Improving Accessibility at Insch Station

Executive Summary

Nestrans

Project number: 60599819

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Introduction

Accessibility improvements at Insch Station – which sits on the Aberdeen to Inverness line approximately 27 miles northwest of Aberdeen, at the southern outskirts of the village – have been a longstanding issue of concern amongst local residents and Elected Members in North East Scotland.

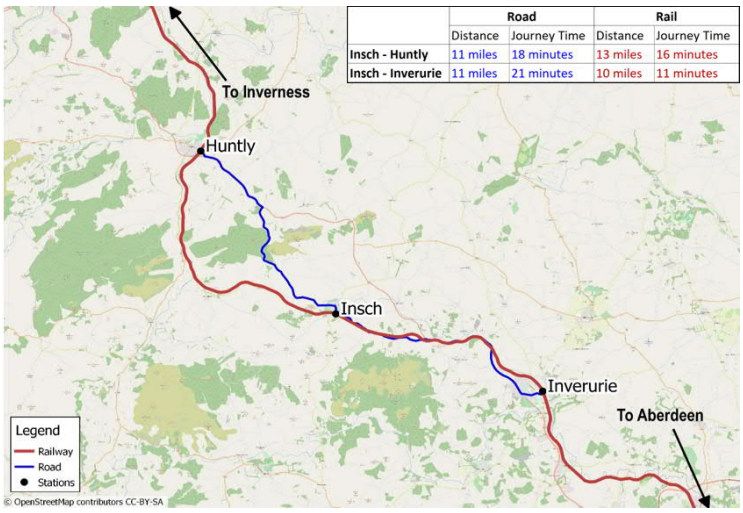

Figure 1: Insch Station Context Plan

Platform 2 is accessible from the main road (B9002) and the station's car park via a short flight of steps or ramps. Platform 1 is only accessible from Platform 2 via a stepped overbridge. Insch is the only station in the North East of Scotland where both platforms are not accessible to all users, making it a priority for improvement from a regional perspective. Currently, passengers with mobility issues have the option to arrange a taxi in advance with ScotRail to transfer to the next closest stations of Inverurie (~21 minute drive) or Huntly (~18 minute drive) for part of their journey.

Problems & Opportunities Analysis

The key problems, issues, opportunities and constraints in the study area were identified based on a review socio-economic conditions in the study area, key transport and travel trends at Insch Station, a review of accessibility at Insch relative to other stations across Scotland, the environmental and planning context and the findings from public and stakeholder engagement activities. The analysis was supported by detailed on-site review including a site accessibility audit, video surveys of pedestrian behaviour in and around the station and the results from an online public survey. A summary of the key issues considered in making the Case for Change for improvements at Insch Station are presented below.

The Policy Context: equal access for all

Improvements sought through the Accessibility at Insch study strongly align with national, regional, and local strategies, as well as Inclusive Access Strategies and guidance that has emerged from the Equality Act 2010.

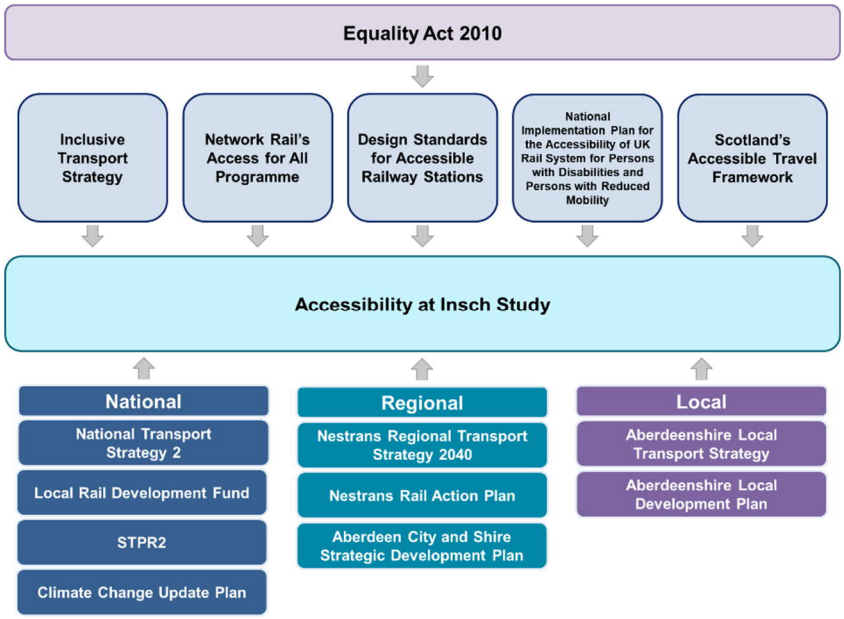

Figure 2: Policy Context

The National Transport Strategy (NTS2), published in February 2020, specifically highlights the need for an inclusive transport system that contributes to a fairer Scotland and includes a specific priority to reduce inequality. Under this priority includes outcomes around developing a transport system that "will provide fair access to services we need" and "will be easy to use for all". Expanding on this, the STPR2

Phase 1 Recommendations published in February 2021 recognise the importance of improving the accessibility of Scotland's rail stations with "Project 12: Infrastructure to provide access for all at rail stations" one of 20 interventions promoted in the report. This option is promoted due to its benefits in terms of reducing inequalities, encouraging modal shift – in line with recent Climate Change Update Plan which sets out the Scottish Government's target to reduce car kilometres by 20% by 2030 – and providing increased access to opportunities for all. Encouraging modal shift has become increasingly important throughout the course of completing this study, with rail travel only permitted for essential purposes throughout the majority of 2020 and so far in 2021 due to the Covid-19 pandemic. To support the green recovery from the pandemic, it will be essential to encourage people back onto public transport and improving the accessibility of rail travel can increase the desirability of this mode.

A consistent theme within the reviewed policy position is the increased focus on protecting people from discrimination in wider society; an issue that the delivery of access improvements at Insch Station would support.

The Socio-Economic Context: supporting rural population accessibility

A common message during engagement activities undertaken was that Insch Station is central to the attractiveness of the village, with data showing that there is a high propensity within Insch to travel to work by train (over 6% compared to 1% for Aberdeenshire and 4% for Scotland). However, current access issues at the station prevent large sections of the population from using the station. Socio-economic data suggests that compared to regional and national averages, there are higher proportions of very young (0-4 years) and older people (65+ years) residing in the village; this points to Insch being attractive to older residents, including those of retirement age, as well as young families; both groups which may have a higher propensity for inclusive physical infrastructure at the station. This could mean that there may be a greater need for accessibility improvements at Insch Station to make rail a more attractive alternative for young families with prams/buggies and a more viable mode of transport for older people who are more likely to experience problems with mobility. A decline in bus services in recent years also compounds the need for improved accessibility at the station.

The Transport Context: the uniqueness of Insch Station

Insch Station experienced a steady increase in passengers from 2004/05 (~62,000), reaching a peak of ~122,000 in 2014/15. Since this time, numbers have fallen, which is likely to reflect the challenges faced by the oil and gas industry since 2014 as well as A2I improvement works which have caused disruption on the line in recent times. A further decline is anticipated for 2020/21 associated with the impacts of the Covid-19 pandemic and subsequent travel restrictions.

During the course of completing this study, the Covid-19 pandemic has led to significant changes in people's travel behaviours and introduced uncertainty around future travel patterns including future attitudes to travel. In the context of Insch, it is important to recognise that while future use of the rail network across Scotland in terms of overall demand remains uncertain, the accessibility problems at Insch Station for those with mobility impairments will remain regardless of future travel patterns, and aspirations to build back better should look to encourage more people onto public transport, which accessibility improvements can support.

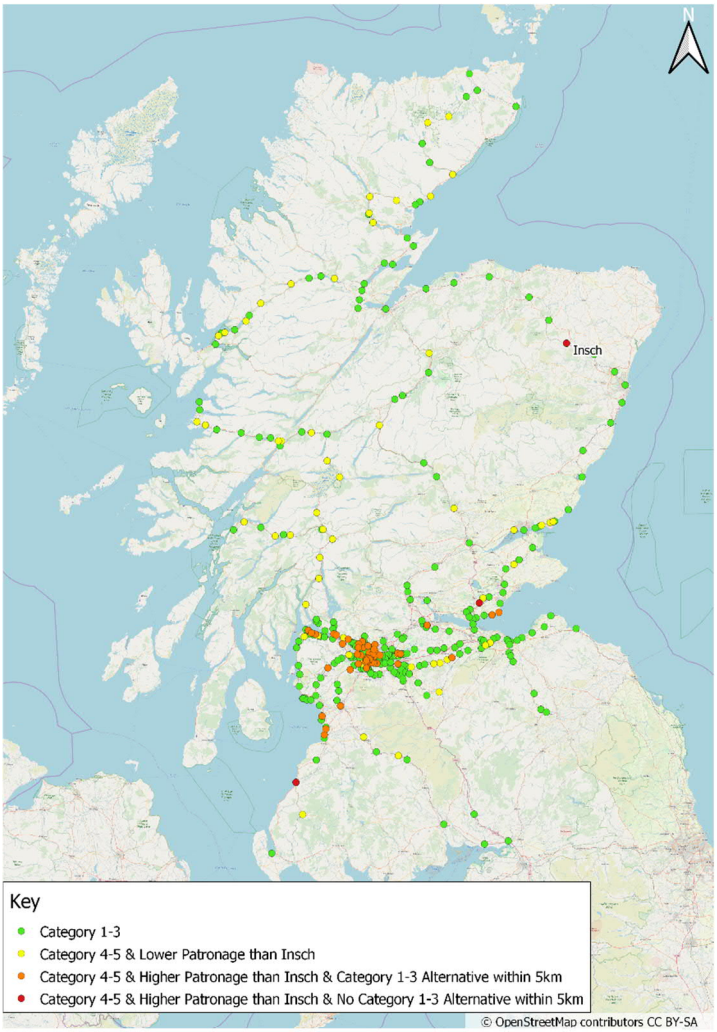

Figure 3: Rail Station Accessibility across Scotland

To understand how the accessibility of Insch Station compares to other stations across the region and country, a review was undertaken to categorise each of Scotland's stations according to their accessibility level (1=Fully accessible, 2=Partially accessible (drop-off by car); 3=Partially accessible (via footpath); 4=Inaccessible; and 5=Fully Inaccessible). Based on this assessment, Insch Station was identified as a Category 4 (inaccessible) station.

From a regional perspective, Insch is considered to be the priority for accessibility improvements as it is the only station in the North East of Scotland that is not at least partially accessible.

At a national level, of Scotland's 359 stations, 111 (31%) fell within Category 4 or 5. 54 stations (15%) fell within Category 4 or 5 and were found to have patronage greater than Insch[1] but only two of these stations (1%) had higher patronage than Insch and did not have an alternative station within 5km that was at least partially accessible. However, in contrast to Insch, both of these stations have a fully accessible Category 1 station within 16km, meaning that passengers with increased mobility needs can complete a round trip using an alternative station. This is contrary to the nearest stations to Insch – Huntly and Inverurie (both 18km by road from Insch) – which fall within Categories 2 and 3 respectively, with the nearest fully accessible station to Insch located at Dyce, some 38km away by road. The review therefore confirmed that Insch is one of the least accessible stations in Scotland.

Stakeholder Engagement: united support to address an issue of longstanding concern

An extensive public and stakeholder engagement exercise was undertaken to understand the transport-related problems and opportunities associated with Insch Station. At a stakeholder level, the study is being overseen by a Project Working Group comprising Nestrans, Aberdeenshire Council, Transport Scotland, Network Rail and ScotRail who have provided input at key points. Engagement was also undertaken with the Elected Members, the British Transport Police, Mobility and Access Committee for Scotland, local taxi operators, the Central Aberdeenshire Access Panel and Bennachie Community Council, all of whom expressed their support and willingness for measures to improve accessibility at the station. A site accessibility audit undertaken with members of the Access Panel provided a particularly insightful review of the problems with access at the station for those with mobility impairments.

Engagement with the public was undertaken through the following sources:

- a public consultation event at Insch Station in October 2019, attended by approximately 40 people who provided their experiences of using Insch Station. A number of attendees were local residents who experienced mobility conditions that meant they were currently unable to access the station;
- an online survey conducted between November and December 2019 which was issued via maildrop to around 5,000 homes in the Insch Station catchment and promoted using social media. The online survey was undertaken to provide more detailed information around the number of people impacted by the current accessibility arrangement at Insch Station, the reasons for the infrequent use of the alternative travel arrangements provided by ScotRail and the number of people that would use Insch Station more frequently if accessibility improvements were made. A total of 438 responses were received.

Responses to the survey confirmed that the current accessibility arrangement is a barrier to station use, with over half of respondents (58%) stating that they were affected by the existing access arrangements at Insch Station in some way. Reasons for being impacted were varied and not confined to physical mobility impairments. Other reasons included having a friend or family member with a mobility impairment, difficulty carrying luggage or other items across the footbridge, medical conditions not classed as mobility issues, concerns about slippery and uneven treads on the footbridge stairs, and difficulty accessing the platform when the Level Crossing barrier is closed. 118 respondents agreed that they do not consider rail to be a viable option due to their access requirements and disagreed that journeys are easy to undertake by train.

The overwhelming majority of respondents to the survey (75%) were unaware that ScotRail offered alternative travel arrangements for those to whom the station is inaccessible. Supplementary to the online survey, consultation with Aberdeenshire Council's Taxi Licensing team indicated within the Inverurie, Insch and Huntly area, there are 14 taxi operators and 26 vehicles, of which only 4 are wheelchair accessible. It was also commented that with many taxis used for school transport in rural areas, it may be difficult for passengers to book a taxi at short notice during

[1] Based on Estimates of Station Usage from 2017-18, Office of Rail and Road

certain times of the day, particularly if an accessible taxi is required. Consultation with ScotRail has suggested that these alternative arrangements are relied upon relatively infrequently (less than ten times per year); as confirmed by the online survey results, this may be because few people are aware of the provision but also because such a service is not seen to be as convenient or comfortable with numerous members of the public commenting that it would be more convenient for them to use their own car or get a lift for their full journey rather than interchange via taxi at their nearest accessible station.

The online survey also asked respondents for their views on potential improvement options, with high numbers stating that they would use Insch Station more frequently in the future if access improvements were delivered. For example, 188 respondents said that they would use the station more frequently if lifts were implemented with similarly high numbers obtained for other improvements e.g. footway to Platform 1 and ramped footbridge options. These findings highlight the potential for greater usage of Insch Station as a result of accessibility improvements.

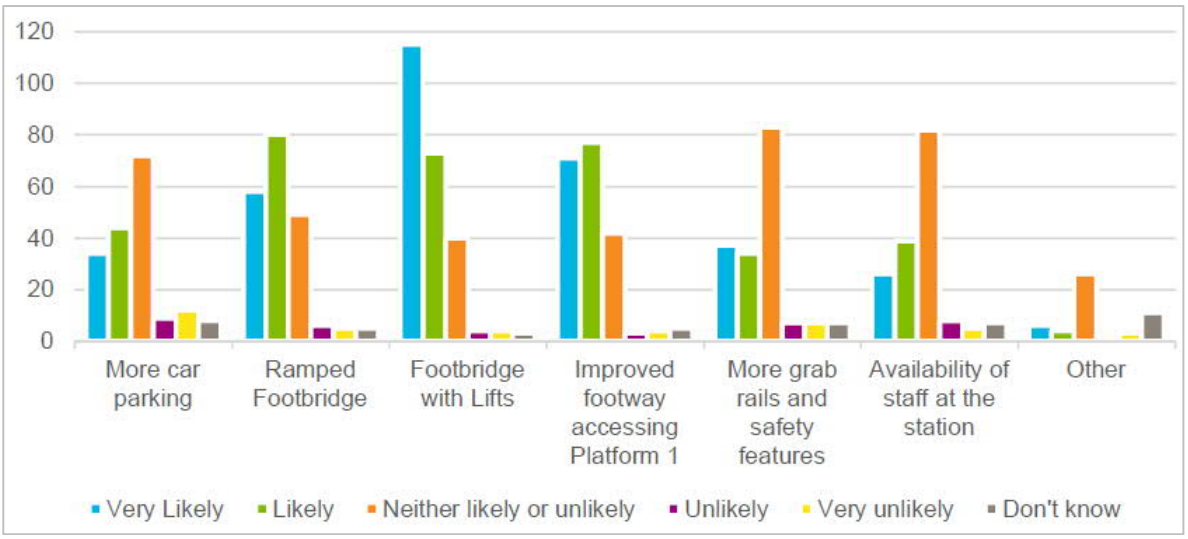

Figure 4: Use of Insch Station if accessibility improvements were to be implemented

As part of the survey, respondents were provided the opportunity to provide any other feedback in relation to travel at Insch Station. Overall, the strength of feeling regarding accessibility issues at the station was emphasised, with many highlighting the unacceptability of the existing situation in terms of equality, the isolating impacts for those unable to drive and the clear desire to use the station if accessibility improvements were made.

Figure 5: Online Survey Feedback

Transport Planning Objectives

In line with Scottish Transport Appraisal Guidance (STAG), objective setting for this study was driven by an understanding of the evidence-based problems and opportunities at Insch Station. This evidence, focussed on the particular problem or barrier associated with accessing the rail network for those with mobility impairments at Insch Station, drove the development of a single Transport Planning Objective (TPO) for the study, as follows.

- **TPO1:** To improve physical accessibility at Insch Station to enable increased travel opportunities for all users, including those with mobility impairments, the ageing population and those with young children.

Option Development and Appraisal

Option Generation

In STAG, all generated options must be appraised against a Do-Minimum option. This considers the impacts on the transport network if no action is taken i.e. if no 'Do-Something' options are implemented. For this project, the following transport commitment has policy and funding approval and therefore constitutes part of the Do-Minimum scenario:

- Refurbishment works of the existing footbridge which are planned to take place in 2023/24 (part of Control Period 6) involving repair, re-painting, and tread and deck replacement.

Other improvements taken into account include the extension of the station's two platforms to support the introduction of longer High-Speed Trains, completed during 2019, and the A2I Phase 1 Improvements, including increased reliability of service (although it is to be noted that Insch Station does not benefit from additional services).

To address the identified TPO, a range of options were generated based on interventions that have a long history in the study area and have been considered through previous work, as well as interventions identified through discussions with stakeholders and on-site review. The following options were generated, with each offering a different level of accessibility:

- Footpath options, comprising a new footpath from the station to the rear of Platform 1 via the B9002 and private land south of the station, to enable step-free access to Platform 1.
- An underpass option to provide a step-free platform-to-platform access under the railway line.
- Ramped footbridge and footbridge with lift options to facilitate step-free access between Platforms 1 and 2.
- Car Park options to enable people with mobility impairments to drive, or be picked-up/dropped-off, via Platform 1.

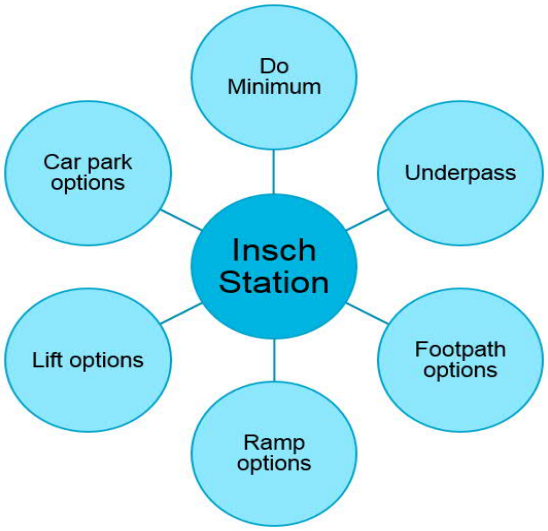

Figure 6: Potential Improvement Options

Option Sifting

A sifting exercise was undertaken based on a high-level assessment of each option's performance against the study TPO and deliverability criteria in order to identify those options suitable for taking forward to Preliminary Appraisal. Findings from the sifting exercise are summarised in Table 1, using the key presented below.

	Option would be expected to have a positive impact against the TPO / Implementability criteria
	Option would be expected to have negligible impact against the TPO / Implementability criteria
	Option would be expected to have negative impact against the TPO / Implementability criteria

Table 1: Option Sifting

	Option	TPO1	Feasibility	Affordability	Acceptability	Progress?
0	Do-Minimum					Yes
Do-Minimum used as the basis to compare other options.						
1a	Footpath to south of Platform 1 with footpath on south side of B9002					Yes
This option would support delivery of the TPO by facilitating pedestrian access to Platform 1 and is likely to be the most publicly acceptable of the alternative footpath options due to the directness of the route. Feasibility and cost issues associated with potential impacts of a footpath on the south side of the B9002 will require further consideration.						
1b	Footpath to south of Platform 1 with footpath on north side of B9002					No
While this option has potentially less deliverability constraints compared to 1a, it would involve people with mobility impairments having to cross the B9002 twice, and therefore does not fully support the TPO for accessibility improvements and is unlikely to be well-used/publicly supported.						
1c	Footpath via residential unit with footpath on south side of B9002					No
While this option could support delivery of the TPO by facilitating pedestrian access to Platform 1, there are significant concerns regarding deliverability and this option could also encounter public acceptability issues.						
2	Underpass					No
While this option could support delivery of the TPO by facilitating pedestrian access to Platform 1, there are significant concerns regarding constructability, feasibility and affordability. This option could also encounter public acceptability issues, although it is possible that concerns regarding personal safety and security may be partially mitigated by CCTV installation.						
3	Footbridge with ramps					Yes
There are variations with this option, including removal of the existing overbridge and retaining of the existing overbridge. This option would contribute positively to delivering the TPO by facilitating access to Platform 1 and is considered feasible, although construction costs are likely to be high. The option could encounter acceptability issues associated with a substantial loss of station car parking and visual impact. The existing footbridge is non-compliant with modern standards and would require considerable upgrade works if the line is to be electrified in the future. Costs are also likely to be higher if the existing overbridge is to be retained due to maintenance costs. However, from an environmental and planning perspective, retaining of the existing bridge is more likely to be feasible.						
4	Footbridge with lifts					Yes
There are variations with this option, including removal of the existing overbridge and retaining of the existing overbridge. This option would contribute positively to delivering the TPO by facilitating access to Platform 1 and is considered feasible, although construction costs are likely to be high. The option would likely be publicly supported - there could be concerns around visual impact although it is expected that the visual impact of ramps would be greater. The existing footbridge is non-compliant with modern standards and would require considerable upgrade works if the line is to be electrified in the future. Costs are also likely to be higher if the existing overbridge is to be retained due to maintenance costs. However, from an environmental and planning perspective, retaining of the existing bridge is more likely to be feasible.						
5a	New car park south of Platform 1					Yes
This option could positively contribute to delivering the TPO by facilitating a drop-off opportunity to Platform 1, similar to the situation at other stations in the North East. Due to the requirement of third party land to deliver this option, feasibility is unknown, while there may also be public acceptability issues due to wider village impacts of developing a car park to the south of station.						
5b	New car park south of Platform 1 with footpath through field & along the south side of the B9002					Yes
This option could positively contribute to delivering the TPO by providing a pedestrian access to the station in addition to a drop-off opportunity to Platform 1. Due to the requirement of third party land to deliver this option, as well as potential impacts on the Level Crossing, feasibility is unknown, while there may also be public acceptability issues due to wider village impacts of developing a car park to the south of station.						

Preliminary Appraisal

The options taken forward to Preliminary Appraisal were subject to qualitative appraisal against the study TPO and STAG Criteria, using the seven-point scale in line with STAG. Feasibility and Public Acceptability were assessed on the extent of risk (low, medium, and high risk); with aspects of Affordability considered alongside the development of option cost estimates as part of the Detailed Appraisal. The findings from the Preliminary Appraisal of options are presented in the table below.

Table 2: Preliminary Appraisal Findings

Option	TPOs	STAG Criteria					Implementability Risk Rating		
	TPO1	Environment	Safety	Economy	Integration	Accessibility & Social Inclusion	Feasibility	Affordability	Public Acceptability
Do-Minimum	-	-	-	-	-	-	-		-
Option 1a – Footpath	✓	✖	✖	-	✓	✓	High		Med
Option 3 – Footbridge with Ramps	✓✓	✖✖	-	-	✓	✓✓	Med		Low
Option 4 – Footbridge with Lifts	✓✓✓	✖	-	-	✓✓	✓✓✓	Med		Low
Option 5a – New Car Park	-	✖	✖	-	✓	✓	Med		Low
Option 5b – New Car Park + Footpath	✓✓	✖	✖✖	-	✓	✓✓	High		Med

Key (impact vs criteria):

✖✖✖	✖✖	✖	-	✓	✓✓	✓✓✓
Major negative impact	Moderate negative impact	Minor negative impact	No benefit or impact	Minor beneficial impact	Moderate beneficial impact	Major beneficial impact

The appraisal findings resulted in the progression of four options to the Detailed Appraisal stage:

- Option 1a: Footpath through field and along south side of the B9002;
- Option 3: Footbridge with ramps;
- Option 4: Footbridge with lifts; and
- Option 5b: New car park south of Platform 1 with footpath through field and along the south side of the B9002.

Based on the findings from the Preliminary Appraisal, it was recommended that Option 5a for a new car park be rejected from further consideration. This option was not considered to support the TPO for the study as it would only provide a benefit to those users who could be dropped off and picked up at the station. It would not provide benefits to those with increased mobility needs who drive to the station as there would remain no opportunity for step-free platform-to-platform access.

Detailed Appraisal

Those options taken forward from the Preliminary Appraisal were defined further, as set out in Table 3 below, for the purposes of further option assessment through the Detailed Appraisal stage. This considered the performance of each option against the TPO; the five STAG Criteria; Cost to Government; and Risks and Uncertainty, including the potential Feasibility, Affordability and Public Acceptability risks associated with the delivery of each option.

Table 3: Options Taken Forward to Detailed Appraisal

Option	Description
1a - Footpath	Option would allow step-free access to Platform 1 by non-motorised users. There is an approximate 250m travel distance between platforms with this option and it would require navigation of the existing Level Crossing.
3 – Footbridge with ramps	Option would allow step-free access to Platform 1 by non-motorised users via a footbridge with ramps. In order to ensure appropriate gradients, this would involve an approximate 250m travel distance between platforms.
4 – Footbridge with lifts	Option would allow step-free access to Platform 1 by non-motorised users via a footbridge with lifts.
5b – New car park + footpath	Option would allow step-free access to Platform 1 by motorised and non-motorised users. This would require an access road to be constructed from the B992 to an approximate 40 space car park. There is an approximate 250m travel distance and navigation of the existing Level Crossing is required for access between the platforms on foot with this option.

An overview plan of the options is presented in Figure 7 below.

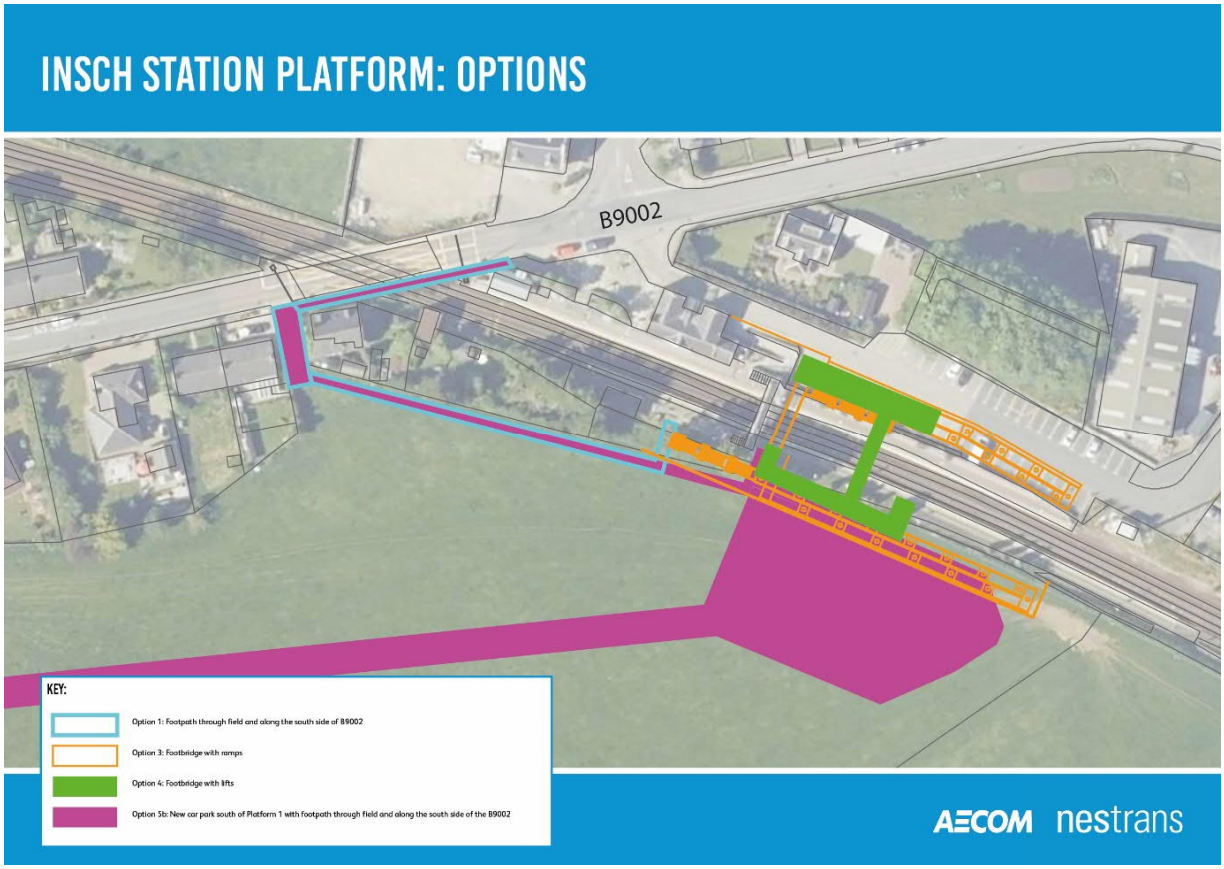

Figure 7: Options Overview Plan

Appraisal Findings

The Detailed Appraisal findings are summarised for each of the options as follows:

Transport Planning Objective

The appraisal found that Option 4 (Footbridge with Lifts) performs most positively against the TPO for the study, as this option would provide the easiest route available and shortest distance practical for passengers to travel between platforms; in line with the Design Guidance for Accessible Railway Stations. Option 4 is considered to be the only option that fully supports the TPO, providing a step-free platform-to-platform access solution that would enable increased travel opportunities for all users at the station.

Whilst the other options provide a benefit relative to the Do-Minimum situation, the walk distance involved in crossing between platforms for Option 1a (Footpath), Option 3 (Footbridge with Ramps) and Option 5b (New Car Park + Footpath) is approximately 250m and these options would not fully support the TPO given that this distance would not be manageable for all users. In addition, Option 1a and Option 5b require users to navigate the existing Level Crossing, which is an uneven surface that can be challenging to negotiate for those with mobility impairments, potentially limiting users of this route further.

Environment

Against the environment criteria of STAG, Option 1a, Option 3 and Option 4 are anticipated to generate limited impacts against the majority of the environmental sub-criteria, with the exception of biodiversity and habitats; landscape and visual and cultural heritage. All options are considered to generate a minor negative impact against biodiversity and habitats due to a loss of trees and scrub, which can create fragmentation of habitats and barriers to movement for a number of species, including protected species such as badgers and bats. Given the listed status of the station, the principal concerns from an environmental perspective are in relation to landscape and visual and cultural heritage impacts, particularly for Option 3 and Option 4.

Option 3 and Option 4 would be anticipated to have a moderate negative impact in terms of landscape and visual effects as a new footbridge structure with ramps or lifts is likely to be at odds with the balance of existing townscape features in view. The use of traditional materials that are more sympathetic to the existing character of the station could be used to mitigate visual amenity impacts of these options, although the scale of each of the proposed structures would still likely impact on the surrounding townscape. The level of visual intrusion created by Option 4 would be expected to be lower than Option 3 due to the reduced footprint of the lifts option.

Option 3 and Option 4 would be anticipated to have a major negative impact in terms of cultural heritage effects. Throughout this study, it has been assumed that the existing footbridge would require removal for a number of reasons including its poor state of repair, the need for ongoing maintenance and the potential for future electrification of the line. However, removing the existing footbridge and introducing a new structure could generate significant adverse impacts on the character, integrity and setting of the remaining listed structures at the station. While further work would be required with Aberdeenshire Council planners to discuss mitigation should this option be progressed, it has previously been noted that impacts could be mitigated to some extent through careful design and siting of a new structure away from the existing footbridge.

Safety

Against the safety criteria, Option 3 and Option 4 perform more positively than Option 1a and Option 5b. There are safety concerns associated with Option 1a and Option 5b in terms of accidents due to increased interaction between pedestrians and vehicles on the B9002 and at the driveway where the path to access Platform 1 would be routed; this concern would be more pronounced for Option 5b as this option would be expected to increase the numbers of vehicles passing through the Level Crossing. There are also minor security concerns associated with these options due to the secluded nature of the path behind the station which could cause incidents of anti-social behaviour, though this could be mitigated through lighting and CCTV provision.

Option 3 and Option 4 are anticipated to have limited impacts in terms of security and could generate a small positive impact in terms of accidents by eliminating a trip hazard for those who currently experience difficulties navigating the existing stepped footbridge. Whilst there may be some perceived safety concerns associated with Option 4 related to possible breakdown of the lift and in relation to anti-social behaviour, discussions with stakeholders have confirmed that, assuming lifts would be of a similar standard to those introduced at stations elsewhere on the Aberdeen to Inverness rail line, it would be fitted with a descend button that allows the lift to

return to ground level in the event of breakdown. It was also noted that lift breakdowns happen infrequently at other stations on the route and CCTV means that lift misuse would be unlikely to be an issue.

Economy

Due to the nature of improvements being considered through this study, it was not possible to fully assess the economy criteria of STAG from a traditional Transport Economic Efficiency or Wider Economic Impacts perspective. As such, the assessment against the economy criteria considered the likely types of benefits that could be generated, drawing on the findings from a literature review of the economic impacts of accessibility improvements elsewhere in the UK, as well as a high level exercise to understand the potential lost passenger revenue associated with the current accessibility arrangement at Insch Station.

The literature review highlighted a range of economic benefits that cannot be captured under a traditional benefit cost ratio approach, including the value of improved inclusiveness that the general population place on such interventions and the value placed on improvements by people who may not benefit now but who may benefit in future if their circumstances change (e.g. ageing, having children, becoming injured, or developing a long-term health condition or disability). The literature review additionally highlighted that accessibility improvements could open up employment opportunities for people with work-limiting disabilities.

To provide an estimate of the number of trips that are potentially lost to the rail network as a result of the current accessibility limitations at Insch Station, results of the online survey undertaken between November and December 2019 were used, specifically considering those users who reported that they would use the station more often if accessibility was improved. This analysis found that accessibility improvements at the station could be expected to generate an additional 4,700 trips (entries and exits) annually at Insch Station, which could generate approximately £50,000 per annum in additional fare revenue. It should be noted that the survey data upon which the analysis was undertaken was completed in 2019 (i.e. pre-pandemic) and therefore, given the uncertainties around potential future levels of travel demand associated with travel behaviours and trends in a post-Covid-19 society, the results should be treated with caution.

In terms of the performance of options against the economy criteria, the high cost relative to the benefits that would be created in economic terms resulted in Option 1a, Option 3 and Option 5b being scored negatively against this criteria. Whilst Option 4 has the highest capital costs of all options under consideration, it is the only option that would provide a fully accessible station at Insch, which is considered to provide economic benefits in terms of value placed on this by the general population, in terms of option values whereby a number of respondents to the online survey indicated that the barriers to access at the station may impact on them in the future and in terms of the new users and diverted users from other modes who could use the station if accessibility was no longer a barrier.

Integration

The options under consideration as part of this study are anticipated to have limited impacts in terms of transport integration and in terms of transport and land use integration. Against the policy integration criteria, all options would be considered to generate positive impacts by aligning with the NTS Priority of ‘Reducing Inequalities’ and other policy and legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in the Nestrans RTS 2040 and STPR2 Phase 1 Report. Given that Option 4 provides a fully accessible platform-to-platform solution, this option performs more positively than other options against the policy integration criteria.

Accessibility and Social Inclusion

All options perform strongly against the accessibility and social inclusion criteria, as physical accessibility improvements at the station will improve access to key services, including employment, education sites and healthcare facilities and all options are anticipated to reduce the disproportionate impact experienced by certain users groups, although to varying extents.

Option 4 is anticipated to perform the most strongly against this criteria as this option would be likely to improve access to local services for the most number of people and this option is anticipated to fully negate the disproportionate impact on affected groups meaning that there would be easy access between platforms regardless of age, gender or physical disability and as a result, would allow excluded groups to participate more fully in society through increased opportunities that rail travel from Insch Station would bring.

Whilst Option 1a, Option 3 and Option 5b are anticipated to reduce the disproportionate impact experienced by some user groups (e.g. people travelling with a pram), it is still considered that other groups of people would continue to be disproportionately impacted by the accessibility arrangement, including older people, pregnant women and those with a physical disability due to the distance required to travel between platforms. Option 5b would provide an additional benefit for those able to get dropped off and picked up at the station, as this negates the need to cross between platforms on foot.

Feasibility

While all options are technically feasible, there are challenges for all options that would need to be overcome.

Option 1a and Option 5b would require changes to the Level Crossing Order as the existing Order does not include any provision for a public footpath. Amendments to the Level Crossing Order would require promotion by Network Rail, who have expressed significant concerns about the footpath element and therefore would be unlikely to support any changes to the Order. The footpath would additionally require changes to the Level Crossing equipment, potential removal of a wall and/or road realignment, and repositioning of the boundary wall which would likely impact on existing rail signalling. Private land to the south of Platform 1 would be required for delivery of these options, with Option 5b requiring the greatest land acquisition of all the options. Discussions with Aberdeenshire Council highlighted concerns relating to the access road junction associated with Option 5b, which would require further consideration through a Transport Statement or Transport Assessment to support any application for planning permission. Discussions would also be required to determine who would take ownership of the footpath and car park if either of these options were to progress. These issues are considered to present a major risk to the deliverability of Options 1a and 5b.

The principal considerations in terms of feasibility for Option 3 and Option 4 relate to the listed planning consent that would be required, both to implement a new structure and to remove the existing stepped overbridge (if decided to be the preferred way forward). Whilst there are environmental constraints that have been recognised, positive discussions have taken place with the local authority thus far and this should continue following selection of a preferred option. These options would also require land take from the existing car park, more significantly so in the case of Option 3, which is estimated to result in a loss of 23 spaces from the 44 space car park (whilst Option 4 is estimated to result in a loss of approximately 6 spaces). Option 3 and Option 4 would additionally require the purchase of private land to the south of Platform 1 and re-cabling from the existing footbridge to the new footbridge. These issues are considered to present a moderate risk to deliverability of Options 3 and 4.

Affordability

Informed by an engineering assessment and associated assumptions, an exercise was undertaken to develop an outline order of magnitude construction costs for each of the options under consideration, as presented in the table below. As shown, the total estimated costs include 64% optimism bias owing to the stage of this study.

Table 4: Estimated Scheme Costs

Ref	Summary	Option 1A	Option 3	Option 4	Option 5b
1	**Construction Works Cost**	**£154,000**	**£853,000**	**£959,000**	**£751,000**
2	Allowance for contractor's preliminaries @ 15%	£24,000	£128,000	£144,000	£113,000
3	Main contractors overheads & profit @ 5%	£9,000	£50,000	£56,000	£44,000
4	**Main contractor's on-costs subtotal**	**£33,000**	**£178,000**	**£200,000**	**£157,000**
5	**Construction Cost @ 4Q 2019**	**£187,000**	**£1,031,000**	**£1,159,000**	**£908,000**
6	Design Development & Contingency @ 20%	£38,000	£207,000	£232,000	£182,000
7	Optimism Bias @ 64%	£144,000	£793,000	£891,000	£698,000
8	**Est. Construction Cost at 4Q 2019 (excl. VAT)**	**£370,000**	**£2,040,000**	**£2,290,000**	**£1,790,000**

As shown, Option 4 is anticipated to be the highest cost option, although it is not significantly higher than Option 3 and Option 5b. Option 1a is anticipated to be the lowest cost option by a considerable margin (over five times lower than other options). However, there are a number of uncertainties regarding the associated changes required to the Level Crossing and the respective costs of these changes, which could increase costs based on both technical delivery and potential programme cost issues.

Operating and maintenance requirements include winterisation for all options, CCTV and lighting for the footpath and car park options, regular servicing of the lift and signing and lining for the car park. It is understood that winterisation would be subsumed into existing contracts as additional work when completing existing winterisation and other maintenance duties at Insch Station. Servicing of the lifts would be undertaken on a regular basis, with

ScotRail indicating that lift servicing would likely be subsumed into an existing maintenance contract for lifts elsewhere on the railway (e.g. at Dyce and Kintore Stations).

Public Acceptability

Engagement with the community indicated strong support for measures to improve accessibility at Insch Station and therefore all options would be likely to generate a level of support from the public. During engagement with the community, Option 4 emerged as the clear preferred intervention with many indicating that the footbridge with lifts option would be the only way to improve accessibility such that travel opportunities are increased for all users. Option 4 was the preferred option by 50% of respondents to the public survey, with 86% including this option within their top three priorities for improvement.

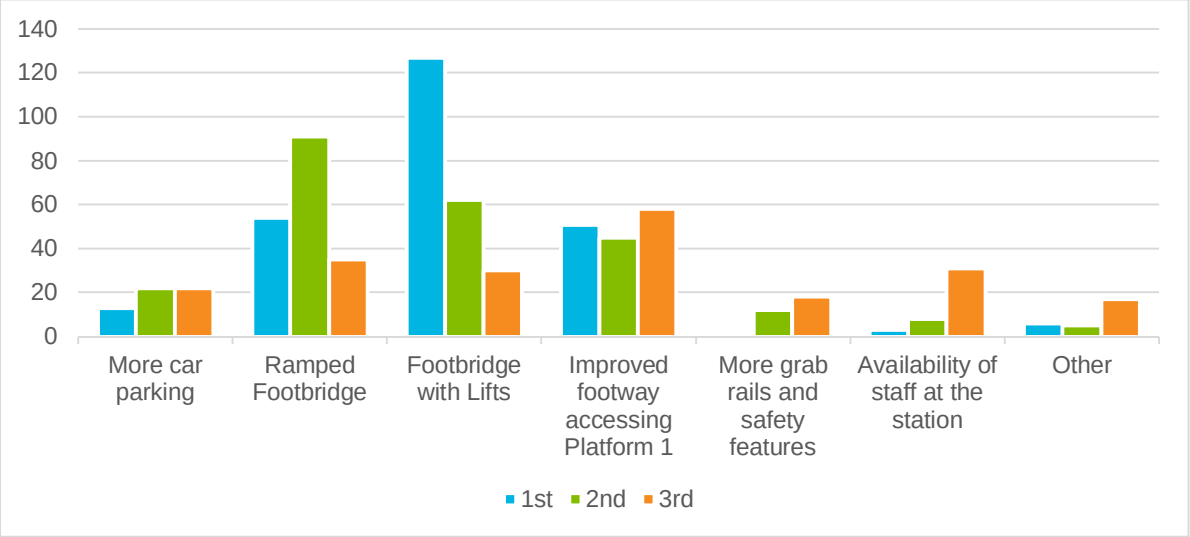

Figure 8: Potential Improvement Options (Prioritised)

A number of concerns were raised regarding Option 1a, including the travel distance that would be required between platforms, the difficulties of navigating a cobbled paving surface and the Level Crossing, potential anti-social behaviour associated with the secluded nature of the path to the south of the station, safety concerns relating to increased interaction between pedestrians and the Level Crossing and privacy concerns for properties located adjacent to the Level Crossing. These concerns are applicable in the case of Option 5b.

Option 3 generated concerns relating to the loss of car parking that would be required to accommodate the footbridge with ramps structure and the significant visual impact that the structure would cause.

Recommendations

Based on the results of the appraisal undertaken, it is recommended that Option 4 (Footbridge with Lifts) provides the greatest benefits and should be progressed for further design and development works.

This option has been assessed to be the only option that fully supports delivery of the study TPO by enabling increased travel opportunities for all users at the station. The option generally performs positively against the STAG criteria and is associated with reduced deliverability risks and uncertainties compared to the other options under consideration through this study. This option benefitted from strong community support and was the top ranked option amongst respondents to the online public survey, with 86% of respondents including this option within their top three priorities for improvement.

In progressing this option, further discussions should be undertaken with the Planning team at Aberdeenshire Council given the potential environmental impacts that have been identified, particularly in relation to potentially adverse impacts on the existing footbridge, meaning that any works would require listed planning consent.

While this option constitutes a high cost option in the context of this study, owing to its strong alignment with policy and the increasing priority being placed on reducing inequalities and improving accessibility for all to the rail network, opportunities should be sought to make the case for funding through appropriate channels.