Improving Accessibility at Insch Station

Detailed Options Appraisal

Nestrans

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1. Introduction

1.1 Purpose of this Report

This report presents the analysis and findings from the Detailed Appraisal Stage of the Accessibility at Insch Study. It documents the final stage of the appraisal in line with Scottish Transport Appraisal Guidance (STAG), providing an assessment of options identified at the Initial Appraisal: Case for Change stage and considered at Preliminary Appraisal stage as being worthy of more detailed assessment.

1.2 Background: Other Reports

The Initial Appraisal: Case for Change report was approved by Transport Scotland in February 2020. In line with STAG, this report focussed on identifying the transport related problems and opportunities at Insch Station and setting a Transport Planning Objective (TPO) to reflect the change sought to address these problems and opportunities, namely: ***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***. A range of options to address the identified problems and opportunities were then generated, assessed, and sifted so that only options worthy of further consideration were taken forward to the Preliminary Appraisal stage.

The Preliminary Options Appraisal report was approved by Transport Scotland in December 2020. This report documented the qualitative appraisal of the options taken forward from the Initial Appraisal stage. At the Preliminary Appraisal stage, options were assessed against the study TPO, the five STAG criteria and implementability criteria. This resulted in some options being rejected so that only options worthy of further detailed consideration were taken forward to the Detailed Options Appraisal stage.

The analysis and findings of the Initial Appraisal: Case for Change and Preliminary Options Appraisal are presented in the respective reports and not repeated in this report.

1.3 Options taken forward for Detailed Appraisal

Following the outcomes from the Preliminary Options Appraisal stage, the following options short-list were recommended for further assessment at Detailed Appraisal stage:

Table 1.1: Options Emerging from the Preliminary Options Appraisal Study

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

At Preliminary Appraisal stage, Option 5a – a new standalone car park to the south of Platform 1 – was rejected from further consideration. This was principally because it 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, and 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.

1.4 Covid-19

Since March 2020, the Covid-19 pandemic has led to a significant change in people's travel behaviours and introduced uncertainty around future travel patterns including future attitudes to travel. The Government-enforced lockdown has resulted in a shift to home working and a reduction in overall travel demand, particularly on public transport, including on the rail network. There is uncertainty as to whether some of the observed changes in travel patterns will be short-term or if they will result in a more structural change in how society operates.

In the context of this study, it is recognised that the existing accessibility arrangement could impact on fewer people if some of the trends observed during the Covid-19 pandemic persist. However, regardless of future travel patterns, the problems identified at Insch Station regarding access for those with increased mobility needs will remain.

It has been assumed for the purposes of this study that physical distancing measures associated with Covid-19 will not be required at the time of option implementation. In the event that physical distancing measures continue or are reintroduced in the future, this would impact on all of the options identified as part of the study and therefore this report does not include consideration of the ability to physical distance in terms of differentiating between options in the appraisal.

1.5 Report Structure

Following this introduction, the remainder of the report is structured as follows:

- Chapter 2 sets out the methodology that has been applied in carrying out the Detailed Options Appraisal;
- Chapter 3 presents the detailed appraisal of each option against the SMART (Specific, Measurable, Attainable, Relevant and Timed) Transport Planning Objective;
- Chapter 4 sets out the detailed appraisal of each option against the STAG criteria (environment, safety, economy, integration, and accessibility & social inclusion);
- Chapter 5 contains a detailed analysis of the public sector costs of each option;
- Chapter 6 documents analysis of the risks and uncertainties associated with each option, including the findings from a Quantified Risk Assessment Workshop, alongside an implementability appraisal covering feasibility, affordability and public acceptability criteria;
- Chapter 7 presents Option Summary Tables;
- Chapter 8 presents an indicative monitoring and evaluation process; and
- Chapter 9 provides a summary of the findings from the Detailed Options Appraisal process.

A number of appendices also support this report. Further detail of the options under consideration is provided in **Appendix A**. Detailed Appraisal Summary Tables (AST2s) for each option are contained within **Appendix B**. A draft Diversity Impact Assessment (DIA) has also been prepared in line with Network Rail guidance and can be viewed in **Appendix C**. **Appendix D** includes a note setting out the potential lost revenue associated with current access restrictions at Insch Station, which has been used to support the economic assessment detailed in the report. **Appendix E** set outs the list of assumptions and exclusions that have informed the option cost estimates Finally **Appendix F** presents the process to be followed if any changes require to be made to a Level Crossing Order.

2. Methodology

2.1 Introduction

The Detailed Options Appraisal stage of the Accessibility at Insch Station Study has been undertaken using STAG. The STAG process is split into four parts: Initial Appraisal: Case for Change; Preliminary Options Appraisal; Detailed Options Appraisal; and Post Appraisal.

Detailed Options Appraisal considers the performance of each option against the SMART TPO(s); five STAG criteria; Cost to Government; and Risks and Uncertainty, including the potential feasibility, affordability and public acceptability risks associated with delivery of each option.

2.2 Options developed for Detailed Appraisal

2.2.1 Do-Minimum

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. In line with STAG, the Do-Minimum 'comprises all schemes and proposals under construction or for which statutory powers exist and funding is available'. On this basis, the Do-Minimum for the Accessibility at Insch Station Study is defined as follows:

- Aberdeen to Inverness (A2I) Phase 1 Improvements, including increased reliability of service (although it is understood that Insch Station will not benefit from additional rail services); and
- Refurbishment works of the existing footbridge, which is planned to take place in 2023/24 (part of Control Period 6).

2.2.2 Option Refinement

In multi-modal appraisal studies, prior to embarking on the appraisal tasks, it is common to undertake a process of further option development and refinement to provide greater definition to the options. For this study, early input to the optioneering process by rail engineers has ensured that options have previously been developed to a level of detail suitable for the purposes of transport appraisal in line with STAG. Early engineering input to the option development process has also supported the preparation of costing and timescale information sufficient for this STAG study. However, additional work has been undertaken to improve the clarity and presentation of options. This has included the preparation of overhead visuals using CAD for all options, as presented in **Appendix A**.

For clarity, the options taken forward for assessment through the Detailed Appraisal are set out below and an overview plan is presented overleaf.

Table 2.1: 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 approx. 40 space[1] 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.

[1] It should be noted that this is an indicative number of spaces based on the footprint available. Further consideration would be required should this option be recommended for progression to the next stage of the study.

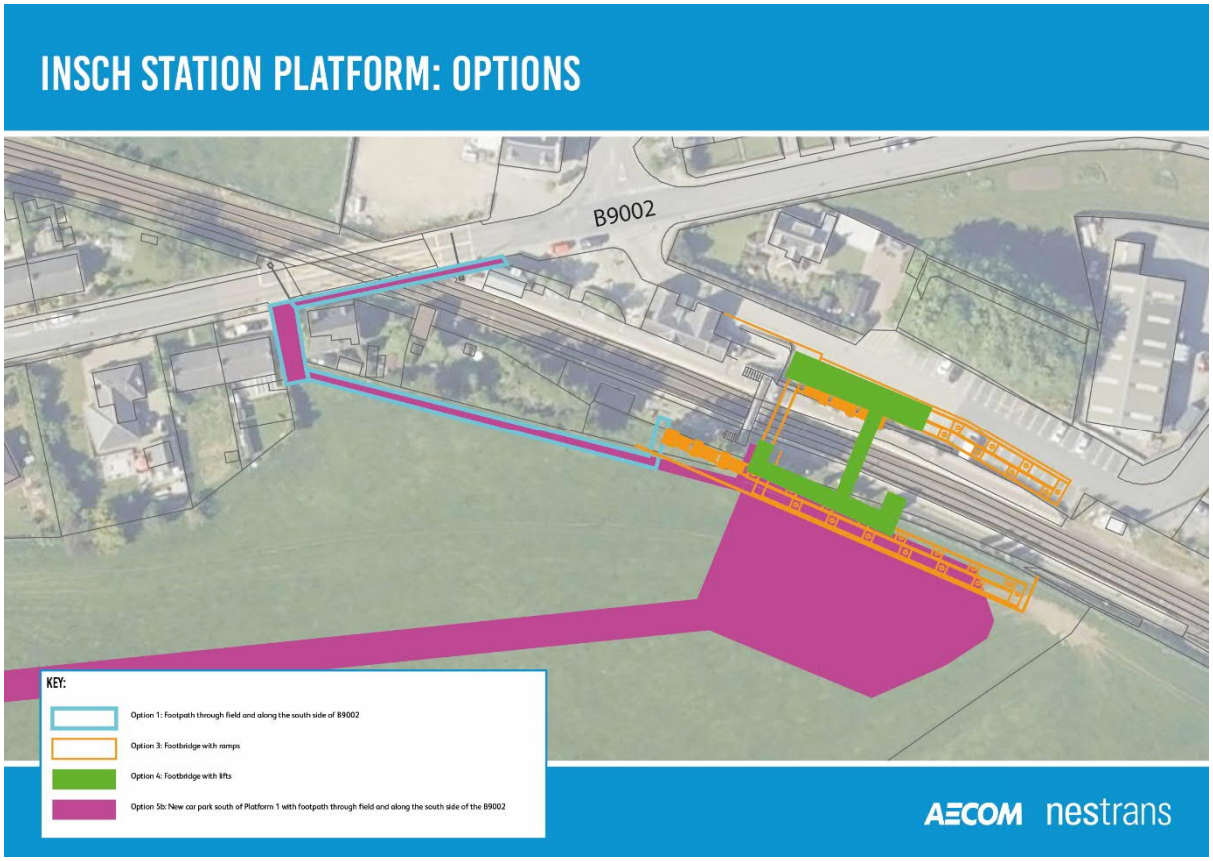


Figure 2.1: Overview Plan of Options

2.3 Transport Planning Objective(s)

TPOs play a central role in the appraisal process and provide a means to assess the performance of the identified options in terms of addressing the evidenced problems and opportunities at Insch Station.

At Initial Appraisal: Case for Change stage, a single TPO was developed to reflect the changes sought in the study area to address the evidenced problems. Following slight refinements from the Working Group, the following TPO was used for the purposes of appraising the identified options:

- 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.

In line with STAG, TPOs are to be kept under review throughout the process to allow for sharpening and refinement where appropriate. This TPO was developed with SMART (Specific, Measurable, Attainable, Relevant, Timed) principles in mind to ensure it can be made SMART before commencing with the Detailed Options Appraisal. In line with STAG, a process of SMARTening the TPO has been undertaken, as presented in **Section 3**.

2.4 STAG Criteria

The likely impacts of each of the identified options have been appraised against the five STAG criteria covering the Environment, Safety, Economy, Integration and Accessibility & Social Inclusion, and their related sub-criteria as shown below.

Table 2.2: STAG Criteria

STAG Criteria	Description
Environment	Indicates the environmental impact of an option against a number of environment sub-criteria, including: Noise and Vibration; Global Air Quality (CO_2); Local Air Quality particulates (PM_{10}) and nitrogen dioxide (NO_2); Water Quality, Drainage and Flood Defence; Geology; Biodiversity and Habitats; Landscape; Visual Amenity; Agriculture and Soils; Cultural Heritage; and Physical Fitness.

STAG Criteria	Description
Safety	Indicates the impact of an option against the safety sub-criteria of Accidents and Security.
Economy	Indicates the impact of an option against the economy sub-criteria of Transport Economic Efficiency and Wider Economic Impacts.
Integration	Indicates the impact of an option against the three sub-criteria of Transport Integration, Transport and Land Use-Integration, and Policy Integration.
Accessibility & Social Inclusion	Indicates the impact of an option against the two sub-criteria of Community Accessibility and Comparative Accessibility.

It is important to note that due to the nature of this study i.e. focussed on assessing the benefits of improved physical accessibility to the rail network for mobility impaired users, it is not possible to fully assess each of the STAG criteria to the extent traditionally undertaken on multi-modal transport appraisals using STAG, particularly the quantifiable appraisal aspects around the economic criterion. Detailed Appraisal, for instance, will typically involve the use of transport models to identify changes in demand generated by changes to the transport system which can then be converted into monetised benefits in terms of user time savings from quicker journey times, or accident and environmental savings associated with modal shift. The nature of improvements sought through this study mean that traditional transport user benefits are unlikely to be significant and cannot be quantified. However, where appropriate, consideration has been given to 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 current accessibility restrictions at Insch Station.

Further details on the adopted approach to the detailed appraisal of options through this study are presented in the respective sub-sections of **Section 4**.

2.5 Option Performance

In line with STAG, for appraisal findings which are qualitative/quantitative and cannot be monetised, a seven-point scale assessment has been undertaken to assess the performance of each option against the TPO(s) and STAG criteria, as shown in Table 2.3.

Table 2.3: STAG Guidance Seven-Point Scale

Impact	Description
Major beneficial impact (✓✓✓)	These are benefits or positive impacts which, depending on the scale of benefit or severity of impact, should be a principal consideration when assessing an option.
Moderate beneficial impact (✓✓)	The option is anticipated to have a moderate benefit or positive impact which, when taken in isolation may not determine the appraisal of an option but would form a key consideration when considered alongside other factors.
Minor beneficial impact (✓)	The option is anticipated to have a small benefit or positive impact. Small benefits or impacts are those which are worth noting but are not likely to contribute materially to determining whether an option is taken forward.
No benefit or impact (-)	The option is anticipated to have no or negligible benefit or negative impact.
Minor negative impact (×)	The option is anticipated to have a small negative impact. Small impacts are those which are worth noting but are not likely to contribute materially to determining whether an option is taken forward.
Moderate negative impact (××)	The option is anticipated to have a moderate negative impact which, when taken in isolation may not determine the appraisal of an option but would form a key consideration when considered alongside other factors.
Major negative impact (×××)	There are negative impacts which, depending on the severity of impact, should be a principal consideration when assessing an option.

2.6 Cost to Government

Cost to Government refers to all costs incurred by the public sector as a whole, net of any revenues. The total net cost consists of:

- Investment (capital) costs;
- Operating and maintenance costs;
- Grant/subsidy payments;
- Revenues; and
- Taxation impacts.

Informed by the engineering assessment and associated assumptions, a costing exercise has been undertaken to develop an outline order of magnitude construction costs for each of the options under consideration, as presented in **Section 5**. Traditionally, the net cost is then compared with the total monetised benefits as part of the TEE assessment; as set out earlier, given the nature of accessibility improvements sought at Insch Station, a more proportionate approach has been taken to the economic assessment of options in this study.

2.7 Risk and Uncertainty

All risks and uncertainties associated with an option need to be fully identified and accounted for in the appraisal process. As stated in the HM Treasury Green Book, in appraisals it is always likely there is some difference between what is expected and what actually happens. This is the consequence of biases unwittingly inherent in the appraisal process, and risks and uncertainties that materialise. As a result, it is important to identify and mitigate risks, and make allowances for Optimism Bias.

Risks and uncertainties identified for the options considered through this study are presented in **Section 6**.

3. TPO Appraisal

3.1 Introduction

In line with STAG, the TPO objective setting process for this study was driven by an understanding of the evidence-based problems and opportunities at Insch Station drawn from the policy review, data analysis and findings from stakeholder consultation. This evidence, which has been focussed on the particular problems and barriers associated with accessing the rail network for those with mobility impairments at Insch Station, has driven the development of a single TPO for the study, as follows:

- **TPO** – 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.

In developing the TPO, early consideration was given to the SMART criteria; that is the extent to which objectives are **Specific** (does the objective say in precise terms what is being sought), **Measurable** (does the objective say how achievement will be measured?), **Attainable** (can the objective be reached?), **Relevant** (is the objective a sensible indicator for the change which is sought?) and **Timed** (has the objective been associated with an agreed future point by which it will have been met?).

In line with STAG, TPOs should be kept under review and subject to refinement as the appraisal progresses and more detail comes forward. For this study, it is considered that the TPO remains valid, although to aid the future monitoring and evaluation of measures post-implementation, an exercise has been undertaken to further SMARTen the TPO, as presented in Table 3.1 below.

Table 3.1: SMART TPO Setting

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.				
Specific	**Measurable**	**Attainable**	**Relevant**	**Timed**
Objective relates to improving physical accessibility at Insch Station.	Success will result in increased travel to and from Insch Station by users with mobility impairments, and improved perceptions of journey quality. TPO can be measured by: - Increase in users with mobility impairments using the station using 2019 video surveys as a baseline[2]; - Passenger satisfaction surveys using the 2019 public online survey as a baseline.	Delivery of TPO should not require implementation of any new or untried techniques. Collaboration will be required between Nestrans, Aberdeenshire Council, and the rail industry to deliver accessibility improvements at the station.	TPO delivery would support equality legislation and accessibility policies of national, regional, and local partners. TPO delivery would support national, regional, and local policies to provide for and promote travel by sustainable modes. Review of physical accessibility (e.g. street to platform and platform to platform access) at stations across Scotland found that Insch Station is one of the least accessible stations in Scotland.	Timeline not yet determined and will be dependent on identification of funding sources to support delivery of recommended option. Baseline for monitoring to be established prior to introduction of interventions, with existing video surveys and public online survey results providing valuable baseline information. Consideration to be given to national guidance[3] in evaluating impacts of improvements.

[2] See Initial Appraisal: Case for Change report for further information on the data collected as part of the 2019 video surveys.

[3] https://www.transport.gov.scot/publication/guidance-for-the-evaluation-of-rail-projects/

3.2 Performance vs TPO

This section describes the impact of the options against the TPO for this study. Many of the appraisal findings from the Preliminary Appraisal continue to be appropriate at the Detailed Appraisal stage, however the findings have been updated and further developed where applicable. Options have been assessed according to the STAG seven-point scale shown below.

STAG Seven-Point Scale

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

3.2.1 Do-Minimum

For the purposes of the appraisal, the Do-Minimum is scored as **no benefit or impact** in order to provide the basis for comparison of other options.

3.2.2 Option 1a – Footpath

The creation of a new footpath link to Platform 1 is considered to partially support delivery of the TPO for this study. Provision of a footpath enabling access to Platform 1 would increase travel opportunities for some groups of people whose access needs currently present a barrier to use of the station. However, there are a number of limitations with this option that prevent it from fully delivering the TPO:

- **Distance required** – Design Guidance for Accessible Railway Stations[4] notes that routes between station objects should be the easiest route available and the shortest distance practical. The route that would be required via the footpath option is estimated at around 250m (from the station car park on Platform 2 to the rear of Platform 1) and, in comparison to the other options under consideration, is not the easiest route available or the shortest distance practical. This issue was raised by members of Bennachie Community Council and Central Aberdeenshire Access Panel during the consultation process, with concerns regarding the ability of certain groups of people to navigate this distance between platforms.
- **Level Crossing navigation** – The footpath option requires navigation of the Level Crossing. On-site observations showed the Level Crossing at Insch Station to be uneven and angled, which makes it challenging to negotiate, particularly for those with increased mobility needs such as wheelchair users or those with visual impairments (see Figure 3.1).

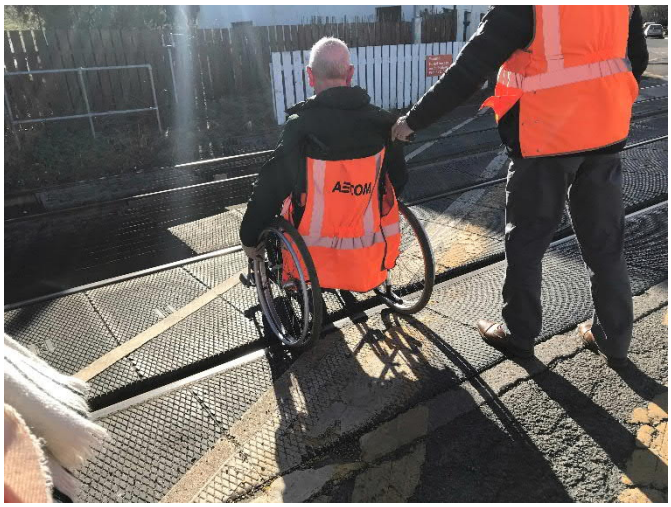


Figure 3.1: Site Visit - Level Crossing at Insch Station

- **Level Crossing barriers** – The two sets of tracks in the immediate vicinity of Insch Station form a passing loop for trains travelling in opposite directions. This means that the Level Crossing barriers can be closed for prolonged periods (in the region of 4-5 minutes) to allow two trains to pass through. Assuming normal train operations, the Level Crossing barriers are activated 24 times per day and of these activations, 5 involve trains passing at the station. If one of the trains is delayed, the Level Crossing barriers can be down for longer than 5 minutes. During these times, the footpath would be inaccessible and therefore rail users with increased mobility needs would be expected to arrive earlier than required in order to access Platform 1 via the footpath before the Level Crossing barriers closed.

[4] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/918425/design-standards-accessible-stations.pdf

While the footpath option provides a benefit to users relative to the do-minimum situation through the enabling of step-free access to Platform 1, there are a number of limitations with this option as outlined above. Accordingly, the footpath option is considered to provide a **minor beneficial impact** against the TPO for this study.

3.2.3 Option 3 – Footbridge with Ramps

The footbridge with ramps option is considered to partially support the TPO for this study. Provision of a footbridge with ramps would increase travel opportunities for some groups of people whose access needs currently present a barrier to use of the station by providing a step-free platform-to-platform solution. To ensure that appropriate gradients are achieved, ramps would result in a similar travel distance between platforms as would be required with the footpath option – approximately 250m based on initial concept design work. As discussed in **Section 3.2.2**, this does not provide the easiest route available or the shortest distance practical and the concerns raised during consultation regarding the ability of some groups to navigate this distance is applicable in the case of the footbridge with ramps option also. However, unlike the footpath option, the footbridge with ramps option does not require navigation of the Level Crossing and therefore this option is considered to perform more favourably against the TPO. Accordingly, the footbridge with ramps option is considered to provide a **moderate beneficial impact** against the TPO for this study.

3.2.4 Option 4 – Footbridge with Lifts

The footbridge with lifts option is considered to fully support the TPO for this study. In line with Design Guidance for Accessible Railway Stations, the lift option provides the easiest route available and the shortest distance practical. It provides a step-free platform-to-platform access solution that would enable increased travel opportunities for all users at the station, including (but not limited to) those with mobility impairments, the ageing population, and people with young children. Accordingly, the footbridge with lifts option is considered to provide a **major beneficial impact** against the TPO for this study.

3.2.5 Option 5b – New Car Park + Footpath

The car park plus footpath option is considered to partially support the TPO for this study. Provision of a car park with a supporting footpath would increase travel opportunities for some groups of people whose access needs currently present a barrier to use of the station by enabling step-free access to Platform 1 by car and on foot. It is considered that this would particularly benefit those users being dropped off and picked up from the station, with the footpath providing an additional opportunity to cross between platforms. This option is subject to the same limitations outlined for the Option 1a in terms of the distance between platforms and the Level Crossing constraints and is considered to provide a **minor beneficial impact** against the TPO for this study.

3.2.6 TPO Summary

A summary of the assessment against the TPO for this study is shown in the table below.

Table 3.2: Summary of Option Assessment against TPOs

Option	Performance vs TPO
Do-Minimum	- (no benefit or impact)
Option 1a – Footpath	✓ (minor benefit)
Option 3 – Footbridge with Ramps	✓✓ (moderate benefit)
Option 4 – Footbridge with Lifts	✓✓✓ (major benefit)
Option 5b – New Car Park + Footpath	✓ (minor benefit)

4. STAG Criteria Appraisal

4.1 Introduction

This section describes the impact of the options against the five STAG criteria, including Environment, Safety, Economy, Integration, and Accessibility and Social Inclusion. Detailed Appraisal Summary Tables (AST2s) are provided in **Appendix B**.

Many of the appraisal findings from the Preliminary Appraisal continue to be appropriate at the Detailed Appraisal stage, however the findings have been updated and further developed where applicable.

Options have been assessed according to the STAG seven-point scale shown below.

STAG Seven-Point Scale

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

4.2 Environment

The following sections present the findings of an environmental appraisal carried out to inform the Detailed Appraisal process. A proportionate approach has been taken to the appraisal; it is to be noted that no survey work or quantitative calculations have been carried out, with recommendations for further work provided where appropriate.

Environment comprises elements of the natural and built environment as well as people. For each option, a qualitative review of the likely environmental effects is provided in relation to five of the eleven environmental sub-criteria identified in STAG, including:

- Agriculture and Soils;
- Biodiversity and Habitats;
- Landscape;
- Visual Amenity; and
- Cultural Heritage.

In addition, the assessment of Option 5b includes consideration of Noise and Vibration impacts, Global and Local Air Quality impacts and Water Quality, Drainage and Flood Defence impacts due to the inclusion of new roads and parking infrastructure.

The following environmental sub-criteria have not been included in the individual assessment of options (with the exception of those aforementioned above for Option 5b).

- Noise and Vibration – operational noise for Option 1a, Option 3 and Option 4 is not anticipated to be significantly different to the current situation given the unlikely increase in traffic. Construction noise is not covered under STAG and industry standard good practice guidance and mitigation measures are assumed to be adhered to during construction to minimise noise nuisance on nearby receptors.
- Global and Local Air Quality – as above, given the unlikely increase in traffic for Option 1a, Option 3 and Option 4, a significant increase in carbon dioxide (CO_2), particulate matter (PM_{10}) or nitrogen dioxide (NO_2) are not considered likely.
- Water Quality, Drainage and Flood Defence – due to the minimal increase in areas of hardstanding, a significant increase in flood risk is not considered to be likely for Option 1a, Option 3 or Option 4. Water quality and drainage issues are anticipated to be appropriately mitigated by following industry standard good practice guidelines and mitigation to minimise any significant adverse effects on the environment. It is advised however that further consultation is undertaken with SEPA once a final option has been selected.

- Geology – There are no sites designated for their geological interests within the vicinity of the station and as such no significant effects are anticipated. Should Option 4 proceed however, it is recommended that further advice is sought from an environment and ground engineering consultant in relation to the ground works necessary for the lift construction.
- Physical Fitness – The remaining options do not alter significantly from the current baseline and so no significant effects on physical fitness are anticipated.

4.2.1 Do-Minimum

For the purposes of the appraisal, the Do-Minimum is scored as **no benefit or impact** in order to provide the basis for comparison of other options.

4.2.2 Option 1a – Footpath

Agriculture and Soils

From a review of online aerial photography, it is noted that the location of a footpath within this area will result in the loss of a small area of scrub woodland in combination with a linear strip of approximately 4.5m wide through agricultural land. It is anticipated that there would be increased loss of agricultural land temporary in nature to facilitate construction of the path, with land not required for the footprint of the path reinstated on completion. Given the limited permanent loss of agricultural land, the footpath option is considered to have **no benefit or impact** against this criteria.

Biodiversity and Habitats

Loss of trees and scrub can create fragmentation of habitats and barriers to movement for a number of species, including protected species such as badgers and bats. It is understood that lighting will be required for safety reasons along the footpath which can also create a barrier to species such as bats. However, with appropriate mitigation, such as sensitively designed low level directional lighting, impacts from lighting could be minimised. Protected species surveys would be required prior to any works commencing as railway corridors frequently support populations of badgers and bats, both of which require licences should works impact upon the species themselves or their habitats. It should also be noted that Policy E1 Protected Species of the 2017 LDP states: "*Development should seek to avoid any detrimental impact on protected species through the carrying out of surveys and submission of protection plans describing appropriate mitigation where necessary. Development likely to have a detrimental impact on protected species will not be approved unless: for European Protected Species, a thorough assessment of the site has demonstrated that the development is required for imperative reasons of overriding public interest and that the population will be maintained at a favourable conservation status in its natural range; or, for non-bird species protected under the Wildlife and Countryside Act 1981 (as amended) or the Protection of Badgers Act 1992, there will be significant social, economic or environmental benefits. In either case there must be no other satisfactory solution*." Through following industry standard good practice, including undertaking appropriate protected species surveys once a final option has been selected, it is anticipated that there would be no residual significant adverse effects on biodiversity and habitats from the footpath option and as such is anticipated to have a **minor negative impact** against this criteria.

Landscape and Visual

The introduction of a new footpath is not considered likely to result in significant adverse landscape and visual effects should appropriate mitigation be implemented. Early liaison with a suitably qualified landscape architect in combination with close consultation with Aberdeenshire Council to create an appropriate design to ensure the proposed development is in-keeping with the character of the surrounding area should mitigate any significant adverse effects. Mitigation suggested by Aberdeenshire Council to date includes ensuring that the street furniture should not clutter the setting or landscape, with post and wire fencing or planting implemented as appropriate boundary treatments. The design will be required to take into consideration views from the surrounding residential dwellings, potential tree loss and compensatory planting and lighting requirements; all of which should be discussed in consultation with the environment team at Aberdeenshire Council to reduce, remove or mitigate the significance of landscape and visual effects. The lighting will also be required to be designed in combination with input from an appropriately qualified ecologist to minimise effects on protected species, as noted above. Overall, the footpath option is anticipated to have a **minor negative impact** against this criteria.

Cultural Heritage

Insch Station comprises several listed buildings and associated structures within their curtilage. Listed structures include the single storey u-plan railway station office on the north platform, rectangular-plan waiting room on the southern platform and ironwork footbridge spanning the railway track. Also included within the curtilage is a granite base on the south platform, which used to be the foundation for a water tank. The introduction of a new footpath in the proposed location would avoid direct impact on any of the listed structures through strategic design. The materials used, such as type of street furniture and lighting could be designed with input from a Heritage Consultant, to minimise significant adverse effects on the setting and character of the listed structures. Through following industry standard good practice and detailed design in combination with an appropriately qualified Heritage Consultant and Aberdeenshire Council's Heritage Team, it is anticipated that there would be no residual significant adverse effects on the character and setting of, or directly on the listed structures. However, it must be noted that there remains the potential for unrecorded heritage assets within the construction area that could be impacted by the development. Overall, the footpath option is anticipated to have a **minor negative impact** against this criteria.

4.2.3 Option 3 – Footbridge with Ramps

Agriculture and Soils

The impacts on Agriculture and Soils are anticipated to be similar to the impacts generated by Option 1a and therefore the footbridge with ramps option has been assessed to have **no benefit or impact** against this criteria overall.

Biodiversity and Habitats

The impacts on Biodiversity and Habitats are anticipated to be similar to the impacts generated by Option 1a and therefore the footbridge with ramps option has been assessed to have a **minor negative impact** against this criteria.

Landscape and Visual

The introduction of a new footbridge with ramps is likely to have the potential to result in significant adverse landscape and visual effects. Policy E2 Landscape within the 2017 LDP states: "*We will refuse development that causes unacceptable effects through its scale, location or design on key natural landscape elements, historic features or the composition or quality of the landscape character. These impacts can be either alone or cumulatively with other recent developments. Development should not otherwise significantly erode the characteristics of landscapes as defined in the Landscape Character Assessments … or have been identified as Special Landscape Areas of local importance*."

Given the required development footprint is relatively constrained, the introduction of ramps at the appropriate gradients and new footbridge is likely to be at odds with the balance of existing townscape features in view and therefore unlikely to be fully accommodated within the existing townscape setting. The material appearance of the footbridge can be detailed using traditional materials such as local stone, which would be more sympathetic to the existing character of the station and the immediate visual envelope. However, the extent of the ramps at the required gradients will remain at odds and unlikely to be fully mitigated, therefore impacts would remain significant. Overall, the footbridge with ramps option is anticipated to have a **moderate negative impact** against this criteria.

Cultural Heritage

Throughout this study, a working assumption associated with Option 3 has been that the existing footbridge at Insch Station would be removed for a number of reasons, including its poor state of repair, the need for ongoing maintenance and most significantly, the potential for future electrification of the rail line (as set out in Transport Scotland's Rail Services Decarbonisation Action Plan[5]), which, under current assumptions, would require removal of the existing structure in future years to meet electrification requirements.

However, from an environmental planning perspective, the removal of the existing footbridge would require separate listed building consent and strong justification for doing so. Removal of the existing listed structure, in combination with the introduction of a new footbridge with ramps is likely to generate significant adverse effects on

[5] https://www.transport.gov.scot/media/47906/rail-services-decarbonisation-action-plan.pdf

the character, integrity and setting of the remaining listed structures. Policy HE1 of the 2017 LDP prohibits such development: "*We will protect all listed buildings contained on the statutory list of Buildings of Special Architectural or Historic Interest for Aberdeenshire, archaeological sites and scheduled monuments. We will encourage their protection, maintenance, enhancement, appropriate active use and conservation. We will not allow development that would have a negative effect on the character, integrity or setting of listed buildings, or scheduled monuments, or other archaeological sites*." Advice should be sought from an appropriately qualified Heritage Consultant in combination with Aberdeenshire Council's Heritage Team to review constraints to obtaining planning consent and explore options for mitigation. For instance, Aberdeenshire Council suggest making contact with the Railway Heritage Trust to review the scheme and similar examples of schemes implemented at other sites across the UK, should this option be taken forward.

Historic Environment Scotland Policy Statement June 2016 (HES 2016b), SPP (Scottish Government 2014a), Historic Environment Circular 1 (HES 2016c) and HES' Managing Change in the Historic Environment guidance note series are the documents to which planning authorities are directed in their consideration of applications for conservation area consent, listed building consent and their consideration of planning applications affecting the historic environment and the setting of individual elements of the historic environment. Overall, the footbridge with ramps option is anticipated to have a **major negative impact** against this criteria.

If, however, the option was to be taken forward alongside continued maintenance of the existing footbridge, the noted environmental impacts would be reduced, albeit the option would still perform negatively against this sub-criteria given the impacts on the other listed structures that this option would cause. Whether or not the existing footbridge be maintained would be considered further as part of future design development work through further discussion with Aberdeenshire Council's Historic Environment and Planning teams at future planning stages.

4.2.4 Option 4 – Footbridge with Lifts

Agriculture and Soils

The impacts on Agriculture and Soils are anticipated to be similar to the impacts generated by Options 1a and 3 and therefore the footbridge with lifts option has been assessed to have **no benefit or impact** against this criteria overall.

Biodiversity and Habitats

The impacts on Biodiversity and Habitats are anticipated to be similar to the impacts generated by Options 1a and 3 and therefore the footbridge with lifts option has been assessed to have a **minor negative impact** against this criteria.

Landscape and Visual

The impacts on Landscape and Visual are anticipated to be similar to the impacts generated by Option 3 and therefore the footbridge with lifts option has been assessed to have a **moderate negative impact** against this criteria. While the visual intrusion caused by the footbridge with lifts option is anticipated to be slightly reduced compared to the footbridge with ramps option due to the reduced footprint, it is not considered to be reduced enough to alter the impact rating.

It may be possible to mitigate to an extent against the negative impacts by locating the new structure as far away from the existing footbridge and station building as possible. To avoid people having to travel further to access the lifts, consideration could be given to an access point from the existing car park.

Cultural Heritage

The impacts on Cultural Heritage are anticipated to be similar to the impacts generated by Option 3 and therefore the footbridge with lifts option has been assessed to have a **major negative impact** against this criteria. Similar to Option 3, negative impacts would be reduced under an option whereby the footbridge with lifts is provided alongside maintenance of the existing footbridge at the station. In line with the assessment against the Landscape and Visual criteria, it may be possible to mitigate to an extent against the negative cultural heritage impacts by locating the new structure as far away from the existing footbridge and station building as possible.

4.2.5 Option 5b – New Car Park + Footpath

Option impacts apply as per the footpath element of this option, with the remainder of this section focussed on the environmental assessment of the car park aspect of the option.

Agriculture and Soils

From a review of online aerial photography, it is noted that the location of a footpath, new car park and associated access road within this area will result in the loss of a small area of scrub woodland, in combination with approximately 1ha of agricultural land. This area of agricultural land is classified on the Scotland's Soils online map - National scale land capability for agriculture, as '3.1 - Land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range. Short grass leys are common'.[6] It appears that the current use of the land is livestock grazing.

It is anticipated that there would be further increased loss of agricultural land temporary in nature to facilitate construction of the development, for example a laydown area and construction compound, with land not required for the footprint of the development reinstated on completion.

The design of the car park is indicative at this stage and therefore the location of the car park could be moved westward, with the access road aligned directly south of the existing residential dwellings, to remove impacts associated with severance of the agricultural field. From a review of aerial photography, it appears that this area is currently utilised by farm vehicles as an informal access track to navigate around the perimeter of the field.

Through detailed design, the development could be designed to minimise the land take required and associated effect on the viability of the farm holding. Appropriate pollution prevention measures during both construction and operation of the development would reduce the risk of contamination of the land. Consideration should also be given to the potential for contaminated land to be present within the proposed construction area. An initial review of publicly available historic mapping does not identify any former land uses that could potentially result in contamination, however with the site being adjacent to a railway line this cannot be wholly concluded at this stage[7]. If this option was chosen to proceed, consultation with farmers should be carried out to enable an assessment of impact on the viability of the holding and to agree on an appropriate land take to enable an appropriate design and alignment of the access track and car park.

Overall, the car park plus footpath option is anticipated to have a **minor negative impact** against this criteria with the above mitigation through design and pollution control measures in place.

Biodiversity and Habitats

The impacts on Biodiversity and Habitats are anticipated to be similar to the impacts generated by Options 1a, 3 and 4 and therefore the car park plus footpath option has been assessed to have a **minor negative impact** against this criteria.

Landscape and Visual

The introduction of a car park and access road to the south of the existing rail line would result in direct effects on the landscape fabric and change in land use. The proposed location is above the current platform level and rises to the south. Although the car park would expand the development footprint of Insch to the south, potential landscape effects would be localised. The existing buildings immediately north of the railway and the residential dwellings to the west enclose the car park and limit its influence on the wider townscape setting. Visibly, the proposed car park would be largely enclosed by landform and surrounding buildings. However, there would be noticeable visual effects experienced by the residents along the B9002 and rail users on the platform. These residential receptors experience views south across the rising agricultural land. The mostly rural nature of southerly views would be substantially affected by the construction and operation of the proposed car park in close proximity. Careful siting of the access road and robust mitigation landscaping proposals could help to screen the car park and integrate it into the landscape setting. Given the sloping nature of the site, consideration of earthworks and cutting will be required to achieve best landscape fit.

[6] https://soils.environment.gov.scot/maps/capability-maps/national-scale-land-capability-for-agriculture/

[7] https://maps.nls.uk/geo/find/#zoom=12&lat=57.33846&lon=-2.59729&layers=102&b=1&z=1&point=57.33998,-2.63189

Overall, this option would result in direct changes to the landscape fabric. Impacts on visual amenity have the potential to be significant from the few closest properties that overlook the site. On balance, the car park plus footpath option would result in a **moderate negative impact** against this criteria.

Cultural Heritage

The impacts on Cultural Heritage are anticipated to be similar to the impacts generated by Option 1a and therefore the car park plus footpath option has been assessed to have a **minor negative impact** against this criteria. Through following industry standard good practice and detailed design in consultation with an appropriately qualified Heritage Consultant and Aberdeenshire Council's Heritage Team, it is anticipated that there would be no residual significant adverse effects on the character and setting of, or directly on the listed structures. As with Option 1a, it is important to note there remains the potential for unrecorded heritage assets within the construction area that could be impacted by the development.

Air Quality

Introduction of a new car park brings with it the potential for increased levels of CO_2 and associated negative impacts on local air quality. However, given the notional size of the car park, current traffic flows in the area, and relatively low frequency of train departures from Insch, it is considered that only a limited number of cars would be using the car park over a 10/15 minute period ahead of train departure times, and these numbers would be within daily fluctuations. Accordingly, no significant effects on either global or local air quality are anticipated. Should this option be taken forward, traffic impact assessments would be required.

Insch is not located within an air quality monitoring area (AQMA), with the nearest zone being Aberdeen City Centre AQMA approximately 23km south east of Insch. Overall, at this stage, it is anticipated that the car park plus footpath option would result in a **minor negative impact** against this criteria.

Water Quality, Drainage and Flood Defence

A review of the Aberdeenshire Council Flood Study[8] has highlighted that the area of proposed development falls just outwith the 200 year flood risk zone for both The Shevock and Mill of Rothney Burn. This flood study provides more recent and updated data to that held on the 2016 SEPA indicative maps showing areas at risk from river, coastal and surface water flooding throughout Scotland. Notwithstanding, the introduction of a car park and associated access track creates additional areas of hardstanding, which in turn can lead to localised flooding during periods of increased rainfall. Detailed design will need to be undertaken according to the principles of Sustainable urban Drainage Systems (SuDS).

Should this option be taken forward, further detailed studies on potential flood risk and a drainage impact assessment/drainage statement should be undertaken as well as identification of associated appropriate mitigation to minimise the risk of flooding given the documented historical flooding issues within and around Insch.

Overall, from a qualitative review, it is anticipated that the car park plus footpath option would result in a **minor negative impact** against this criteria, given the immediate surrounding flooding issues.

Noise and Vibration

There are a number of noise sensitive receptors in the vicinity of the proposed car park and associated access road. Operational noise from the road and car park has the potential to impact upon residential dwellings, two of which operate as Bed and Breakfasts, directly west of the proposals. Detailed design, taking into consideration other environmental receptors, through specifying design, layout issues, operational speed limits and mitigation planting will assist in minimising noise impacts.

In the absence of data, it is assumed at this stage that given the limited number of car parking spaces, in combination with appropriate mitigation, the car park plus footpath option would result in a **minor negative impact** against this criteria. However, it should be noted that a field survey to determine ambient noise levels and consultation with the local Environmental Health office should be undertaken to gain a more accurate assessment regarding potential noise impacts should this option be selected to progress.

[8] http://www.inschfloodstudy.com/

4.2.6 Summary of Environmental Appraisal

The findings of the environmental appraisal are summarised in Table 4.1 below.

Table 4.1: Environment Criteria Appraisal Summary

Option	Environment Criteria						
	Agriculture & Soils	Biodiversity & Habitats	Landscape & Visual	Cultural Heritage	Air Quality	Water Quality, Drainage & Flood Defence	Noise and Vibration
Do-Minimum	-	-	-	-	-	-	-
Option 1a	-	✖	✖	✖	-	-	-
Option 3	-	✖	✖✖	✖✖✖	-	-	-
Option 4	-	✖	✖✖	✖✖✖	-	-	-
Option 5b	✖	✖	✖✖	✖	✖	✖	✖

4.3 Safety

The following sections discuss the impacts of the options on the two safety sub-criteria: reducing accidents and improving security.

In line with STAG, this section considers whether options will have any measurable impact on the number of transport-related accidents and their severity. As the options under consideration are unlikely to generate significant changes in road traffic flows and are focussed on improving access to the rail network, it is assumed that accidents associated with the options under consideration for this study will be negligible. However, also in line with STAG, a qualitative assessment highlighting matters of safety has been undertaken, as set out in the following section.

The security criterion is used to assess and reflect changes in real and perceived security of travellers arising from particular transport options and the likely number of users affected, with consideration to be given to security indicators such as site perimeters; entrances and exits; surveillance; landscaping; lighting and visibility; and emergency call facilities. In line with guidance, particular consideration has been given to the safety and security of vulnerable sections of the community such as children, the elderly and women travelling alone.

4.3.1 Do-Minimum

For the purposes of the appraisal, the Do-Minimum is scored as **no benefit or impact** in order to provide the basis for comparison of other options.

4.3.2 Option 1a – Footpath

Accidents

In addition to vehicular traffic on the B9002, the Level Crossing is currently used by pedestrians and cyclists to access the small residential and business area to the south of the station, with small numbers of active travel users having to navigate the Level Crossing (on road) as a result. The implementation of a footpath used to access the south side of the station would be anticipated to increase the numbers of active travel users passing over the Level Crossing, therefore increasing the interaction between vehicles and active travel users. While the users would be able to use a footpath as opposed to the road, which currently those traversing the Level Crossing require to use, increasing the level of footfall and interaction with the Level Crossing has been raised as a significant concern by Network Rail.

Increased interaction between vehicles and pedestrians at the driveway of the two properties between which the footpath is proposed to be routed also poses a potential safety risk. At present, the existing footpath begins to the south of the driveway and the proposed footpath could therefore increase the potential for accidents with more active travel users likely to be routing this way to access the south side of the station. This raises safety concerns, particularly as residents would have to cross the footpath when accessing and exiting from the driveway. Furthermore, it is likely that increased pedestrian activity could include vulnerable groups such as elderly people, those with mobility impairments and parents with young children who are not able to use the existing stepped overbridge.

In addition, there is the potential for increased personal injury accidents from falls along the footpath. This would be a particular concern during colder temperatures when ice and snow are a consideration. It is considered, however, that this could be mitigated through effective winter maintenance.

Overall, this option is anticipated to have a **minor negative impact** on the accidents criterion.

Security

The footpath option additionally raises security concerns. The secluded nature of the path behind the station and away from the built-up area of Insch could introduce concerns relating to anti-social behaviour. It is considered however that this could be mitigated through the provision of lighting and CCTV.

Overall, this option is anticipated to have a **minor negative impact** on the security criterion.

4.3.3 Option 3 – Footbridge with Ramps

Accidents

It is considered that the implementation of a footbridge with ramps could slightly reduce the risk of accidents. The only current means of accessing Platform 1 is via the stepped overbridge, which creates a trip hazard, particularly for more vulnerable groups such as elderly people and young children. The implementation of step-free access between the platforms would be considered to reduce this risk. This option is therefore anticipated to have a **minor beneficial impact** on the accidents criterion.

Security

The implementation of a footbridge with ramps would not be anticipated to have any effect on the security of station users and therefore is anticipated to have **no benefit or impact** on the security criterion.

4.3.4 Option 4 – Footbridge with Lifts

Accidents

It is considered that the implementation of a footbridge with lifts could have the potential to reduce the risk of accidents slightly. Currently, the only means of accessing Platform 1 is via the stepped overbridge, which creates a trip hazard, particularly for more vulnerable groups such as elderly people and young children. The implementation of step-free access between the platforms would be considered to reduce this risk. This option is therefore anticipated to have a **minor beneficial impact** on the accidents criterion.

Security

The implementation of a footbridge with lifts would not be anticipated to have any effect on the security of station users. There may be some perceived safety concerns associated with this option related to possible breakdown of the lift and in relation to anti-social behaviour. However, 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. The presence of CCTV also means that misuse of the lifts would not be expected to be an issue. Furthermore, it is likely that lifts would not be operational from the time of the last train in the evening until 30 minutes prior to the first train in the morning, which would further limit any misuse of the lifts.

Overall, this option is anticipated to have **no benefit or impact** on the security criterion.

4.3.5 Option 5b – New Car Park + Footpath

Accidents

The implementation of a new car park to the south of the station would be anticipated to increase the numbers of vehicles passing over the Level Crossing, albeit this number is likely to be relatively small as the new car park would only offer an additional 43 spaces. However, this accentuates the concerns raised for Option 1a as it could increase the number of vehicles passing over the Level Crossing as well as active travel users, likely leading to increased interaction between the two and therefore increasing the risk of accidents occurring.

In line with the appraisal of Option 1a, this option also raises safety concerns in terms of the increased interaction between vehicles and pedestrians at the driveway between the two properties that the footpath is proposed to be routed through.

Overall, at this stage, Option 5b is anticipated to have a **minor negative impact** on the accidents criterion. Should this option be taken forward, traffic impact assessments would be required to determine the impacts on the local area.

Security

The new car park plus footpath option additionally raises concerns in terms of security. The secluded nature of the path behind the station and away from the built-up area of Insch could introduce concerns regarding anti-social behaviour. It is considered, however, that this could be mitigated through the provision of lighting and CCTV.

Overall, this option is anticipated to have a **minor negative impact** on the security criterion

4.3.6 Summary of Safety Appraisal

The findings of the safety appraisal are summarised in Table 4.2 below.

Table 4.2: Safety Criteria Appraisal Summary

Option	Safety Criteria	
	Accidents	Security
Do-Minimum	-	-
Option 1a – Footpath	✖	✖
Option 3 – Footbridge with Ramps	✓	-
Option 4 – Footbridge with Lifts	✓	-
Option 5b – New Car Park + Footpath	✖	✖

4.4 Economy

4.4.1 Overview

The economy criterion has two sub-criteria that should be considered as part of the Detailed Appraisal:

- Transport Economic Efficiency (TEE) – the benefits ordinarily captured by standard cost-benefit analysis - the transport impacts of an option; and
- Wider Economic Impacts (WEI) – impacts in non-transport markets that are either of importance from a policy or distributional perspective or which affect the net value that society attributes to the outcomes of a transport intervention.

As noted in **Section 2** and agreed with Transport Scotland at the Preliminary Appraisal stage, due to the nature of this study i.e. focussed on assessing the benefits of improved physical accessibility to the rail network for mobility impaired users, it is not possible to fully assess the economy criteria from a traditional TEE or WEI perspective. As such, an appraisal of economy has been undertaken on a largely qualitative basis.

TEE analysis typically considers impacts on journey cost, time, reliability and quality. Accessibility improvements are likely to improve journey quality. However, there is a lack of evidence on the value of accessibility improvements, and as such the transport economic benefits cannot be quantified for appraisal purposes.

Given the scale of the options, wider economic impacts are likely to be negligible and therefore no assessment of WEI has been undertaken.

Although quantitative analysis of economic benefits has not been possible, consideration has been given to 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 revenues associated with current accessibility restrictions at Insch Station. These are presented below.

4.4.2 Valuing Accessibility Improvements

The nature of improvements sought through this study mean that transport user benefits are likely to be experienced by existing users due to improved journey quality, diverted users who are able to switch modes to rail due to the improved accessibility delivered by improvements, and new generated users whose use was previously frustrated by inaccessibility. There is no established guidance on monetising the impacts of accessibility improvements in transport appraisal. Where the impacts of such improvements are considered, this is usually in the form of a qualitative assessment under the STAG criteria of accessibility & social inclusion and/or integration.

For some disabled people, accessibility represents the difference between being able to use public transport or not; and for those who are reliant on public transport, it can determine whether it is feasible to travel at all. Few other types of transport intervention so clearly remove barriers to travel, and while those barriers may only affect a small number of people, the benefits to those people are significant and their value should not be overlooked.

There is a growing body of research into the economic benefits of accessibility improvements, however this is not yet at a stage where it can be incorporated into conventional Cost Benefit Analysis in appraisal. Some examples of research identified during the course of this study, and the applicability of this research to the issues at Insch Station, is discussed below.

Access for All Programme – Post-Implementation Surveys

An evaluation of the Access for All programme in 2017[9] looked at six schemes, all of which had positive benefit cost ratios (BCRs) based on benefits to existing users, new users and non-users, derived from growth in station usage observed in post-implementation user surveys. The schemes included works at stations across the UK including Rutherglen, Bridgend (Wales), Huddersfield, Kidderminster, Purley and Vauxhall London.

All of the schemes included the installation of lifts and thus draw similarities to the lift option under consideration as part of the Accessibility at Insch Study. However, it is to be acknowledged that the stations themselves are not comparable with Insch Station, with each of the aforementioned stations generally experiencing significantly higher patronage numbers and being located within a more urban context. Nevertheless, it is considered that there remains value in outlining the types of benefits that were identified through the post-implementation surveys. Whilst the number of people experiencing benefits is likely to be lower, it is possible that benefits for individuals could be more pronounced due to the rural nature of Insch meaning that the nearest fully accessible station is a significant distance away. Key findings from the study included:

- Respondents to the user surveys who said they were aware of accessibility improvements were asked if the improvements had affected their station use. The number of trips made from the study stations increased for:
    - 11% of all station users
    - 33% of wheelchair users
    - 19% of hearing impaired passengers
    - 15% of mobility impaired passengers
- In general, station users felt that the improvements at the study stations would encourage people with limited mobility or a disability to use the station more. This was reported by:
    - 59% of all station users
    - 86% of wheelchair users
    - 71% of mobility impaired users
    - 66% of hearing impaired users
- Interestingly, the research highlighted a range of other economic benefits not captured in the BCR, such as:
    - The value of improved inclusiveness that the general population (i.e. non-users) place on such interventions, based on their principles and ethics about the role of Government in supporting an inclusive society; and

[9] Tony Duckenfield, Steer Davies Gleave, The Benefits of Improving Access to the United Kingdom Rail Network via the Access For All Programme,2017, https://www.itf-oecd.org/sites/default/files/docs/benefits-improving-access-uk-rail-network.pdf

- o ‘Option values’ i.e. the value placed on improvements by people who may not benefit now but who may benefit in future if their circumstances changed; for example, if they had children, got older, became temporarily incapacitated (e.g. injured), or developed a long term health condition or disability.

Future Inclusion Ltd

Another paper[10] observed that two studies which undertook stated preference surveys for disabled access features at rail stations demonstrated positive willingness-to-pay values. While this willingness-to-pay was higher amongst people who experience physical barriers, older people, and those with responsibility for children under 5, it was observed across the whole sample.

Leonard Cheshire

Analysis by WPI Economics on behalf of Leonard Cheshire[11] showed that a fully accessible rail system could:

- Help around 51,000 people with work-limiting disabilities into employment, offering the Exchequer benefits of £450 million per year and delivering an economic output (GVA) boost of £1.3 billion, and increasing the well-being of those who gain employment;
- Help around 85,000 employed people with work-limiting disabilities into a new job, bringing potential further economic benefits; and
- Help a further 43,500 unemployed people and 115,000 employed people to attend an interview that may lead to a new job.

Whilst this work applies to the wider rail system, the work commissioned by Leonard Cheshire raises an important point. Enabling people who could not previously work to gain employment and opening up better employment opportunities for those who may previously have been underemployed, strongly aligns with the Scottish Government’s aspiration for Inclusive Growth, defined as ‘growth that combines increased prosperity with greater equality, creates opportunities for all, and distributes the benefits of increased prosperity fairly’[12]. Accessibility improvements address economic inequality experienced by people with the protected characteristic of disability.

This is considered to be particularly relevant in the case of Insch, given the distance required to access the nearest fully accessible station where passengers could complete a round trip. The nearest fully accessible station is in Dyce, which is approximately 38km to the east of Insch Station. Therefore, accessibility improvements at Insch Station could open up employment opportunities for those who may experience difficulties accessing the rail network. This is particularly important in a post-Covid-19 context where there will be a need to encourage people back onto public transport, with people only being encouraged to use public transport for essential purposes only during the pandemic. It is considered that a fully accessible station would support this goal.

4.4.3 Calculating Potential Lost Revenue

As set out above, an exercise has also been undertaken 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. This was calculated using results of the online survey that was undertaken between November and December 2019 specifically considering those users who reported that they would use the station more often if accessibility was improved. The full methodology, including assumptions applied, and the results are set out in **Appendix D**. The analysis is summarised in Table 4.3 below.

[10] Alice Maynard, Future Inclusion Ltd., 2009 Can measuring the benefits of accessible transport enable a seamless journey?, https://www.researchgate.net/profile/Alice_Maynard/publication/44848083_Can_measuring_the_benefits_of_accessible_transport_enable_a_seamless_journey/links/5666abd708ae418a786f4f50/Can-measuring-the-benefits-of-accessible-transport-enable-a-seamless-journey.pdf?origin=publication_detail

[11] Leonard Cheshire, Get on Board 2020: Making the economic case for “levelling up” inclusive transport, 2020, https://www.leonardcheshire.org/sites/default/files/2020-12/Get-on-Board-2020-policy-report.pdf

[12] https://www.gov.scot/policies/economic-growth/inclusive-growth/

Table 4.3: Estimated Annual Trips by Rail

A	B	C	D	E	F
Demand (Return trips from expanded survey data)	Current total trips by rail (includes those who identified accessibility as an issue)	Current trips by rail for people who identified accessibility as an issue	New trips by rail for people who identified accessibility as an issue if it was addressed	Estimated trips by rail for people who identified accessibility as an issue if it was addressed) (C+D)	Total trips by rail if accessibility was addressed (B+D)
Aberdeen	23,635	1,907	775	2,682	**24,410**
Inverurie	7,616	997	258	1,255	**7,874**
Dyce	2,165	148	86	234	**2,251**
Huntly	2,719	111	381	492	**3,100**
Inverness	1,833	246	504	750	**2,338**
Glasgow	1,919	148	74	221	**1,993**
Edinburgh	2,559	283	234	517	**2,793**
Other	1,735	62	37	98	**1,772**
Total Return Trips	**44,181**	**3,900**	**2,350**	**6,250**	**46,531**
Total Entries and Exits	**88,362**				**93,062**

The estimated revenue impact of improved accessibility has also been estimated. It should be noted that existing revenue data was not available for this analysis and the process required a number of assumptions to be made, therefore the results should be treated with caution and only used as a guide. As the survey data upon which this analysis has been undertaken was collected in 2019 (i.e. pre-pandemic), the demand estimates should also be treated with a level of caution given the uncertainties around future levels of demand associated with travel behaviours and trends in a post-Covid-19 society. The revenue impact was estimated using the following steps:

- The demand by journey purpose was identified for the seven destinations identified in the survey for both the current (all demand) and the new journeys from the station.
- Fares for each of these flows were sourced from the National Rail website (Standard Day Return, Cheap Day Return). It should be noted that no responses identified passengers travelling 5 times a week or more and therefore, Season Tickets were excluded.
- By each destination and for each journey purpose, a ticket type was assumed (i.e. Leisure = Cheap Day Return). The percentage share of trips by each ticket type was used to estimate an average fare yield that could be applied to the demand.
- The demand by flow was then multiplied by the fare yield by flow to estimate the revenue for both the current trips and the additional trips from the station.

The above process assumes that no passengers have additional discounts (e.g. young person's rail card etc.) and therefore potentially slightly overestimates the revenue. The estimate of the revenue impact of improvements in accessibility at Insch Station is presented in Table 4.4.

Table 4.4: Estimated Revenue for All Passengers Travelling from Insch (2019)

	Aberdeen	Inverurie	Dyce	Huntly	Inverness	Glasgow	Edinburgh	Total
Revenue before intervention (annual)	£303,175	£57,019	£23,870	£25,928	£65,824	£117,375	£152,296	**£745,486**
Increase in revenue following intervention	£9,943	£1,934	£949	£3,637	£18,113	£4,514	£13,912	**£53,002**
Percentage change	3.3%	3.4%	4.0%	14.0%	27.5%	3.8%	9.1%	**7.1%**

As set out above, the analysis suggests that additional revenue of approximately £50k per annum could be generated associated with potential patronage that could be encouraged to use the station following the implementation of accessibility improvements.

4.4.4 Impact of Options against Economy Criteria

This section provides a commentary of each option's performance against the economy criteria based on the types of benefits that can be generated by accessibility improvements, as discussed in **Section 4.4.2**, including:

- Transport user benefits – improving the journey quality of existing users, diverting users to rail from other modes, and generating new users whose use was previously frustrated by inaccessibility.
- The value of improved inclusiveness that the general population place on such interventions, based on their principles and ethics about the role of Government in supporting an inclusive society.
- Option values – the value placed on improvements by people who may not benefit now but who may benefit in future.
- The economic benefits gained from improved access to employment opportunities and services.

Do-Minimum

For the purposes of the appraisal, the Do-Minimum is scored as **no benefit or impact** in order to provide the basis for comparison of other options.

Option 1a – Footpath

The footpath option may provide some minor transport user benefits by improving the journey quality for a limited number of existing users (e.g. those with prams/buggies, those with luggage or travelling with a bike) by removing the requirement to navigate the stepped footbridge for these users. However, due to its limitations as an access solution (primarily in terms of the distance required to cross between platforms and the requirement to navigate the Level Crossing), it is not anticipated that the footpath option would divert users to rail from other modes or generate new users who do not currently make trips. Similarly, it would not be anticipated that the general population would place value on the footpath option in relation to improved inclusiveness as this is not a wholly inclusive option. Due to the limitations outlined, it is not anticipated that the footpath option would improve access to employment opportunities or other services to the extent that notable economic benefits would be generated.

Overall, this option is anticipated to have a **minor negative impact** on the economy criteria. Whilst the footpath option has the lowest capital construction costs, the anticipated benefits that would be generated from such an improvement would be limited.

Option 3 – Footbridge with Ramps

The footbridge with ramps option may provide some transport user benefits by improving the journey quality for a variety of existing users, including those with prams/buggies, those carrying luggage or travelling with a bike and for some people with mobility issues. As the footbridge with ramps option has fewer limitations than the footpath option as an access solution as there is not a requirement to cross the uneven Level Crossing, it is considered that this option could divert a limited number of users to rail from other modes and generate some new users who do not currently make trips. However, the distance required to cross between the platforms using the ramps (~250m) means that this option may continue to present a barrier to access for some users.

Similar to Option 1a, it would not be anticipated that the general population would place value on the footbridge with ramps option in relation to improved inclusiveness as this is not a wholly inclusive option. There may be some minor benefits in terms of option values, with a number of respondents to the online survey noting that the stepped overbridge does not currently present a barrier to access at the station but that it is likely to in the future. There may be some minor benefits in terms of increased station use and in terms of economic benefits generated by improved access to employment opportunities and services.

Overall, this option is anticipated to have a **minor negative impact** on the economy criteria. Whilst there are a number of benefits relative to the Do-Minimum, the footbridge with ramps option would require significant capital investment (and ongoing maintenance costs) without providing a solution that would be accessible to all.

Option 4 – Footbridge with Lifts

The footbridge with lifts option would be anticipated to generate a number of similar benefits to those discussed in **Section 4.4.2**. The footbridge with lifts option would be anticipated to provide transport user benefits in terms of

improving the journey quality for a wide variety of users including those with mobility issues, those with visual impairments, those with prams/buggies, elderly people, and those carrying luggage or travelling with a bike. Based on the findings of the online survey, it is also anticipated that the footbridge with lifts option (which came out as the most favourable option amongst respondents) could divert some users to rail from other modes and could enable new users to make trips that they would not have otherwise made.

The results of the online survey highlighted the value that the wider population of Insch place on improved inclusiveness that a fully accessible station would bring as highlighted by the selection of quotes provided in the table below.

Table 4.5: Online survey responses outlining the value of improved inclusiveness to the general population

It is ridiculous to expect wheelchair users or others with limited mobility to travel to another station and get a taxi from there. Public transport has to be as easy as possible for everyone to access including people with disabilities as these people may have less other options available to them for travel.
I believe all public transport access points should be accessible to all members of the public irrespective of disabilities/special access needs.
I think in this day and age public transport should be highly accessible for everyone regardless of where you live or your ability. The fact that there is no disabled access to the other platform at Insch Station is awful. Why should people be forced to put time onto their journey just to use a train.
Accessibility is not an issue for myself, but in this day and age I do not think it is acceptable to expect people to take taxis to nearby stations because they are unable to cross from one platform to the next. Both platforms at Insch station should be available for everyone to use, independent of their access requirements.
Although the footbridge access does not affect me, I know it affects our elderly neighbours and friends.
The lack of access to Platform 1 at Insch station is a disgrace. When accessing the station, to be confronted with a sign saying the nearest accessible facilities are actually in a different town is not acceptable in 2019.
It is unacceptable that some disabled passengers cannot use Insch station for all journeys.
It's poor that you can't use the station if you have any mobility issues in this day and age.
I think it's disgraceful in this day and age that's there's no disabled access to the north bound platform.

The results of the online survey also demonstrated option value benefits, with a number of respondents referencing how the existing accessibility arrangement does not affect them at present but may do in the future.

Table 4.6: Online survey responses demonstrating 'option values'

I may need wheelchair access as I get older.
I don't have a problem at this time but may in the future have a problem using the bridge.
I can see that access to the station is an issue for those with disabilities/those with young families, it doesn't affect me at the moment, but may do in the future.
Currently able to climb stairs but concerned this may become more difficult with age.
The platform access does not affect me now but may do in the future.
Access arrangements at Insch do not currently affect me, but in the future, I may need better accessibility to the northbound line currently accessed by a bridge.
As I get older the bridge over may cause me problems with my mobility.
When arriving in Insch carrying a suitcase up the steps of the footbridge is difficult and with my age/health issues this will get more so.
Being elderly we find the bridge difficult and as we get older it may become impossible.

In terms of the economic benefits that could be generated from improved access to employment opportunities and services, the potential lost revenue exercise indicated that improved accessibility at Insch Station could lead to increased station use, equating to an estimated additional revenue of ~£50k per annum[13].

[13] Whilst the potential lost revenue exercise was not specific in terms of the type of accessibility improvement, it is assumed that respondents would have responded based on the assumption that accessibility improvements would result in no barriers to access at the station (and the footbridge with lifts option is the only option to fully remove barriers to access).

Overall, this option is anticipated to have **no benefit or impact** on the economy criteria. Despite the potential benefits outlined above, the footbridge with lifts option would require significant capital investment (and ongoing maintenance costs).

Option 5b – New Car Park + Footpath

The new car park plus footpath option may provide some minor transport user benefits in terms of improving the journey quality for a limited number of existing users (e.g. those with mobility issues that can be dropped off and picked up at the station, those with prams/buggies, those with luggage or travelling with a bike) by removing the requirement to navigate the stepped footbridge for these users. Whilst Option 5b may provide slightly enhanced accessibility compared to the footpath solution on its own as it could improve access to the rail network for people with mobility issues that could be picked-up and dropped-off at the station, it is not anticipated that these improvements would be significant enough to divert users to rail from other modes or generate new users who do not currently make trips. Similarly, this option would be anticipated to generate negligible impacts in terms of increased station use, the value that the general population place on improved inclusiveness, option values and in terms of access to employment and services.

Overall, this option is anticipated to have a **moderate negative impact** on the economy criteria. Whilst the new car park plus footpath option provides some minor additional benefits relative to the footpath solution on its own, the capital construction costs of the new car park plus footpath would be nearly five times as much, and ongoing maintenance costs would also be greater.

4.4.5 Summary of Economy Appraisal

Due to the nature of this study, which focusses on assessing the benefits of improved physical accessibility to the rail network for mobility impaired users, it is not possible to fully assess the economy criteria from a traditional TEE or WEI perspective. As such, an appraisal of economy has been undertaken on a qualitative basis, drawing on findings from studies which consider the economic impacts of accessibility improvements and a high level exercise to understand the potential lost passenger revenues associated with current accessibility restrictions at Insch Station. This has demonstrated that improving access at the station could have a significant impact, particularly on users who are currently unable to access the station and platforms with ease, including an improved ability to access employment and other key services with greater ease. Findings also demonstrate that potential revenue at Insch Station could increase by £53,000 per annum or 7.1% should accessibility be improved. It is noted however that these are high level findings and that full economic analysis has not been possible.

With consideration of both the potential economic benefits and costs associated with each of the options under consideration, a summary of the findings from the economy appraisal is shown in the table below.

Table 4.7: Economy Criteria Appraisal Summary

Option	Economy Criteria
Do-Minimum	-
Option 1a – Footpath	✖
Option 3 – Footbridge with Ramps	✖
Option 4 – Footbridge with Lifts	-
Option 5b – New Car Park + Footpath	✖✖

4.5 Integration

The following sections discuss the impacts of the options on the integration sub-criteria of transport integration, transport and land-use integration, and policy integration, which can be defined as follows:

- Transport integration – the degree to which an option fits with other transport infrastructure and services;
- Transport and land-use integration – the fit between the option and established land-use plans and land-use/transport planning guidance; and

- Policy integration – the appropriateness of the option in light of wider policies, including those of both central and local government.

4.5.1 Transport Integration

The assessment of transport integration requires consideration of services and ticketing, and infrastructure and information. Given the focus of this study on improving physical accessibility at Insch Station, it is not anticipated that there will be an impact on services and ticketing or infrastructure and information and therefore the assessment of transport integration has not been included in the appraisal of individual options.

4.5.2 Transport and Land Use Integration

Developments in UK and Scottish Government policy have provided a clear framework for the integration of land use and transport planning with a general requirement to promote sustainability and reduce the need to travel to relevant existing or future developments.

The land-use transport integration criterion should consider whether:

- Any land required for the proposal is preserved for uses which are incompatible with transport;
- The proposal fits with the general policies of all authorities at all levels concerning transport and land use; or
- The proposal conflicts with any other existing or planned development.

Thus, there is a requirement for the identification of the land-use policies or proposals conflicting with statutory planning documents at local, regional, and national levels. In order to establish the nature and gravity of any spatial conflicts between the options under consideration and established planning policy at the local, regional, and national level, statutory documents have been reviewed to ensure compatibility.

National Planning Policy

Scottish Planning Policy is a policy statement on how nationally important land use planning matters should be addressed across Scotland. The Scottish Government publish a series of Planning and Architecture documents, which are material considerations in the planning system. The Planning Series includes:

- **Scottish Planning Policies** (SPPs), which provide statements of policy on nationally important land use and other planning matters, supported where appropriate by a locational framework;
- **Circulars**, which also provide statements of policy and contain guidance on policy implementation through legislative or procedural change; and
- **Planning Advice Notes** (PANs), which provide advice on good practice and other relevant information.

Statutory planning documents have been reviewed to establish any spatial conflicts; the key documents reviewed are Scottish Planning Policy and PAN 75: Transport and Planning.

Scottish Planning Policy was originally published in 2014 and updated in December 2020. It outlines the following vision for the planning system in Scotland:

'We live in a Scotland with a growing, low-carbon economy with progressively narrowing disparities in well-being and opportunity. It is growth that can be achieved whilst reducing emissions and which respects the quality of environment, place and life which makes our country so special. It is growth which increases solidarity – reducing inequalities between our regions. We live in sustainable, well-designed places and homes which meet our needs. We enjoy excellent transport and digital connections, internally and with the rest of the world.'

Four outcomes explain how planning should support the vision as follows:

- **A successful, sustainable place** – supporting sustainable economic growth and regeneration, and the creation of well-designed, sustainable places;
- **A low carbon place** – reducing our carbon emissions and adapting to climate change;
- **A natural, resilient place** – helping to protect and enhance our natural and cultural assets, and facilitating their sustainable use; and
- **A more connected place** – supporting better transport and digital connectivity.

PAN75 aims to create greater awareness of how linkages between planning and transport can be managed. It notes that measures should be encouraged to make travel easier and more convenient for those who have additional mobility needs, emphasising that planning authorities should consider developing supplementary planning guidance relating to accessibility for all. It is noted that this could consider ensuring that local pedestrian networks are fully accessible and provision of parking spaces for those with physical disabilities, with children and the elderly in a location where passengers do not have to cross the road to reach their destination.

Aberdeen City and Aberdeenshire Strategic Development Plan 2020

The Strategic Development Plan (SDP) was prepared by the Aberdeen City and Shire Strategic Development Planning Authority on behalf of Aberdeen City and Aberdeenshire Council and it was adopted in August 2020. It sets the strategic framework for investment in jobs, homes, and infrastructure over the next 20 years to 2040. The SDP is used to inform Local Development Plans (LDPs) prepared by both Aberdeen City and Aberdeenshire Councils.

Insch is within one of the four Strategic Growth Areas in the region between Aberdeen and Huntly, with allowance for 1,000 houses and 70 hectares of employment land to 2035. These Strategic Growth Areas will be the main focus for development in the area up to 2040, with at least 75% of all homes built and employment land developed to be focussed in these areas.

One of the objectives of the SDP is to ensure that new development meets the needs of the whole community, specifically referencing an ageing population and the changing needs of society.

Aberdeenshire Local Development Plan 2017

The Aberdeenshire Local Development Plan (LDP) was adopted in 2017 and is used to direct decision-making on all land-use planning issues and planning applications in Aberdeenshire. It sets out planning policies intended to enable the sustainable growth of Aberdeenshire in accordance with the provisions of the SDP.

Within the LDP 2017, there are four opportunity sites within the settlement of Insch, including a residential development of 48 homes to the north of the railway line to the west of the station. While the boundary of this site is directly adjacent to the Level Crossing, it is not considered that it will have a notable impact on the options considered as part of this study as access would be taken from Commercial Road.

It is to be noted that the settlement statement for Insch indicates that the provision of disabled access to the railway station is an important objective for the future and therefore, options developed as part of this study to improve accessibility at the station support this.

Given the Category C-listed status of Insch Station, Policy HE1 ‘Protecting historic buildings, sites and monuments’ is relevant within the context of this study. This policy seeks to protect listed buildings and encourage their maintenance, enhancement, appropriate active use, and conservation and it does not allow development that would have a negative effect on the character, integrity or setting of the listed building.

Aberdeenshire Proposed Local Development Plan 2020

The Proposed LDP was agreed as the settled view of Aberdeenshire Council in March 2020 and has since been subject to consultation. It sets out the proposed policies that will be used to assess planning applications and identifies development opportunities across Aberdeenshire for the period to 2031.

It is noted within the Proposed LDP that no significant additional land allocations have been made in Insch. The Plan continues to emphasise the importance of providing access to and from the railway station for disabled people, people with children in buggies and/or heavy luggage. It further notes that care should be taken not to detract from the existing sense of place while at the same time sustaining and enhancing existing services, facilities and providing local employment opportunities.

4.5.3 Impact of Options against Transport and Land Use Integration

For the purposes of the appraisal, the Do-Minimum is scored as **no benefit or impact** in order to provide the basis for comparison of other options.

Overall, it is anticipated that the four options will have **no benefit or impact** on the transport and land use integration criteria. The four options would not generate any spatial conflicts and there are negligible impacts in terms of existing and planned land-use developments. The options do not generally conflict with planning policy at

a national or regional level and all support the aspiration within local planning policy to improve accessibility at the station for disabled people and people with children in buggies and/or heavy luggage, though the extent of this is less for Options 1a, 3 and 5b compared with Option 4. As discussed as part of the appraisal against the environment criteria in **Sections 4.2.3** and **4.2.4**, Options 3 and 4 could have adverse impacts on Policy E2: Landscape and Policy HE1: Protecting Historic Buildings, Sites and Monuments of the LDP.

Consultation with planning officers at Aberdeenshire Council indicated a preference for options that reduce impacts on the character and setting of Insch Station e.g. the footpath or car park options. Planning officers noted that the progression of options which have a more intrusive impact (e.g. new footbridge options) would need to be justified, including demonstration of why other less intrusive options are not appropriate.

4.5.4 Policy Integration

The assessment of policy integration requires consideration of any genuinely additional benefits in the context of Scottish policy on disability, health, and rural matters, together with further social inclusion impacts. This includes consideration of the contribution of options to meeting the Government's purpose and national transport targets. Policy Assessment Framework (PAF) diagrams were completed as part of the Preliminary Appraisal using the PAF tool. This assessment measured the performance of each of the appraised options against objectives from the National Transport Strategy, Strategic Transport Projects Review, and the National Performance Framework in addition to those from STAG.

National Transport Strategy 2

The National Transport Strategy 2 (NTS2) was published in February 2020. The vision outlined within the strategy is for *'a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors.'* The NTS2 includes a specific priority area around promoting equality, with outcomes relating to developing a transport system that *'will provide fair access to services we need'* and *'will be easy to use'*. The NTS2 additionally includes a priority area on taking climate action, with the Scottish Government declaring a climate emergency in April 2019. As a result, the Government has committed to a target of net zero emissions of all greenhouse gases by 2045 and the updated Climate Change Plan outlines a target to cut car kilometres by 20% by 2030. The NTS2 also outlines the commitment to embed the Sustainable Travel Hierarchy in decision-making by promoting walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private car use for the movement of people.

Equality Act 2010

The Equality Act 2010 legally protects people from discrimination in the workplace and in wider society. The Act means that public bodies and organisations that provide goods and services are required to take reasonable steps to remove physical barriers that disabled people might experience when accessing services. Rail companies are required by the Act to make reasonable adjustments for disabled people to ensure they can use their services as everybody else can. It is a requirement that all rail companies must have a system that allows people to book assistance. For stations that are inaccessible (such as Insch), this means that the rail company is required to assist passengers in getting to the nearest accessible station where assistance is available.

Inclusive Transport Strategy

The Inclusive Transport Strategy was published by the Department for Transport in July 2018. It identifies the aim for more rail journeys to be facilitated through step-free routes and for all passenger trains to be accessible. It outlines the aim of providing equal access to the transport system by 2030, noting an aspiration that *'all major transport hubs and terminals on both public and private transport networks will meet the needs of disabled people'*.

Scotland's Accessible Travel Framework

Scotland's Accessible Travel Framework was published by Transport Scotland in September 2016 and is the first ever Travel Framework co-produced with disabled people in Scotland. It outlines a range of issues raised by disabled people with Transport Scotland and Convention of Scottish Local Authorities (COSLA), including the need to improve accessibility at more railway stations.

Nestrans Regional Transport Strategy 2040

The Regional Transport Strategy 2040 was approved by Nestrans Board in February 2021. It sets the long-term vision and direction for transport in the North East for the next 20 years. The key transport policies within the RTS are linked to the priorities in the NTS2 and focus on improving journey efficiencies to enhance connectivity, reducing carbon emissions to support net zero, providing accessibility for all and creating a step change in public transport and active travel allowing for a 50:50 mode split. Under the accessibility for all priority, it is noted that there is an aspiration to ensure all railway stations are fully accessible and that accessibility to key destinations is significantly improved. The need for accessibility improvements at Insch are specifically outlined within the strategy.

Aberdeenshire Local Transport Strategy

The Aberdeenshire Local Transport Strategy (LTS) was published in 2012. The strategy outlines aims of reducing non-sustainable journeys, increasing the modal share of public transport and active travel, and making travel more effective.

Strategic Transport Projects Review 2 – Phase 1 Recommendations

The second Strategic Transport Projects Review (STPR2) is currently underway to inform the Scottish Government's transport investment programme in Scotland over the next 20 years (2022-2042). STPR2 takes a national overview of the transport network with a focus on regions and will help to deliver the vision, priorities and outcomes that are set out in NTS2. The STPR2 Phase 1 Recommendations were published in February 2021 and one of the 20 interventions identified to support the objectives is **Project 12: Infrastructure to provide access for all at rail stations**[14]. It is noted that this intervention is important in terms of reducing inequalities, encouraging modal shift to rail, protecting people from discrimination in wider society and providing increased access to opportunities for all. The Phase 1 report outlines the intention for progressing this intervention will be via a study to identify locations and options for intervention followed by the development of business cases for investment.

4.5.5 Impact of Options against Policy Integration

The PAF assessment undertaken at the Preliminary Appraisal stage of the study has been revisited, with the outputs presented below. This clearly shows that the greatest anticipated positive impacts are recorded around the Reducing Inequalities objectives, particularly those related to Accessibility, Access to Healthcare and Access to Employment, Education and Training. This is as expected given the focus of this study is to improve access at Insch Station. Generally, other objectives score neutral against each option, although there are some slight negative impacts anticipated around Option 5b, particularly in relation to Safety and Casualty Reduction, Protecting Natural Environment & Access to Nature, Demand Management and Modal Shift. This is primarily as a result of the car park element associated with this option. Commentary against each option is provided below.

[14] https://www.transport.gov.scot/media/49064/stpr2-phase-1-ast-project-12-infrastructure-to-support-access-to-rail-3-feb-2021.pdf

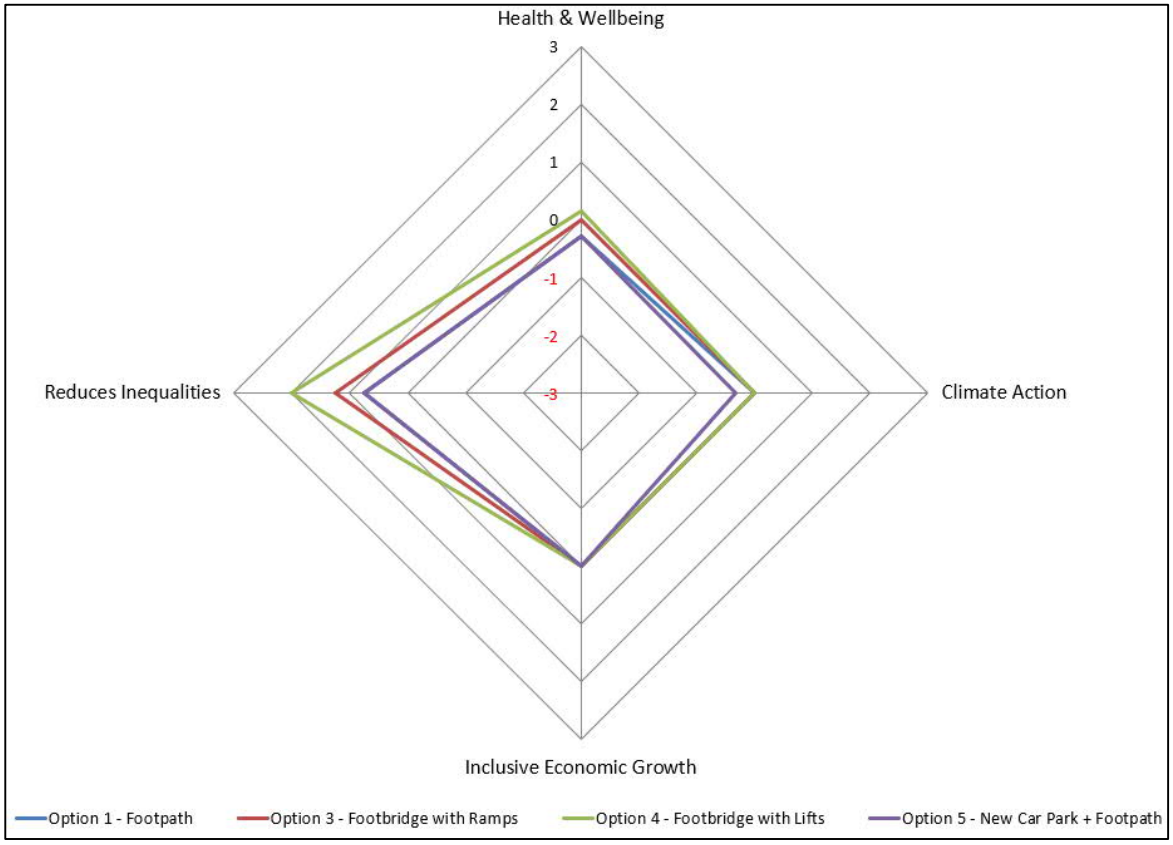


Figure 4.1: PAF Output 1

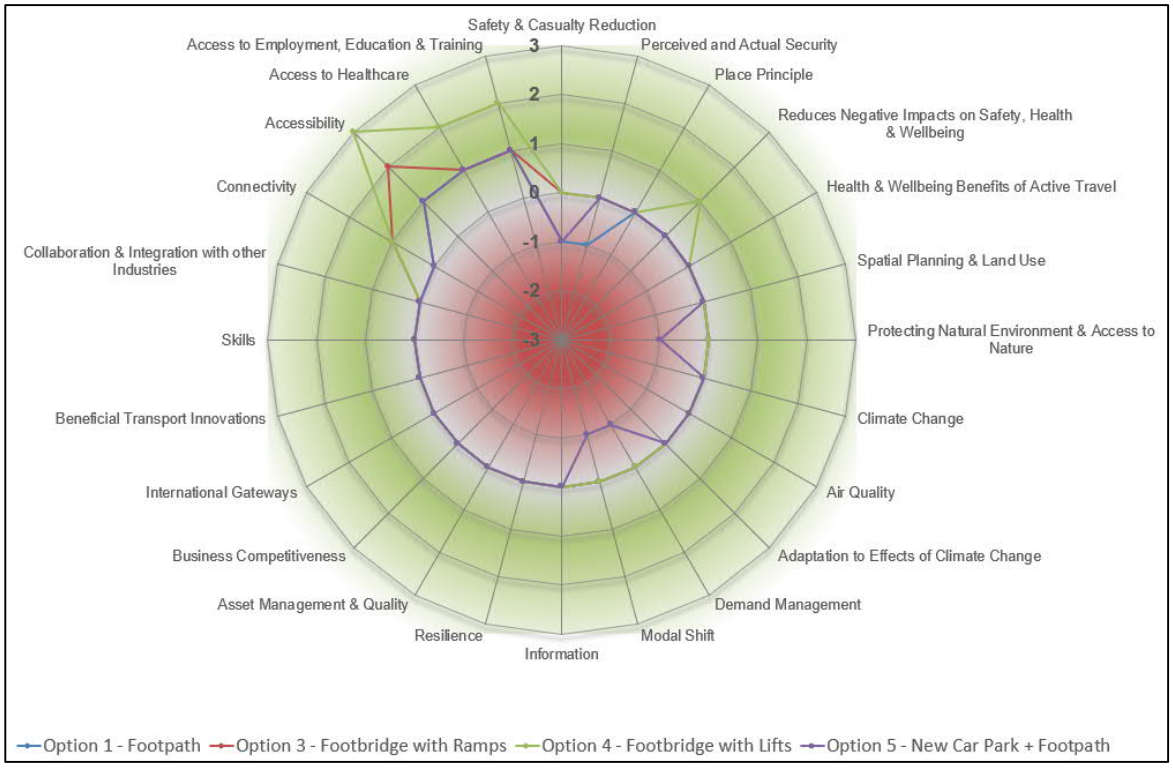


Figure 4.2: PAF Output 2

The options under consideration as part of this study are not anticipated to generate any impacts in terms of rural affairs and it is not anticipated that any of the options would have additional social inclusion impacts that have not been captured under the assessment of accessibility and social inclusion.

Do-Minimum

For the purposes of the appraisal, the Do-Minimum is scored as **no benefit or impact** in order to provide the basis for comparison of other options.

Option 1a - Footpath

Option 1a is anticipated to have a **minor beneficial impact** on the policy integration criterion. The option strongly aligns with the NTS2 Priority 'Reducing Inequalities' by providing improved access at the rail station, which in turn improves access for onward travel to key attractors, including employment and education sites and healthcare facilities. This is reflected in the PAF output, albeit to a lesser degree compared to Options 3, 4 and 5b. The option is generally considered to have a neutral impact against other NTS2 Priorities, although it may have a slight negative impact against Safety & Casualty Reduction as a result of traversing the Level Crossing and Perceived and Actual Security as a result of the potentially secluded nature of the footpath. The option generally aligns well with other policy and legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in Nestrans Regional Transport Strategy 2040, which specifically references the need for accessibility improvements at Insch Station.

Option 3 – Footbridge with Ramps

Option 3 is also anticipated to have a **minor beneficial impact** on the policy integration sub-criterion. As above, the option strongly aligns with the NTS2 Priority 'Reducing Inequalities' by providing improved access at the rail station, which in turn improves access for onward travel to key attractors, including employment and education sites and healthcare facilities. This is reflected in the PAF output. The option is generally considered to have a neutral impact against other NTS2 Priorities. However, it could have a slight positive impact against connectivity by improving access to rail services. The option also aligns well with other policy and legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in Nestrans Regional Transport Strategy 2040, which specifically references accessibility improvements at Insch Station. As this option includes ramps rather than lifts, the positive impact is considered to be less compared to Option 4; Option 3 would still involve an approximate 250m travel distance between platforms and therefore older people, pregnant people and those with a disability would continue to be impacted to a greater extent than the rest of society.

Option 4 – Footbridge with Lifts

Option 4 is anticipated to have a **moderate beneficial impact** on the policy integration criterion. This is a result of the lift component of the option, which is considered to remove existing barriers to accessing both platforms at the station. As with other options, the option strongly aligns with the NTS2 Priority 'Reducing Inequalities' by providing improved access at the rail station, which in turn improves access for onward travel to key attractors, including employment and education sites and healthcare facilities. This is reflected in the PAF output. The option is generally considered to have a neutral impact around other NTS2 Priorities, although the option may have a slight positive impact against Reducing Negative Impacts on Safety, Health & Wellbeing associated with the mental health benefits that could be generated by reducing the barriers to accessing the rail network and the associated opportunities that this can provide. This option may also have a slight positive impact against connectivity by improving access to rail services. Furthermore, the option aligns well with other policy and legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in Nestrans Regional Transport Strategy 2040, which specifically references the need for accessibility improvements at Insch Station.

Option 5b – New Car Park + Footpath

Option 5b is anticipated to have a **minor beneficial impact** on the policy integration criterion. The option aligns strongly with the NTS2 Priority 'Reducing Inequalities' by providing improved access at the rail station, which in turn improves access for onward travel to key attractors, including employment and education sites and healthcare facilities. The option also aligns well with other policy and legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in Nestrans Regional Transport Strategy 2040, which specifically references accessibility improvements at Insch Station. The car park component of this option results in a slight negative score against Safety & Casualty Reduction, Protecting Natural Environment & Access to Nature, Demand Management and Modal Shift as a result of a new car park potentially encouraging travel by car. The car park option, supporting the movement of cars, would also sit towards the bottom of the

Sustainable Travel Hierarchy promoted in the NTS2 which advocates investing in measures that support active travel and shared transport options ahead of measures that support single occupancy private car use. However, given the small size of the car park, it is expected that any increase in traffic flows would be very minor and could be offset by enabling more people to travel by rail for longer trips rather than by car.

4.5.6 Summary of Integration Appraisal

The findings of the integration appraisal are summarised in Table 4.8 below.

Table 4.8: Integration Criteria Appraisal Summary

Option	Integration Criteria		
	Transport	Transport and Land-Use	Policy
Do-Minimum	-	-	-
Option 1a – Footpath	-	-	✓
Option 3 – Footbridge with Ramps	-	-	✓
Option 4 – Footbridge with Lifts	-	-	✓✓
Option 5b – New Car Park + Footpath	-	-	✓

4.6 Accessibility & Social Inclusion

Accessibility is a broad concept that defines the ability of people and businesses to access goods, services, people, and opportunities. STAG highlights four aspects of accessibility that require consideration in relation to transport schemes, grouped under the headings of Community Accessibility and Comparative Accessibility. These are:

Community Accessibility comprising:

- Public Transport Network Coverage – a consideration of the impacts of an option on each group in society for a range of trip purposes; and
- Access to Local Services – the measurement of opportunities to walk or cycle to services and facilities is required, including severance arising from proposed changes.

Comparative Accessibility comprising:

- People group – particular attention is paid to the needs of socially excluded groups with age, gender, mobility impairment, income group and car ownership factors of relevance; and
- Geographic location – locations relevant to local TPOs considered, for example community regeneration areas, areas of disadvantage and deprivation and rural areas. The appraisal should describe where impacts are occurring and compare the impacts within these locations with other areas.

4.6.1 Community Accessibility

Given the nature of improvements that this study is focussed on, it is anticipated that there will be no impact on public transport network coverage with any of the options under consideration. The public transport network coverage element of Community Accessibility has therefore been scoped out of the appraisal of individual options and this section only focusses on access to local services.

This section considers walking and cycling access to services and facilities, including public transport, associated with each of the options.

Each of the options are considered to have a **minor beneficial impact** in terms of improving access to local services (with the exception of Option 4 which is considered to have a moderate positive impact, further details below). Although access to local services primarily relates to services in the local Insch area, improving access at the station itself for all users will make it easier for people to access rail services operating from the station and thus improve access to key services, including employment and education sites and healthcare facilities. Given the

nature of the improvements, this will have a disproportionately positive impact against users which are unable to use the existing footbridge to traverse platforms. It is further noted that the impact of Option 4 is considered to be **moderate beneficial impact** as the inclusion of lifts removes the need for users to walk an approximate 250m in relation to Options 1a, 3 and 5b. This is therefore likely to make Option 4 a more attractive option, encourage more people to use the station and thus improve access to services for those users.

4.6.2 Comparative Accessibility

Distribution of impacts by geographic location has been scoped out of the appraisal as each of the options considered affect the same area immediately surrounding Insch Station. This section therefore only considers impact by people group.

Socio-economic background information in the Initial Appraisal: Case for Change report outlined the socio-economic context for the study area. The 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 Insch, which points to the village 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. The problems and opportunities analysis found that the existing situation is disproportionately impacting on specific groups of people based on factors such as:

- **Age:** older people tend to be less mobile and are more likely to struggle navigating the stepped overbridge.
- **Gender:** females may be more likely to be travelling with a pram or with young children. Females could also be disproportionately impacted in terms of increased mobility needs associated with pregnancy.
- **Disability:** disabled people are far more likely to be impacted by the current accessibility arrangement.

This section will consider the impact of each option against these groups and all other groups.

In line with good practice in the planning and development of rail schemes, a draft Diversity Impact Assessment (DIA) following Network Rail's guidance has also been prepared and is provided in **Appendix C**. The draft DIA anticipates the likely effects of the work on the characteristics protected by the Equality Act: age; disability; sex; gender reassignment; pregnancy and maternity; race; religion or belief; sexual orientation; and marriage and civil partnerships. The DIA should be kept under review as a preferred option is identified for future development.

Overall, an important part of the recovery from Covid-19 will be encouraging people back onto public transport, with bus and rail only recommended for essential travel purposes during the pandemic. Measures that improve equality of access to the rail network through accessibility improvements could encourage increased use of the network and restore confidence in this mode post-pandemic.

Do-Minimum

For the purposes of the appraisal, the Do-Minimum is scored as **no benefit or impact** in order to provide the basis for comparison of other options.

Option 1a – Footpath

The footpath option would be anticipated to provide a **minor beneficial impact** with regards to impact by people group. It is anticipated that the disproportionate impact experienced by people travelling with a pram would be lessened with the footpath and the opportunity to access Platform 1 without having to navigate a stepped overbridge. While other groups would benefit from the implementation of a footpath between the platforms relative to the Do-Minimum situation, it is considered that older people, pregnant women and those with a disability would still be disproportionately impacted by the accessibility arrangement as this option would require an approximate 250m travel distance between platforms and would require navigation of the Level Crossing, which is uneven.

Option 3 – Footbridge with Ramps

The footbridge with ramps option would be anticipated to provide a **minor beneficial impact** with regards to impact by people group. It is anticipated that the disproportionate impact experienced by all groups discussed above would be lessened as a footbridge with ramps would allow step-free access to Platform 1. However, in order to ensure appropriate gradients, it is anticipated that the footbridge with ramps would again involve an approximate 250m travel distance between platforms and therefore older people, pregnant people and those with a disability would

continue to be impacted to a greater extent than the rest of society. While it is considered that the ramp option would provide a greater benefit to some people than the footpath option because it does not involve having to navigate the Level Crossing, the slight gradients may prove difficult for some people and therefore, overall it is considered to perform similarly in terms of comparative accessibility.

Option 4 – Footbridge with Lifts

The footbridge with lifts option would be anticipated to provide a **major beneficial impact** with regards impact by people group. It is considered that the footbridge with lifts option would fully negate the disproportionate impact on the groups discussed above. This option would allow easy access between platforms regardless of age, gender or physical disability and as a result would allow excluded groups to participate more in society through increased opportunities that rail travel from Insch Station would bring.

Option 5b – New Car Park + Footpath

The new car park plus footpath option would be anticipated to provide a **minor beneficial impact** with regards impact by people group. It is anticipated that the disproportionate impact experienced by all groups discussed above would be lessened as this option would allow step-free access to Platform 1.

In terms of age and disability, it is considered that this option would mainly provide benefits to those who can be dropped off and picked up at the station. For those driving themselves, it would be anticipated that older people and those with mobility impairments would continue to be impacted negatively because they would be required to utilise the footpath on their return journey, which raises the same concerns noted under Option 1a.

It is anticipated that the disproportionate impact experienced by people travelling with a pram or young children would be lessened with the footpath and the opportunity to access Platform 1 without having to navigate a stepped overbridge; although a disproportionate impact would still be felt by some people, including those who are pregnant due to the distance required to travel via the footpath on their return journey.

4.6.3 Summary of Accessibility and Social Inclusion Appraisal

The findings of the accessibility & social inclusion appraisal are summarised in Table 4.9 below.

Table 4.9: Accessibility & Social Inclusion Criteria Appraisal Summary

Option	Accessibility & Social Inclusion Criteria	
	Community Accessibility *(Distribution of Impacts by People Group)*	Comparative Accessibility *(Access to Local Services)*
Do-Minimum	-	-
Option 1a – Footpath	✓	✓
Option 3 – Footbridge with Ramps	✓	✓
Option 4 – Footbridge with Lifts	✓✓	✓✓✓
Option 5b – New Car Park + Footpath	✓	✓

5. Cost to Government

5.1 Introduction

STAG requires that the net cost of an option is assessed from a public spending perspective, which is then compared with the total benefits of the option in terms of the STAG criteria, allowing an overall value for money assessment to be made. As set out earlier in the report, previous discussions with Transport Scotland noted that the nature of improvements sought through the Accessibility at Insch Station study are unlikely to generate the types of benefits that can conventionally monetised related to, for example, journey time improvements or modal shift. It has therefore not been possible to prepare a cost benefit analysis of the options assessed in this study, with this section concentrating on the capital and operational costs of the respective options.

5.2 Cost to Government

Cost to Government refers to all costs incurred by the public sector as a whole net of any revenues. The total net cost consists of:

- Investment (capital) costs – include all infrastructure and other capital costs incurred by public sector operators which are additional to those incurred in the Do-Minimum scenario;
- Operating and maintenance costs – include the annual recurring costs incurred by the public sector in running and maintaining the option considered;
- Grant/subsidy payments – should private sector operators not cover the investment and operating costs; some form of grant or subsidy may be required for the delivery of an option by private sector operators;
- Revenues – user charges, which represent monetary transfers from the users to the Government; and
- Taxation impacts – options which substantially promote public transport can lead to reductions in indirect tax receipts by shifting expenditure from cars and car fuel, which are heavily taxed, to public transport services on which the indirect tax rate is relatively low.

Capital Costs

Informed by the engineering assessment and associated assumptions, an exercise has been undertaken to develop an outline order of magnitude construction costs for each of the options under consideration, as presented in Table 5.1 below. As shown, the total estimated costs include 64% optimism bias.

Table 5.1: Estimated Scheme Costs

Ref	Summary	Option 1A	Option 3	Option 4	Option 5b
1	Construction Works Cost	£153,630	£852,050	£958,554	£750,355
2	**Sub Total**	**£154,000**	**£853,000**	**£959,000**	**£751,000**
3	Allowance for contractor's preliminaries @ 15%	£24,000	£128,000	£144,000	£113,000
4	Main contractors overheads & profit @ 5%	£9,000	£50,000	£56,000	£44,000
5	**Main contractor's on-costs subtotal**	**£33,000**	**£178,000**	**£200,000**	**£157,000**
6	**Construction Cost @ 4Q 2019**	**£187,000**	**£1,031,000**	**£1,159,000**	**£908,000**
7	Inflation to start on site	Excluded	Excluded	Excluded	Excluded
8	**Construction Cost @ 4Q 2019**	**£187,000**	**£1,031,000**	**£1,159,000**	**£908,000**
9	Design Development & Contingency @ 20%	£38,000	£207,000	£232,000	£182,000
10	Optimism Bias @ 64%	£144,000	£793,000	£891,000	£698,000
11	**Est. Construction Cost at Current 4Q 2019 (excl. VAT)**	**£370,000**	**£2,040,000**	**£2,290,000**	**£1,790,000**
12	**Est. Construction Cost at 2010 Prices[15]**	**£316,000**	**£1,740,000**	**£1,950,000**	**£1,530,000**

[15] TAG recommends presentation of monetary values in 2010 prices - https://www.gov.uk/government/publications/tag-data-book

As shown, the highest cost options are Option 3 and Option 4 associated with the construction of a new footbridge and ramps or lifts. As a side note, these costs include for the demolition and removal of the existing footbridge, which as stated earlier could be retained if required. Option 1a is the least expensive option relating to the construction of a new footpath, although there are a number of risks associated with this option; while the estimated cost includes for changes to the existing Level Crossing to accommodate the proposed footpath, works could require the agreement from the Office of Rail and Road (ORR) which could see costs escalate.

It is to be emphasised that, in line with the feasibility stage of this study, the estimated costs are based on a number of assumptions and that a number of exclusions apply. The full list of assumptions and exclusions are set out in **Appendix E**.

Operating and Maintenance Costs

It is anticipated that the public sector could incur maintenance costs associated with each of the options. Discussions with ScotRail confirmed that the following elements would generate maintenance costs:

- **Winterisation** – winterisation would be required for all options under consideration. This would be subsumed into existing contracts as additional work when completing existing winterisation and other maintenance at Insch Station and therefore, additional costs would be based on staff time and any additional resource requirements.
- **CCTV** – CCTV would be required for Option 1a, Option 4 and Option 5b.
- **Lighting** – lighting would be required for Option 1a and Option 5b. Any issues with lighting would be reported by those on site undertaking regular maintenance.
- **Lift Servicing** – servicing of the lifts would be required for Option 4 and would be undertaken on an annual or bi-annual (twice yearly) basis. This would likely be subsumed into an existing maintenance contract such as that associated with lift servicing at Dyce and Kintore Stations.
- **Signing and Lining** – maintenance of signing and lining in the car park and along the access road would be required for Option 5b. This is generally undertaken through a sub-contractor to Network Rail.

Overall, it is not anticipated that operating and maintenance costs will be significant as there is already a requirement for regular maintenance at the station and therefore additional costs would generally be based on additional staff time or additional staffing requirements.

6. Risk & Uncertainty

6.1 Introduction

Risk management strategies should be adopted throughout the appraisal and implementation strategies of proposals in order to ensure that steps have been taken to prevent and mitigate risks and uncertainties. Once cost estimates are built up, risks are explicitly assessed and quantified, and work to minimise project-specific risks is undertaken, any optimism bias can be reduced.

It is important for key risks and uncertainties to be taken into consideration at the early stage of a project so that any impacts can be potentially mitigated.

6.2 Optimism Bias

Experience has demonstrated a tendency for insufficient contingency costs or programme time to be made; known as Optimism Bias (OB). The cost analysis in this report has been undertaken using standard OB uplifts (for rail projects at a pre-feasibility stage without a Quantified Risk Assessment an OB of 64% should be applied, as per guidance). Should the preferred option(s) be progressed towards construction, a plan for the management and mitigation of risk will require to be adopted.

6.3 Implementability

Implementability, or deliverability, has been a key consideration through the development and assessment of options through this study, as any option that is undeliverable could not be taken forward for further consideration. The options taken forward should therefore be deliverable including in terms of feasibility, affordability and public acceptability. There are several factors to take into consideration, including:

- Availability of funding to progress recommended option;
- Land acquisition;
- Environmental considerations relating to the construction of a new car park associated with Option 5b and the environmental impact of this; and
- Design – detailed ground investigation and civil engineering surveys would require to be undertaken prior to progressing options.

Further details relating to risk and uncertainty are presented in this chapter.

Sections 6.3.1 to **6.3.3** below provide commentary against feasibility, affordability and public acceptability for each option. There are not considered to be any feasibility or affordability concerns relating to the Do-Minimum, although in relation to public acceptability, in the absence of any improvements to improve platform-to-platform access at Insch, the longstanding stakeholder concerns regarding accessibility of the station will continue.

6.3.1 Feasibility

This section provides an overview of the feasibility of each option.

Option 1a – Footpath

From a technical perspective, construction of a new footpath would be feasible, although there are a number of challenges which would constitute cost, timescale, and deliverability risks. A previous optioneering exercise[16] into this option identified a number of constraints:

- Changes to the Level Crossing and its equipment would be required (e.g. the Level Crossing barriers may require extension and warning lights repositioned), as well as potential removal of a wall and/or road realignment;

[16] Insch Station Platform 1 Footpath Optioneering, AECOM for Aberdeenshire Council, 2018

- Creation of a formal minimum 1.2m wide footpath on the approaches and across the Aberdeen side of the Level Crossing;
- Repositioning of the 1.2m boundary wall would be required, likely impacting on the existing rail signalling aspects located at the top of the wall between the signal box and the retaining wall;
- Relocation of the existing bench and burying existing semaphore signalling wires on Platform 1 to allow a connection to the footpath would be required; and
- Private land south of Platform 1 would be required to facilitate connection of B9002 to proposed rear of Platform 1 access point. Discussions would also be required to determine who would take ownership of the footpath and therefore be responsible for its construction and maintenance.

Insch Level Crossing

There are a number of risks associated with the Insch Level Crossing that could impact the deliverability of the new footpath option.

Insch Level Crossing is a Manned Crossing Barrier (MCB1) controlled from Insch signal box. Its legal status is governed by the Level Crossing Act it was brought into use under, with the current legislation being the 1983 Level Crossing Act. The Level Crossing has a Schedule that details the protective arrangements at the Level Crossing. Any variation to the Order in respect of the Level Crossing infrastructure compliance with the detail of the Order makes the Level Crossing non-compliant and exposes the Infrastructure Manager to possible prosecution.

Review of the Order suggests that the layout arrangements do not include any provision for a public footpath. In order to include a new footpath – such as that proposed under Options 1a and 5b – the following process would therefore be required:

1. Amend the existing Level Crossing Order, which would have to be promoted by the Infrastructure Manager (i.e. Network Rail). This process is outlined in the diagram shown in Figure 6.1.
2. Issues may arise regarding timescales, with contact requiring to be made with the ORR by Network Rail around 18 to 24 months before commissioning. It is also dependent on whether Network Rail wish to promote the proposed change to the Level Crossing Order.

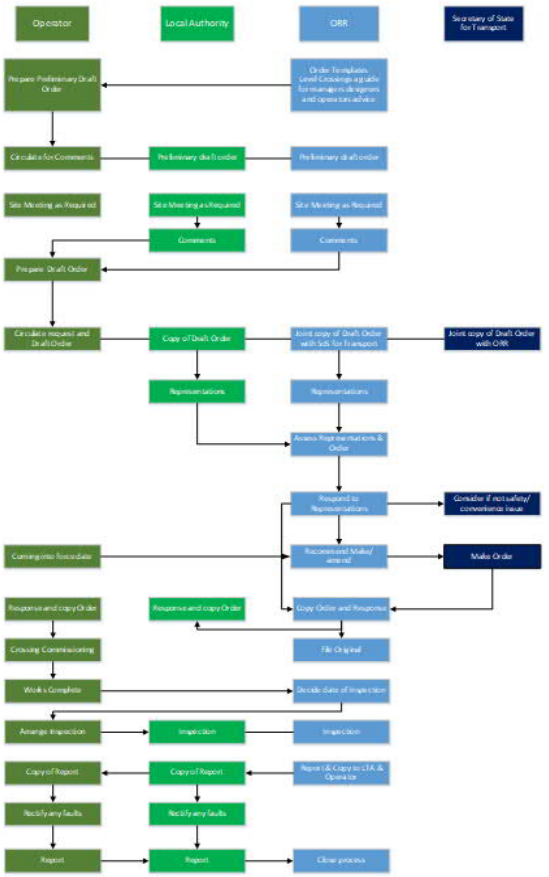


Figure 6.1: Level Crossing Order Process
*(see **Appendix F** for larger scale version)*

Accordingly, development of these options is linked to a number of risks and uncertainties and would be dependent on Network Rail's support for the proposal. Discussions with Network Rail have indicated significant concerns regarding developing a new footpath over the Level Crossing and therefore it is very unlikely that they would promote the necessary change to the Level Crossing Order that would be required for delivery of Option 1a and 5b.

It is considered that the required changes to the Level Crossing equipment and to the Level Crossing Order constitute a **major or high risk** to deliverability of the footpath option, particularly given Network Rail's reluctance to support any change to the Order.

Option 3 – Footbridge with Ramps

A ramped footbridge is considered feasible as this is a common means of providing platform-to-platform access across Scotland's rail network, but again there would be a number of deliverability risks. The principal consideration in terms of feasibility relates 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). The ramp option would be anticipated to require a significant proportion of land from the existing car park (estimated loss of 23 spaces out of the 44 space car park) and would also require the purchase of private land to the south of Platform 1 to provide the ramped footbridge. Re-cabling would be additionally required to take station retail cabling (lighting, CCTV and LLAP) across to Platform 1 from the existing footbridge to the new footbridge. Overall, these factors are considered to present a **moderate or medium risk** to deliverability of this option.

Option 4 – Footbridge with Lifts

Other stations on the Aberdeen to Inverness railway have benefitted from the installation of lifts in recent years including Dyce, Forres and the new Kintore Station, and therefore this option would not constitute a new or untried approach to providing platform-to-platform access. The lift option is still associated with a number of deliverability risks, including the requirement for listed planning consent, the anticipated requirement for a small number of spaces from the existing car park, and the purchase of land to the south of Platform 1 to provide the lifts. Overall, these factors are considered to present a **moderate or medium risk** to deliverability of this option.

Option 5b – New Car Park + Footpath

The car park plus footpath option would be associated with the same risks identified for Option 1a (new footpath) and other risks related to the car park element, including a requirement for land to be purchased to the south of Platform 1. Discussions with Aberdeenshire Council highlighted concerns relating to access to the site, the provision of suitable permeability to the surrounding area and to the ability to provide suitable footway connections in and around the Level Crossing. These issues, along with further consideration of junction design, would likely require a Transport Statement or Transport Assessment to be completed in order to obtain planning permission from Aberdeenshire Council. In addition, the car park would be required to provide electric vehicle charging infrastructure and designers would need to determine the availability of sufficient supporting infrastructure if this option was to progress. Discussions would also be required to determine ownership of the car park including responsibility for construction and maintenance. Given the land is not in ownership of the Council, there are a number of risks to this option in terms of timescale, cost, and deliverability. Added to the risks and uncertainties associated with the footpath option (Option 1a) discussed above, principally owing to interaction with the Level Crossing, it is considered that on the whole these factors could constitute a **major or high risk** to the deliverability of this option.

6.3.2 Affordability

This section provides an overview of the affordability of each option.

Option 1a – Footpath

The footpath option would be anticipated to be a relatively **low cost** option for construction. This option would also require ongoing maintenance, including winter maintenance of the footpath. While the cost estimate provided in Table 5.1 include for changes to the Level Crossing, as set out in **Section 6.3.1**, there are a number of risks and uncertainties regarding the associated changes to the Level Crossing and the respective costs of these changes, which could increase costs significantly based on both technical delivery and potential programme cost issues.

Option 3 – Footbridge with Ramps

The footbridge with ramp option would be estimated to constitute a **high cost** option in term of capital construction costs. This option would also require ongoing maintenance, including winter maintenance. From an efficiency point of view, delivery of this option could remove the need for investment in the existing footbridge, therefore maximising the value of renewals, should the existing footbridge be removed. It should be noted that this option would be designed to enable route clearance for potential route electrification in the future, therefore ensuring the future-proofing of this option.

Option 4 – Footbridge with Lifts

The lift option would be estimated to be a **high cost** option for construction. This option would be associated with potentially higher maintenance costs associated with regular and ad-hoc maintenance should any technical issues arise. From an efficiency point of view, delivery of this option could remove the need for investment in the existing footbridge, therefore maximising the value of renewals, should the existing footbridge be removed. It should be noted that similar to Option 3, the footbridge would be future-proofed to enable route clearance for potential route electrification in the future.

Option 5b – New Car Park + Footpath

The car park plus footpath option would be expected to constitute a **medium-high cost** option based on the potential technical issues identified. This option would also require ongoing maintenance, including footpath and car park maintenance, lighting, and CCTV.

6.3.3 Public Acceptability

This section considers the public acceptability of options informed by the findings from engagement exercises[17] undertaken throughout the study, including an online public survey conducted between November and December 2019. As part of the survey, completed by 438 respondents, the opportunity was taken to ask respondents about options they would like to see progressed to improve accessibility at the station and their prioritisation of options, with responses shown in Figure 6.2.

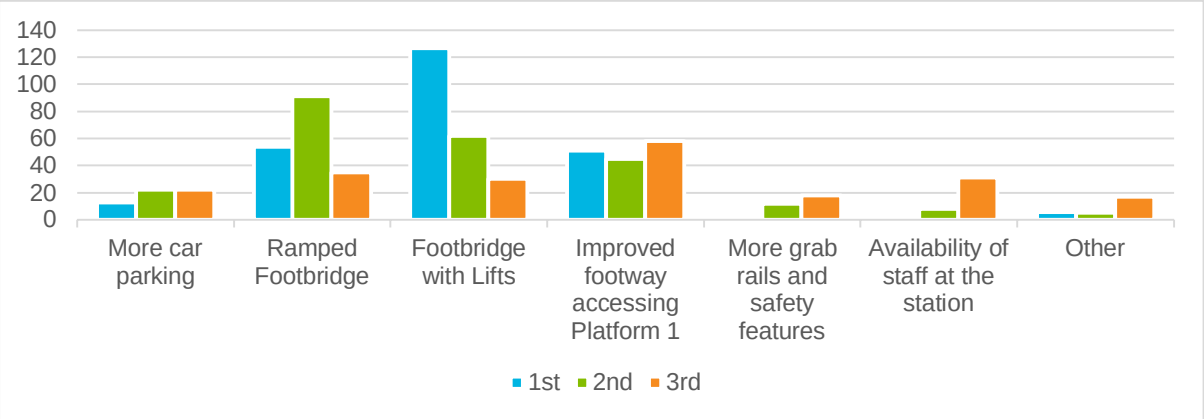


Figure 6.2: Potential Improvement Options – Prioritised

Respondents were also asked how likely they would be to use Insch Station more frequently if each of the potential improvement options were delivered. The results are shown in Figure 6.3.

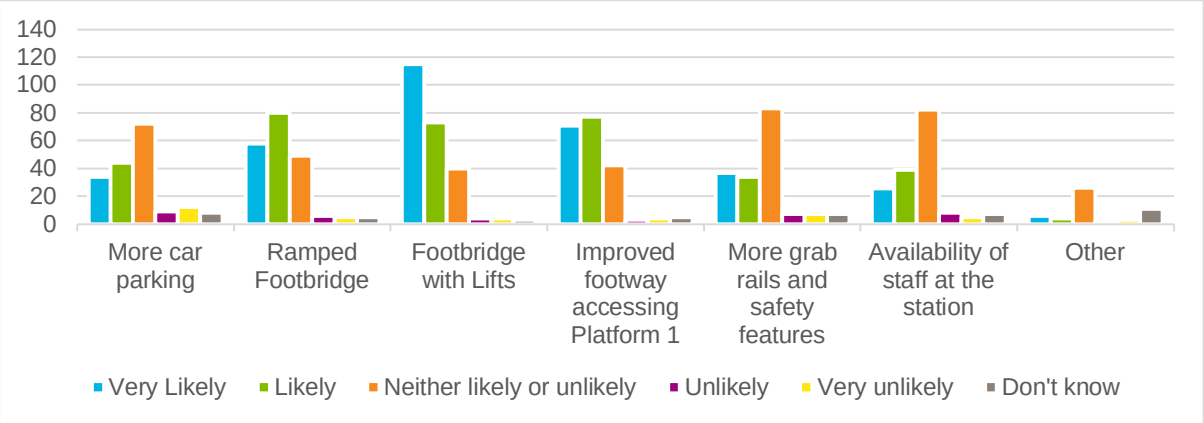


Figure 6.3: Use of Insch Station if accessibility improvements were to be implemented

[17] Full details of the Public Survey, and other Consultations exercises carried out as part of this study are presented in the Initial Appraisal: Case for Change Report (AECOM, 2020) available at: https://www.nestrans.org.uk/wp-content/uploads/2020/02/2020_01_22_Accessibility-at-Insch_Case-for-Change-Report-and-Appendices.pdf

Option 1a – Footpath

The footpath option would have public support in terms of enhancing accessibility at Insch Station, with 20% of respondents to the public survey indicating that this would be their first choice option for improvement (the third highest of the options presented). In total, 60% of respondents considered an improved footway to be a top-three priority. In addition, 148 respondents indicated that they would be more likely to use the station more often in the future if a footway was implemented (71 very likely; 77 likely).

A review of responses to the survey suggested key reasons of support for this option were that it would be the least intrusive on the cultural heritage of Insch Station and it would additionally allow those approaching the station from the west to access Platform 1 after the Level Crossing barriers are lowered.

However, it is anticipated that the footpath option would not fulfil widespread aspirations for improving accessibility at Insch Station, with a number of concerns raised through the online survey and other engagement with the local community. The concerns raised have been grouped as follows:

- **Distance and surface** – an approximate 250m travel distance between platforms via a footpath is not suitable for all users and concerns were raised about the difficulties of crossing the cobbled paving at Platform 2 and the Level Crossing for those with increased mobility needs.
- **Anti-social behaviour** – implementation of a footpath via the field to the south of Platform 1 could create issues with anti-social behaviour.
- **Safety** – the footpath would interact with the driveway of the two properties to the west of the Level Crossing, which raises safety concerns.
- **Privacy** – the footpath would require lighting and CCTV installation, which would impact on the privacy of the properties adjacent to the Level Crossing. It would be important to ensure that CCTV does not encroach on the private properties.

Option 3 – Footbridge with Ramps

The footbridge with ramps option would have public support in terms of enhancing accessibility at Insch Station, with 21% of respondents to the public survey indicating that this would be their first choice option for improvement (the second highest of the options presented). In total, 71% considered the ramped footbridge to be a top-three priority. In addition, 138 respondents indicated that they would be more likely to use the station more often in the future if a footbridge with ramps was implemented (58 very likely; 80 likely).

However, a review of responses to the open question at the end of the survey suggests that there are also a number of concerns with this option, including:

- **Distance and surface** – an approximate 250m travel distance between platforms via a footbridge with ramps is not suitable for all users and concerns were raised about the surface of a ramp becoming slippery during winter.
- **Loss of parking** – the loss of approximately half of the existing car parking spaces to accommodate the footprint of this option was raised as a concern. This was also raised by the Community Council.
- **Visual intrusion** – the footprint of this option means that it would be the most visually intrusive of the proposed options.

Option 4 – Footbridge with Lifts

The footbridge with lifts option would have significant public support in terms of enhancing accessibility at Insch Station, with 50% of respondents to the public survey indicating that this would be their first choice option for improvement (the highest of the options presented). In total, 86% considered the footbridge with lifts option to be a top-three priority. In addition, 188 respondents indicated that they would be more likely to use the station more often in the future if a footbridge with lifts was implemented (115 very likely; 73 likely).

It was generally agreed in responses to the public survey and during wider engagement with the community that the lift option is the only way to improve accessibility at Insch Station such that travel opportunities are increased for all users. Engagement with the Community Council also indicated that this would be the preferred option of the community. While this option was identified as the clear preference during engagement with the community, a very

small number of respondents to the public survey indicated concerns related to visual amenity impacts and the potential for the lift to breakdown.

Option 5b – New Car Park + Footpath

It is considered that the car park plus footpath option would generally have public support in terms of enhancing accessibility at Insch Station, with 5% of respondents to the public survey indicating that more car parking would be their first choice for improvement (in addition to the 20% who indicated that the improved footway option would be their top priority). In total, 23% of respondents considered additional car parking to be a top-three priority. 78 respondents indicated that they would be more likely to use the station more often in the future if additional car parking was implemented (34 very likely; 44 likely). Despite this, the concerns raised regarding the implementation of a footpath set out under Option 1a apply to this option, including likely objections by local residents who may be adversely impacted by the construction of a new footpath.

6.4 Risk & Uncertainties

6.4.1 Risk Management

Risk management is a structured approach to identifying, assessing, and controlling risks that emerge during the course of the option lifecycle; this supports better decision making by developing a more thorough understanding of the risks inherent within an option and their likely impact. Risk management involves:

- Identifying possible risks in advance and putting mechanisms in place to minimise the likelihood of their materialising with adverse effects;
- Having processes in place to monitor risks, and access to reliable, up-to-date information about risks;
- The right balance of control in place to mitigate the adverse consequences of the risks, if they should materialise; and
- Decision making processes supported by a framework of risk analysis and evaluation.

6.4.2 Risks and Uncertainties identified through the STAG process

Key risks and uncertainties associated with progressing accessibility improvements at Insch Station are noted below:

- **Land Tenure:** each of the options under consideration as part of the study would require development of land that is not currently owned by Aberdeenshire Council or Network Rail and therefore land acquisition would be required (although to varying extents depending on the option). Land could be acquired via a negotiation process or through Compulsory Purchase Order (CPO).
- **Planning Consent:** Due to the listed status of the station, listed planning consent would be required for the installation of lifts or ramps, and separate listed planning consent would be required should the existing footbridge be removed. Planning consent would additionally be required for the delivery of the car park and footpath options, including completion of a Transport Statement or Transport Assessment for the car park option. Positive discussions have taken place with the local authority thus far and this dialogue will need to be maintained going forward. Feedback from planning officers has indicated that strong justification would be required to obtain the planning consent necessary to remove the existing footbridge and if Option 3 or Option 4 are selected as the preferred option, a clear rationale would need to be set out, including the reasons why other options are not suitable. It should be noted that Network Rail has recently introduced an independent Design Advice Panel, who could be consulted on options as the project progresses.
- **Availability of Funding:** at present, there is no allocated budget to support the progression of options through to delivery and construction. However, a range of funding sources exist, namely the Department for Transport's Access for All scheme[18], which provides funding to create obstacle free, accessible routes from the station entrance to platforms, including through the provision of lifts and ramps. It is understood that there is a commitment to extend this funding until at least 2024. The UK Government's Levelling Up fund announced in March 2021 may provide a further funding opportunity, with accessibility improvements to local transport

[18] https://www.gov.uk/government/collections/access-for-all-programme

networks for disabled people understood to be an area that local authorities can submit bids. Furthermore, as noted in **Section 4.5.4**, the recently published STPR2 Phase 1 Report[19] recognises the value of access for all rail infrastructure and includes the recommendation to progress a study to identify locations and options for infrastructure to provide access for all at rail stations, this could signal potential funding opportunities in the future at the national level.

- **Ownership and Footpath and Car Park Options:** discussions would be required with rail stakeholders and the local authority to reach agreement on the arrangements for future ownership and maintenance of the options, specifically those that include the footpath and car park.
- **Technical Risks:** there are technical risks to consider with each of the options, as discussed further in Table 6.2. Of particular significance are the risks associated with implementation of the footpath option via the Level Crossing. This process requires amendments to be made to the existing Level Crossing Order and requires input from the ORR and Network Rail (who are not supportive of the footpath option), as detailed in **Section 6.3.1**.
- **Future Attitudes to Travel:** the Covid-19 pandemic has led to significant change in people's travel behaviours and introduced uncertainty around future travel patterns including future attitudes to travel. Specifically, the government-enforced lockdown has resulted in a shift to home working and a reduction in overall travel demand, particularly on public transport, including on the rail network, with only essential journeys permitted. There is uncertainty as to whether some of the observed changes will be short-term or if they will result in a more structural change in how society operates. In the context of rail, as a result of increased home working, it is anticipated that rail users will be made up of fewer daily commuters to work, while leisure trips and longer distance trips may increase as people are afforded the opportunity to live further from their workplace. Research[20] has shown that people with disabilities are more likely to undertake a larger proportion of leisure trips and smaller proportion of commuting trips compared to people without disabilities (8% compared to 22%) and therefore it could be argued that the impacts on those users most likely to benefit from accessibility improvements at Insch would be less pronounced given that it is the commuting market that potentially brings with it the greatest uncertainty around future travel demand. In the context of Insch, it is important to recognise that while there remains uncertainty over future use of the rail network in terms of overall demand, the problems identified at Insch regarding access 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.
- **Environment:** as detailed in **Section 4.2**, various environmental issues have been identified as part of this study, most notably in relation to the potential landscape and visual and cultural heritage impacts that proposed options could have on the fabric of the existing station. A key factor in the assessment against the cultural heritage criteria relates to the potential removal of the existing footbridge, which is a listed structure. It is considered that retention of the existing footbridge would lessen the cultural heritage impacts associated with these options and subsequently mitigate the environmental concerns raised; further discussion about the future of the existing footbridge should be undertaken as the study moves forward.
- **Managing Communications:** ongoing engagement and sharing of information with partners and wider stakeholders through regular briefings should be undertaken to generate ongoing buy-in to the project and reduce the potential for future objections, including for example complaints during construction phases. As outlined in **Section 6.3.3**, there is strong support amongst the community for interventions that improve accessibility at the station and therefore this is considered to be low risk; however, it is important to keep the community updated with progress, particularly those living in close proximity to Insch Station who may be directly impacted by interventions.

The risks and uncertainties outlined above could have implications in terms of the programme for delivering options. The table below presents indicative timescales for the delivery of each option. It should be noted that this is based on the assumption that the land required to the south of the station is a private sale agreed between Network Rail and the landowner, which is assumed to be completed during the design phase.

[19] https://www.transport.gov.scot/media/49098/stpr2-update-and-phase-1-3-feb-2021.pdf

[20] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/647703/disabled-peoples-travel-behaviour-and-attitudes-to-travel.pdf

Table 6.1: Indicative Timescales for Option Delivery[21]

Project Activity	Option 1a - Footpath	Option 3 – Footbridge with Ramps	Option 4 – Footbridge with Lifts	Option 5b – Car Park + Footpath
GRIP 3	N/A – assumes Detailed Appraisal Report addresses this requirement			
Tender / Procurement (Design & Build)	Minimum 4 months	Minimum 4 months	Minimum 4 months	Minimum 4 months
GRIP 4 & 5 to AFC Issue	May be up to 12 months due to ORR sign off of the Level Crossing	6 months for design with further 2 months to full planning consent	6 months for design with further 2 months to full planning consent	May be up to 12 months due to ORR sign off of the Level Crossing
Land Purchase	Completed at the same time as GRIP 4 & 5 (minimum 12 months)			
Build Phase	4-6 months	6-8 months	6 months	6-8 months
Total Duration	22 months	20 months	18 months	24 months

A Hazard Identification Register has also been prepared to highlight a number of the technical risks associated with options under consideration through this study, as informed by a HAZard IDentification (HAZID) Workshop attended by Members of the Project Team during the study. The Risk Register, presented in Table 6.2, summarises each of the key risks identified during the HAZID workshop, and considers the likelihood of delivery and severity of their occurrence based on the categories below.

		Consequence				
		1	2	3	4	5
Frequency	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5

Risk Category	
Intolerable	High risk that is unacceptable
Tolerable	Risk that is acceptable when reduced to ALARP
Negligible	Low risk that is generally acceptable

[21] Risks to programme include: Public Utility diversions, ground conditions, environmental constraints, and weather conditions.

Table 6.2: Risk Register

Ref.	Description	Cause	Consequence	Uncontrolled Risk		
				Likelihood	Severity	Risk
Insch_001	Risk of pedestrian coming into contact with road vehicle on the Level Crossing (existing risk)	Footpath users pushed onto roadway due to narrowness of footpath	Major injury (assumes non fatality due to sighting lines and speed but assumes older demographic)	4	3	12
Insch_002	Vehicle entering Level Crossing with barriers lowering and becoming trapped between barriers (existing risk)	Road driver indiscipline	The consequence is offset by the signaller who must confirm crossing is clear and can therefore stop barriers lowering	4	2	8
Insch_003	Pedestrian attempting to beat barriers lowering slips trips or falls on crossing (existing risk)	Pedestrian indiscipline	Unlikely to occur in older demographic but risk exists for other users	2	2	4
Insch_004	Level Crossing footprint altered	Dimension required for safe segregation of road and pedestrian traffic is greater than existing footprint	Change in LC order required and not supported by ORR or Network Rail leading to maintenance of existing arrangements see risks 001 to 003	4	3	12
Insch_005	Passengers trapped in platform to platform lifts	Lift failure	Discomfort and concern It should be noted that the frequency of lift failures is extremely low	1	2	2
Insch_006	Users of car park do not use safe access arrangements	Car park significantly remote from station	Unauthorised access to station may increase	2	3	6
Insch_007	Users of footpath and car park do not feel safe or secure	Secluded location and darkness (lighting, CCTV (could mitigate impacts)	Footpath and Car park not used by rail travellers	2	3	6

Inherent Severity				Inherent Likelihood		
Consequence Category	Classification Term	Description Safety	Description Non Safety	Frequency Category	Classification Term	Description
1	Negligible	Non-reportable injury	No effect	5	Frequent	The event is likely to occur frequently (probably on a daily basis)
2	Minor	Minor injury	Minor effect	4	Probable	The event will occur several times and is likely to occur often
3	Major	Major injury/multiple minor injuries	Noticeable inconvenience	3	Occasional	The event is likely to occur several times
4	Critical	Single fatality/multiple major injuries	Significant inconvenience	2	Remote	The event can be expected to occur during the lifecycle
5	Catastrophic	Multiple fatalities	Infrastructure intent not met	1	Improbable	The event is unlikely to occur by may by exception occur

7. Option Summary Tables

7.1 Option Summary Tables

This report has considered the key elements of the appraisal summarising the performance of the appraised options against the five STAG criteria of environment; economy; safety; integration; and accessibility & social inclusion. In addition, consideration has also been given to the Costs to Government, deliverability and public acceptability.

Option Summary Tables have been developed for each option. As the Do-Minimum has been scored as neutral in order to provide the basis for comparison of other options, an Option Summary Table has not been produced for this. It should be noted that the scoring of the OSTs under the heading of 'Summary of impact on the five STAG criteria' includes the range of impact for each option, across each of the STAG sub-criteria.

Option 1a Summary Table

Option title: Footpath through field and along the south side of the B9002

Option description:

Option includes a new footpath through the field to the south of the station along the south side of the B9002. 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 Level Crossing.

Capital Costs/grant (2010 Prices): £316,000

Annual Revenue Support (2010 Prices): Regular, incl. winter maintenance

Present Value (PV) of Cost to Government: N/A

Summary of impact on the five STAG criteria

Impacts (Monetary and Non-Monetary)

	- - -	- -	-	*0*	+	++	+++
Accessibility and Social Inclusion							
Environment							
Integration							
Safety							
Economy							

	Monetary only (£m)		**Monetary impact ratio**
			(if relevant)
NPV:		**BCR:**	
Including Wider Economic Benefits **NPV(WEB):**		**BCR(WEB):**	

Assessment against Transport Planning Objective

	- - -	- -	-	*0*	+	++	+++
TPO							

Contribution toward the Government Purpose	This option improves access at Insch Station for all users, including those that are currently unable to cross between platforms in a safe and easy way. Improving access at the station therefore contributes towards the Government's purpose by improving access to rail services and onward travel to key services, including employment centres. This therefore helps to support sustainable economic growth. It is noted however that the impact of this option may not support the Government's purpose as strongly as other options.

STAG Criteria		**Implementability Appraisal**	
Criterion:	**Supporting Information**	**Criterion:**	**Supporting Information**
Accessibility & Social Inclusion	It is anticipated that the disproportionate impact experienced by people travelling with a pram would be lessened as a footpath would provide those people the opportunity to access Platform 1 without having to navigate a stepped overbridge. While other groups would benefit from the implementation of a footpath between the platforms relative to the Do-Minimum situation, it is considered that older people, pregnant people and those with a disability would still be disproportionately impacted by the accessibility arrangement as this option would require an approximate 250m travel distance between platforms and would require navigation of the Level Crossing, which is uneven.	Technical	While construction of a new footpath would be feasible, there are a number of challenges which would constitute cost, timescale and deliverability risks including required changes to the Level Crossing Order, which requires promotion to ORR via Network Rail. Network Rail has expressed concerns over the footpath option and therefore would be unlikely to support any changes to the Order. The footpath also requires 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 the existing rail signalling. Private land to the south of Platform 1 would also be required to facilitate a connection from the B9002 to the rear of Platform 1 and discussions would be required to determine who would take ownership of the footpath and therefore be responsible for its construction and maintenance.
Safety	The implementation of a footpath used to access the south side of the station is anticipated to increase the numbers of active travel users passing over the Level Crossing, therefore increasing the interaction between vehicles and active travel users and poses a potential safety risk. Furthermore, it is likely that increased pedestrian activity could include vulnerable groups such as elderly people, those with mobility impairments and people with prams or those who are not able to use the existing stepped overbridge. The footpath option additionally raises security concerns. The relatively secluded nature of the path behind the station could introduce concerns relating to anti-social behaviour. However, this could be mitigated through the provision of lighting and CCTV.	Operational	Although the footpath element would traverse the Level Crossing, this is not expected to have any impact on the operational impact of the rail network.
Economy	The footpath option may provide some minor transport user benefits by improving the journey quality for a limited number of existing users by removing the requirement to navigate the stepped footbridge. However, due to its limitations as an accessibility solution (primarily in terms of the distance required to cross between platforms and the requirement to navigate the Level Crossing), it is not anticipated that the footpath option would divert users to rail from other modes or generate new users who do not currently make trips. Similarly, it would not be anticipated that the general population would place value on the footpath option in relation to improved inclusiveness as this is not a wholly inclusive option. Due to the limitations outlined, it is not anticipated that the footpath option would improve access to employment opportunities or other services to the extent that notable economic benefits would be generated. Whilst the footpath option has the lowest capital construction costs, the anticipated benefits that would be generated from such an improvement would be limited.	Financial	Estimated construction costs are lower compared to other options. It is anticipated that the footpath option would incur relatively low maintenance costs, although any required changes to the Level Crossing may result in escalating cost and require agreement from the Office of Rail and Road (ORR).

Integration	The option strongly aligns with the NTS2 Priority 'Reducing Inequalities' by providing improved access at the rail station, which in turn improves access for onward travel to key attractors, including employment and education sites and healthcare facilities. The option also aligns well with other policy and legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in Nestrans Regional Transport Strategy 2040, which specifically references accessibility improvements at Insch Station.	Public Acceptability	It is considered that the footpath option would generally have public support in terms of enhancing accessibility at Insch Station; however, the engagement exercise indicated a number of concerns relating to the travel distance that would be required between platforms, the difficulties of navigating a cobbled paving surface and the Level Crossing, 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.
Environment	***This section identifies key impacts and tension across the sub-criteria***		
	Overall, although no significant impact is anticipated on environment associated with Option 1a, some slight negative impacts are anticipated. Minor negative impacts are anticipated against biodiversity and habitats as a result of loss of trees and scrub and lighting would be required for safety reasons along the footpath which can create a barrier to species such as bats. The introduction of a new footpath is not considered likely to result in significant adverse landscape and visual effects should appropriate mitigation be implemented, though there is still considered to be a slight negative impact. The lighting design will also be required to be designed in combination with input from an appropriately qualified ecologist to minimise effects on protected species. The proposed location of the option would, through strategic design, avoid direct impact on any of the listed structures. The design of materials used, such as type of street furniture and lighting could be designed, in combination with input from a Heritage consultant, to minimise significant adverse effects on the setting and character of the listed structures; though again, a slight negative impact is anticipated.		
Transport Planning Objective			
Objective:	Description of Objective		
TPO	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 3 Summary Table

Option title: Footbridge with Ramps

Option description:

Option includes a new footbridge with ramps. Option would allow step-free access to Platform 1 by non-motorised users. In order to ensure appropriate gradients, this would involve an approximate 250m travel distance between platforms.

Capital Costs/grant (2010 Prices): £1,740,000

Annual Revenue Support (2010 Prices): Regular, incl. winter maintenance

Present Value (PV) of Cost to Government: N/A

Summary of impact on the five STAG criteria

Impacts (Monetary and Non-Monetary)

	- - -	- -	-	0	+	++	+++
Accessibility and Social Inclusion							
Environment							
Integration							
Safety							
Economy							

	Monetary only (£m)		**Monetary impact ratio**
			(if relevant)
NPV:		**BCR:**	
Including Wider Economic Benefits **NPV(WEB):**		**BCR(WEB):**	

Assessment against Transport Planning Objective

	- - -	- -	-	0	+	++	+++
TPO							

Contribution toward the Government Purpose

This option improves access at Insch Station for all users, including those that are currently unable to cross between platforms in a safe and easy way. Improving access at the station therefore contributes towards the Government's purpose by improving access to rail services and onward travel to key services, including employment centres. This therefore helps to support sustainable economic growth. It is noted however that the impact of this option may not support the Government's purpose as strongly as other options, particularly Option 4.

STAG Criteria		**Implementability Appraisal**	
Criterion:	**Supporting Information**	**Criterion:**	**Supporting Information**
Accessibility & Social Inclusion	It is anticipated that the disproportionate impact experienced by particular groups, including older people, pregnant people, those travelling with prams and those with a disability would be lessened as a footbridge with ramps would allow step-free access to Platform 1. However, in order to ensure appropriate gradients, it is anticipated that the footbridge with ramps would involve an approximate 250m travel distance between platforms and therefore these same groups would continue to be impacted to a greater extent than the rest of society. While it is considered that the ramp option would provide a greater benefit to some people than	Technical	There are no significant feasibility concerns as this is a common means of providing platform-to-platform access across the rail network. Deliverability risks to consider include the requirement for a significant proportion of land take from the existing car park, the purchase of private land to the south of Platform 1, re-cabling to take station retail cabling (lighting, CCTV, LLAP)

	the footpath option because it does not involve having to navigate the Level Crossing, the slight gradients may prove difficult for some.		across the Platform 1 from the existing footbridge to the new footbridge, and the requirement for listed planning consent.
Safety	It is considered that the implementation of a footbridge with ramps could slightly reduce the risk of accidents. The only current means of accessing Platform 1 is via the stepped overbridge, which creates a trip hazard, particularly for more vulnerable groups such as elderly people and young children. The implementation of step-free access between the platforms would be considered to reduce this risk. The implementation of a footbridge with ramps is not be anticipated to have any effect on the security of station users.	Operational	Option is not expected to have any impact on the operational impact of the rail network or otherwise.
Economy	The footbridge with ramps option may provide some transport user benefits by improving the journey quality for a variety of existing users. However, the distance required to cross between the platforms is similar to the footpath option (~250m), which may continue to present a barrier to access for some users. This option could divert a limited number of users to rail from other modes and generate some new users who do not currently make trips. It would not be anticipated that the general population would place value on the footbridge with ramps option in relation to improved inclusiveness as this is not a wholly inclusive option. There may be some minor benefits in terms of option values, with a number of respondents to the online survey noting that the stepped overbridge does not currently present a barrier to access at the station but that it is likely to in the future. There may be some minor benefits in terms of increased station use and in terms of economic benefits generated by improved access to employment opportunities and services. Whilst there are a number of benefits relative to the Do-Minimum, the footbridge with ramps option would require significant capital investment (and ongoing maintenance costs) without providing a solution that would be accessible to all.	Financial	Option would be estimated to constitute a high cost option in term of capital construction costs. This option would also require ongoing maintenance, including winter maintenance. From an efficiency point of view, delivery of this option could remove the need for investment in the existing footbridge, therefore maximising the value of renewals, should the existing footbridge be removed.
Integration	The option strongly aligns with the NTS2 Priority 'Reducing Inequalities' by providing improved access at the rail station, which in turn improves access for onward travel to key attractors, including employment and education sites and healthcare facilities. The option also aligns well with other policy and legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in Nestrans Regional Transport Strategy 2040, which specifically references accessibility improvements at Insch Station. However, owing to the option resulting in a new overbridge and ramp, it does not support Policy E2: Landscape and Policy HE1: Protecting Historic Buildings, Sites and Monuments of the LDP.	Public Acceptability	It is considered that the option would generally have public support in terms of enhancing accessibility at Insch Station; however, the engagement exercise indicated a number of concerns relating to the loss of parking associated with this option and the significant visual impact that the footbridge with ramps option could cause.
Environment	***This section identifies key impacts and tension across the sub-criteria***		
	Impact of the option against environmental criteria is considered to range from neutral to major negative depending on the sub-criteria. While there is anticipated to be a neutral impact against most environmental sub-criteria, there is likely to be a minor negative impact against the biodiversity and habitats sub-criterion, a moderate negative impact against the landscape and visual sub-criterion and a major negative impact on the cultural heritage sub-criterion. It should be noted that this option has been assessed as having major negative cultural heritage impacts based on the assumption that the existing footbridge would be removed. It may be possible to retain the existing footbridge; however, this would require discussions between relevant stakeholders should this option be progressed further.		
Transport Planning Objective			
Objective:	Description of Objective		
TPO	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 4 Summary Table

Option title: Footbridge with Lifts

Option description:

Option includes a new footbridge with lifts and would allow step-free access to Platform 1 by non-motorised users.

Capital Costs/grant (2010 Prices): £1,950,000

Annual Revenue Support (2010 Prices): Lift servicing & maintenance

Present Value (PV) of Cost to Government: N/A

Summary of impact on the five STAG criteria

Impacts (Monetary and Non-Monetary)

	- - -	- -	-	*0*	+	++	+++	**Monetary only (£m)**	**Monetary impact ratio**
									(if relevant)
Accessibility and Social Inclusion									
Environment									
Integration									
Safety									
Economy									

NPV: **BCR:**

Including Wider Economic Benefits **NPV(WEB):** **BCR(WEB):**

Assessment against Transport Planning Objective

	- - -	- -	-	*0*	+	++	+++
TPO							

Contribution toward the Government Purpose

This option improves access at Insch Station for all users, including those that are currently unable to cross between platforms in a safe and easy way. Improving access at the station therefore contributes towards the Government's purpose by improving access to rail services and onward travel to key services, including employment centres. This therefore helps to support sustainable economic growth.

STAG Criteria		**Implementability Appraisal**	
Criterion:	**Supporting Information**	**Criterion:**	**Supporting Information**
Accessibility & Social Inclusion	It is considered that the footbridge with lifts option would fully negate the disproportionate impact of the current situation on particular groups, including older people, pregnant people, those travelling with prams and those with a disability. This option would allow easy access between platforms regardless of age, gender or physical disability and as a result would allow excluded groups to participate more in society through increased opportunities that rail travel from Insch Station would bring.	Technical	There are no significant feasibility concerns relating to this option as this is a common means of providing platform-to-platform access across the rail network, with lifts also in place at other stations on the Aberdeen to Inverness corridor. Deliverability risks to consider include the requirement to remove a limited number of spaces from the existing car park, the purchase of private land to

			the south of Platform 1 and the requirement for listed planning consent.
Safety	It is considered that the implementation of a footbridge with lifts could have the potential to reduce the risk of accidents slightly. Currently, the only means of accessing Platform 1 is via the stepped overbridge, which creates a trip hazard, particularly for more vulnerable groups such as elderly people and young children. The implementation of step-free access between the platforms would be considered to reduce this risk. The implementation of a footbridge with lifts would not be anticipated to have any effect on the security of station users and the presence of CCTV also means that misuse of the lifts would not be expected to be an issue.	Operational	Option is considered to be operationally feasible. In the event of lift breakdown, a descend button which allows the lift to return to ground level would be fitted.
Economy	The footbridge with lifts option would be anticipated to generate a number of economic benefits. It would be anticipated to provide transport user benefits in terms of improving the journey quality for a wide variety of users, in terms of the potential to divert some users to rail from other modes and in terms of enabling new users to make trips that they would not have otherwise made. The results of the online survey highlighted the value that the wider population of Insch place on improved inclusiveness that a fully accessible station would bring. The results of the online survey also demonstrated option value benefits, with a number of respondents referencing how the existing accessibility arrangement does not affect them at present but may do in the future. In terms of the economic benefits that could be generated from improved access to employment opportunities and services, the potential lost revenue exercise indicated that improved accessibility at Insch Station could lead to increased station use, equating to an estimated additional revenue of ~£50k per annum.	Financial	Option would be estimated to be a high cost option for construction. This option would be associated with potentially higher maintenance costs associated with regular and ad-hoc maintenance should any technical issues arise. From an efficiency point of view, delivery of this option could remove the need for investment in the existing footbridge, therefore maximising the value of renewals, should the existing footbridge be removed.
Integration	This option is anticipated to have a moderate beneficial impact on the policy integration criterion. This is a result of the lift component of the option. This option removes existing barriers to accessing both platforms at the station. As with other options, the option strongly aligns with the NTS2 Priority 'Reducing Inequalities' by providing improved access at the rail station, which in turn improves access for onward travel to key attractors, including employment and education sites and healthcare facilities. The option is generally considered to have a neutral impact around other NTS2 Priorities, although the option may have a slight positive impact against Reducing Negative Impacts on Safety, Health & Wellbeing associated with the mental health benefits that could be generated by reducing the barriers to accessing the rail network and the associated opportunities that this can provide. This option may also have a slight positive impact against connectivity by improving access to rail services. Furthermore, the option aligns well with other policy and legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in Nestrans Regional Transport Strategy 2040, which specifically references the need for accessibility improvements at Insch Station. However, owing to the option resulting in a new overbridge and a lift, it does not support Policy E2: Landscape and Policy HE1: Protecting Historic Buildings, Sites and Monuments of the LDP.	Public Acceptability	It is considered that the footbridge with lifts option would have significant public support in terms of enhancing accessibility at Insch Station. It was generally agreed in responses to the public survey and during wider engagement with the community that the lift option is the only way to improve accessibility at Insch Station such that travel opportunities are increased for all users. While this option was identified as the clear preference during engagement with the community, a very small number of respondents to the public survey indicated concerns regarding impacts on the visual amenity and the chance of breakdown associated with this option.
Environment	***This section identifies key impacts and tension across the sub-criteria***		
	Impact of the option against environmental criteria is considered to range from neutral to major negative depending on the sub-criteria. While there is anticipated to be a neutral impact against most environmental sub-criteria, there is likely to be a minor negative impact against the biodiversity and habitats sub-criterion, a moderate negative impact against the landscape and visual sub-criterion and a major negative impact on the cultural heritage sub-criterion. It should be noted that this option has been assessed as having major negative cultural heritage impacts based on the assumption that the existing footbridge would be removed. It may be possible to retain the existing footbridge; however, this would require discussions between relevant stakeholders should this option be progressed further.		
Transport Planning Objective			
Objective:	Description of Objective		
TPO	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 5b Summary Table

Option title: New car park south of platform 1 with footpath through field & along the south side of the B9002

Option description:

Option includes a new footpath through the field to the south of the station along the south side of the B9002 as well as a new car park, also to the south of the station. 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 a 43-space car park. There is an approximate 250m travel distance and navigation of the Level Crossing is required for access between the platforms on foot with this option.

Capital Costs/grant (2010 Prices): £1,530,000

Annual Revenue Support (2010 Prices): Regular, incl. winter maintenance

Present Value (PV) of Cost to Government: N/A

Summary of impact on the five STAG criteria

Impacts (Monetary and Non-Monetary)

	- - -	- -	-	*0*	+	++	+++	**Monetary only (£m)**	**Monetary impact ratio**
									(if relevant)
Accessibility and Social Inclusion									
Environment									
Integration									
Safety									
Economy									

NPV: **BCR:**

Including Wider Economic Benefits **NPV(WEB):** **BCR(WEB):**

Assessment against Transport Planning Objective

	- - -	- -	-	*0*	+	++	+++
TPO							

Contribution toward the Government Purpose

This option improves access at Insch Station for all users, including those that are currently unable to cross between platforms in a safe and easy way. Improving access at the station therefore contributes towards the Government's purpose by improving access to rail services and onward travel to key services, including employment centres. This therefore helps to support sustainable economic growth. It is noted however that the impact of this option may not support the Government's purpose as strongly as other options.

STAG Criteria

Implementability Appraisal

Criterion:	Supporting Information	Criterion:	Supporting Information
Accessibility & Social Inclusion	In terms of age and disability, it is considered that this option would mainly provide benefits to those who can be dropped off and picked up at the station. For those driving themselves, it would be anticipated that older people and those with mobility impairments would continue to be impacted negatively because they would be required to utilise the footpath on their return journey. It is anticipated that this option would generally be suitable for those with prams or with young children, although a disproportionate impact would still be felt by people who are pregnant and other groups due to the distance required to travel via the footpath on their return journey.	Technical	Option would be associated with the same risks identified for Option 1a and other risks, including a requirement for land to be purchased to the south of Platform 1. Discussions with Aberdeenshire Council highlighted concerns relating to access to the site, the provision of suitable permeability to the surrounding area and to the ability to provide suitable footway connections in and around the Level Crossing.

Safety	The implementation of a new car park to the south of the station is anticipated to increase the numbers of vehicles passing over the Level Crossing, albeit this number is likely to be relatively small as the new car park would only offer an additional 43 spaces. However, this accentuates the concerns also raised as per Option 1a as it could increase the number of vehicles passing over the Level Crossing as well as active travel users, likely leading to increased interaction between the two and therefore increasing the risk of accidents occurring. In line with the appraisal against Option 1a, this option raises safety concerns in terms of the increased interaction between vehicles and pedestrians at the driveway between the two properties that the footpath is proposed to be routed through. The option additionally raises concerns in terms of security given the relatively secluded nature of the path behind the station. However, this could be mitigated through the provision of lighting and CCTV.	Operational	Discussions would also be required to determine ownership of the car park including responsibility for construction and maintenance.
Economy	The new car park plus footpath option may provide some minor transport user benefits in terms of improving the journey quality for a limited number of existing users by removing the requirement to navigate the stepped footbridge for these users. Whilst it may provide slightly enhanced accessibility compared to the footpath solution on its own as it could improve access to the rail network for people with mobility issues that could be picked up and dropped off at the station, it is not anticipated that these improvements would be significant enough to divert users to rail from other modes or generate new users who do not currently make trips. Whilst Option 5b provides some minor additional benefits relative to the footpath solution on its own, the capital construction costs of the new car park plus footpath would be nearly five times as much, and ongoing maintenance costs would also be greater.	Financial	The car park plus footpath option would be expected to constitute a medium-high cost option based on the potential technical issues identified. This option would also require ongoing maintenance, including footpath and car park maintenance, lighting and CCTV.
Integration	The option aligns strongly with the NTS2 Priority 'Reducing Inequalities' by providing improved access at the rail station, which in turn improves access for onward travel to key attractors, including employment and education sites and healthcare facilities. The option also aligns well with other policy and legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in Nestrans Regional Transport Strategy 2040, which specifically references accessibility improvements at Insch Station. The car park component of this option results in a slight negative score against Safety & Casualty Reduction, Protecting Natural Environment & Access to Nature, Demand Management and Modal Shift as a result of a new car park potentially encouraging travel by car. However, given the small size of the car park, it is expected that any increase in traffic flows would be very minor and could be offset by enabling more people to travel by rail for longer trips rather than by car.	Public Acceptability	It is considered that the car park plus footpath option would generally have public support, with the engagement exercise indicating that some people would like to see additional car parking considered as a potential improvement. However, the concerns raised regarding the implementation of a footpath are applicable in the case of this option also, including likely objections by local residents who may be adversely impacted by the construction of a new footpath.
Environment	***This section identifies key impacts and tension across the sub-criteria***		
	Overall, although no significant impact is anticipated on environment associated with the footpath element of the option, some slight negative impacts are anticipated. Minor negative impacts are anticipated against biodiversity and habitats as a result of loss of trees and scrub and lighting would be required for safety reasons along the footpath which can also create a barrier to species such as bats. The introduction of a new footpath is considered unlikely to result in significant adverse landscape and visual effects should appropriate mitigation be implemented, though there is still considered to be a slight negative impact. The lighting design will also be required to be designed in combination with input from an appropriately qualified ecologist to minimise effects on protected species. The proposed location of the option would, through strategic design, avoid direct impact on any of the listed structures. The design of materials used, such as type of street furniture and lighting could be designed, in combination with input from a Heritage consultant, to minimise significant adverse effects on the setting and character of the listed structures; though again, a slight negative impact is anticipated. The car park element does however raise some concerns, including around air quality, water quality, drainage and flood defence and noise and vibration, which other options were not assessed against. Introduction of a new car park brings with it the potential for increased levels of CO_2; although these are considered to be low levels. The area of proposed development falls just outwith the 200 year flood risk zone for both The Shevock and Mill of Rothney Burn. Notwithstanding, the introduction of a car park and associated access track creates additional areas of hardstanding, which in turn can lead to localised flooding during periods of increased rainfall. Detailed design will need to be undertaken according to the principles of Sustainable urban Drainage Systems (SuDS). There are also a number of noise sensitive receptors in the vicinity of the proposed car park and associated access road.		
Transport Planning Objective			
Objective:	Description of Objective		
TPO	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.		

8. Monitoring & Evaluation

8.1 Introduction

The Scottish Government requires monitoring and evaluation to be undertaken and documented for any proposal for which it provides funding or approval. STAG requires that a new project or strategy be subject to planned evaluation and monitoring, in addition to regular revalidation throughout its development.

Monitoring is an ongoing process of watching over the performance of a project identifying problems as they arise and taking appropriate action, whilst evaluation is used for specific, post-implementation events, designed to assess the project performance against established objectives and to provide in-depth diagnosis of successes as well as deficiencies. Therefore, by gathering and interpreting information, monitoring and evaluation will demonstrate how the project or strategy performs against its objectives, identify any deficiencies and allow adjustments to be made.

Transport Scotland's 2015 Guidance for the Evaluation of Rail Projects[22] sets out good practice advice around the evaluation of rail schemes including the setting of SMART TPOs to assist with future evaluation and noting that the evaluation approach should be proportionate to the scale and cost of the project. It suggests that evaluation should be undertaken at two key stages:

- **Stage 1 Evaluation**: Usually carried out around a year following the completion of a project, this is a high level assessment of the extent to which the project is on track to reach its objectives, through examining relevant monitoring data. An assessment of outturn versus predicted cost can also be made. This may also provide an opportunity to assess mitigation measures (to prevent, reduce and where possible remedy or offset any significant adverse impacts on the environment). An assessment of the delivery of the project usually through interviews with key members of staff should also be included (i.e. a process evaluation, lessons learned exercise).
- **Stage 2 Evaluation**: It is recommended that a more comprehensive evaluation be carried out when a project has had sufficient time to bed in, typically 3-5 years after the completion of a project. It will draw upon the existing types of data outlined for Stage 1 but also collect primary data to assess if the project has achieved its objectives, such as surveys of passengers and stakeholders. Where possible this data should be compared with information collected as part of the baseline studies. It also recognises that there usually is a time lag in secondary data sources being published so by carrying out the evaluation 5-10 years after completion there will be usually be a better selection of data available. Additional elements such as recalculation of Benefit Cost Ratio may also be included, along with an in depth assessment of Wider Economic Benefits and Accessibility.

The objective for this project is: *"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".* It is essential that the monitoring and evaluation process uses the objective as a performance indicator and considers to what extent the objective has been met. To achieve this, future monitoring and evaluation should use the 2019 Station Video Surveys and 2019 Public Surveys as a baseline to determine what impact the project has had in relation to improving accessibility at the station. It is noted that it is possible that circumstances may change within the time required for scheme development, approval and construction, which could affect the assumptions made regarding the proposals. During this time, it will be necessary to keep the objective under review, taking into account any changes in the underlying transport situation.

The following sections further describe the measures which may be put in place by Nestrans/Aberdeenshire Council to meet the requirements of STAG with respect to monitoring and evaluation.

8.2 Indicative Monitoring Programme

Table 8.1 sets out potential performance indicators, including monitoring approach. In conjunction with the evaluation performance indicators, these provide a framework against which the project can be monitored and evaluated.

[22] https://www.transport.gov.scot/media/11093/transport-research-rail-evaluation-rail-evaluation-guidance-2015-version-final-pdf-may-2015.pdf

Performance indicators for this project primarily relate to accessibility indicators given the focus of this study and the improvements under consideration in terms of improving physical accessibility at the station. As such, the proposed indicators are related to improved access at the station and as a result of this, improved access to services for onward travel to key attractors such as employment and education opportunities and healthcare, leisure and retail centres.

Table 8.1: Indicative Performance Indicators and Monitoring Programme

Objective	Performance Indicator	Indicator Definition	Performance Target	Source of indicator/target	Monitoring method & frequency
Accessibility	Access at the station	Change in number of passengers able to traverse platforms with ease	X% by {year}	Increase in users with mobility impairments using the station using 2019 video surveys as a baseline. Passenger satisfaction surveys using the 2019 Public Online Survey as a baseline.	Stage 2 Evaluation: Repeat of 2019 Video Surveys 1 and 3 years after scheme opening. Stage 2 Evaluation: Repeat of 2019 Public Online Survey to understand impacts of improvements on people's propensity to travel; undertaken 1 and 3 years after scheme opening.
	Access to employment and education opportunities and key attractors such as healthcare, leisure, and retail facilities	Change in number of people able to access the station with ease (and so access services for onward travel). Mode of travel to work/school etc.	X% rail use for travel from Census data and other local data as available. X% of households able to access key services within a defined period of time or defined distance.	Mode of travel to work/school from Census and other data as available. Local surveys as appropriate.	Review of Census Travel to Work Data, and other local surveys as appropriate.

In addition to the project being evaluated against the study objective, Table 8.2 sets out possible examples which might be employed as the basis for the evaluation.

Table 8.2: Evaluation Performance Indicators

Objective	Performance Indicator	Performance Target	Indicator Source	Monitoring method & frequency
Costs	Proportion of actual costs over budget, including realisation of risk	X% of budget exceedance	Project costs	Budget and cost comparison – after implementation
Views	The extent to which (stakeholder, public) consultation influenced outcomes	Views taken into account, including online survey and feedback from key stakeholders	Consultation process	Qualitative examination of consultation

Objective	Performance Indicator	Performance Target	Indicator Source	Monitoring method & frequency
	Stakeholders' views on how well the final option was designed and implemented. Lessons learned	Views on development and delivery of project	Stakeholder / public feedback	Qualitative survey results by group – after implementation Stage 2: Process Evaluation
Transport/ Accessibility	The extent to which expected results reflect reality	Accessibility at the station, particularly for groups who currently experience barriers crossing platforms	Passenger count data by group, ticketing data	Comparison between passenger numbers – before implementation and again one year later

The Process Evaluation is conducted straight after the implementation and it will draw lessons for ongoing implementation and for the design, management, and implementation of future projects.

A detailed Monitoring and Evaluation Plan should be drawn up as the study moves forward.

9. Summary & Recommendations

9.1 Introduction

This document has outlined the findings from the Detailed Appraisal of options to improve accessibility at Insch Station. The report sets out the relative merits of each of the shortlisted options against the TPO developed for the study, the five STAG criteria, and a detailed analysis of risk and uncertainty associated with each option, including feasibility, affordability, and public acceptability.

9.2 Summary

The Detailed Options 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 over 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 & 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 positively 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 the 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.

Table 9.1: 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**

Ref	Summary	Option 1A	Option 3	Option 4	Option 5b
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.

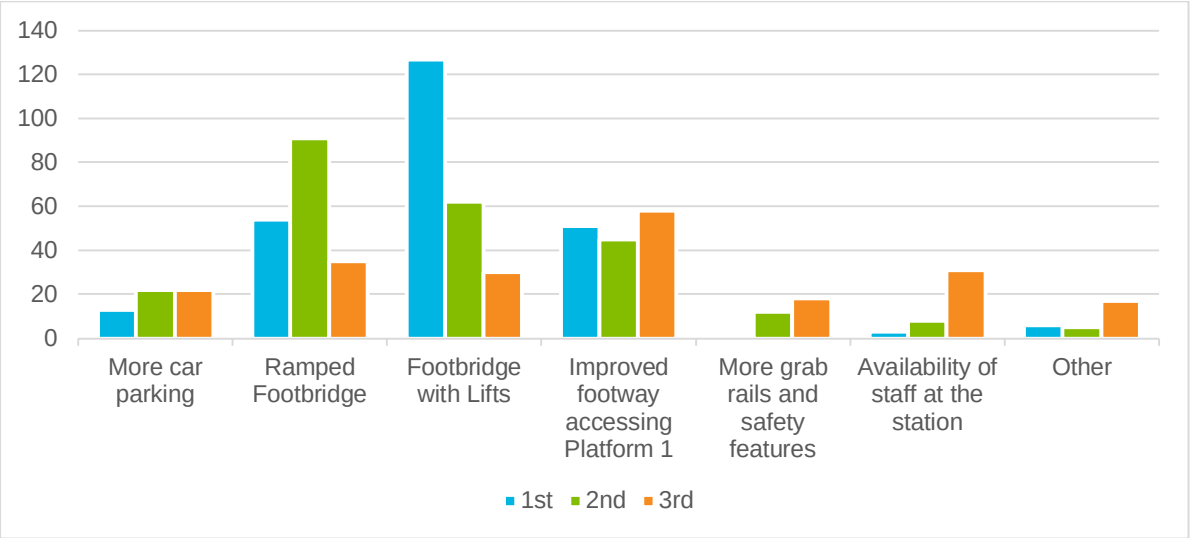


Figure 9.1: Potential Improvement Options (Prioritised)

A number of concerns were raised regarding Option 1a, including the distance required to travel 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.

9.3 Conclusions & Recommendations

Accessibility improvements at Insch Station have been a longstanding issue of concern amongst local residents and Elected Members in North East Scotland. Platform 2 is accessible from the main road and the station's car

park via a short flight of steps or ramps. Platform 1, however, 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 and therefore it is 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.

An Initial Appraisal: Case for Change study was developed during 2019 which explored problems and opportunities for travel to and from the station and generated a range of options for improving physical accessibility at the station. Problems and opportunities were identified based on 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 (online survey, public exhibition event at the station, meetings with the local Community Council and correspondence with stakeholders). This analysis was supported by detailed on-site review, including a site accessibility audit and video surveys of pedestrian behaviour in and around the station. The problems and opportunities analysis found that Insch is one of the least accessible stations in Scotland when taking into account patronage levels and distance to the nearest accessible station. Transport Scotland's recognition of the problems and issues at the station have been acknowledged through their approval of the Initial Appraisal: Case for Change report in early 2020. On the back of this work, five options were recommended for taking forward for further assessment through a Preliminary Appraisal stage: Option 1a: Footpath to south of Platform 1 with footpath on south side of B9002; Option 3: Footbridge with ramps; Option 4: Footbridge with lifts; Option 5a: New car park south of Platform 1; and Option 5b: New car park south of Platform 1 with footpath through field and along the south side of the B9002.

The Preliminary Appraisal stage of the study was progressed during 2020, which provided a largely qualitative assessment, considering the performance of each option against the study TPO, the five STAG criteria, implementability criteria (feasibility, affordability, public acceptability) and Established Policy Directives. The appraisal recommended that four of the five options considered should be taken forward to the Detailed Appraisal stage. It recommended that Option 5a was rejected from further consideration as it did not support the study TPO as it only provided a benefit to those rail users who could be dropped off and picked up at the station. The Preliminary Options Appraisal report was approved by Transport Scotland in December 2020.

This report has presented the findings from the Detailed Appraisal of the remaining options. 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.

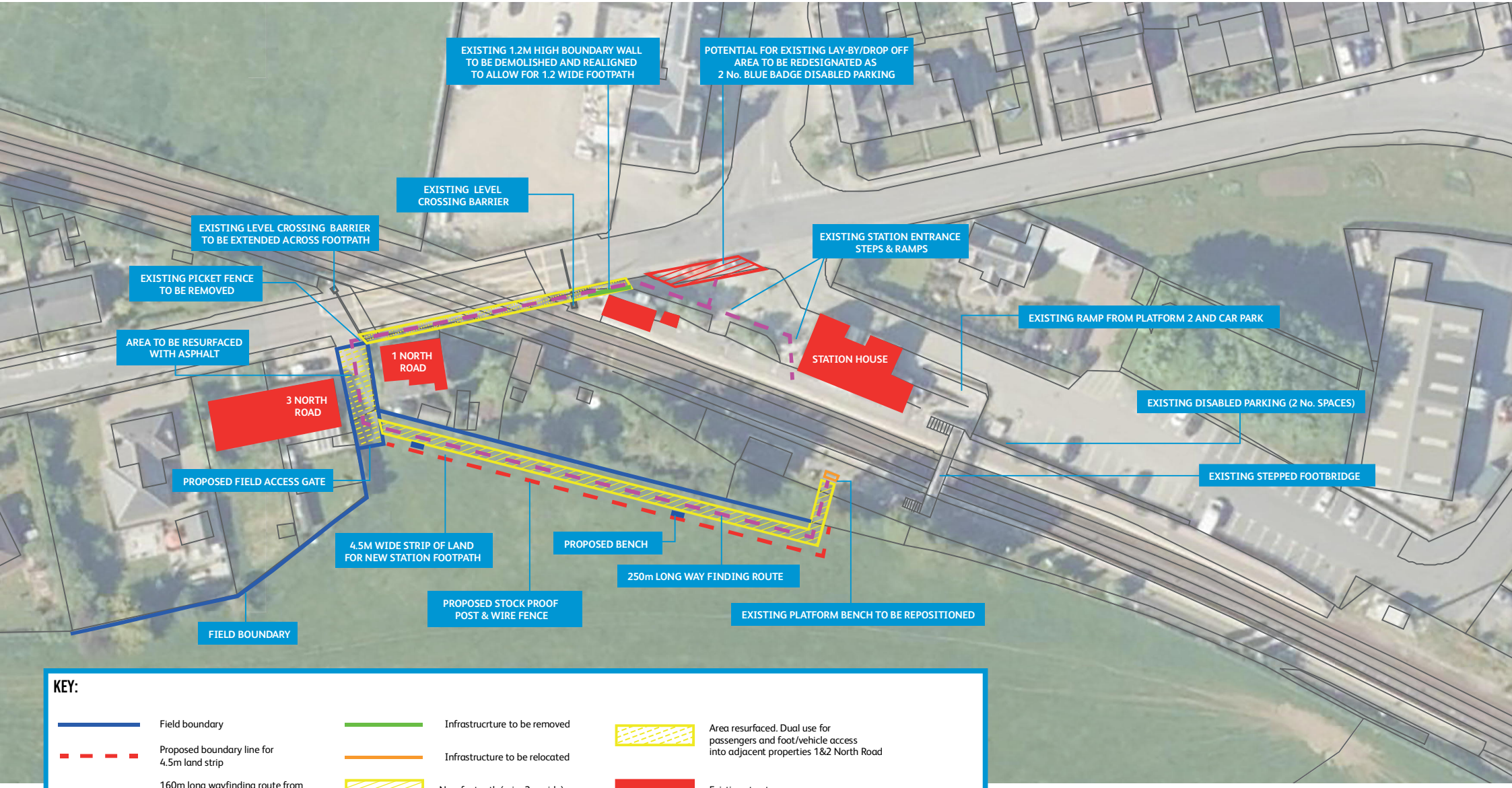
In progressing this option, further discussions should be undertaken with the Planning team at Aberdeenshire Council given the potential environmental impacts that have been identified, particularly in relation to potentially adverse impacts on the existing footbridge, meaning that any works would require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

Appendix A: Option Plans

INSCH STATION PLATFORM: OPTION 1

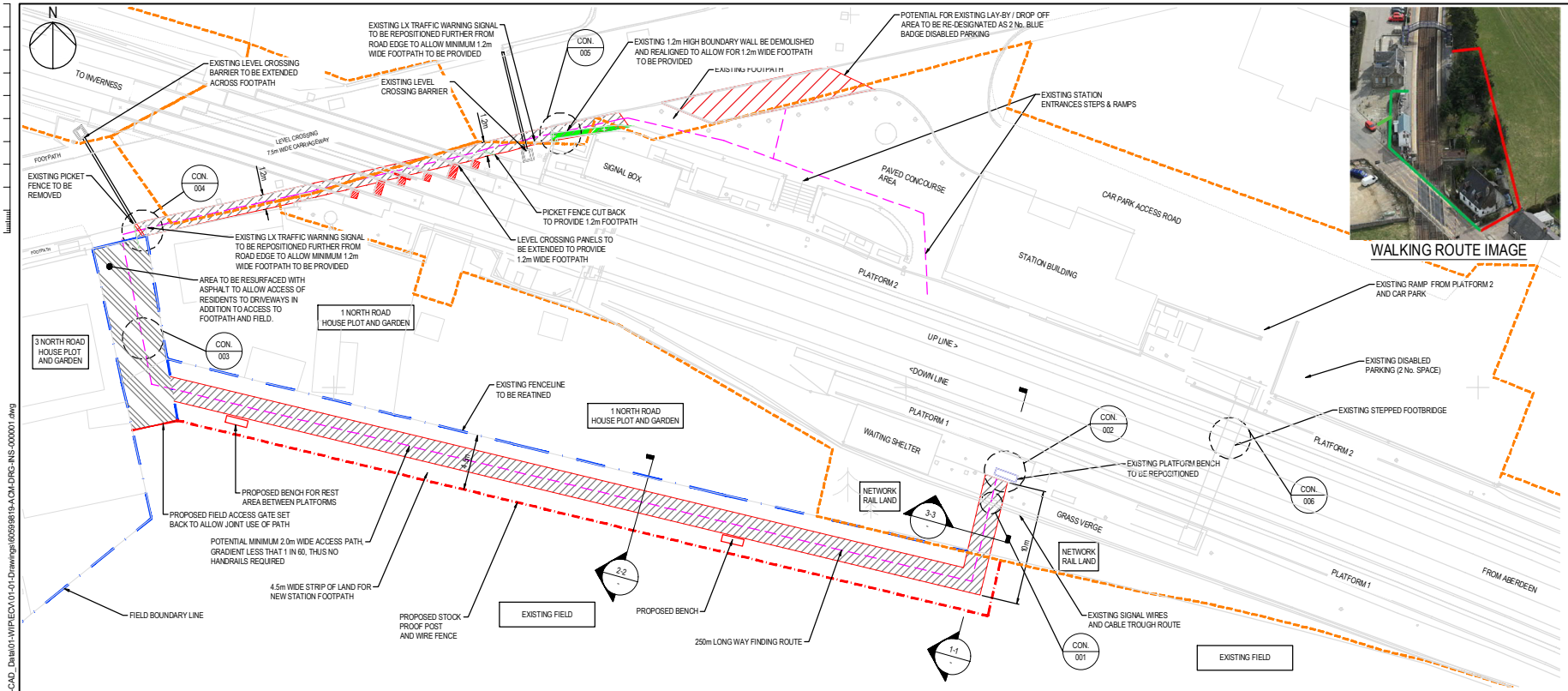
Footpath through field and along the south side of B9002



KEY:

- Field boundary
- Proposed boundary line for 4.5m land strip
- 160m long wayfinding route from platform 1 to new disabled parking
- New infrastructure
- Infrastrucrture to be removed
- Infrastructure to be relocated
- New footpath (min. 2m wide)
- 1.2m wide footpath upgrade along North Road
- Area resurfaced. Dual use for passengers and foot/vehicle access into adjacent properties 1&2 North Road
- Existing structures

AECOM nestrans



LAYOUT PLAN
(1:200)

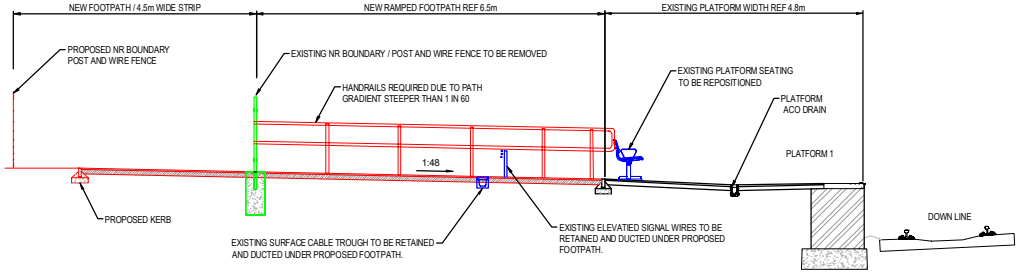
WALKING ROUTE IMAGE

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
2. DO NOT SCALE FROM THIS DRAWING, USE ONLY PRINTED DIMENSIONS.
3. ALL DIMENSIONS IN MILLIMETRES, ALL CHAINAGES, LEVELS AND COORDINATES ARE IN METRES UNLESS DEFINED OTHERWISE.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECT HEALTH & SAFETY FILE FOR ANY IDENTIFIED POTENTIAL RISKS.
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE 'ACCESSIBILITY AT INSCH STUDY - DETAILED APPRAISAL REPORT'.

TABLE OF CONSTRAINTS

NO.	DESCRIPTION
CON. 1	REAR OF PLATFORM SIGNAL WIRE AND CABLE TROUGH TO BE DUCTED UNDER PROPOSED FOOTPATH
CON. 2	EXISTING PLATFORM FURNITURE TO BE REPOSITIONED TO ALLOW CONNECTION TO FOOTPATH
CON. 3	LAND REQUIRED TO FACILITATE CONNECTION OF BRIDGE TO PROPOSED REAR OF PLATFORM 1 ACCESS POINT
CON. 4	EXISTING OBSTACLES ON FOOTPATH REQUIRE TO BE REPOSITIONED/REMOVED TO ALLOW PROPOSED CLEAR 1.2m FOOTPATH
CON. 5	EXISTING OBSTACLES ON FOOTPATH REQUIRE TO BE REPOSITIONED/REMOVED TO ALLOW PROPOSED CLEAR 1.2m FOOTPATH. POSSIBLE IMPACT WITH EXISTING S&T EQUIPMENT.
CON. 6	RETAINS EXISTING FOOTBRIDGE WHICH WOULD BE NON-COMPLIANT IF LINE WAS TO BE ELECTRIFIED AT A LATER STAGE.



SECTION 1-1
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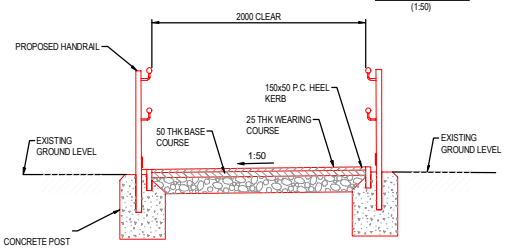
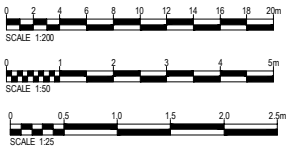
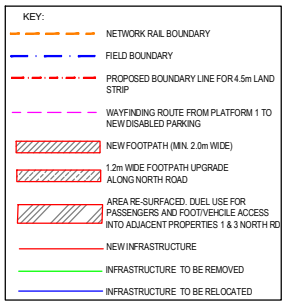
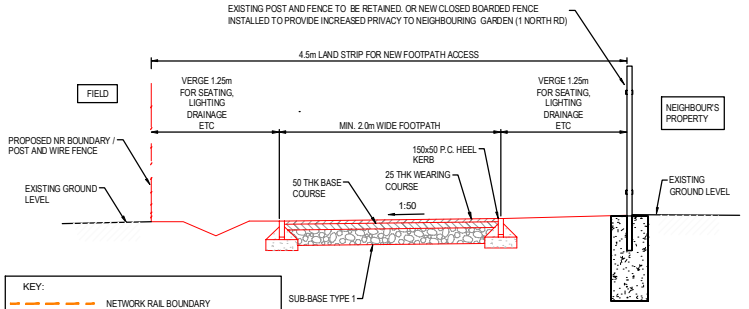


SECTION 3-3
(1:25)







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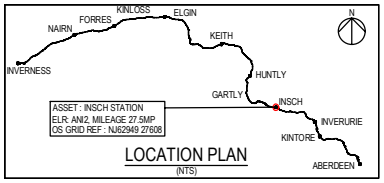

LOCATION PLAN
(NTS)

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Rev	Date	Issue History	Drawn	Chkd	Appd
B01	01/04/21	ISSUED FOR INFORMATION	GM	GM	MH
P01	14/05/19	ISSUED FOR INFORMATION	ER	GM	MH

Description of Change

Drawing Status: FOR INFORMATION

AECOM
7th Floor
Aurora Building
120 Bothwell Street
Glasgow, G2 7JS
Tel: +44 (0)141 248 0300

NESTRANS

Project Title: INSCH STATION PLATFORM 1

Drawing Title: OPTION 1A FOOTPATH THROUGH FIELD AND ALONG THE SOUTH SIDE OF THE B9002

Drawn	Date	Designed	Date
ER	20.12.18	GM	20.12.18
Checked	Date	Approved	Date
MH	20.12.18	RF	20.12.18

Size	Scale	Location
A1	AS SHOWN	INSCH STATION, AN2, 27.5MP

Drawing Number: 60599819-ACM-DRG-INS-000001 Revision: B 01

Millimetres 100 10 0
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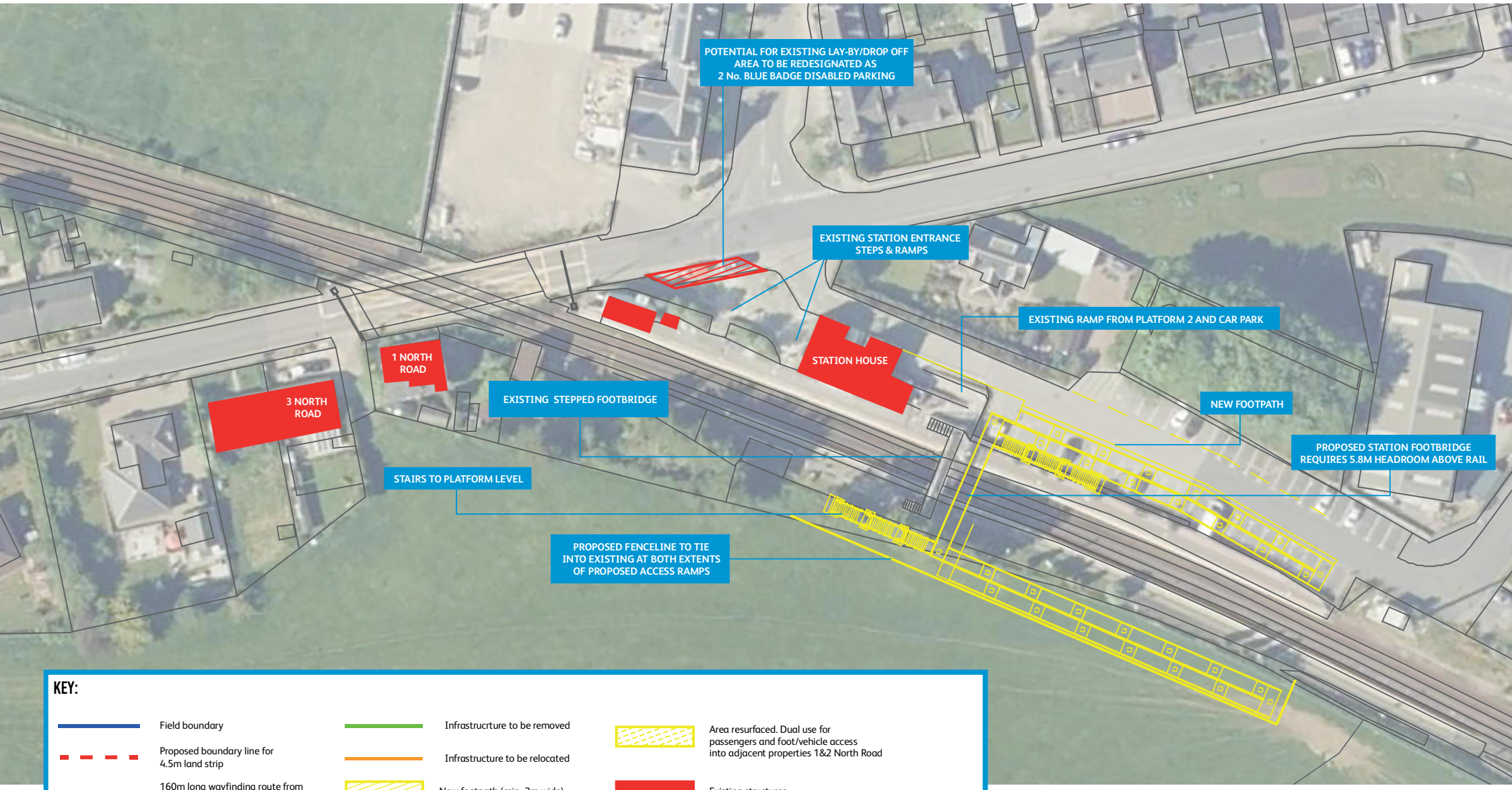
Date: 30/3/21 12:42:06
Username: greg.mitchell

INSCH STATION PLATFORM: OPTION 3

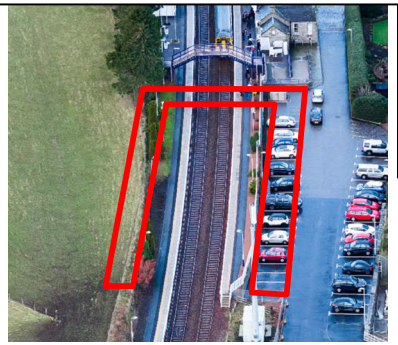
Footbridge with ramps



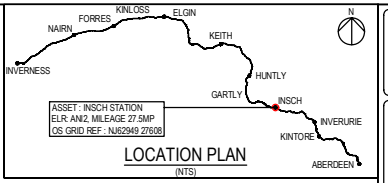
KEY:

- Field boundary
- Proposed boundary line for 4.5m land strip
- 160m long wayfinding route from platform 1 to new disabled parking
- New infrastructure
- Infrastrucrture to be removed
- Infrastructure to be relocated
- New footpath (min. 2m wide)
- 1.2m wide footpath upgrade along North Road
- Area resurfaced. Dual use for passengers and foot/vehicle access into adjacent properties 1&2 North Road
- Existing structures

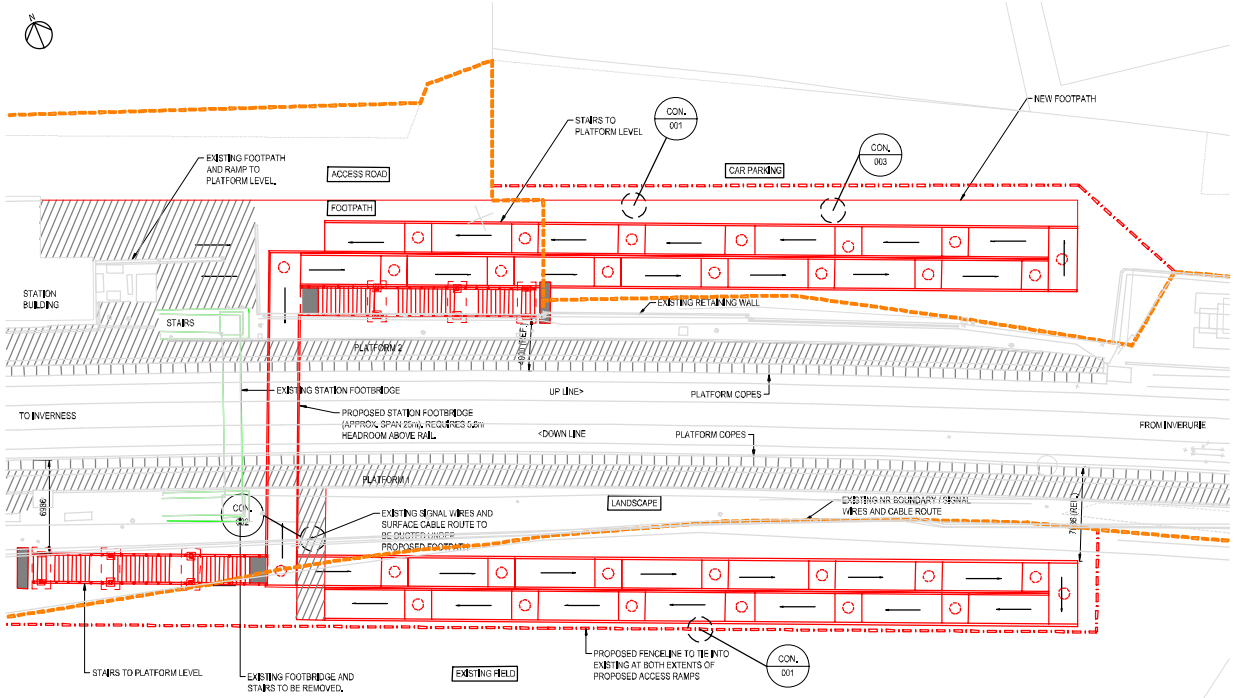
AECOM nestrans



RAMPED FOOTBRIDGE IMAGE



LOCATION PLAN
(NTS)



LAYOUT PLAN
(1:200)

0 2 4 6 8 10 12 14 16 18 20m
SCALE 1:200

NOTES

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5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE 'ACCESSIBILITY AT INSCH STUDY - DETAILED APPRAISAL REPORT'.

TABLE OF CONSTRAINTS	
NO.	DESCRIPTION
CON. 1	EXISTING NR BOUNDARY TO BE EXTENDED TO INCLUDE PROPOSED ACCESS RAMPS
CON. 2	EXISTING SIGNAL WIRES TO BE DUCTED UNDER PROPOSED ACCESS FOOTPATH
CON. 3	EXISTING CAR PARK REDUCED BY 23 No. SPACES TO ACCOMMODATE FOUNDATIONS FOR PROPOSED RAMPED FOOTBRIDGE FOUNDATIONS

KEY:
- NETWORK RAIL BOUNDARY
- PLATFORM SURFACE
- NEW INFRASTRUCTURE
- INFRASTRUCTURE TO BE REMOVED
- INFRASTRUCTURE TO BE RELOCATED
- NEW NETWORK RAIL BOUNDARY

Rev	Date	Issue History	Drawn	Chkd	Appd
B01	01/04/21	ISSUED FOR INFORMATION	GM	GM	MH
P01	14/05/19	ISSUED FOR INFORMATION	ER	GM	MH

Description of Change

Drawing Status: FOR INFORMATION

AECOM
7th Floor
Aurora Building
120 Bothwell Street
Glasgow, G2 7JS
Tel: +44 (0)141 248 0300

NESTRANS

Project Title: INSCH STATION PROPOSED ACCESS ARRANGEMENTS

Drawing Title: OPTION 3 FOOTBRIDGE WITH RAMPS

Drawn	Date	Designed	Date
ER	06.03.19	GM	06.03.19
Checked	Date	Approved	Date
MH	06.03.19	RF	06.03.19

A1	Scale 1:200	Location: INSCH STATION, ANI2, 27.5MP

Drawing Number: 60599819-ACM-DRG-INS-000003 | Revision: B 01

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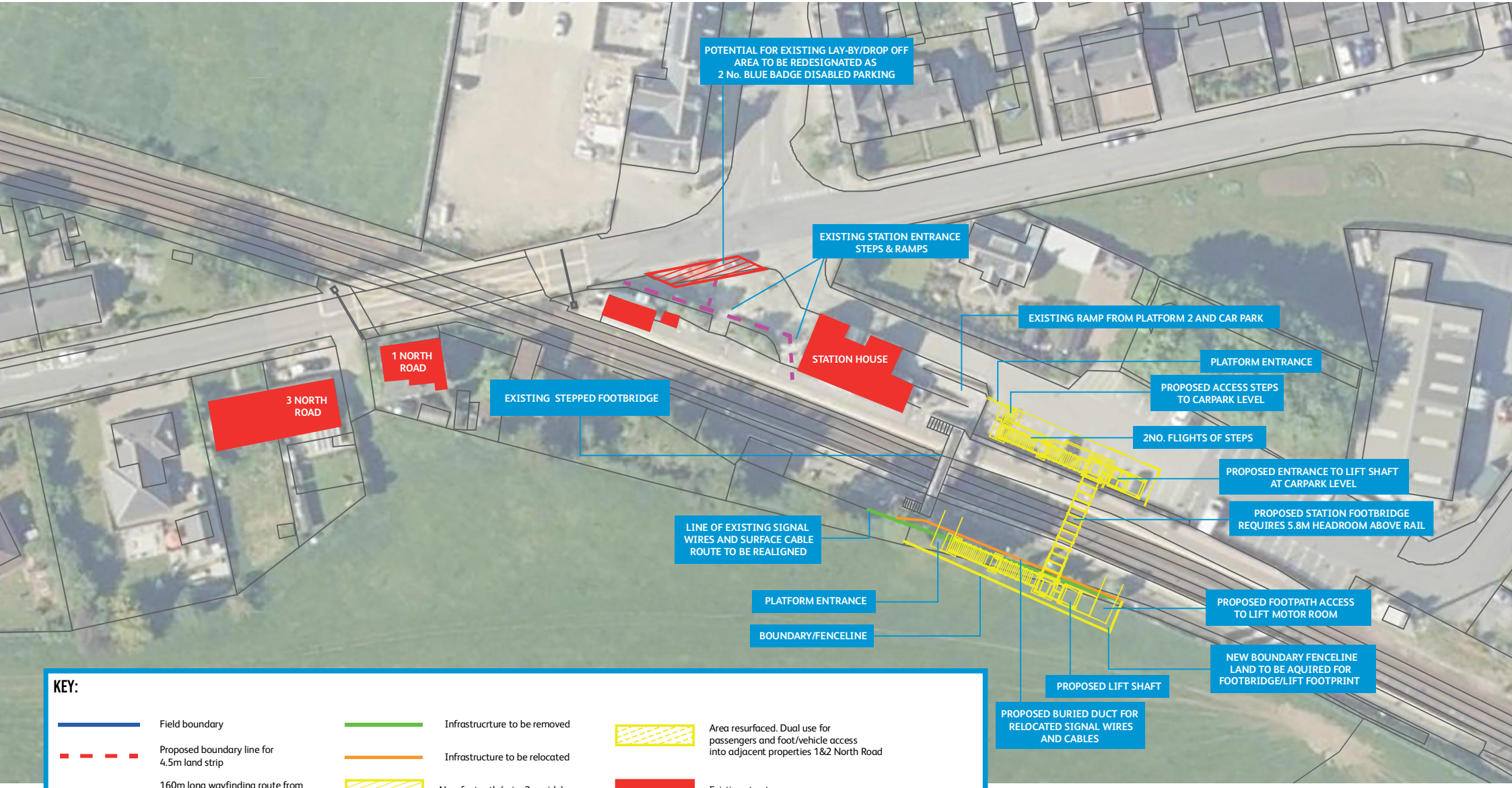
Date: 30/3/21 12:44:34
Username: greg.mitchell

INSCH STATION PLATFORM: OPTION 4

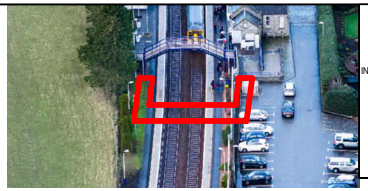
Footbridge with lifts



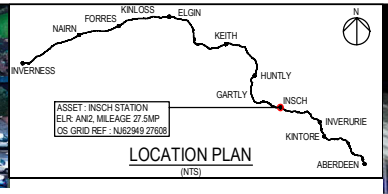
KEY:

- Field boundary
- Proposed boundary line for 4.5m land strip
- 160m long wayfinding route from platform 1 to new disabled parking
- New infrastructure
- Infrastrucrture to be removed
- Infrastructure to be relocated
- New footpath (min. 2m wide)
- 1.2m wide footpath upgrade along North Road
- Area resurfaced. Dual use for passengers and foot/vehicle access into adjacent properties 1&2 North Road
- Existing structures

AECOM nestrans

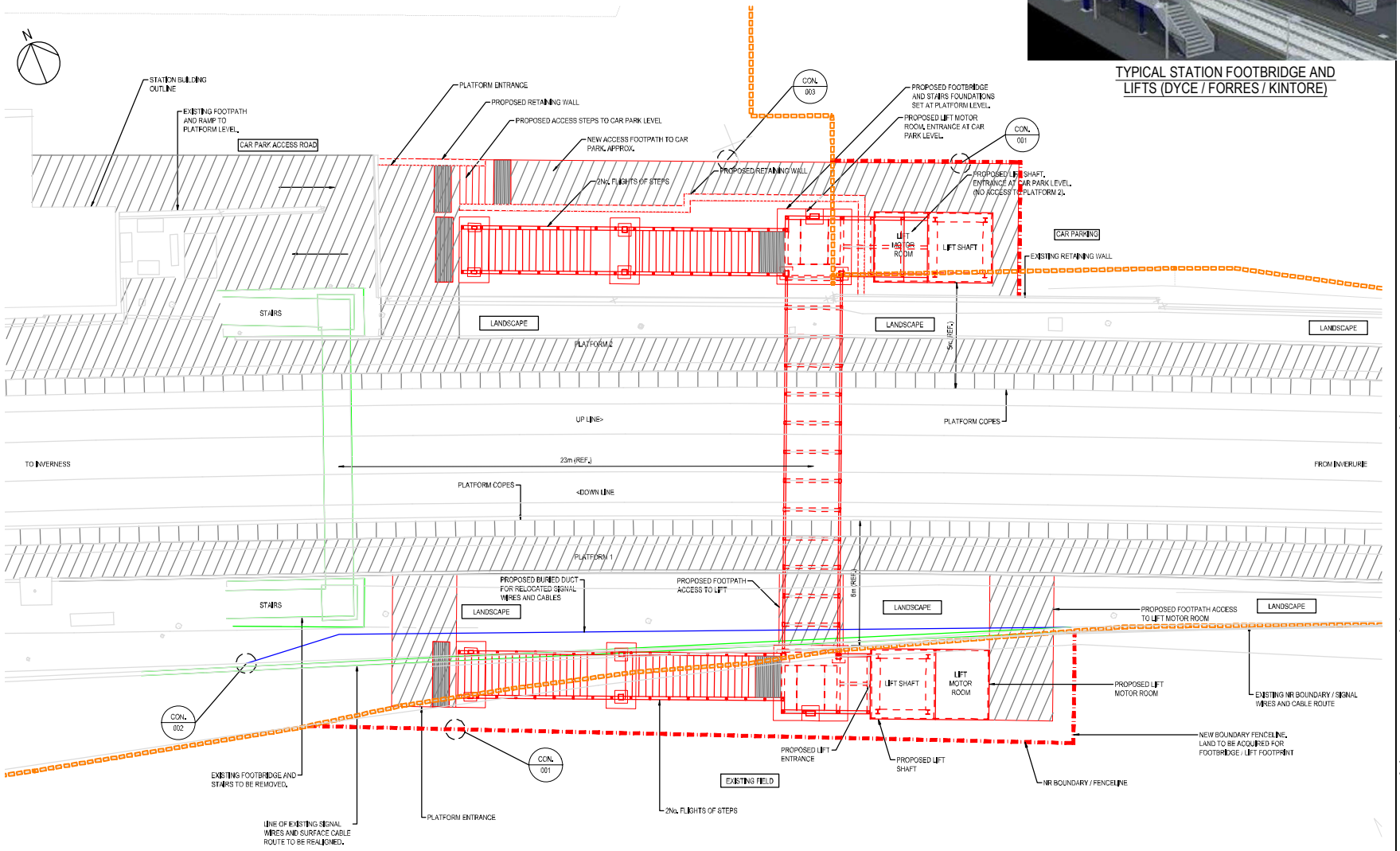


STEPPED FOOTBRIDGE IMAGE



LOCATION PLAN
(NTS)

TYPICAL STATION FOOTBRIDGE AND LIFTS (DYCE / FORRES / KINTORE)



LAYOUT PLAN
(1:100)

0 1 2 3 4 5 6 7 8 9 10m
SCALE 1:100

NOTES

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TABLE OF CONSTRAINTS	
NO.	DESCRIPTION
CON. 1	EXISTING NR BOUNDARY TO BE EXTENDED TO INCLUDE PROPOSED ACCESS STEPS & LIFT
CON. 2	EXISTING SIGNAL WIRES & CABLE ROUTE TO BE REALIGNED TO ACCOMMODATE PROPOSED ACCESS STEPS
CON. 3	EXISTING PLATFORM TO BE BUILT OUT TO ACCOMMODATE FOOTBRIDGE FOUNDATIONS. THIS WILL MEAN THE REMOVAL OF EXISTING BICYCLE PARKING AND 2 No. PARKING SPACES
CON. 4	REQUIRES LISTED PLANNING CONSENT. COLOUR & MATERIAL FINISH TO BE AGREED WITH ABERDEENSHIRE COUNCIL

KEY:
- NETWORK RAIL BOUNDARY
- PLATFORM SURFACE
- NEW INFRASTRUCTURE
- INFRASTRUCTURE TO BE REMOVED
- INFRASTRUCTURE TO BE RELOCATED
- NEW NETWORK RAIL BOUNDARY

Rev	Date	Issue History	Drawn	Chkd	Appd
B01	01/04/21	ISSUED FOR INFORMATION	GM	GM	MH
P01	14/05/19	ISSUED FOR INFORMATION	ER	GM	MH

Description of Change

Drawing Status: FOR INFORMATION

AECOM
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Aurora Building
120 Bothwell Street
Glasgow, G2 7JS
Tel: +44 (0)141 248 0300

NESTRANS

Project Title: INSCH STATION PROPOSED ACCESS ARRANGEMENTS

Drawing Title: OPTION 4 FOOTBRIDGE WITH LIFTS

Drawn	Date	Designed	Date
ER	06.03.19	GM	06.03.19
Checked	Date	Approved	Date
MH	06.03.19	RF	06.03.19

Size	Scale	Location
A1	1:100	INSCH STATION, ANI2, 27.5MP

Drawing Number: 60599819-ACM-DRG-INS-000004
Revision: B 01

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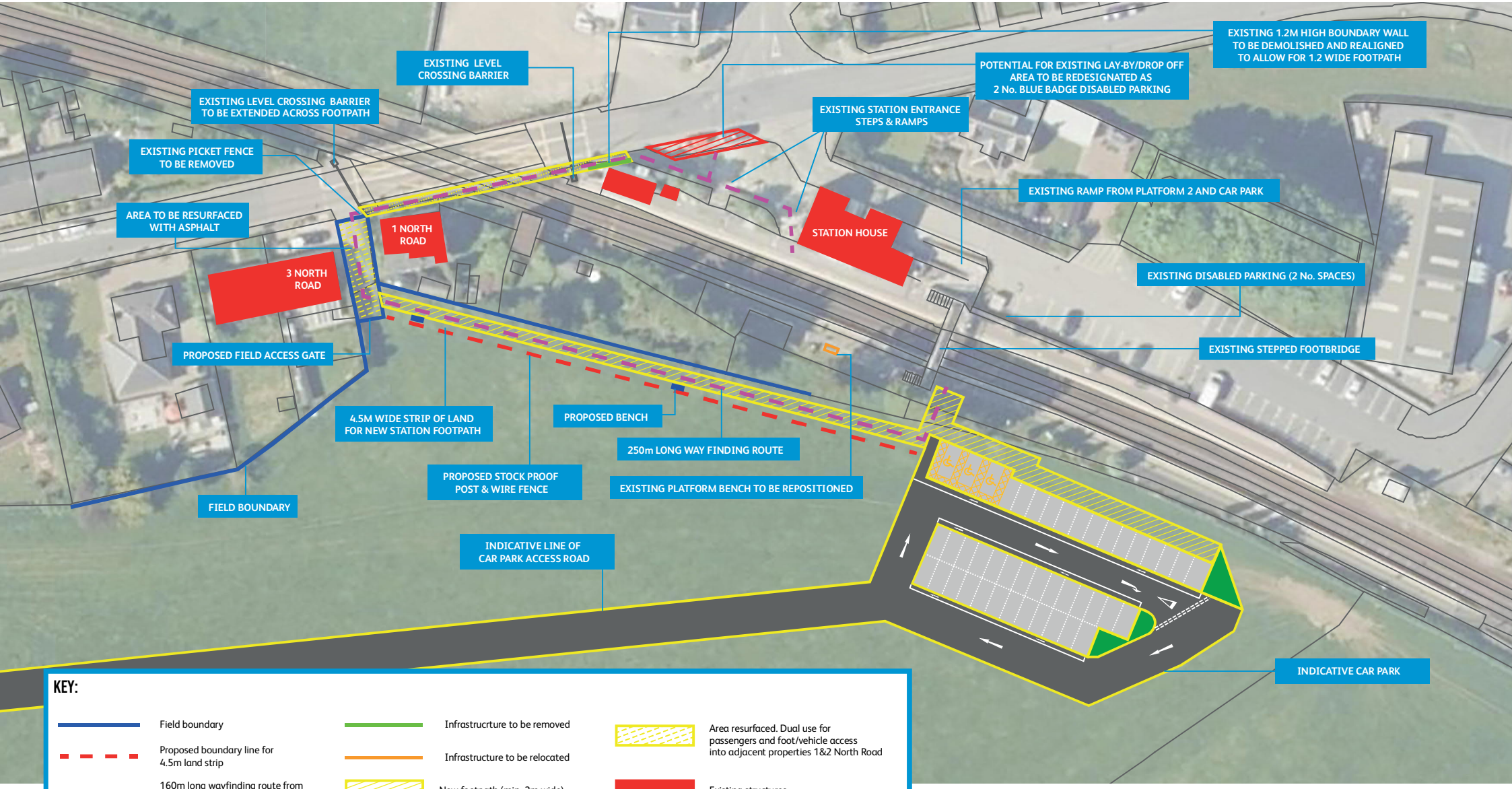
Date: 30/3/21 12:46:57
Username: greg.mitchell

INSCH STATION PLATFORM: OPTION 5B

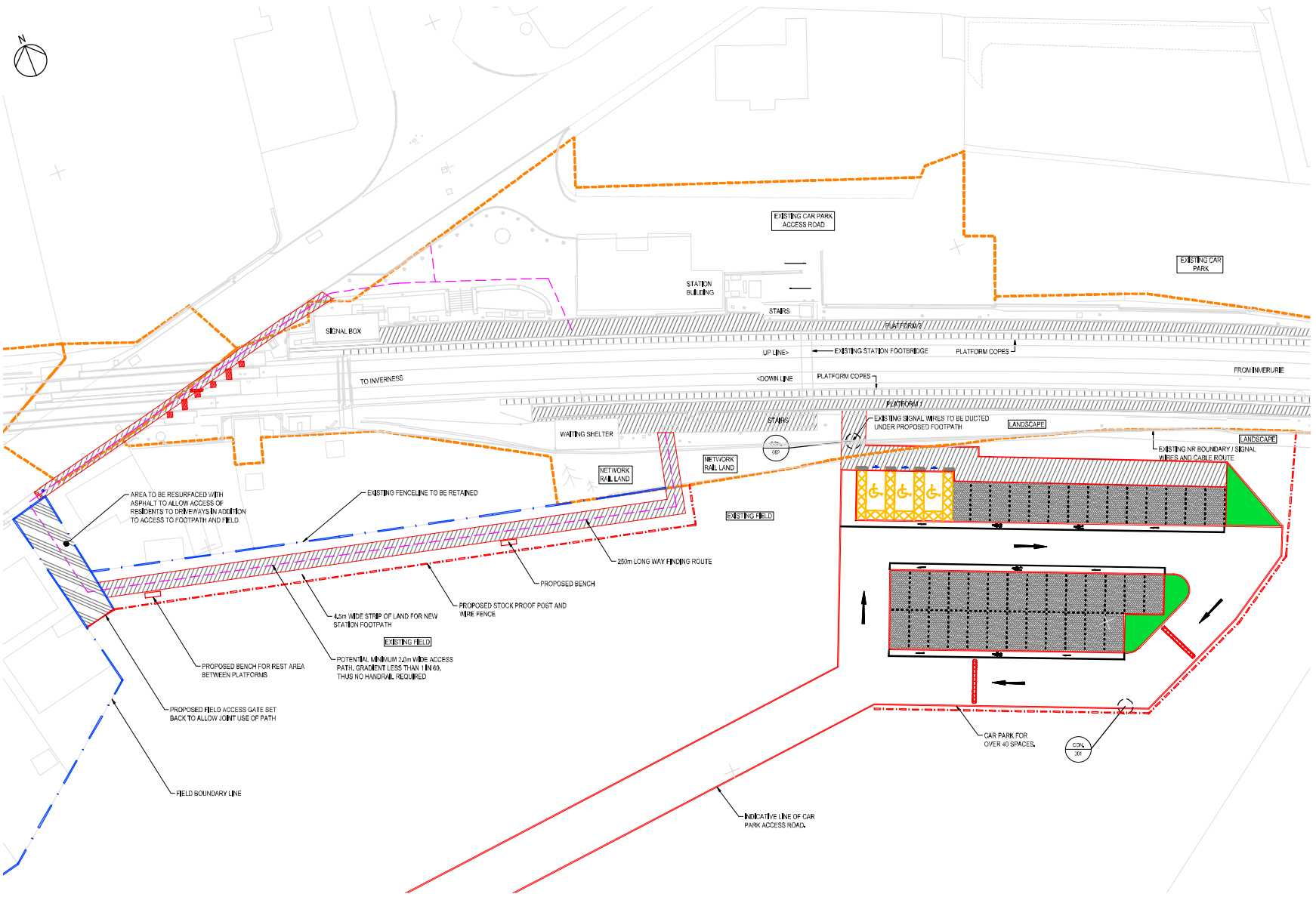
New car park south of Platform 1 with footpath through field and along the south side of the B9002



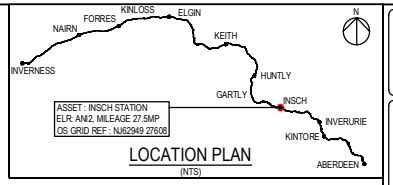
KEY:

- Field boundary
- Proposed boundary line for 4.5m land strip
- 160m long wayfinding route from platform 1 to new disabled parking
- New infrastructure
- Infrastrucrture to be removed
- Infrastructure to be relocated
- New footpath (min. 2m wide)
- 1.2m wide footpath upgrade along North Road
- Area resurfaced. Dual use for passengers and foot/vehicle access into adjacent properties 1&2 North Road
- Existing structures

AECOM nestrans



LAYOUT PLAN
(1:250)



LOCATION PLAN
(NTS)

NOTES

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5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE 'ACCESSIBILITY AT INSCH STUDY - DETAILED APPRAISAL REPORT'.

TABLE OF CONSTRAINTS	
NO.	DESCRIPTION
CON. 1	EXISTING NR BOUNDARY TO BE EXTENDED SIGNIFICANTLY TO INCLUDE PROPOSED ACCESS RAMPS
CON. 2	EXISTING SIGNAL WIRES TO BE DUCTED UNDER PROPOSED ACCESS FOOTPATH

KEY:

- NETWORK RAIL BOUNDARY
- FIELD BOUNDARY
- PROPOSED BOUNDARY LINE FOR 4.5m LAND STRIP
- WAYFINDING ROUTE FROM PLATFORM 1 TO NEW DISABLED PARKING
- NEW FOOTPATH (MIN. 2.0m WIDE)
- 1.2m WIDE FOOTPATH UPGRADE ALONG NORTH ROAD
- AREA RE-SURFACED. DUEL USE FOR PASSENGERS AND FOOT/VEHICLE ACCESS INTO ADJACENT PROPERTIES 1 & 3 NORTH RD
- NEW INFRASTRUCTURE

Rev	Date	Issue History	Drawn	Chkd	Appd
B01	01/04/21	ISSUED FOR INFORMATION	GM	GM	MH
P01	14/05/19	ISSUED FOR INFORMATION	ER	GM	MH

Description of Change

Drawing Status: FOR INFORMATION

AECOM
7th Floor
Aurora Building
120 Bothwell Street
Glasgow, G2 7JS
Tel: +44 (0)141 248 0300

NESTRANS

Project Title: INSCH STATION PROPOSED ACCESS ARRANGEMENTS

Drawing Title: OPTION 5B NEW CAR PARK SOUTH OF PLATFORM 1 AND FOOTPATH

Drawn	Date	Designed	Date
ER	06.03.19	GM	06.03.19
Checked	Date	Approved	Date
MH	06.03.19	RF	06.03.19

Size	Scale	Location
A1	1:250	INSCH STATION, ANI2, 27.5MP

Drawing Number: 60599819-ACM-DRG-INS-000005
Revision: B 01

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Millimetres 0 10 100
Filename: L:\Legacy\WIP\1P\Projects\60599819 - Insch Access Arrangements\600-Project_Data\601-CAD_Data\01-WIP\EXV\01-01-Drawings\60599819-ACM-DRG-INS-000005.dwg
Date: 30/3/21 12:39:44
User name: greg.mitchell

Appendix B: AST2s

Proposal Details			
Name and address of authority or organisation promoting the proposal:		**Nestrans** 27-29 King Street, Aberdeen, AB24 5AA	
Proposal Name:	Option 1a – Footpath through field and along the south side of the B9002	Name of Planner:	AECOM, 120 Bothwell Street, Glasgow, G2 7JS
Proposal Description:	This option considers provision of a footpath along the south side of the B9002 North Road and through the field to the south platform (Platform 1). There is an approximate 250m travel distance between platforms with this option and it would require navigation of the Level Crossing.	Total Public Sector Funding Requirement:	Capital costs/grant: £316,000 Annual revenue support: Regular, incl. winterisation Present Value of Cost to Govt: N/A
Funding Sought From: (if applicable)	-	Amount of Application:	-
Background Information			
Geographic Context:	Insch is situated approximately 27 miles northwest of Aberdeen adjacent to the A96 trunk road which strategically connects Aberdeen and Inverness. The rail station is located in the south of the village and sits on the Aberdeen to Inverness railway line.		
Social Context:	Insch has a population of approximately 2,690 according to mid-2016 estimates by National Records of Scotland. The proportion of older people is higher in Insch (20%) than the average for Aberdeenshire (16%) and Scotland (17%). There is also a slightly higher proportion of those aged 30-44 in the area. Household ownership is high (74%) compared to the national average (62%). There are very high levels of car ownership in the area and 73% of people travel to work by car, reflective of trends evident in the Aberdeenshire region generally. The most common destinations for those travelling to work from Insch are Aberdeen City (particularly Dyce and the city centre), Inverurie and Huntly.		
Economic Context:	The Aberdeen City and Shire Strategic Development Plan (2014) identifies a strategic growth area between Aberdeen and Huntly, with allowance for 1,000 houses and 70 hectares of employment land to 2035. The Proposed Local Development Plan (2020) notes that no significant additional land allocations have been made in Insch to allow the village to consolidate and react to the recent level of growth.		

Transport Planning Objective	
Objective:	Performance against planning objective:
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.	The creation of a new footpath link to Platform 1 is considered to partially support delivery of the TPO as it would increase travel opportunities for some groups of people whose access needs currently present a barrier to use of the station. However, there are a number of limitations with this option that prevent it from fully delivering the TPO including the distance required to cross between platforms, the requirement to navigate the uneven and angled Level Crossing and due to the Level Crossing barriers, which can be closed for up to 4-5 minutes at a time.
Rationale for Selection or Rejection of Proposal:	It is not recommended that this option is progressed for further consideration. The appraisal has identified a number of limitations with this option, in relation to the distance and navigation of the Level Crossing that is required to cross between platforms, and the potential for increased safety risks 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. More significantly, this option has significant deliverability risks as the introduction of a footpath would require changes to the Level Crossing Order – these amendments would require promotion by Network Rail, who have expressed significant concerns about the option due to safety concerns and therefore would be unlikely to support any changes to the Order.
Implementability Appraisal	
Technical:	While construction of a new footpath would be feasible, there are a number of challenges which would constitute cost, timescale and deliverability risks including required changes to the Level Crossing Order, which requires promotion to ORR via Network Rail. Network Rail has expressed concerns over the footpath option and therefore would be unlikely to support any changes to the Order. The footpath also requires 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 the existing rail signalling. Private land to the south of Platform 1 would also be required to facilitate a connection from the B9002 to the rear of Platform 1 and discussions would be required to determine who would take ownership of the footpath and therefore be responsible for its construction and maintenance.
Operational:	Although the footpath element would traverse the Level Crossing, this is not expected to have any impact on the operational impact of the rail network.
Financial:	Estimated construction costs are lower compared to other options. It is anticipated that the footpath option would incur relatively low maintenance costs, although any required changes to the Level Crossing may result in escalating cost and require agreement from the ORR.
Public:	It is considered that the footpath option would generally have public support in terms of enhancing accessibility at Insch Station; however, the engagement exercise indicated a number of concerns relating to the travel distance that would be required between platforms, the difficulties of navigating a cobbled paving surface and the Level Crossing, 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.

Environment			
Mitigation Options Included: (Costs & Benefits)	Option-specific mitigation measures would be developed should the design of the option progress further and on completion of any additional environmental assessment.		
Sub-criterion	**Qualitative Information**	**Quantitative Information**	**Significance of Impact**
Noise and Vibration	No notable impacts anticipated on noise and vibration.	-	No Benefit or Impact (-)
Global Air Quality – CO_2	No notable impacts anticipated on global air quality.	-	No Benefit or Impact (-)
Local Air Quality – PM_{10} and NO_2	No notable impacts anticipated on local air quality.	-	No Benefit or Impact (-)
Water Quality, Drainage and Flood Defence	No notable impacts anticipated on water quality, drainage, and flood defence.	-	No Benefit or Impact (-)
Geology	No notable impacts anticipated on geology.	-	No Benefit or Impact (-)
Biodiversity	Loss of trees and scrub can create fragmentation of habitats and barriers to movement for a number of species, including protected species such as badgers and bats. It is understood that lighting will be required for safety reasons along the footpath which can also create a barrier to species such as bats. However, with appropriate mitigation, such as sensitively designed low level directional lighting, impacts from lighting could be minimised.	-	Minor Negative Impact (×)
Landscape & Visual Amenity	The introduction of a new footpath is not considered likely to result in significant adverse landscape and visual effects should appropriate mitigation be implemented. The design will be required to take into consideration views from the surrounding residential dwellings, potential tree loss and compensatory planting and lighting requirements.	-	Minor Negative Impact (×)
Agriculture and Soils	The introduction of a new footpath will result in the loss of a small area of scrub woodland in combination with a linear strip of approximately 4.5m wide through agricultural land. Land not required for the footprint of the path could be reinstated on completion and therefore there would be limited permanent loss of agricultural land with this option.	-	No Benefit or Impact (-)
Cultural Heritage	The introduction of a new footpath would avoid direct impact on any of the listed structures through strategic design. With appropriate mitigation, it is	-	Minor Negative Impact (×)

	anticipated that there would be no residual significant adverse effects on the character and setting of listed structures, though there remains the potential for unrecorded heritage assets within the construction area that could be impacted by the development.		
Monetised summary	Not determined		
Monetary Impact Ratio	Not determined		

Safety			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Accidents	Change in Annual Personal Injury Accidents	This option would be anticipated to increase the numbers of active travel users passing over the Level Crossing, therefore increasing the interaction between vehicles and active travel users and thus, increasing the risk of personal injury accidents. The footpath option would also increase interactions between vehicles and active travel users at the driveway of the two properties between which the footpath is proposed to be routed through, which also poses a potential safety risk. There is additionally the potential for increased personal injury accidents from falls along the footpath, particularly during winter.	Minor Negative Impact (**×**)
	Change in Balance of Severity	No notable impacts anticipated on the severity of accidents.	No Benefit or Impact (-)
	Total Discounted Savings	-	-
Security		The secluded nature of the path behind the station and away from the built-up area of Insch could introduce concerns relating to anti-social behaviour, though this could be mitigated through the provision of lighting and CCTV.	Minor Negative Impact (**×**)
Monetised summary		Not determined	
Monetary Impact Ratio		Not determined	

Economy (Transport Economic Efficiency)			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**

User Benefits	Travel Time	No impacts anticipated in terms of travel time.	No Benefit or Impact (-)
	User Charges	No impacts anticipated in terms of user charges.	No Benefit or Impact (-)
	Vehicle Operating Costs	No impacts anticipated in terms of vehicle operating costs.	No Benefit or Impact (-)
	Quality / Reliability Benefits	No impacts anticipated in terms of reliability benefits.	No Benefit or Impact (-)
Private Sector Operator Impacts	Investment Costs	-	-
	Operating & Maintenance Costs	-	-
	Revenues	-	-
	Grant/Subsidy payments	-	-
Monetised summary		Not determined	
Monetary Impact Ratio		Not determined	
Integration			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Transport Interchanges	Services & Ticketing	No notable impacts in terms of services and ticketing.	No Benefit or Impact (-)
	Infrastructure & Information	No notable impacts in terms of infrastructure and information.	No Benefit or Impact (-)
Land-use Transport Integration		Overall, it is anticipated that this option will have no benefit or impact on the transport and land use integration criteria. It does not generate any spatial conflicts and there are negligible impacts in terms of existing and planned land-use developments. The option does not conflict with planning policy at a national or regional level and it supports the aspiration within local planning policy to improve accessibility at the station for disabled people and people with children in buggies and/or heavy luggage.	No Benefit or Impact (-)

Policy Integration		This option strongly aligns with the NTS Priority 'Reducing Inequalities' by providing improved access at the rail station, which improves access for onward travel to key attractors, including employment and education sites and healthcare facilities. The option generally aligns well with other policy and legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in the Nestrans Regional Transport Strategy 2040, which specifically references the need for accessibility improvements at Insch Station.	Minor Positive Impact (✓)
Accessibility & Social Inclusion			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Community Accessibility	Public Transport Network Coverage	No notable impacts in terms of public transport network coverage.	No Benefit or Impact (-)
	Access to Other Local Services	This option is considered to have a minor beneficial impact in terms of improving access to local services through improving access at the station, which will make it easier for people to access rail services and thus improve access to key services, including employment and education sites and healthcare facilities.	Minor Positive Impact (✓)
Comparative Accessibility	Distribution/Spatial Impacts by People Group	This option is anticipated to reduce the disproportionate impact experienced by people travelling with a pram by providing the opportunity to access Platform 1 without having to navigate a stepped overbridge. However, older people, pregnant people and those with a disability would continue to be disproportionately impacted by the accessibility arrangement as this option would require an approximate 250m travel distance between platforms and would require navigation of the long and angled Level Crossing.	Minor Positive Impact (✓)
	Distribution/Spatial Impacts by Area	No notable impacts by geographic area as each of the options considered affect the same area immediately surrounding Insch Station.	No Benefit or Impact (-)

Strategic Environmental Assessment (SEA)		
Summary of SEA outcome where appropriate	-	
Cost to Public Sector		
Item	**Qualitative information**	**Quantitative information**
Public Sector Investment Costs	This option is the lowest cost option, though it should be noted that there are a number of uncertainties regarding associated changes to the Level Crossing that would be required and the respective costs of these changes, which could increase costs.	£316,000 (2010 prices)
Public Sector Operating & Maintenance Costs	Operating and maintenance requirements include winterisation, CCTV, and lighting. This would generally be subsumed into existing contracts as additional work when completing existing maintenance and therefore additional costs would be based on staff time and additional resource requirements.	-
Grant/Subsidy Payments	-	-
Revenues	-	-
Taxation impacts	-	-
Monetised Summary		
Present Value of Transport Benefits	-	
Present Value of Cost to Government	-	
Net Present Value	-	
Benefit-Cost to Government Ratio	-	
Benefit-Cost to Government Ratio (including WEBs)	-	
Benefit-Cost to Funding Agency Ratio	-	

Proposal Details			
Name and address of authority or organisation promoting the proposal:		**Nestrans** 27-29 King Street, Aberdeen, AB24 5AA	
Proposal Name:	Option 3 – Footbridge with Ramps	Name of Planner:	AECOM, 120 Bothwell Street, Glasgow, G2 7JS
Proposal Description:	This option considers provision of a new footbridge with ramps. It would allow step-free access to Platform 1 by non-motorised users. In order to ensure appropriate gradients, this would involve an approximate 250m travel distance between platforms.	Total Public Sector Funding Requirement:	Capital costs/grant: £1,740,000 Annual revenue support: Regular, incl. winterisation Present Value of Cost to Govt: N/A
Funding Sought From: (if applicable)	-	Amount of Application:	-
Background Information			
Geographic Context:	Insch is situated approximately 27 miles northwest of Aberdeen adjacent to the A96 trunk road which strategically connects Aberdeen and Inverness. The rail station is located in the south of the village and sits on the Aberdeen to Inverness railway line.		
Social Context:	Insch has a population of approximately 2,690 according to mid-2016 estimates by National Records of Scotland. The proportion of older people is higher in Insch (20%) than the average for Aberdeenshire (16%) and Scotland (17%). There is also a slightly higher proportion of those aged 30-44 in the area. Household ownership is high (74%) compared to the national average (62%). There are very high levels of car ownership in the area and 73% of people travel to work by car, reflective of trends evident in the Aberdeenshire region generally. The most common destinations for those travelling to work from Insch are Aberdeen City (particularly Dyce and the city centre), Inverurie and Huntly.		
Economic Context:	The Aberdeen City and Shire Strategic Development Plan (2014) identifies a strategic growth area between Aberdeen and Huntly, with allowance for 1,000 houses and 70 hectares of employment land to 2035. The Proposed Local Development Plan (2020) notes that no significant additional land allocations have been made in Insch to allow the village to consolidate and react to the recent level of growth.		

Transport Planning Objective	
Objective:	Performance against planning objective:
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.	The footbridge with ramps option is considered to partially support delivery of the TPO as it would increase travel opportunities for some groups of people whose access needs currently present a barrier to use of the station. However, to ensure that appropriate gradients are achieved, ramps would result in an approximate 250m travel distance between platforms, which is not the easiest route available or shortest distance practical. The footbridge with ramps option does not require navigation of the Level Crossing and therefore is considered to perform more favourably than the footpath option.
Rationale for Selection or Rejection of Proposal:	It is not recommended that this option is progressed for further consideration. This option is anticipated to result in significant adverse impacts on the landscape and visual amenity and on the cultural heritage of Insch Station. Whilst these are concerns applicable for the footbridge with lifts option (albeit to a slightly lesser extent), the footbridge with ramps option does not fully support the TPO for the study as it would require an approximate 250m travel distance between platforms; a distance not manageable for all users. In addition, due to the footprint of the option, approximately half of the existing car parking spaces would need to be removed, which has been raised as a significant concern during public engagement.
Implementability Appraisal	
Technical:	There are no significant feasibility concerns as this is a common means of providing platform-to-platform access across the rail network. Deliverability risks to consider include the requirement for a significant proportion of land take from the existing car park, the purchase of private land to the south of Platform 1, re-cabling to take station retail cabling (lighting, CCTV, LLAP) across the Platform 1 from the existing footbridge to the new footbridge, and the requirement for listed planning consent.
Operational:	Option is not expected to have any impact on the operational impact of the rail network or otherwise.
Financial:	Option would be estimated to constitute a high cost option in term of capital construction costs. This option would also require ongoing maintenance, including winter maintenance. From an efficiency point of view, delivery of this option could remove the need for investment in the existing footbridge, therefore maximising the value of renewals, should the existing footbridge be removed.
Public:	It is considered that the option would generally have public support in terms of enhancing accessibility at Insch Station; however, the engagement exercise indicated a number of concerns relating to the loss of parking associated with this option and the significant visual impact that the footbridge with ramps option could cause.

Environment			
Mitigation Options Included: (Costs & Benefits)	Option-specific mitigation measures would be developed should the design of the option progress further and on completion of any additional environmental assessment. Initial mitigation measures considered to reduce the environmental impacts include the use of materials that are sympathetic to the character of the station		
Sub-criterion	**Qualitative Information**	**Quantitative Information**	**Significance of Impact**
Noise and Vibration	No notable impacts anticipated on noise and vibration.	-	No Benefit or Impact (-)
Global Air Quality – CO_2	No notable impacts anticipated on global air quality.	-	No Benefit or Impact (-)
Local Air Quality – PM_{10} and NO_2	No notable impacts anticipated on local air quality.	-	No Benefit or Impact (-)
Water Quality, Drainage and Flood Defence	No notable impacts anticipated on water quality, drainage, and flood defence.	-	No Benefit or Impact (-)
Geology	No notable impacts anticipated on geology.	-	No Benefit or Impact (-)
Biodiversity	Loss of trees and scrub can create fragmentation of habitats and barriers to movement for a number of species, including protected species such as badgers and bats. It will be important to undertake protected species surveys prior to any works commencing.	-	Minor Negative Impact (×)
Landscape & Visual Amenity	This option is likely to have the potential to result in significant adverse landscape and visual effects. Given the required development footprint is relatively constrained, the introduction of ramps at the appropriate gradients is likely to be at odds with the balance of existing townscape features in view. Traditional materials can be used to be more sympathetic to the existing character of the station, however given the scale it is unlikely that the effects will be fully mitigated.	-	Moderate Negative Impact (××)
Agriculture and Soils	This option will result in the loss of a small area of scrub woodland. Land not required for the footprint of the ramps could be reinstated on completion and therefore there would be limited permanent loss of agricultural land with this option.	-	No Benefit or Impact (-)
Cultural Heritage	It has been assumed throughout this study that this option would include removal of the existing footbridge. However, removal of the footbridge in	-	Major Negative Impact (×××)

	combination with the introduction of a new footbridge with ramps is likely to generate significant adverse effects on the character, integrity and setting of the remaining listed structures. Removal of the existing structure would therefore require strong justification and would need listed planning consent. Whether or not the existing footbridge would be maintained would be considered further as part of future design development through further discussion with the local authority; however, it should be noted that, under current assumptions, decarbonisation of the rail line in future years would require removal of the existing footbridge to meet electrification requirements.		
Monetised summary	Not determined		
Monetary Impact Ratio	Not determined		

Safety			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Accidents	Change in Annual Personal Injury Accidents	The implementation of a footbridge with ramps could slightly reduce the risk of accidents by eliminating an existing trip hazard for those who may experience difficulty navigating the existing stepped overbridge.	Minor Positive Impact (✓)
	Change in Balance of Severity	No notable impacts anticipated on the severity of accidents.	No Benefit or Impact (-)
	Total Discounted Savings	-	-
Security		No notable impacts on the security of users.	No Benefit or Impact (-)
Monetised summary		Not determined	
Monetary Impact Ratio		Not determined	

Economy (Transport Economic Efficiency)			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
User Benefits	Travel Time	No impacts anticipated in terms of travel time.	No Benefit or Impact (-)
	User Charges	No impacts anticipated in terms of user charges.	No Benefit or Impact (-)

	Vehicle Operating Costs	No impacts anticipated in terms of vehicle operating costs.	No Benefit or Impact (-)
	Quality / Reliability Benefits	No impacts anticipated in terms of reliability benefits.	No Benefit or Impact (-)
Private Sector Operator Impacts	Investment Costs	-	-
	Operating & Maintenance Costs	-	-
	Revenues	-	-
	Grant/Subsidy payments	-	-
Monetised summary		Not determined	
Monetary Impact Ratio		Not determined	
Integration			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Transport Interchanges	Services & Ticketing	No notable impacts in terms of services and ticketing.	No Benefit or Impact (-)
	Infrastructure & Information	No notable impacts in terms of infrastructure and information.	No Benefit or Impact (-)
Land-use Transport Integration		Overall, it is anticipated that this option will have no benefit or impact on the transport and land use integration criteria. It does not generate any spatial conflicts and there are negligible impacts in terms of existing and planned land-use developments. The option does not conflict with planning policy at a national or regional level and it supports the aspiration within local planning policy to improve accessibility at the station for disabled people and people with children in buggies and/or heavy luggage, although not to the same extent as the footbridge with lifts option.	No Benefit or Impact (-)

Policy Integration		This option strongly aligns with the NTS Priority 'Reducing Inequalities' by providing improved access at the rail station, which improves access for onward travel to key attractors, including employment and education sites and healthcare facilities. The option generally aligns well with other policy and legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in the Nestrans Regional Transport Strategy 2040, which specifically references the need for accessibility improvements at Insch Station.	Minor Positive Impact (✓)
Accessibility & Social Inclusion			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Community Accessibility	Public Transport Network Coverage	No notable impacts in terms of public transport network coverage.	No Benefit or Impact (-)
	Access to Other Local Services	This option is considered to have a minor beneficial impact in terms of improving access to local services through improving access at the station, which will make it easier for people to access rail services and thus improve access to key services, including employment and education sites and healthcare facilities.	Minor Positive Impact (✓)
Comparative Accessibility	Distribution/Spatial Impacts by People Group	This option is anticipated to reduce the disproportionate impact experienced by people travelling with a pram by providing the opportunity to access Platform 1 without having to navigate a stepped overbridge. However, older people, pregnant people and those with a disability would continue to be disproportionately impacted by the accessibility arrangement as this option would require an approximate 250m travel distance between platforms.	Minor Positive Impact (✓)
	Distribution/Spatial Impacts by Area	No notable impacts by geographic area as each of the options considered affect the same area immediately surrounding Insch Station.	No Benefit or Impact (-)
Strategic Environmental Assessment (SEA)			

Summary of SEA outcome where appropriate	-	
Cost to Public Sector		
Item	**Qualitative information**	**Quantitative information**
Public Sector Investment Costs	This option would be estimated to constitute a high cost option. From an efficiency point of view, delivery of this option could remove the need for investment in the existing footbridge, therefore maximising the value of renewals, should the existing footbridge be removed. It should be noted that this option would be designed to enable route clearance for potential route electrification in the future, therefore ensuring the future-proofing of this option.	£1,740,000 (2010 prices)
Public Sector Operating & Maintenance Costs	The main operating and maintenance requirement with this option would be winterisation of the ramps and footbridge. This would generally be subsumed into existing contracts as additional work when completing existing maintenance at the station and therefore additional costs would be based on staff time and any additional resource requirements.	-
Grant/Subsidy Payments	-	-
Revenues	-	-
Taxation impacts	-	-
Monetised Summary		
Present Value of Transport Benefits	-	
Present Value of Cost to Government	-	
Net Present Value	-	
Benefit-Cost to Government Ratio	-	
Benefit-Cost to Government Ratio (including WEBs)	-	
Benefit-Cost to Funding Agency Ratio	-	

Proposal Details			
Name and address of authority or organisation promoting the proposal:		**Nestrans** 27-29 King Street, Aberdeen, AB24 5AA	
Proposal Name:	Option 4 – Footbridge with Lifts	Name of Planner:	AECOM, 120 Bothwell Street, Glasgow, G2 7JS
Proposal Description:	This option considers provision of a new footbridge with lifts. It would allow step-free access to Platform 1 by non-motorised users.	Total Public Sector Funding Requirement:	Capital costs/grant: £1,950,000 Annual revenue support: Lift servicing & maintenance Present Value of Cost to Govt: N/A
Funding Sought From: (if applicable)	-	Amount of Application:	-
Background Information			
Geographic Context:	Insch is situated approximately 27 miles northwest of Aberdeen adjacent to the A96 trunk road which strategically connects Aberdeen and Inverness. The rail station is located in the south of the village and sits on the Aberdeen to Inverness railway line.		
Social Context:	Insch has a population of approximately 2,690 according to mid-2016 estimates by National Records of Scotland. The proportion of older people is higher in Insch (20%) than the average for Aberdeenshire (16%) and Scotland (17%). There is also a slightly higher proportion of those aged 30-44 in the area. Household ownership is high (74%) compared to the national average (62%). There are very high levels of car ownership in the area and 73% of people travel to work by car, reflective of trends evident in the Aberdeenshire region generally. The most common destinations for those travelling to work from Insch are Aberdeen City (particularly Dyce and the city centre), Inverurie and Huntly.		
Economic Context:	The Aberdeen City and Shire Strategic Development Plan (2014) identifies a strategic growth area between Aberdeen and Huntly, with allowance for 1,000 houses and 70 hectares of employment land to 2035. The Proposed Local Development Plan (2020) notes that no significant additional land allocations have been made in Insch to allow the village to consolidate and react to the recent level of growth.		

Transport Planning Objective	
Objective:	Performance against planning objective:
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.	The footbridge with lifts option is considered to fully support delivery of the TPO for this study. In line with Design Guidance for Accessible Railway Stations, the lift option provides the easiest route available and the shortest distance practical. It provides a step-free platform-to-platform access solution that would enable increased travel opportunities for all users at the station, including (but not limited to) those with mobility impairments, the ageing population, and people with young children.
Rationale for Selection or Rejection of Proposal:	It is recommended that this option is progressed for further consideration. This option is the only option that fully supports delivery of the study TPO by enabling increased travel opportunities for all users at the station. It generally performs positively against the STAG criteria and is associated with reduced deliverability risks and uncertainties compared to options involving the Level Crossing. This option benefitted from strong community support and was the top ranked option amongst respondents to the online public survey. Given the potential environmental impacts associated with this option, further discussions will be required with the Planning team at Aberdeenshire Council.
Implementability Appraisal	
Technical:	There are no significant feasibility concerns relating to this option as this is a common means of providing platform-to-platform access across the rail network, with lifts also in place at other stations on the Aberdeen to Inverness corridor. Deliverability risks to consider include the requirement to remove a limited number of spaces from the existing car park, the purchase of private land to the south of Platform 1 and the requirement for listed planning consent.
Operational:	Option is considered to be operationally feasible. In the event of lift breakdown, a descend button which allows the lift to return to ground level would be fitted. It is also assumed that lifts would not be operational from the time of the last train until 30 minutes before the first train in the morning, which would mitigate against any misuse of the lifts.
Financial:	Option would be estimated to be a high cost option for construction. This option would be associated with potentially higher maintenance costs associated with regular and ad-hoc maintenance should any technical issues arise. From an efficiency point of view, delivery of this option could remove the need for investment in the existing footbridge, therefore maximising the value of renewals, should the existing footbridge be removed.
Public:	It is considered that the footbridge with lifts option would have significant public support in terms of enhancing accessibility at Insch Station. It was generally agreed in responses to the public survey and during wider engagement with the community that the lift option is the only way to improve accessibility at Insch Station such that travel opportunities are increased for all users. While this option was identified as the clear preference during engagement with the community, a very small number of respondents to the public survey indicated concerns regarding impacts on the visual amenity and the chance of breakdown associated with this option.

Environment			
Mitigation Options Included: (Costs & Benefits)	Option-specific mitigation measures would be developed should the design of the option progress further and on completion of any additional environmental assessment. Initial mitigation measures considered to reduce the environmental impacts include the use of materials that are sympathetic to the character of the station and locating the new lift structure as far from the existing stepped footbridge as possible.		
Sub-criterion	**Qualitative Information**	**Quantitative Information**	**Significance of Impact**
Noise and Vibration	No notable impacts anticipated on noise and vibration.	-	No Benefit or Impact (-)
Global Air Quality – CO_2	No notable impacts anticipated on global air quality.	-	No Benefit or Impact (-)
Local Air Quality – PM_{10} and NO_2	No notable impacts anticipated on local air quality.	-	No Benefit or Impact (-)
Water Quality, Drainage and Flood Defence	No notable impacts anticipated on water quality, drainage, and flood defence.	-	No Benefit or Impact (-)
Geology	No notable impacts anticipated on geology.	-	No Benefit or Impact (-)
Biodiversity	Loss of trees and scrub can create fragmentation of habitats and barriers to movement for a number of species, including protected species such as badgers and bats. It will be important to undertake protected species surveys prior to any works commencing.	-	Minor Negative Impact (×)
Landscape & Visual Amenity	The introduction of a new footbridge with lifts is likely to have the potential to result in significant adverse landscape and visual effects. It may be possible to mitigate to an extent against the negative impacts by locating the new structure as far away from the existing bridge and station building as possible. However, it is unlikely that the impacts can be fully mitigated.	-	Moderate Negative Impact (××)
Agriculture and Soils	The introduction of a new footbridge with lifts will result in the loss of a small area of scrub woodland. Land not required for the footprint of the lifts could be reinstated on completion and therefore there would be limited permanent loss of agricultural land with this option.	-	No Benefit or Impact (-)
Cultural Heritage	It has been assumed throughout this study that this option would include removal of the existing footbridge. However, removal of the footbridge in combination with the introduction of a new footbridge with lifts is likely to	-	Major Negative Impact (×××)

	generate significant adverse effects on the character, integrity and setting of the remaining listed structures. Removal of the existing structure would therefore require strong justification and would need listed planning consent. Whether or not the existing footbridge would be maintained would be considered further as part of future design development through further discussion with the local authority; however, it should be noted that, under current assumptions, decarbonisation of the rail line in future years would require removal of the existing footbridge to meet electrification requirements.		
Monetised summary	Not determined		
Monetary Impact Ratio	Not determined		
Safety			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Accidents	Change in Annual Personal Injury Accidents	This option could slightly reduce the risk of accidents by eliminating an existing trip hazard for those who may experience difficulty navigating the existing stepped overbridge.	Minor Positive Impact (✓)
	Change in Balance of Severity	No notable impacts anticipated on the severity of accidents.	No Benefit or Impact (-)
	Total Discounted Savings	-	-
Security		No notable impacts on the security of users. There may be some perceived safety concerns relating to possible lift breakdown and anti-social behaviour. However, discussions with stakeholders have indicated that lifts would be fitted with a descend button that allows the lift to return to ground level in the event of a breakdown. The presence of CCTV also means that misuse of the lifts would not be expected to be an issue.	No Benefit or Impact (-)
Monetised summary		Not determined	
Monetary Impact Ratio		Not determined	
Economy (Transport Economic Efficiency)			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**

User Benefits	Travel Time	No impacts anticipated in terms of travel time.	No Benefit or Impact (-)
	User Charges	No impacts anticipated in terms of user charges.	No Benefit or Impact (-)
	Vehicle Operating Costs	No impacts anticipated in terms of vehicle operating costs.	No Benefit or Impact (-)
	Quality / Reliability Benefits	No impacts anticipated in terms of reliability benefits.	No Benefit or Impact (-)
Private Sector Operator Impacts	Investment Costs	-	-
	Operating & Maintenance Costs	-	-
	Revenues	-	-
	Grant/Subsidy payments	-	-
Monetised summary		Not determined	
Monetary Impact Ratio		Not determined	
Integration			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Transport Interchanges	Services & Ticketing	No notable impacts in terms of services and ticketing.	No Benefit or Impact (-)
	Infrastructure & Information	No notable impacts in terms of infrastructure and information.	No Benefit or Impact (-)
Land-use Transport Integration		Overall, it is anticipated that this option will have no benefit or impact on the transport and land use integration criteria. It does not generate any spatial conflicts and there are negligible impacts in terms of existing and planned land-use developments. The option does not conflict with planning policy at a national or regional level and it supports the aspiration within local planning policy to improve accessibility at the station for disabled people and people with children in buggies and/or heavy luggage.	No Benefit or Impact (-)
Policy Integration		This option strongly aligns with the NTS Priority 'Reducing Inequalities' by providing improved access at the rail station, which improves access for onward travel to key attractors, including employment and education sites and healthcare facilities. The option generally aligns well with other policy and	Moderate Positive Impact (✓✓)

		legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in the Nestrans Regional Transport Strategy 2040, which specifically references the need for accessibility improvements at Insch Station. This option is considered to perform more strongly in terms of policy integration than other options as it would remove existing barriers to accessing both platforms at the station.	
Accessibility & Social Inclusion			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Community Accessibility	Public Transport Network Coverage	No notable impacts in terms of public transport network coverage.	No Benefit or Impact (-)
	Access to Other Local Services	This option is considered to have a moderate beneficial impact in terms of improving access to local services through improving access at the station, which will make it easier for people to access rail services and thus improve access to key services, including employment and education sites and healthcare facilities. This option performs better than other options in terms of access to local services as it removes the need to walk 250m when crossing between platforms (which is required for the other options).	Moderate Positive Impact (✓✓)
Comparative Accessibility	Distribution/Spatial Impacts by People Group	This option is considered to fully negate the disproportionate impact experienced by certain groups. It would allow 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.	Major Positive Impact (✓✓✓)
	Distribution/Spatial Impacts by Area	No notable impacts by geographic area as each of the options considered affect the same area immediately surrounding Insch Station.	No Benefit or Impact (-)
Strategic Environmental Assessment (SEA)			
Summary of SEA outcome where appropriate	-		
Cost to Public Sector			

Item	Qualitative information	Quantitative information
Public Sector Investment Costs	This option is estimated to be a high cost option. From an efficiency point of view, delivery of this option could remove the need for investment in the existing footbridge, therefore maximising the value of renewals, should the existing footbridge be removed. It should be noted that this option would be designed to enable route clearance for potential route electrification in the future, therefore ensuring future-proofing.	£1,950,000 (2010 prices)
Public Sector Operating & Maintenance Costs	This option would require winterisation of the footbridge and regular servicing of the lifts. Winterisation would be subsumed into existing contracts as additional work when completing existing maintenance at the station and therefore additional costs would be based on staff time and any additional resource requirements. Servicing of the lifts would be undertaken on an annual or bi-annual basis and this would likely be subsumed into an existing contract.	-
Grant/Subsidy Payments	-	-
Revenues	-	-
Taxation impacts	-	-
Monetised Summary		
Present Value of Transport Benefits	-	
Present Value of Cost to Government	-	
Net Present Value	-	
Benefit-Cost to Government Ratio	-	
Benefit-Cost to Government Ratio (including WEBs)	-	
Benefit-Cost to Funding Agency Ratio	-	

Proposal Details			
Name and address of authority or organisation promoting the proposal:		**Nestrans** 27-29 King Street, Aberdeen, AB24 5AA	
Proposal Name:	Option 5b – New Car Park + Footpath	Name of Planner:	AECOM, 120 Bothwell Street, Glasgow, G2 7JS
Proposal Description:	This option considers the provision of a new car park on the south side of the station to enable access to Platform 1 by motorised users, in combination with a footpath along the south side of the B9002. This would require an access road to be constructed from the B992 to an approximate 40-space car park. This option would additionally involve an approximate 250m travel distance and navigation of the Level Crossing for access between the platforms by non-motorised users.	Total Public Sector Funding Requirement:	Capital costs/grant: £1,530,000 Annual revenue support: Regular, incl. winterisation Present Value of Cost to Govt: N/A
Funding Sought From: (if applicable)	-	Amount of Application:	-
Background Information			
Geographic Context:	Insch is situated approximately 27 miles northwest of Aberdeen adjacent to the A96 trunk road which strategically connects Aberdeen and Inverness. The rail station is located in the south of the village and sits on the Aberdeen to Inverness railway line.		
Social Context:	Insch has a population of approximately 2,690 according to mid-2016 estimates by National Records of Scotland. The proportion of older people is higher in Insch (20%) than the average for Aberdeenshire (16%) and Scotland (17%). There is also a slightly higher proportion of those aged 30-44 in the area. Household ownership is high (74%) compared to the national average (62%). There are very high levels of car ownership in the area and 73% of people travel to work by car, reflective of trends evident in the Aberdeenshire region generally. The most common destinations for those travelling to work from Insch are Aberdeen City (particularly Dyce and the city centre), Inverurie and Huntly.		
Economic Context:	The Aberdeen City and Shire Strategic Development Plan (2014) identifies a strategic growth area between Aberdeen and Huntly, with allowance for 1,000 houses and 70 hectares of employment land to 2035. The Proposed Local Development Plan (2020) notes that no significant additional land allocations have been made in Insch to allow the village to consolidate and react to the recent level of growth.		

Transport Planning Objective	
Objective:	Performance against planning objective:
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.	The new car park + footpath option is considered to partially support the TPO for this study. It would increase travel opportunities for some groups of people whose access needs currently present a barrier to use of the station by enabling step-free access to Platform 1 by car and on foot. It is considered that this would particularly benefit those users being dropped off and picked up from the station, with the footpath providing an additional opportunity to cross between platforms. However, there are a number of limitations with this option that prevent it from fully delivering the TPO including the distance required to cross between platforms on foot, the requirement to navigate the uneven and angled Level Crossing and due to the Level Crossing barriers, which can be closed for up to 4-5 minutes at a time.
Rationale for Selection or Rejection of Proposal:	It is not recommended that this option is progressed for further consideration. This option does not fully support the TPO for the study as it would require an approximate 250m travel distance between platforms (unless users were able to be dropped off and picked up at the station); a distance which would not be manageable for all users. In addition, there are a number of deliverability concerns with this option. Significantly, the works proposed would require changes to the Level Crossing Order – these amendments would require promotion by Network Rail, who have expressed significant concerns about the option due to safety concerns associated with increased pedestrian and vehicle movements through the Level Crossings and therefore would be unlikely to support any changes to the Order.
Implementability Appraisal	
Technical:	The car park element of this option would require land to be purchased to the south of Platform 1. Discussions with Aberdeenshire Council highlighted concerns relating to access to the site, the provision of suitable permeability to the surrounding area and to the ability to provide suitable footway connections in and around the Level Crossing. The footpath element of this option is associated with a number of challenges which would constitute cost, timescale and deliverability risks including required changes to the Level Crossing Order and its equipment; potential removal of a wall and/or road realignment; and repositioning of the boundary wall which would likely impact on the existing rail signalling. Private land to the south of Platform 1 would also be required to facilitate a connection from the B9002 to the rear of Platform 1 and discussions would be required to determine who would take ownership of the footpath and therefore be responsible for its construction and maintenance.
Operational:	Discussions would be required to determine ownership of the car park including responsibility for construction and maintenance.
Financial:	The car park plus footpath option would be expected to constitute a medium-high cost option based on the potential technical issues identified. This option would also require ongoing maintenance, including footpath and car park maintenance, lighting, and CCTV.
Public:	It is considered that the car park plus footpath option would generally have public support, with the engagement exercise indicating that some people would like to see additional car parking considered as a potential improvement. However, the concerns raised regarding the implementation of a footpath are applicable in the case of this option also, including likely objections by local residents who may be adversely impacted by the construction of a new footpath.

Environment			
Mitigation Options Included: (Costs & Benefits)	Option-specific mitigation measures would be developed should the design of the option progress further and on completion of any additional environmental assessment.		
Sub-criterion	**Qualitative Information**	**Quantitative Information**	**Significance of Impact**
Noise and Vibration	Operational noise from the road and car park has the potential to impact upon residential dwellings, two of which operate as Bed and Breakfasts, directly west of the proposals. However, given the limited number of car parking spaces, in combination with appropriate mitigation, it is not anticipated that impacts would be significant.	-	Minor Negative Impact (×)
Global Air Quality – CO_2	This option results in the potential for increased levels of CO_2 associated with additional vehicular traffic in the area. However, given the relatively small size of the car park, the increase in traffic is likely to be limited and therefore it is not anticipated that impacts would be significant.	-	Minor Negative Impact (×)
Local Air Quality – PM_{10} and NO_2	This option results in the potential for increased levels of PM_{10} and NO_2 associated with additional vehicular traffic in the area. However, given the relatively small size of the car park, the increase in traffic is likely to be limited and therefore it is not anticipated that impacts would be significant.	-	Minor Negative Impact (×)
Water Quality, Drainage and Flood Defence	This option would create additional areas of hardstanding, which can lead to localised flooding during periods of increased rainfall. If option was to progress, further detailed studies on potential flood risk and a drainage impact assessment/drainage statement should be undertaken as well as identification of associated appropriate mitigation to minimise the risk of flooding given documented historical flooding issues within and around Insch.	-	Minor Negative Impact (×)
Geology	No notable impacts anticipated on geology.	-	No Benefit or Impact (-)
Biodiversity	Loss of trees and scrub can create fragmentation of habitats and barriers to movement for a number of species, including protected species such as badgers and bats. It is understood that lighting will be required for safety reasons along the footpath which can also create a barrier to species such as bats. However, with appropriate mitigation, such as sensitively designed low level directional lighting, impacts from lighting could be minimised.	-	Minor Negative Impact (×)

Landscape & Visual Amenity	This option would result in direct effects on the landscape fabric and change in land use. The existing buildings immediately north of the railway and the residential dwellings to the west enclose the car park and limit its influence on the wider townscape setting. Visibly, the proposed car park would be largely enclosed by landform and surrounding buildings. However, there would be noticeable visual effects experienced by the residents along the B9002 and rail users on the platform. The mostly rural nature of southerly views would be substantially affected by the construction and operation of the proposed car park in close proximity. Overall, this option would result in direct changes to the landscape fabric. Impacts on visual amenity have the potential to be significant from the few closest properties that overlook the site.	-	Moderate Negative Impact (××)
Agriculture and Soils	This option would result in the loss of a small area of scrub woodland, in combination with approximately 1ha of agricultural land. It is anticipated that there would be further increased loss of agricultural land temporary in nature to facilitate construction of the development, for example a laydown area and construction compound, with land not required for the footprint of the development reinstated on completion. The design of the car park is indicative at this stage and therefore the location of the car park could be moved westward, with the access road aligned directly south of the existing residential dwellings, to remove impacts associated with severance of the agricultural field.	-	Minor Negative Impact (×)
Cultural Heritage	This option would avoid direct impact on any of the listed structures through strategic design. The materials used, such as type of street furniture and lighting could be designed with input from a Heritage Consultant, to minimise significant adverse effects on the setting and character of the listed structures.	-	Minor Negative Impact (×)
Monetised summary	Not determined		
Monetary Impact Ratio	Not determined		

Safety			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**

Accidents	Change in Annual Personal Injury Accidents	This option would increase the numbers of vehicles passing over the Level Crossing (albeit numbers are likely to be low), which could increase interaction between vehicles and between vehicles and non-motorised users; some of whom may be vulnerable. This increases the risk of accidents occurring. There are also concerns regarding the increased interaction between vehicles and pedestrians at the driveway between the two properties that the footpath is proposed to be routed through.	Minor Negative Impact (**×**)
	Change in Balance of Severity	No notable impacts anticipated on the severity of accidents.	No Benefit or Impact (-)
	Total Discounted Savings	-	-
Security		The secluded nature of the path behind the station and away from the built-up area of Insch could introduce concerns regarding anti-social behaviour. It is considered, however, that this could be mitigated through the provision of lighting and CCTV.	Minor Negative Impact (**×**)
Monetised summary		Not determined	
Monetary Impact Ratio		Not determined	
Economy (Transport Economic Efficiency)			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
User Benefits	Travel Time	No impacts anticipated in terms of travel time.	No Benefit or Impact (-)
	User Charges	No impacts anticipated in terms of user charges.	No Benefit or Impact (-)
	Vehicle Operating Costs	No impacts anticipated in terms of vehicle operating costs.	No Benefit or Impact (-)
	Quality / Reliability Benefits	No impacts anticipated in terms of reliability benefits.	No Benefit or Impact (-)
Private Sector Operator Impacts	Investment Costs	-	-
	Operating & Maintenance Costs	-	-
	Revenues	-	-

	Grant/Subsidy payments	-	-
Monetised summary		Not determined	
Monetary Impact Ratio		Not determined	
Integration			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Transport Interchanges	Services & Ticketing	No notable impacts in terms of services and ticketing.	No Benefit or Impact (-)
	Infrastructure & Information	No notable impacts in terms of infrastructure and information.	No Benefit or Impact (-)
Land-use Transport Integration		Overall, it is anticipated that this option will have no benefit or impact on the transport and land use integration criteria. It does not generate any spatial conflicts and there are negligible impacts in terms of existing and planned land-use developments. The option does not conflict with planning policy at a national or regional level and it supports the aspiration within local planning policy to improve accessibility at the station for disabled people and people with children in buggies and/or heavy luggage.	No Benefit or Impact (-)
Policy Integration		The introduction of a new car park and footpath strongly aligns with the NTS Priority 'Reducing Inequalities' by providing improved access at the rail station, which improves access for onward travel to key attractors, including employment and education sites and healthcare facilities. The option generally aligns well with other policy and legislative areas, including the Equality Act 2010, the Inclusive Transport Strategy and accessibility for all priorities outlined in the Nestrans Regional Transport Strategy 2040, which specifically references the need for accessibility improvements at Insch Station. The car park component of this option results in a slight negative score against Safety & Casualty Reduction, Protecting Natural Environment & Access to Nature, Demand Management and Modal Shift as a result of a new car park potentially encouraging travel by car. However, given the small size of the car park, it is expected that any increase in traffic flows would be minor and could be offset by enabling more people to travel by rail for longer trips rather than by car.	Minor Positive Impact (✓)
Accessibility & Social Inclusion			

Sub-criterion	Item	Qualitative Information	Quantitative Information
Community Accessibility	Public Transport Network Coverage	No notable impacts in terms of public transport network coverage.	No Benefit or Impact (-)
	Access to Other Local Services	This option is considered to have a minor beneficial impact in terms of improving access to local services through improving access at the station, which will make it easier for people to access rail services and thus improve access to key services, including employment and education sites and healthcare facilities.	Minor Positive Impact (✓)
Comparative Accessibility	Distribution/Spatial Impacts by People Group	This option is anticipated to reduce the disproportionate impact experienced by certain groups. In terms of age and disability, it is considered that this option would mainly provide benefits to those who can be picked up and dropped off at the station. For those driving themselves, it would be anticipated that older people and those with mobility impairments would continue to be impacted negatively because they would be required to utilise the footpath on their return journey. It is anticipated that the disproportionate impact experienced by people travelling with a pram or young children would be lessened with the footpath and the opportunity to access Platform 1 without having to navigate a stepped overbridge; although a disproportionate impact would still be felt by some people, including those who are pregnant due to the distance required to travel via the footpath on their return journey.	Minor Positive Impact (✓)
	Distribution/Spatial Impacts by Area	No notable impacts by geographic area as each of the options considered affect the same area immediately surrounding Insch Station.	No Benefit or Impact (-)

Strategic Environmental Assessment (SEA)	
Summary of SEA outcome where appropriate	-

Cost to Public Sector		
Item	**Qualitative information**	**Quantitative information**
Public Sector Investment Costs	This option is estimated to constitute a medium-high cost option.	£1,530,000 (2010 prices)
Public Sector Operating & Maintenance Costs	Operating and maintenance requirements include winterisation, CCTV, and lighting and car park maintenance including gully cleaning, and signing and	-

	lining. This would generally be subsumed into existing contracts as additional work when completing existing maintenance at the station and therefore additional costs would be based on staff time and any additional resource requirements. Maintenance of signing and lining is generally undertaken through a subcontractor to Network Rail.	
Grant/Subsidy Payments	-	-
Revenues	-	-
Taxation impacts	-	-
Monetised Summary		
Present Value of Transport Benefits	-	
Present Value of Cost to Government	-	
Net Present Value	-	
Benefit-Cost to Government Ratio	-	
Benefit-Cost to Government Ratio (including WEBs)	-	
Benefit-Cost to Funding Agency Ratio	-	

Appendix C: Diversity Impact Assessment

Diversity Impact Assessment

Guidance for completing each section is provided in the
Everyone Guide to Diversity Impact Assessments

Name of policy, programme or project: Accessibility at Insch Station

Your Name: **Your Job Title:**

Your Email: **Department:**

Document Ref: **DIA Version No:**

Step 1: Clarifying Aims

Q1. What are the aims of this project/piece of work?

This project aims to improve accessibility at Insch Station. A full analysis of problems and opportunities associated with the project, is presented in the 'Accessibility at Insch Study'.

Q2. Could this work impact on people? If yes, briefly explain how (considering our duty to promote equality, tackle discrimination and foster good relations between groups).

The southern (west-bound) platform at Insch Station can currently only be accessed via a footbridge with steps. Insch is the only station in the North East of Scotland where both platforms are not accessible to all users. This project seeks to promote equality by ensuring that people have access to both platforms, rather than having to arrange in advance a taxi from the closest stations of Inverurie (~22 mins) or Huntly (~18 mins) where step-free access is provided. As such, this project will have a positive impact on people who cannot (or cannot easily) use steps, including people with reduced mobility, people in wheelchairs, and people with pushchairs or luggage.

The footbridge with lift option (Option 4) would be the most inclusive option, providing DDA compliant access and minimising the distance between platforms. The ramp option (Option 3) would also provide DDA compliant access between platforms however, due to gradient requirements, the ramp would result in a travel distance of approximately 250m between platforms which may be difficult for some people with reduced mobility. The footpath option (Option 1a) would provide step-free access; however, it would involve longer travel distances around the station via the level crossing, which may not be manageable for all users.

In terms of fostering good relations between groups, generally options that provide improved access at the station would be anticipated to foster good relations based on findings from stakeholder engagement – accessibility issues at Insch have been a longstanding issue of public and political concerns. In relative terms however, the ramped footbridge option (Option 3) would not be as acceptable as the other options as facilitation of this option would require the car park to be reduced by around 23 parking spaces (amounting to a loss of around 50% of existing parking); this may not contribute to positive relations between groups if it is perceived that accessibility improvements are

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at the expense of parking. Full details on the public acceptability of options has been assessed as part of the 'Accessibility at Insch Study'.

Step 2: The Evidence Base

Q3. Record here the data you have gathered about the diversity of the people potentially impacted by this work e.g. from the 2011 national census or from HR Shared Service. You should also include any research on the issues affecting inclusion in relation to your work.

Consider evidence in relation to all the protected characteristics;

- Disability including Carers[1]
- Pregnancy/maternity
- Religion or belief
- Sexual orientation
- Gender reassignment
- Age
- Race
- Gender
- Marriage/Civil Partnership

Based on the 2011 Census Data:

- 5.2% of people in the AB52 6 postcode area (including Insch) have a long-term health problem or disability which limits their day-to-day activities a lot, and 8.34% have a long-term health problem or disability which limits their day-to-day activities a little.
- 49.9% of people in the AB52 6 postcode area (including Insch) are male and 50.1% are female.
- The following table shows the age distribution of the AB52 6 postcode area (including Insch):

Age Range	% in AB52 6 Postcode Area
Under 16	18.8
16-24	9.6
25-34	9.7
35-44	16.6
45-54	16.3
55-64	13.3
65+	15.7

- The following table shows the religion distribution of the AB52 6 postcode area (including Insch):

Religion	% in AB52 6 Postcode Area
Church of Scotland	37.1
Roman Catholic	3.0
Other Christian	7.4
Buddhist	0.1

[1] Including those with physical, mental and hidden impairments as well as **carers** who provide unpaid care for a friend or family member who due to illness, disability, or a mental health issue cannot cope without their support

Hindu	0.0
Jewish	0.0
Muslim	0.1
Sikh	0.0
Other religion	0.3
No religion	44.3
Religion not stated	7.5

- The following table shows the ethnicity distribution of the AB52 6 postcode area (including Insch):

Ethnicity	% in AB52 6 Postcode Area
White	99.1
Mixed or multiple ethnic groups	0.4
Asian, Asian Scottish or Asian British	0.4
African	0.0
Caribbean or Black	0.1
Other ethnic groups	0.0

- The following table shows the marital status distribution of the AB52 6 postcode area (including Insch):

Marital Status	% in AB52 6 Postcode Area
Single (never married or never registered a same-sex civil partnership)	18.0%
Married	58.1%
In a registered same-sex civil partnership	0.2%
Separated (but still legally married or still legally in a same-sex civil partnership)	4.1%
Divorced or formerly in a same-sex civil partnership which is now legally dissolved	9.1%
Widowed or surviving partner from a same-sex civil partnership	10.5%

- Based on video surveys undertaken at Insch Station, a total of 70 pedestrians were recorded crossing the footbridge from Platform 1 to Platform 2 towards the exit and car park, with 94% of pedestrians classified as 'Adults'. One pram/buggy, one child under 16 years of age, one cycle and one elderly person were recorded. A total of 10 adults were recorded crossing the footbridge from Platform 2 to Platform 1 during the survey period

Step 3: Impact

Q4. Given the evidence listed at step 2, what potentially negative impacts could this work have on people with protected characteristics?

Protected Characteristic		Explain the potential negative impact
Disability e.g. the impact of a new online process on dyslexic staff or the impact of changes to how passengers get to a	N	Only positive impacts anticipated based on this characteristic, with proposed options designed to promote equality of access for people with

platform on someone who cannot use stairs.		reduced mobility due to health conditions or disability.
Age e.g. the impact of changes to long-service benefits on younger and older staff or the impact of a long alternative route to close a level crossing on an older person with a long-term health issues	N	Only positive impacts anticipated based on this characteristic, with each of the options under consideration designed to promote equality of access for people with age-related reduced mobility.
Pregnancy / maternity e.g. the impact of team relocation on a woman who is on maternity leave or the increase in height of a footbridge over the railway	N	Only positive impacts anticipated based on this characteristic, with each of the options under consideration designed to promote equality of access for people with pregnancy-related reduced mobility.
Race e.g. the impact of psychometric testing on the recruitment of people who don't have English as a first language or the gentrification of an area following station redevelopment that makes retail outlets too expensive for local businesses	N	No anticipated impact based on this characteristic.
Religion or belief e.g. the impact of a new expenses policy on meal times or the closure of a level crossing between a community and its place of worship	N	No anticipated impact based on this characteristic.
Gender e.g. the impact of a local decision to adopt arbitrary 'core hours' on women who are more likely managing childcare issues or the impact of changes in parking policies on women who are more likely to start work later due to childcare issues	N	Only positive impacts anticipated with each of the options under consideration designed to promote equality of access for people travelling with pushchairs (who may be more likely to be female).
Sexual orientation e.g. the impact of a decision to invite partners to an away day on a gay man who hasn't disclosed his sexual orientation or the secondment of a lesbian member of staff to a project in a country where this would be a risk to life / human rights	N	No anticipated impact based on this characteristic.
Marriage/Civil Partnership e.g. the impact of the extension of private health care to spouses	N	No anticipated impact based on this characteristic.
Gender reassignment e.g. the impact of a decision to publish	N	No anticipated impact based on this characteristic.

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Oracle gender data on a new intranet staff finder page or the impact of a decision to not let staff use taxis for late night events in high risk areas		

Q5. What could you do to ensure your work has a positive impact on diversity and inclusion including by supporting delivery of the Everyone Strategy.

The purpose of this study is to provide more inclusive access to the rail network at Insch Station. Currently, access is only possible via a footbridge with steps, which may be difficult for several groups sharing protected characteristics including: people with disability-related reduced mobility; people with age-related reduced mobility; people with pregnancy-related reduced mobility; and people travelling with pushchairs (who may be more likely to be female). This supports the Everyone Strategy aim related to Access and Inclusion: To deliver a more inclusive and accessible service, increasing our ability to serve existing and potential customers by providing access to the rail network at Insch Station to people currently unable to use the existing footbridge to access both platforms, and improving access to the rail network at Insch Station for people who currently have difficulty using the existing footbridge to access both platforms.

Step 4: Consultation

Q6. How has consultation with those who share a protected characteristic informed your work?

List the groups you have consulted or reference previous relevant consultation?[2]	What issues were raised in relation to one or many of the protected characteristics?
Central Aberdeenshire Access Panel (an accessibility audit of Insch Station was carried out with Panel Members in March 2019)	• The ability to easily access both platforms was the key concern for the Central Aberdeenshire Access Panel. • There is a perception that many people do not use the station due to the accessibility issues. • A separate Accessibility Audit was completed based on a site review carried out alongside members of the Aberdeenshire Access Panel. Full details are provided in the 'Accessibility at Insch Study'.
ScotRail Access and Inclusion Manager	• ScotRail oversee 361 stations within its remit and approximately half of those stations are currently

[2] This could include our staff networks, the Built Environment Access Panel, local faith leaders etc.

	inaccessible. Of the 361 stations, Insch ranks at 194 on the list in terms of those requesting assistance. • It was emphasised that accessibility is not just about those in a wheelchair or people who are blind, it is an issue affecting the ageing population, those with injuries affecting their mobility, and those with young children amongst several other groups of people. • To deliver a fully accessible station, both platform-to-platform access and street-to-platform access must be achieved.
Others	• Note, in addition, consultation has been undertaken with a range of other stakeholder groups including the local Community Council (Bennachie), British Transport Police, and elected officials, including MPs. MSPs and Local Councillors. • A wider Project Steering Group comprising Nestrans, Aberdeenshire Council, Transport Scotland, Network Rail and ScotRail also provide input to guide and develop the study.

Q7. Where relevant, record any consultation you have had with Network Rail teams who are delivering work that might overlap with yours. This will ensure that our solutions are joined up.

Network Rail sit on the Steering Group for the Access to Insch Improvements projects and are responsible for feeding into the study and reviewing appraisal reports at key gateway stages. In addition, a meeting has taken place with Network Rail Scotland's Route Level Crossing Representatives for advice on the potential impacts of options under consideration through this study on a nearby barrier-controlled Level Crossing at Insch. Network's Rail have also been contacted for guidance and advice regarding the preparation of this Diversity Impact Assessment.

Step 5: Informed Decision-Making

Q8. In light of the assessment above, what is your decision?
Please tick one box and provide a rationale (for most DIAs this will be box 1).

1. Change the work to mitigate against potential negative impacts found	
2. Continue the work because no potential negative impacts found	✔ No potential negative impacts found.

	Due to the nature of this project as a station accessibility study, equality of access is a central consideration in the study. This project is not expected to have any negative impact, as people who currently use the footbridge to access both platforms would continue to be able to do so via the existing or replacement footbridge (depending on which option is taken forward). In addition to the existing footbridge access, the project will also provide the option to use the alternative access (options under consideration include a lift, ramp, footpath or car park), allowing people who cannot use steps to access both platforms. This project will improve equality of access for those people.
3. Justify and continue the work despite negative impacts (please provide justification)	
4. Stop the work because discrimination is unjustifiable and no obvious ways to mitigate	

Step 6: Action Planning

Q9. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at step 3 or through consultation?

Action	By when	By who
N/A		
Review this DIA		

Step 7: Sign off

Name	Position	Signed	Date
DIA Owner			

Superuser[3]			
Senior Manager[4]			

If you don't have a local superuser or if your project has been to BEAP please send your DIA for quality assurance to DiversityImpactAssessment@networkrail.co.uk

To help us respond more quickly please make sure you have;

1. Sent your DIA as a Word document not a PDF
2. Used this naming convention '**Name of project-Draft DIA'**
3. Used the correct DIA form with no additional pages e.g. 'not for circulation cover-sheets'
4. Included any relevant maps / diagrams needed to understand your project
5. Completed all sections of the DIA in line with guidance and training

Step 8: Publication

Send your final DIAs to DiversityImpactAssessment@networkrail.co.uk. Customer related DIAs will be published on our website**.**

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[3] Quality assurance check.
[4] Sign-off should be by someone who can approve policy, programme or budget changes.

Appendix D: Estimating Potential Lost Revenue at Insch Station File Note

Appendix D: Estimating Potential Lost Revenue at Insch Station File Note

Introduction

As part of the Accessibility at Insch Study, an online survey was carried out in response to a request to provide more detailed information to an earlier draft of the Case for Change around the number of people that would use Insch Station more frequently if accessibility improvements were made. From the results of the survey, AECOM was asked to provide an estimate of the revenue that is potentially lost to the rail network as a result of the current accessibility arrangement.

This note documents the analysis of the survey data that has been undertaken in order to estimate the impact that the accessibility barrier potentially has on passenger demand to/from Insch station which can then be used to estimate the revenue impact.

Methodology

Data Collection

The online survey was undertaken from 1 November 2019 to 6 December 2019 and was completed by 438 respondents.

For the purpose of this analysis the questions which pertained to current inaccessibility and those which were relevant to the level of usage should accessibility at the station be improved were identified:

- Q9j – *which of the following would be most likely to encourage you to use the station more often in the future?*
- Q5 – *How often do you travel to the following destinations?*
- Q6 – *How often do you use train for these trips?*
- Q7 – *How often have you used the rail services at Insch in the last month?*
- Q11-18 – *Please indicate the purpose and frequency of the journeys you would make by rail to Aberdeen (or other relevant city for Q12-18).*

Data Cleaning and Processing

In order to undertake analysis of the survey data that would enable the potential impact on trip making to be estimated, the responses to a number of qualitative questions were updated based on a set of assumptions. Specifically, Questions 5-7 and 11-18, which asked the frequency in which respondents made journeys to Aberdeen, Inverurie, Dyce, Huntly, Inverness, Glasgow, Edinburgh, and other destinations and the responses to this needed to be converted into a number of trips for each record. To convert these responses into trip numbers, assumptions were made as presented in **Table 1**.

Table 1: Trip Frequency Assumptions

Survey Answer	Assumed trips per week
Daily	5
2 - 5 times a week	3.5
Once a week	1
Less than once a week but more than once a month	0.5
Less than once a month but more than once a year	0.1
Never	0
Not in the last month	0

The data was reviewed in order to identify any outliers which included responses that may have misinterpreted some of the questions. Following the inclusion of trip numbers, it became clear that the number of trips included in the responses were not feasible (e.g. some respondents that stated they did not currently use the train at all, then suggested that after improvements they would travel 100+ times a week).

The reasons for some of these over estimates were investigated and the following actions were taken in order to clean the data, shown in **Table 2**.

Table 2. Data Cleaning

Reason for Over Estimation	Action
Duplication of trips where multi-purpose trips (e.g. going shopping and visiting friends) were being recorded as separate trips in the response.	Only use response for a single journey purpose and where the value differed between purposes, use the maximum value in the response to the question.

Following this action, any person who would still make > 5 return trips a week by rail were excluded from any further analysis. This left 394 cleaned records out of a possible 438 completed surveys.

Data Analysis and Results

As the survey was only completed by a sample of the population, the records needed to be expanded to ensure the total volume of trips was captured in the analysis. In order to estimate the expansion factor, the responses to the survey were compared to observed station entries and exits, using 'Estimates of Station Usage' data from the Office of Rail and Road[1]. The steps required to complete this were as follows:

- Calculate the sample figure: the weekly number of trips recorded in each survey recorded was annualised through multiplying by an annualisation factor (47, assumes 5 weeks holiday). This resulted in 33,755 entries and exits being calculated.
- Identify the observed figure: the total observed entries and exists at Insch Station from the ORR data in 2017/18[2] was 88,362.
- Calculate the expansion factor: from these two figures (sample v observed), an expansion factor of ~2.62 was calculated.

In order to identify the passengers that would likely benefit from improved accessibility at the station, the survey was filtered by records that responded to Q9j ('*which of the following would be most likely to encourage you to use the station more often in the future?*'), with the option '*Increased physical accessibility at the station (including platform accessibility)*'. This resulted in 66 records being identified with all of these identifying as existing rail users.

The total current annual rail journeys identified in these 66 records that identified accessibility at the station as an issue was 3,900 return trips (7,800 entries and exits) per annum from Insch Station.

The responses to Q11-18 which recorded the anticipated frequency of trips if the accessibility at the station was improved suggested that trips from Insch Station would increase by 2,350 return trips (4,700 entries and exits) per annum.

[1] [1] https://dataportal.orr.gov.uk/media/1669/time-series-of-estimates-of-station-usage-1997-98-to-2018-19.xlsx
[2] 2017/18 data was used because the 2018/19 data was affected by engineering works on the line and is considerably lower than the previous year.

This suggests that the total annual entries and exits at Insch Station could increase to circa 93,000 or by 5% if station/platform access was improved at the station. The analysis is summarised in **Table 3**.

Table 3: Estimated Trips by Rail

A	B	C	D	E	F
Demand (Return trips from expanded survey data)	**Current total trips by rail (includes those who identified accessibility as an issue)**	**Current trips by rail for people who identified accessibility as an issue**	**New trips by rail for people who identified accessibility as an issue if it was addressed**	**Estimated trips by rail for people who identified accessibility as an issue if it was addressed) (C+D)**	**Total trip by rail if accessibility was addressed (B+D)**
Aberdeen	23,635	1,907	775	2,682	**24,410**
Inverurie	7,616	997	258	1,255	**7,874**
Dyce	2,165	148	86	234	**2,251**
Huntly	2,719	111	381	492	**3,100**
Inverness	1,833	246	504	750	**2,338**
Glasgow	1,919	148	74	221	**1,993**
Edinburgh	2,559	283	234	517	**2,793**
Other	1,735	62	37	98	**1,772**
Total Return Trips	**44,181**	**3,900**	**2,350**	**6,250**	**46,531**
Total Entries and Exits	**88,362**				**93,062**

The estimated revenue impact of improved accessibility has also been estimated. It should be noted that existing revenue data was not available for this analysis and the process required a number of assumptions to made, therefore the results should be treated with caution and only used as a guide. The revenue impact has been estimated using the following steps:

- The demand by journey purpose was identified for the seven destinations identified in the survey for both the current (all demand) and the new journeys from the station.
- Fares for each of these flows were soured from National Rail website (Standard Day Return, Cheap Day Return). It should be noted that no responses identified passengers travelling 5 times a week or more, so Season tickets were excluded.
- By each destination and for each journey purpose, a ticket type was assumed (i.e. Leisure = Cheap Day Return). The percentage share of trips by each ticket type was used to estimate an average fare yield that could be applied to the demand.
- The demand by flow was then multiplied by the fare yield by flow to estimate the revenue for both the current trips and the additional trips from the station.

The above process assumes that no passengers have additional discounts (young person's rail card etc.) and therefore potentially slightly overestimating the revenue. There are also a few trips to other destinations for which the revenue has not been captured in the analysis. The estimate of the revenue impact of improvements in accessibility at Insch Station is presented in **Table 4.**

Table 4: Estimated Revenue for all passengers travelling from Insch

	Aberdeen	**Inverurie**	**Dyce**	**Huntly**	**Inverness**	**Glasgow**	**Edinburgh**	**Total**
Revenue before intervention (annual)	£303,175	£57,019	£23,870	£25,928	£65,824	£117,375	£152,296	**£745,486**
Increase in revenue following intervention	£9,943	£1,934	£949	£3,637	£18,113	£4,514	£13,912	**£53,002**
Percentage change	3.3%	3.4%	4.0%	14.0%	27.5%	3.8%	9.1%	**7.1%**

Benchmarking

To compare the results to those experienced at other stations where accessibility has been improved, a benchmarking exercise was undertaken.

Firstly, we identified stations where a similar intervention has been implemented from Network Rail's Access for All website.[3] We then sourced station entries and exits data from ORR 'Estimates of Station Usage' and extracted data for stations where accessibility interventions had been identified, and for a number of reference stations where no improvements have recently been made. Reference stations were selected on the basis that they are likely to have experienced similar background growth and were therefore selected from stations in similar geographic areas to the benchmarking stations.

Most stations nationally see a long-term trend of growth, which the impact of accessibility improvements at a particular location cannot easily be isolated from, however we have used the process outlined below to attempt to isolate this impact from the data.

The average growth in demand two years after the intervention was calculated from the entries and exits data, and an average for the reference case stations produced. To then estimate the impact of the improvement in accessibility, the difference between the growth experienced at the station with the improvement was then compared with the average growth across the reference stations. This was undertaken for two stations and the results are presented in **Table 5**.

Table 5: Benchmarking Analysis

Station	Year Complete	Intervention	Year before improvement	Year of improvement	Two years after improvement	Growth after two years	Average Growth	Difference between Station with improvements and those without
St Austell	2014	New footbridge with lifts	469,074	461,194	464,000	1.006	N/A	4%
Par	N/A	Reference station	193,818	190,532	190,168	0.998	0.964	
Truro	N/A	Reference station	1,265,284	1,238,874	1,201,010	0.969		
Lostwithiel	N/A	Reference station	76,922	73,042	67,472	0.924		
Penrith	2016	New footbridge with lifts	475,964	498,428	565,660	1.135	N/A	5%
Oxenholme	N/A	Reference station	489,158	521,768	581,308	1.114	1.080	
Lancaster	N/A	Reference station	2,004,122	2,033,538	2,142,868	1.054		
Carlisle	N/A	Reference station	1,908,872	1,833,028	1,967,474	1.073		

The results above indicate that growth at the two stations where new footbridges and lifts have been installed has outstripped the growth at experienced at other stations nearby by between 4% and 5% after two years. This is only a small sample but indicates that the results calculated for Insch Station are likely to be a reasonable estimate of the uplift in demand that might be experienced should accessibility at the station be improved.

[3] https://www.networkrail.co.uk/communities/passengers/station-improvements/access-for-all-improving-accessibility-at-railway-stations-nationwide

Appendix E: Option Costs – Assumptions & Exclusions

Basis

The Order of Cost Estimate is based on the following:

1) Information upon which cost estimates have been prepared:
- 60599819-ACM-DRG-INS-000001-P01
- 60599819-ACM-DRG-INS-000003 P01
- 60599819-ACM-DRG-INS-000004 P01
- Blackridge Design Package (similar to Option 3)
- Kintore Design Package (similar to Option 4)
- For the new car park option (Option 5b) The type of highway construction was taken from Aberdeenshire Councils Standards for Roads Construction Consent and Adoption, using the make up for a Core Road (2MSA) with the costs being extracted from Benchmarked Schedule of Rates that have been compiled from various construction projects to determine appropriate construction costs.

2) Outline scope is as follows:-
- Option 1A - To upgrade existing Level Crossing with new barrier and additional footpath
- Option 3 - Remove existing footbridge and install new footbridge with ramp and stairs
- Option 4 - Remove existing footbridge and install new footbridge with lift and stairs
- Option 5B - Option 1A plus new car park and access road

Assumptions

The following assumptions have been made in preparing this report:

1) Construction costs are estimated up to and including 4Q 2019. No inflationary allowance has been included due to there being no proposed site start date.

2) A single stage traditional procurement strategy has been assumed and the following allowances have been made for on-costs:-
- Main Contractor's Preliminaries 15.0%
- Main Contractor's OH&P 5%
- Design Development / Client Contingency 20%

3) Costs have been based on rates from recent benchmark data, with due allowance/adjustments for expected specification and scope of works.

4) It is assumed the contractor will have to allow for increased protection measures due to the nature of the environment in which construction work will be taking place.

Exclusions

The items noted below are excluded but are known to have cost implications. If these items are required, these items need to be covered by separate allowances.

This exclusions list is intended as a guide and is not to be treated as exhaustive. Noted below are items which have been excluded from this estimate.

1. Value Added Tax (VAT).
2. Client's financing costs.
3. Planning and building warrant fees.
4. Legal advice and associated costs including fees.
5. Construction inflation beyond 4Q 2019.
6. Capital allowances and incentive grants are excluded.
7. No allowances have been made to cover phasing the works. It is assumed the works will be carried out in one continuous construction sequence.
8. Other than those specifically listed above, no allowance is made for enabling and temporary works that may be necessary prior to commencement on site.

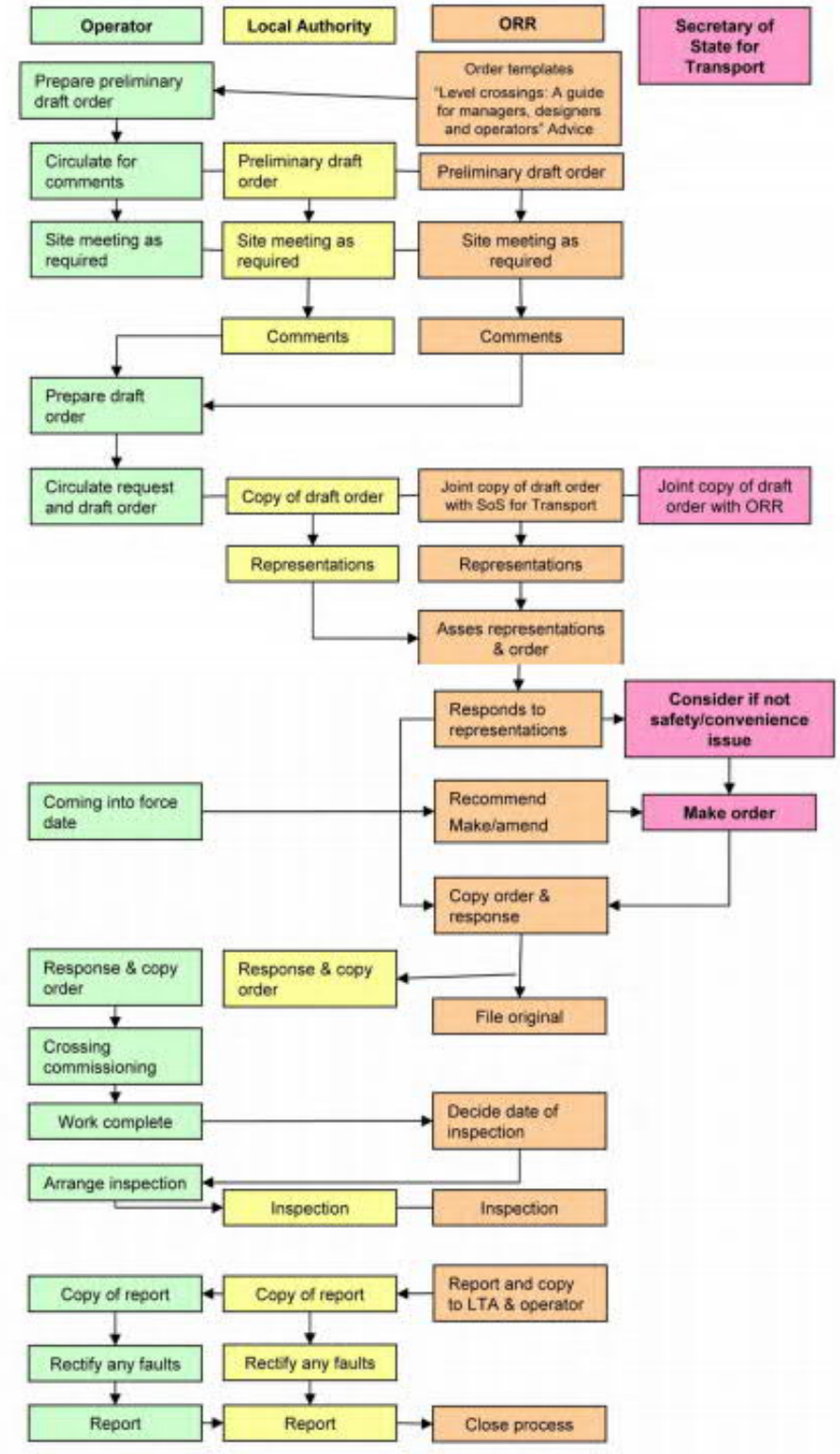
9. Out of hours working.
10. Abnormal ground conditions / contamination / remediation measures (including consequential costs arising).
11. Works to any services in the area other than those specifically stated.
12. Any abnormal substructure works such as piling etc
13. Disposal costs of hazardous materials on site.
14. No works to the permanent way or to the line itself
15. Any land purchase costs

Risks

The items noted below should be noted as having a potential impact on the project cost and are not fully quantifiable until further design is complete.

- Options 3 & 4 - The number of services requiring diversion both on the platform and over the existing bridge
- Options 1A & 5B movement of services/infrastructure at the Signal Box/Station House

Appendix F: Level Crossing Order Process



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