

# LAND EAST OF ABERGAVENNY

## Accessible Footbridges – Feasibility Study

JULY 2025

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|-----------|--------------------------------------|
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|         |            |                       |                                                     |
|         |            |                       |                                                     |
|         |            |                       |                                                     |

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# CONTENTS

|          |                                                                                                     |           |
|----------|-----------------------------------------------------------------------------------------------------|-----------|
| <b>1</b> | <b>INTRODUCTION.....</b>                                                                            | <b>1</b>  |
| 1.1      | Proposed Development .....                                                                          | 1         |
| 1.2      | Possible Structure Locations .....                                                                  | 3         |
| 1.2.1    | Potential Structure Location 1 – Abergavenny Station .....                                          | 4         |
| 1.2.2    | Potential Structure Location 2 – End of Firs Road .....                                             | 10        |
| 1.2.3    | Crossing at B4233 (aka Asylum Road) .....                                                           | 14        |
| 1.3      | Requirements .....                                                                                  | 15        |
| 1.3.1    | Intended Use .....                                                                                  | 15        |
| 1.3.2    | Walkway Widths .....                                                                                | 15        |
| 1.3.3    | Gradients .....                                                                                     | 16        |
| 1.4      | Site Knowledge .....                                                                                | 17        |
| 1.4.1    | SSSI .....                                                                                          | 17        |
| 1.4.2    | Listed Status of Structures .....                                                                   | 17        |
| 1.4.3    | Use of A465 as Parking for Access to Station .....                                                  | 18        |
| 1.4.4    | Stakeholder Engagement .....                                                                        | 21        |
| <b>2</b> | <b>OPTIONS .....</b>                                                                                | <b>22</b> |
| 2.1      | Option 1A: Improvements to Listed Station Footbridge Access / Egress .....                          | 22        |
| 2.2      | Option 1B: Ramp & Stepped Access to Platform 2 .....                                                | 25        |
| 2.3      | Option 1C: New Free-Standing Structure to Span Potential New Rail Line .....                        | 28        |
| 2.4      | Option 2A: New Structure at End of Firs Road Crossing Rail and Road .....                           | 31        |
| 2.5      | Option 2B: New Ramped Structure at End of Firs Road Crossing Rail with Ramp to Road Crossing .....  | 34        |
| 2.6      | Option 2C: New Stepped Structure at End of Firs Road Crossing Rail with Ramp to Road Crossing ..... | 36        |
| <b>3</b> | <b>RECOMMENDATIONS.....</b>                                                                         | <b>38</b> |

# TABLES

|                                     |    |
|-------------------------------------|----|
| Table 1 - Option 1A Costings .....  | 24 |
| Table 2 - Option 1B Costings .....  | 27 |
| Table 3 - Option 1C Costings .....  | 30 |
| Table 4 - Option 2A Costings .....  | 33 |
| Table 5 - Options 2B Costings ..... | 35 |

Table 6 - Option 2C Costings ..... 37

Table 7 - Preferred Options Costs..... 38

Table 8 - Updated Preferred Options Costs ..... **Error! Bookmark not defined.**

APPENDICES

APPENDIX A

Drawings

## 1 Introduction

Arcadis Consulting (UK) Ltd ('Arcadis') have been commissioned by Monmouthshire Housing Association and Monmouthshire County Council as part of the Replacement Local Development Plan (RLDP) to undertake early-stage feasibility work to examine options for the provision of a combined footway/cycleway connecting the proposed housing development to the east of the A465 to Abergavenny town to the west. The site is currently to be allocated through the RLDP process, after which an application will be submitted.

The feasibility study is required to support the proposals for the development of land to the east of the railway and the A465 trunk road. The structures / improvements proposed within this report aim to assist in developing access proposals for the land identified within the RLDP.

### 1.1 Proposed Development

In line with the RLDP, the Development proposed by Monmouthshire Housing Association (MHA) will look to provide a 35.9-hectare Strategic Mixed-Use Development located on the eastern edge of Abergavenny, bordered by the A465 and the Hereford and Newport (HNL1) railway line to the west and the foot slopes of the Ysgyryd Fach (Little Skirrid) hill to the east. See Figure 1 below for the proposed development location.

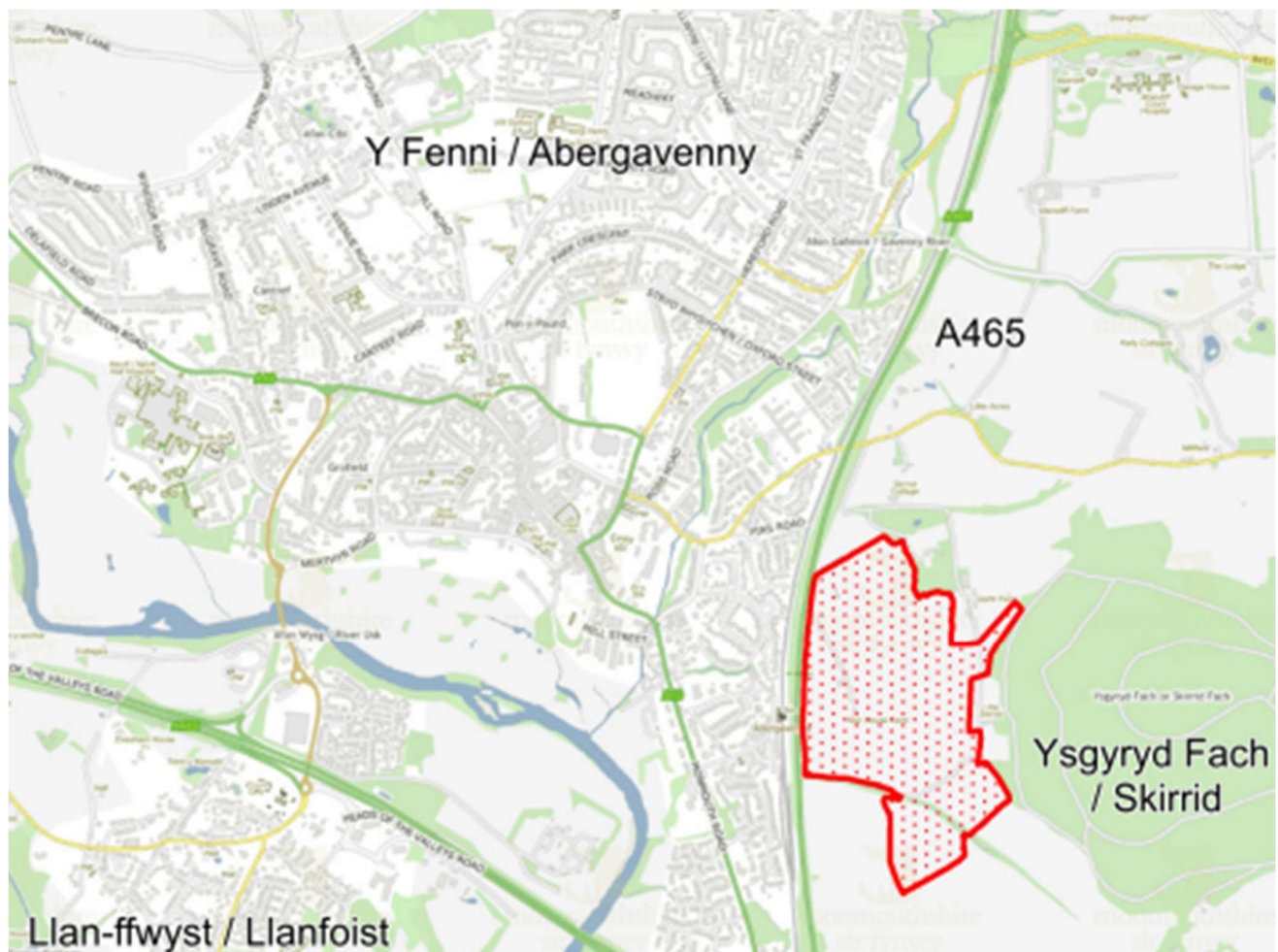


Figure 1 - Proposed Development Location

The site is proposed to be allocated as a residential-led mixed-use development in the RLDP under Policy HA1 'Land to the East of Abergavenny'. The RLDP is currently at Deposit Plan stage and is due to be adopted in 2026 after undergoing the public examination.

The site has also been earmarked for further development. As such, identifying connection links that provide crossings over the railway line and the A465 is a 'key focus' for the site.

An extract from the current (June 2025) site masterplan is shown in Figure 2. As can be seen in there is a desire to integrate the development with the existing Railway Station and wider areas of Abergavenny through the "Station Quarter" at the southwest extremity of the site. This proposed "Station Quarter" offers the potential to provide a 'community hub' serving both the urban extension and the railway station area, as well as a park and ride facility for the railway station, in line with the requirements set out within Policy HA1.

Additionally, there are a number of improvements proposed as part of the scheme to the A465 – including pedestrian crossing points, new access points, active travel routes for pedestrians / cyclists, and the reduction of the speed limit to 30mph.



Figure 2 - Current Development Masterplan (June 2025)



## 1.2 Possible Structure Locations

The proposed development site and Abergavenny town are separated by both the A465 and the Newport to Herford railway line, establishing the need for a structure to provide safe and accessible passage over both key transportation routes and support the planned / proposed changes to the A465.

There are two potential structure locations discussed within this report; the first location is at Abergavenny Railway Station. The second location considered is at Firs Road. These locations can be seen in Figure 3 below.

The existing B4233 structure is also mentioned for comparison as this is an alternative route that could provide access between Abergavenny town and the development. However, this is not considered to be a viable proposal due to the structure's distance from the proposed development and train station, as an active travel link. The remaining 2 No. locations are proposed as a betterment due to the distance between the B4233 structure and the development.

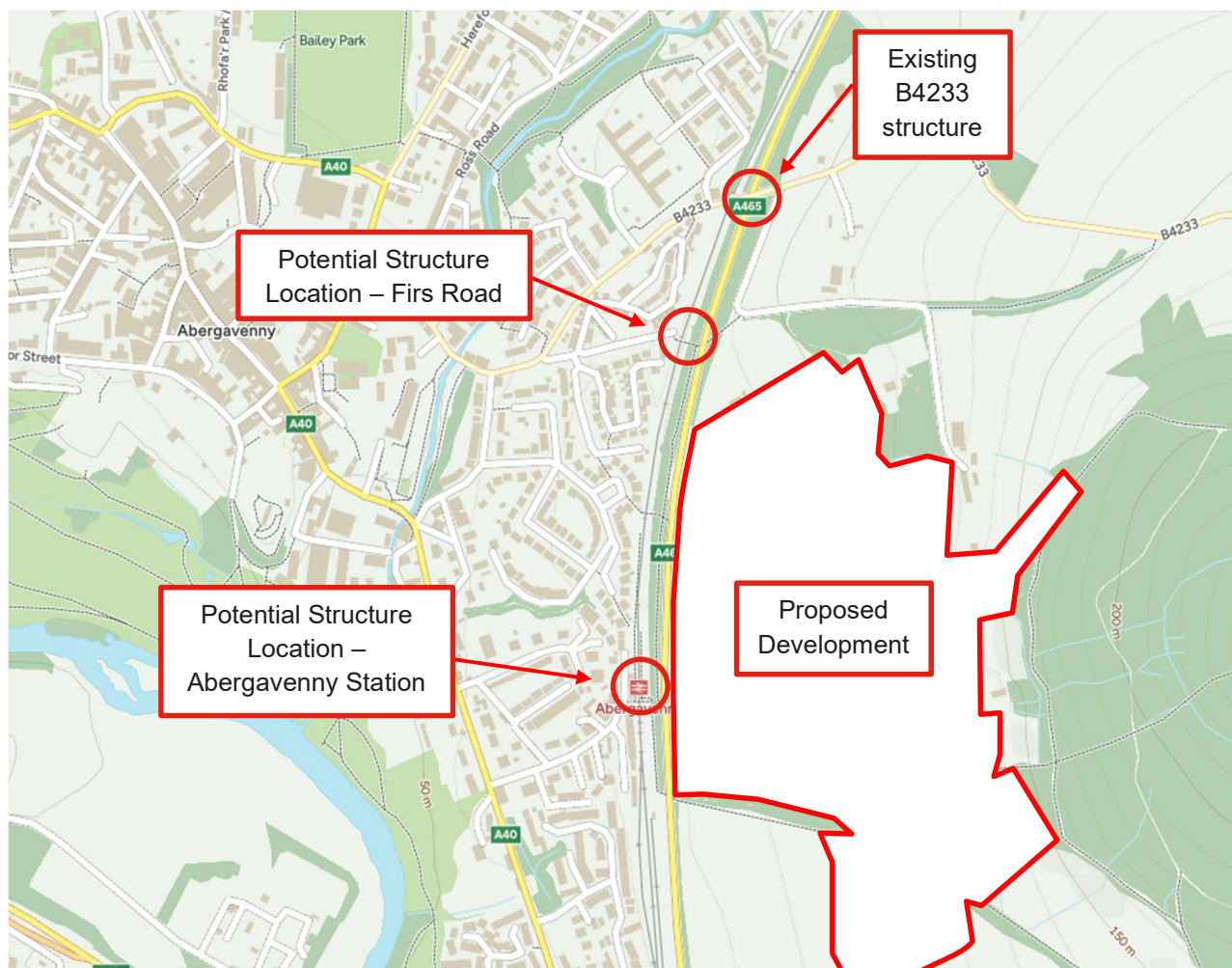


Figure 3 – Development and Potential Structure Locations

### 1.2.1 Potential Structure Location 1 – Abergavenny Station

The first location proposed for provision of a crossing point is at Abergavenny Station. This area is shown within Figure 4 below.

A footbridge is already present at this location, crossing from the station car park to a footpath that ends at an unmade path connection to the verge of the A465. This footbridge comprises two spans, the eastern span carries the footpath over a redundant track bed, whilst the western span carries the footpath over the current Newport to Hereford railway lines. The structure crossing over the disused lines comprises wrought iron lattice girders and staircases which are supported on cast iron columns and are of original construction. The span crossing over the operational railway has been replaced some time ago with a more modern steel plate girder construction. The original section of this footbridge is subject to listed status and as a result restrictions will be in place regarding changes or alterations.

A barrow crossing is located immediately south of the listed station footbridge. This is currently used to provide supervised and assisted access to Platform 2 for Persons with Reduced Mobility (PRMs) and those unable to use stairs during staffed station hours. The crossing is gated and locked except when usage is requested. The recently constructed Access for all (AfA) footbridge at the North end of the platforms has been designed such that the barrow crossing is now only to be used when the AfA bridge lifts are inoperable.

The location of the structure and the barrow crossing is shown within Figure 4 and Figure 5 below.

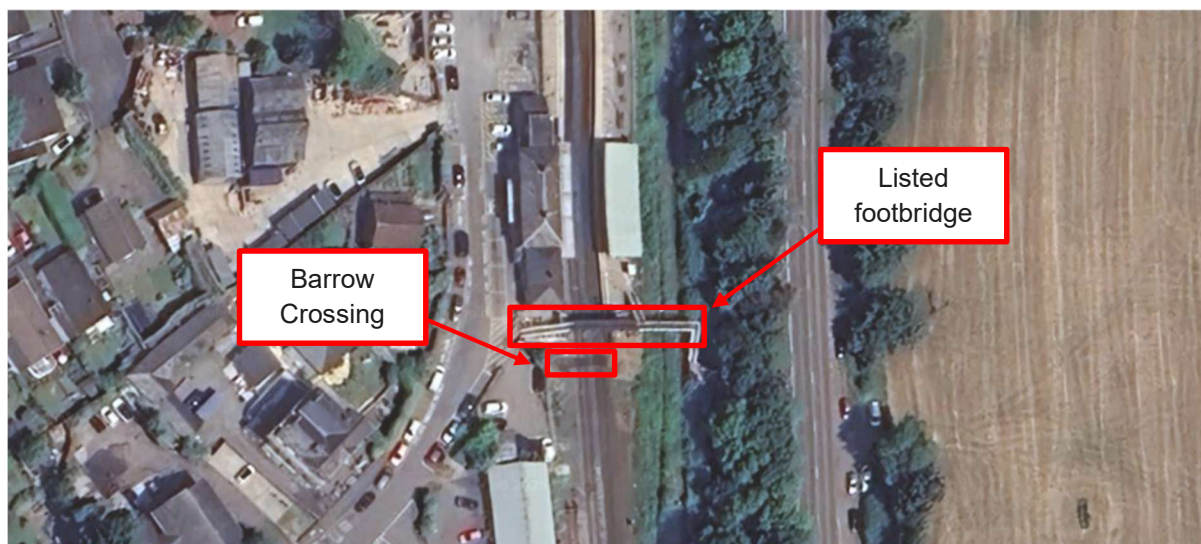


Figure 4 – Location of Existing Station Footbridge





Figure 5 – Elevation of Existing Station Footbridge and Barrow Crossing

At the Eastern end of the listed footbridge, on the opposite side to the station car park, the access steps terminate at an unmade path that passes through on to the verge of the A465. This is used to gain access to the layby on the Eastern side of the road which is presently being used instead of the station car park and / or as a makeshift an overspill car park for the station. This results in pedestrians crossing the road (which has a national speed limit of 60mph, though there are future proposals to reduce this locally which are separate to this study) after parking to gain access to the station, creating a hazard to both those using the parking and driving on the road, as well as causing potential congestion. The parking arrangements and route through to the listed footbridge are shown within Figure 6.

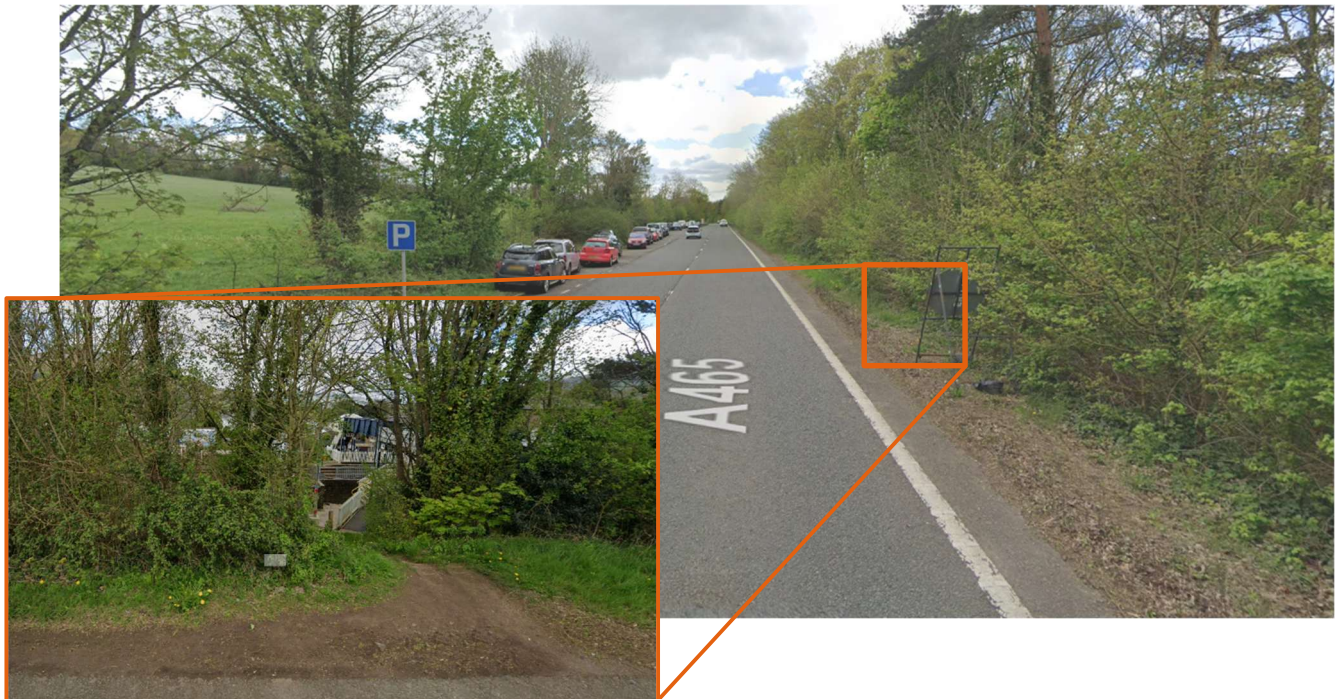


Figure 6 – Location of A465 Access/Egress to Existing Station Footbridge

Following proposals submitted by Network Rail and Transport for Wales (TfW), an additional station footbridge has recently been constructed to provide ease of access to station platforms for persons with reduced mobility (PRM), situated north of the listed footbridge and station buildings. The footbridge construction is referred to as a “Beacon Footbridge” due to its glass beacon feature in the lift shafts. The footbridge span is enclosed span, with access in the form of stairs and lifts on each end. A ramp has also been constructed to provide PRM access to Platform 1 and the new bridge, from the station car park.

A view of the bridge from the station car park can be seen within Figure 7.

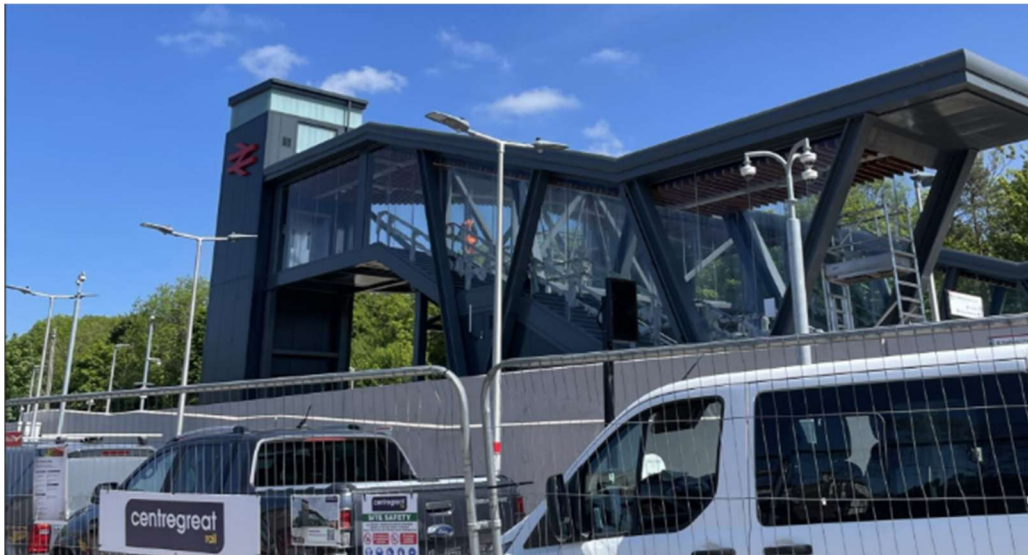


Figure 7 – Recently Constructed Beacon Footbridge

## **Constraints**

### **Existing Topography**

There is a large level difference of circa 4.5m between the northern end of Platform 2 and the level of the A465. Addressing this is critical to ensure accessibility for all users.

The elevation change combined with the limited available space results in the horizontal extension of any proposed ramp along the length of the embankment being required to achieve a compliant gradient. The required run to connect the two levels at a gradient of 1:12 is circa 54m, while a 1:20 gradient would require 90m. This will result in a return on the ramp down the embankment, creating a central island surrounded by the ramp that presents an opportunity for planting / rewilding.

The most cost-effective means of addressing the level difference is considered to be via remodelling the earthwork slope to incorporate a ramp, rather than an elevated ramp structure, due to construction, maintenance requirements, and constructability complications such as access for large cranes in a rail environment.

### **Listed Status of Station Building & Original Station Footbridge**

The Grade II listed status of the station footbridge imposes restrictions on permissible modifications, particularly where alterations would affect its historic character. While modification is technically feasible, the primary constraint is the footbridge's limited structural capacity. Cast iron is no longer used in construction due to its susceptibility to brittle fracture, this combined with the unknown internal condition of the columns is likely to preclude any modification. The form of construction also poses issues as lattice girders of this age are usually assessed at below required capacity and not possible to widen / extend without significant changes to key structural members such as the top and bottom chords and lattice bars. The extent of intervention required to meet accessibility standards, such as wider paths, ramps, or lifts, would effectively constitute the



construction of a new structure, conflicting with heritage preservation requirements. Any proposed works would therefore necessitate external approval and careful heritage assessment.

### **Station Footbridge Accessibility Constraints**

The existing footbridge does not comply with modern accessibility standards, including those specified in the Equality Act 2010 and the Welsh Government Active Travel Guidance (2021). The structure's narrow width, steep steps, and absence of ramps or lifts render it unsuitable for use by wheelchair users, cyclists, and PRMs. To address these limitations, the newly constructed Access for All footbridge located at the north end of the platforms provides step-free access and meets relevant accessibility requirements. This structure can be used to provide PRMs with safe access over the railway. However, this results in the accessibility of PRMs being reliant on the operational status of the lifts.

A barrow crossing is present underneath the original station footbridge and can be used by PRMs should the lifts become inoperative, although this is not desirable for most station users and is only available when the station is staffed. The current intended purpose of the barrow crossing is only to be used in exceptional circumstances in which the lifts are un operational and is by no means a part of "normal" operation.

### **Separation of Station Users and Route Users**

Abergavenny Station currently operates without controlled access systems resulting in an absence of physical barriers that restrict access to the newly constructed footbridge or station platforms. The original footbridge is accessed via the main road. In the absence of ticket validation or physical access restrictions, the footbridges serve as dual-purpose infrastructure, accommodating both station users and individuals utilising the route to connect the residential development, the railway station, and Abergavenny town.

While the absence of controlled access eliminates immediate concerns regarding ticket-based segregation, increased foot traffic resulting from the shared-use arrangement may impact station operations. The introduction of cyclists, pedestrians, and non-station users has the potential to increase congestion on the newly constructed bridge and the platforms during peak travel times, potentially reducing the efficiency of station operations. Although this increase in congestion would likely be easily mitigated by upgrading the footpath to the original station footbridge, enabling able bodied persons bypass to bypass the station.

Future changes, such as the implementation of gate lines or turnstiles, would further complicate shared-use arrangements. Additional measures would be required to ensure the shared-use route remains functional and accessible for all users. This would likely necessitate design modifications or operational adjustments to segregate station users from through-route users.

With regard to the AfA footbridge, usage by non-route users is expected to be minimal and is therefore unlikely to impact station operations significantly.

### **Spatial Requirements for Access Ramps**

To achieve a compliant gradient for PRMs and cyclists in line with DfT guidelines, ramps must be designed to a maximum gradient of 1:20 wherever possible. For shorter sections, a maximum gradient of 1:12 is permissible, provided level landings are incorporated every 10 metres for gradients steeper than 1:20, as well as at the top and bottom of each ramp.

The spatial requirements for ramps designed to these gradients are significant. The constrained nature of the station site will make it challenging to accommodate the total length required for compliant ramps without conflicting with existing infrastructure and operational areas. This limitation necessitates the use of solutions such as switchbacks or horseshoe-shaped ramps to integrate ramp access into the site layout while maintaining functionality and minimising disruption. Some relaxation may be possible through discussion with the technical approval authority if precedents exist within the local area, although the preference will always be to provide a solution without relaxation.

### **Site Access**

The site access at the station presents significant challenges due to the limited space available for construction activities. The constrained area around Platform 2, combined with the proximity of existing infrastructure such as the Access for All (AfA) footbridge and operational railway lines, restricts the positioning of equipment, materials, and workspaces.

However, the redundant track bed located on the eastern side of the station can be utilised for the storage of materials, equipment, and temporary works, partially mitigating the spatial constraints.

Careful planning will still be required to manage logistics while ensuring safe access for passengers and uninterrupted station operations during the works.

### **Land Ownership**

The land at Abergavenny Station appears to be owned by the Welsh Government. Any proposed works at the Station will require formal permissions and agreements; early engagement with the landowner and other relevant stakeholders will be essential.

### **Working Over the Railway**

Generally, the need for railway possessions will not be required as the proposals will only interface with Network Rail operations at the boundaries. However, if large plant or cranes are required to be used with a risk of toppling or fouling the line then possession works or mitigations will be required. Additionally, if works to the existing listed footbridge are required then this will require agreement with Network Rail. Interface with Network Rail will be needed via their Asset Protection Services. Temporary protective measures would need to be implemented to protect those working at height and to prevent debris from falling onto the railway during construction activities.

However, as previously discussed, alterations to the original station footbridge are unlikely due to its listed status.

### **Future Station Development**

Transport for Wales have communicated their interest in a potential third platform at Abergavenny Station to support the provision of a local service to Newport and Cardiff. The design is currently at the feasibility stage and is exploring options including a turnback and a through line; the through line is currently preferred as it would support further development along the route.

It is not clear on the timescales of this development nor whether there is a sufficient business case for such a development and would appear unlikely to be constructed within the next 10-25 years due to the significant expense, modifications, disruption, fabrication, and correspondence / collaboration with relevant stakeholders.

However, its potential impact of any of the proposed solutions should be carefully considered with the intention to tie-in to any future developments, minimising cost and in-keeping with a shared objective for the station operations.

See Figures below for potential options of station development.

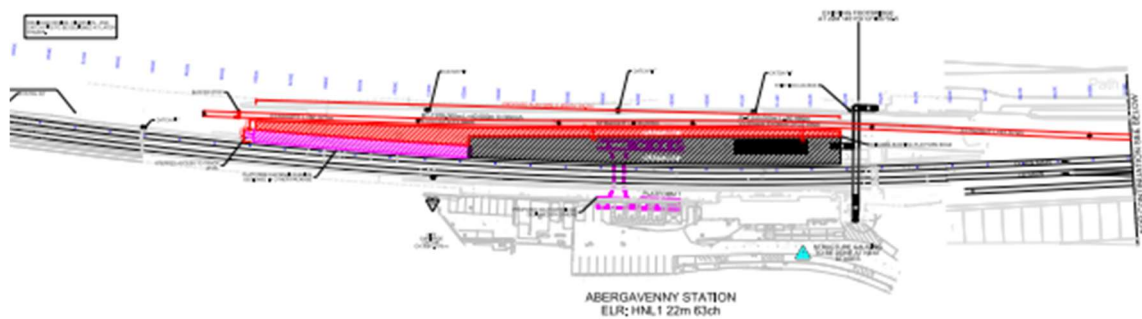


Figure 8 - Turnback Option

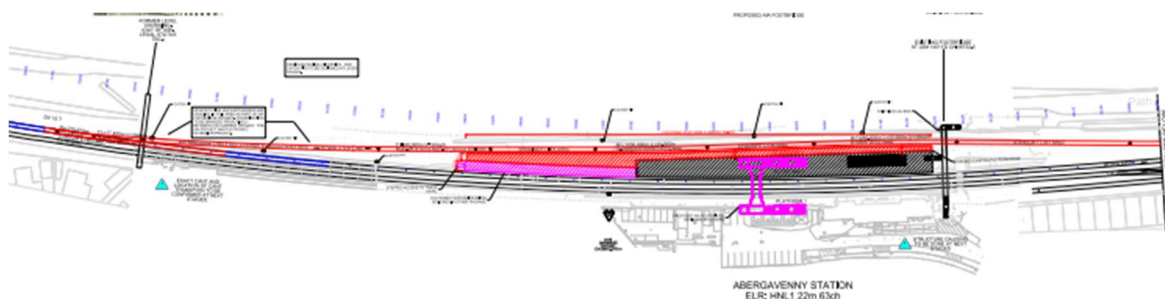


Figure 9 - Through Line Option



### 1.2.2 Potential Structure Location 2 – End of Firs Road

The second location proposed is to the north of the station, at the end of Firs Road. This area is shown within Figure 8 below.

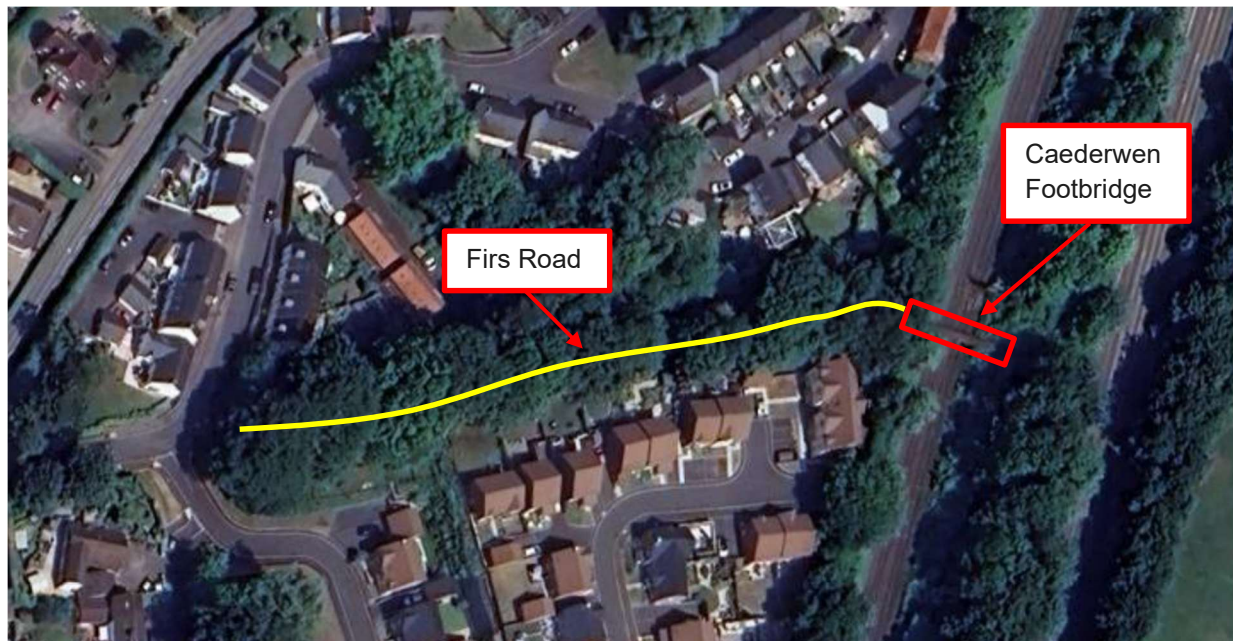


Figure 10 – Proposed Location of Firs Road Footbridge

Similar to the previous location, a structure is already present at Firs Road, crossing the railway. The structure is known as Caederwen Footbridge, shown within Figure 11, has three spans with stepped access on either side (approx. 30 No. steps on the western side and 20 No. steps on the eastern side, with average 30cm riser height). All three spans comprise of riveted steel angle and plate lattice truss-girders in a half-through arrangement. The structure has outrigger framing connected to transverse timber cross-girders with a longitudinal timber deck, with the decking spanning between cross girders. The outrigger framing is connected to the cross girders and is underslung from the trusses. The substructure comprises stone masonry piers with a brickwork stairway to the upside and a masonry bank seat at the downside abutment.



Figure 11 – View of Caederwen Footbridge from A465 End



There are known capacity issues with the current footbridge; an assessment undertaken by Network Rail in 2004 noted the structure fails wind loading checks acting upon the outrigger bracing. This is due to two failure modes: the connection of the diagonal to the cross girder and flexure of the cross girders taken as plan bracing, meaning the re-use of this structure will require structural intervention in the form of repair.

As with the previous location, the footbridge also terminates at one the embankments of the A465. However, unlike the listed station footbridge, the relative level compared to the roadway is much higher with steps leading down the embankment to road level. Unlike near to the station, this area is not used for parking, however, there are no pedestrian features to the road such as pavements, crossings, etc. The location of the access / egress to the structure from the A465 is shown within Figure 12 below.



*Figure 12 – Existing Location of Caederwen Footbridge Access/Egress from A465*

## **Constraints**

### **Existing Topography**

Firs Road has a gradient of 1:7, which exceeds the maximum permissible gradient for an Active Travel Route as outlined in Welsh Government Active Travel Guidance (2021). The guidance specifies a maximum gradient of 1:12, with a preferred gradient of 1:20, to ensure safe and inclusive access for all users. Additionally, access to the existing Caederwen Footbridge is via steep stepped approaches. These steps further exacerbate accessibility challenges, creating significant barriers for PRMs and cyclists.

The existing gradient of Firs Road and the stepped access to the bridge present substantial difficulties to its use as part of a fully accessible Active Travel network. Remediation of these issues would necessitate substantial regrading and the replacement of the stepped access with compliant ramps, requiring significant spatial and structural intervention to achieve compliance and functionality.

While it is feasible to construct a compliant footbridge at Caederwen to span the railway and meet structural and clearance requirements, the approach route via Firs Road would remain non-compliant due to its steep gradient of 1:7, making the site unsuitable for integration into a fully accessible Active Travel network without adapting this gradient, however partial accessibility and improvements from the existing are still possible.

### **Demolition of Existing Footbridge**

The demolition of the existing Caederwen Footbridge will require a controlled approach to minimise disruption to railway operations and ensure the safety of all personnel and infrastructure. The works will most likely involve the use of cranes to dismantle the structure in phases, ensuring stability throughout. Debris will be removed systematically, with appropriate segregation and disposal in compliance with environmental regulations. Protection measures will be implemented to safeguard adjacent infrastructure during the works, and all activities will be planned to avoid unnecessary disruption to train services. A detailed demolition methodology will be developed, factoring in site-specific constraints and operational requirements.

### **Protection of Trees During Construction**

The location is well vegetated, and several large trees are present within the area. Measures must be implemented to protect existing trees and minimise disruption to the surrounding environment during construction at Firs Road.

Protective fencing will be installed around tree root zones to prevent damage from construction vehicles, equipment, or excavation activities. Works near trees must be carefully planned to avoid compaction of soil within root protection areas, and no storage of materials or equipment will be permitted in these zones.

If tree removal is unavoidable, it must be minimised and accompanied by a replanting scheme using native species to restore biodiversity.

All tree protection measures will comply with BS 5837:2012.

### **Nearby Residents**

A recently constructed housing estate, Clos Y Pinwydd, is located immediately southwest of Caederwen Footbridge, with the closest property approximately 20 metres from the structure. Construction works, including demolition and installation of new infrastructure, will require careful planning to mitigate potential impacts on nearby residents, including noise, dust, and vibration.

Mitigation measures such as temporary acoustic barriers, dust suppression systems, and adherence to restricted working hours may require implementation to minimise disruption. Site logistics must also ensure safe access to residential properties is maintained throughout the duration of the works.

### **Land Ownership**

The land surrounding Firs Road, including the area required for construction works at Caederwen Footbridge, is mainly privately owned by Monmouthshire County Council (MCC). The embankment adjacent to the A465 is owned by Welsh Ministers. Firs Road is currently listed as unregistered; MCC have been contacted and Caederwen footbridge is not listed in their records as in their ownership. It is recommended ownership of the structure is identified prior to works commencing.

Any proposed works will require agreement with the landowner, including permissions for access, temporary use of land during construction, and any permanent modifications. Early engagement with stakeholders will be essential to address legal and logistical considerations and ensure smooth progression.

### **Existing Network Rail Access Point**

The Network Rail Vehicular Access Point (HNL1 22m 0836yds), located immediately adjacent to the western side of Caederwen Footbridge to the north, will be inaccessible during the works due to its proximity to the construction site.

Continued use of the access point following installation of the structure will also need to be discussed with Network Rail as the stairs leading to the structure may obstruct vehicles from gaining access. Although, entry as a pedestrian access point may still likely be achievable.

Alternative access arrangements, most likely via Abergavenny Station, must be implemented to maintain Network Rail operations, ensuring safe and continuous access for maintenance and emergency requirements. This will require coordination with Network Rail to establish temporary routes or possession planning to minimise disruption and ensure operational safety.

### **Public Right of Way Status**

Firs Road, including Caederwen Footbridge, forms part of a Public Right of Way (PROW) that provides a connection across the A465 and into 'The Ropewalk'. During the construction works, Firs Road and Caederwen Footbridge will be inaccessible, requiring a temporary closure of the PROW.

A diversion route will need to be established to maintain connectivity for pedestrians and ensure compliance regarding PROW access. This will require coordination with the local authority / landowner to implement appropriate signage, communicate the closure effectively, and minimise disruption to users.

### **Working Above the Railway**

Any works undertaken at Firs Road will involve construction directly above the operational railway, which is unavoidable due to the alignment of the existing infrastructure. This will require extensive coordination with Network Rail, including the production of an appropriate safe method of working and Work Package Plan, to ensure all activities are planned and executed safely.

### **Construction / Maintenance Agreements**

Due to the construction environment being primarily railway in nature, we would recommend that the works are managed by Network Rail Capital Delivery and NR Asset Protection team.

Informal discussions with Network Rail have determined that NR would prefer that the new structure is owned and maintained by Monmouthshire CC.



### 1.2.3 Crossing at B4233 (aka Asylum Road)

Lastly, there is the potential to utilise the existing highway structure to the north of Firs Road that carries the B4233. The structure currently supports two lanes of traffic in addition to two footways of width circa 2m. Whilst the current structure is not very well pedestrianised, i.e. does not have sufficient means of crossing the road safely such as a form of pedestrian crossing or a means of segregation between traffic and pedestrians, and despite sufficient space the pavement is not continuous throughout the area. The financial outlay required would be relatively small compared to the costs associated with the construction of a new structure. Due to the distance from the proposed development, the re-use of this structure is not seen as a preferred option but is still proposed within this report for comparison.



Figure 13 – B4233 Highway Structure from End of Garth Farm Access Road

## **Constraints**

### **Distance from Development**

The existing highway bridge is located an approximately 1.2km walk from the residential development, introducing accessibility challenges for PRMs and pedestrians traveling to the town centre or railway station. The elevation difference of circa 7m results in a gradient along the route that may pose difficulties for PRMs and others. The extended distance reduces accessibility, increasing physical exertion and travel time. These factors may limit the practicality of the route for Active Travel users and encourage reliance on vehicles.

### **Land Between Development and B4233**

The land between the B4233 bridge and the proposed development site is not currently part of the existing development but has been identified for potential future development and connections. At present, the absence of direct access through this land restricts movement for residents and users of the site, increasing journey times and reducing overall accessibility.

## 1.3 Requirements

The proposed route will be designed in accordance with the relevant standards and guidance to ensure compliance with accessibility, safety, and usability requirements. The key documents informing the design include:

- BS 8300-1:2018,
- Welsh Government Active Travel Guidance (2021),
- Network Rail Inclusive Design Manual,
- Transport for Wales (TfW) Accessible Travel Policy,
- Manual for Streets (MfS).

The route will adhere to these standards, where possible with any deviations noted, ensuring a fully accessible and compliant Active Travel network that integrates with existing transport infrastructure and supports safe, sustainable travel for all.

### 1.3.1 Intended Use

The proposed route will be designed to prioritise safe and accessible movement for pedestrians, including Persons with Reduced Mobility (PRM), as the primary user group. The route will be fully compliant with relevant accessibility standards, ensuring usability for wheelchair users, individuals with mobility impairments, and other pedestrians. Features such as compliant gradients, level landings, tactile paving, and handrails will be incorporated to meet the needs of this group.

Cyclists are identified as a secondary user group, with the route accommodating shared use where space permits. The design will ensure sufficient width and appropriate surface materials to minimise conflicts between user types. Clear signage and markings will be included to delineate pedestrian and cyclist zones where necessary, maintaining safe and efficient movement for all users.

### 1.3.2 Walkway Widths

The width of walkways must comply with BS 8300-1:2018 (Design of an Accessible and Inclusive Built Environment), NR/GN/CIV/300 (Design Requirements for Footbridges), and Welsh Government Active Travel Guidance (2021). Requirements include the following:

- Walkways must have a clear width of at least 1.8 metres to accommodate pedestrian traffic and ensure sufficient space for wheelchair users and individuals with mobility aids.
- For shared-use routes accommodating both pedestrians and cyclists, the minimum width increases to 3 metres, with additional width recommended in areas of higher traffic flow or where overtaking is likely.
- Walkways and footbridges must align with Network Rail standards, ensuring sufficient width for safe and inclusive movement.
- In constrained environments, widths must still allow for safe two-way movement of pedestrians and wheelchair users. Where tactile paving, handrails, or barriers are included, the clear width must account for these features without compromising accessibility.

The proposed width of the footway is 3.5m, which satisfies the above and ensures walkways are functional, inclusive, and safe for all users, particularly in high-traffic areas or when integrated into Active Travel networks.

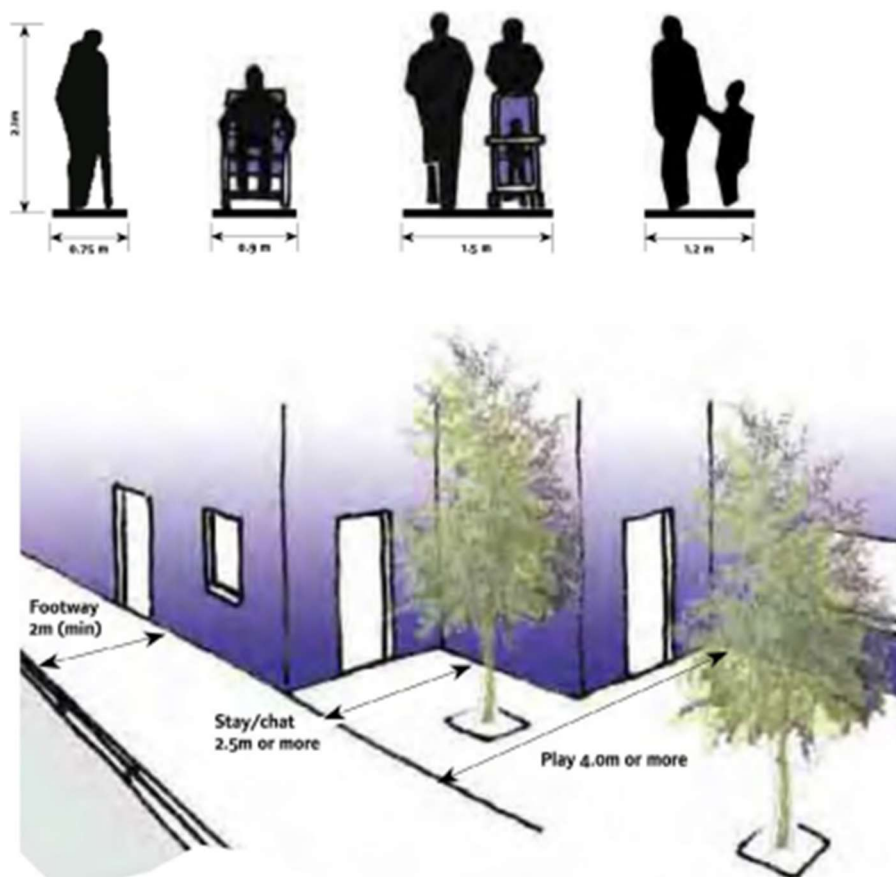


Figure 14 - Walkway Width Requirements (MfS)

### 1.3.3 Gradients

Ramps for pedestrian and cyclists access must comply with relevant standards to ensure accessibility and usability. The Welsh Government Active Travel Guidance (2021) and NR/GN/CIV/300 specify the following requirements:

- Gradients should not exceed 1:20 wherever feasible to minimise physical strain and ensure ease of use.
- Gradients of up to 1:12 are permissible for shorter lengths, provided intermediate level landings are incorporated.
- Level landings of at least 1.5 metres in length must be provided:
  - Every 10 metres for ramps with gradients steeper than 1:20.
  - At the top and bottom of each ramp to allow users to rest and safely transition.

In addition, ramps must meet a minimum width of 1.8 metres for pedestrian use or 3 metres for shared pedestrian and cyclist use. Handrails must be provided on both sides, positioned at 900-1000mm for adults and 600-750mm for children or wheelchair users. Non-slip surface materials and tactile paving must also be included.

Due to site constraints provision of preferable gradients may not always be practicable, however all gradients proposed within the options presented are best practicable. With any deviation from preferred gradients noted.



## 1.4 Site Knowledge

### 1.4.1 SSSI

The proposed works are not anticipated to be impacted by the presence of Sites of Specific Scientific Interest (SSSI's). The nearby SSSI's as shown within the Data Map Wales web viewer ([DataMapWales](#)) can be seen within Figure 15 below. As shown, the nearest SSSI is the River Avon which is situated at a sufficient distance, such that any pollution or impact concerns can be discounted.

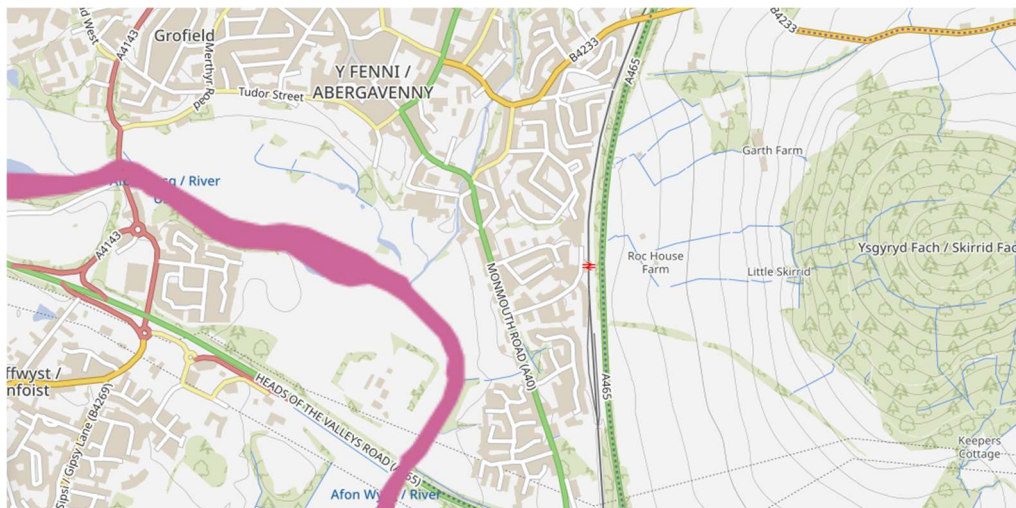


Figure 15 – Map of Nearby SSSI's

### 1.4.2 Listed Status of Structures

Abergavenny Station Footbridge is a Grade II listed structure and therefore cannot be considered as a viable option for lengthening to cross both the railway and the A465, or for widening of the structure to facilitate a 3.5m wide walkway.

The footbridge was built in 1863 by the Great Western Railway. It consists of cast iron columns of a typical GWR design that support the stairways and the two spans. The span over the live tracks has been replaced by a steel plate-girder of utilitarian design during the BR period in the late 1900s, but the span over the now removed by-pass freight lines is the wrought iron lattice girder original. See below Figure for listed status of the structure.

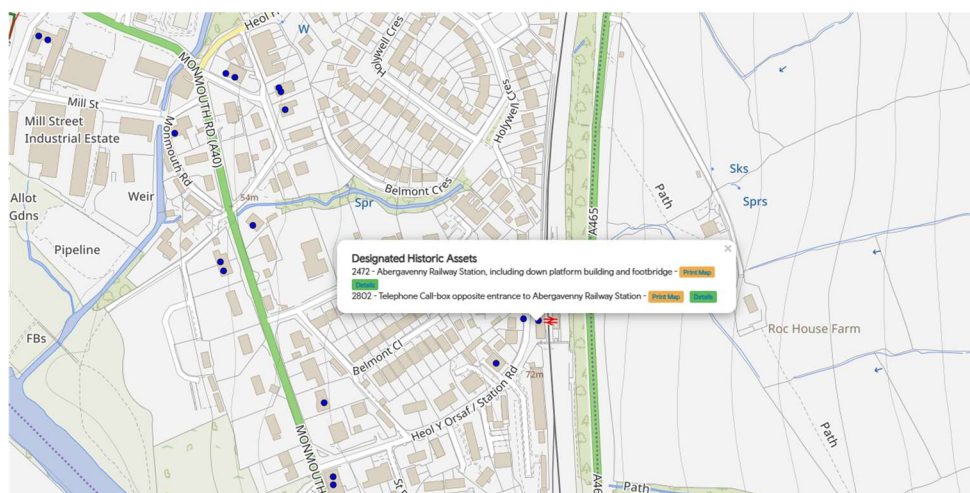


Figure 16 - Listed Status of Abergavenny Rail Station



### **1.4.3 Use of A465 as Parking for Access to Station**

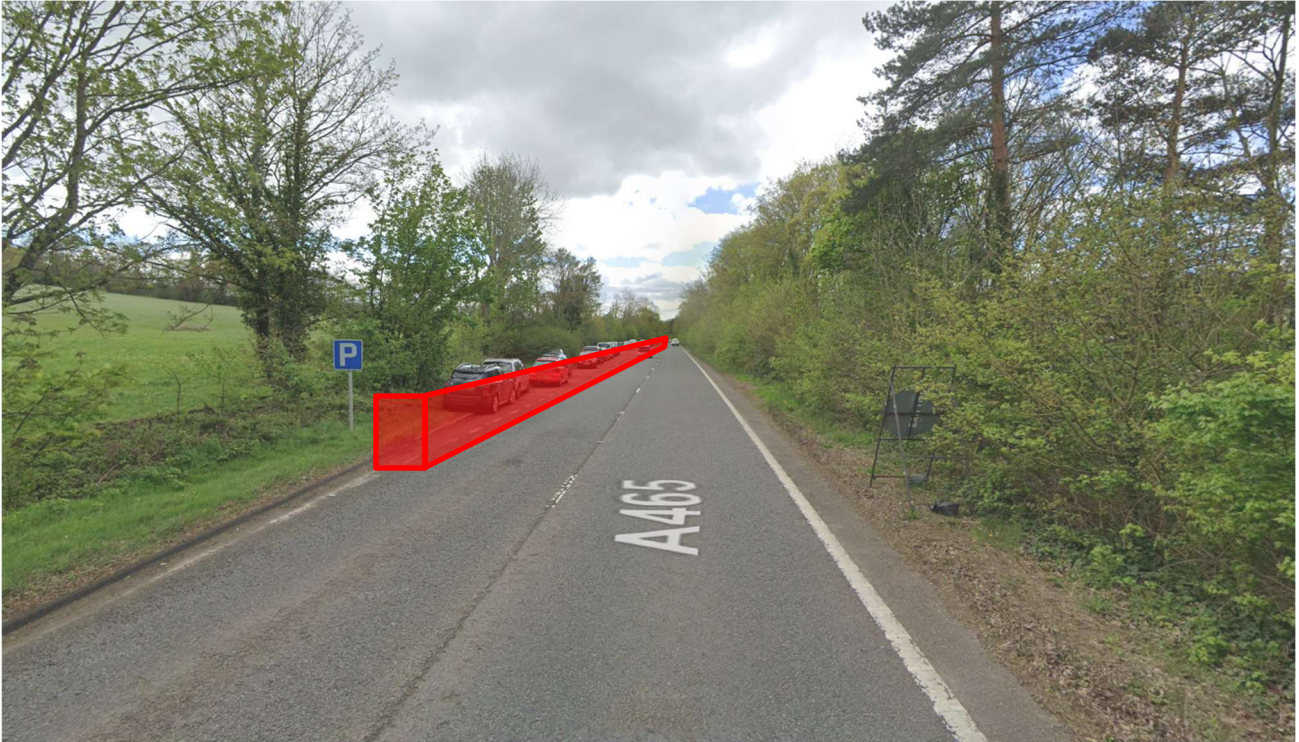
A lay-by on the eastern side of the A465, adjacent to the proposed development site, is currently being used as an informal car park by commuters accessing Abergavenny Railway Station. Commuters park in the lay-by, cross the A465, and use a rural footpath and the listed station footbridge to reach the station platforms. This arrangement presents significant safety risks due to the lack of formal crossing infrastructure and the high-speed nature of the A465.

The A465 is a high-traffic road with a speed limit of 60mph. Pedestrians crossing the carriageway are exposed to considerable danger due to the absence of designated pedestrian crossing infrastructure. This creates poor visibility for both pedestrians and drivers, particularly during adverse weather condition or at night. Unpredictable or unsafe pedestrian behaviour while crossing the road further exacerbates the risks, increasing the likelihood of driver distraction, sudden braking, or swerving, which can result in accidents or traffic congestion.

For PRM users, there is currently no access from the A465 side. Uneven ground, unpaved surfaces, and steep embankments at the crossing point make access difficult and unsafe. Additionally, the listed station footbridge is inaccessible for PRMs due to its stepped access, and the approach to the footbridge involves navigating uneven and unpaved terrain. The existing barrow crossing located underneath the listed footbridge provides access only from the station car park to Platform 2.

The existing arrangement does not meet modern safety standards for pedestrian access to transport facilities as outlined in the Design Manual for Roads and Bridges (DMRB). Specifically, CD 143 highlights the necessity of providing safe, direct, and accessible pedestrian facilities in areas with high-speed traffic. The absence of a formal crossing point fails to mitigate conflicts between vehicles and pedestrians, exposing users to safety risks.

The RDLP proposes significant changes to the character and functionality of the A465. It is envisaged that the road will be reconfigured to adopt a street-scene character, with a reduced speed limit of 30mph. The design will incorporate formal pedestrian crossings and landscaping measures to support safe and integrated movement for both pedestrians and vehicles.



*Figure 17 - Location of A465 Layby Parking*

### **Proposed Park & Ride Facilities**

Park & Ride facilities are currently proposed at two locations within the development: The first adjacent to the Community Hub and the second within the Station Quarter, intended to encourage increased public transport use and reduce congestion. The indicative locations of these facilities are shown in Figure 18 below. These proposals remain subject to change through ongoing stakeholder engagement as the scheme progresses towards a detailed planning application.

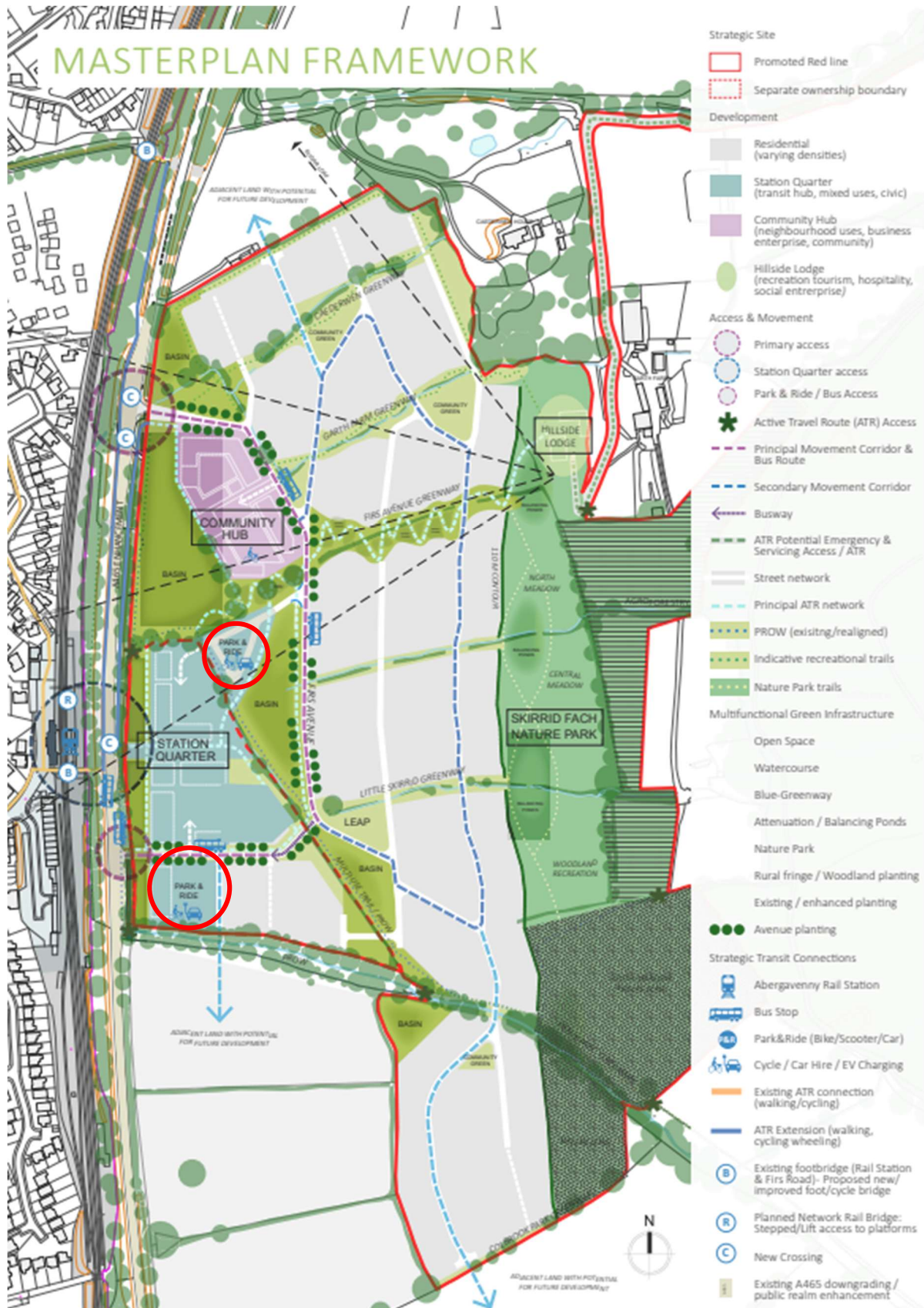


Figure 18 - Locations of Park & Ride Facilities (Circled in Red) from Current Proposed Masterplan (June 2025)

#### **1.4.4 Stakeholder Engagement**

During this feasibility study, Arcadis has engaged with various relevant stakeholders listed below:

- Developer – Monmouthshire Housing Association and Project Team,
  - Lime Transport (Highways Consultant),
  - Hammond (Urban Design / Scheme Architects),
  - GJP (Planning).
- Welsh Government – SWTRA,
- Network Rail,
  - Sponsor,
  - Structures Route Asset Management Team,
- Monmouthshire County Council,
  - Active Travel Officer,
  - Highways Officer,
  - Public Transport Officer,
  - Policy Officer,
  - Placemaking Officer.

All of the comments raised by the various stakeholder have been considered within the options and addressed within the dedicated sections for each.

All of the options presented have been assessed with regards their contribution to a full active travel network. Each option has been presented to provide a betterment either with regards to connections to bus and rail services, connections to the town centre, facilitating Park and Ride provisions or providing freedom of movement in a more accessible manner.

Each option choice will also be coordinated with Network Rail and other key stakeholders with the designs submitted for their acceptance.

#### **Cost Considerations**

The costings for each option have been broken down into key components, including preliminaries, vegetation clearance, earthworks, road/rail closures, design fees, and civil engineering works. It should be noted that these are high-level estimates, and no formal quantity surveying has been undertaken at this stage.



## 2 Options

### 2.1 Option 1A: Improvements to Listed Station Footbridge Access / Egress

#### Explanation

This option proposes improvements to the listed station footbridge. As mentioned previously, the widening of the existing Grade II listed station footbridge from its current width of 1.01 metres to 3.5 metres to accommodate shared use by pedestrians and cyclists is not considered to be feasible due to the technical challenges it would present as well as the listed status of the structure.

Despite this, access at the Eastern end of the station footbridge can be improved for minimal cost and effort. Currently, the arrangement consists of a paved area immediately after the footbridge that leads to an unmade ground path with wooden fencing ascending to the A465. Surfacing of this route and the provision of steps up to the A465 is easily achievable. Stepped access would be incorporated up the verge to provide a route for pedestrians wishing to bypass the station and travel into Abergavenny town. It is important to note that this option provides no benefits for persons with reduced mobility.

The resurfacing is proposed in conjunction with Option 1B: Ramp & Stepped Access to Platform 2.

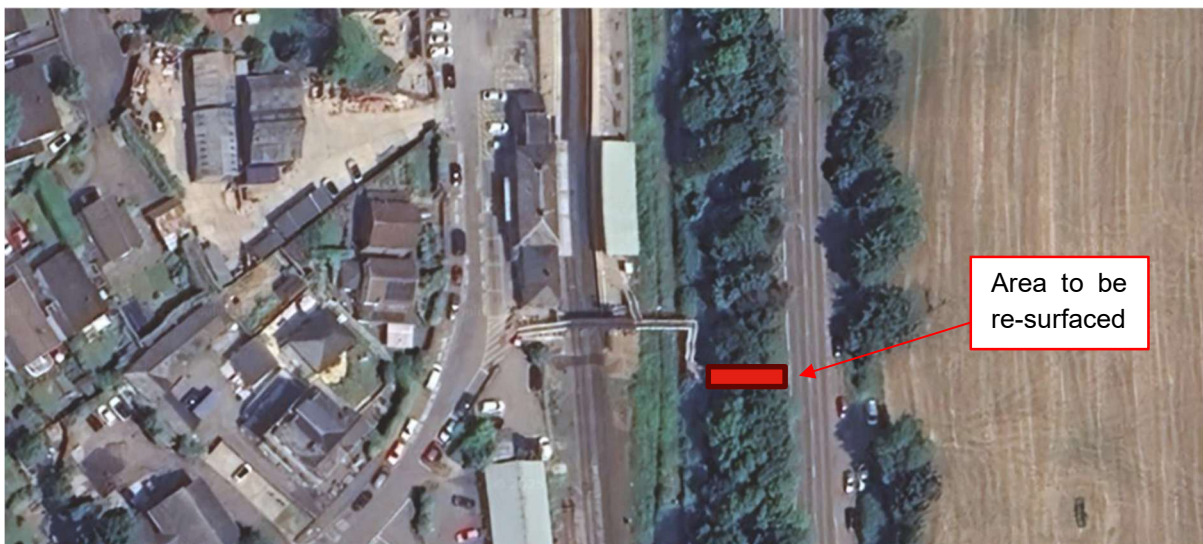


Figure 19 - Option 1A

#### Engineering Considerations

##### Structural Capacity of Station Footbridge

The current lattice framework is insufficient to support the wider deck and the associated increase in loads. Given the limited load-bearing capacity and age of the existing bridge elements, strengthening them is unlikely to be a feasible option. Without significant intervention, the bridge will fail to meet the requirements for shared-use paths or modern accessibility standards.

##### Bespoke Design

Working on the listed footbridge would require bespoke design and construction methods to preserve its historical integrity, adding complexity to the works. Customised structural modifications and the use of specialist materials to match the original design would significantly increase costs and extend the construction timeline. Additionally, compliance with heritage regulations would require additional approvals and close collaboration with conservation authorities, further impacting project timeframes and budgets.

### **Re-Surfacing and Connection to A465**

Surfacing of the walkway from the base of the footbridge, including steps up to the A465, can be achieved with minimal effort, disruption and cost.

Provision of the stepped access to the A465 will also improve the safety of use, which could then be further improved by the addition of the proposed pedestrian crossing included within the current development plans.

Surfacing will comprise durable, non-slip materials to provide traction in all weather conditions. Tactile paving will be placed at the top and bottom of the steps to assist visually impaired users, and the edges of the steps will feature contrasting markings to improve visibility. The surfacing material will offer long-term durability with minimal maintenance, ensuring compliance with Active Travel standards while maintaining safety and usability.

All connections to the A465, including the proposed stepped access, will be integrated with wider proposals for characterisation and speed reduction along the route, ensuring consistency with the overarching street design objectives and supporting a safer, more accessible environment for all users.

### **Access for Cyclists**

Due to the existing width of the structure, the provision for ease-of-access for cyclists, such as a bike gutter, would be detrimental to the use of the structure by pedestrians and is deemed to be more of a hinderance with any potential benefits to cyclists being outweighed by the negative impact on the flow of pedestrians.

## **Landscaping/Visual Considerations**

### **Impact on Visual Character**

Resurfacing of the footway and provision of a clear footway and formalised access will neaten up the area significantly. The provision of handrailing / fencing either side of the walkway will likely also stop accumulation of litter within the trees adjacent to the road.

## **Ecological Considerations**

### **De-Vegetation**

The resurfacing of the footway will likely require small scale de-vegetation works, with the provision of the stairs potentially impacting tree roots. However, these impacts are minor and could easily be balanced following ecological survey of the area and efforts within planning for minimal disruption to trees, etc.

## **Accessibility / Use Considerations**

### **Access for PRMs**

The betterment to the listed footbridge connection would primarily be for able-bodied pedestrians and cyclists but would remain inaccessible to PRMs due to the retention of stairs. PRMs and wheelchair users would be able to utilise the newly constructed AfA bridge at the station, which is equipped with lifts. This however does limit access across the station and does not provide access to the level of the A465.

While this arrangement ensures compliance with accessibility requirements, it introduces reliance on a separate structure for PRMs, potentially reducing direct connectivity for all users. However, the barrow crossing is available

## Cost Considerations

| Item                         | Cost (+ / - 30%) |
|------------------------------|------------------|
| Design Fee                   | £15,000          |
| Preliminaries                | £8,000           |
| Vegetation Clearance         | £2,500           |
| Earthworks                   | £4,500           |
| Road/Rail Closures           | £2,000           |
| Surfacing and Steps          | £50,000          |
| <b>Sub-total</b>             | <b>£82,000</b>   |
| Risk (20%)                   | £16,400          |
| Network Rail Interface (10%) | £8,200           |
| <b>Total</b>                 | <b>£106,600</b>  |

*Table 1 - Option 1A Costings*

**NOTE: THESE COSTINGS ARE FOR ANCILLARY WORKS TO THE FOOTPATH AND DO NOT INCLUDE ANY WORKS TO THE FOOTBRIDGE**

## 2.2 Option 1B: Ramp & Stepped Access to Platform 2

### Explanation

This option involves the construction of a ramp and stepped access on the east side of Platform 2, connecting directly to the A465 where a new station entrance would be established. The ramp would provide step-free access for PRM's while the stairs would offer an alternative route for able-bodied users. Both existing station footbridges – the Grade II listed footbridge and the new beacon footbridge – will be utilised to provide access between the development and Abergavenny.



Figure 20 - Option 1B

### Engineering Considerations

#### Ramp Gradient and Layout

The ramp will be designed with a 1:16 gradient, adhering to the acceptable limits outlined in the relevant standards. To provide resting points for users, 2m-long landings will be incorporated at intervals varying between 1.4m and 12.6m. Its horseshoe-shaped layout makes efficient use of the available footprint while achieving the necessary elevation change to link Platform 2 with the A465.

There are also talks of potential development to Abergavenny station, making use of the redundant line to establish an additional platform for use. Final ramp arrangement will be integrated with any potential development.



### **Retaining Wall and Earth Ramp Construction Method**

The ramp and stairs at the station will be constructed using backfill and retaining walls rather than a series of independent ramped / stepped steel structures. This approach will provide a longer design life due to the durability of the materials and significantly reduce maintenance requirements over time.

Additionally, as all works will be located off-track with Platform 2 acting as a buffer between the construction site and the railway line, no possessions or line closures are required, allowing railway operations to continue uninterrupted during the works.

### **Impact of Potential Increased Foot Traffic on Station Operations**

The station will function as a thoroughfare for PRMs under the proposed design, resulting in increased traffic as it becomes a connection between the residential development and the town. Pedestrians travelling into Abergavenny town will be able to bypass the station but will still utilise the original station footbridge.

Careful consideration will be required to ensure the station infrastructure can accommodate the increased pedestrian flow without impacting operational efficiency or passenger experience, including measures to maintain safety and minimise congestion during peak periods.

### **Potential Future Station Developments**

There are discussions to further develop Abergavenny Station, creating a third platform and making use of the redundant track bed. Station operator is to be consulted regarding any future developments of the station, making sure that any proposals are in keeping with the future intent of the station as a whole.

At this stage, the development remains in its early phases, and no definitive plans have been solidified. However, this proposal presents a valuable opportunity to actively engage Network Rail in the consultation process, ensuring their insights are incorporated into the planning and design. Early collaboration with Network Rail will be essential to address any concerns, particularly regarding the integration of new infrastructure with existing assets, and to align the project with broader operational and strategic objectives for the rail network.

## **Landscaping/Visual Considerations**

### **Aesthetic Improvements and Landscaping Integration**

The construction of the ramp and stairs leading to the new station entrance represents a significant aesthetic improvement when compared to the current appearance of the area, which consists of disused freight lines and unmanaged vegetation. This option provides an opportunity to transform the space into a functional and visually appealing station entrance, integrating landscaping features such as planted areas, trees, and soft landscaping to enhance the user experience and improve the overall appearance of the station environment.

## **Ecological Considerations**

### **Biodiversity Opportunities and Tree Removal Impacts**

The construction of the ramp and stairs up to the new station entrance presents opportunities to enhance biodiversity through soft landscaping measures, such as the planting of native species, wildflower areas, and the incorporation of bird boxes and insect habitats. These features would support local wildlife and contribute to ecological connectivity within the station environment.

However, the works will require the removal of established trees within the construction footprint, which will require mitigation through replanting schemes and careful integration of new green infrastructure to offset habitat loss.

## Accessibility / Use Considerations

### Accessibility Benefits

The ramp provides step-free access in full compliance with BS 8300-1:2018 and the Welsh Active Travel Guidance, ensuring usability for PRMs, wheelchair users, and cyclists. The inclusion of landings, along with handrails and edge protection, further enhances safety and comfort for all users. The stairs provide an alternative route for able-bodied users, ensuring efficient movement and flexibility for varying user needs.

By integrating this infrastructure directly into the station environment, this option creates a cohesive, accessible connection between the station, the A465, and the wider Active Travel network.

The use of the new beacon footbridge for use by PRM's does present a minor use risk with regards to the lifts being operational, however, the barrow crossing located directly beneath the listed footbridge may serve as a back-up in the unlikely event of the lift becoming inoperable. This, however, is only available during manned station hours.

### Cost Considerations

| Item                         | Cost (+ / - 30%)  |
|------------------------------|-------------------|
| Design Fee                   | £75,000           |
| Preliminaries                | £80,000           |
| Vegetation Clearance         | £15,000           |
| Earthworks                   | £250,000          |
| Civil Engineering            | £750,000          |
| Road/Rail Closures           | £25,000           |
| Surfacing                    | £50,000           |
| Finishing works              | £75,000           |
| <b>Sub-total</b>             | <b>£1,320,000</b> |
| Risk (20%)                   | £264,000          |
| Network Rail Interface (10%) | £132,000          |
| <b>Total</b>                 | <b>£1,716,000</b> |

Table 2 - Option 1B Costings

## 2.3 Option 1C: New Free-Standing Structure to Span Potential New Rail Line

### Explanation

As stated in Section 1.2.1, there is a potential proposal to reinstate the redundant rail lines located to the east of Platform 2 and establish a third platform at Abergavenny Station. In this case, Option 1B: Ramp & Stepped Access to Platform 2 would no longer be feasible in its proposed location. A free-standing structure could therefore be linked to the newly constructed AfA footbridge to provide access for all users, crossing the reinstated rail lines and Platform 3, leading users onto the level of the A465. The structural design will be consistent with the recently constructed beacon footbridge, comprising a free-standing structure supported by columns on Platform 2 and a bank seat situated on the embankment leading to the A465. The structure will be roofed with the potential for provision of gated access if deemed to be required by Network Rail to meet station security requirements.

It should be noted that this option would only progress should Network Rail and TfW confirm their intention to reinstate the redundant railway lines and that this will be completed in the immediate future.

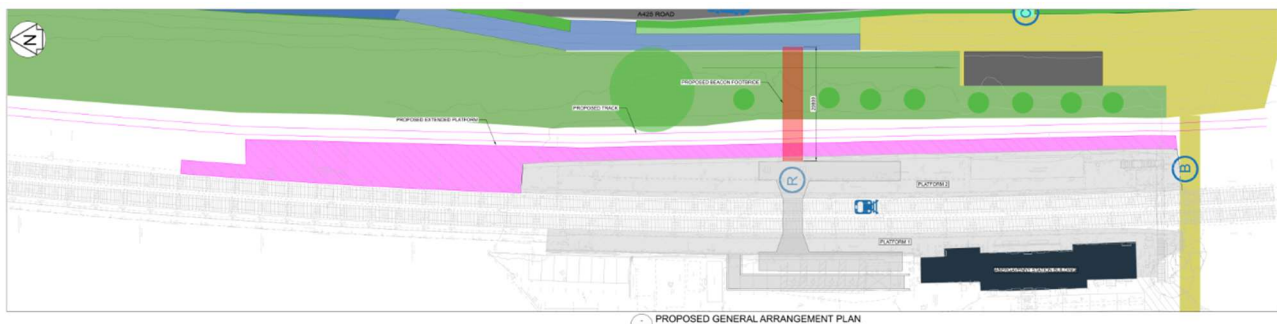


Figure 21 - Option 1C Proposed General Arrangement - Structure in Red

### Engineering Considerations

#### Structure and Foundation Design

The new structure will need to be free-standing, as the existing beacon footbridge was not designed to withstand the additional loading imposed by another span. The most likely configuration would involve two columns positioned on Platform 2 to support the span crossing the reinstated rail lines, with the eastern end of the span supported by a bank seat situated on the embankment leading to the A465.

The design would incorporate a glass parapet to ensure consistency with the architectural style of the existing footbridge, along with a steel deck plate and surfacing applied to the top surface for durability and functionality. The foundation and column locations will need to be carefully designed to ensure that they do not interfere with any existing station infrastructure or operational elements.

#### Consultation with Network Rail

The implementation of this proposal will require consultation with Network Rail, who are likely to express resistance due to the fact that the new AfA footbridge was only completed very recently, in June 2025. It is anticipated that Network Rail will be reluctant to alter or modify a brand-new asset, particularly given the investment and effort involved in its construction and commissioning.

### Landscaping/Visual Considerations

#### Integration with Existing Infrastructure

The structure will need to be designed to complement and integrate seamlessly with the beacon footbridge, which features a modern glass and steel construction. This alignment in design is advantageous, as it will ensure aesthetic consistency across the station infrastructure. The combination of glass and steel will provide

a visually appealing solution, delivering a high-quality architectural outcome when compared to alternative options.

## **Ecological Considerations**

### **Biodiversity Opportunities**

There is an opportunity to incorporate soft landscaping around the bridge on the embankment, which would represent a significant improvement over the current state of overgrown vegetation. This approach would not only enhance the visual appeal of the area but also provide a more managed and accessible environment, contributing positively to the overall aesthetics of the station and its surroundings.

### **Tree Clearance**

Clearance of established trees will be required to provide space for the structure to link up the embankment to the A465.

While this removal is unavoidable, mitigation measures should include replanting schemes using native species to offset habitat loss and improve biodiversity. Careful planning will be required to minimise the extent of tree removal and ensure compliance with environmental regulations, including BS 5837:2012.

## **Accessibility / Use Considerations**

### **Impact on Station Operations**

This design option offers significant benefits for PRMs, ensuring accessibility and ease of movement. However, it also creates a direct thoroughfare that could attract individuals traveling from Abergavenny town into the proposed development. This increased foot traffic might impact station operations, necessitating careful consideration of crowd management and security measures to maintain smooth and efficient station functionality.



## Cost Considerations

| Item                         | Cost (+ / - 30%)  |
|------------------------------|-------------------|
| Design Fee                   | £200,000          |
| Preliminaries                | £80,000           |
| Vegetation Clearance         | £10,000           |
| Earthworks                   | £150,000          |
| Civil Engineering            | £3,000,000        |
| Road/Rail Closures           | £25,000           |
| Surfacing                    | £10,000           |
| Finishing works              | £50,000           |
| <b>Sub-total</b>             | <b>£3,525,000</b> |
| Risk (20%)                   | £705,000          |
| Network Rail Interface (10%) | £352,500          |
| <b>Total</b>                 | <b>£4,582,500</b> |

Table 3 - Option 1C Costings

## 2.4 Option 2A: New Structure at End of Firs Road Crossing Rail and Road

### Explanation

This option involves constructing a new footbridge at the end of Firs Road, positioned immediately south of the existing Caederwen Footbridge, to span both the railway and the A465. The structure will provide a segregated crossing for pedestrians and cyclists. This design facilitates direct connectivity between Firs Road and the proposed development, enhancing the Active Travel network and improving accessibility to Abergavenny Station and the town.

### Engineering Considerations

#### Bridge Construction

The bridge will feature a truss arrangement that complements the original station footbridge and the aesthetic of the station, a similar structure is shown within Figure 22 below. The structure would comprise 2 No. spans; the rail span supported on 2 No. bank seats on the embankments either side of the railway, with the road span starting on the embankment and ending at a column, also supporting the ramp into the proposed development.

It is proposed that all structural elements are prefabricated with offsite assembly to limit site works and provide factory quality finishes.

#### Ramp Ascending Firs Road

The steep 1:7 gradient of Firs Road cannot be mitigated through landscaping or regrading due to the existing topography and site constraints, making it impossible to achieve the preferred 1:20 gradient. To provide access to the footbridge, ramps with level landings every 1.85 meters are necessary to ensure usability and compliance. Although this gradient exceeds the maximum permissible gradient outlined in Welsh Government Active Travel Guidance and BS 8300-1:2018, the ramp design is essential to address the site's physical constraints and offer functional access for pedestrians and cyclists.



Figure 22 - Examples of Similar Truss Bridges

#### Structure Clearance

The bridge will achieve a minimum vertical clearance of 5.8m over the railway and 5.7m over the road as per the relevant standards.

#### Working Over the Railway

Construction over the railway will require complete possession of the HNL1 line passing the eastern end of Firs Road. This will require extensive coordination with Network Rail, including the production of an appropriate safe method of working and Work Package Plan, to ensure all activities are planned and executed safely. The

A465 will also need to be closed/have a traffic management plan throughout the duration of the works. This will require extensive coordination with Monmouthshire County Council.

With the second span of the structure passing over the highway, this will also require closures to be put into place.

## **Landscaping/Visual Considerations**

As the structure proposed will be relatively large compared to those within the surrounding area it is proposed that the construction type is chosen for aesthetic value as well as structural efficiency. Due to this a truss arrangement has been proposed, giving a similar aesthetic to listed rail footbridge structure.

## **Ecological Considerations**

### **Tree Removal**

Constructing the ramp along Firs Road and into the development will require removing established trees and vegetation within its footprint due to the steep gradient and limited space. This clearing is necessary to accommodate the ramp structure, landings, and foundations.

While this removal is unavoidable, mitigation measures will include replanting schemes using native species to offset habitat loss and improve biodiversity. Careful planning will be required to minimise the extent of tree removal and ensure compliance with environmental regulations, including BS 5837:2012.

## **Accessibility / Use Considerations**

### **Provision of Ramp on Both Sides**

Provision of ramped access on both sides of the footbridge will allow for access by PRM users as well as able bodied users and cyclists.

### **Gradient at Firs Road**

The approach from Firs Road has a 1:7 gradient, which exceeds the maximum allowable gradient for compliance with Active Travel standards. This limits the ability to provide a fully accessible route for PRMs and cyclists.

## Cost Considerations

| Item                         | Cost (+ / - 30%)  |
|------------------------------|-------------------|
| Design Fee                   | £200,000          |
| Preliminaries                | £200,000          |
| Vegetation Clearance         | £50,000           |
| Earthworks                   | £750,000          |
| Civil Engineering Works      | £3,500,000        |
| Road/Rail Closures           | £100,000          |
| Surfacing                    | £100,000          |
| Finishing Works              | £75,000           |
| <b>Sub-total</b>             | <b>£4,975,000</b> |
| Risk (20%)                   | £995,000          |
| Network Rail Interface (10%) | £497,500          |
| <b>Total</b>                 | <b>£6,467,500</b> |

Table 4 - Option 2A Costings



## 2.5 Option 2B: New Ramped Structure at End of Firs Road Crossing Rail with Ramp to Road Crossing

### Explanation

This option proposes the construction of a new footbridge at the end of Firs Road, spanning the railway and incorporating ramps on either side to provide access to a newly established road crossing. The ramps will allow pedestrians and cyclists to navigate the steep gradients on both sides of the bridge, ensuring connectivity between Firs Road, the A465, and the proposed Active Travel network.

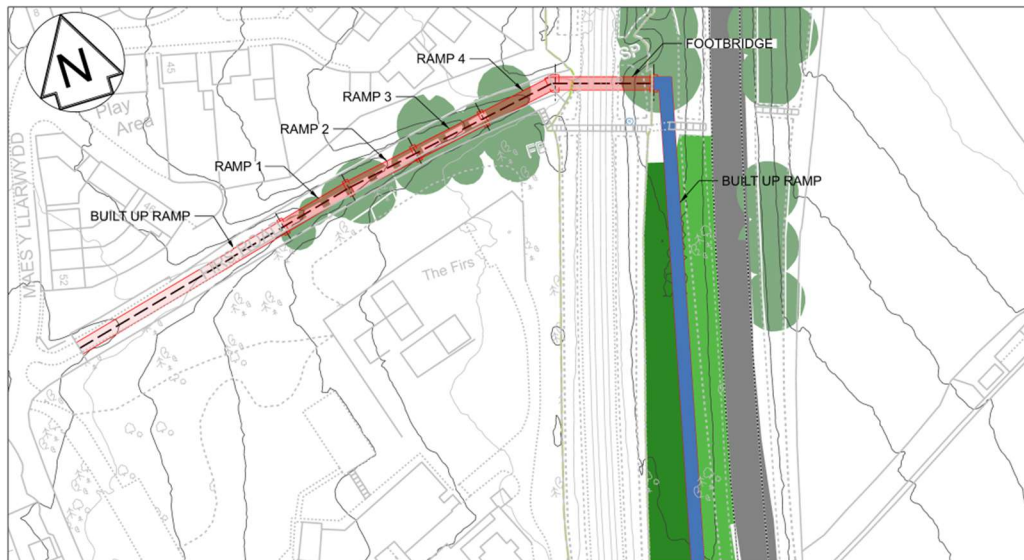


Figure 23 - Option 2B

### Engineering Considerations

#### Bridge Construction

Similar to the previous proposal for this area, the bridge spanning the railway will feature a truss arrangement that complements the original station footbridge and the aesthetic of the station. With the provision of a ramp on its eastern end, running along the embankment next to the A465 and into the entrance of the proposed development and bus station.

#### Ramp Ascending Firs Road

The constraints regarding Firs road and the gradient of ramp feasible also apply to this option, with a 1:7 gradient being the best achievable if the required landings etc. are provided.

### Landscaping/Visual Considerations

#### Reduction in Impact Due to Removal of Second Span

The removal of the highway span greatly reduces the visual impact on the area, with the structure only being directly visible from firs road or the ramped access up the A465 embankment.

#### Landscaping Opportunities Adjacent to A465 Ramp

The eastern ramp of the proposed footbridge at Firs Road presents an opportunity to integrate landscaping features that enhance the surrounding environment. Native flower planting and other soft landscaping can be incorporated adjacent to the ramp to improve biodiversity, support pollinators, and provide visual appeal for users of the route.

The use of native species will ensure ecological compatibility and minimise maintenance requirements. Landscaping can also serve to soften the appearance of the ramp structure, creating a more natural and inviting environment while promoting ecological connectivity along the A465 corridor.

## Ecological Considerations

### Tree Removal Along Firs Road

As mentioned previously, the construction of the ramp will require removal of select trees / vegetation. Careful planning will be required to minimise the extent of tree removal and ensure compliance with environmental regulations, including BS 5837:2012.

### Betterment to Habitat

The works present the opportunity to incorporate the planting of native flowers and shrubbery along length of ramp, potentially also including habitat creation in the form of bird boxes and insect houses.

## Accessibility / Use Considerations

### Gradient at Firs Road

The approach from Firs Road has a 1:7 gradient, which exceeds the maximum allowable gradient for compliance with Active Travel standards. This limits the ability to provide a fully accessible route for PRMs and cyclists.

## Cost Considerations

| Item                         | Cost (+ / - 30%)  |
|------------------------------|-------------------|
| Design Fee                   | £180,000          |
| Preliminaries                | £200,000          |
| Vegetation Clearance         | £45,000           |
| Earthworks                   | £550,000          |
| Civil Engineering Works      | £2,500,000        |
| Road/Rail Closures           | £100,000          |
| Surfacing                    | £100,000          |
| Finishing Works              | £75,000           |
| <b>Sub-total</b>             | <b>£3,750,000</b> |
| Risk (20%)                   | £750,000          |
| Network Rail Interface (10%) | £375,000          |
| <b>Total</b>                 | <b>£4,875,000</b> |

Table 5 - Options 2B Costings

## 2.6 Option 2C: New Stepped Structure at End of Firs Road Crossing Rail with Ramp to Road Crossing

### Explanation

This option proposes the construction of a new footbridge at Firs Road to span the railway, combined with a link to an at-grade crossing over the A465. The footbridge would replace the existing Caedewen Footbridge, providing a dedicated railway crossing for pedestrians and cyclists, while the at-grade crossing would facilitate safe interaction with the road, supported by a reduced speed limit of 30mph. This option offers improved connectivity between the residential development, Abergavenny Station, and the town, addressing physical barriers while integrating with the Active Travel network.



Figure 24 - Option 2C

### Engineering Considerations

#### Bridge Construction

The structural arrangement will mirror that of the previous 2 options, comprising a truss structure. However, with stepped access and a bicycle gutter provided to the western end of the structure onto Firs Road.

### Landscaping/Visual Considerations

#### Landscaping Opportunities Adjacent to A465 Ramp

As discussed in Section 0, there is the opportunity to incorporate landscaping features, such as the planting of native flowers and other vegetation, adjacent to the ramp running along the east side of the A465.

These measures would enhance biodiversity, support pollinators, and improve the visual character of the route. Native species would ensure ecological compatibility and reduce maintenance requirements, while also serving to integrate the ramp structure into the surrounding environment, creating a more natural and inviting Active Travel corridor.

## Ecological Considerations

### Ecological Benefits of Stepped Access

This option presents ecological benefits when compared to Options 2A and 2B, as it eliminates the need for tree removal within the construction area. Unlike the ramped solution, this design allows the existing trees and vegetation to remain intact, preserving valuable habitats and supporting local biodiversity.

During the surfacing works for Firs Road, protective measures such as fencing around root protection areas will be implemented to safeguard tree roots from soil compaction and construction activities. This approach aligns with BS 5837:2012, ensuring that trees are retained and integrated into the final design while reducing ecological disruption.

## Accessibility / Use Considerations

### Surfacing Requirements for Stepped Access

As with the proposed stepped access to the A465 from the station footbridge, the steps will use strong, non-slip materials to prevent falls in any weather. Tactile paving at the top and bottom will help visually impaired users, and contrasting edges will make the steps easier to see. The surface will be hard-wearing, low-maintenance, and meet Active Travel standards for safety and accessibility.

### Access for Cyclists

A bicycle gutter will be incorporated into the stepped access side of the structure, ensuring access for cyclists across the railway and into the development.

## Cost Considerations

| Item                         | Cost (+ / - 30%)  |
|------------------------------|-------------------|
| Design Fee                   | £150,000          |
| Preliminaries                | £200,000          |
| Vegetation Clearance         | £30,000           |
| Earthworks                   | £400,000          |
| Civil Engineering Works      | £1,500,000        |
| Road/Rail Closures           | £100,000          |
| Surfacing                    | £50,000           |
| Finishing Works              | £45,000           |
| <b>Sub-total</b>             | <b>£2,475,000</b> |
| Risk (20%)                   | £495,000          |
| Network Rail Interface (10%) | £247,500          |
| <b>Total</b>                 | <b>£3,217,500</b> |

Table 6 - Option 2C Costings

### 3 Recommendations

This report outlines the potential options for accessible and active travel routes linking Monmouthshire Housing Association's proposed development to Abergavenny Railway Station and into Abergavenny town. Outline designs, as well as engineering, landscaping, and ecological considerations have been presented for the proposed options.

It is recommended that 3 options are all progressed to provide suitable and sufficient access for the proposed development, as these jointly provide access for all users. PRMs and pedestrians via the existing station footbridges and active travel users via Firs Road.

The advised solution is the creation of a link both at the railway station but also at Firs Road. Due to the accessibility issues present with the ramp leading up Firs Road and the cost savings associated with a single span structure, Option 2C is recommended. This will provide a route from the development to Abergavenny town for able bodied pedestrians and cyclists. With access provided to PRM users by the implementation of Option 1B – the ramped access to the station, with the new station footbridge. In order to minimise increase in congestion at the station it is also recommended that option 1A – resurfacing of the pathway at the base of the listed footbridge and creation of the stepped access to the A465 is incorporated within the scheme. As this will provide a path of least resistance to able bodies pedestrian users and promote use of this route.

The collated costs of each of these options is shown within the table below:

| Item         | Cost (+ / - 30%)  |
|--------------|-------------------|
| Option 1A    | £106,600          |
| Option 1B    | £1,716,000        |
| Option 2C    | £3,217,500        |
| <b>Total</b> | <b>£5,040,100</b> |

*Table 7 - Preferred Options Costs*



### **Next Steps**

We recommend the following next steps to progress the recommended options:

- Consultation with Transport for Wales and Network Rail regarding the proposed station development.
- Monmouthshire CC to enter into a BAPA agreement with Network Rail to obtain formal consultation feedback from all the relevant departments on the proposed options,
- Concept designs to be progressed to Approval in Principle stage, to complete these designs, the following surveys will be required:
  - Site Investigations;
  - Ground Investigations;
  - Topographical Survey;
  - Ecology Surveys.

# APPENDIX A

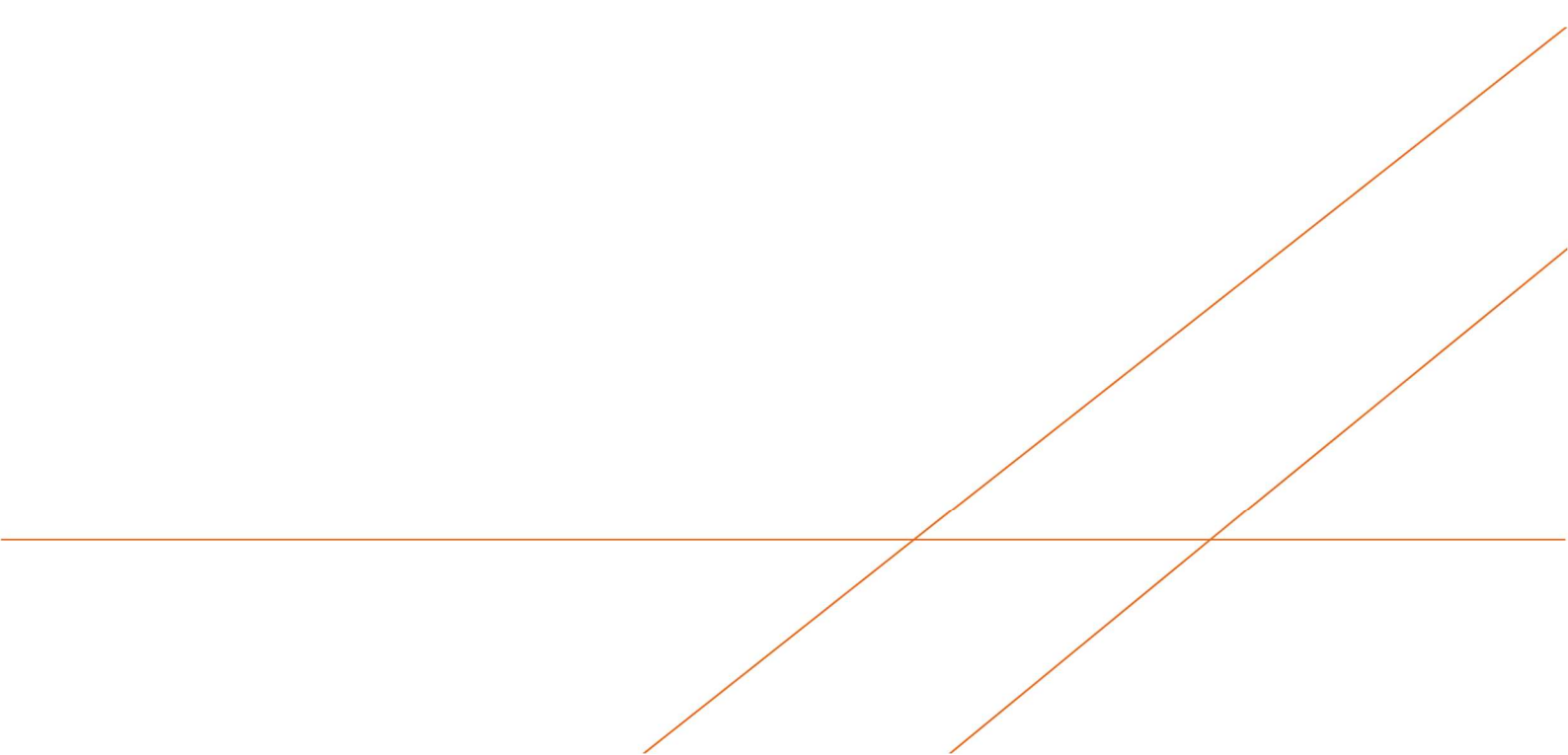
## Drawings

| Drawing number                       | Drawing Title                                                                                                |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 30279301-ARC-WLS-HNL1-DRG-ECV-100100 | GA Plan – Preferred Options Firs Road and Abergavenny Station                                                |
| 30279301-ARC-WLS-HNL1-DRG-ECV-100101 | Options 1A and 1B - Improvements to Footbridge Access and Ramp / Stepped Access to Platform 2 (Sheet 1 of 2) |
| 30279301-ARC-WLS-HNL1-DRG-ECV-100102 | Options 1A and 1B - Improvements to Footbridge Access and Ramp / Stepped Access to Platform 2 (Sheet 2 of 2) |
| 30279301-ARC-WLS-HNL1-DRG-ECV-100103 | Option 1C - New Free-Standing Structure to Span Potential New Rail Line                                      |
| 30279301-ARC-WLS-HNL1-DRG-ECV-100201 | Option 2A - New Structure at End of Firs Road Crossing Railway and Road                                      |
| 30279301-ARC-WLS-HNL1-DRG-ECV-100202 | Option 2B - New Ramped Structure at End of Firs Road Crossing Railway and Road (Sheet 1 of 2)                |
| 30279301-ARC-WLS-HNL1-DRG-ECV-100203 | Option 2B - New Ramped Structure at End of Firs Road Crossing Railway (Sheet 2 of 2)                         |
| 30279301-ARC-WLS-HNL1-DRG-ECV-100204 | Option 2C - New Stepped Structure at End of Firs Road Crossing Railway                                       |

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