7,062

3.7.2. OPEX

High-level operating cost estimates have been prepared by Atkins and have considered the net additional station and facilities operating and renewal costs compared with a 'Do Minimum' cost projection based on the current baseline expenditure, assuming retention of existing facilities and expenditure with no change.

The net additional operating costs estimated for each option accounts for a 4-6-year cycle of renewal and periodic maintenance works for new station elements including CCTV and customer information systems, and other station facilities. The resulting estimates are summarised in Table 4-3, in £k (2020 prices) over a 60 year period. At this stage there is little to no significant variation in the Opex requirements between the options, therefore for the purposes of SOBC, the same operating costs have been considered across all options. The largest cost area would be the maintenance and renewal of the Operational Telecommunications Systems which includes the CCTV systems and Customer Information Systems, which are common to all options.

Table 3-20: Summary of Opex estimates. All values in £,000s (2020 prices)

Cost area	60-year operating costs (2020 prices)
Operational Telecommunication Systems	£3,742
Electrical Systems	£1,261
Specialist Installations	£109
Structures and Fittings	£675
Other Items	£279
Total 60-year operating costs (2020 prices)	**£6,066**

The economic appraisal applies Optimism Bias (41% for operational expenditure, in line with general practice for the net additional operational expenditure, for projects at GRIP Stage 1[57]) before being rebased, discounted and converted to market prices in line with WebTAG guidance[58]. The totals of year-on-year operating costs in current prices and in present value costs over the appraisal period are summarised in Table 3-21.

Table 3-21 – Operating costs £,000s

	Operating costs (2020 prices)	Present Value of Costs (2010 prices, discounted to 2010)
Total 60-year operating costs	£6,066	£2,167

[56] https://www.gov.uk/government/publications/webtag-tag-unit-a1-2-scheme-costs-july-2017
[57] https://www.gov.uk/government/publications/webtag-tag-unit-a5-3-rail-appraisal-may-2018
[58] https://www.gov.uk/government/publications/webtag-tag-unit-a1-2-scheme-costs-july-2017

3.8. Cost Benefit Analysis

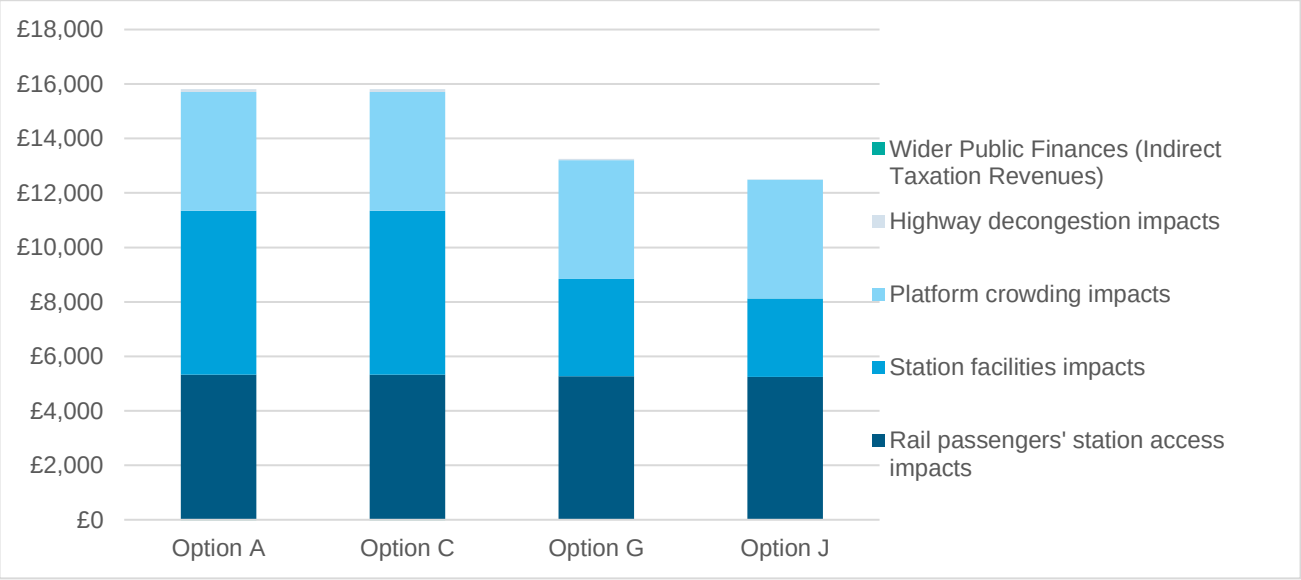
This section presents a comparison of the costs and benefits for each of the Do-Something options compared against the Do-Minimum scenario and summarises the initial BCRs and associated perspectives on the Value for Money category.

3.8.1. Present Value of Benefits

Figure 3-9 provides a summary of the Present Value of Benefits for the four options. The station access journey time (walking-time benefits) and platform crowding impacts are broadly similar for all options. These are linked to the new station layouts, including additional ticketing machines provided on the northbound platform, and platform widening elements that are common to all options.

Station facilities impact vary more significantly between the options and represents the extent to which station users are likely to perceive and experience the upgrade to station facilities. Option A and Option C perform broadly similarly and present the highest station facilities benefit of the four options since they provide the most extensive upgrade to the station facilities including providing shelter, lift, toilets, space for a potential café and staff. Option J performs the worst as it provides no canopy, lifts, toilets, café or staff.

Figure 3-9 – Composition of the Present Value of Benefits

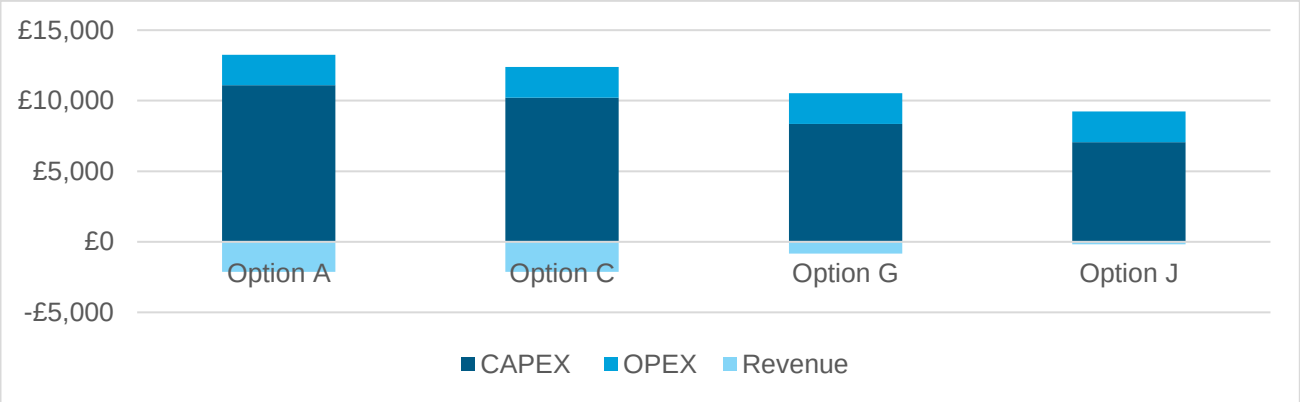


The highway decongestion impacts, including the indirect tax impacts, relate to benefits from the mode shift between highway and rail. These account for a small portion of overall benefits and are broadly similar for all options. Overall, Options A and C present the highest total PVB followed by Option G. Option J presents the lowest PVB of the four options.

3.8.2. Present Value of Costs

The Present Value of Costs directly attributable to the scheme options are summarised in Figure 3-10 below. The operating costs are broadly similar across all options while the Capex (cost of implementation) present the largest variation between the options. Option J the basic station redevelopment option has the lowest Present Value of Costs while Option A the more ambitious/extensive option is the most expensive to implement and has the highest Present Value of Cost. Option J generated the lowest revenue which is inked to the lower level of additional demand induced by its limited improvement to the station facilities.

Figure 3-10 – Present Value of Costs



3.8.3. Initial BCR and NPV

The ratio of benefits to the impact on the broad transport budget presents an "initial BCR" and associated perspective on VFM. Assessments of VFM have been performed for each of the options under consideration.

Table 3-22 presents the summarised cost-benefit analysis for each of the options under the Core Scenario assumptions.

Table 3-22 – Appraisal summary and Value for Money (£,000s 2010 prices, discounted)

	Option A Transformational Upgrade Max	Option C Transformational Upgrade	Option G Enhanced Upgrade	Option J Core upgrade
PVB	£15,795	£15,795	£13,241	£12,492
PVC	£11,134	£10,259	£9,697	£9,054
NPV	£4,662	£5,536	£3,545	£3,437
BCR	**1.42**	**1.54**	**1.37**	**1.38**

The results indicate that the BCRs for Option G and Option J are just below 1.4. This represents a Low value for money (VFM) in DfT VFM category terms. Option J generates the lowest PVB (reflecting the lowest level of facilities upgrade provided) resulting in the lowest NPV. Option C is the best performing option with a BCR just over 1.5 representing a Medium Value for Money (VFM) in DfT VFM category terms, while Option A is the next best performing with a BCR just over 1.4. This is linked to the findings that both Options C and A offer similar benefits, but Option C delivers those impacts at a comparatively lower cost of delivery.

The analysis at this stage represents a conservative view of the Value for Money position as it does not include monetised benefits from any wider economic impacts, public realm improvements, safety benefit from reduced platform crowding, physical activity or any health benefits. It is expected that such benefits would be actualised, and these could be captured at the next stage following further design detail.

Analysis has been undertaken to consider the scale of change that would be required in the key benefit and cost elements associated with the options, under the Core Scenario, to switch the option from its current VFM category to that above. Table 3.23 summarises the percentage scale of change to costs and benefits that would be required to move the Value for Money position. This analysis does not consider how realistic the levels of cost savings are.

Table 3.23: Value for money sensitivity

	Option A	Option C	Option G	Option J
	Low to High	Medium to High	Low to High	Low to High
% Change in Costs	-29%	-23%	-32%	-31%
% Change in Benefits	41%	30%	46%	45%

Option C returns the highest core scenario BCR and its VFM position is most sensitive to variations in costs and benefits as It requires the lowest % change in cost or benefit to increase its VFM position. A decrease of 23% in costs or an increase of 30% in benefits would shift the VFM category to a High. The VFM position of the other option are less sensitive to changes in costs and benefits. Option G and J require the highest change in cost or benefits to increase the VFM category to High.

Capital costs across all options accounts for between 77% and 84% of total PVC and any change in the capital costs will have a proportionate impact on the BCR.

3.9. Alternative scenarios

To test the resilience and sensitivities of the core PVBs and BCRs the following alternative scenarios are considered:

1) Low growth: This test assumes exogenous demand growth of 3.6% per annum would be capped at 20 years, with zero growth (i.e. no impact from population growth) thereafter[59].
2) Low rail mode share: This test assumes that the low baseline rail mode share of 2% will continue with no change despite the rail improvements and travel plan initiatives.
3) Greater highways decongestion from mode shift to rail: noting that the average rail trip distances are longer than average car trip distances, this test considers a larger reduction in vehicle-miles driven per new rail trip. The national average is 32miles[60] per rail trip, however for the purposes of the appraisal for Cannock Station, the sensitivity test has assumed 20 vehicle-miles removed per rail trip based on the typical driving distance between Cannock and Birmingham city centre.
4) High rail mode share: This test assumes that the mode share targets within the MGDOV Transport Assessment and Travel Plan Framework will be met.

The differences between assumptions in these scenarios are summarised in Table 3.24 below.

Table 3.24: Alternative Scenario Assumptions

Parameters	Core scenario	Scenario 1: Low growth	Scenario 2: Low rail mode share	Scenario 3: Greater highways decongestion	Scenario 4: High rail mode share
Average annual growth	3.6% up to 30 years, 0% up to 60 years	**3.6% up to 20 years, 0% up to 60 years**	3.6% up to 30 years, 0% up to 60 years	3.6% up to 30 years, 0% up to 60 years	3.6% up to 30 years, 0% up to 60 years
MGDOV Rail mode share	Visitors 2%, increasing to 3.5% at end of Y5 (assume TA baseline is not met) Employees, as per TA	Visitors 2%, increasing to 3.5% at end of Y5 (assume TA baseline is not met) Employees, as per TA	**Visitors 2% only (assume TA baseline is not met)** **Employees, as per TA**	Visitors 2%, increasing to 3.5% at end of Y5 (assume TA baseline is not met) Employees, as per TA	**Visitors & Employees 2%, increasing to 6% at end of Y5 (assume TA travel plan framework is met)**
Highways impact from mode shift	Road to rail mode shift removes 8.7 vehicle-miles per trip	Road to rail mode shift removes 8.7 vehicle-miles per trip	Road to rail mode shift removes 8.7 vehicle-miles per trip	**Road to rail mode shift removes 20 vehicle-miles per trip**	Road to rail mode shift removes 8.7 vehicle-miles per trip

3.9.1. Scenario 1: Low growth

The core scenario assumed that the historic average annual growth rate of 3.6% would be sustained for 30 years. This sensitivity test assumes exogenous demand growth of 3.6% per annum would be capped at 20

[59] The impact of the COVID pandemic has not been considered within the demand forecast and assumptions made within these scenarios.
[60] Average trip length (miles) for surface rail trips, in England, in 2019, National Travel Survey Table NTS101; https://www.gov.uk/government/collections/national-travel-survey-statisticsv

years, with zero growth (i.e. no impact from population growth) thereafter. Table 3.25 presents the sensitivity test results against the Core scenario BCRs.

Table 3.25: Scenario 1 Low growth summary

	Option A	Option C	Option G	Option J
PVB	£14,230	£14,230	£12,105	£11,434
PVC	£11,683	£10,809	£8,946	£8,276
NPV	£2,547	£3,421	£3,159	£3,157
BCR	**1.22**	**1.32**	**1.35**	**1.38**
Core Scenario BCR	**1.42**	**1.54**	**1.37**	**1.38**

As expected, the sensitivity test BCRs are lower than in the core scenario, primarily due to the lower rail demand. The reduced rail demand leads to reductions in user benefits, but also affects the PVC in the form of greater subsidy/grants required to offset lower fare revenues.

3.9.2. Scenario 2: Low rail mode share

The core scenario assumed the mid-range of rail mode share would be achieved in future as a result of the rail improvements and travel planning initiatives. This sensitivity test assumes that the low baseline rail mode share of 2% will continue with no change despite the rail improvements and travel plan initiatives. Table 3.26 presents the sensitivity test results against the Core scenario BCRs.

Table 3.26: Scenario 2 Low rail mode share summary

	Option A	Option C	Option G	Option J
PVB	£14,462	£14,462	£12,244	£11,590
PVC	£11,134	£10,259	£9,697	£9,054
NPV	£3,328	£4,202	£2,547	£2,536
BCR	**1.30**	**1.41**	**1.26**	**1.28**
Core Scenario BCR	**1.42**	**1.54**	**1.37**	**1.38**

Again, as expected, the sensitivity test BCRs are lower than in the core scenario which is linked to the reduced levels of rail demand. However, the scale of change indicates that the demand impacts of encouraging greater mode shift to rail could be significant.

3.9.3. Scenario 3: Greater highways decongestion

The core scenario assumed that each trip that switches mode from road to rail would result in a reduction in vehicle-mileage driven, based on the national average car-based trip distance of 8.7miles. Noting that the average rail trip distances are longer than average car trip distances, this sensitivity test considers a larger reduction in vehicle-miles driven per new rail trip. The national average is 32miles[61] per rail trip, however for the purposes of the appraisal for Cannock Station, the sensitivity test has assumed 20 vehicle-miles removed per rail trip based on the typical driving distance between Cannock and Birmingham city centre. Table 3.27 presents the sensitivity test results against the Core scenario BCRs.

Table 3.27: Scenario 3 Greater highways decongestion summary

	Option A	Option C	Option G	Option J
PVB	£15,914	£15,914	£13,287	£12,501
PVC	£11,131	£10,257	£9,696	£9,054
NPV	£4,783	£5,657	£3,592	£3,447
BCR	**1.43**	**1.55**	**1.37**	**1.38**
Core Scenario BCR	**1.42**	**1.54**	**1.37**	**1.38**

[61] Average trip length (miles) for surface rail trips, in England, in 2019, National Travel Survey Table NTS101; https://www.gov.uk/government/collections/national-travel-survey-statistics

In this test, the highway-mileage impacts are more than doubled, and this has led to slight increases in PVBs and BCRs. Noting that the high-level approach to demand forecasting for this SOBC had not considered the distribution of origins and destinations of travellers who might potentially use Cannock Station, there is reasonable uncertainty in the overall highways impacts that mode shift to rail could have in appraisal terms. However, the relatively small difference between the sensitivity test BCRs and Core scenario BCRs could indicate that this uncertainty may not have a significant impact overall. On the other hand, if average trip distances among potential users of Cannock Station are significantly longer than the assumed 20 miles, then consideration of those highway decongestion impacts could improve the PVBs.

3.9.4. Scenario 4: High rail mode share

The core scenario assumed the mid-range of rail mode share would be achieved in future as a result of the rail improvements and travel planning initiatives. This sensitivity test assumes that the slightly more ambitious mode share targets within the MGDOV Transport Assessment and Travel Plan Framework will be met.

Table 3.28 presents the sensitivity test results against the Core scenario BCRs.

Table 3.28: Scenario 4 High rail mode share summary

	Option A	Option C	Option G	Option J
PVB	£18,018	£18,018	£14,904	£13,994
PVC	£11,134	£10,259	£9,697	£9,054
NPV	£6,884	£7,758	£5,207	£4,940
BCR	**1.62**	**1.76**	**1.54**	**1.55**
Core Scenario BCR	**1.42**	**1.54**	**1.37**	**1.38**

These sensitivity test BCRs are substantially higher than in the core scenario, due to the greater levels of rail demand. The scale of difference in BCRs here could indicate any efforts to ensure that the mode share targets within the MGDOV TA and Travel Plan Framework are achieved could make substantial differences to the value for money position.

3.9.5. Summary of alternative scenario testing.

These tests indicate that minor reductions to the applied exogenous growth rates could have a small effect on the overall BCRs, but it is considered likely that the scale of this effect would be largely offset if the assessment were to include longer term population growth. Similarly, if more detailed forecasting of exogenous growth factors finds that the rates applied to date have underestimated the background growth projections, then this would likely have a commensurate effect on the benefits. In contrast, these tests suggest that the demand effects from modest increases in rail mode share could have a relatively larger effect on benefits that simply the exogenous growth. And finally, these tests demonstrate that the monetisation of highways-related secondary impacts arising from mode shift to rail would have relatively insignificant effects on benefits.

3.10. Assessment of Social and Distributional impacts

3.10.1. Social impacts

Social impacts cover the human experience of the transport system and its impact on social factors. At this stage of scheme development and appraisal, a high-level review is undertaken in line with WebTAG guidance Unit A4.1.

Physical activity

The scheme design at this stage does not detail any changes to the cycle storage facilities or cycle path to or from the station. If the scheme is developed and improved to include better cycling and walking facilities to promote active travel, the impacts on physical activity and health benefits would be revisited.

Security

An online survey suggested that there is currently not enough lighting between the station platforms and the car park, resulting in an unsafe environment. There is limited CCTV coverage over the station car park and

entrance to the platforms to ensure security for station users. Furthermore, incidents of antisocial behaviour and vandalism indicates an unsafe environment.

Security will be improved by the provision of CCTVs and lighting. Overall, impact on security is expected to be slight beneficial.

Accessibility

The scheme will provide DDA compliant step free access which will provide accessibility by foot and bicycle and will be beneficial for disabled users, those with buggies or carrying luggage and older people.

The car park and access to the station will be in an improved state and demand for the car park suggest that the number of spaces are adequate. The scheme also includes physical improvements to the station and improved spatial configuration, which will improve transport accessibility to the station itself.

Overall, impact on accessibility is expected to be slight beneficial.

3.10.2. Distributional impacts

Distributional impacts consider the variance of impacts across different social groups. At this stage of scheme development and appraisal, a high-level assessment is undertaken in line with WebTAG guidance A4.2 and a summary of the key findings of socio-economic demographic analysis of the scheme impact area is as follows.

- The scheme impact area has a larger proportion than average of population in the lower quintiles, in the case of quintile 2, this is more than double the English average at 44.8%. Since the lowest two quintiles, 1 and 2, surpass half of the population share in the area, it can be inferred that the scheme will have a larger proportional impact on those from lower income groups.
- There is a lower proportion of 'No Car Households' than average suggesting there could potentially be more reliance on private cars for travel rather than public transport.
- The scheme impact area has a lower proportion of BME group than average of England and Wales.

More details of the assessment are provided in the Economic Appraisal Technical Note.

Noise and air quality

TAG unit A4.2 highlights that noise and air quality have a larger impact on children as a social group. At GRIP Stage 1, traffic analysis has not been carried out as the scheme design is not anticipated to generate any material traffic impacts on the road network. The proportion of children in population in the scheme impact area is marginally lower than the national average and therefore the scheme impacts would be anticipated to be neutral on these groups.

Accidents

The scheme is not anticipated to have material impacts on the road network, so the impacts are considered likely to be neutral. If the scheme is developed to include wider improvements on access routes to and from the station, assessment of the scheme impacts in the next stages of appraisal would be required to understand its impact on accident rates and key risk groups.

Security

The scheme proposes improvements to the public realm of the station where children & young people, older people and women are key groups to consider. The proportions of these social groups in Cannock are broadly in line with national averages, therefore the impacts of improved security would likely not disproportionately benefit any particular social group.

Severance

There is an intention to relocate a crossing on Lichfield road for access to the station where severance could be a key consideration, particularly affecting more vulnerable people in the population such as people without access to a car, older people, people with disabilities, children and people with reduced mobility. Relocating the existing crossing to a new alignment is considered likely to have a neutral impact in this case.

Accessibility

Physical improvements to the station would improve movement within the station but would not be likely to affect transport accessibility to and from the station itself. Moreover, the specification and detail of any upgrade

to active mode infrastructure is not available at this stage but is expected to be developed as the project progresses. The scheme will improve accessibility to the station by providing DDA compliant step-free access and an additional ticket machine at the Northbound platform which would improve accessibility for vulnerable groups in the population including disabled users, the elderly and those with buggies.

3.11. Assessment of Environmental Impacts

A high-level desktop assessment of the existing environmental baseline to identify environmental constraints and an ecology walk over survey has been undertaken at this stage. As the design progresses, further impact assessment inline Networks Rail's ENV015 with will be undertaken.

Noise

The proposed scheme is located in a largely urbanised area with surrounding sensitive receptors, such as residential properties located directly opposite the station on Remington Drive. Construction operations would have the potential to give temporary rise to adverse noise and vibration effects to nearby sensitive receptors e.g. residential properties. During operation, the Scheme could also result in altered noise levels at nearby sensitive receptors due to various new and altered activities and changes in traffic flow, which may introduce increased levels of noise within the search area.

Local air quality

The scheme area lies within the wider CCDC Air Quality Management Area (AQMA) which included Cannock Chase AQMA, AQMA 2, AQMA 3 and AQMA 4, all located within approx. 2.1 km of the site. During the construction phase, sensitive receptors have the potential to experience a temporary deterioration in air quality due to nuisance particulates. During the operational phase, vehicle traffic flows and speeds could potentially be altered which may result in long-term permeant changes in local air quality.

Landscape

The area within 300m beyond the scheme boundary is part of the Cannock Chase and Cank Wood Character Area (CA) and has three Public Right of Way (PRoW) footpaths The Scheme is also located within a highly urbanised area which has the potential to cause adverse impacts on nearby residential and business receptors.

There is potential for changes to landscape character and impacts to sensitive visual receptors during the construction and operational phases of the Scheme. During construction, temporary visual effects are likely to occur due to the introduction of construction machinery, compounds, temporary light etc. which may impact Network Rail's social performance requirement of 'Being a Caring Neighbour'.

During the operational phase, the Scheme could introduce substantial new and altered structures and infrastructure, which may improve on the setting of the surrounding area and local views, Significant removal of existing vegetation may give rise to impacts on landscape and visual amenity, particularly for the residential properties which are located immediately adjacent to the proposed Scheme.

Historic environment

The potential impacts on the cultural heritage assets are defined as changes to the historic environment resource caused by the proposed Scheme. This can include direct physical impact (e.g. partial destruction or total loss of a heritage asset), settings impact (non-physical changes to the character and significance of assets arising from works), indirect impacts or secondary impacts. A desk-based study has identified that there are two Grade II Listed Buildings located approx.120 m east and 135 m north-east of the Scheme. There are no Scheduled Monuments, World Heritage Sites, Registered Battlefields or Registered Parks and Gardens within the search area.

Biodiversity/ecology

There are several areas of priority habitat inventory consisting of deciduous broadleaved woodland (located approximately 15m north of the scheme. In addition, scheme is within a priority habitat for Lapwing as well as being within a risk zone for Stowe Pool and Walk Mill Clay Pit Site of Special Scientific Interest (SSSI). Cannock Town Centre Conservation Area is also located 450 m north west of the Scheme.

Although no protected or notable habitats are present within the site, efforts would be made to retain or enhance the existing native habitats of value where possible.

It is considered that any risks to ecology can be mitigated through appropriate construction planning and delivery methods which would be assessed as the scheme design progresses.

Water Environment

The Scheme boundary is located within Flood Zone 1 (as defined by the Environment Agency (EA)), which is categorised as having a low probability of flooding. Additionally, the site is underlain by a Secondary A aquifer and is also within a Nitrate Vulnerable Zone (NVZ).

Potential changes in surface runoff, groundwater flow and flow paths may alter drainage and increase flood risk. The introduction and alternation of new and existing materials may create new pollution pathways and impact water quality surrounding the Scheme. Due to the proximity to the river, there may be potential for direct and indirect physical impacts or morphological changes caused by the movement of material during construction.

3.12. Value for Money (VFM) Statement

This section provides a summary of the key considerations in arriving at Value for Money categories, which have not been adjusted at this stage.

Option A		**Option C**		**Option G**		**Option J**	
BCR: 1.42	**VFM: Low**	**BCR: 1.54**	**VFM: Medium**	**BCR: 1.37**	**VFM: Low**	**BCR: 1.38**	**VFM: Low**
Broad Transport Budget (£,000s 2010 prices, discounted)							
Capex	£11,096	Capex	£10,221	Capex	£8,359	Capex	£7,062
Opex	£2,167	Opex	£2,167	Opex	£2,167	Opex	£2,167
Revenue	£2,127	Revenue	£2,127	Revenue	£829	Revenue	£175
Subsidy	£40	Subsidy	£40	Subsidy	£1,338	Subsidy	£1,992
Total	**£11,134**	**Total**	**£10,259**	**Total**	**£9,697**	**Total**	**£9,055**
For all options, the Present Value of Costs (PVC) to the public accounts include a small subsidy to the transport operator to cover the small difference between the revenue uplifts and operating costs of the new station; and for all options, the Net Present Value (NPV) is positive. Positive NPVs can act as implicit measures of the amount of public value that is expected to be gained by delivering the option.							
Monetised Impacts (£, 000s 2010 prices, discounted)							
Access	£5,331	Access	£5,331	Access	£5,273	Access	£5,247
Facilities	£6,012	Facilities	£6,012	Facilities	£3,571	Facilities	£2,876
Crowding	£4,361	Crowding	£4,361	Crowding	£4,361	Crowding	£4,361
Highways	£108	Highways	£108	Highways	£42	Highways	£9
Ind. Tax	-£17	Ind. Tax	-£17	Ind. Tax	-£7	Ind. Tax	-£1
Total	£15,795	**Total**	£15,795	**Total**	£13,241	**Total**	£12,492
The Present Value of Benefits (PVB) is positive across all options ranging from the lowest level of benefits for Option J (£12.5m), to the highest level of benefits for Options A and C (£15.8m). In all options, the bulk of benefits arise from walking-time savings and journey quality benefits, including reductions in platform crowding, due to the station upgrade. Across all four options, the benefits arising from walking-time savings within the respective proposed station layouts are broadly similar, with all walking-time savings totalling £5.2m for Option J or £5.3m for Options A, C and G. The largest differences in PVB elements are in the journey quality, where, as expected, the lowest cost Option J with the lowest provision of station facilities offers the lowest levels of journey quality benefits. This assessment suggests that Options A and C would offer the highest journey quality							

impacts overall, but the lower capital costs for Option C naturally place it above Option A in terms of VFM.

Social Impacts

The scheme is expected to offer beneficial impacts in terms of personal security, accessibility and potentially also physical activity. As the scheme develops and details of the full package of measures to integrate Cannock Station facilities with active travel opportunities, the scheme's social impacts should be considered further, and impact assessments should be carried out where applicable.

Distributional Impacts

The scheme's impact on all distributional indicators should be explored further at the next stage of development.

Environmental Impacts

Further Economic Impact assessment (in line with Network Rail's ENVO15 should be undertaken at the next stage of development to understand the scale of impacts.

Value for Money (next steps to improve the VFM)

The four options considered in this SOBC have been carefully specified to represent a broad range of potential solutions. Options A (Transformational Upgrade max) and C (Transformational Upgrade) present the highest BCRs of **1.42** and **1.54** respectively and provide the perspective Value for Money position. These options secure a transformational upgrade to the Station by providing an exciting and inviting gateway into Cannock, whilst transforming the passenger experience, future proofing the Station for growth and significantly improving access to the station.

The initial BCRs at this stage represents a conservative view of the Value for Money as it does not include monetised benefits from public realm improvements, wider economic impacts, safety benefit from reduced platform crowding, physical activity or any health benefit. These benefits whilst have not been quantified at this stage should be taken into consideration when deriving the Value for Money presented by the scheme. The combination of the initial BCR and the qualitative non-monetised impacts would suggest that there is a reasonable prospect of the scheme delivering a **Medium Value for Money.** Potential avenues to be explored to improving the economic Case and VFM performance through the development phase going forward include:

- Maintaining a focus in design development on the key benefit driving elements and ensuring they are secured.
- Adopting appropriate value engineering and value management analysis and challenge in design development to enhance and optimise the cost effectiveness and value delivery of the chosen preferred solution
- Seek to secure and maximise for 3rd party private sector contributions to potentially reduce the burden on the broad transport budget. Such as revenue from commercial rental (such as a café) or further contributions from private developers who stand to benefit from this scheme (such as McArthurGlen).

Further considerations

The following if considered at the next stage are expected to improve the BCR and the Value for Money position.

<u>Additional revenue or contribution from private developer</u>

Additional revenue from commercial rental (such as a café) or further contributions from private developers who stand to benefit from this scheme (such as McArthurGlen) would reduce pressure on the public account and improve the BCR. Developers should be encouraged to commit further funds to the scheme.

<u>Safety benefits from platform crowding</u>

The high-level approach to monetising the impacts from station facilities improvements contained within this appraisal, while appropriate and proportionate for the purposes of SOBC, is likely to have been somewhat limiting in its inability to quantify additional safety impacts (for example from reducing platform crowding).

<u>Wider Economic impacts</u>

The appraisal at SOBC stage has also not considered wider impacts, or the potential economic multiplier effects from infrastructure investments which would substantially improve transport accessibility and capacity for travel to and from Cannock.

Rail demand growth assumptions

The rail demand forecasting applies a relatively conservative exogenous growth rate based on historic trends; and the demand itself has started from a low baseline set in 2017/18. Furthermore, the potential additional induced rail demand from improved accessibility within the station has not been included in the demand forecasting. The sensitivity testing has indicated that modest variances in rail mode share or changes in rail demand could translate into sizeable demand effects which would have knock-on impacts on benefits and revenue.

MGDOV assumptions

The quanta of future development-related rail trips are based on mid-level trip generation and mode share forecasts, however the actual trip attraction of the MGDOV could exceed these mid-level estimates. A useful case study is found in Bicester Village designer outlets in Oxfordshire, where a refurbishment programme of the shopping centre in 2016/17 led to an approximate doubling of rail demand at Bicester Station with the reopening of the shopping centre. Cannock and MGDOV is estimated to have 11 million consumers within a 90-minute catchment area, including Birmingham which is within a 30-minute rail journey.

Other benefits

Public realm, physical activity and health benefits could be quantified.

3.13. Conclusion

The analysis suggests the Option C and A are likely to offer the most Value for Money of the options assessed, presenting BCRs of 1.54 and 1.42, respectively. It should be noted that the assessment has been undertaken at high-level, for the purposes of SOBC and the consideration of economic impacts attributable to the scheme at this early stage of scheme development presents a conservative view of the value for Money position. Although the initial BCRs suggest the scheme presents Medium / Low Value for Money, further consideration of other non-monetised impacts is expected to improve the BCR and potentially improve the Value for Money position.

4. Financial Case

4.1. Introduction

The Financial Case assesses the affordability of the scheme by comparing the availability of funds against anticipated expenditure and develops the funding and financing strategy for the scheme. An assessment has been carried out for each of the four short-listed station redevelopment options.

At the SOBC stage our approach is to:

- assess the potential Capex and Opex requirements of the four short-listed options;
- review and sift potential sources of funding;
- make an initial assessment of the funding gap.

The remainder of the Financial Case is structured as follows:

- Section 4.2 provides an overview of the cost implications (Capex and Opex) for the station redevelopment options.
- Section 4.3 provides and review and sift of potential funding sources, including both public sector funding and alternative funding sources.
- Section 4.4 provides an assessment of scheme affordability, based on available funds, Capex, and Opex for each station redevelopment option.
- Section 4.5 concludes and provides recommendations for progressing the Financial Case.

4.2. Emerging Cost Estimates

4.2.1. Capex

Atkins has produced Capex estimates for each of the four short-listed options. These estimates are exclusive of VAT. They are presented at the 80% confidence level, i.e. Atkins estimates that there is an 80% probability that the redevelopment option could be provided at or below the stated cost.

Table 4-1: Summary of station redevelopment Capex estimates (excl. VAT)

Station Design	Description	Anticipated Final Cost at 80% confidence level, 2020 prices
Option A	**Transformational upgrade Max** - High Cost option featuring a platform canopy, a new station building, a café and w/c	£17.1m
Option C1	**Transformational upgrade** - High cost option featuring a platform canopy, platform extension, an enclosed pavilion and a cafe	£15.7m
Option G	**Enhanced upgrade** - Medium cost option featuring a platform canopy, an enclosed pavilion and a cafe	£12.9m
Option J	**Core upgrade** - Low cost option with basic station redevelopment including new platform shelter	£10.9m

The following key cost risks were identified:

- R1: Ground conditions on the site.
- R2: Availability of track possessions.
- R3: The Compulsory Purchase Order required for Option A.

The Capex estimates broken down into high-level costs areas is summarised in Table 4-2.

Table 4-2: breakdown of station redevelopment Capex estimates (excl. VAT) in £k (2020 prices)

	Station Redevelopment Option	A	C1	G	J	(%)
1	**Direct Construction Works**					
1.01	Railway Control Systems	20	20	20	20	-
1.02	Train Power Systems	100	275	100	100	-
1.03	Electric Power & Plant	-	-	-	-	-
1.04	Permanent Way	30	30	30	30	-
1.05	Operational Telecommunications Systems	390	390	400	400	-
1.06	Buildings & Property	1,650	1,650	750	325	-
1.07	Civil Engineering	2,600	2,100	2,300	2,100	-
1.08	Enabling Works	190	90	90	90	-
T1	Total Direct Construction Works	4,980	4,555	3,690	3,065	-
2	**Indirect Construction Works**					
2.01	Main Contractor Preliminaries	1,750	1,600	1,300	1,100	35%
2.02	Main Contractor Overheads & Profit	540	490	400	330	8%
T2	Total Indirect Construction Works	2,290	2,090	1,700	1,430	-
T1+T2	Total Base Construction Works	7,270	6,645	5,390	4,495	-
3	**Project Management, Design & Other Project Costs**					
3.01	Design Team Fees	1,500	1,400	1,200	1,100	18%
3.02	Project Management Teams Fees	930	860	710	590	10%
3.03	Other Project Costs	620	570	460	380	9%
T3	Total Project Management, Design & Other Project Costs	3,050	2,830	2,370	2,070	-
4	**Risk**					
4.01	Risk contingency	6,750	6,250	5,100	4,300	66%
T4	Subtotal	6,750	6,250	5,100	4,300	-
T1+T2+T3+T4	Anticipated Final Cost (AFC) at 80% confidence level / P80	17,070	15,725	12,860	10,865	-
AFC Range	Anticipated Final Cost (AFC) at 50% confidence level / P50	15,700	14,500	11,800	9,900	-
	Anticipated Final Cost (AFC) at 90% confidence level / P90	18,000	16,600	13,600	11,400	-

4.2.2. OPEX

A high level Opex estimation is undertaken for the four station options for Cannock Station upgrade. Opex estimate is based on a simplistic delta expenditure value from existing station situation. This estimate considers the additional physical design elements added to the station as part of station options and their relevant maintenance/renewal cost. However, in absence of detailed staffing plan for the options, no staff cost has been assumed in the estimate.

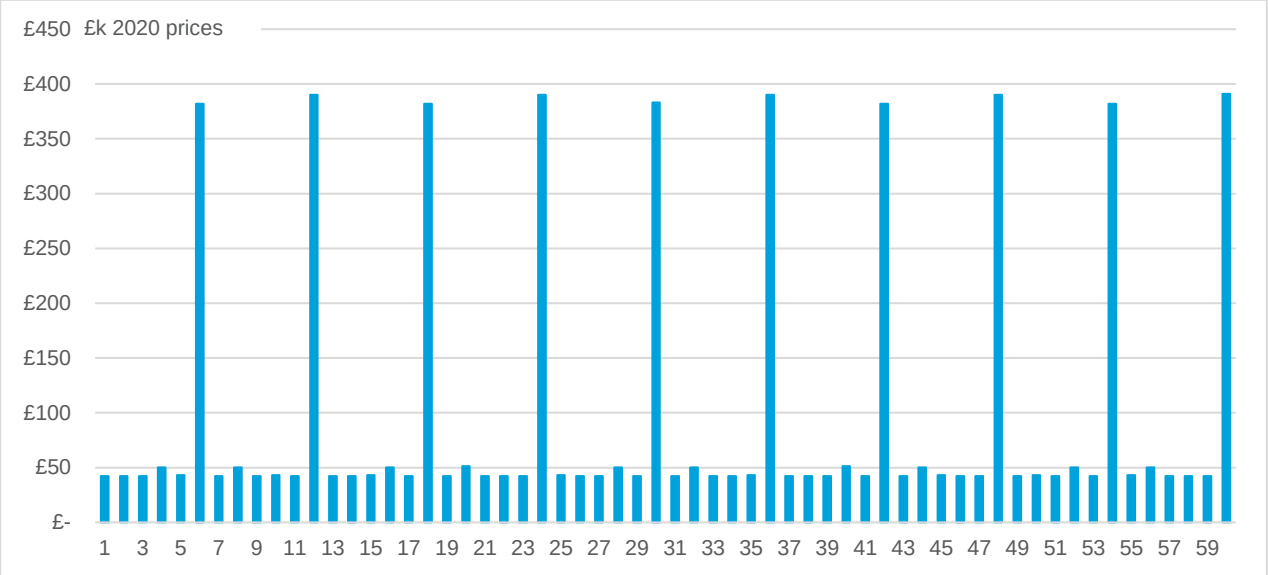
The resulting estimates are summarised in Table 4-3, in £k (2020 prices) over a 60-year period. At this stage there is little to no variation in the Opex requirements between the options and so a single worst case is considered representative of all options. The largest cost area is maintenance and renewal of the Operational Telecommunications Systems which includes the CCTV systems and Customer Information Systems.

Table 4-3: Summary of Opex estimates. All values in £k (2020 prices)

Cost area	Operational Costs
Operational Telecommunication Systems	3,742
Electrical Systems	1,261
Specialist Installations	109
Structures and Fittings	675
Other Items	279
Total (over 60-year period)	**6,066**

The spend profile f is shown in Figure 4-1. The spike in costs in years 6, 12, 18, 24, 30 and so on are primarily driven by renewal of CCTV and Customer Information Systems, which should be carried out every 5-7 years.

Figure 4-1: Annual Opex for 60-year period. All values in £k (2020 prices).



The Opex estimates rely on the following assumptions:

- No cost assumed for vandalism.
- Lifts maintenance is generally undertaken by NR – no cost included at this stage.
- No SQUIRE regime assumed which mean additional maintenance cost.
- No cost of increased maintenance and cleaning due to atypical materials used in design e.g. for aesthetic purposes.
- No Cost for Secure Station Accreditation assumed.
- No Cost for Park Mark Status accreditation for car park assumed.
- No Cost for green credentials assumed.

4.3. Potential Funding

At this stage the funding and financing strategy for the station redevelopment is in development, and the final funding package is not confirmed. Atkins has therefore carried out a long-list and sift assessment of a range of potential funding sources for consideration by the scheme sponsors. The sift assessment is carried out with a Red-Amber-Green (RAG) rating according to the criteria in Table 4-4.

While the majority of rail infrastructure is publicly funded, the DfT's Rail Network Enhancement Pipeline guidance states that exploring alternative sources of funding is encouraged to reduce the burden on the taxpayer.

Table 4-4: Assessment criteria for potential funding sources

Red: Discard	**Amber**: Retain	**Green**: Retain
Likely to be opposed by community or key stakeholder groups, or no realistic mechanism for accessing the funding stream is available. The funding party is not a direct beneficiary of the scheme, or the funding stream incentivises outcomes that are contrary to scheme objectives or wider policy objectives.	Possible to be opposed by community or stakeholder groups, or there are issues to be overcome in accessing the funding steam. The funding stream incentivises outcomes that are not aligned to scheme objectives or wider policy objectives.	Likely to be supported by the community and key stakeholder groups, and there exists realistic mechanisms for accessing the funding stream. The funding party is a direct beneficiary of the scheme, or the funding stream incentivises outcomes that are aligned with scheme objectives or wider policy objectives.

4.3.1. Government funding

The majority of rail infrastructure enhancements in the UK are publicly funded. Three potential routes to obtaining public sector funds for the project have been identified.

#	Government funding	Comment	RAG
1.1	DfT – Rail Network Enhancement Pipeline (RNEP)	All DfT funding for network enhancements is provided through RNEP. Preference is given to schemes that have a strong economic case and make use of innovative funding schemes. This funding source has been rated **green**, as the majority of rail network enhancements are (part) funded through RNEP.	
1.2	WMCA / TfWM / WMRE	Funding could be provided by transport authorities in the West Midlands. This funding source has been rated **green** rating, as WMRE is the sponsor of this project.	
1.3	Staffordshire County Council / CCDC Capital Funds	Funding could be provided by the local authorities. This funding source has been rated **red** rating, as the local authorities do not have spare capital funding.	
1.4	Local Enterprise Partnership (LEPs)	There are examples of LEPs providing funding for railway station redevelopment such as Perry Barr Station redevelopment and Kidderminster Station improvements. This funding source has been rated **amber**. LEPs have funded station refurbishments that generate positive local economic impact in the past via Local Growth Funds (LGF). LGF monies are available until March 2021, but most if not all of their funds are already committed.	
1.5	Towns Fund	The Towns Funds Prospectus, published in November 2019, provides guidance on accessing £3.6bn of funding for investment in towns. This investment may include transport links. The funding is accessed through Town Deals, which will be made available to a group of 101 towns. The prospectus outlined plans to strike the Town Deals over the course of 2020. This funding source has been rated **amber**. Cannock is not listed in the group of 101 towns but may be eligible in potential future funding rounds.	

4.3.2. Station-related funding

Station-related funding streams rely on generating value from, and commercialising the station asset itself, excluding activities directly related to rail operations.

#	Station-related funding	Comment	RAG
2.1	Station sponsoring / naming rights	Station sponsoring or naming rights might be sold to local attractions or brands in order generate a funding stream. Examples include a plan to rename of White Hart Lane Station to Tottenham Hotspur, the temporary renaming of Canada Water to Buxton Water on the day of the 2015 London Marathon, Greenhithe for Bluewater and University Station. This funding source has been rated **amber**, as this form of sponsorship is relatively uncommon and local communities may object to renaming of heritage railway assets.	
2.2	In-station advertising	In-station advertising space or trackside billboards can be rented to provide a funding stream. This funding source has been rated **green** as several of the long-listed station designs include potential space for advertising.	

2.3	In-station retail rental	Rental income from in-station retail offerings represents a potential source of funding. This funding source has been rated **green** as several of the long-listed station designs include new in-station retail space.	
2.4	Station car park revenue apportionment	A portion of additional car park revenue generated from a refurbished car park and greater station patronage could be allocated to the station redevelopment. This funding source has been rated **amber**, as it is an accessible source of funds. However, our initial demand modelling suggests that the potential revenue generated may be small relative to the investment required by the scheme plus any revenue may be offset by operating costs.	

4.3.3. Rail-related funding

Rail-related funding streams aim to access the value generated to the rail industry from increased passenger numbers and from the improved station asset.

#	Rail-related funding	Comment	RAG
3.1	Rail passenger fare uplift	There are examples of station upgrades being funded through a small uplift to fares being added to fares for journeys originating or departing at the station in question. This has been used successfully at several airport railway stations. This funding source has been rated **amber as** this can add to complexity and inconsistencies within the rail fares system. It is also likely that a fare uplift would be unpopular with rail users, and that the increased cost to passengers would reduce the number of people using the station. However, an ongoing review of fares across the region led by the West Midlands Rail Executive suggests that the Chase Line has low fares compared to other routes.	
3.2	TOC contribution from passenger revenue uplift	The Train Operating Company could contribute a portion of the increased farebox revenue that they receive due to the investment in the station. This funding source has been rated green as our initial demand and revenue modelling suggests that the Train Operating Company servicing the station is a beneficiary of the investment.	
3.3	Long-term charge (TOC station access charge)	This involves diverting the station long-term charge - an annual charge currently paid by operators that use the station to Network Rail for the maintenance and renewal of the station – to the redevelopment project (2019/20 onwards). This option does not generate additional value as funding source; simply diverts an existing cost-recovery payment. This established mechanism may however be suitable for delivery models involving a third party maintaining the station, and hence avoiding the need for Network Rail to cover such costs. This funding source has been rated **amber** because although existing mechanisms exist to access it, **its applicability is limited to delivery models where a third party carries out station maintenance.**	

4.3.4. Business and property

#	Business- and property-related funding	Comment	RAG
4.1	Contribution from McArthurGlen Designer Outlet	Station options with enhanced connectivity to the Designer Outlet will increase sales revenue and reduce carbon emissions related to the operation of the outlet. It is potentially in the interests of the developer to contribute to the scheme. This funding source has been rated **amber**, because although the outlet developers may stand to benefit from increased visitors to the outlet if the station facilities are improved, the developers have already made an S106 contribution of £90,000. The developers may still be encouraged to commit further funds.	
4.2	Retail property sales / rental	Station options that include space for retail development could accrue rental revenue or revenue from property sales. This funding source has been rated **green** because the options under consideration include the possibility of retail adjacent retail developments.	
4.3	Residential property sales / rental	Station options that include space for residential development could accrue rental revenue or revenue from property sales. This funding source has been rated **green** because the options under consideration include the possibility of retail adjacent residential developments.	
4.4	Community Infrastructure Levy apportionment	The Community Infrastructure Levy (CIL) is a levy made on developers to fund community infrastructure such as transport infrastructure and including railway station. There is significant home building activities ongoing in Cannock 2020-25, and a portion of the accruing funds could potentially be allocated to the station redevelopment. This funding source has been rated **green** because there is a reasonable case that the station redevelopment is a necessary infrastructure improvement to support increased numbers of residents in the local area.	
4.5	Business rates retention	An uplift to local business rates could provide funds which could be allocated to the scheme. This is likely to be unpopular with local business and may discourage the objective of enabling a thriving Cannock Town Centre area. This funding source has been rated **red** as it runs contrary to the strategic objective of enabling a thriving Cannock Town Centre area.	
4.6	S106 Apportionment	S106 contributions are levied on developers in as part of the process in securing planning permission. This funding source has been rated **red**, as the £90,000 of S106 funding secured from the Designer Outlet has been allocated for minor cosmetic changes and there are no other possible S106 funds available.	

4.4. Affordability

4.4.1. Summary of funding

As of April 2020, at the SOBC / GRIP1 stage, there are no committed sources of funding in place. A more detailed assessment of funding sources, and the potential need for financing arrangements, will be carried out in the GRIP2/SOBC Stage.

4.4.2. Funding gap

The total funding requirement for the four options ranges between £17-£23m at the p80 confidence level. The spend profile over time is visualised in Figure 4-2.

Figure 4-2: Total Expenditure (Capex + Opex) profile for the four short-listed options over a 4-year build and 60-year operational period. All values in £k 2020 prices.

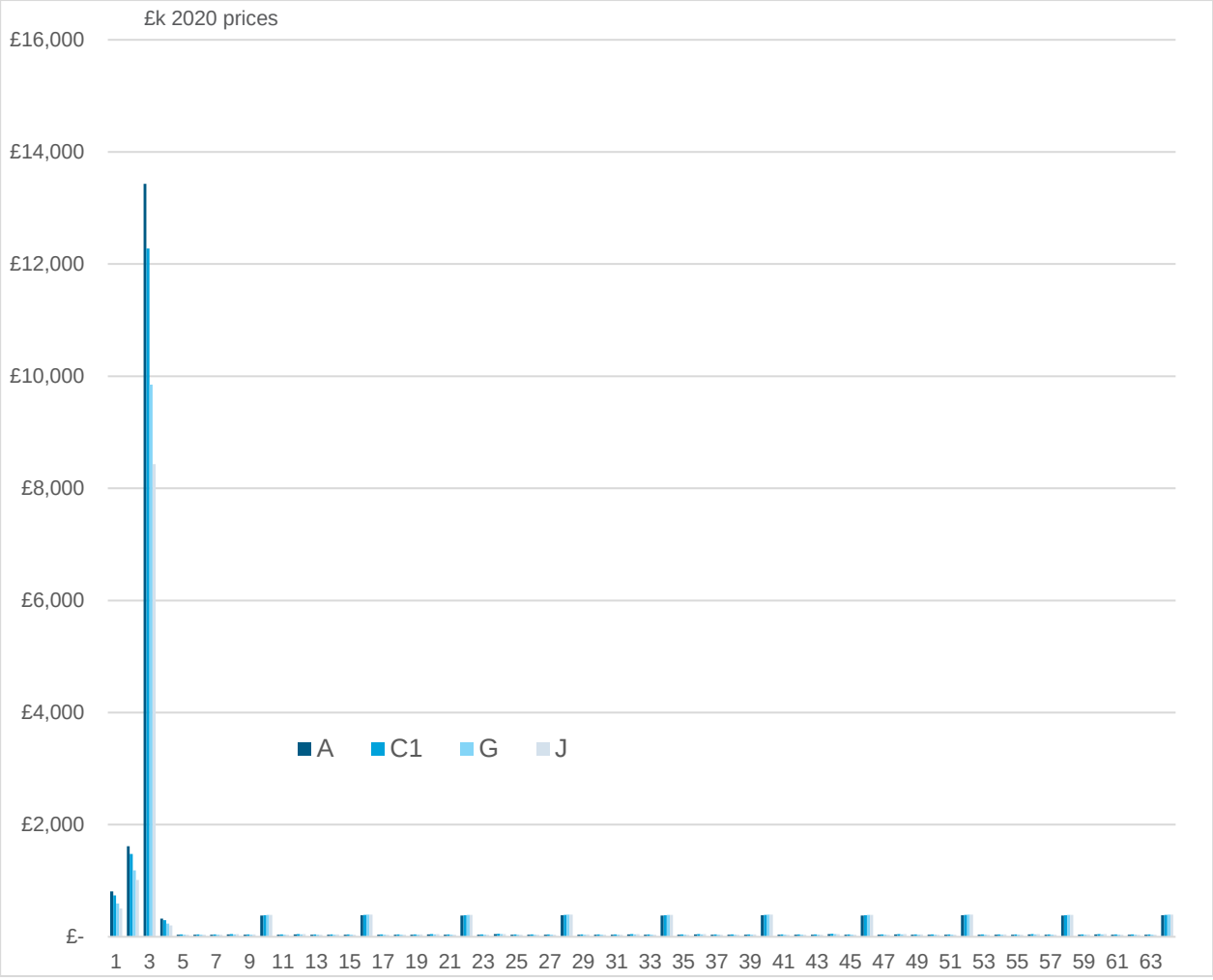


Table 4-5: Summary of Total Expenditure (Capex + Opex) over 4-year build period and 60-year operational period. All values in £k 2020 prices.

Option	A	C1	G	J
Capex Y1-Y4 (4-year build period, p80 confidence)	17,070	15,725	12,860	10,865
Opex Y5-Y34 (60-year operational period)	6,066	6,066	6,066	6,066
Total Y1-Y34	**23,136**	**21,791**	**18,926**	**16,931**

4.5. Conclusion

At the SOBC / GRIP1 stage the following key undertakings for the Financial Case have been completed.

1. Capex requirements and Opex requirements have been estimated for four short-listed station designs. A Total Expenditure (TotEx) profile over a 4-year build and 60-year operational period has been produced.
2. A long-list of potential funding sources have been identified. A RAG rating / sift exercise has highlighted potentially viable public and private sources of funding.
3. As no funding has yet been committed to the project, a funding gap of £16-£22m (exclusive of financing costs and VAT) has been identified, depending on final option selection.

If the development of the project is continued to the OBC / GRIP2 stage (depending on the results of the Economic Case) the Financial Case will be focused on assessing feasible packages of funding and financing arrangements that could close the funding gap.

5. Management Case

5.1. Introduction

The Management Case has been prepared through consultation with representatives from WMRE (West Midlands Rail Executive), SCC (Staffordshire County Council), CCDC (Cannock Chase District Council) and NR (Network Rail).

The Management Case describes how the Cannock Station redevelopment project will be delivered through project management best practice, confirming that timescales are realistic and demonstrating that an appropriate governance structure is in place to oversee the project.

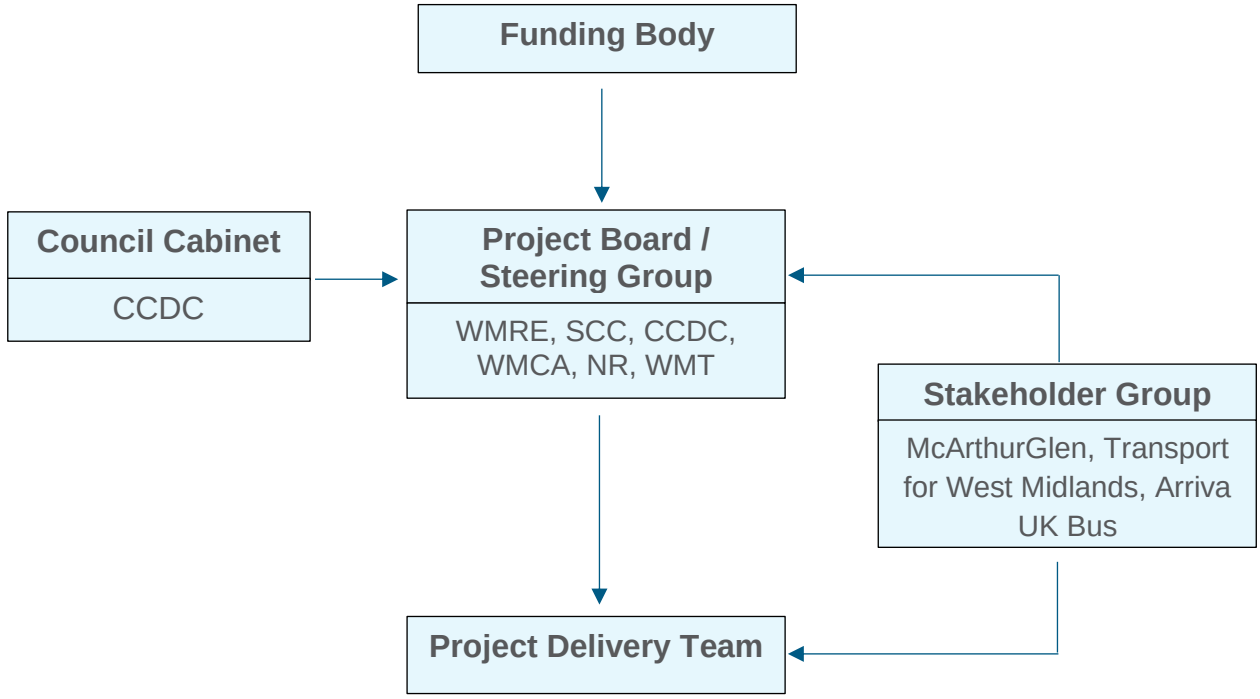
The structure of this case is based on the HMT's Green book guidance and is set out as follows:

- Governance and organisational structures and roles
- Project plan
- Assurance and approvals plan
- Communications and stakeholder management
- Risk management strategy

5.2. Governance and Organisational Structure and Roles

The governance structure in Figure 5-1 shows a clear decision-making line from project delivery team through to the Funding Body.

Figure 5-1 - Governance Structure



5.2.1. Project Board/Steering Group

The Project Board/Steering Group will provide strategic direction and will be responsible for overseeing the development of the scheme to ensure a successful delivery. The Project Board/Steering Group will meet at key milestones in the project and consist of senior representatives from:

- West Midlands Rail Executive (WMRE, the sponsor)
- West Midlands Combined Authority (WMCA, Project Contract lead)

- Cannock Chase District Council (CCDC, Project Partner, the Local Planning Authority)
- Staffordshire County Council (SCC, Project Partner, the Local Transport Authority and Highway Authority)
- West Midlands Trains (WMT, Project Partner, the train operating company)
- Network Rail (NR, owner and manager of the rail infrastructure)

The Project Board/Steering Group will:

- Ensure commitment from the relevant organisations and stakeholders for the overall strategy including the approach to funding.
- Act as a champion for Cannock station and proposed scheme and take a proactive approach to communication and engagement.
- Advice on structure and options for private sector support to deliver the plan including approach to funding.
- Support the project delivery team by providing steering on risks, issues or concerns raised during technical delivery of the scheme to ensure that due process is followed during the scheme development.
- Provide an integrated approach to powers and consents.
- Evaluate progress and keep track of adherence to programme/ budget including approving any significant changes to the delivery programme.
- Report to the council cabinet and funding body.

5.2.2. Stakeholder group

The Stakeholder Group will engage with the project delivery team, providing guidance to ensure that due process is followed during the development of the scheme. These stakeholders are consulted on the project to highlights issues and constraints which influence the option development. Although this group does not have decision making powers, it acts as an advisory board to the Project Board/Steering Group. The Stakeholder Group will consist of senior representatives from key statutory stakeholders including:

- McArthurGlen
- Transport for the West Midlands (TfWM)
- Arriva UK Bus
- Others as identified

5.2.3. Project delivery team

The Project Delivery Team will be accountable to the Project Board/Steering Group and will be responsible for:

- Delivering the scheme while ensuring project timescales and milestones are met.
- Resolving all detailed day-to-day project issues.
- Liaising with stakeholders to ensure due process is followed during the development of the scheme.
- Adopting and implementing appropriate quality control procedures.
- Reporting progress to the Project Board/Steering Group.

5.3. Project Dependencies

The Cannock Station redevelopment is a standalone scheme and not dependent on any other schemes or projects. It can be designed, costed and delivered independently. However, the scheme is dependent on the receipt of funding, support of stakeholders and is subject to risks as set out in the risk register. The scheme is also dependent on a few activities outlined in the project programme including:

- **Planning Consent** - It is expected that planning permission will be required for the scheme. Both WMRE and SCC have previous experience in securing planning permission for transport scheme and are confident in the timely delivery of this task.
- **Land Acquisition** - The feasibility and cost of acquiring any land will be considered during the scheme design. This will include identifying any planning or legal issue that may arise. Following this, a land

acquisition strategy will be agreed by the county council cabinet. Affected land owners will be contacted as part of a consultation process.

5.4. Project Plan

An indicative programme has been prepared in consultation with WMRE, SCC and CCDC. It anticipates commencement of the station construction works in July 2024 and completion in December 2025.

A project programme has been produced. It covers all key stages of the programme from OBC (assuming completion by December 2021) to project delivery. It is anticipated that station construction works will commence in July 2024 for completion in December 2025. More details will be introduced into the programme as the project progresses through Outline Business Case and Full Business Case.

5.5. Assurance and Approvals Plan

The project will need to comply with Network Rail Governance for Railway Investment Projects (GRIP) processes.

The scheme design will need to comply with Network Rail's Governance to Railway Investment Projects guidance process, because of its impact and/or proximity to Network Rail's assets. For elements of the options touching or adjacent to Network Rail's assets, Network Rail would need to manage the design or receive and process compliant designs through GRIP stage 3 through to GRIP stage 8 - Project Close Out. Network Rail is therefore integral to design standards and design assurance.

5.6. Communication and Stakeholder Strategy

The principal stakeholders are discussed in the Governance section of this Management Case. Other important stakeholders include property owners that may be affected by the scheme.

The purpose of the Communications Strategy is to identify who the project's key stakeholders are, what is important to them and what will be done to ensure they are appropriately engaged. The strategy will be guided by Network Rail's 'Our Principles of Good Design' guidance (2019), which specifies exemplary stakeholder engagement and communications principles.

5.6.1. Identified stakeholders

A stakeholder may be defined as anyone with an interest in the programme or project. Stakeholders can be individuals, groups or organisations. The identified stakeholders include the project partners and stakeholders listed in Section 5.2 as well as external stakeholders which include the general public, businesses and residents located around the station, user groups etc.

Table 5-1 summarises the interests/objectives for communication with key stakeholders and the level of engagement proposed. Stakeholders who are directly affected by the scheme and whose agreement is required in order for the scheme to progress are kept involved throughout the design and implementation of the scheme. Stakeholders who are affected by the scheme and can contribute to the successful delivery of the scheme are consulted at key stages of the project development. Stakeholders with general interest in the scheme will be kept informed at appropriate stages.

Table 5-1: Key Stakeholders

Key stakeholders	Interests/ objectives for communication	Level of Engagement	When to Engage
WMRE	Keeping sponsor involved through the design and implementation of the scheme	Involve	Ongoing
CCDC	Keeping the Local Planning Authority involved through the design and implementation of the scheme	involve	Ongoing
SCC	Keeping the Local Transport Authority and Highway Authority involved through the design and implementation of the scheme. To expand awareness and support across the Staffordshire region.	Involve	Ongoing
WMCA	Keeping the project partner involved through the design and implementation of the scheme.	Involve	Ongoing

Network Rail	Ensuring Network Rail is kept involved during the design and implementation of the scheme. To ensure that scheme design meets network Rail compliance and achieve sign0off or the various GRIP stage reports.	Involve	Ongoing
WMT	Keeping the Train Operating Company involved through the design and implementation of the scheme	Involve	Ongoing
TfWM	Keeping TfWM involved through the design and implementation of the scheme. To expand awareness and support across the region	Involve	Ongoing
McArthurGlen	Developing channels for engaging with the stakeholder to obtain inputs on matters impacting the designer outlet.	Consult	Ongoing
Bus Operators	Developing channels for engaging with the stakeholder to obtain inputs on matters impacting buses.	Consult	Ongoing
General Public	Public consultation to obtain input on matters impacting the public and disseminate information on the project development. To improve transparency and public involvement during the scheme development.	Consult	GRIP 3
Landowners/ residents	Negotiation and dialogue with Landowners impacted by scheme	Consult	GRIP 4
Utilities Companies	Developing channels for engaging with the stakeholder to obtain inputs on matters impacting utilities. Consultation will be undertaken during the development of the scheme.	Consult	GRIP 3
Environment Agency	They will be consulted to ensure environmental implication are fully understood during completion of the Environmental Impact Assessment.	Consult	GRIP 2
Businesses	Raise awareness of the ambitious plans for Cannock Station and create regular opportunities for dialogue with the regional business audience	Inform	GRIP 3
Local Councillors	Keeping cabinet members and local councillors informed on progress	Inform	Ongoing
Local MPs	Keep local MPs informed and aware of the Cannock station plans through targeted/tailored regular communications.	Inform	GRIP 3
Funding body	Funding the Design/ implementation of scheme	Inform	GRIP 3/4

5.6.2. Dates and Frequency of Communication

A range of engagement exercises has been undertaken during the production of the SOBC and these are listed in table below. Further engagement exercises will be undertaken as the project progresses to Outline Business Case.

Table 5-2: Previous Engagement Exercises

Engagement Exercises	Dates
Site visit with stakeholders	11/11/19
Progress meeting with Steering Group	5/11/19, 5/12/19, 11/12/19, 18/12/19, 23/01/20, 24/02/20, 19/03/20, 02/04/20, 30/04/20
Stakeholder workshops	29/01/20, 03/03/20, 10/03/20

5.7. Risk Management Strategy

The Risk Management Strategy (RMS) sets out how WMRE will look at risks as a partnership with Cannock Chase District council, Staffordshire County Council (SCC), West Midlands Combined Authority (WMCA) and West Midland Trains (WMT). The Project Board/Steering Group will manage the risks register and the risks are to be managed by risk owners.

The risk management strategy sets out how risk will be managed on the project and identifies the:

- Risk management process
- Roles and responsibilities
- Records
- Timing of risk management activities

5.7.1. Risk management process

A five-step risk management process has been agreed as a mechanism to deliver a simple and effective risk management process.

Figure 5-2 - Five-step Risk Management Process

Further detail on the five-step process is discussed below.

- Step 1: Identify the risk
- Step 2: Assess and evaluate the risk
- Step 3: Plan and Implement response
- Step 4: Monitor and review the risk
- Step 5: Communicate

Through the lifecycle of the project, a risk register will be maintained. The risk register will enable the team to record and manage risks in a consistent way, map risks to objectives and risk types, monitor and review risks and produce management reports.

5.7.1.1. Identify the risks

The project delivery team and Project Board/Steering Group will identify and describe risks that might affect the programme or its outcomes. This stage involves identifying the source of the risk, the threat or opportunity and the impact the risk would have on the project objectives. Once identified all risks will be recorded in a Risk Register. The scheme risks will be grouped into categories such as:

- Risk to programme
- Political risks
- Economical risks
- Financial / Legal risk (including risk to scheme costs or funding)

- Technical risk
- Health and Safety risk
- Organisational / stakeholder risk
- Reputational risk
- Risks to the operation of the transport network

5.7.1.2. Assess and evaluate the risk

Once risks have been identified, the next step is to assess the probability and impact of the risk.

Probability - A risk is an event that "may" occur. The probability of it occurring can range anywhere from just above 0 percent to just below 100 percent. (Note: It can't be exactly 100 percent, because then it would be a certainty, not a risk. And it can't be exactly 0 percent, or it wouldn't be a risk.). This will be mapped to a 5-point scale set out in Figure 5-3 below.

Figure 5-3 - 5-point Probability Scale

Level	Description	Detailed Description
5	Almost Certain	Expected to occur in most circumstances. Greater than 95% probability of occurring and/or has happened on almost all similar projects in the past.
4	Probable	Will probably occur in most circumstances. Between 60% and 90% probability of occurring and/or has happened on many similar projects in the past.
3	Possible	Might occur at some time. Between 20% and 60% probability of occurring and/or has happened on a few similar projects in the past.
2	Unlikely	Unlikely to occur. Between 10% and 20% probability of occurring and/or has rarely happened on similar projects in the past.
1	Rare	May occur only in exceptional circumstances. Less than 10% probability of occurring and/or has never or very rarely happened on similar projects in the past.

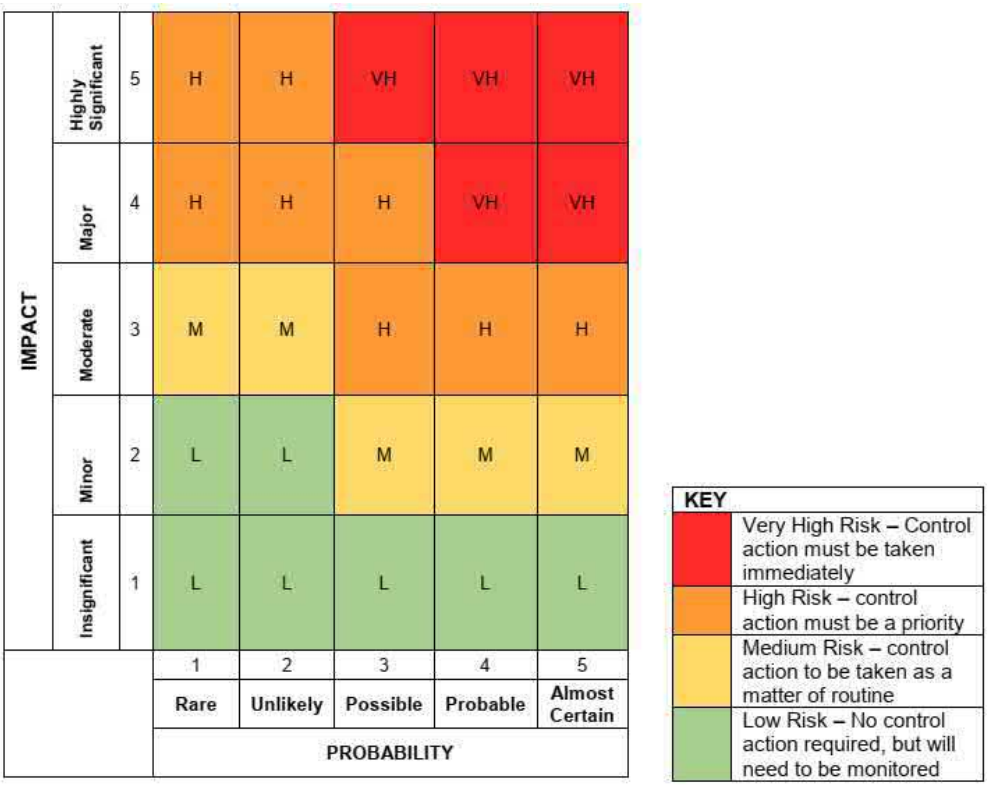
Impact - A risk, by its very nature, always has a negative impact. However, the size of the impact varies in terms of cost and impact on health, human life, or some other critical factor. This will be mapped to a 5-point scale set out in Figure 5-4 below.

Figure 5-4 - 5-point Impact Scale

Level	Description	Detailed Description		
		Financial	Time	Reputational
5	Highly Significant	Huge financial loss, >10% of project cost	Major disruption to the project and/or services or major failure to deliver vital services	Serious major reputational damage inflicted, external intervention certain
4	Major	Major financial loss, 5-10% of project cost	Major disruption to the project and/or services or short failure to deliver services	Major reputational damage inflicted, external intervention likely
3	Moderate	Medium financial loss, 2-5% of project cost	Disruption to the project and/or services or short failure to deliver services	Reputation damage inflicted, external intervention possible
2	Minor	Minor financial loss, 1-2% of project cost	Limited disruption to the project and/or services	Could affect reputation
1	Insignificant	Little or no financial loss, >1% of project cost	Inconvenience to the project and/or services	Potential reputation issues

Once the impact and probabilities have the assessed, the risk will be mapped onto a 5-point matrix to generate an overall risk score representing the risk exposure (Figure 5-5).

Figure 5-5 - 5-point Risk Matrix



The risk matrix combines the impact and probability to provides an understanding of the risk profile, clarify thinking on the nature and impact of the risks and helps highlight the risks that need more attention. Looking at impact versus probability is common in order to categorise and prioritise risks as some risks may have a severe impact on projects objectives but only happen on rare occasions, while other have a moderate impact but occur more frequently. The probability impact and risk exposure will be noted in the Risk Register.

5.7.1.3. Plan and implement response

This step involves setting out a risk response plan to modify risks to achieve acceptable risk levels. A risk response will be planned if the risk exposure is greater the risk tolerance set out by the programme board as representing their overall risk appetite. To minimise the probability of the risks as well as enhancing the opportunities, the team will create risk mitigation strategies, preventive plans and contingency plans in this step. The team will also add the risk solution measures for the highest ranking or most serious risks to the Risk Register. The opportunities and threat responses are discussed in the Table below.

Table 5-3: Risk Responses

Opportunities	Threats
Exploit the risk- make possible actions to ensure the opportunities are realised in the Benefits Plan.	**Avoid the risk** - This is where the response to be put in place are intended to prevent the threat from being realised, or to prevent it from having any impact e.g. by adopting an exit strategy
Enhance the risk –taking measures or actions for example, changing the project plan or approach. To increase the probability of the occurrence of opportunities / increase the benefits from the opportunities.	**Reduce the risk –** This were the response taken is not necessarily to avoid the risk but, more likely, to set in place a series of actions to reduce the risk to an acceptable level.
Transfer the risk - This is where the risk is passed to a third party, generally through an insurance policy or penalty clause.	
Share the risk – This is where the risk would be shared between involved parties as pre-agreed at the beginning of the project. For example, if it was possible that the cost plan was to be exceeded the variance could be shared.	

Accept the risk - This is where the Programme Board makes a conscious decision to accept the possibility that the risk may occur, and the risk may create an opportunity or a threat. This may be because they consider that the risk will not actually occur, or because any possible countermeasures are too expensive or unworkable.

Preparing a contingency plan - This involves preparing plans now, but not taking any actions now. This is a fall-back plan identifying what to do if the original response does not work.

It will be critical to ensure that owners and actioner are identified and agreed for each risk.

Risk owner - A risk owner must be allocated and recorded against each risk on the risk register. Such accountability helps to ensure 'ownership' of the risk is documented and recognised. A risk owner is defined as a person with the accountability and authority to effectively manage the risk and ensures that appropriate resources and importance are allocated to manage the risk.

Risk actioner - A risk actioner is a nominated owner of an action to address the risk. The individual will confirm the existence and effectiveness of mitigating actions and responses, ensuring that any further actions are implemented.

5.7.1.4. Monitor and Review the Risk

Risk management should be thought of as an ongoing process and as such risks need to be reviewed regularly to ensure accuracy, quality of data and prompt and appropriate action is taken to reduce their likelihood and/or impact.

5.7.1.5. Communication

Communications will be undertaken through the project lifecycle. This ensure that information relating to the threats and opportunities faced by the project is communicated between the project delivery team and internal stakeholders.

5.7.2. Roles and responsibilities

The key roles and responsibilities are summarised below.

Project Board/Steering Group

- Facilitation of risk reviews involving partner organisations.
- Escalation of risk to the appropriate level of management.
- Reporting of risks to Programme Board.
- Produce risk information in an appropriate format for inclusion within business cases.
- Manage risk in line with industry best practice.

Project Delivery Team

- Facilitation of risk reviews involving partner organisations.
- Escalation of risk to the appropriate level of management.
- Reporting of risks to Project Steering Group.
- Produce risk information in an appropriate format for inclusion within business cases.
- Manage risk in line with industry best practice.

Risk Owner

- Overall responsibility for the risk ensuring that appropriate resources and importance are allocated to manage the risk.
- Provide assurance that the risks for which they are the risk owner are being effectively managed.

Risk Actioner

- Confirm the existence and effectiveness of mitigating actions and countermeasures, ensuring that any further actions are implemented.
- Provide the Project Manager with periodic status updates.

5.7.3. Records

The risk register sets out the extent of the risks and the progression being made to manage them. It provides a record of identified risks relating to the project, including their status and history. It is used to capture and maintain information on all the identified threats and opportunities relating to the project. For each risk entry in the Risk Register, the following should be recorded:

- Risk identifier (reference number)
- Risk category
- Risk description
- Risk probability, Impact and expected value
- Proximity for risk events – less than a year, one – five years, five years plus
- Planned response
- Risk owner
- Risk actioner
- Risk status

The Risk Register is a life document. It should be reviewed and updated periodically through the lifecycle of the project.

5.7.4. Timing of risk management activities

There are a number of activities the team will undertake in communicating risk throughout the programme lifecycle. **Table 5-4** summarises the timing of such activities.

Table 5-4: Timing of Risk Management Activities

List of activities	When
Risk workshop	TBC
Review of risk register	Monthly
Reporting to the Project Board/Steering Group	Monthly

5.7.5. Overview of identified risks

Key technical, organisational, environmental and financial risks identified at this stage are recorded in **Table 5-5** below. The risk register will be maintained and updated during the project steering group meetings. Any high residual impact risks will be identified for discussion at the programme board meetings to determine the appropriate mitigation measures.

Table 5-5: Main Risks at SOBC Stage

Category	Risk	Mitigation
Organisational / Stakeholder	Threat to viability of scheme due to lack of political support for development of station from a national perspective.	Identify a range of options including 'do minimum' to be taken through to OBC stage. Identification of investment opportunities to offset costs.
	Stakeholder engagement relating to bus services (bus stop relocation) may be lengthy causing delays to design and sign-off.	Early engagement with bus operators.
	Planning permission won't be achieved because of a rejection from neighbours or local group.	Early engagement with the public.
	Failure to acquire necessary property interests.	Consent acquisition strategy to be produced.
Technical	Failure to provide a fit for purpose operating solution as a result of inadequate provision for	Study to assess electrification requirements to be undertaken at later

	increased power requirements resulting in reputation damage and cost.	stage to ensure this is accounted for within design.
	Ground conditions and structure below the station may not support the construction proposals for the station development.	Ground condition survey to be undertaken as appropriate.
	Ecological/arboreal mitigation may be required adding project cost and complexity.	Ecological assessment to be undertaken to ensure this is considered during design.
	Station redevelopment may destabilise the existing embankment.	Any design should make allowance as required for suitable retaining structures
	Station won't be integrated with the surrounding area as the master plan for the area hasn't been agreed.	Continued engagement with CCDC to ensure alignment with expectations.
	Station has non-compliances that may be too complex and expensive to rectify.	Early understanding and consideration of station compliance requirements.
Financial / Legal	Risk to affordability of scheme in event of unfavourable economic conditions and absence of lenders in market resulting in the scheme becoming unaffordable.	Continued early market engagement to identify appetite amongst private sector funders and development of an investment strategy.
	Failure to secure funding for scheme	Continued dialogue with potential sponsors to ensure alignment with expectations.
	Impact on design development as a result of changes in regulations (e.g. EU) resulting in increased cost and delays to the programme and phasing of works.	Horizon scanning for early identification of potential change and due consideration of impact on design. May also provide opportunities for innovation.
	Impact on operations as a consequence of extreme weather patterns (force majeure).	Effective contingency planning to account for likely scenarios.
COVID-19 Pandemic	Decrease demand for public transport travel as a result of COVID-19 pandemic.	The scheme will contribute to encouraging the use of rail by providing the added capacity on platform that is needed to accommodate expected demand and encourage social distancing if required. It is anticipated that in the long term, passenger numbers will resume to pre-COVID-19 levels.

5.8. Conclusion

The project is not dependent on any other schemes. Governance for the Cannock Station Redevelopment is provided through the sponsor WMRE and the supporting partners. An indicative high-level project plan has been prepared in consultation with WMRE, CCDC and SCC. It anticipates commencement of the station construction works in July 2024 and completion in December 2025. The project will need to comply with Network Rail Governance for Railway Investment Projects (GRIP) processes. The principal stakeholders are currently represented within the Stakeholder Group as discussed in the Governance section of this Management Case. Other important stakeholders include property owners that may be affected by the scheme and will be engaged with in due course. Technical, Organisational, and Financial risks have been identified in this SOBC. At later stages of business case development, a full quantified risk assessment, contract management, contingency plans and a benefits realisation plan a will be produced.

6. Commercial Case

6.1. Introduction

This section of the Business Case examines the commercial implications, actions and responsibilities associated with the delivery of the proposed way forward for Cannock Station redevelopment. It provides evidence that the proposed investment can be procured, implemented and operated in a viable and sustainable way. At this SOBC stage of development the commercial case is restricted to a summary of potential procurement strategies only. Further detail on procurement for the delivery of the components of this scheme will be included in the next iteration of the Business Case and further refined as work progresses.

The structure of this case is based on the HMT's Green book guidance and is as follows:

- Output-based specification
- Procurement strategy

6.2. Output-based Specification

The Commercial Case format requires an outputs specification for the given programme. In the case of the Cannock Station redevelopment these are the core project requirements set out within the Clients Requirements Document.

The components to be delivered by the station redevelopment are summarised in **Table 6-1**. The full scope of the project is described in the Strategic Case.

Table 6-1: Component Delivered by the Scheme

Components		Option A	Option C	Option G	Option J
Platforms	Widening/lengthening	x	x	x	x
	New Canopy	x	x	x	
	New Shelter	x	x	x	x
	PRM-compliant footpath/ramp	x	x	x	x
	Ticket machine at platform	x	x	x	x
Station Building	Station Building	x			
	Enclosed Pavilion		x	x	
	Café	x	x	x	
	WC	x			
	Lift	x	x		
Car Park	Car Park reconfiguration	x	x	x	
	Public realm improvements	x	x	x	x
	Mobile catering provision				x
Operational Telecommunication systems	Audio Visual Management Systems (CCTV)	x	x	x	x
	Customer Information system	x	x	x	x

6.3. Procurement Strategy

Within the Strategic Outline Business Case, the procurement strategy should present outline details of procurement/purchasing options which will be subject to further analysis at the OBC stage. As such, work is ongoing to explore the procurement routes for each scheme components outlined in the table above.

WMRE will decide whether it contracts directly for the design and/or construction works, or whether it contracts a third party to procure works on behalf of the Council, for example Network Rail. This will be decided on agreement of a preferred scheme option, and as such both procurement processes are discussed below. It is likely that a mixture of contracts will be formed, potentially to allow Network Rail, as owner and manager of the rail infrastructure, to procure aspects of the scheme that will directly affect rail infrastructure or operation of the network, whilst WMRE focuses on non-rail operational areas. This will ensure that the procurement processes used will be of suitable standard for both Network Rail and WMRE.

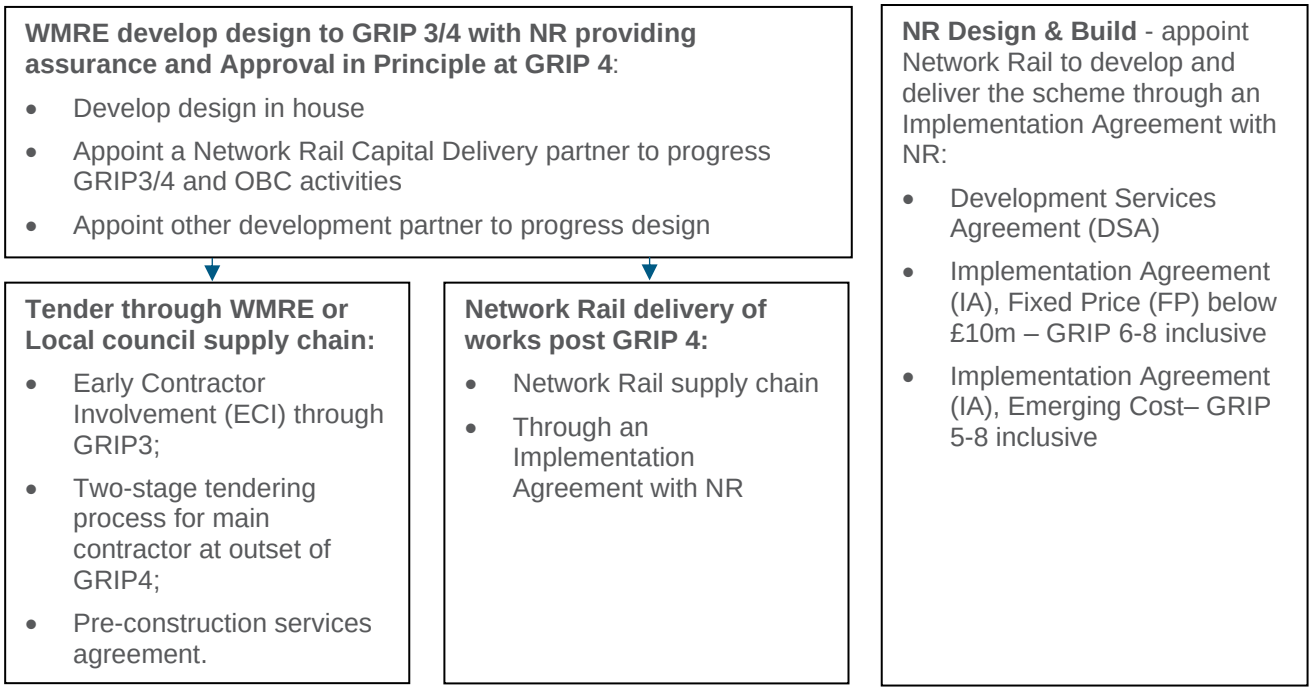
The procurement strategy will be developed in line with Network Rail's commercial guidance on undertaking railway projects and further government procurement policies, in addition to WMRE standard procurement process.

The outline procurement strategy for the four key components, Platforms, Station Building, Car Park and Operational Telecommunication systems, are discussed in further detail below. The information provided within the SOBC Commercial Case is suitable for all four shortlisted options and will be subsequently expanded and defined in further detail at the OBC stage when a preferred option has been confirmed.

6.3.1. Platform components

Platform components make up a key section of the scheme under all four shortlisted options and include the provision to extend the width/length of the platforms and new shelters/canopies for passengers. Potential procurement routes are set out in Figure 6-1 below. Further consideration of the benefits/disbenefits of these routes will be taken at the next stages of business case development.

Figure 6-1 – Procurement routes



6.3.2. Station building components

The Station Building components will follow a similar procurement strategy to the platform components for the delivery of the physical infrastructure, including the Station Building or enclosed Pavilion. At OBC stage, further consideration will be taken to assess the implication of the procurement processes on the operation and maintenance of the Café, WC and station building.

6.3.3. Car park components

As the car park is owned by the Council, the procurement for the delivery and implementation will follow Staffordshire's legislature procurement framework processes that are already in place and may be through a pre-procured panel route or an open/ restricted tender route. At the next stages of business case development, further consideration of the benefits/disbenefits of both routes will be taken

6.3.4. Operational telecommunication systems components:

Similarly, to the Car Park components, the Operational Telecommunication systems components will likely be procured through the council supply chain and following the Staffordshire's legislature procurement framework processes that are already in place.

6.3.5. Conclusion

The majority of outputs relate to or interface with the operational railway. As such the procurement route for much of the scheme would be aligned to Network Rail's processes, most likely a Design & Build route via existing supply chains which offers a ready-made and competitive route to market with a track record of delivering similar station works. The pros and cons of the available procurement routes will be assessed in detail at the next stages of business case development.

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Item No. 14.107

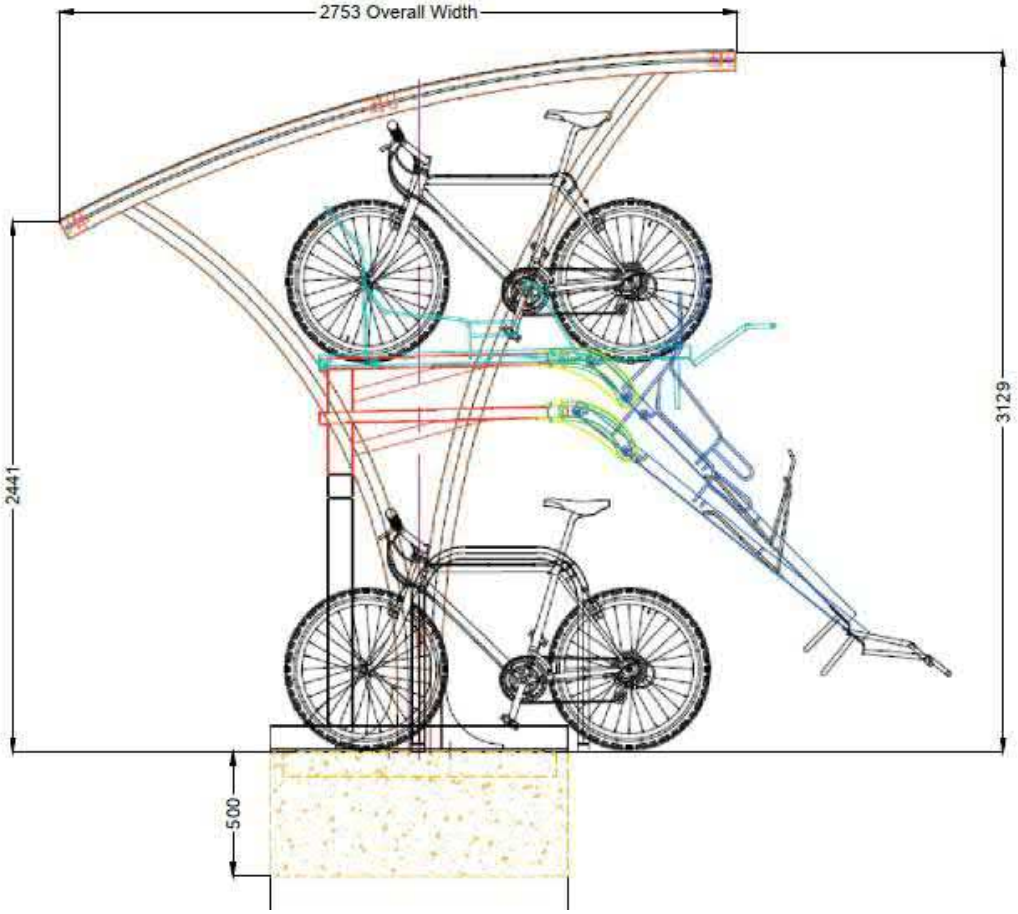
Appendix 2

Example of the wayfinding monolith

Item No. 14.108

Appendix 3

Example of the Apollo 2 tier cycle shelter



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Appendix 4

Murals installed at Platform level

Platform 1 -below

Platform 2 - below

Entrances to walkways below