



Dewsbury Bus Station
Design and Access Statement

West Yorkshire Combined Authority

June 2023

Dewsbury Bus Station

Design and Access Statement



QUALITY INFORMATION

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1.0 INTRODUCTION

1.1 Background

1.1.1 Dewsbury Bus Station

Jacobs UK Ltd and Jefferson Sheard Architects have been commissioned by West Yorkshire Combined Authority (WYCA) to prepare a planning application for the proposed refurbishment of Dewsbury Bus Station, located on Aldams Road, Dewsbury, Kirklees (hereafter 'the Scheme').

The Scheme forms part of a programme of works in the Leeds City Region (LCR) funded by the Transforming Cities Fund (TCF), to make public journeys along the A638 from the Chain Bar roundabout at Cleckheaton and across to Dewsbury safer and more reliable. This would be achieved by increasing the number of buses and easing congestion along the A638 and by improving cycle routes and pedestrian crossings.

The plans for Dewsbury Bus Station are transformational and are part of the aspiration to improve the environment and access routes for people using buses and trains, and also walking and cycling routes in Dewsbury and West Yorkshire. The Scheme involves extensive refurbishment and physical improvements to the existing bus station, reconstruction and reconfiguration of the forecourt and concourse areas and minor changes to the layout at the junctions with the local highway network.

1.1.2 Transforming Cities Fund

The TCF comprises a £317m programme of investment that aims to deliver a transformational programme of new infrastructure and help create a step change in travel across the LCR. WYCA, on behalf of the LCR, submitted a Strategic Outline Business Case (SOBC) funding bid to the Department for Transport (DfT) under the TCF programme in November 2019. The SOBC detailed the development of 22 packages of schemes across the city region, identified to achieve the LCR TCF vision and programme objectives as outlined below.

The WYCA's TCF Vision is *"to support delivery of inclusive growth across the Leeds City Region, through an innovative and coordinated walking, cycling and bus package, which provides genuine sustainable and healthy travel options for our communities along our corridors of greatest economic need, and transforms accessibility from new development sites and accommodates growth at key public transport hubs"*.

The vision has shaped the TCF objectives, which are:

- Enabling inclusive growth – *"To enable as many people as possible to contribute to and benefit from economic growth, and contribute to improved health and wellbeing of our residents"*;
- Boosting productivity – *"Working with businesses and universities to close the productivity gap, create thousands of jobs and add substantially to our economy"*;
- Supporting clean growth – *"Achieving our target for a net zero carbon economy by 2038 through lowering carbon emissions and taking advantage of new innovations to create jobs and growth"*; and
- Delivering 21st century transport – *"Creating a transport system which addresses the challenges we face around capacity, connectivity, sustainability and air quality."*

Within Dewsbury, TCF funding will be used to improve access across the town centre. In addition to the improvements to the Bus Station which are outlined in this Planning Application, there will be improvements to the walking and cycling routes within the town, as well as better access to the rail station. These changes will contribute to LCR's goal of being a carbon neutral economy by 2038.

The Scheme is part of these improvements and will be funded under the TCF. It will seek to contribute to the TCF vision and objectives, in terms of better connecting people through affordable and sustainable transport measures. These improvements are centred around making the public Journeys along the A638 from the Chain Bar roundabout at Cleckheaton and across to Dewsbury more reliable

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and safer, with increasing buses, improving cycle routes, pedestrian crossings and easing congestion along the A638.

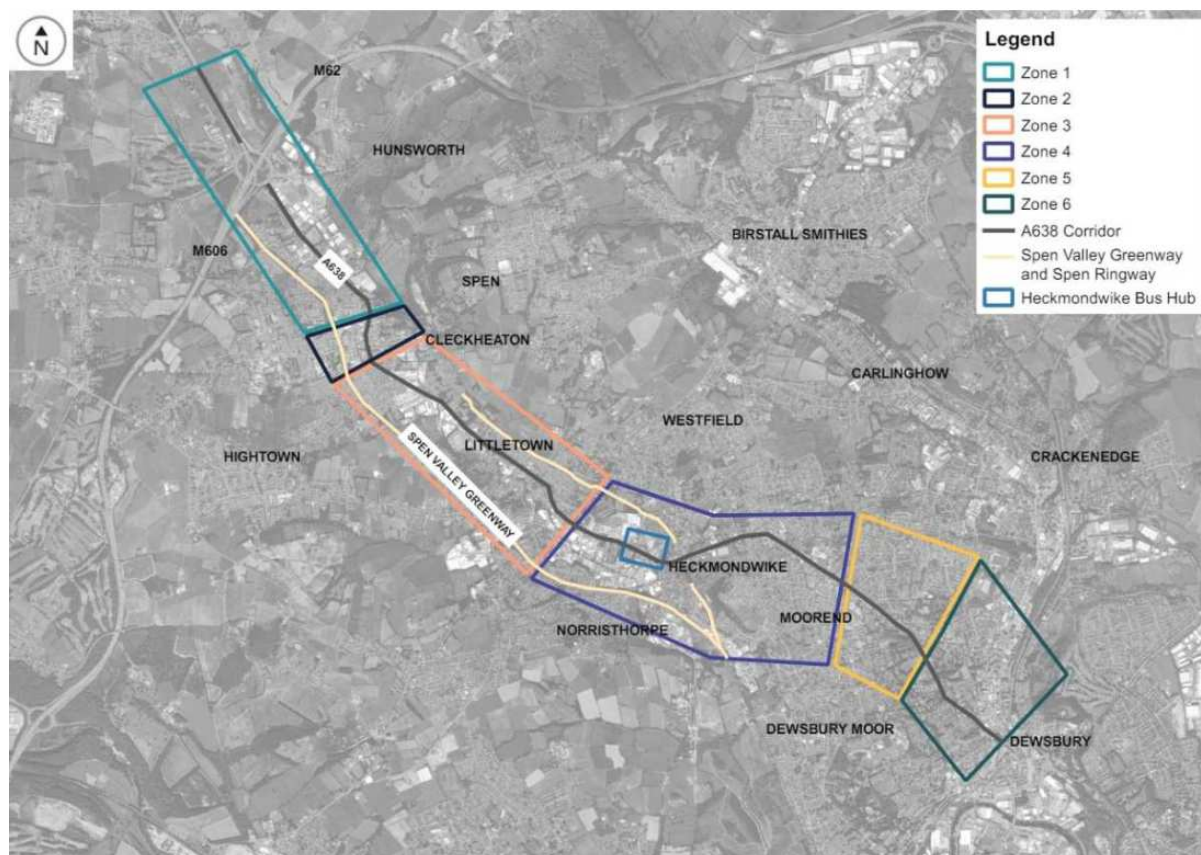


Figure 1 Map of A638 Dewsbury – Cleckheaton Sustainable Travel Corridor

The Scheme will contribute to the wider ambitions for Dewsbury as a town, enabling the town centre to strengthen and sustain its economic role within the region, contributing to the delivery of the LCR's vision for 'good growth'.

1.1.3 The Proposed Dewsbury Bus Station Scheme

The improvements (herein referred to as the 'Proposed Scheme') are composed of an improved 'fit for purpose' bus station at Dewsbury to provide greater access to the town centre. The changes are considered to contribute to Leeds City Region's goal of being a carbon neutral economy by 2038.

The Proposed Scheme aims to improve access to the bus station and refurbish the internal building to a higher standard, as well as offer opportunities to improve the energy efficiency on site.

Overall, the Proposed Scheme aims to enhance the appearance of the bus station, improve accessibility within the bus station and also to the town centre, as well as boosting pedestrian and cycle access to the site. The Proposed Scheme is composed of the following:

- Refurbishment of the bus station building to a higher standard (internal concourse)
- Provide additional passenger facilities, including improved seating, a Changing Places Toilet and a quiet room.
- Re-configuration of the existing retail units to rationalise the retail offer and improve accessibility around the bus station entrances.
- Building entrance improvements including glazing and a proposed glazed atrium between South Street and Aldams Road to improve the sense of place.
- New roof glazing to increase natural daylight in the passenger concourse areas.

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- External building cladding and glazing to rationalise the existing elevations, project a suitably high-quality image and improve thermal insulation.
- Strengthening signage and wayfinding to improve integration and accessibility.
- Reconfiguration of the bus apron area to improve safety, efficiency and accessibility.
- Landscaping and boundary improvements.
- New contractor parking with an EV charging point.
- Sustainability improvements to contribute to carbon reduction and energy efficiency including PV panels on the flat and pitched roof and an area of new green roof.
- Improved pedestrian linkages through the bus station to improve connectivity.
- Integration with Kirklees Council Aldams Road and South Street walking and cycling proposals.

Together, the above improvements aim to:

- Encourage more people to visit Dewsbury Bus Station.
- Transform passenger facilities.
- Improve access and safety for all bus station passengers.
- Attract new retail business and improve people's experience.
- Help regenerate Dewsbury town centre in line with the Dewsbury Blueprint.
- Make the bus station more energy efficient and reduce carbon emissions.

1.2 Scope of this Design and Access Statement

This Design and Access Statement has been structured in line with the CABE recommendations for Design and Access Statements and provides a design commentary in support of the submitted planning application. A list of the associated submitted documents and statements which form the Planning Application is contained within **Appendix A**.

For details of the proposed planning policies which set the context for the proposed development and a summary of how the development complies with those policies, reference should be made to the Jacobs Planning Statement which accompanies this application for Planning Approval.

Section 2 of this statement outlines the founding principles of the development by assessment of the development aspirations and of the existing and proposed site and its context.

Section 3 provides a summary of the design development options which have been considered leading up to the preparation of the current proposals.

Section 4 provides a description of the current design proposals as submitted for Full Planning Approval. The section follows the CABE guidance for design and access statements, with commentary on Use, Amount, Layout and Access, Scale and Massing, Appearance and Landscaping

Section 5 provides a summary of consultations and engagement with public and stakeholders that have been undertaken to inform the submitted proposals.

Section 6 of this statement provides a commentary on deliverability of the development, including details of the proposed arrangements for the demolition and strip-out of sections of the existing bus station, and the provision of temporary bus services during the demolition and construction periods.

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2.0 EXISTING SITE AND CONTEXT

2.1 Location

Dewsbury is a town located in the northeast of Kirklees district in West Yorkshire. It is approximately 14km south of Leeds, 11km northeast of Huddersfield and 9km west of Wakefield.

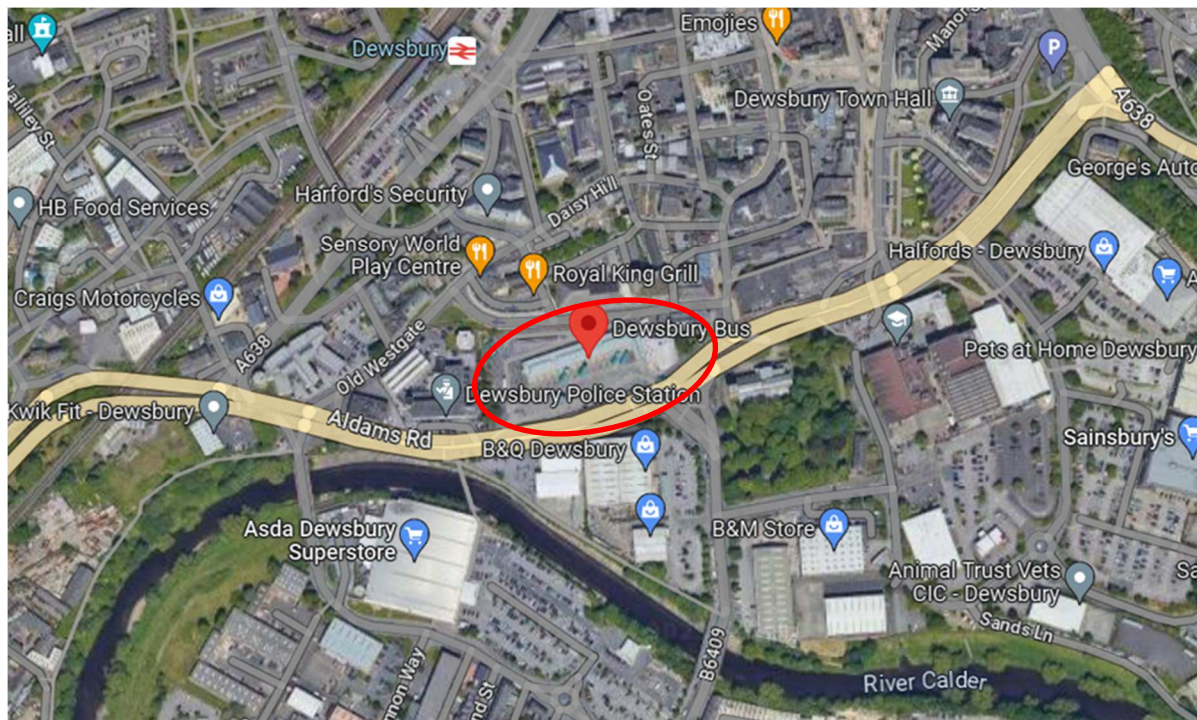


Figure 2 Aerial view showing proposed scheme (Source: Google Maps).

The town centre is surrounded by Dewsbury Ring Road (the A638), with Aldams Road (the A644) at the south of the Ring Road and the A638 making up the rest of the Ring Road at the north, east and west. Dewsbury Bus Station is situated close to the town centre employment area and retail core situated to the northeast. Dewsbury train station is located approximately 250m to the north of the site. Immediately south on the other side of River Calder is a local ASDA Superstore, the Savile Town retail parks, and a jetty point on the Calder & Hebble Navigation waterway. The bus station is strategically situated for close access to amenities in Dewsbury town centre and is a local hub.

2.2 Site Context, Connectivity and Adjacent Developments

2.2.1 General Context

Located immediately Southwest of the town centre, Dewsbury Bus Station provides good connectivity with the primary retail and employment areas within the town centre and is at the centre of an area of significant investment and development.

To the north of the bus station, is the train station that serves the Northern and TransPennine Express lines. Also is the town centre that has key amenities such as retail, cafés and restaurants, cinema, and parking. The town hall, which houses a concert hall hosting exhibitions, live music, etc, is situated to the east.

Dewsbury Minster is situated immediately east of the bus station and Crow Nest Park is less than a mile west.

The River Calder is situated immediately south, along with a mix of commercial parks and the Savile Town suburbs

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- | | | | |
|---|------------------------|---|--------------------|
| 1 | Dewsbury Bus Station | 5 | Dewsbury Town Hall |
| 2 | ASDA | 6 | Police Station |
| 3 | Dewsbury Minster | 7 | River Calder |
| 4 | Dewsbury Train Station | 8 | Daisy Hill |

Figure 3 Aerial Photograph of the Existing Bus Station, showing surrounding places of interest.



Figure 4 Dewsbury Minster as seen from Aldams Road

2.2.2 Connectivity

The location of the bus station provides close pedestrian connections to the train station, retail, civic and employment areas within the town centre.

To the west of the Town Hall leads to Foundry Street and Northgate which are the main retail precincts in the town with access to shopping centres and indoor market. There are also other streets (Westgate, Tithe Barn St, and Daisy Hill) that lead from the bus station east into the town centre passing shops and other businesses. Westgate leads north into Northgate and into the heart of the town centre with major food outlets and Pioneer House (part of Kirklees College) on Dewsbury Road off Northgate. Further east is the A638 which runs from Dewsbury east beyond the M1 and into Wakefield.

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Further north is Pioneer House and the recently completed Dewsbury Learning Quarter building, which helps with bringing new students into the town, many which use the bus and train links.

The most significant area of urban heritage in the immediate vicinity of the site is situated just to the North of the Bus Station in the adjacent conservation area and zone of the Historic Area Assessment, however one of the Town Centre's key historical buildings, the Grade II* listed Dewsbury Minster, is immediately adjacent to the site to the east and therefore also has a strong visual connection.

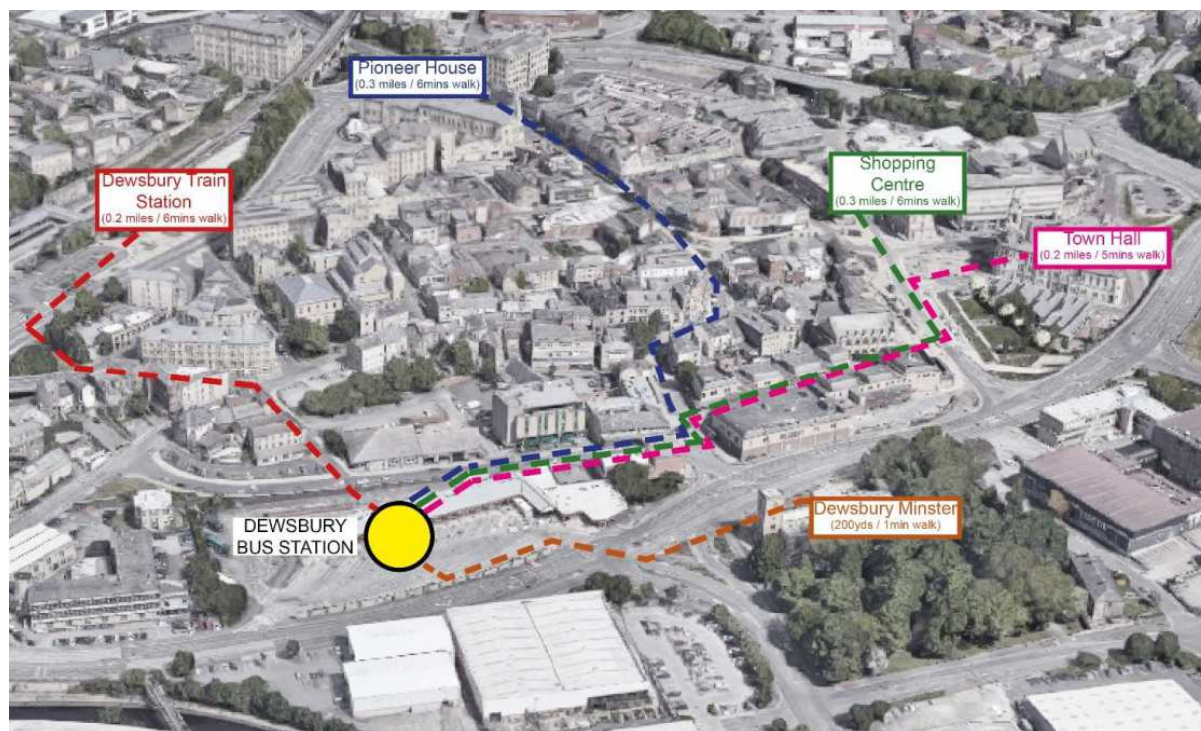


Figure 5 Aerial View indicating connectivity to key places of interest around the project site

2.2.3 Adjacent Developments

Dewsbury Town Centre has seen significant investment in recent years to improve the town centre, repurposing older buildings and historic assets. Consequently, it has encouraged aged wider investment and growth and thus also continuing to improve the status of the town.

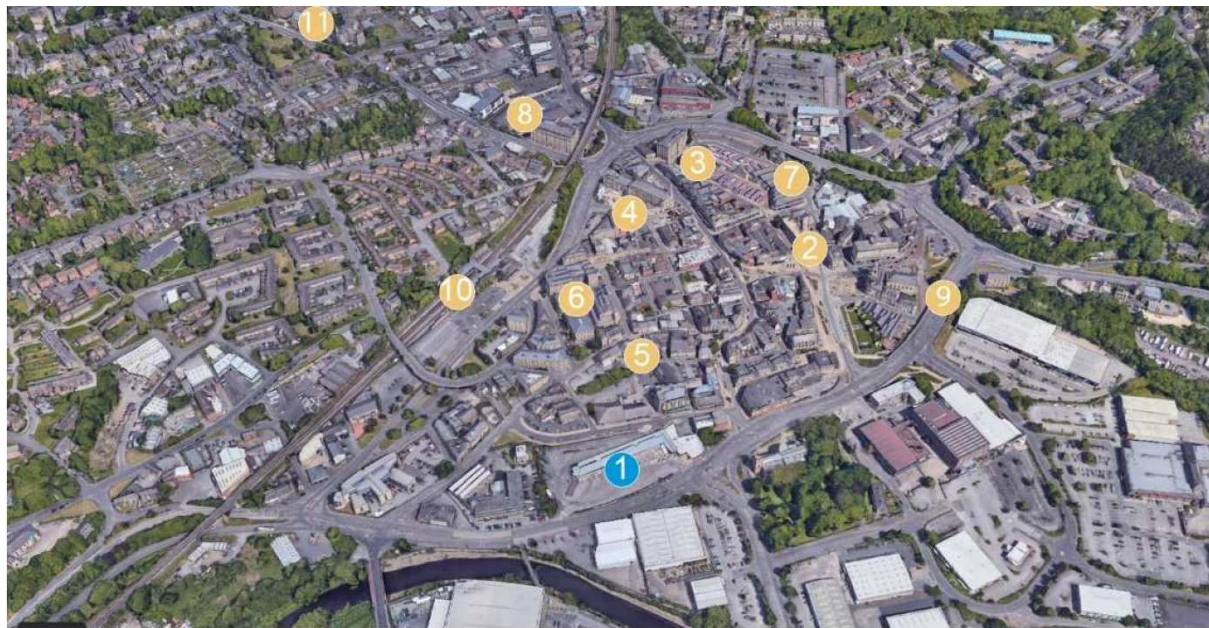
The developments for the town centre are northeast of the site, with the Daisy Hill neighbourhood development being the nearest. This consists of:

- converting the vacant Grade 2 listed Field House building into 23 high quality apartments and a restaurant / bar
- acquiring land and buildings to create a single development opportunity which is due to be completed in 2023.

Following major investment from the council, Kirklees College, Leeds City Region Enterprise Partnership (LEP) and the Heritage Lottery Fund, the learning quarter was completed with the opening of Pioneer Higher Skills Centre in September 2020.

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Benefiting from a Townscape Heritage Initiative (THI), the Northgate House Refurbishment consists with new shopfronts, a new flat roof and new windows.



Matchells Mill conversion to mixed use: ground floor factory shop residential flats



Pioneer House conversion for Kirklees College "New Home"



Daisy Hill new neighbourhood development



Field House Mixed-Use Conversion



A consolidated retail offer, with significant investment in Dewsbury's famous market, to transform it into a flexible space for both shopping and leisure.



Opened in 2018, a state-of-the-art Centre delivered by the West Yorkshire Combined Authority, through Leeds City Region Growth Deal.



Introducing trees and landscaping to ring road



The train station saw a £1.2million facelift in 2019, thereby creating a more attractive entrance to Dewsbury for visitors and commuters.



Plans have been pitched to Kirklees Council regarding Dewsbury Police Station to relocate at former Kirklees College premises at Halifax Road.

Figure 6 Examples of Recent Adjacent Developments

To the North of the Bus Station, there is the intention to reopen The Arcade between Market Place and Corporation Street with the view of attracting and retain a diverse mix of retail, leisure, and community facilities.

Dewsbury is also due to be transformed with the next phase of highway improvements works to improve the connectivity of the town especially for cyclists.

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The Dewsbury Blueprint published by Kirklees Council, includes for the pedestrian and cycle routes to be improved, including better links between the rail and bus stations, along Bond Street to the Market Place, and better access across the ring road.

The train station gateway recently underwent a major redesign, with improved pedestrian and crossing facilities, giving priority to pedestrianisation, and thus creating a more attractive entrance to Dewsbury for visitors and commuters. Following the TransPennine Upgrade, which has brought improved and more reliable rail services to Dewsbury, this in turn has a successive effect for bus services and thus providing greater potential for increased demand within the bus station.



Figure 7 Dewsbury Railway Station

2.3 Existing Site

2.3.1 Use

The site is owned and managed by West Yorkshire Combined Authority and is used as a public Bus Station. Several small retail units are directly connected to the bus station, however current demand for these units is low due to their size, age and narrow proportions. Only two units are currently occupied, both by bus Operator Arriva, and are used for driver rest, toilet and canteen facilities.

The existing Bus Station was built in 1994 and, at nearly 30 years old, is at the end of its design life.

2.3.2 Amount

2.3.2.1 Site

The Bus Station site occupies an area of 10,076sqm which falls within WYCA ownership.

The submitted Planning Application Red Line Boundary encloses an area of 10,534sqm, which includes the WYCA owned bus station site and three small parcels of land, one at each vehicle entrance, which are under Kirklees Council ownership and which are required as part of the application in order to tie in new paving and kerbs with existing.

The existing bus station consists of the following vehicle provision:

- 15 No. Drive in Reverse Out (DIRO) Bus Stands
- 1 No. Shallow Sawtooth Bus Stand
- 2 No. Drop-Off Bus Stands
- 2 No Separate external Coach Stands (Disused)
- 4 No. Bus Layover Bays

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- 1 No. Ambulance Bay
- 1 No. Service Bay for transit van sized service vehicles
- 12 – 14 No. Staff / Contractor car parking spaces.
- A single electric vehicle parking space is provided for use by authorised maintenance / staff vehicles.

2.3.2.2 Building

The Bus Station Building has a gross external area of 2087sqm and a gross internal floor area of approximately 1982sqm, consisting of:

- 1366sqm Passenger Concourse and Mall
- 395sqm occupied by 5 No. retail Units.
- 168sqm of staff / Public Facilities, comprising of:
 - Bus Station Manager Office
 - Customer Care Office
 - Bus Operator Inspector's Office (disused)
 - Combined Cleaner's Store and Staff Rest Room
 - Cleaning Machine Store
 - ATM Room
 - Travel Centre and associated Toilet and Storeroom (disused)
 - Male and Female Public Toilets
 - Accessible Toilet
 - Plant Room
- The remaining 53sqm consisting of internal walls and structure.

2.3.3 Layout

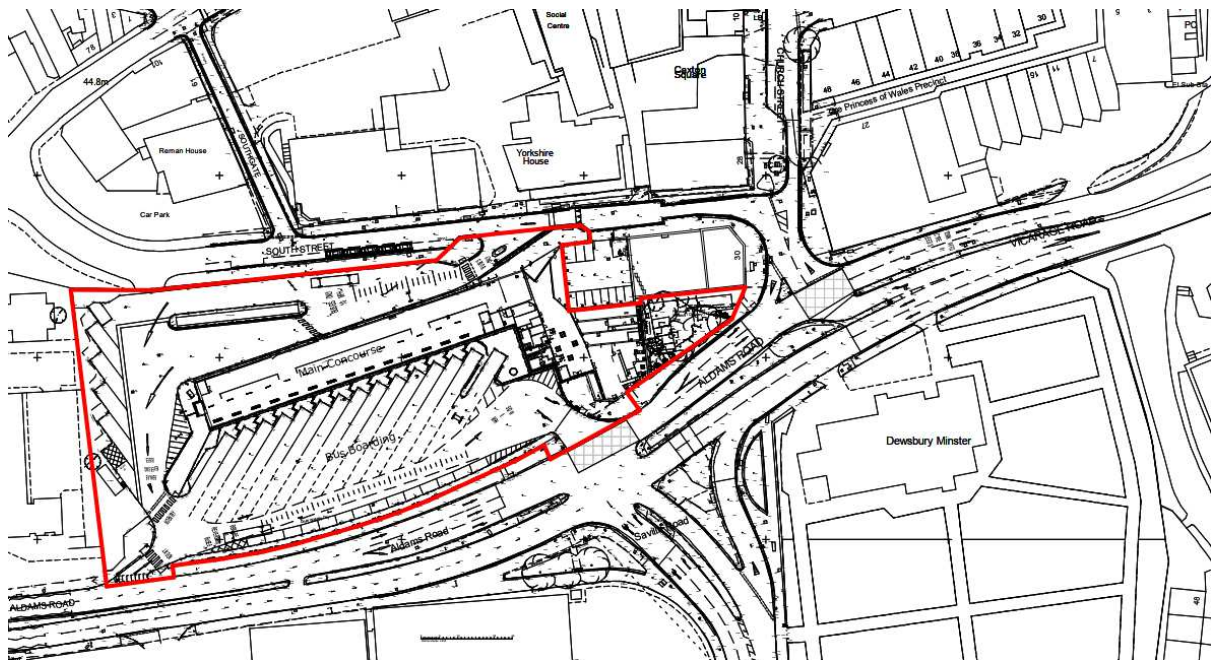


Figure 8 Existing Location Plan Showing Planning Application Red Line Boundary

2.3.3.1 Building Layout

The existing bus station building comprises of a long, single storey, portal framed, passenger concourse which runs from east to west in the centre of the site. At the eastern end of this concourse is a circulation

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mall which runs from north to south, linking South Street and Aldams Road respectively. Passenger toilets and the retail units are accessed off this mall.

At the junction of the concourse and mall are a disused travel information centre, ATM, staff / cleaner facilities, Bus Station Manager's Office and Customer Care Office. A separate cleaning machine store is located at the western end of the passenger concourse.

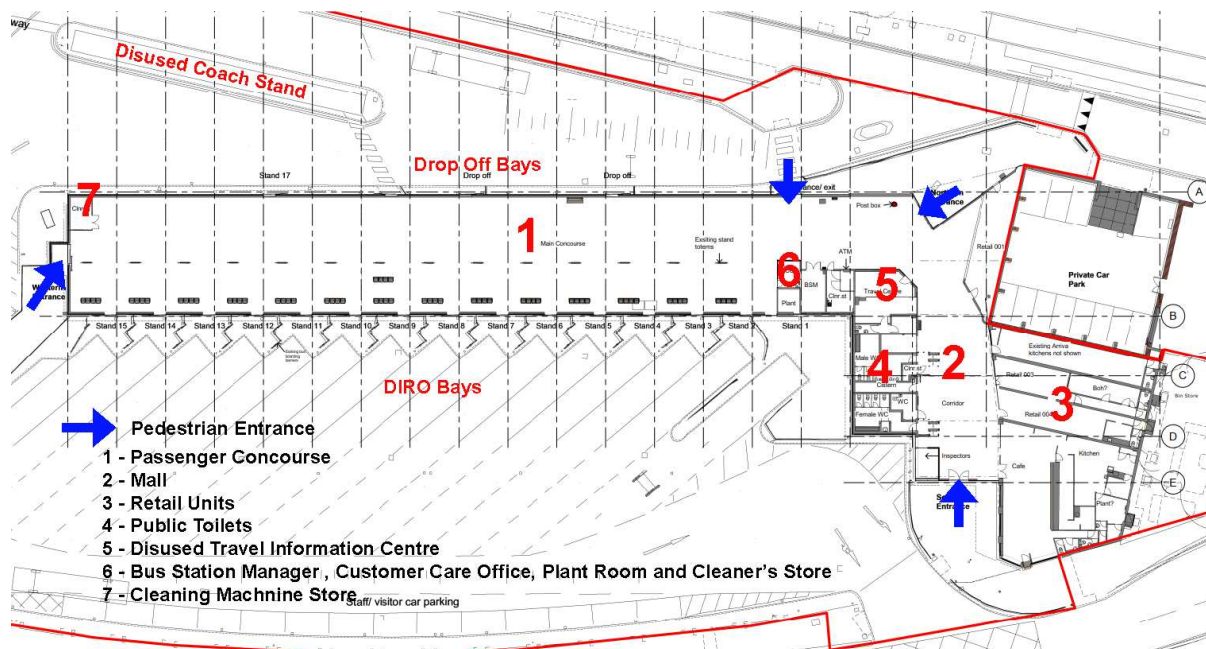


Figure 9 Existing Building Layout Plan

2.3.3.2 Site Layout

To the eastern end of the site is a triangular public space accessed directly from Aldams Road. This is located immediately opposite Dewsbury Minster, but does not offer a commensurately high-quality environment, containing overgrown landscaping, poor quality paving and uncontrolled and visually prominent bins from the retail units.

To the western side of the bus station site are a series of bus layover bays, an ambulance bay and associated portacabin and an external bin store surrounded by a timber fence. The eastern boundary separates the bus station from the existing Police Station site and is demarked by heavy tree planting and a boundary fence / wall.

Immediately to the North of the bus station concourse is located a disused coach stand shelter. The northern boundary is defined by a brick faced retaining wall which separates the bus circulation areas from South Street, which rises steeply from the east to the west. A taxi rank is located on the southern side of South Street, adjacent to this boundary.

The southern boundary, along Aldams Road is demarked with a tall stone-faced retaining wall which separates the bus station site from the Aldams Road footpath. On the bus station side of the retaining wall is located a series of staff and authorised visitor / contractor parking bays and an associated footpath.

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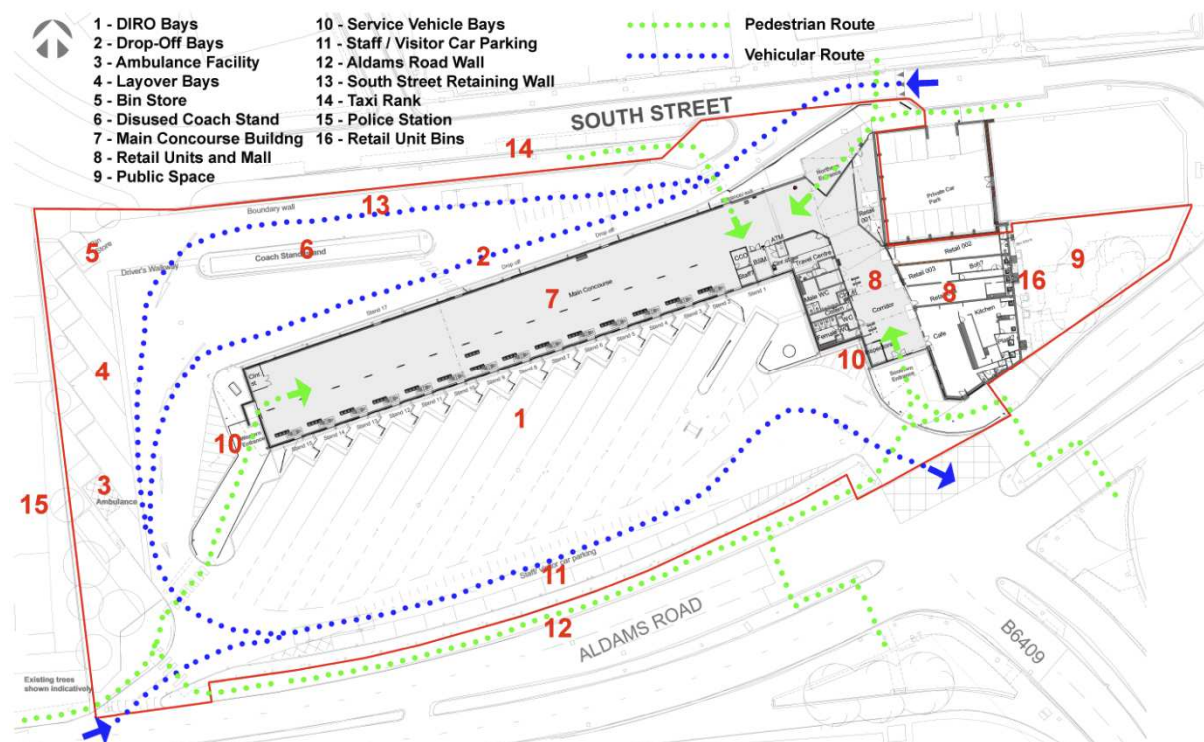


Figure 10 Existing Site Layout Plan

2.3.4 Access

2.3.4.1 Pedestrian Access

Pedestrian entrances to the bus station are located at the North and South of the mall, off South Street and Aldams Road respectively. A further pedestrian entrance is located at the western end of the passenger concourse with access off Aldams Road.

Pedestrian crossings are provided across each of the vehicular site entrances and bus runways. Other than the crossing at the southeast exit these are not signalised crossings and in several locations their alignment does not sit wholly on the pedestrian desire lines, encouraging users to jay walk in non-designated areas of the roadways.

The site falls gently from the northern boundary to the southern boundary, creating a cross fall within the pedestrian concourse and bus runways, however this is not of sufficient gradient to pose accessibility problems for pedestrians or passengers.

Access to and from the buses is possible at each bus stand and drop-off stand location. However, an accessibility audit has been undertaken by Jefferson Sheard Architects and has indicated that the existing bus bay alignment, coupled with the bus overrun barrier and pedestrian barrier locations, limits the range of buses and wheelchair accessible ramp options that can currently be accommodated.

2.3.4.2 Bus Access

Bus Access is possible from the northeast vehicular entrance from South Street and from the Southwest vehicular entrance from Aldams Road. Bus exit from the site is possible only via the signalised southeastern vehicular exit onto the junction of Aldams Road, Vicarage Road and the B6409.

2.3.4.3 Cycle Access

In terms of cycle routes there are no Sustrans routes within the application site; however, National Cycle Network Route 69 is located approximately 50m to the north of the site. This runs north along Old Westgate and Daisy Hill and then turns south along Long Causeway (130m from the site). Cycle access is currently provided to the scheme via on street access using the local highway network, however Kirklees Council are currently developing proposals for improvement of the cycle network which will see

a combination of dedicated cycle routes and shared pedestrian and cycle routes introduced along Aldams Road.

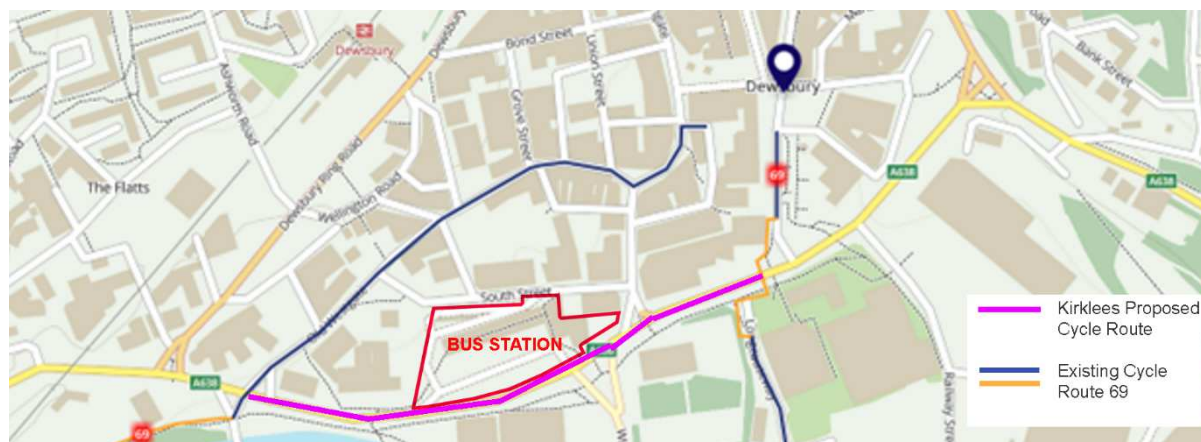


Figure 11 National Cycle Route 69 near the application site (source: Sustrans OS Maps)

2.3.4.4 Refuse Vehicle Access

Refuse vehicles for the bus station enter the bus station site via the northeast vehicular entrance and can park up adjacent to the external bin store in a shared service vehicle / layover bay. Exit from the site is via the southeast vehicular exit onto the junction of Aldams Road, Vicarage Road and the B6409.

Refuse vehicles for the existing retail units pull in at the side of Aldams Road, adjacent to the triangular public space at the east of the bus station. Bins are transferred to the refuse vehicle at the break in the pedestrian railings at the Aldams Road pedestrian crossing.

2.3.4.5 Service and Maintenance Vehicle Access

Staff and contractor parking spaces are provided to the southern boundary of the bus station, adjacent to the Aldams Road boundary wall. Vehicles enter the site via the southwest entrance from Aldams Road and exit via the southeast vehicle exit onto the junction of Aldams Road, Vicarage Road and the B6409. Additional service vehicle bays suitable for small light goods vehicles are provided within the bus station site to the eastern and western ends of the bus concourse and are demarked by hatched road markings.

2.3.4.6 Fire Fighting Access

The majority of the external perimeter of the bus station building is accessible from the bus runways and provides suitable circulation and parking space for fire fighting vehicles within 45m of all internal points of the building.

2.3.5 Scale, Massing and Appearance

In addition to the wider aims of the TCF investment packages, several factors relating to the existing scale, massing, appearance and functional layout have converged in consideration of the vision for Dewsbury and present a compelling argument for re-development of the existing bus station. The following provides an outline summary of those factors:

2.3.5.1 Failing Infrastructure

The components of the existing bus station building have, in the majority, exceeded their anticipated design life and are posing a significant maintenance burden.

The existing bus station's material palette generally comprises of curtain wall glazing for the concourse with a brick plinth externally and a tiled masonry plinth internally. Dark brickwork and metal cladding in corporate Metro colours provides an aesthetic that is somewhat out of keeping with the more subdued brickwork and stonework facades within the area. The finishes are aesthetically 'tatty' and the visual appearance is dated. The existing bus station environment is not in line with current expectations for

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the quality of a modern public transport system, nor does it promote the feeling of a safe and secure environment.

The existing bus runways have passed their intended design life and the cracking of the runway surfaces indicates that both the wearing courses and sub-bases are now beginning to fail.

The bus apron is surfaced with thermoplastic markings to delineate bays, circulation routes and crossings, which have overtime faded following weathering. It is currently the intention to revive the prominence of this floor contrasting for the purpose of ensuring that routes, bays, and crossings are obvious to all users. Paving consists of mostly stone coloured and textured concrete paving, and there are areas of tarmac throughout the bus apron. The proposals will address the external surface finishes so that there will be a managed surfacing strategy which is appropriate to the various access routes provided.

2.3.5.2 Imperfect Vehicular / Pedestrian Separation

The existing layout exhibits several issues with pedestrian and vehicular segregation. Crossing points to the south-western pedestrian entrance are often bypassed by pedestrians. An existing external coach stand (currently not in service) requires passengers to cross the bus runways between the main concourse and the external shelter, posing a risk of vehicle / pedestrian conflict. Pedestrian circulation and road crossings at the northern entrance from South Street is complex and the multiple entrance points to the building do not help clarify the desire lines.

The unused coach shelter occupies a considerable site area and opportunity exists for its removal and replacement with landscaping which would help mitigate surface water drainage and increase biodiversity on the site.



Figure 12 Existing Unused External Coach Stand

2.3.5.3 Poor Quality Internal Environment

The existing bus concourse is a sparse arrangement which consists of an exposed portal frame structure containing passenger waiting areas with minimal facilities for seating or passenger information. Queuing areas are poorly defined which leads to the queues spilling out across circulation routes during busy periods. The exposed portal frame structure appears more like an industrial barn than a high quality 21st century transport hub.

The existing retail mall feels enclosed, with limited natural light and low ceilings and is not appropriate for one of the main arrival points into Dewsbury Town Centre.

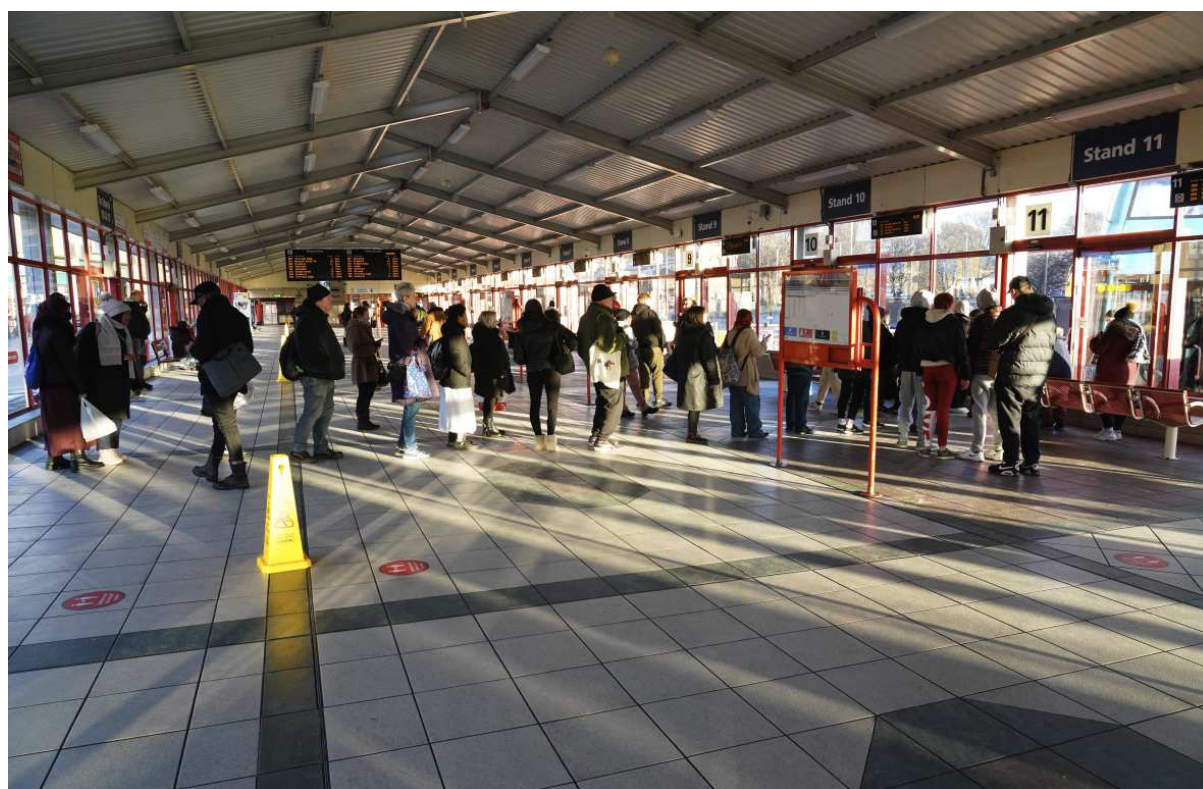


Figure 13 Existing Passenger Concourse

2.3.5.4 Insufficient Passenger Facilities

Whilst the existing public toilets have recently undergone a refurbishment and now provide a high-quality facility for passengers, the existing bus station falls short of the expected standards of a modern, inclusive transport hub. Changes to regulations and changes in general expectations have introduced requirements for the inclusion of Changing Places Toilets, Quiet Rooms, fully accessible travel information and waiting areas. The existing bus station falls short on these measures.

The existing travel information centre does not meet the requirements for inclusive access and is not currently in operation. Door widths and information desk heights do not comply with current requirements for wheelchair access.

Waiting areas have minimal seating and are not structured in a way to help orderly queuing. Passenger information is limited and provisions such as induction loop connectivity are absent in many areas of the station. Travel information provision does not take full advantage of modern electronic systems.

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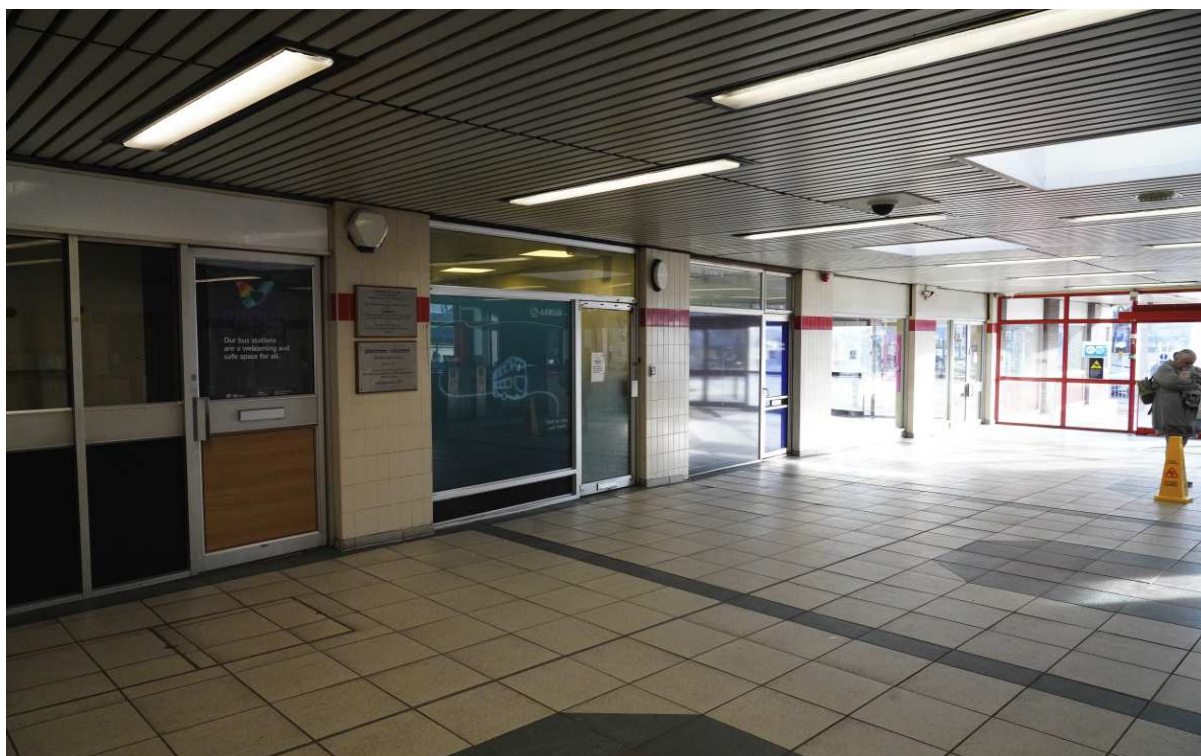


Figure 14 Existing Retail Mall



Figure 15 Existing Travel Information Centre, now unused.

2.3.5.5 Sub-standard Accessibility Provision

Standards for persons with restricted mobility or other forms of restricted accessibility have steadily improved since the original bus station was constructed. This has resulted in the existing facility falling short of the current best practice standards for accessibility.

An accessibility Audit for the existing bus station has indicated a series of non-compliances with current accessibility standards and regulations. Redevelopment of the bus station offers the opportunity to bring the facility in line with current accessibility legislation and guidance, including Building Regulations Part M, BS8300, DfT Inclusive Mobility and local accessibility guidelines such as the Kirklees Dementia Design Guide.

The existing facility is also limited in its ability to fully accommodate bus boarding for users with restricted mobility. The existing boarding points, bus overrun barriers and pedestrian guardrails do not adequately accommodate a full range of current and anticipated future bus door positions and wheelchair access ramp deployments.

2.3.5.6 Poor Visual Prominence

Whilst the northern façade of the bus station is clearly visible from South Street, the passenger entrances are duplicated and poorly defined which creates a lack of clarity in circulation.



Figure 16 South Street Entrances

From the south, visibility from Aldams Road to the bus station is dominated by the tall stone wall which runs along its southern boundary. Whilst the wall helps prevent unauthorised crossing of the Bus Runways, it also creates a solid and visually harsh barrier which does little to promote accessibility and safety of the bus station. It does not represent the visually open and accessible bus facilities which are being promoted within the region.

The bus station entrances are not visually distinct from the rest of the building façade and the south-eastern entrance is largely dominated by the projecting retail units, which also constrict pedestrian circulation to and from the entrance.

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Figure 17 The solid stone wall to the Aldams Road Boundary



Figure 18 South East Entrance from Aldams Road. Poor Architectural Quality.

2.3.5.7 Poor Architectural Appearance

The existing bus station is of relatively low architectural quality. The single storey massing with exposed portal framed roof is less tall than many other surrounding town centre buildings and appears more appropriate to an out-of-town retail park than the heart of a town centre.

The existing cladding systems are dated and are at odds with the predominant stone and brick materiality of the surrounding town centre. Whilst the retail units which are located at the south-eastern corner of the bus station are predominantly of brick construction, the integration of a dated curtain wall cladding system with red cladding panels and fascias is in stark contrast to the stone construction of Dewsbury Minster which sits on the other side of Aldams Road, opposite the bus station.

The areas of landscaping adjacent to the rear of the retail units is significantly overgrown and the layout offers multiple places for concealment which reduce personal safety. Incidents of climbing the existing trees to access the retail unit roofs have been reported. Exposed bins from the retail units and poor-quality paving all combine to create a public area which is currently unsafe and which fails to address the excellent views towards the Minster.

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Figure 19 Single Storey 'Industrial' Style Building is not Appropriate for its Town Centre Location



Figure 20 Overgrown Landscaping and Poor-Quality Paving Opposite Dewsbury Minster

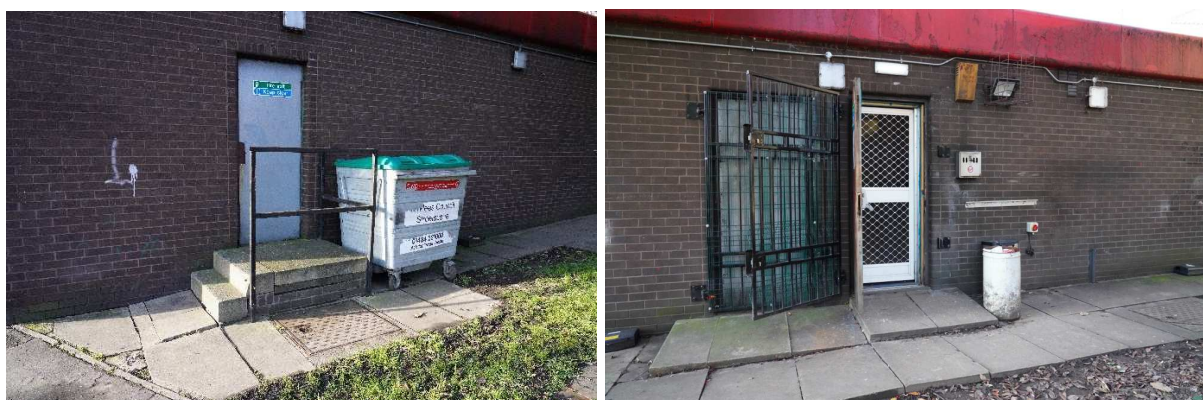


Figure 21 Waste Bins and Aesthetically Poor Service Doors to Rear of Retail Units

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2.3.6 Sustainability

Standards for energy efficiency and reduced carbon emissions have greatly improved since construction of the original bus station and retail units. The existing facility does not meet current standards for thermal insulation or control of overheating by thermal gain. Provision for active generation of energy such as solar panels and ground source heat pumps are not currently present within the bus station and the infrastructure does not safeguard the future change to electric bus fleets.

Redevelopment of the bus station offers opportunities to provide both passive and active sustainable enhancements to minimise its ongoing impact upon the environment and to contribute to Kirklees Council's aspirations for net zero carbon emissions by 2038.

2.3.7 Landscaping and Public Realm

2.3.7.1 Landscape Character

Dewsbury town centre, and its surroundings, are categorised as Landscape Character Area U (Urban). The site borders Landscape Character Area M1 (Industrial Lowland Valleys, Calder Valley Floor). This area is characterised by limited greenspace and historic industrial buildings, along the river valleys. The site is bounded by commercial properties to the north and east, and Dewsbury Police Station to the west. Adams Road and the River Calder are to the south, with the river situated 50m away.

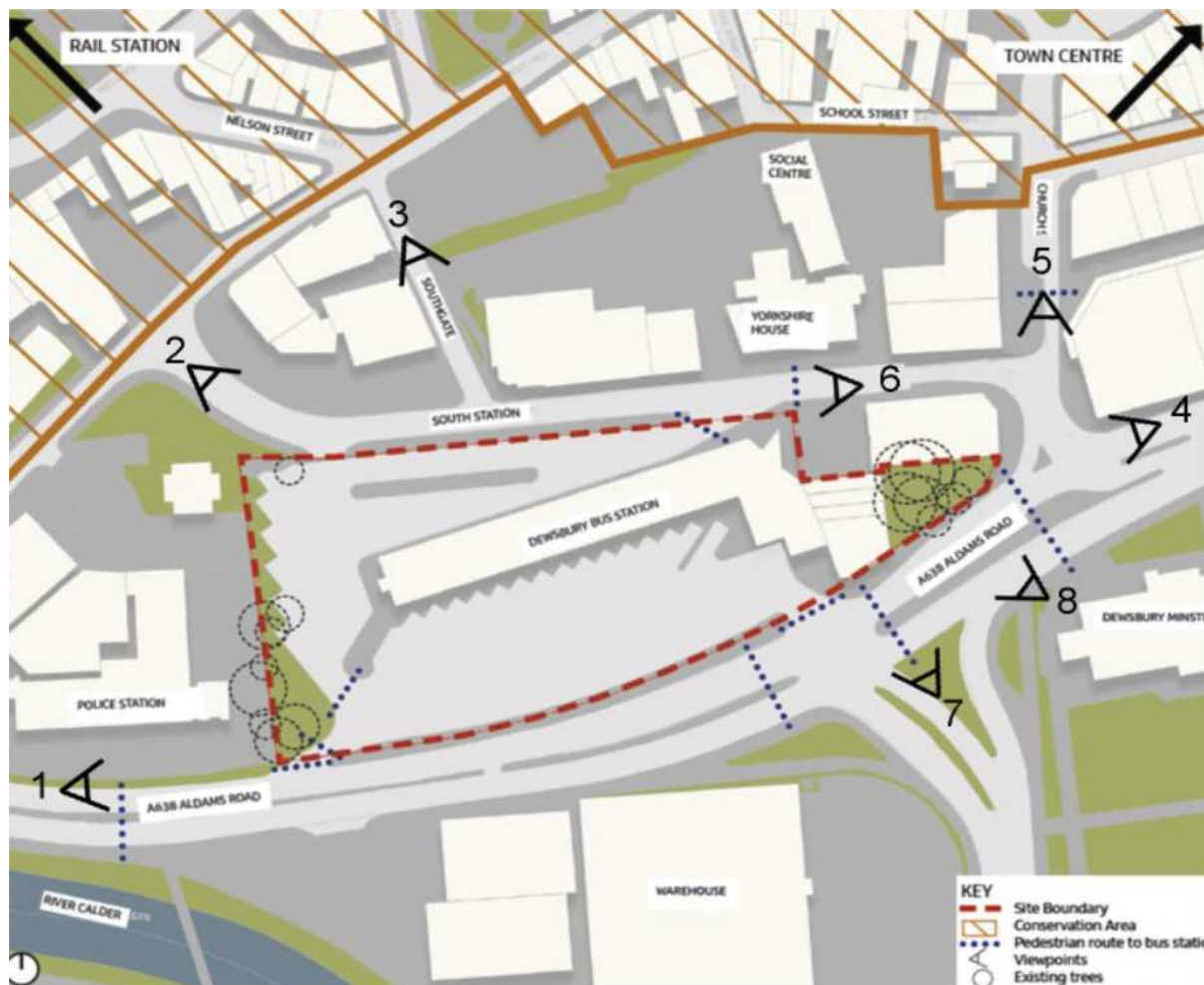


Figure 22 Site Context in relation to key views and conservation area

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Figure 23 Viewpoint 1 – View down Aldams Road from the west to Dewsbury Bus Station



Figure 24 Viewpoint 2 – View down South Street to Dewsbury Bus Station



Figure 25 Viewpoint 3 – View down Southgate to Dewsbury Bus Station

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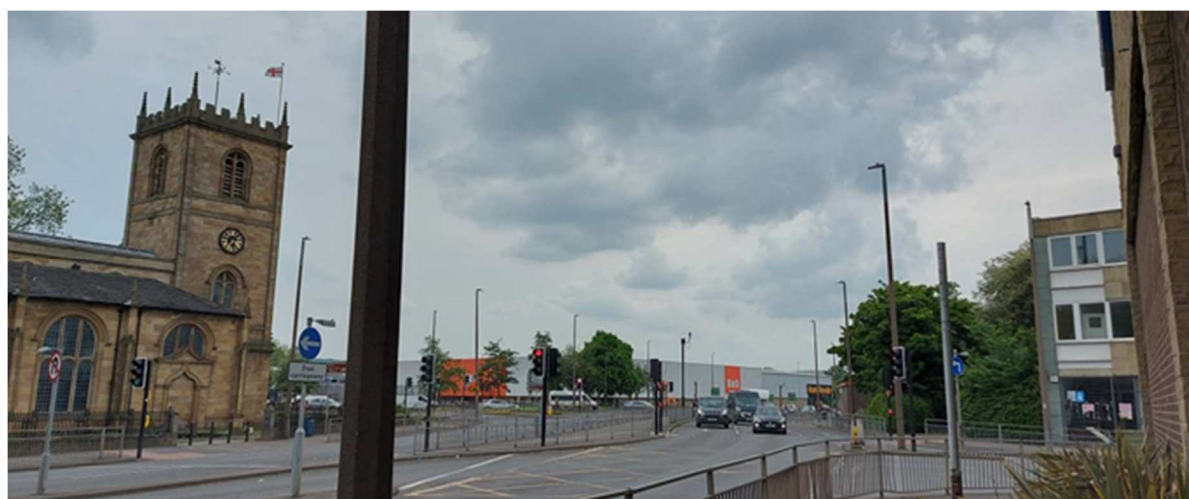


Figure 26 Viewpoint 4 – View down Aldams Road from the east to Dewsbury Bus Station



Figure 27 Viewpoint 5 – View down Church Street to Dewsbury Bus Station



Figure 28 Viewpoint 6 – View up South Street to Dewsbury Bus Station

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Figure 29 Viewpoint 7 – View from the B6409 to Dewsbury Bus Station



Figure 30 Viewpoint 8 – View from Dewsbury Minster to the bus station

Dewsbury is within National Character Area 37: Yorkshire Southern Pennine Fringe. This area is described as “a transitional landscape from the upland areas of the Southern Pennines NCA in the west through to the low-lying land of the Nottinghamshire, Derbyshire and Yorkshire Coalfield NCA to the east. The most striking aspect of the landscape is the mingling of predominantly ‘gritstone’ industrial towns and villages with the strong valley forms and pastoral agriculture of the Pennine foothills. The gritstone industrial buildings and settlements bring a sense of visual unity to the landscape. The landscape is dominated by industrial buildings and structures such as factories, chimneys, railways and canals. The NCA is characterised by steep slopes that are cut through by narrow rivers, which open up into valleys on lower land. The river corridors provide links through the NCA from the uplands into the towns and cities in the valleys, supplying not only water for the large population in these areas but also opportunities for people to access and enjoy the natural environment and for species movement through the landscape.”

There are very few areas of green space such as woodland, agricultural land in close proximity to the Site Boundary, with only a few isolated areas along the river and a cemetery next to Dewsbury Minster. The nearest open space is 550 m to the east, near Mount Pleasant. There are no outdoor recreational sports and park grounds adjacent to the Site Boundary.

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The Site Boundary is not directly adjacent to any Greenbelt designations, however there are two designations within the Study Area. These include the Liverpool, Manchester and West Yorkshire Greenbelt (Kirklees District) approximately 700 m to the northeast: and the Liverpool, Manchester and West Yorkshire Greenbelt (Wakefield) 760 m to the southeast.

There are no Public Rights of Way (PRoW) directly adjacent to the Site Boundary. The closest PRoWs are located along the river Calder approximately 50 m away, and there are numerous PRoWs further north in the Eastborough area.

2.3.7.2 Heritage and Other Assets

There are no listed buildings, registered park and gardens, scheduled monuments, areas of Outstanding Natural Beauty (AONB) or National Parks within the site boundaries. The site does not sit within a conservation area however the Dewsbury Town Centre Conservation Area boundary (as designated by Kirklees Council in 1981) does lie some 70m to the North of the site.

There is one non-designated heritage, (MWY3767 Moot Hall / Rectory Manor,(demolished) feature extending into the site boundaries.

There are no European or National designated sites, no local nature reserves, and no local wildlife sites within the boundaries of the site.

Although the Town of Dewsbury has numerous Historic Environment designations, with 47 listed buildings within 1km of the Proposed Scheme, the site of the proposed bus station is not directly impacted/constrained by any of these. However the overall design should aim to respond to the surrounding context. In particular, the visual relationship between the bus station site and the adjacent Grade II* Church of All Saints, also known as Dewsbury Minster, should be carefully considered.

Further details of historically significant constraints are presented within the Planning Statement.

2.3.7.3 Arboriculture

The Arboriculture Impact Assessment (AIA) and Arboriculture Method Statement indicate that there are 12 trees within the site and 3 adjacent to the boundary. 11 of these are categorised as moderate quality, five of low quality and one that is not worthy of retention. The assessment also indicates that there are no Tree Protection orders (TPO's) on any of these trees and there are no ancient woodlands or notable / veteran trees within 15m of the Site Boundary.

2.3.7.4 Ecology and Protected Species

In terms of protected or notable species, the existing trees on site are not suitable for roosting bats but may offer nesting opportunities for nesting birds. If these trees are removed potential foraging and breeding habitat may be lost / disturbed. The existing buildings, however, do offer low potential for bat roosts. As these buildings are being refurbished or demolished as part of the proposed scheme there is the potential for loss of habitat for roosting bats and consideration should be given to providing bat and bird nesting boxes within the proposed scheme.. There are no Great Crested Newts recorded on site.

There are no priority habitats and no invasive non-native species on site but there are several recordings close to the site boundaries. Both Japanese Knotweed (*Fallopia japonica*) and Himalayan Balsam (*Impatiens glandulifera*) have been recorded at OS grid reference SE2442149. Approximately 150 m south of the site along the river Calder. Giant Hogweed (*Heracleum mantegazzianum*) was also found at OS grid reference SE249212, approximately 400m southeast of the Site Boundary.

2.3.7.5 Climate Context and Biodiversity

Kirklees Council declared a Climate Emergency in January 2019 and has begun working on a plan to deliver carbon reductions. Kirklees Council's vision is to be carbon neutral by 2038, and an action plan with detailed targets is currently in development.

Paragraph 153 of the NPPF encourages, "a proactive approach to mitigating and adapting to climate change, considering the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support

appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts.”

Kirklees Council has outlined several objectives aimed at improving greenspaces for residents, habitats and wildlife; promote developments that help mitigate climate change; and to protect and enhance the characteristics of the built, natural and historic environment.

In line with the NPPF, Kirklees Council Local Plan Policy LP30 requires that development applications should not result in loss or harm to biodiversity, minimise its impact, and provide biodiversity net gains where appropriate.

2.3.7.6 Boundaries and Barriers

The existing soft landscaping includes an established tree margin on the west boundary of the site separating the Bus Station from the existing Police Station.

Additional tree planting is in the triangular public space in the southeastern corner of the site, accessed directly from Aldams Road. There have been reported issues of young people climbing these trees to access the roof, which poses a risk to the security for the bus station. Engagement with West Yorkshire Police has been undertaken throughout the design development period to help address the various security risks posed and advice has been incorporated into the proposals where practicable.

Railings are provided around the bus station for the interests of safety. They are also implemented adjoining the boundary walls that currently provide a more solid, impermeable boundary, however in several locations the barrier locations do not fully align with the pedestrian desire lines and their effectiveness is reduced.

2.4 Infrastructure Assessment

2.4.1 Assessment Reports

A range of environmental and site assessment reports have been undertaken by Jacobs and WSP to assess the impact of various constraints and opportunities associated with the proposed development. The Jacobs Planning Statement summarises these various reports and provides further commentary. Please refer to the reports and associated documents which are scheduled in Appendix A for details.

Due to a desire to maintain continued operation of the bus station site and the relatively limited risk that the below ground infrastructure poses to a refurbishment project of this nature, a series of surveys have been deferred until the main contractor is appointed and the survey works can be managed with minimum disruption. These include intrusive geotechnical investigations, contaminated land investigations and drainage surveys. The above reports provide desktop assessment of the likely risks.

2.5 Other Constraints / Opportunities

2.5.1 Adjoining Owners and Developments

2.5.1.1 Party Wall Agreements

Although substantial changes to the boundary conditions are not anticipated, party wall agreements will be required for works to the eastern and western boundaries of the site. These formal notices and agreements will be progressed during the RIBA Stage 4 technical design stage.

2.5.1.2 Kirklees Council Streetscape Improvements

Kirklees Council are progressing proposals for upgrades to South Street and Aldams Road as part of the walking and cycling improvements to Dewsbury Town Centre. The bus station design team has attended several design coordination meetings with Kirklees Council to agree the likely future interfaces between the various schemes and agreement has been reached to safeguard the future cycling, walking and landscape improvements which are currently proposed.

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2.5.1.3 Works Outside the Bus Station Site Boundary

In order for the various pedestrian crossing, roadway junction, hardscape and landscape improvements to be successfully integrated with the existing and proposed streetscape there will be small areas of work required at the vehicle entrances which fall outside of the existing bus station site ownership boundary. These areas are included within the planning application red line boundary and will be subject to section agreements with Kirklees Council. Discussion to date, as part of the design coordination meetings between the bus station and Kirklees Council Streetscape improvements team, have indicated that implementation of the section agreements should not be problematic.

2.5.2 Safety of Continued Operation During Construction

Continued, safe operation of the bus facility is a pre-requisite of any development. Design proposals must offer a safe and managed means for constructing a new bus facility without detrimental impact on the functioning of the existing bus services. Vehicular and pedestrian accessibility must be facilitated in a manner which permits continued safe operation and without unnecessary changes in service times or points of access which would be disruptive, expensive and confusing for passengers and operators alike.

The Jacobs and Jefferson Sheard design team have worked closely with WYCA and the bus station managers to develop a construction strategy which demonstrates that bus operations are able to continue safely on site throughout the refurbishment period, without significant bus service disruption or the need for temporary off-site bus facilities. It should be noted that, whilst the overall principle has been established, the detail of the strategy is not fixed and the contractor will be tasked with developing this strategy further to help secure efficiencies in time and cost and also to help further improve safety during construction.

Details of the phased construction proposals may be found in **Section 6** of this Design and Access Statement.

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3.0 DESIGN EVOLUTION

3.1 Project Goals

At commencement of the project, the following high-level goals were established for the development:

- That there should be a clear focus on Health and Safety, particularly in the segregation of vehicles and pedestrians.
- Creating an external and internal environment that is accessible and inclusive will be a key feature of any proposal developed.
- Designing a high quality, modern bus station that creates a visually impressive building which is a pleasure to use, within the project budget.
- Environmental sustainability should be a priority.

3.2 Proposed Site Layout Options

3.2.1 Suitability of Existing Layout

Experience in operation of the bus station since its last refurbishment in the 1990s indicated there were no significant areas of concern for the bus circulation and no significant changes to the general circulation were considered desirable. Two proposed site plans were produced which offered minor variations to the existing layout, both proposing removal of the disused coach stand, with the difference between the two options restricted to the treatment of vehicular access to the station from Aldams Road in the southwest. Both options proposed extensive resurfacing of the failing bus runway surfaces and bases and new paving, landscaping, signage and barriers to rationalise the external material palette and circulation routes.

3.2.2 Option 1

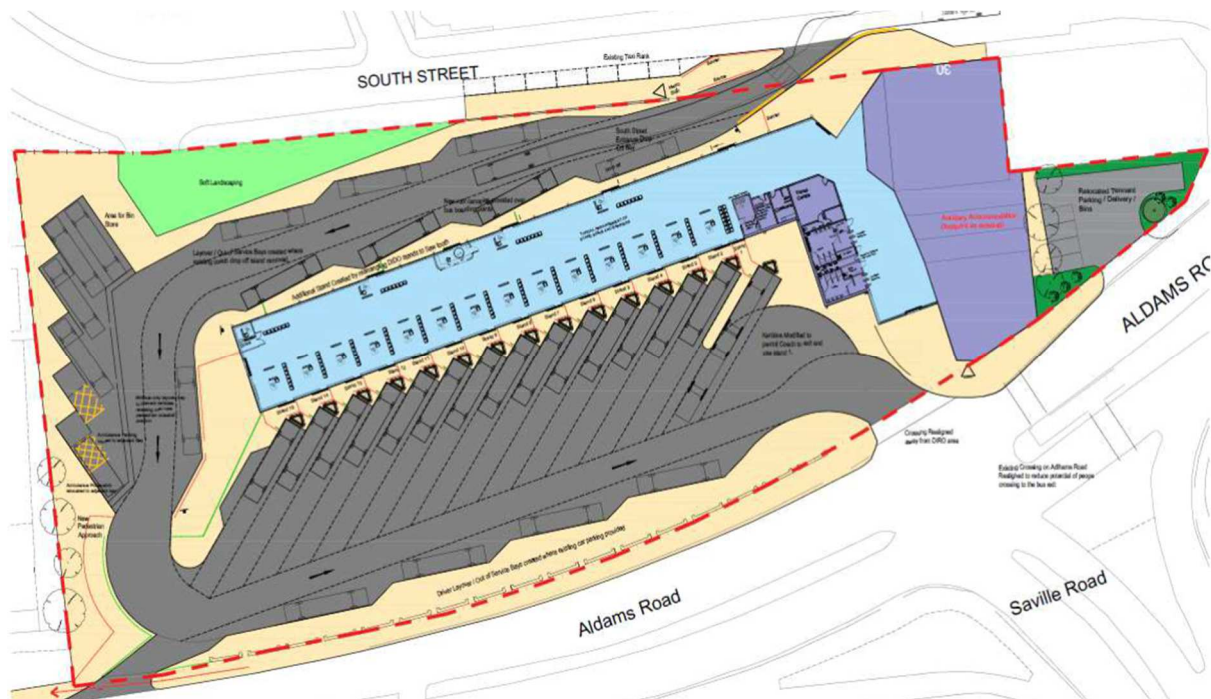


Figure 31 Initial Development Layout Option 1

The first site layout option retained the existing access and egress arrangements from Aldams Road. Pedestrian crossings and the route to the concourse were modified in an attempt to reduce the risk of pedestrian infringements on the bus carriageway. The existing layover provision was retained to the

3.3 Proposed Building Development Options

3.3.1 Do Minimum

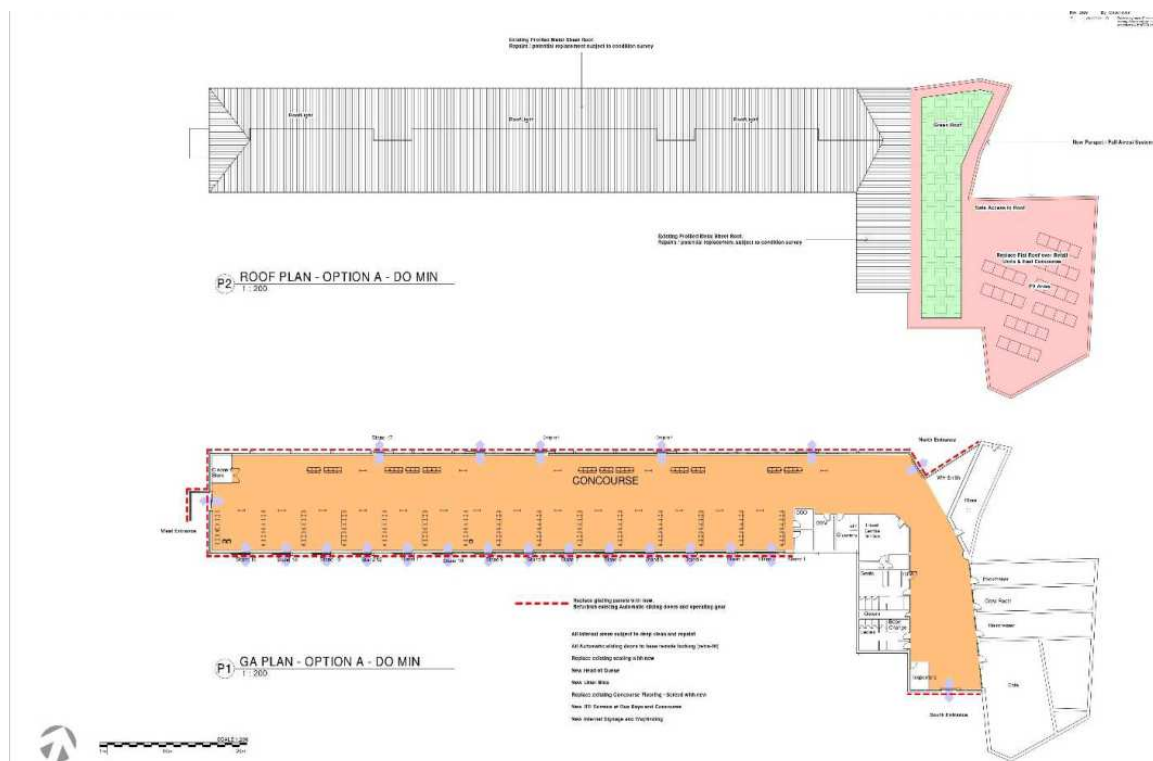


Figure 33 Ground Floor Plan and Roof Plan of Do Minimum Option

A minimum intervention option was proposed, to replace the most degraded, end of life components and provide a range of environmental improvements. The option included:

- Replacing glazing panels, existing seating, and concourse flooring / screed with new.
- Refurbishing existing automatic sliding doors and operating gear.
- Deep cleaning and repainting of all internal areas
- New head of queue information and RTI screens in waiting areas and within the main concourse circulation space. New litter bins and seating and new internal Signage and wayfinding, to bring the facility in line with the other new bus station developments
- Repairs / potential replacement to the existing metal sheet roofing.
- Replacement of the mall roof and the roof over the Retail Units & passenger facilities to provide a fully watertight enclosure and to include a new parapet / fall arrest system, a portion of Green Roof and PV arrays.
- The existing retail units and passenger facilities were to remain unchanged and no provision was to be made for the introduction of a Changing Places Toilet, Quiet Room or other passenger facilities.

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- Complete replacement of the existing curtain walling and automatic doors to the bus apron frontages and replacement with a new capless curtain wall system and new automatic doors to provide a unified and modern façade throughout the building.

3.3.4 Preferred Option Selection

Following review of the Options, through preparation of an Outline Business Case, it was determined that the Do-Maximum Option was the preferred option and was to be taken forward to full design status.

Whilst the Do-Minimum and Medium Intervention Options promised to provide significant upgrades to the existing station for a lower capital cost, it was only the Do-Maximum Option which promised to provide the transformative change in passenger experience, environmental and ecological sustainability, safety and physical appearance which satisfied the original client brief and the aspirations for a modern and inclusive transport hub for Dewsbury.

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4.0 CURRENT PROPOSALS

4.1 Use

The Scheme is a refurbishment of the existing Bus Station and the use of the site consequently remains unchanged as a bus station, with associated staff and passenger facilities and a small range of retail units which are directly connected to the bus station building.

No proposed change of use or change of operating hours are proposed by the scheme or by this planning application.

4.2 Amount

4.2.1 Site

The Bus Station site area remains unchanged and occupies an area of 10,076sqm, which falls within WYCA ownership.

The submitted Planning Application Red Line Boundary encloses an area of 10,534sqm, which includes the WYCA owned bus station site and three small parcels of land, one at each vehicle entrance, which are under Kirklees Council ownership and which are required as part of the application in order to tie in new paving and kerbs with existing.

The proposed bus station consists of the following vehicle provision:

- 15 No. Drive in Reverse Out (DIRO) Bus Stands (including 1 No. stand capable of accommodating 15m coaches)
- 3 No. Shallow Sawtooth Bus Stand
- 1 No. Drop-Off Bus Stand / Service delivery bay
- 7 No. Bus Layover Bays
- 1 No. Ambulance Bay
- 1 No. Service Bay for transit van sized service vehicles
- 2 No. Staff / Contractor car parking spaces with electric vehicle charging

4.2.2 Building

The bus station building is to undergo comprehensive refurbishment, utilising the existing structures where possible, however new retail units are to be constructed to overcome existing structural, thermal insulation and layout issues and the mall circulation area is to be provided with a new ETFE roof structure.

The proposed Bus Station Building has a gross external area of 2100sqm and a gross internal floor area of approximately 1957sqm, consisting of:

- 1375sqm Passenger Concourse and Mall
- 306sqm occupied by 3 No. retail Units.
- 215sqm of staff / Public Facilities, comprising of
 - Combined Bus Station Manager and Security Office
 - Staff Rest Room and Kitchenette
 - Accessible Staff Toilet and Shower
 - Cleaner's Store
 - Cleaning Machine Store
 - General Store / Staff Cycle Store
 - Plant Room

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- 4 No. roof access ladder / stair enclosures
- ATM Room
- Customer Information Desk
- Male and Female Public Toilets
- Accessible Public Toilet
- Changing Places Toilet
- Quiet Room
- The remaining 61sqm consisting of internal walls and structure.

4.3 Layout

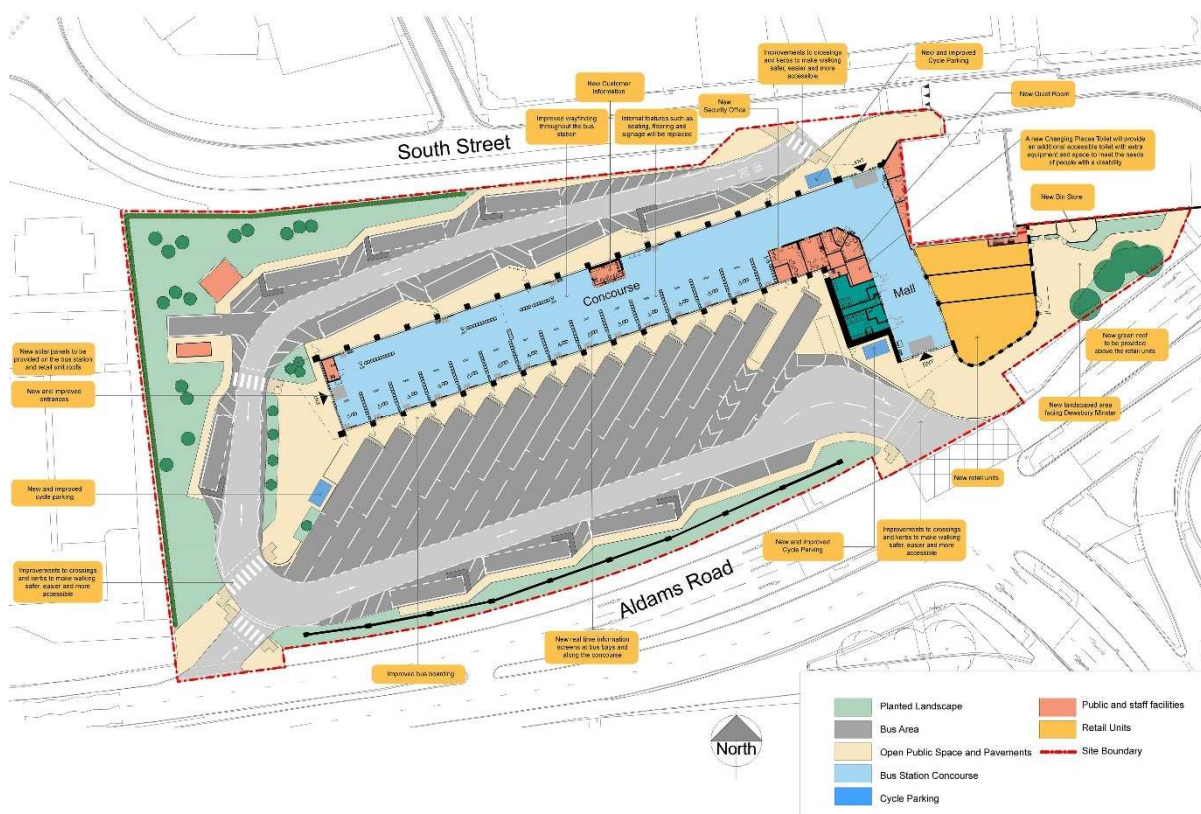


Figure 36 Proposed Site Layout Plan

4.3.1 Site Layout

The site layout has undergone a series of changes to help improve vehicle circulation and increase the amount and quality of landscaping. This provides a significant gain in biodiversity and creates more sustainable surface water drainage.

4.3.1.1 Retail Units and Adjacent Public Space

The triangular public space which is located opposite Dewsbury Minster is to be completely refurbished, including removal of overgrown trees and bushes, provision of new paving and inclusion of new low maintenance landscaping which has been designed to remove concealment spaces and to improve personal safety. The existing bins to the retail units are to be accommodated within a new bin store enclosure which provides a neutral backdrop to the new soft landscaping and climbing plants. The package of design interventions significantly improves the visual appearance of the space and helps improve natural sight lines and personal safety.

The existing retail units, which had been highlighted as end-of-life structures are to be replaced with new units. These new units do not project as far into the Aldams Road footpath as the existing units, removing restrictions in pedestrian circulation and making the bus station entrance more prominent.

The re-design has also facilitated improved access into the triangular green space from the retail units, to permit possible use for external seating which can be supervised and managed by the retail unit tenants.

4.3.1.2 Northern Boundary to South Street

The disused coach stand and shelter which was located to the north of the main passenger concourse is to be removed, making space for additional bus layover bays and increased perimeter landscaping along the northern boundary. The new trees in this landscaping area will help soften the view to the bus station from the approach down South Street.

The existing Taxi Rank is to remain unchanged in its current location, but a re-aligned pedestrian crossing to the building entrance will be provided to improve natural wayfinding and safety.

4.3.1.3 Southern Boundary to Aldams Road

The solid stone wall to the Aldams Road boundary is to be removed and replaced with a new stone pier and metal rail boundary wall, with ornamental landscaping to either side. The arrangement visually opens up and softens the view to the bus station when approached from Aldams Road, but still fulfils its role as a suitable pedestrian barrier, which is required to prevent jaywalking across the bus runway areas. Please refer to the Jacobs Landscape Architect drawings for further details.

4.3.1.4 Western Boundary

Relocation of the existing layover bays from the western boundary will permit a significant increase in the quantity of landscaping to that boundary, softening the view, improving sustainable drainage and improving biodiversity.

The existing Ambulance Bay and Bus Station Bin Store are to be relocated further from the pedestrian entrance off Aldams Road, to deter unauthorised access. To improve safety between pedestrians and vehicles, a new staff crossing, with lockable gate to deter unauthorised access, is provided between the concourse building the bus layover bays, bin store and ambulance bay.

4.3.1.5 Pedestrian and Cycle Facilities

Improved pedestrian crossings, re-positioned pedestrian barriers, deterrent planting zones, improved signage and improved lighting all help in reinforcing the safe walk routes and improve pedestrian safety.

New covered cycle shelters will be provided immediately adjacent to each pedestrian entrance. These provide links to the existing on-street cycle routing and are located to make direct connection to the proposed cycle routes along Aldams Road which are being proposed by Kirklees Council.

4.3.2 Building Layout

4.3.2.1 General Layout

The location and orientation of the bus station building remains unchanged from existing. This permits the re-use of the existing concourse building structure and provides significant sustainability benefits over demolishing the existing structure and erecting new. The building comprises of a long, single storey, portal framed, passenger concourse which runs from east to west in the centre of the site. At the eastern end of this concourse is a circulation mall which runs from north to south, linking South Street and Aldams Road and providing access to the passenger toilet facilities and new retail units.

4.3.2.2 Internal Accommodation

It is recognised that the layout and details for the internal accommodation within the bus station are not material considerations in determining of the Planning Application, however it is considered that an understanding of the internal layouts and facilities are required to fully understand the improvements offered by the bus station re-development and to understand the access strategy. The following commentary on the internal accommodation should therefore be regarded only as providing additional context to support the planning application proposals rather than fundamental components of the application itself.

4.3.2.3 Passenger Comfort

The passenger waiting and circulation areas are fully enclosed and provide protection against inclement weather and wind.

It is not considered appropriate for the passenger concourse to be artificially heated or cooled as it is a transitional space in which the removal of coats is generally not desirable. Full thermal modelling of the space has been undertaken and, through the use of solar control glazing and the design of the roof and façade fabric, has passed the criteria agreed for internal thermal comfort. A combination of high-level louvres, opening windows and the opening of the bus boarding doors will permit natural ventilation within the concourse and mall areas.

No smoking or vaping will be permitted within the building.

4.3.2.4 Seating and Waiting Areas

Waiting areas have been sized to accommodate approximately 20-30 queuing passengers per stand (26sqm per waiting area).

The arrangement of seats and signage totems defines the extent of each waiting area.

10 No. seats are provided at each stand. Experience of operating previous bus facilities indicates that providing seats of different heights is not effective in accommodating users of different statures as the seats tend to be populated in the direction of queue rather than by the physical characteristics of the seats. Accordingly, as at other WYCA operated bus stations, standard height seats are proposed, with backrests and arms to separate each seat.

Dedicated space for wheelchair waiting is provided at each stand, defined by pictograms inlaid into the floor tiles. The spaces are fully integrated within the ambulant seating areas to permit wheelchair users to sit adjacent to a helper if required.

Waiting areas are provided in a linear arrangement which provides direct transfer between stands for passengers if required.

Automatic sliding bus boarding doors are provided with a minimum clear width of 1000mm. The doors are only operational when a bus is at stand to restrict unauthorised pedestrian access to the vehicle manoeuvring areas.

4.3.2.5 Public Toilets

The existing male, female and accessible passenger toilets have been recently refurbished and are retained unchanged from existing.

4.3.2.6 Changing Places Toilet

The existing toilet provision has been enhanced through the addition of a new Changing Places Toilet. The standard for the facility is in line with the guidance of BS8300 and the recommendations of ChangingPlaces.org. The level of provision has additionally been enhanced through inclusion of a variable height peninsular toilet as well as a variable height washbasin. A changing bench, showering provision and a hoist with full room coverage are included.

4.3.2.7 Quiet Room

A new quiet room has been provided. This room may be accessed by users of the bus station who have become stressed or overwhelmed by their environment and need a quiet place of retreat. The facility is accessed by a call intercom which permits a member of staff to assist and provide access to the room.

4.3.2.8 Customer Information Desk

A new Customer Information desk has been located centrally within the bus concourse and provides two fully accessible service points for customer enquiries. The service points are fully compliant with BS8300 and desks are designed with suitable leg space for wheelchair users and with raised writing shelves for non-wheelchair users.

A toughened and laminated glass screen is provided above the desk and a speaker and microphone system is provided to each counter, along with an induction loop system for the hard of hearing.

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Card payment machines and cash transfer trays are provided and, along with the speaker and microphone system, can be fitted with removable protective covers to project against vandalism during periods in which the facility is closed.

The counter forms a fully thermally insulated enclosure in order that staff are not subject to cold air from the unheated concourse enclosure and that heat losses are minimised.

As a facility which deals with cash transfers, it has been designed with a secure access controlled door, CCTV coverage, lighting which is triggered by movement detection, an intruder alarm system and a Safe.

4.3.2.9 ATM

An ATM cash point has been provided. The facility is located at the junction of the mall and concourse where it is visible for natural surveillance and security. A new secure room has been provided for servicing, emptying and refilling the machine, complete with a LPS 1175 grade SR11 steel security door.

4.3.2.10 Defibrillator

The existing defibrillator unit is to be re-installed at the junction of the Mall and Passenger Concourse.

4.3.2.11 Post Box

The existing Post Box is to be re-installed within the Mall.

4.3.2.12 Cleaner's Stores

A new cleaner's store is provided at the junction between the mall and passenger concourse and a separate cleaning machine store has been created on the opposite side of the mall.

4.3.2.13 Staff Mess Room / Shower and Toilet

A new mess room has been created for bus station staff, along with a fully accessible staff shower and toilet which is fully compliant with the requirements of Building Regulation Approved Document Part M and BS8300. The mess room contains seating, staff lockers and a small kitchenette area in line with workplace requirements.

4.3.2.14 Bus Station Manager / Security Office

The Bus Station Manager and Security Offices have now been combined into one office as opposed to the two separate rooms which are present in the existing bus station. Creating an office space for multiple members of staff permits security patrols of the concourse areas to be undertaken whilst still maintaining a manned presence within the office to assist with public enquiries.

4.3.2.15 General Storage / Staff Cycle Store

A new general store / staff cycle store has been created to permit secure storage for staff cycles to encourage use of active travel modes and for storage of other general equipment associated with the day to day running of the bus station

4.3.2.16 Retail Units

On the eastern side of the Mall are three new retail units, designed with improved service zones and increased levels of thermal insulation, in order to provide a more desirable offer for potential tenants than is the case for the existing units, and to improve sustainability.

New glazed screens and automatic doors are provided to the internal mall frontage of the retail units to help improve the internal aesthetics of the mall and to provide assisted access for mobility impaired users.

The retail units are provided as shell only, with pop-ups for electric, water and drainage to permit individual tenant fit-out.

Possible signage zones have been assigned to the shopfronts and to the main retail unit façade, however the design and location of any signage would be subject to a further planning application by the individual tenant.

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4.3.2.17 Roof Access

New dedicated companion way ladder and stair enclosures will provide safe maintenance and cleaning access to the building roofs, where new roof glazing, photovoltaic panels and a new extensive green roof are located. Together, these elements offer a significant improvement in energy efficiency and biodiversity and assist with the overall sustainability improvements and reduction in carbon emissions. New 1100m high parapets surround the roof to provide fall protection and remove the requirement for lanyard fall arrest systems.

4.3.2.18 Plant Rooms

The existing bus station plant room is retained and re-fitted out with new energy efficient equipment.

An extensive array of PV cells is provided to the south facing pitch of the concourse roof and also to the new retail unit roof. An air source heat pump is installed adjacent to the existing plant room.

Roof space has been allocated for possible future tenant installation of condenser and / or ventilation units, however the extent of provision will be subject to a further planning application by the individual tenant.

4.4 Access

4.4.1 Site Wide Access

4.4.1.1 Pedestrian Access

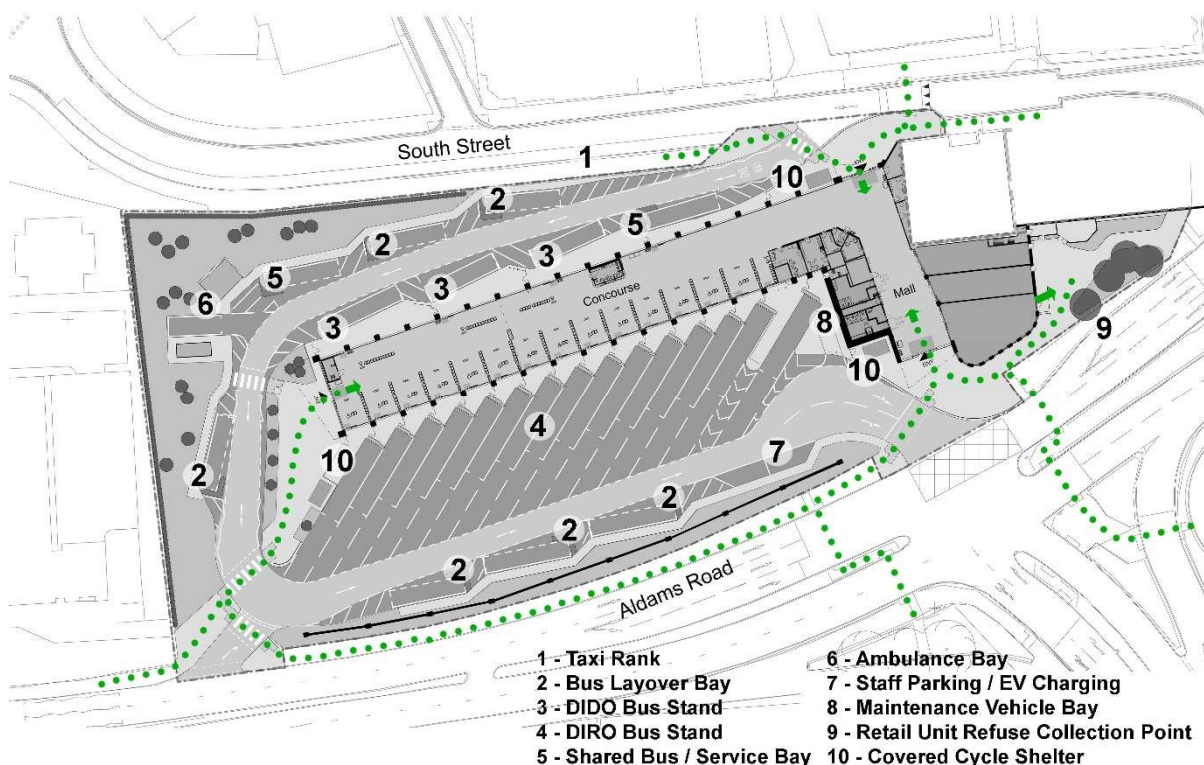


Figure 37 Proposed Pedestrian Access

Pedestrian entrances to the bus station are located at the North and South of the mall, off South Street and Aldams Road respectively. A further pedestrian entrance is located at the western end of the passenger concourse with access off Aldams Road.

Given that Kirklees Council are currently developing walking and cycling and highway improvements for the surrounding area, it is not intended for the bus station project to make any changes to the off-site access routes or pedestrian crossings. The bus station design team has, however, liaised

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extensively with the Kirklees Council design team to ensure that the bus station proposals are in harmony with the proposed walking, cycling and highway improvements.

New pedestrian crossings are provided across each of the vehicular site entrances and bus runways. Other than the crossing at the southeast exit these are not signalised crossings, however their location has been adjusted from existing to better respond to pedestrian desire lines. The pedestrian barriers, railings and planting have been designed to reinforce the safe circulation routes. Each crossing has tactile paving which is designed in accordance with the requirements of the DETR publication 'Guidance on The Use of Tactile Paving Surfaces'.

The site falls gently from the northern boundary to the southern boundary, creating a cross fall within the pedestrian concourse and bus runways, however this is not of sufficient gradient to pose accessibility problems for pedestrians or passengers and access routes are provided with falls and cross falls with a gradient no steeper than 1 in 40.

Access to and from the buses is possible at each bus stand and drop-off stand location. The setting out of the kerblines and bus overrun barriers have been completely re-configured to permit access to the full range of buses currently in service and to provide sufficient circulation space for wheelchair users to board when the bus access ramps are deployed.

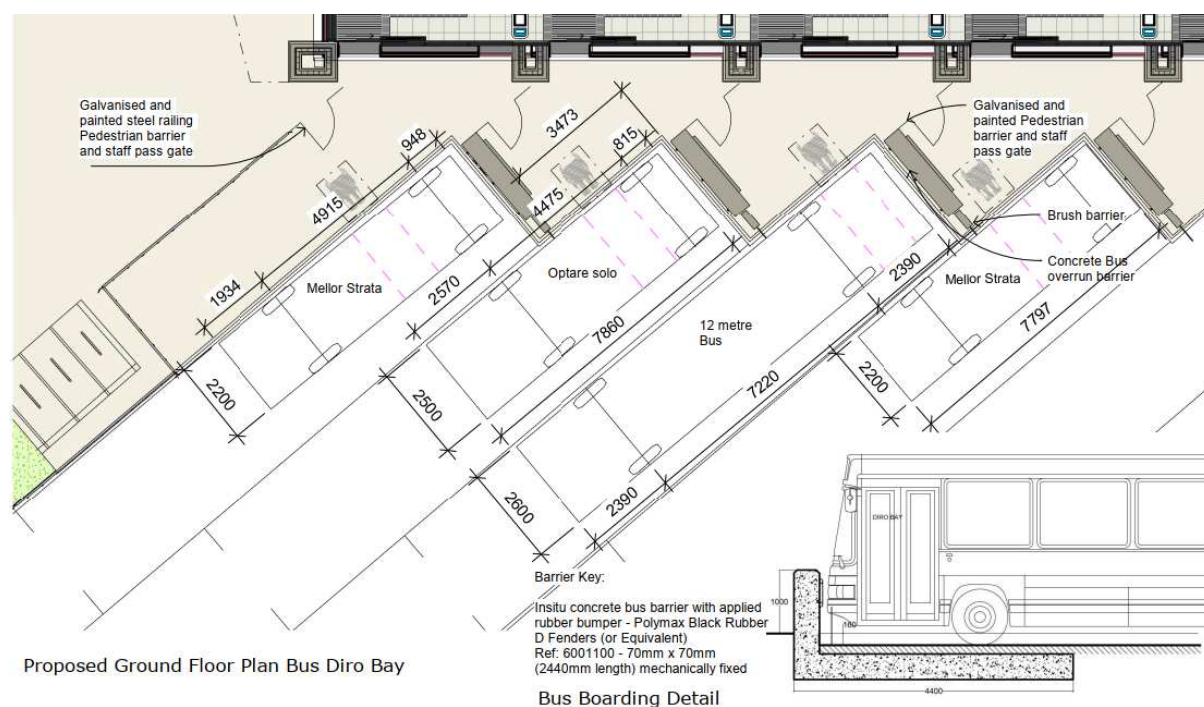


Figure 38 Bus Boarding Area Layout Showing Range of Buses and Wheelchair Access

Induction loops are provided within the roadway under each bus bay. These ensure that the automatic doors which lead from concourse to bus boarding areas are only able to open when a bus is at stand, reducing the risk of pedestrians gaining unauthorised access onto the bus runways from the building. The system can be overridden to open the doors and permit emergency evacuation in the event of a fire or terrorist incident, during which scenario buses would not be permitted to enter the bus station running lanes.

4.4.1.2 Bus Access

Bus Access is possible from the northeast vehicular entrance from South Street and from the Southwest vehicular entrance from Aldams Road. Bus exit from the site is possible only via the signalised southeastern vehicular exit onto the junction of Aldams Road, Vicarage Road and the B6409.

Computerised vehicle swept path tracking has been undertaken by the Transport Consultant to verify that all movements may be undertaken safely as designed.

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To the northern side of the building there is a bus drop-off stand and three shallow sawtooth Drive-in Drive-Out (DIDO) bus stands. These have been tracked to accommodate vehicles up to 12m in length.

To the southern side of the bus station are 15 No. Drive-In Reverse-Out (DIRO) bus bays. These bays have been tracked to accommodate buses up to 12m in length with straight line reversing on departure from their stand. In addition, the eastern most bay has been designed to accommodate 15m long coaches with side access doors and luggage loading.

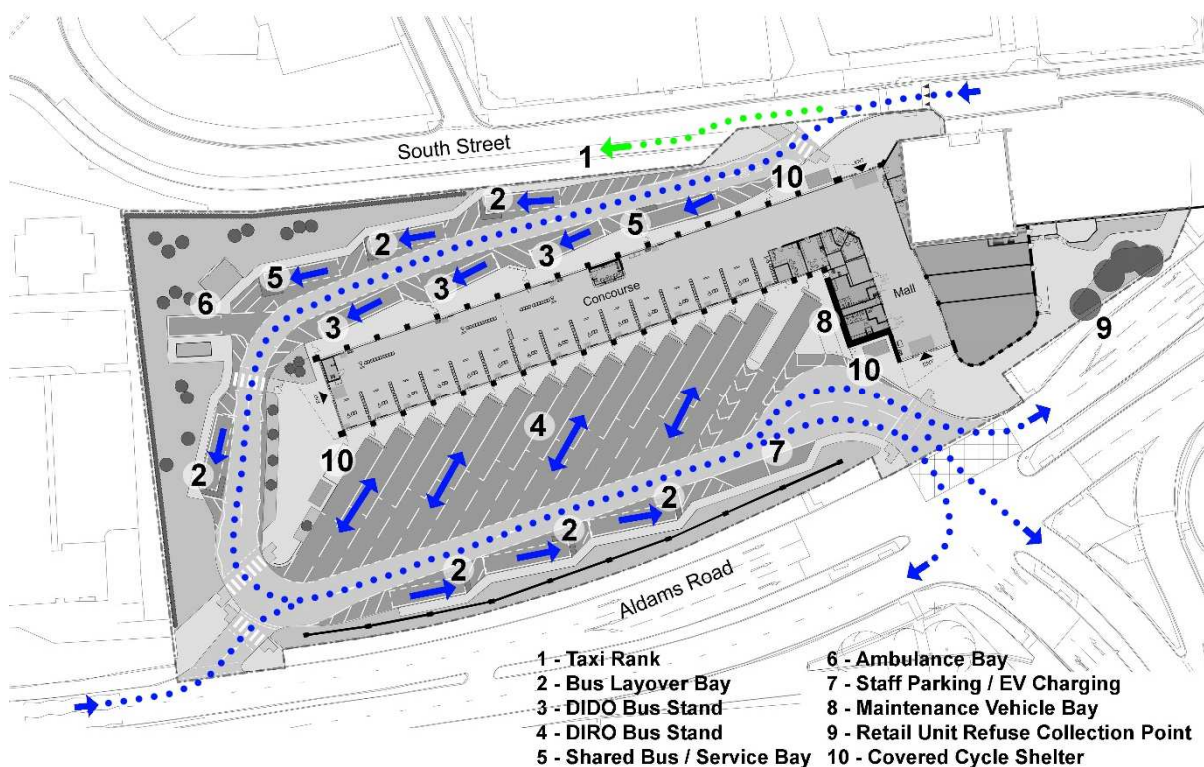


Figure 39 Bus and Taxi Access

The bus layover bays have been re-located around the perimeter of the bus station running lane, providing an increase in numbers from the existing four to the proposed seven bays and providing improvements in operational flexibility. Dedicated walkways are provided to create clearly demarcated safe walk zones for drivers moving between their vehicles and the building.

4.4.1.3 Taxi Access

Taxi Rank provision is to remain, unaltered, on South Street. The pedestrian crossing alignment between taxi rank and building has been revised to better sit on the pedestrian desire line and to provide improved safety.

4.4.1.4 Cycle Access

There are no Sustrans routes within the application site; however, National Cycle Network Route 69 is located approximately 50m to the north of the site. This runs north along Old Westgate and Daisy Hill and then turns south along Long Causeway (130m from the site). Cycle access is currently provided to the scheme via on street access using the local highway network, however Kirklees Council are currently developing proposals for improvement of the cycle network which will see a combination of dedicated cycle routes and shared pedestrian and cycle routes introduced along Aldams Road.

New covered cycle parking has been introduced at each of the main building entrances. These new shelters will protect cycles from inclement weather and are in prominent locations where they are under natural surveillance by the building users and staff. The improved cycle facilities and shelter locations are designed to link in with the current cycle routes and to safeguard the proposed cycle routes in order to encourage active travel.

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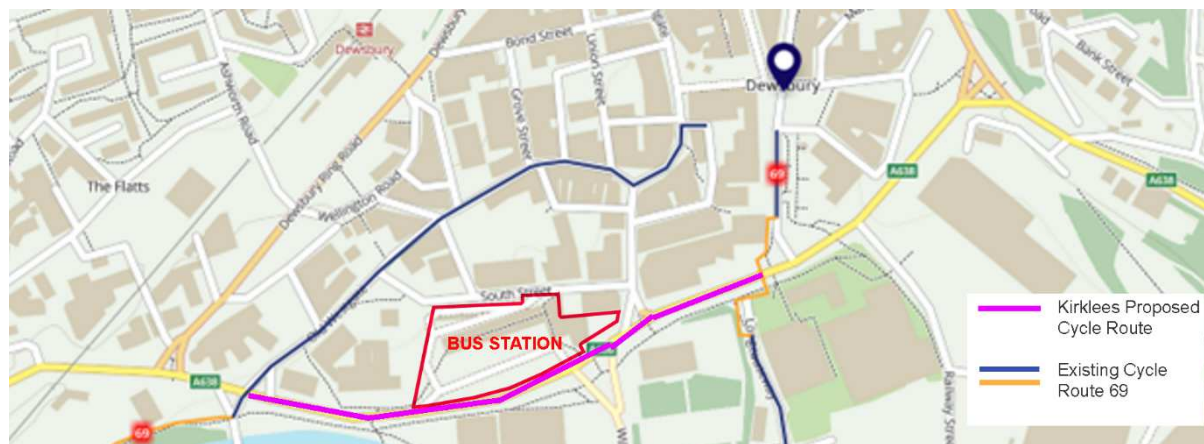


Figure 40 Current and Proposed Cycle Routes

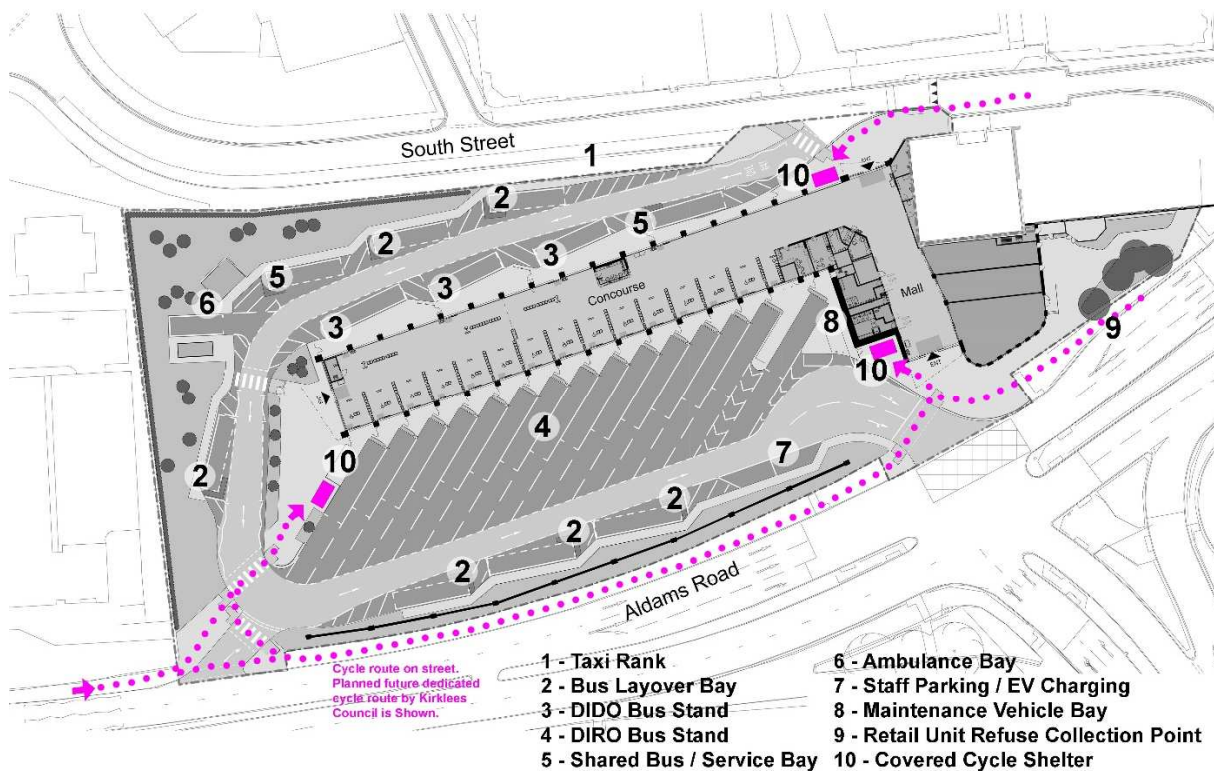


Figure 41 Cycle Access

The shelters are to be T-Hide Cycle Shelters model VEC143 or equivalent. To be single sided, single height, with structured polycarbonate roof cladding. Steel frame to be hot-dip galvanised and Polyester Powder Coated in colour RAL7016 – Anthracite Grey. Drainage is to be integrated with the frame to discharge to paving surface.

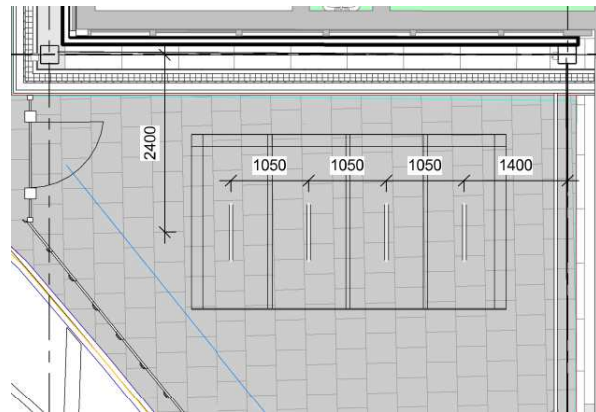
A minimum of 4 No. stainless steel Sheffield style cycle hoops are to be provided under each shelter and secured in accordance with manufacturer’s recommendations to minimise risk of theft. This provides a total cycle parking provision for 24 cycles at the bus station. An additional 4 No. staff cycle parking spaces are provided within the internal store room adjacent to the northeast building entrance.

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Figure 42 Proposed Cycle Shelter



4.4.1.5 Retail Unit Refuse Vehicle Access Strategy

A new, lockable bin compound for 6 No. 1100 litre general waste and mixed recycling bins is to be constructed to the rear of the retail units, for security and to improve the aesthetic quality of the public space. Bin lorries will be able to continue to collect from on-street pull-in along Aldams Road as existing, which is approximately 28m from the proposed retail unit bin store. An additional off-street service bay is also available within the bus station, which is 75m from the proposed bin store. No refuse will be moved, removed or placed outside of the designated areas prior to collection.

Discussions have also been held with Kirklees Council to confirm arrangements for the proposed streetscape alterations along Aldams Road. As part of the design coordination between the two projects it is proposed that a dedicated service vehicle pull in bay will be provided on Aldams Road, to provide refuse vehicle parking within 20-25m of the proposed retail unit bin stores. The combined scheme will provide traditional storage and collection methods in line with policy and existing practices currently employed by Kirklees Council.

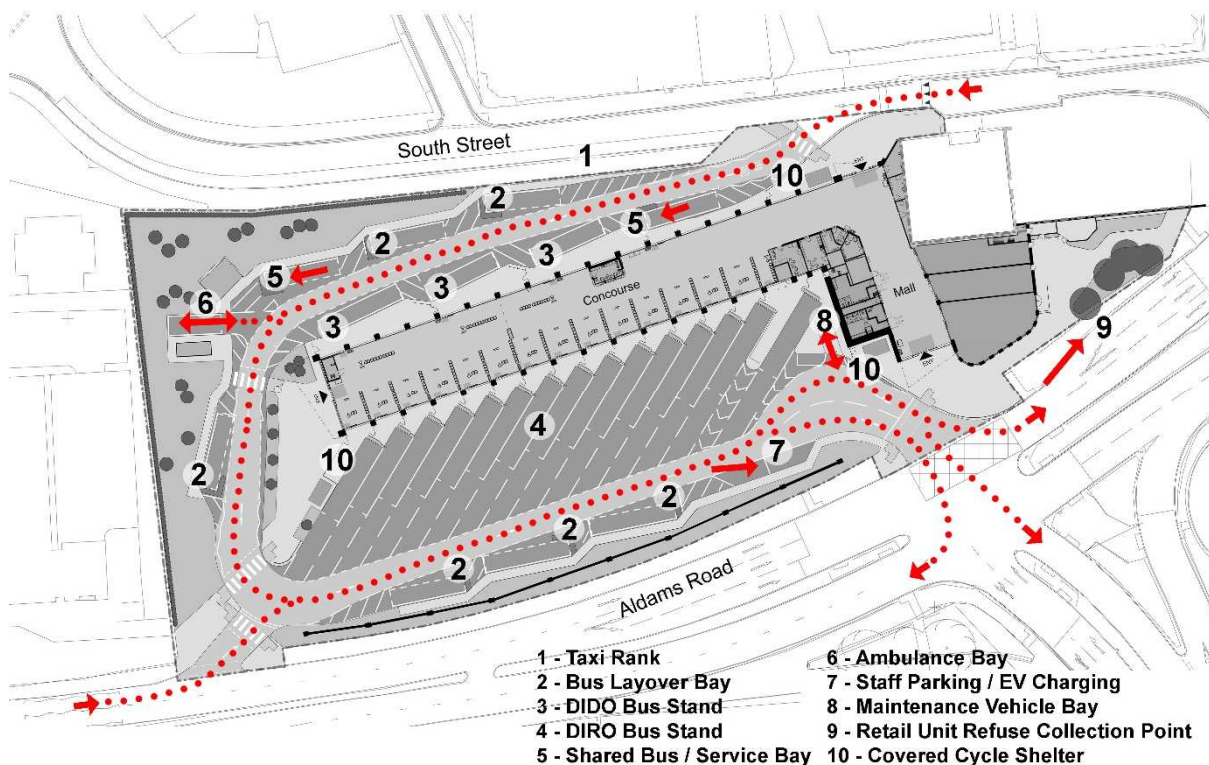


Figure 43 Service Vehicle Circulation Routes

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Figure 44 Retail Unit Bin Store Design

4.4.1.6 Bus Station Refuse Vehicle Access Strategy

Refuse vehicles for the bus station enter the bus station site via the northeast vehicular entrance from South Street and can park up adjacent to the external bin store in a shared service vehicle / layover bay. Exit from the site is via the southeast vehicular exit onto the junction of Aldams Road, Vicarage Road and the B6409.

A new enclosed, external bin compound is to be constructed to the northwest corner of the bus station site. The store is to house 8 No. 1100 litre waste and mixed recycling bins. This is double the existing bin provision and is designed to safeguard space for future separation of recyclable waste into more granular waste streams. The adjacent layover / service bay spaces ensure that the bin storage area is located no more than 25 metres away from where waste collection vehicles can safely and legally park up in order to facilitate collection. The scheme will provide traditional storage and collection methods in

line with policy and existing practices currently employed by Kirklees Council. No refuse will be moved, removed or placed outside of the designated areas prior to collection.

A dedicated staff crossing with lockable gate is provided to improve safety of staff crossing the bus runways to access the refuse store.

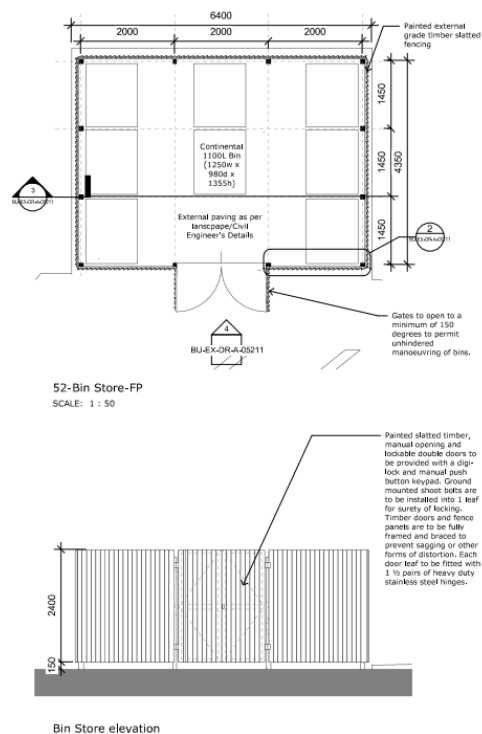


Figure 45 Proposed Bus Station Bin Store Design

4.4.1.7 Service and Maintenance Vehicle Access Strategy

Two staff and contractor car / light vehicle parking spaces are provided to the southern boundary of the bus station, adjacent to the Aldams Road boundary wall. The spaces are provided with an EV Charging Point. Vehicles enter the site via the southwest entrance from Aldams Road and exit via the southeast vehicle exit onto the junction of Aldams Road, Vicarage Road and the B6409.

An additional maintenance vehicle, bay suitable for small light goods vehicles, is at the eastern end of the bus DIRO bays. This bay is secured with removable bollards in order that it is designated for authorised and occasional maintenance use only.

The bus drop-off bay adjacent to the northeast entrance has been allocated to provide service drop-off provision for larger vehicles, up to 12m in length. Access would be for pre-arranged deliveries only and would be provided for vehicles entering from South Street and exiting via the southeast vehicular exit onto the junction of Aldams Road, Vicarage Road and the B6409. It is envisaged that this bay would be used to facilitate deliveries to the retail units.

4.4.1.8 Emergency / Fire Fighting Access

The majority of the external perimeter of the bus station building is accessible from the bus runways and provides suitable circulation and parking space for fire fighting vehicles within 45m of all internal points of the building.

The concourse space is designed as a fire sterile space which reduces risk of fire spread within the concourse and between the concourse and adjacent buildings.

An L1 classification fire alarm system is to be installed throughout the building.

In line with the protocols in place at other WYCA operated bus stations, all automatic doors to the bus station are to fail open in the event of a verified fire alarm or terrorist incident to provide evacuation with minimum delay and to permit unhindered fire-fighting access..

4.4.2 Building Accessibility Strategy

4.4.2.1 Access Strategy

A building access strategy has been developed based around clarity of natural wayfinding and provision of accessible design features to permit access for all users of the facility.

Consultation has been undertaken with local accessibility groups and will continue throughout the detail design stages of the project.

An accessibility Audit has been undertaken by Jefferson Sheard and has highlighted non compliances in the existing building and surrounding site and provided recommendations for compliance with accessibility best practice. The design proposals have been developed in accordance with the recommendations contained in:

- Building Regulation Approved Document Part M
- BS8300
- BS EN 17210
- DfT Inclusive Mobility
- DETR Guidance on the Use of Tactile Paving Surfaces
- Kirklees Dementia Design Guide.

General access provisions have been discussed throughout this Design and Access Statement, including provision of an enhanced Changing Places Toilet facility, provision of a fully accessible staff toilet and shower, the provision of a Quiet Room, provision of induction loops and tactile information and provision of seating and wheelchair spaces in each waiting area.

Compliance with Building Regulations, which reference the various British Standards for accessibility, is a statutory requirement and the design has accordingly been developed to comply with requirements such as minimum door opening widths, contrasting surfacing colours, contrasting door surrounds etc. It is not intended to replicate the detail of those statutory requirements within this design and access statement, only to describe the general strategy for access which has been adopted.

4.4.2.2 Accessible Building Layout

Passenger circulation within the concourse building is a linear route, with excellent visibility throughout for wayfinding. Gradients along circulation routes within the passenger concourse are less than 1 in 40 and provide ease of access for all in compliance with current access standards.

The new ETFE rooflights and the mall ETFE roof provide a clear visual indication of the main circulation route and this is enhanced by linear strip lights throughout the concourse ceiling and mall bulkheads..

New entrance canopies provide visual confirmation of the proposed building entrance points.

4.4.2.3 Wayfinding Strategy

A wayfinding signage strategy has been produced, in line with the strategies in use at other WYCA / Metro bus station facilities in order to ensure consistency in approach for the travelling public.

External signage for the building is clearly defined above the building entrances, with large lettering incorporating Metro standard colours and logos. A full hierarchy of internal wayfinding, instructional and safety signage is to be provided, all to metro standard designs for consistency and clarity. These include but are not limited to:

- Facility Signs (e.g Toilets, Customer Information, Security office)
- Directional Signs suspended above the concourse and mall circulation routes.
- Information Signage (e.g. CCTV in Operation)
- Instructional Signage (e.g. Way Out etc)

- Prohibitive Signage (e.g. No Smoking or Vaping, No Pedestrian Access to the Bus Runways etc)
- Statutory Fire Strategy Signage (e.g. Fire Exit, Fire door keep shut etc)

Full signage design will be undertaken during RIBA Stage 4 using recommendations for lettering size, colours and contrast in line with British Standard best practice and previous Metro approved implementations.

4.4.2.4 The Tactile Route

A hierarchical route of tactile information is to be provided throughout the bus concourse and mall, and is provided in contrasting colours to the surrounding surfaces to assist the partially sighted and blind with wayfinding.

A tactile map of the bus concourse is provided as part of an information hub at each of the three main pedestrian entrances and is to be designed in line with the recommendations of the RNIB.

Leading from this map is a continuous tactile paving route which runs throughout the mall, bus concourse and passenger waiting areas. The route leads to each of the passenger facilities, including:

- Public Toilets
- Changing Places Toilet
- Quiet Room
- Help Points
- Security Office Enquiry Window
- Each Waiting Area
- Customer Information Desk

At each arrival point there will be a tactile identification sign which is designed to re-assure users that they have arrived at the correct destination. These are provided on the signage totems to each waiting area, on the door jambs to the automatic entrance and bus boarding doors and to the centre of the manual doors.

The form and pattern of the tactile paving is to match that installed at Leeds Bus Station, which is currently being installed at other WYCA stations. This has been trialled and verified as suitable by local access groups within the West Yorkshire Region and its use at Dewsbury will help ensure consistency and legibility between the various bus stations.

4.4.2.5 Travel Information

A hierarchy of electronic and static travel information is to be provided within the bus station facility.

- A 55" electronic information screen and an A0 poster casing are to be wall mounted immediately inside each of the main pedestrian entrances. These are located adjacent to the tactile maps and create a small information hub at each entrance point to the bus station.
- A larger information screen is mounted at high level adjacent to the northeast entrance and contain rail information to provide rail departure and arrival information on the exit route to the train station.
- Groups of 65" electronic information screens are suspended over the main concourse to provide stand departure information.
- A totem which provides static travel information is provided at each stand and is provided with connectivity for a future change to electronic information.
- A 55" real time information screen is located above each bus boarding door to provide current information about bus departures and arrivals at the individual stand.

- A 45" interactive electronic information screen is provided within the concourse, adjacent to the Customer Information Desk. This forms a further information hub, along with travel information leaflet racks and Ticket Vending Machines.
- Further electronic screens are provided to the rear and side walls of the Customer Information Desk for staff and public use when at the desk.

All screens are to use the latest TFT/LCD/Plasma technology to permit improved clarity of display and full flexibility in the material being displayed, including the potential to display moving images / advertisements.

4.4.2.6 Audible Information

A PA system is provided which will be audible throughout the interchange and is supplemented with an audio frequency induction loop system at customer information points. The system will provide the security staff / bus station manager with the ability to relay messages throughout the bus station.

4.4.3 Other Accessibility Considerations

Several elements of the building design provide for passive improvements in accessibility, including:

4.4.3.1 Glare and Solar Gain

The extensive façade glazing and new ETFE rooflights have the potential to create disability glare within the concourse environment, particularly on the boarding façade to the DIRO bus stands which is south facing. Several strategies have been developed to avoid this scenario:

- The glazed façade behind each of the above door passenger information screens has been provided with vinyl applied stand number signage. This helps to reduce backlighting to the screens, limit glare and provide better legibility of the screens.
- The building glazing has been specified as solar controlled double-glazed units which will substantially reduce solar gain and partially limit the intensity of sunlight entering the space.
- The new ETFE rooflights over the main concourse and mall are to be designed to incorporate monochrome solar fritting to help limit solar gain and glare. Initial proposals of providing coloured film to the roof glazing have been rejected, following liaison with local accessibility groups, who were concerned that the coloured reflections would be confusing for partially sighted building users.

4.4.3.2 Obstructions to Circulation

Where possible the concourse has been designed as a column free and obstruction free space. Where features such as signage totems and seating create a potential obstruction these have been fully integrated into the design of the tactile route within the concourse paving to minimise risk of collision.

Where totem features and seating are provided these will be in contrasting colours and selected to provide structure which serves as a tapping rail at low level.

All glazing will be provided with manifestation in accordance with Building Regulation requirements and external bollards will be provided with contrasting bands to their top surface.

4.4.3.3 Door Widths

Door widths to the staff toilet and shower and the changing places toilet have been designed to be in excess of the minimum defined by Building Regulation Part M and generally provide 900mm clear openings, with a 1000mm clear opening provided to the Changing Places facility so as to accommodate larger powered wheelchairs.

The doors to the bus boarding areas are a minimum of 1000mm wide. The main pedestrian entrance doors are a minimum of 2000mm wide to permit simultaneous two-way circulation in and out of the station.

All doors will be provided with contrasting colours to the door frames.

4.4.3.4 Door Locking

A strategy for controlling access through the various doors within the bus station is required to help avoid unauthorised access whilst also minimising obstruction to approved access routes.

The following provide a summary of the types of access control which are within the bus station facility.

- Doors on public access routes which are unrestricted during day-to-day operation (e.g. Main entrance doors). These doors are operated by PIR sensors which are active at all times whilst the bus station is open.
- Doors on public access routes which are restricted during day-to-day operation (e.g. bus boarding doors). These doors remain inactive unless a bus is at stand in order to help prevent unauthorised access onto the bus runway areas. An induction loop in the bus stand roadway will activate the door when a bus is at stand, allowing the PIR sensor to detect an approaching passenger and automatically open the door.
- Male and Female toilets which are accessed via pay turnstiles
- Accessible Public Toilet and Changing Places Facility which are accessed with the use of a Radar key.
- Quiet Room which is accessed by contacting a member of staff via an intercom to request that the door is unlocked.
- Card Readers / keypad security to staff accommodation, including bus station manager / security office, mess room, Customer Information Desk.
- Key access or keypad security to roof access, ATM room and other maintenance areas to be accessed by external maintenance workers.

4.4.3.5 Slip and Trip Resistance

Suitability of the floor surfaces to resist trips and slips is essential to permit safe access for building users.

All floors are to be assessed for slip resistance in accordance with CIRIA and HISE Slip Risk criteria. The bus station passenger areas are to be finished with terrazzo tiles as used in other WYCA / Metro bus facilities and are specified with a ramp test class of R11 and SRV of 40+ Wet and Surface roughness of 20+. Entrance barrier matting is to be provided at each entrance to minimise the transfer of water into the bus station during wet weather.

Following incidents of DETR Tactile Guidance paving creating a trip hazard in other bus stations it has been decided to use a less aggressive paving pattern for the tactile paving at Dewsbury, in line with that previously trialled and successfully installed at Leeds Bus Station.

4.4.4 Maintenance Access

4.4.4.1 Minimising Required Access – The Choice of Components

The components and materials to be used have been chosen to be robust, vandal resistant and easily maintainable. The majority of the surfaces to the exterior of the bus station are glazed, stone faced or metal cladding.

Internally, Floor tiling is proposed to be low slip terrazzo tiles, solid walls are double layers of duraline plasterboard and all doors facing onto the concourse area will either be glass, hardwood solid core or steel security doors.

Glazing is specified with high levels of integrity and impact performance. The glazing is to be tested against attack in accordance with BS EN 356:2000 and is to resist:

- point loading of 1.5kN,
- horizontal uniformly distributed line load of 1.5kN/m and a
- uniformly distributed load of 1.5kN/sqm.

Serviceability impact is to be CWCT class 1 and the hard and soft body impact test resilience is to be confirmed by the glazing supplier as being appropriate for glazing subject to the sort of abuse anticipated in a bus station environment.

Ceiling and roof finishes are generally out of public reach, however robust metal ceilings are proposed to the concourse area. ETFE rooflights provide a low maintenance 'glazing' solution at high level.

4.4.4.2 Maintenance Access to Facades

The proposed development is a single storey building and all areas of external façade can be reached from ground level for cleaning with a water fed pole mop and maintained either from ground level or from a low mobile elevated working platform (MEWP). The tallest extents of the external facades are approximately 5.5m above ground level.

Where working immediately adjacent to bus bays it may be necessary for temporary closure of the adjacent bays, subject to the extent of access required and the nature of work to be undertaken.

4.4.4.3 Maintenance Access to Roof Soffits and Ceilings

The materials specified for the concourse ceilings, namely polyester powder coated metal ceiling panels and ETFE roofing should require minimal maintenance and cleaning. When this is required, it will be undertaken with a MEWP, fitted with spreader plates to avoid damage to the concourse floor finishes. The main concourse light fittings are specified as long life, high efficiency LED fittings which will require only periodic replacement.

4.4.4.4 Maintenance Access to Roof

A new maintenance access walkway and 1100mm high parapet is to be constructed around the perimeter of the roof. Access to the roof is provided by dedicated roof access stairs and companion way ladders which are accessed from secure rooms. Multiple access points are provided to the concourse roof, where required to comply with fire escape distances.

The new ETFE roof to the mall is installed at least 1100mm above the surrounding walkways and maintenance staff are consequently protected against the risk of falls. For very occasional maintenance of the ETFE roof itself, a lanyard system is provided for access by approved installers. The ETFE is classed as a non-fragile material.

4.4.4.5 Maintenance of Flooring

A dedicated cleaning machine room has been provided for the storage of the client's specified cleaning machine, as used for cleaning the same range of floor tiles at other WYCA / Metro bus stations.

4.4.4.6 Maintenance of Plant

The main building plant may be safely accessed in the ground floor plant room. A zone for future condensers or ventilation units for retail unit tenants is provided on the roof of the retail units, visually screened from external view by the parapet upstand and accessed via a full staircase.

The roof mounted photovoltaic arrays and green roof have been located in easy reach of the new roof access walkways and may be safely accessed without risk of fall due to the roof edge being fully protected by an 1100mm high parapet.

4.4.4.7 Building Refuse Strategy

Each passenger waiting area and main pedestrian entrance is to be provided with a multi-compartment waste and recycling bin. The bins are located adjacent to the seating and bus boarding doors to encourage passengers to dispose of litter on their way into or out of the bus station building. The bin compartments are transparent to permit the contents to be observed by security staff.

All individual staff and public facilities are also provided with clear waste and recycling containers to ensure that waste is disposed of into the correct waste stream at source.

Emptying of bins and transferring the contents to the external bin stores will be undertaken by cleaning staff as part of their daily / weekly cleaning routine.

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4.5 Scale and Massing

The project is a refurbishment of the existing bus station structure and consequently major changes to the massing of the building were not part of the development scope. It has been possible, however, to achieve several more minor improvements in the massing and scale which benefit both the internal and external environment.

4.5.1 Façade Proportions and Roofscape

The proposed refurbishment introduces a new roof parapet around the entire perimeter of the existing pitched roof. In addition to providing safe maintenance access to the roof and to the new PV panels which are on the roof, the intent is to increase the apparent height of the building so that it is more in keeping with the massing expected in a town centre environment and to screen the visual appearance of the existing industrial style portal framed pitched roof.

In order to minimise wind loading on the existing structure this new upstand is formed out of elliptical section louvres, tilted back towards the roof slightly to obscure views through the louvres from ground level.

Vertical strip windows to the Aldams Road frontage of the retail units are designed to provide a new vertical emphasis to the building, further enhancing the visual appearance of increased height, appropriate to a town centre environment.

4.5.2 Entrance Scale and Massing

The existing bus station pedestrian entrances are not sufficiently distinct from the surrounding facades and add nothing to assist with natural wayfinding. The proposed re-development includes new projecting ETFE entrance canopies which oversail the building entrance points, providing suitable visual emphasis.

A new ETFE roof over the mall further increases the internal height of the mall, adds much needed natural light to the space and increases the height of the north and south building entrances, adding further visual emphasis.

4.5.3 Transparency and Activity

The new building façade is to consist of new curtain wall glazing in a capless structural mullion system which will provide a clean aesthetic and excellent out to in and in to out visibility for natural surveillance and emphasis on visible activity within the building.

The vertical strip windows which are to wrap around the Aldams Road frontage of the retail units further enhance the visual transparency and will help establish an active street frontage.

4.5.4 Façade Scale

Whilst the existing facades are of low height, their scale remains large and horizontal in nature, and their massing feels lightweight and industrial, consisting of slender external columns offset against a continuous run of large module glazing and cladding panels.

The proposed façade development includes overcladding of the existing columns with new stone faced rainscreen cladding to provide a visible rhythm to the facades and a new visual weight to the structure that is more in keeping with the traditional stone and brick buildings within Dewsbury Centre. The new louvred parapets and horizontal ribbed zinc cladding provide a suitable visual cap to the façade structure, again adding visual weight and depth to the façade.

4.5.5 Roofscape

The existing roof structure to the main concourse building is retained, but with the existing gable ends removed and replaced with new hipped roof cladding. This permits the continuous roof access walkway to be formed and simplifies the external massing of the roof, removing the false emphasis that the gables provided which could be incorrectly interpreted as building entrance points.

The new single ply ETFE roof over the mall provides a break in the roof construction, permitting natural light and ventilation to be provided to the existing building circulation routes. The increased height of

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the roof, coupled with the visual lightness of the transparent ETFE, creates a much greater feeling of space and lightness within the mall area.

A new flat roof structure is provided to the retail units, providing the necessary increase in structural strength required to support the new Photo Voltaic Panels, green roof and possible future ventilation plant for the retail tenants.

The green roof is to be an extensive green roof, but with individual plug plants using British native plant species to encourage biodiversity.

4.6 Appearance

4.6.1 Concept behind the Materials Palette

The materials for the proposed bus station have been chosen to achieve the desired transparency between internal and external public spaces, whilst also referencing the traditional constructions and colour palettes of the Town Centre. The new stone and zinc rainscreen cladding systems have been proposed to provide an appearance of weight and permanence, which was inappropriately absent from the existing bus station building.

4.6.1.1 Compatibility with surrounding materials

The proposed stone rainscreen cladding system consists of lightweight aluminium honeycomb panels with a thin (nominally 6mm thick) stone veneer facing. The system is compatible with most quarried stones and should permit a suitable match to the local vernacular to be sourced by the cladding sub-contractors.

Whilst Dewsbury Minster is immediately opposite the proposed bus station site, it is of multiple build dates and varied stone types, but the most prominent sections in views to and from the bus station are the tower and north aisle. These were built in 1767 and are a red-brown sandstone, which is unusual for the area. The rest of the church is a sandstone more similar to that used throughout Dewsbury and this is to be used as a reference point for the selection of the proposed stone cladding.

It is understood that the existing stone used for much of the construction of the nearby Town Hall (and likely also the Grade II* Listed Dewsbury Minster) was Thornhill Rock Sandstone, from the Caulms Wood Quarry which has now closed. It is proposed that a stone supplier is engaged during detail design to select a suitable alternative for agreement with representatives from Historic England and Kirklees Planning Department.

DUNHOUSE BUFF
Fine grained creamy buff sandstone

The Stone:
Extracted in the heart of Scotland, Dunhouse buff has proved popular for its subtle colouring, fine grain and consistency, making it ideal for carving and a good match for restoration and new build in city's such as Edinburgh, Glasgow and Newcastle.

This stone has been used extensively in Edinburgh and surrounding areas, and supplied approx. 50,000m³ to one of the largest new build projects in the city at Clydesdale Plaza, Lothian Road.

We have had the pleasure in supplying Dunhouse stone for the restoration of Durham Cathedral, Edinburgh Castle, Castle Howard among many other projects throughout Britain.

It was the stone used to build Bowes Museum, Barnard Castle (completed in 1882) and the quality of detail still evident today stands as testament to the durability of the stone.

Applications:

Absorb walling	✓
Thin Cladding, Cantaria Lite system	✓
Chopped / Carved stone	✓
Rock faced walling	✓
Rubble walling	✓
Rockery stone	✓
External Flooring / Paving	light use only, see disclaimer
External steps / Platts	light use only, see disclaimer
Internal Flooring (requires sealant)	✓

Declaration of Performance to BS EN 771-6-2011
Natural Stone Masonry Units:

Resistance to the	Class A1
Shear bond strength	Fixed Value
Apparent Density (kg/m ³)	2160
Clear Porosity (%)	13.2
Water absorption (kg/m ² sec)	35.06
Compressive Strength (Mpa)	36.66
Flexural Strength (Mpa)	4.8
Flex Resistance (Cycles)	140
Thermal Conductivity	NPD

Dunhouse
NATURAL STONE

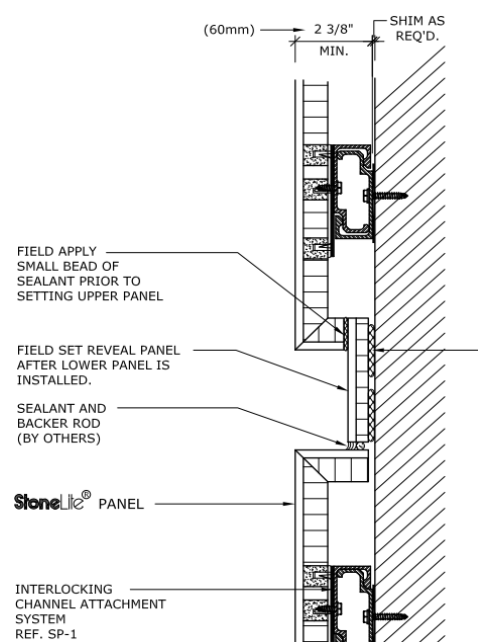


Figure 46 Typical stone specification and typical StoneLite panel detail

4.6.2 Proposed Constructions and Materials

A series of scheme design drawings have been prepared by Jeffersons Sheard which demonstrate the proposed external envelope constructions, materials and assembly of the various external envelope components. The following extracts provide a summary:

4.6.2.1 Concourse Façade and Roof

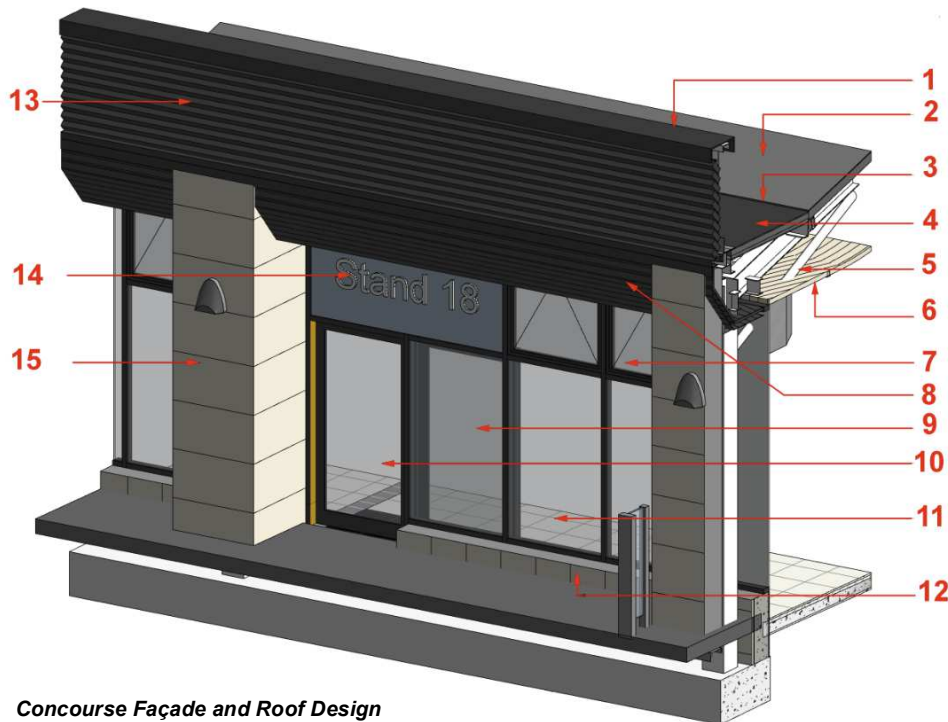


Figure 47 Concourse Façade and Roof Design

- 1 - Polyester powder coated aluminium capping. Colour dark grey (RAL7016)
- 2 - Insulated, profiled metal roof. CA Products Twin Therm or Kingspan Quadcore or similar. Colour slate grey.
- 3 - Box Gutter
- 4 - Single ply membrane non-slip walkway with drainage fall back to box gutter. Colour slate grey
- 5 - CHS strengthening of existing structure. Concealed with ceilings and stand number boxes.
- 6 - Polyester powder coated curved aluminium metal plank ceiling. Hunter Douglas Luxalon 300c or similar. Colour white.
- 7 - High level windows, integral with curtain wall system, to automatically open if internal temperature exceeds 22°C.
- 8 - Horizontal ribbed zinc rainscreen cladding. VMZINC Sine Wave 18/76 or similar. Colour dark grey (Anthra-zinc / RAL7016)
- 9 - Glazed pocket screens and anti-finger trap sensors.
- 10 - Polyester powder coated aluminium framed, glazed, sliding door. PIR sensor operation. PIR sensors to bus boarding area doors only activate when a bus is at stand. Remote control of locking and opening possible. Contrasting colour to inside of frame. Glazing manifestation to glass (not shown).
- 11 - Structural mullion double glazed curtain wall system. Schueco FWS50SG or similar. Silicon joint to outer face. Polyester powder coated aluminium transoms and mullions in dark grey (RAL7016). Glass to be toughened and laminated for robustness and security and supplied

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- with a solar control interlayer for thermal control. Vinyl applied manifestations to be provided on the glazing in compliance with Building Regulation requirements.
- 12 - Glazing plinth. Mechanically fixed and bonded stone facing to external face and ceramic / terrazzo tiling to internal face. Stone colour to match stone cladding panels.
 - 13 - Polyester powder coated elliptical section architectural louvres to parapet upstands. Schueco ALB Passive Hollow Louvre Blades or similar. Colour dark grey (RAL 7016)
 - 14 - Bus Stand Number in vinyl lettering applied to glass. Fritting to glass conceals internal over-door PIDS screen and reduces backlight glare to the screen.
 - 15 - Composite rainscreen cladding system consisting of stone veneer on a honeycombed aluminium backing panel. StonePanels Stonelite cladding system or similar. Stone type to be agreed with Planning Authority / Heritage England to visually complement Dewsbury Town Hall and sections of Dewsbury Minster.



Figure 48 Passenger Concourse Visualisation

4.6.2.2 Retail Unit Facade and Roof

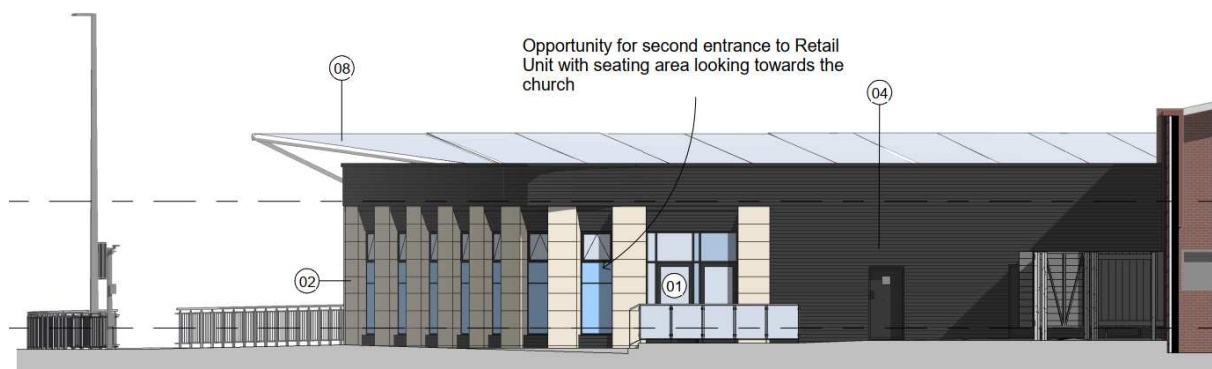


Figure 49 Retail Unit Elevation facing Public Landscaped Space

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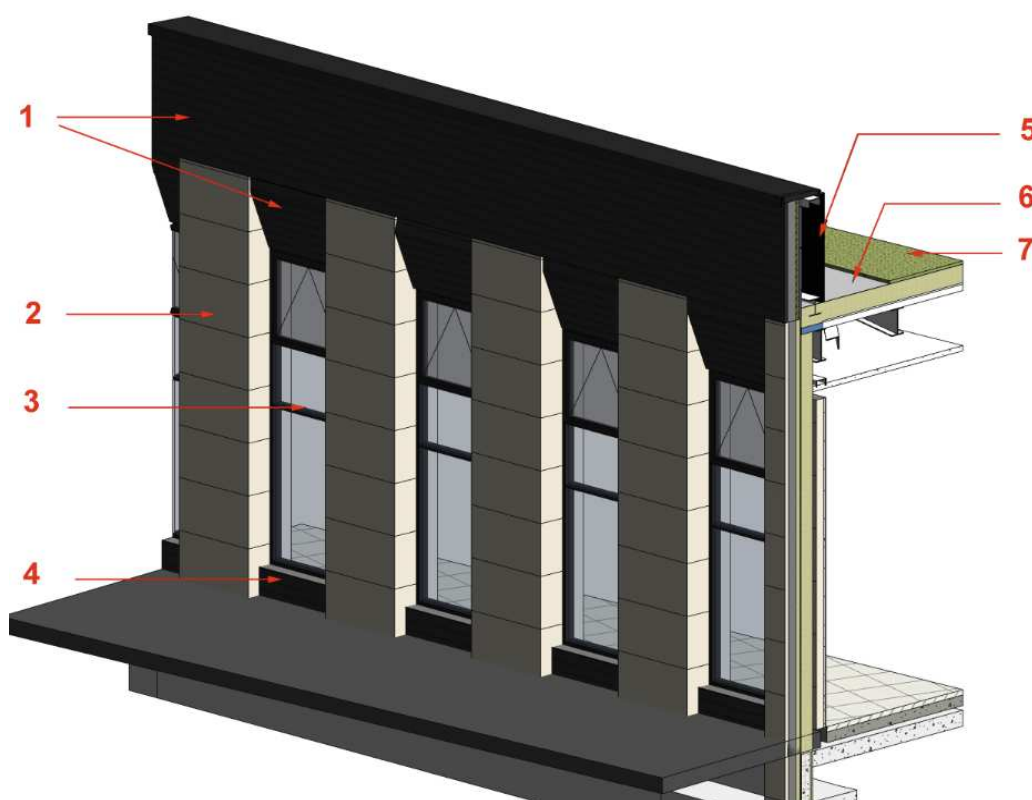


Figure 50 Retail Unit Façade and Roof Design

- 1 - Horizontal ribbed zinc rainscreen cladding. VMZINC Sine Wave 18/76 or similar. Colour dark grey (Anthra-zinc / RAL7016)
- 2 - Composite rainscreen cladding system consisting of stone veneer on a honeycombed aluminium backing panel. StonePanels Stonelite cladding system or similar. Stone type to be agreed with Planning Authority / Heritage England to visually complement Dewsbury Town Hall and sections of Dewsbury Minster.
- 3 - Structural mullion double glazed curtain wall system. Schueco FWS50SG or similar. Silicon joint to outer face. Polyester powder coated aluminium transoms and mullions in dark grey (RAL7016). Glass to be toughened and laminated for robustness and security and supplied with a solar control interlayer for thermal control. Vinyl applied manifestations to be provided on the glazing in compliance with Building Regulation requirements.
- 4 - Glazing plinth. Mechanically fixed and bonded stone facing to external face. Stone colour dark grey.
- 5 - External grade HPL rainscreen cladding board to rear of parapet. Trespa Meteon TS200 or similar. Colour NA18 Natural Slate.
- 6 - Single ply membrane (Bauder Thermofol U15 FR or similar) or 2-layer bituminous built-up roofing system (BauderFLEX / BauderPLANT or similar). Colour slate grey.
- 7 - Extensive green roof. Consisting of sedum / native species plug plants, extensive substrate, filter fleece, water retention and drainage layer, protection layer and foil separation layer. Edges to be provided with a separate vegetation barrier and perforated edge trims.

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4.6.2.3 Mall, Mall Roof and Retail Unit Frontages



Figure 51 Mall Visualisation Looking Towards Public and Staff Facilities

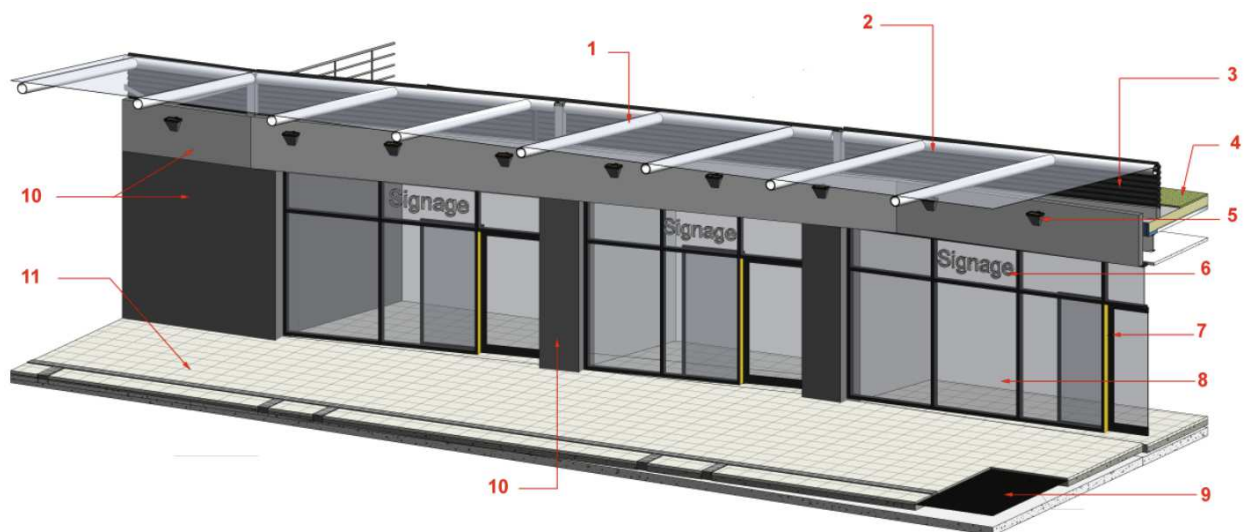


Figure 52 Mall, Mall Roof and Retail Unit Frontages Design

- 1 - New painted steel canopy / roof structure. Colour White.
- 2 - Transparent single membrane ETFE roof (non-inflated). Vector Foiltec Texlon ETFE Single Membrane system or similar. Applied fritting to provide solar control in line with requirements established by the computer thermal model.
- 3 - Polyester powder coated automatically controlled louvres linked to temperature sensors and the building management system. McKenzie Martin Thermac 2000 Combination Thermal Louvres or similar. Colour dark grey (RAL7016)
- 4 - Extensive green roof. Consisting of sedum / native species plug plants, extensive substrate, filter fleece, water retention and drainage layer, protection layer and foil separation layer. Edges to be provided with a separate vegetation barrier and perforated edge trims.
- 5 - Mall lighting in accordance with MEP engineer's calculations and details.

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- 6 - Retail Unit signage zone. Signage design to be by tenant.
- 7 - Polyester powder coated aluminium framed, glazed, sliding door. Contrasting colour to inside of frame. Glazing manifestation to glass (not shown). Glazed pocket screens and anti-finger trap sensors.
- 8 - Structural mullion double glazed curtain wall system. Schueco FWS50SG or similar. Silicon joint to outer face. Polyester powder coated aluminium transoms and mullions in dark grey (RAL7016). Glass to be toughened and laminated for robustness and security. Vinyl applied manifestations to be provided on the glazing in compliance with Building Regulation requirements.
- 9 - Heavy duty barrier matting to entrance doors. Gradus Esplanade 8500 or similar.
- 10 - Two layers of heavy-duty high impact rated plasterboard. British Gypsum Duraline or similar. Skimmed and painted. Insulated to existing and proposed heated accommodation. Heavy duty skirting to be provided.
- 11 - Anti-slip terrazzo floor tiling to concourse, incorporating contrasting tactile wayfinding route.

1. ETFE foil: transparent up to 300µm (this will be confirmed during design process)
2. Aluminium profile with bird wire
3. Reinforcing stainless steel cable (in pockets or mullions)
4. Interface: Flashings (design, supply and installed by Vector Foiltec)
5. Primary structure: CHS or RHS



Figure 53 Vector Foiltec Single Ply ETFE Membrane Detail

4.6.2.4 West Entrance



Figure 54 West Entrance Visualisation

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Figure 55 West Entrance Design

- 1 - Stainless steel signage lettering and coloured Metro Logo.
- 2 - Polyester powder coated elliptical section architectural louvres to parapet upstands. Schueco ALB Passive Hollow Louvre Blades or similar. Colour dark grey (RAL 7016).
- 3 - Composite rainscreen cladding system consisting of stone veneer on a honeycombed aluminium backing panel. StonePanels Stonelite cladding system or similar. Stone type to be agreed with Planning Authority / Heritage England to visually complement Dewsbury Town Hall and sections of Dewsbury Minster.
- 4 - Polyester powder coated aluminium framed, glazed, sliding door. PIR sensor operation. Remote control of locking and opening possible. Contrasting colour to inside of frame. Glazing manifestation to glass (not shown). Glazed pocket screens and anti-finger trap sensors.
- 5 - Structural mullion double glazed curtain wall system. Schueco FWS50SG or similar. Silicon joint to outer face. Polyester powder coated aluminium transoms and mullions in dark grey (RAL7016). Glass to be toughened and laminated for robustness and security and supplied with a solar control interlayer for thermal control. Vinyl applied manifestations to be provided on the glazing in compliance with Building Regulation requirements.
- 6 - Horizontal ribbed zinc rainscreen cladding. VMZINC Sine Wave 18/76 or similar. Colour dark grey (Anthra-zinc / RAL7016)
- 7 - Transparent single membrane ETFE roof (non-inflated). Vector Foiltec Texlon ETFE Single Membrane system or similar. Applied fritting to provide solar control in line with requirements established by the computer thermal model.
- 8 - New painted steel canopy / roof structure. Colour White.
- 9 - Opaque glazing to roof access stair enclosure.
- 10 - New painted steel CHS canopy / roof support column. Colour white
- 11 - Glazing plinth. Mechanically fixed and bonded stone facing to external face and ceramic / terrazzo tiling to internal face. Stone colour to match stone cladding panels.

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4.6.2.5 Southeast Entrance (Aldams Road)



Figure 56 Southeast Entrance Visualisation

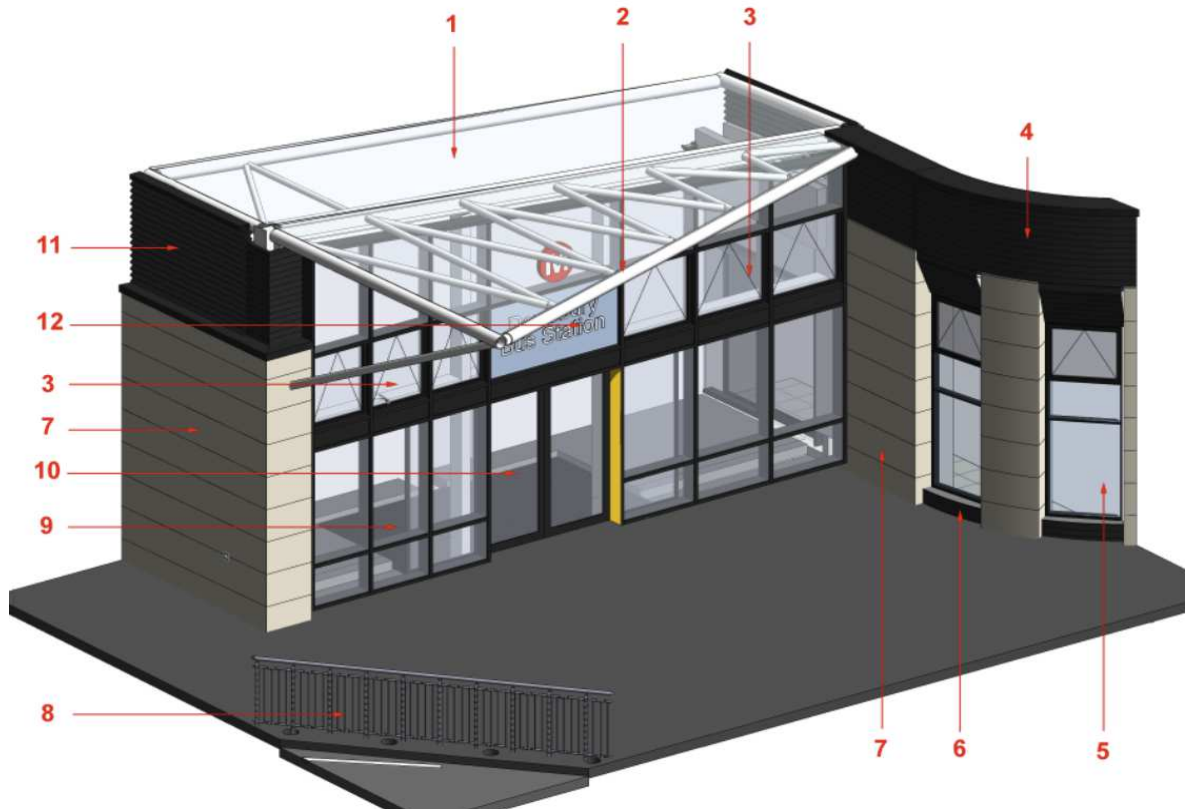


Figure 57 Southeast Entrance Design

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- 1 - Transparent single membrane ETFE roof (non-inflated). Vector Foiltec Texlon ETFE Single Membrane system or similar. Applied fritting to provide solar control in line with requirements established by the computer thermal model.
- 2 - New painted steel canopy / roof structure. Colour White.
- 3 - High level windows, integral with curtain wall system, to automatically open if internal temperature exceeds 22°C.
- 4 - Horizontal ribbed zinc rainscreen cladding. VMZINC Sine Wave 18/76 or similar. Colour dark grey (Anthra-zinc / RAL7016).
- 5 - Structural mullion double glazed curtain wall system. Schueco FWS50SG or similar. Silicon joint to outer face. Polyester powder coated aluminium transoms and mullions in dark grey (RAL7016). Glass to be toughened and laminated for robustness and security and supplied with a solar control interlayer for thermal control. Vinyl applied manifestations to be provided on the glazing in compliance with Building Regulation requirements.
- 6 - Glazing plinth. Mechanically fixed and bonded stone facing to external face. Stone colour to be dark grey.
- 7 - Composite rainscreen cladding system consisting of stone veneer on a honeycombed aluminium backing panel. StonePanels Stonelite cladding system or similar. Stone type to be agreed with Planning Authority / Heritage England to visually complement Dewsbury Town Hall and sections of Dewsbury Minster
- 8 - Painted galvanized steel pedestrian guardrail. Colour light grey.
- 9 - Structural mullion double glazing system.
- 10 - Polyester powder coated aluminium framed, glazed, sliding door. PIR sensor operation. Remote control of locking and opening possible. Contrasting colour to inside of frame. Glazing manifestation to glass (not shown). Glazed pocket screens and anti-finger trap sensors.
- 11 - Polyester powder coated automatically controlled louvres linked to temperature sensors and the building management system. McKenzie Martin Thermac 2000 Combination Thermal Louvres or similar. Colour dark grey (RAL7016).
- 12 - Vinyl applied entrance signage and Metro Logo on glass.

4.6.2.6 Northeast Entrance (South Street)



Figure 58 Northeast Entrance Visualisation

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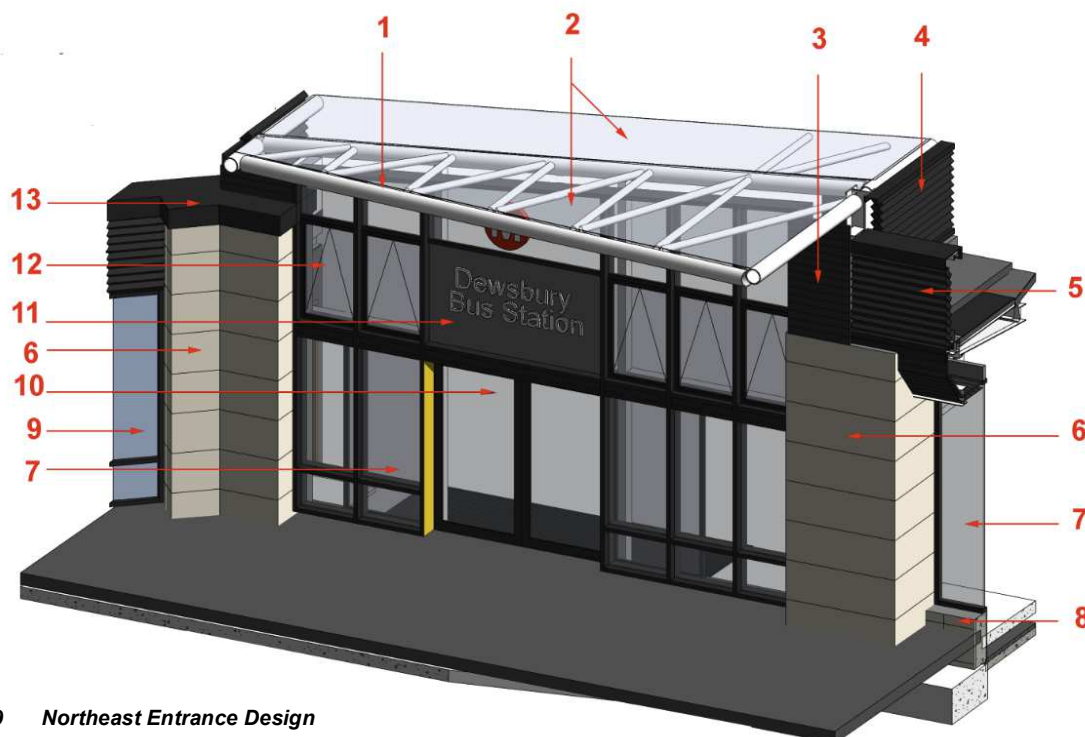


Figure 59 Northeast Entrance Design

- 1 - New painted steel canopy / roof structure. Colour White
- 2 - Transparent single membrane ETFE roof (non-inflated). Vector Foiltec Texlon ETFE Single Membrane system or similar. Applied fritting to provide solar control in line with requirements established by the computer thermal model.
- 3 - Horizontal ribbed zinc rainscreen cladding. VMZINC Sine Wave 18/76 or similar. Colour dark grey (Anthra-zinc / RAL7016).
- 4 - Polyester powder coated automatically controlled louvres linked to temperature sensors and the building management system. McKenzie Martin Thermac 2000 Combination Thermal Louvres or similar. Colour dark grey (RAL7016).
- 5 - Polyester powder coated elliptical section architectural louvres to parapet upstands. Schueco ALB Passive Hollow Louvre Blades or similar. Colour dark grey (RAL 7016).
- 6 - Composite rainscreen cladding system consisting of stone veneer on a honeycombed aluminium backing panel. StonePanels Stonelite cladding system or similar. Stone type to be agreed with Planning Authority / Heritage England to visually complement Dewsbury Town Hall and sections of Dewsbury Minster.
- 7 - Structural mullion double glazed curtain wall system. Schueco FWS50SG or similar. Silicon joint to outer face. Polyester powder coated aluminium transoms and mullions in dark grey (RAL7016). Glass to be toughened and laminated for robustness and security and supplied with a solar control interlayer for thermal control. Vinyl applied manifestations to be provided on the glazing in compliance with Building Regulation requirements.
- 8 - Glazing plinth. Mechanically fixed and bonded stone facing to external face and ceramic / terrazzo tiling to internal face. Stone colour to match stone cladding panels.
- 9 - Opaque glazing to general storage / staff cycle store area.
- 10 - Polyester powder coated aluminium framed, glazed, sliding door. PIR sensor operation. Remote control of locking and opening possible. Contrasting colour to inside of frame. Glazing manifestation to glass (not shown). Glazed pocket screens and anti-finger trap sensors.
- 11 - Vinyl applied entrance signage and Metro Logo on glass.

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12 - High level windows, integral with curtain wall system, to automatically open if internal temperature exceeds 22°C

13 - Polyester powder coated aluminium capping. Colour dark grey (RAL7016).

4.6.2.7 Cycle shelters and Bin Stores

For details of the proposed cycle shelters and bin stores, please refer to Jefferson Sheard drawings DBS-JSA-ZZ-ZZ-DR-A-05801_Cycle Shelter / External Bin Store Detail and DBS-JSA-ZZ-ZZ-DR-A-05802_Retail Unit External Bin Store Detail.

4.7 Landscaping and Public Realm

4.7.1 Summary of Landscaping Zones

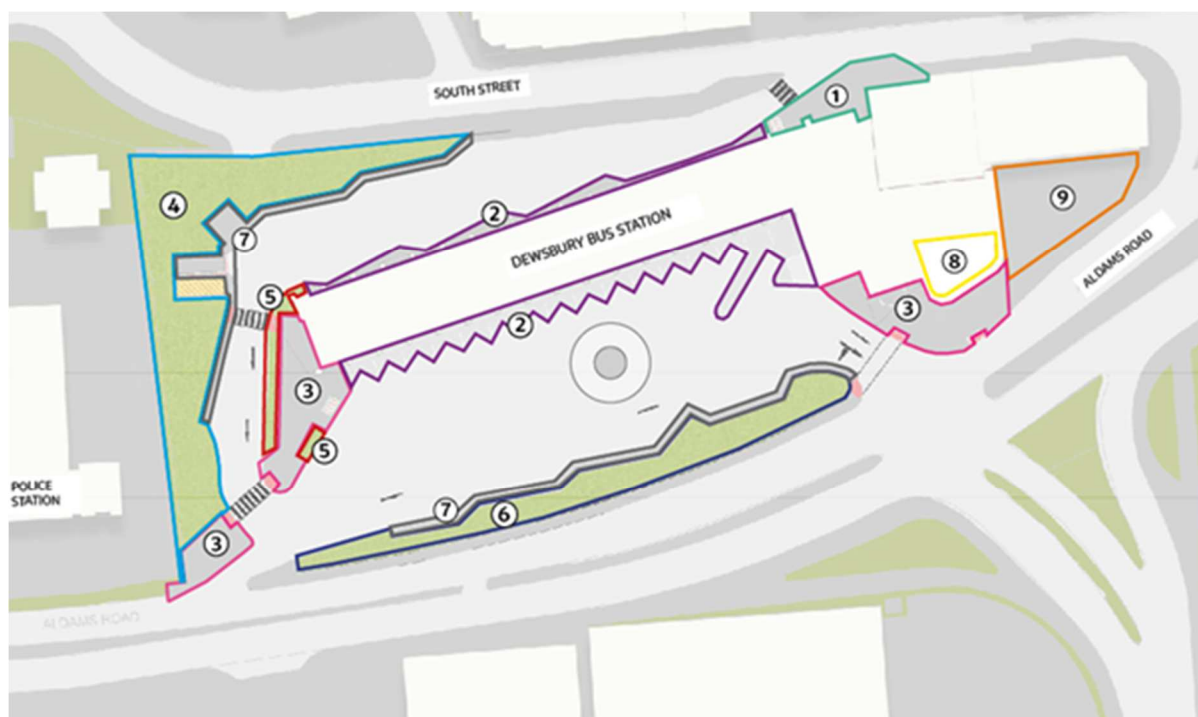


Figure 60 Zoning Location Plan

4.7.1.1 Soft Landscape

The objective for the soft landscape scheme is to provide a safe, visually attractive environment based on sound ecological principles. The proposed planting style will look to use clear stem trees with light canopies, robust low maintenance ornamental shrub planting, herbaceous planting, ornamental grasses, and species rich grass with wildflowers.

The soft landscape design has been developed in conjunction with the project ecologist and the planting will aim to complement the existing site and local character, mitigate against any existing habitat loss, and improve the existing sites biodiversity. The creation of varied habitats throughout the site will enhance biodiversity whilst ensuring that passengers, staff and visitors maintain a link to their local natural world. The landscape will provide an attractive year-round setting offering an enjoyable environment.

The site has been grouped into zones to provide visually distinct area that are different in character, but the use of a common palette of spring and summer flowering bulbs will be consistent across the zones and this pattern will visually unify the scheme. The soft landscape zones are listed below.

- ZONE 4 Grass and tree planting
- ZONE 5 Low maintenance ornamental planting

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- ZONE 6 Aldams Road Planting
- ZONE 8 Green roof.
- ZONE 9 Pocket Park.

4.7.1.2 Hard Landscape

The material strategy seeks to provide a hierarchy of finishes which respond to both the spatial usage and context of the site. Materials have been chosen to complement the new modern bus station and to be robust, functional, low maintenance and to suit the needs of the users. A simple palette of hard landscape materials has been selected and includes Yorkstone paving at the main entrance. Complementary good quality concrete paving for passenger and boarding areas and an asphalt surface from maintenance and service areas. Kerbs and edgings have been selected to complement the adjacent paving.

The different zones can be seen in the zoning location plan below and the hard landscape zones are listed below.

- ZONE 1. Main Entrance
- ZONE 2. Passenger boarding and alighting areas and loading bay.
- ZONE 3 Aldams road entrances.
- ZONE 7. Service areas and walkways

4.7.2 Biodiversity Net Gain

4.7.2.1 Baseline Habitat

An Ecological Constraints Assessment including a phase 1 habitat survey, was undertaken by WSP in October 2021. This identified the type, location, and extent of habitats within the site. A habitat condition survey was not required, as the habitats were of low distinctiveness and were automatically assigned a low condition score by the metric calculation tool. The baseline habitats were then converted from phase 1 classification to the metric habitat classification using the G-9 phase 1 habitat translation tool in the Biodiversity Metric 4.0 Calculation Tool. In the phase 1 habitat survey all green infrastructure habitats were assigned as introduced shrub. Whilst this is appropriate for a phase 1 assessment, there are also a number of urban street trees within the same area and were not captured in the phase 1 habitat map.

An Arboricultural Assessment was undertaken by WSP in October 2021. This identified the type, location, and root protection areas of street trees within the site. The habitat condition assessment was carried out retrospectively based on the tree category and descriptions provided in the Arboricultural Assessment.

The phase 1 survey results were used to define the baseline habitats in the metric. The Arboricultural Assessment was then used to define the areas for the urban street trees. This was based on the indicative root protection areas. Habitats and hedgerows were separated into discrete parcels and linear features either when they were geographically discrete or where there was a change in habitat condition across a single location. Each parcel/linear feature was recorded on the map and calculated separately using the metric calculator.

4.7.2.2 Post Development Habitat

The post development habitats are based on the landscape proposal drawing B2382808 JAC GEN XX DR L 3001 Landscape General Arrangement

4.7.2.3 Summary

The scheme currently provides a net gain over 300%. Full details of the study and calculations are available in document ENV0001331C-JAC-XX-RP-BD003 for further details.

4.7.3 Landscaping Zone Details

4.7.3.1 Zone 1 – Main Entrance

Also see drawing B2382808 JAC GEN XX DR L 3003 – Hard Landscape Detail

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Pedestrian routes providing access to the main building entrance points on the northeast of the building will be paved using natural stone to help create a public realm feel. Kerbs and edging will be granite style. Where tactile pavings directly interface with natural stone these should be of a granite material to the appropriate style and colour.

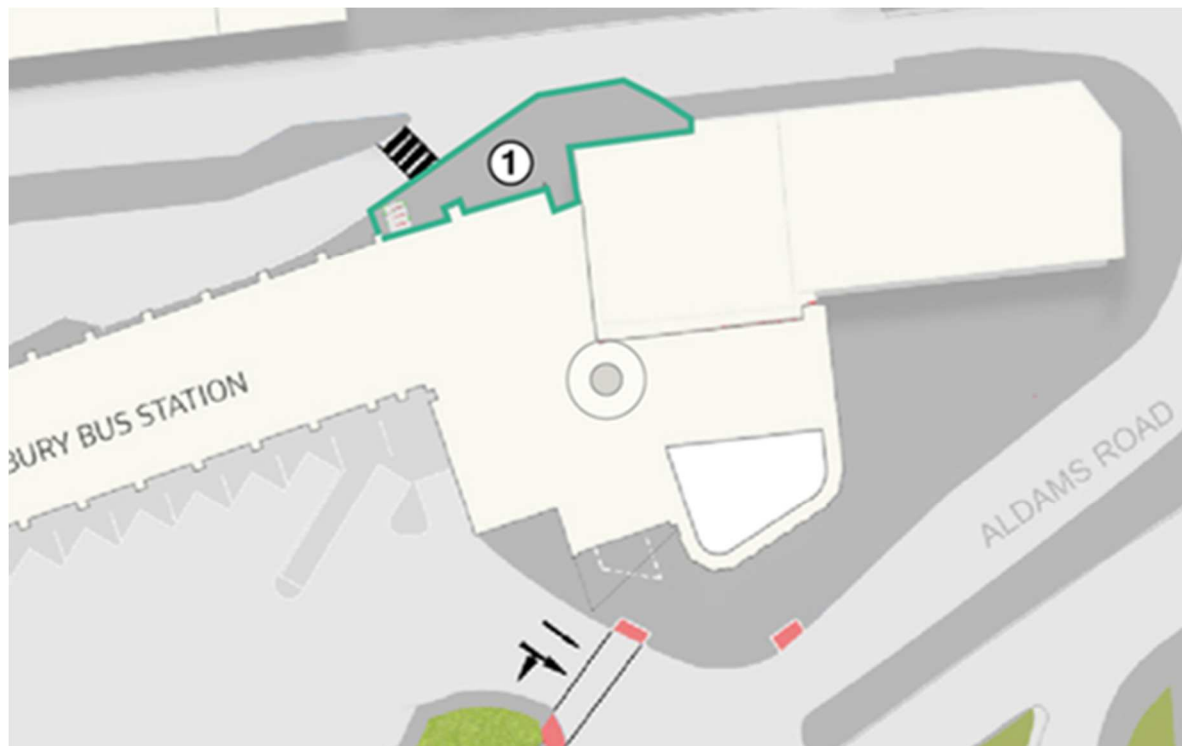


Figure 61 Landscape Zone 1

The proposals for this area are to introduce a higher quality public realm feel to the entrance to the new bus station using higher quality materials and reduce / remove pedestrian guard rails and other clutter as much as possible. As well as functioning as the main entrance to the bus station the area is also the gateway and main pedestrian link for visitors arriving at the bus station to the main shopping areas of Dewsbury and to the Rail Station, therefore it is important for the selection of material to tie into these areas.

As space is limited, and there needs to be an open feel to the area to help with circulation there are limited opportunities to introduce new elements such as seating and planting into this area and initial liaison with the police security advisors have warned against provision of seating, planters or other features which could be used as a focus for anti-social behaviour.

By keeping the space open and free from obstructions the selection and design of the paving takes on greater importance. The proposals draw on local artwork and patterns from the community to introduce similar patterns into the paving. This can be achieved by a mixture of diamond sawn and shot blasted Yorkstone paving flags, which can be arranged to create patterns within the paving. This effect if combining diamond sawn paving and shot blasted paving can be further enhanced by masking areas of diamond sawn paving prior to the shot blasting process. Flags can also be arranged to create patterns within the paving.

Cycle storage facilities are to be provided in this location as specified elsewhere in this statement.

Proposed paving materials are to be equivalent to the following:

- TYPE: Marshalls Scoutmoor Yorkstone.
- SIZE: Widths 900, 600, 300 with random lengths
- SURFACE FINISH Diamond sawn. / Shot blasted
- SLIP SKID RESISTANCE BS EN 1339: USRV>40



Figure 62 Image of typical paving pattern. Diamond Cut and Shot Blasted Yorkstone Paving.

4.7.3.2 Zone 2 – Passenger Boarding Areas

Also see drawing B2382808 JAC GEN XX DR L 3003 – Hard Landscape



Figure 63 Landscape Zone 2

Zone 2 is the passenger boarding and alighting zones, paving in this area is to be a good quality concrete paving flag in a complementary darker colour to the general passenger areas. The use of a darker paving unit will provide a stronger visual contrast with the light-coloured kerbs. The jointing material between paving to be the same mid grey colour as used in Zone 3. No planting within these areas.

Proposed paving materials are to be equivalent to the following:

- TYPE: Charcon Andover Ground
- SIZE 600x450mm
- SHADE: Mid Grey

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- EDGE DETAIL: Chamfered
- SURFACE FINISH Ground
- SLIP SKID RESISTANCE BS EN 1339: USRV>40

Proposed Kerbs are to be equivalent to the following

- TYPE: Precast concrete BS EN 1340
- SIZE: 914x125mm

Proposed edges are to be equivalent to the following:

- TYPE: Precast concrete BS EN 1340
- SIZE: 914x50mm
- PROFILE: Flat top

Where loading bays are formed within the paving zones, they are to be constructed as the same paving as the adjacent Zone 2 paving but with a smaller paving unit and a more textured surface.

4.7.3.3 Zone 3 – Aldams Road Entrance

Also see drawing B2382808 JAC GEN XX DR L 3003 – Hard Landscape

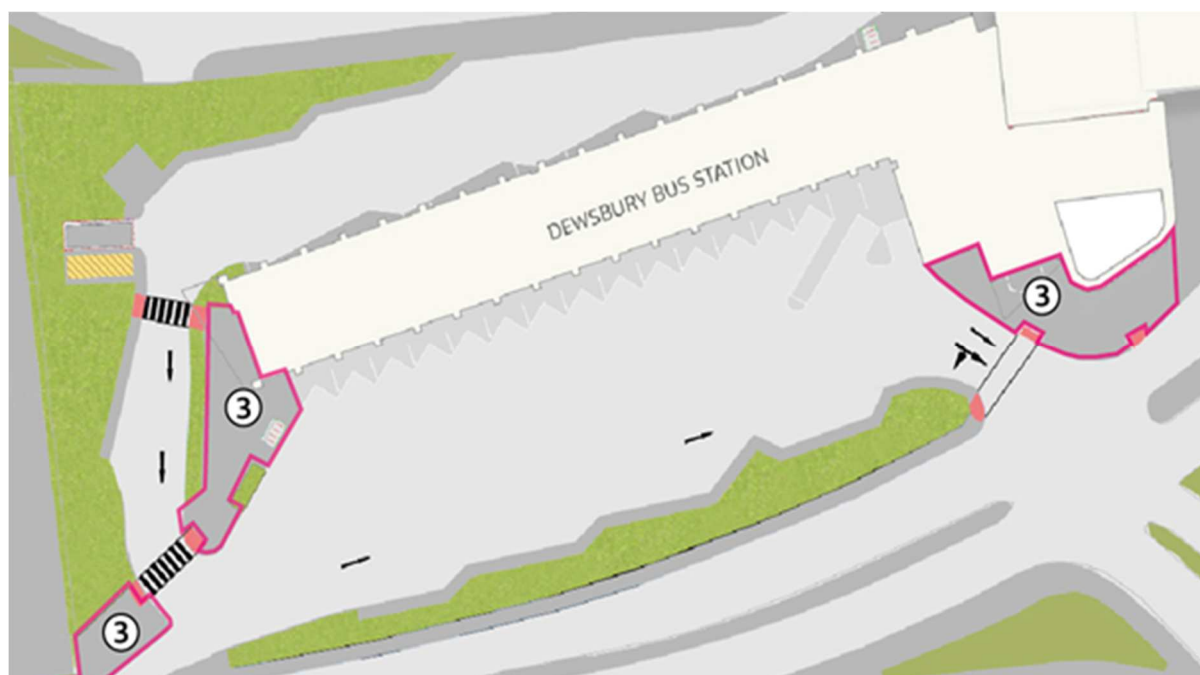


Figure 64 Landscape Zone 3

Pedestrian routes into the bus station from the Southeast and Southwest from Aldams road will be good quality concrete paving flags. The colour of the paving is to provide a contrast to the paving used at passenger boarding areas. The area has been designed to provide good circulation space and clear unobstructed access to the bus station.

Cycle storage is located within this space to provide easy and convenient access for cyclists but to also be outside of the natural desire line for passengers and visitors to the bus station.

At detailed design stage it may be feasible to locate a small number of small planters in this location and these should only be introduced if they will not impede circulation and there is confidence that ongoing maintenance can be confirmed. In accordance with police guidance received the design of planters will be undertaken to ensure that it will not encourage anti-social gatherings.

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Proposed paving materials are to be equivalent to the following

- TYPE: Charcon Andover Ground
- SIZE 600x450mm
- SHADE: Light Grey
- EDGE DETAIL: Chamfered
- SURFACE FINISH Ground
- SLIP SKID RESISTANCE BS EN 1339: USRV>40

Proposed Kerbs are to be equivalent to the following

- TYPE: Charcon ECO Countryside
- SIZE: 914x145mm
- SHADE: Black Fleck

Proposed Kerbs are to be equivalent to the following

- TYPE: Charcon ECO Countryside
- SIZE: 914x145mm
- SHADE: Black Fleck

4.7.3.4 Zone 4 – Grass and Tree Planting

Also see drawing B2382808 JAC GEN XX DR L 3004 – Soft Landscape zone 4



Figure 65 Landscape Zone 4

Species rich grass with wildflowers with trees with light canopies and clear stems. The purpose on this zone is to provide seasonal interest and introduce ecological enhancement to the scheme and help provide an overall net gain in habitat diversity across the scheme. To provide the habitat and diversity intended it is important that special attention is given to the soils in this area. All existing hardstanding

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and associated subbase should be removed from site and replaced with 0.15m low fertility topsoil to BS3882 placed over 0.45m of free draining subsoil to BS8601.

The final selection of the species rich grass and wildflowers mix is to match soil conditions. The suggested seed mix for this location based in the provision of low fertility soils and subsoil is 80% standard general purpose meadow mixture (Emorsgate EM2) and 20% standard cornfield mixture (Emorsgate EC1).

It is especially important that consideration is given to the Biodiversity Net Gain Report in this specific area as this area provides a significant contribution to the overall net gain for the site. For examples, as part of the maintenance it is important that the fertility of the soil remains low, therefore the grass should be cut once a year in September / October and all clippings to be removed from site.

Appropriate root barrier protection is to be installed as required to protect the existing and known services.

Trees have been included in this area to provide visual interest and ecological enhancement but also to screen / filter views towards the bus station from South Street. The level difference between the bus station and South Street results in only the upper canopy of the trees been visible in the views from South Street. 1m radius around all trees to be mulched to avoid damage to trees during grass cutting. All new trees to have 2m clear stem to avoid creating concealment spaces.

Careful consideration of selection of tree species will be required at detailed design stage, partially informed by detailed knowledge of underground services but also to ensure the mature canopy of trees do not encroach into the running lanes of the bus station. Trees are to be planted into tree pits containing topsoil but, long term, need to be tolerant of low fertility soils. Pioneer type species are generally good in these types of conditions.



Figure 66 Zone 4 Species rich grass and wildflower planting (EM2 & EC1)

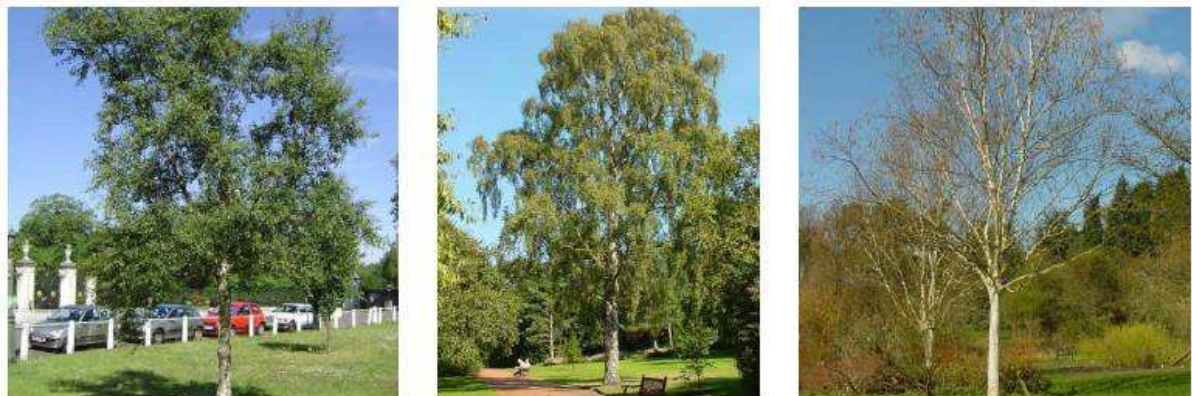


Figure 67 Zone 4 suggested tree planting

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4.7.3.5 Zone 5 – Low Maintenance Ornamental Planting

Also see drawing B2382808 JAC GEN XX DR L 3005 – Soft Landscape Zone 5

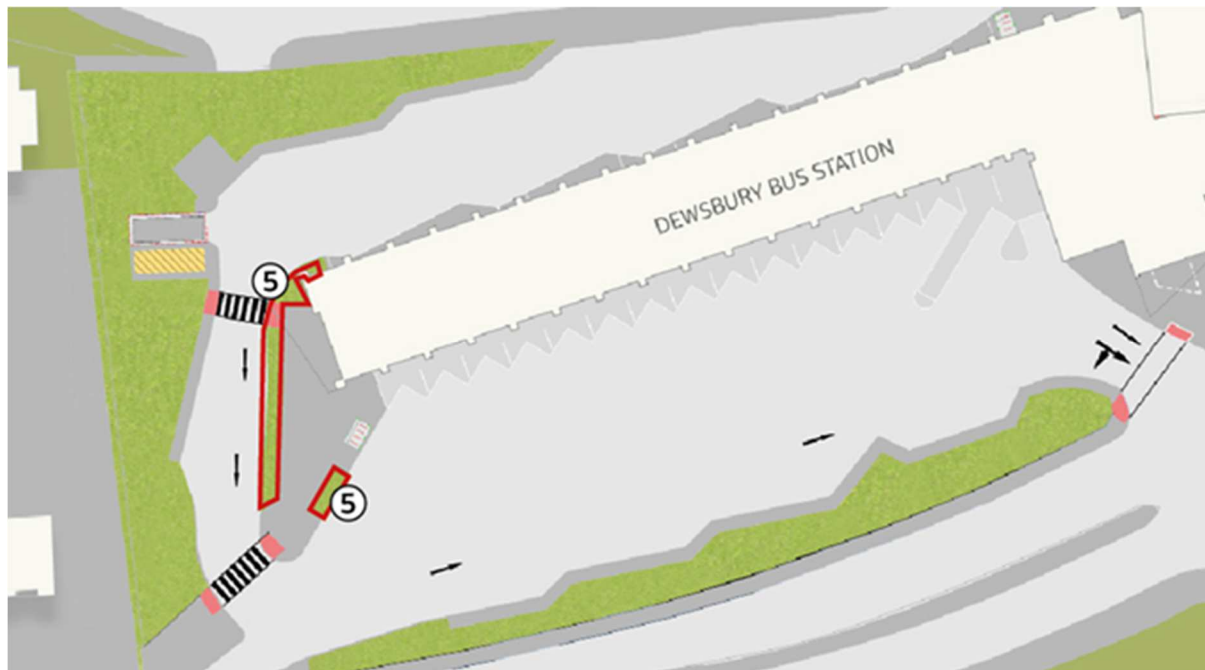


Figure 68 Landscape Zone 5

The purpose of this zone is to soften the visual dominance of hard landscape materials using ornamental planting and provide visual interest for passengers and visitors to the bus station.

Plants shown are indicative and subject to detailed design. Generally, plants should be supplied in 3L pots except for the specimen shrubs that should be supplied much larger to allow for under planting. Plants should be planted in large groups of single species.

All plants in this are to be robust and require low levels on maintenance. Salt tolerant evergreen shrubs are to be located adjacent to bus running lane to reduce maintenance requirements. No planting at maturity should encroach into any visibility requirements for bus drivers and people using the bus station. Mulch to be placed under planting in this area to suppress weeds and help retain moisture in the soil reducing the requirements for maintenance. Mulch should be fire resistant.

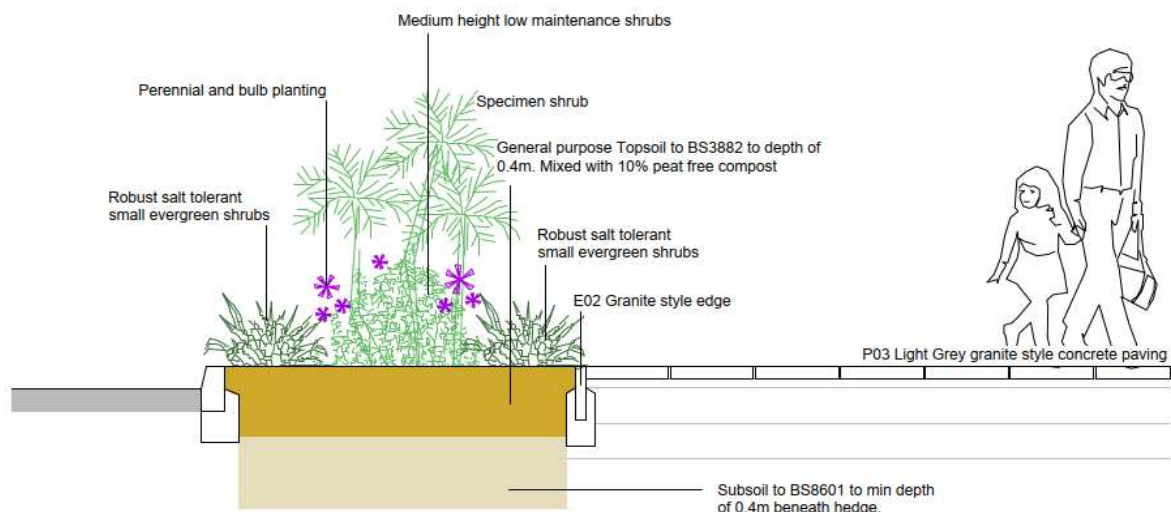


Figure 69 Zone 5 Indicative section

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Figure 70 Zone 5 Indicative planting

4.7.3.6 Zone 6 – Ornamental Planting to Aldams Road

Also see drawing B2382808 JAC GEN XX DR L 3006 – Soft Landscape Zone 6



Figure 71 Landscape Zone 6

The new stone wall with railings will be a strong visual element in this zone and provide a physical boundary between Aldams Road and the Bus Station. The location of the wall is within the planting areas to allow for planting on both sides. The wall is located to give more planting space than existing on the Aldams Roadside to maximise the opportunities to provide planting with strong visual interest from Aldams road to give a modern and exciting foreground to the new bus station.

The grasses will die back in winter and seed heads are to be retained for visual interest. Grasses to be cut back and arising's removed in spring.

Plants listed below are indicative and subject to detailed design. Generally, plants should be supplied in 3L pots and planted in large drifts of single species.

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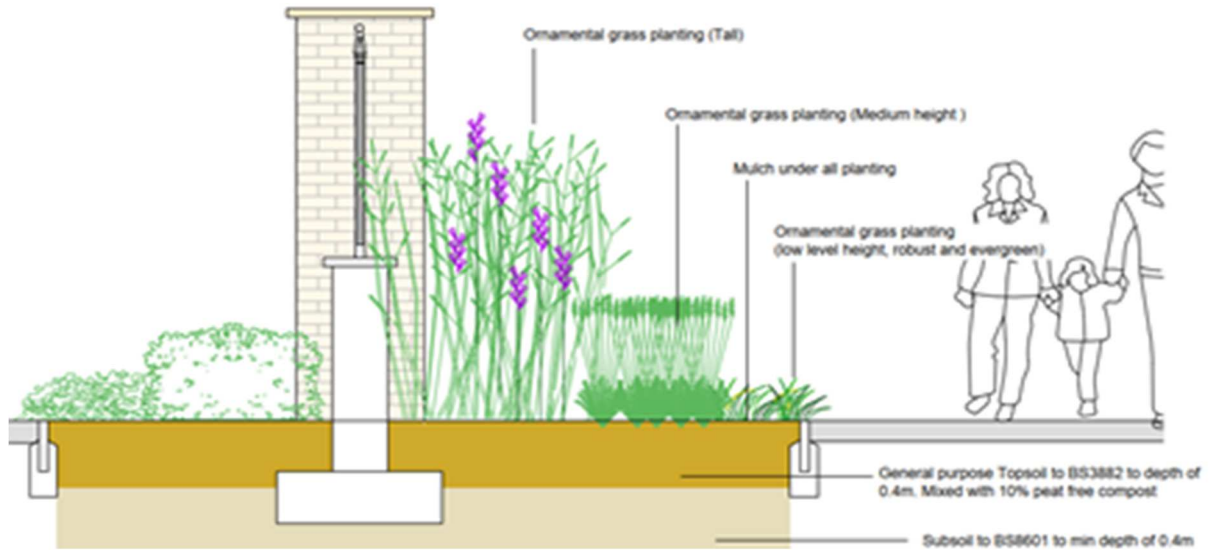


Figure 72 Zone 6 Indicative section

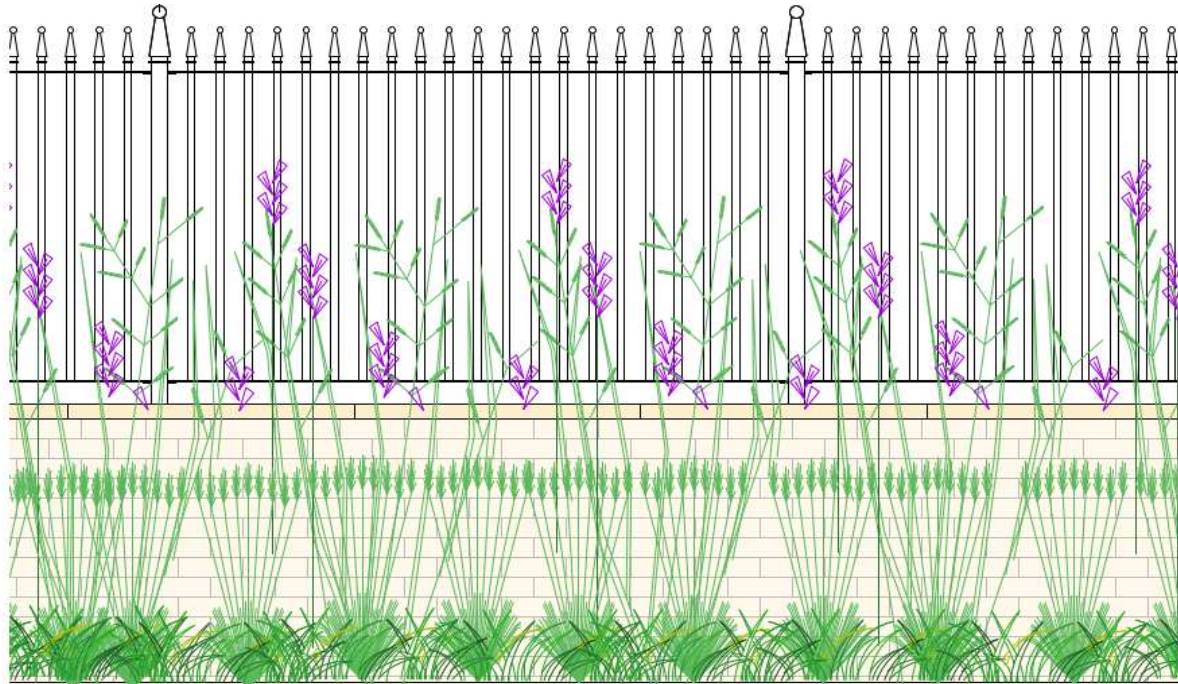


Figure 73 Zone 6 Indicative elevation



Figure 74 Zone 6 Indicative planting

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4.7.3.7 Zone 7 – Service Walkways

Also see drawing B2382808 JAC GEN XX DR L 3003 – Hard Landscape

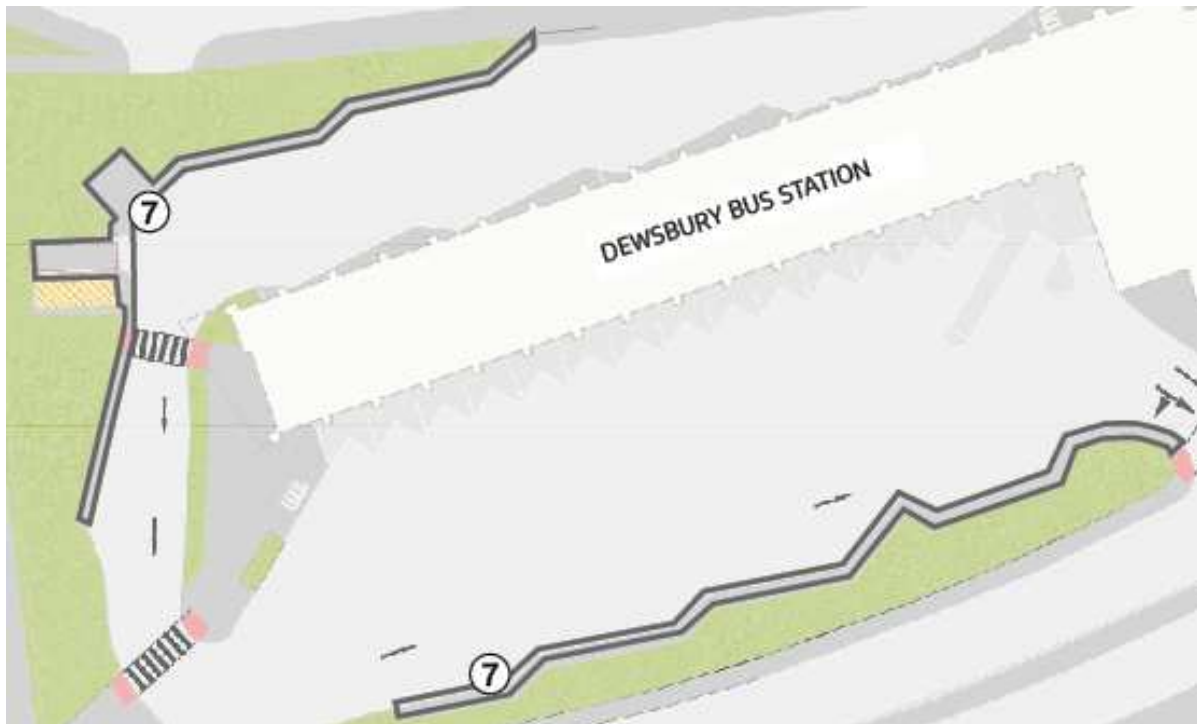


Figure 75 Landscape Zone 7

Asphalt surface will be used as this provides the most flexible and robust material for this application.

This area is to be used by bus drivers and bus operatives and maintenance / cleaning staff only. Adjacent planting will provide visual interest, but this is a low maintenance functional space.

4.7.3.8 Zone 8 – Green roof

Also see drawing B2382808 JAC GEN XX DR L 3001 – Landscape General Arrangement

The purpose of the green roof is to provide visual interest and increase biodiversity. The roof is to be a plug plant system to include 8-12 native species specifically selected for green roof application.

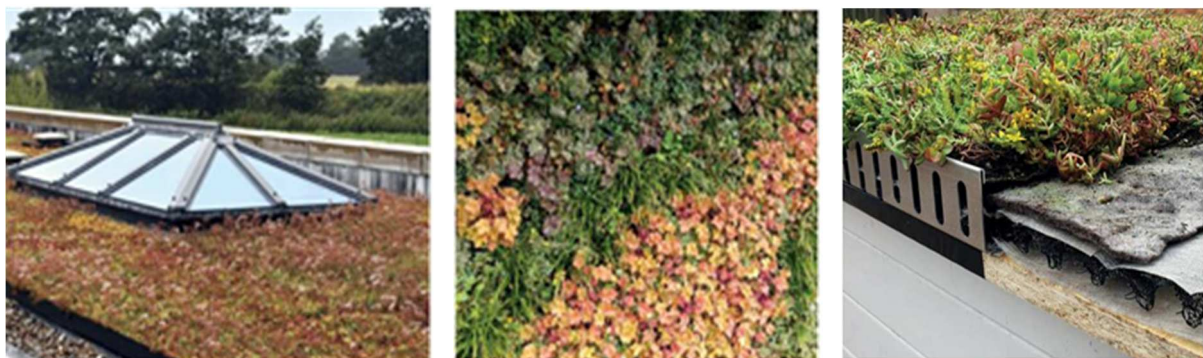


Figure 76 Zone 8 Indicative planting

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4.7.3.9 Zone 9 Public Space Planting

Also see drawing B2382808 JAC GEN XX DR L 3007 – Soft Landscape Zone 9



Figure 77 Landscape Zone 9

The key proposal for this area is to remove all the overgrown ornamental planting and visually open this space to create views from the public space to Dewsbury Minster and to make this a safe and pleasant space for the public and users of the bus station.

To further enhance the open feel for this area and improve circulation and security, three trees adjacent to the building will be removed. These trees have also been recorded as providing a climbing route for unauthorised access onto the retail unit roofs and present an ongoing security concern. The four trees adjacent to Aldams road will be retained but with a reduction in crown density and with crown lifting to provide a minimum 2-meter clear stem for each tree. The existing trees will be located within an area of free draining arb resin to maximise natural drainage, keep the space visually and physically open, maximise circulation space and retain flexibility for future use.

This area will be accessible to the public and potentially by users of retail units via a direct access (orange arrow). No formal seating has been proposed for this location following pre-application advice from West Yorkshire Police. Although no permanent seating is proposed, seating could be provided by retail tenants if required. This would permit the seating to be in place when the tenant was supervising it and removed out of operational hours.

The lighting scheme in this area will be sensitive to the setting of Dewsbury Minster and potential ecological interests and provide good levels of lighting for security. New paving will provide continuity of materials and an even surface that will wrap round from the southern entrance to the bus station and unify the areas.

The current situation has free standing bins exposed to the public area, the proposed new bin store (blue rectangle) is a significant visual improvement and is to be screened by a 2.4-meter fence constructed of high-quality materials such as Accoya or similar specifically selected to complement the horizontal cladding on the new bus station. The use of materials in a considered way will complement

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the bus station building and will give the bin store architectural interest. To further integrate the bin store and provide some screening and visual interest, climbing plants and ornamental shrubs and grasses have been selected and located adjacent to the store. The thicker bamboo is located to provide screening of the bin store from Dewsbury Minster. It is important that the proposed planting does not enclose the space and will not provide any opportunity for concealment and the type of bamboo specified will provide a low maintenance means to achieve this. Shrub planting is to be no higher than 0.5 meters. Tall Grasses have been selected specifically to complement the planning scheme adjacent to Aldams road but to also retain some visual permeability in key locations.

Subject to further ecological surveys, bird and bat boxes could be introduced into this area.



Figure 78 Zone 9 Indicative planting

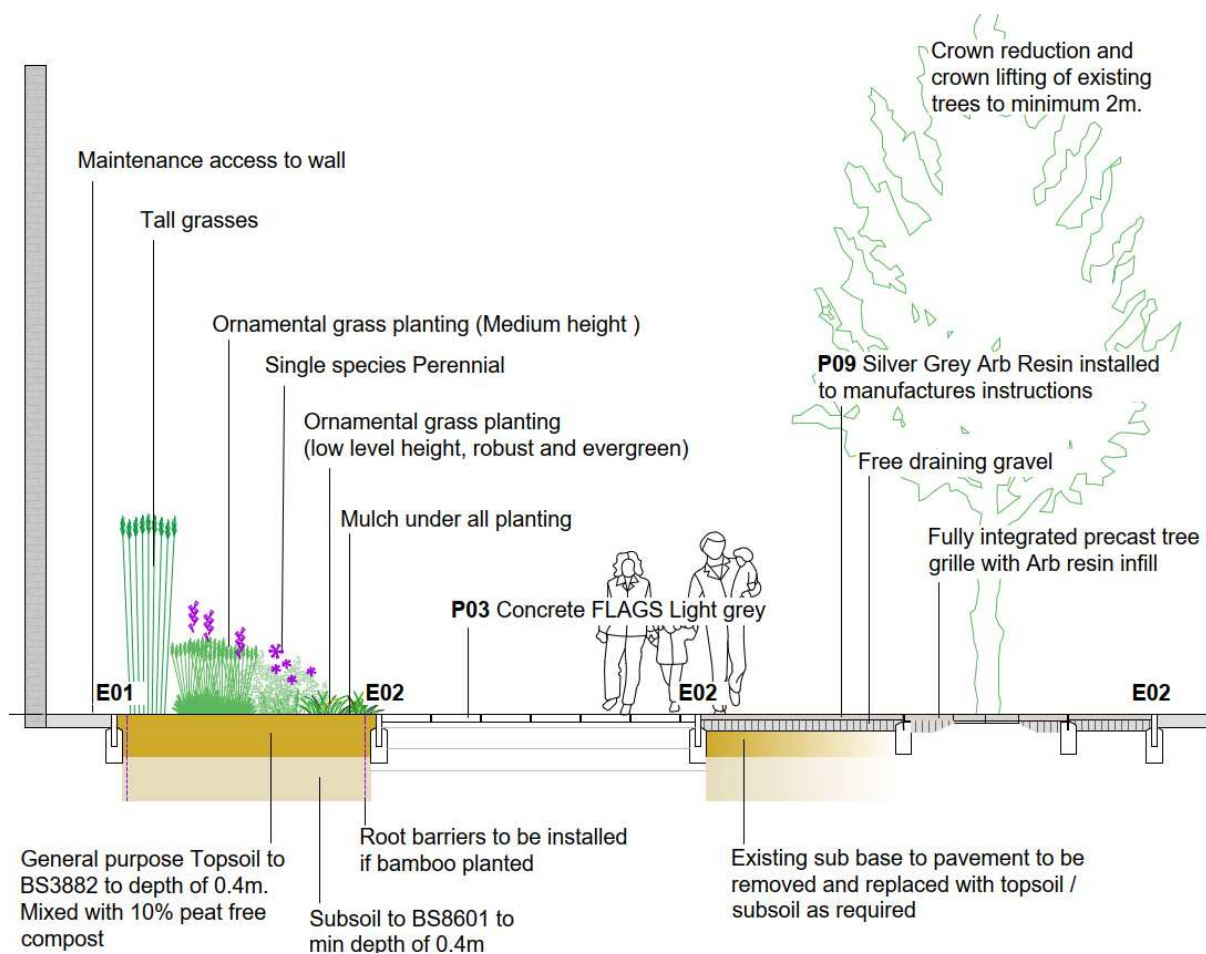


Figure 79 Zone 9 Indicative section through planting and existing trees.

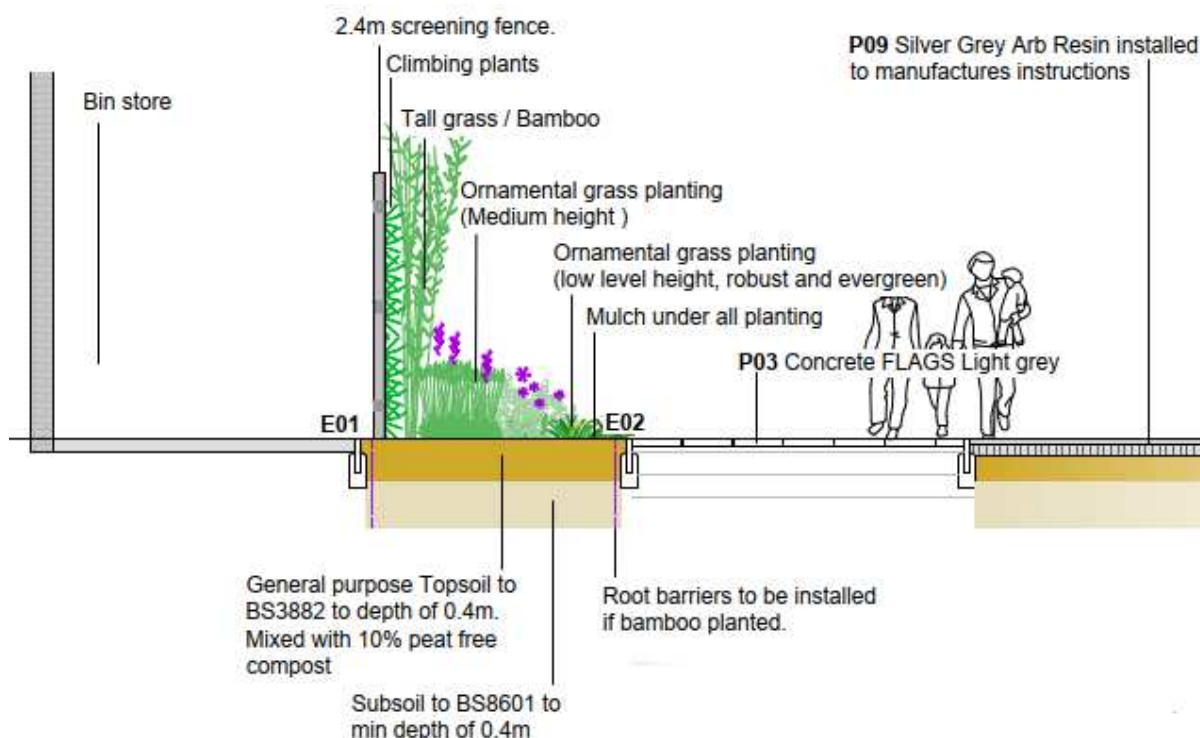


Figure 80 Zone 9 Indicative section through bin store and planting area

4.7.4 Transport and Highway Design

4.7.4.1 Proposed Layout

The existing levels and gradients for the trafficked areas are to be maintained, except for areas where kerb lines are to be realigned. In addition, other significant layout changes are to be implemented by means of changes to the carriageway markings.

The proposed improvements to the layout of the bus station entrances have also attempted to account for two proposed adjoining schemes being delivered by Kirklees Council. These are understood to be due for construction after the completion of the Dewsbury Bus Station works. The schemes are located on South Street (north of the bus station) and Aldams Road, to the south, and include highway upgrades and provision for active travel. Although consideration has been given to the design of the station layout to accommodate these two schemes, it is not certain precisely what these schemes will ultimately implement, so the design has aimed to provide solutions that are sympathetic to the aspirations of the adjacent schemes but will be able to "stand on their own" if the schemes are not implemented.

A Stage 1 Highway Safety Audit has been undertaken to establish that the proposals are to be safe in use and computer-generated vehicle tracking has been undertaken. Kerb alignments, pedestrian crossings, road markings external signage and vehicle and pedestrian barriers have been designed accordingly.

Lighting and CCTV coverage have been designed to levels compliant with current design standards and as advised via Pre-Application consultation with West Yorkshire Police. Please refer to the Jacobs General & Emergency Lighting Layouts and the Jacobs External Lighting Drawings for further details.

For further details of the hard landscaping proposals please refer to the Jacobs Landscape Design Proposals and the Civils Design Proposals which are contained within the following sections of the RIBA Stage 3 Report

4.7.4.2 Standards and Guidance Documents

The design has been undertaken in accordance with the latest versions of various standards and guidance documents, including, but not limited to:

- Design Manual for Roads and Bridges (DMRB)
- Specification for Highway Works (SHW)
- Kirklees Highways Design Guide, Kirklees Council (2019)
- Manual for Streets 2, The Chartered Institution of Highways & Transportation (2010)
- Inclusive Mobility, Department for Transport (2021)
- Chapter 3 of the Traffic Signs Manual – Regulatory Signs, Department for Transport (2019)
- Chapter 4 of the Traffic Signs Manual – Warning Signs, Department for Transport (2018)
- Chapter 5 of the Traffic Signs Manual - Road Markings, Department for Transport (2018)
- LTN 2/09 Pedestrian Guardrailling, Department for Transport (2009)
- LTN 2/95 The Design of Pedestrian Crossings, Department for Transport (1995)
- LTN 1/20 Cycle Infrastructure Design, Department for Transport (2020)
- Guidance on the use of Tactile Paving Surfaces, Department for Transport (2021)

4.7.4.3 Vehicle Access & Egress

The vehicles assessed in the design are listed below:

- Dennis Dart SLF bus 11.2 m
- Optare Solo bus 7.9 m to 10 m
- Mellor Strata bus 7.8 m to Strata Ultra 8.8 m
- Plaxton Panther bus (coach) 15 m
- DB32 refuse vehicle 7.9 m
- Ambulance 5.5 m
- FTA Design 13/18 tonne rigid vehicle 10 m

It is not anticipated that articulated lorries will be required to, or permitted to access the bus station.

The location of the existing vehicle access points has been maintained, but the layout has been improved. In addition, consideration has been given to the future development of South Street and Aldams Road by Kirklees Council.

The trafficked lane for access around the bus station is an anti-clockwise, one-way system from the north-east entrance to the south-east exit. The minimum width of this lane is 4 m.

There are two entrance points for vehicle access to the station. One is located to the north of the site for vehicles travelling westbound along the one-way system on South Street. The other is located to the south-west of the site for vehicles travelling eastbound along Aldams Road.

The layout of the south-west station exit onto Aldams Road has essentially been maintained, with an alteration to the kerb line on the southern side for an improved swept path for buses in the right-hand lane. Visibility from the junction remains unchanged from the existing arrangement, and egress is signal-controlled, so there are no visibility issues or conflicts with oncoming vehicles.

4.7.4.4 Pedestrian Crossings

Tactile paving is provided at all pedestrian crossings, designed in accordance with DfT guidance on the use of tactile paving. The zebra crossings, including road markings and belisha beacons, are designed in accordance with the Traffic Signs Manual TSM Chapter 6.

Zebra crossings are appropriate at the north-east and west of the site where traffic volumes are low, and signals are not required. However, a signal-controlled crossing is required at the exit where traffic is controlled for egress onto the major road (Aldams Road).

The zebra crossing at the north-east vehicle entrance has been relocated further north, where the proposed kerb lines allow for it to be sited more in line with the edge lines of the building and closer to the proposed building entrance.

The zebra crossing at the south-west vehicle entrance is in approximately the same location as the existing one but has been realigned to be perpendicular across the realigned access.

The signal-controlled pedestrian crossing at the south-east vehicle exit is in approximately the same location as the existing one but is realigned perpendicular to the exit.

4.7.4.5 Visibility at Pedestrian Crossings

Visibility at the two proposed zebra crossings to the north-east (South Street) and south-west (Aldams Road) vehicle entrances has been assessed to determine the extent to which pedestrians can see approaching vehicles. The assessment was undertaken in accordance with LTN 2/95, The Design of Pedestrian Crossings and CD 143 Designing for Walking, Cycling and Horse-riding.

- In accordance with CD 143, the eye heights assessed ranged from 0.9 m to 2 m.
- In accordance with CD 143, the object heights assessed ranged from 0.26 m to 2 m, though it was considered more appropriate to use an upper range of 3 m which represents the height of a single-decker bus, the same as the Dart SLF 11.2 m used elsewhere in assessments of the bus station design.
- The required sight distances are taken from LTN 2/95 for an 85-percentile approach speed of 25 mph. Aldams Road has a 30-mph speed limit; however, it is noted that approach speeds to the proposed crossing would be much lower than 25 mph due to the junction layout and another (existing) marked crossing located to the south, which is to be retained. South Street is also a 30-mph road, but speeds on the approach to the crossing would be much lower due to the traffic calming features and road narrowing along South Street.

At the South Street vehicle entrance, pedestrians on both sides of the crossing, from a full eye height range of 0.9m to 2m, can see 50 m east along South Street to an object between 0.26-3 m in height. Traffic on South Street can only travel westbound in this direction. The level of visibility satisfies guidance in LTN 2/95 and CD 143. South Street has one direction of travel from east to west, so visibility has only been assessed in one direction, to the east.

At the Aldams Road vehicle entrance, visibility provision differs between the north and south sides of the crossing. On the south side of the crossing, pedestrians, represented by an eye height range of 0.9-2 m, can see 50 m west along Aldams Road to an object between 0.26m and 3m in height. On the north side, existing vegetation and the adjacent police headquarters car park restrict visibility, as shown in Table 1 below. Aldams Road has one direction of travel from west to east, so visibility has only been assessed in one direction, to the west.

The proposals are an improvement over the existing condition.

Pedestrians using the signalised crossing at the south-west vehicle exit have unrestricted visibility of vehicles leaving the bus station to join Aldams Road.

4.7.4.6 Driver Walkways

Walkways of 1.5 m width are provided around the perimeter of the bus station for drivers going to and from the layover bays. The walkways lead to either the zebra crossing to the west of the site or the signal-controlled crossing near the station exit, allowing drivers to cross the trafficked lane.

Localised widening of the driver walkway is provided at the EV charging pedestal located at the contractor parking bays to ensure the 1,5 m width is maintained.

The walkway to the west of the site is to be secured using a gate operated by a keypad located at the eastern side of the western crossing to restrict access to authorised personnel only.

Pedestrian-deterrent paving has been provided at the narrow, paved strip at the site's northern boundary to encourage drivers using the northern layover bays to utilise the western entrance to the main building rather than walking along the narrow strip to the north-east entrance. A small rectangular section of the deterrent paving to the rear of layover bay L1 is proposed, rather than paving the entire

strip, as the pedestrian guardrail at the north-east entrance is a deterrent for pedestrians approaching from South Street from using it as a footway.

4.7.4.7 Traffic Signs & Road Markings

Traffic signs and road markings have been designed in accordance with the Traffic Signs Regulations and General Directions (TSRGD) 2016 and any subsequent amendments and the Traffic Signs Manual (TSM).

Road markings will be constructed using thermoplastic screed and applied with glass beads. Traffic signs are to be constructed using Class RA2 material and are to be manufactured by a CE mark-certified manufacturer. Signs are to be orientated in accordance with Chapter 1 of the Traffic Signs Manual and should have a minimum offset distance of 450 mm from the edge of the kerb. Clearance to signs will be set at 600 mm where possible.

4.7.4.8 Street Furniture

Pedestrian guardrails are proposed in areas around each of the pedestrian accesses from South Street and Aldams Road to prevent pedestrian incursion onto the trafficked area within the bus station.

The existing guardrails at the south-west exit to Aldams Road are to be retained in keeping with the surrounding infrastructure. However, it is possible that these will be removed during the design of the adjacent Aldams Road scheme.

It is noted that the Kirklees active travel improvements to both South Street and Aldams Road are likely to remove pedestrian barriers in line with current design best practices. It is anticipated that there will be preference to replace some of the pedestrian barriers to the perimeter of the bus station site with landscaped barriers or planters, however it is not considered appropriate to provide such proposals at this stage until final details of the Kirklees schemes are known.

4.7.4.9 Heavy-Duty Impact Bollards

Heavy-duty impact bollards are located at the south-east corner of the building near stand 1 to protect from errant vehicles striking the building, specifically the plant room.

There is also a heavy-duty bollard arrangement with infill panels located at the front of stands 16 to 19 on the north side of the building to prevent buses from striking the building.

Concrete bus overrun barriers are provided to each of the DIRO stands to the south side of the building.

4.7.4.10 Traffic Calming

Several measures are in place to promote traffic calming; these include appropriate signing through the trafficked area within the bus station and physical measures such as zebra crossings.

Speed detection devices have been provided at the entrances / exits with a digital display of a vehicle's speed. Speed limit signs are also sited at the vehicle entrances and repeated at the north-western zebra crossing to inform and remind drivers of the speed limit through the trafficked area.

Zebra crossings provide another means of traffic calming, with drivers slowing down on approach to check for pedestrians or coming to a stop.

The entry angle on the Aldams Road access has been increased to improve safety around the pedestrian crossings by encouraging drivers to slow down. Aldams Road is a 30 mph road where the current geometry may not require drivers to slow down, as it is a layout similar to a junction diverge.

4.7.4.11 Pavement Design

The pavement design for Dewsbury Bus Station has been developed in accordance with the Design Manual for Roads and Bridges (DMRB) and the Specification for Highway Works (SHW). The primary documents used for the pavement design are:

- CD 224 – Traffic Assessment
- CD 225 – Design for New Pavement Foundations
- CD 226 – Design for New Pavement Construction

- CD 236 – Surface Course Materials for Construction
- CD 239 – Footway and Cycleway Pavement Design

Full reconstruction of the pavement is proposed to offer maximum design life until next scheduled maintenance and replacement., although it may be possible to reduce this requirement in some areas when additional survey data becomes available that provides evidence of reasonable residual life.

Existing pavement levels are to be maintained for all carriageway pavement areas that are to be retained.

4.7.4.12 Assessment of Traffic Loading

The carriageway pavement design considers two main areas – the bus circulation route (a one-way route operating in an anti-clockwise direction) and the bus stands. The traffic loading for these pavement areas is a primary input in the determination of the required construction of the proposed pavement.

Traffic calculations are based on Annual Average Daily Traffic (AADT), which is intended to remove any seasonal variation.

It has been assumed that all heavy vehicle traffic at the bus station will be in the PSV category, so OGV2 traffic has been excluded. Standard growth factors from CD 224 for PSV traffic have been used, as well as a 25% uplift to take account of the aspiration stated in WYCA's Bus Service Improvement Plan (October 2022), which includes a target to increase bus passengers by up to 25% over the next ten years.

Traffic loading calculations for both a 20- and a 40-year pavement design life have been undertaken, and the results for a 40-year life have been used for the pavement thickness calculations.

The total traffic loading for the bus circulation route has been determined as 39 msa (equivalent standard axle loads). This is assumed to be the worst case and takes account of all traffic travelling to and from the bus station.

The traffic loading for the bus stands is based on the busiest stand and makes allowance for an average of 58 movements per day.

4.7.4.13 Carriageway Construction

The proposed carriageway pavement foundation design comprises of Type 1 granular sub-base, with a thickness of 410 mm. This provides an unbound foundation for a 2.5% CBR

The proposed construction for the bus circulation route (including the foundation) is as follows:

- 40 mm TSCS (PSV 65)
- 60 mm AC 20 dense bin 40/60 des
- 220 mm AC 32 dense bin 40/60 des
- 410 mm Type 1 sub-base

The proposed construction for the bus stands (including the foundation) is as follows:

- 40 mm TSCS (PSV 65)
- 60 mm AC 20 dense bin 40/60 des
- 155 mm AC 32 dense bin 40/60 des
- 410 mm Type 1 sub-base

The surfacing for the bus vehicle areas is to be grouted macadam as used in other WYCA / Metro bus stations. This has the benefit of providing resistance to fuel and oil spillages and it typically provides good rut resistance.

Further consideration of the use of polymer modified binders will be made at RIBA Stage 4 detail design stage following contractor and sub-contractor design input.

The use of cold in-situ recycling of the existing pavement materials will be considered to:

- Re-use the majority of the existing paving materials.
- Provide Construction phasing and programme benefits.
- Provide sustainability benefits.
- Minimise Waste

4.7.4.14 Footway Construction

The pavement design for footways and other paved areas is in accordance with CD 239. However, a large proportion of the proposed footway and paved areas falls within areas of existing carriageway pavement. The proposed construction is therefore intended to make up for the increase in level due to the introduction of a standard kerb, typically 120 mm.

Where full construction of new paved areas is required, it is assumed that the bearing capacity of the subgrade is equivalent to 2.5% CBR, requiring a sub-base of 200 mm of Type 1 granular material. The footway design assumes only occasional overrun by heavy vehicles – where regular overrun by heavy vehicles is expected; such as the designated service bays, the specification is increased to provide a footway or paved area in accordance with Clause 3.16 of CD 239.

4.7.5 External Drainage

Given that a significant net decrease in impermeable area is proposed, it is considered that surface water discharge control and associated surface water attenuation will not be required.

Along the site's southern edge, the existing gullies made redundant by repositioning the kerb line are to be abandoned, and new gullies will be installed at appropriate locations. The new gullies will discharge to the existing surface water sewer that traverses the southern kerb line. Gully outlets will be rationalised and will reuse the existing connection points to the surface water sewer, thus avoiding the need for on-line connections to a live drainage system.

The northern and western areas of the site will also require the abandonment of existing gullies and the installation of new gullies to match revised kerb alignments.

It has been confirmed that foul drainage loading and building surface water drainage will remain per the existing site configuration. Whilst a remote connection agreement may be necessary (confirmation of discharge point upon completion of the remaining drainage surveys), it will be made on a like-for-like basis, with no anticipated additional network loading envisaged.

4.7.6 External Lighting

The lighting design for the external areas provides a minimum illumination level for the primary bus circulation route through the bus station, with enhanced values at the formalised pedestrian crossings. Lower levels of illumination are proposed at the extremities of the site, where little or no pedestrian activity is anticipated (such as the landscaped areas near the perimeter). The building entrance areas and the bus boarding areas in close proximity to the main building have been designed as an extension to the building lighting design to ensure that lighting spill through the concourses glazing is properly considered and that the lighting levels at the building entrances meet the required levels to enhance natural security.

The lighting design for the external areas of the bus station has been undertaken in accordance with the following standards:

- BS5489-1:2020
- BS EN 1264-2:2014
- BS EN 13201-2:2015

BS EN 1264-2:2014, was used for the primary bus circulation area requirements. 20 lux with a minimum uniformity of 25% is to be provided.

BS EN 13201-2:2015 was used for the lighting design at pedestrian crossings. This standard prescribes the minimum requirements for conflict areas and provides a class of lighting higher than for the other

parts of the bus circulation area. Class C1 from Table 2 has been applied, providing a minimum of 30 lux with a uniformity of 40%.

The LED lighting is to have a minimum 60Ra Colour Rendering Index.

Reliance on other lighting sources which surround the bus station site has not been made given that the condition, maintenance and hours of operation of these are not within control of the bus station management.

A DALI lighting control system is specified to allow for full addressable control of all light fittings. The external luminaires shall be connected to the building's internal DALI system via local DALI controllers within each feeder pillar, allowing the internal and external lighting systems to work together. All DALI controllers shall be linked via the building's ICT network.

External lighting shall generally operate in hours of darkness, with operating hours configured within the DALI system. The system shall also link with photocells positioned externally around the building to ensure luminaires are not activated when daylight levels are deemed sufficient.

All fittings and wiring are to be vandal resistant to deter criminal attack.

4.7.7 Other Site Services

The MEP team has designed and detailed the infrastructure required for mechanical, electrical and plumbing within the bus station's external areas.

A new external electrical service route around the site's perimeter is proposed. This external route will provide supplies for electrical equipment, external lighting & communications cabling. Power & communications will be segregated in different ducts to remove any "crosstalk" issues between the systems.

Electrical vehicle charging points will be provided at the two contractor parking bays to the south of the site near the exit. New ducting will be provided from the main building, with supplies provided via distribution boards located in the plant room. Conduit for possible future provision of EV charging to the bus stands / layover areas is provided.

Feeder pillars will be located around the site's perimeter to provide local power and data supplies to external equipment (speed cameras, lighting, CCTV, etc.). Feeder pillars will be fitted with consumer units, network switches and associated control equipment to allow external systems to link in with the internal systems.

External CCTV cameras will be Bosch-manufactured Pan-Tilt-Zoom cameras to match the internal cameras proposed for the interior refurbishment. CCTV cameras will be mounted on posts to provide maximum coverage to the external areas of the bus station.

4.8 Crime Prevention Statement

4.8.1 Design Out Crime and Terrorism Consultation

As part of the Planning Pre-Application and scheme design process, advice on security was received from the West Yorkshire Police, Kirklees District, Designing Out Crime Officer. Additional advice was provided from the NE Counter Terrorism Unit in consideration of planned future changes to legislation dealing with Public Realm security.

A series of potential security improvements have been identified and included within the proposed designs. Liaison is currently ongoing with West Yorkshire Police in development of a full Crime Prevention Strategy.

4.8.2 General Approach to Security

Whilst details of the full crime and terrorism prevention strategy are still under development in liaison with West Yorkshire Police and not yet recommended by WYP for public release, the general approach to design in support of this strategy includes the following best practice design principles:

- Provision of excellent natural sight lines throughout and around the bus station, supported by CCTV coverage.
- Provision of new soft landscaping which is designed to avoid concealment, along with defensible planting to help deter unauthorised access across the bus runways.
- Re-design of the retail units to provide the potential for improved natural surveillance of the adjacent public space.
- Increased levels of natural light within the building and improvements in the uniformity, coverage and colour rendering index of the building and site artificial lighting.
- Reconfiguration of the Security and Bus Station Manager's Offices to provide more flexibility for security patrols of the concourse without the office being left unmanned.
- Provision of a new customer information desk which offers the potential for further staff supervision of the passenger concourse.
- Provision of emergency help points within the passenger concourse.
- Flexibility in lockdown and opening of the bus station entrance doors via a remote door locking system, to restrict access or to facilitate emergency evacuation in the event of a security or terrorist threat.
- Visual 'opening up' of the Aldams Road wall to provide better natural sight lines into and out of the bus station site for security.
- Specification of robust materials, including upgraded glazing systems, claddings and fixtures and fittings.

4.9 Sustainability

4.9.1 General Principles

The development is to promote sustainable construction as part of Kirklees Council's commitment to achieve net zero carbon by 2038. A Climate Change Statement is provided within the Jacobs Planning Statement, along with further details of the sustainability and Carbon reduction Targets.

The following outlines the general principles which have been adopted for sustainable and environmentally responsible construction.

4.9.1.1 Re-use of Existing Structures

One of the most effective means of sustainable development is to manage construction waste and to re-use existing materials and structures rather than to demolish and re-build.

Following assessment of the existing bus station structure it was determined that, whilst the claddings, glazing systems and other components were at end of life, the above and below ground structures of the bus concourse remained in serviceable condition and could be retained to form the basis of the new facility.

The existing retail unit and mall structures were older than the rest of the bus station and were considered unsuitable to accommodate the upgraded loads required for the new thermally insulated claddings, roofing systems and parapets. The mall and retail unit structures also presented massing, aesthetic, serviceability and pedestrian circulation issues which have been commented on elsewhere in this statement. It was consequently determined that the existing Mall and Retail Unit structures should be demolished in order to deliver the full benefit of the transformational scheme proposals.

The use of a lightweight stone veneer rainscreen cladding system permits overcladding of the existing concourse structure without excessive increase in structural loading, which would, with traditional stone construction, necessitate substantial strengthening of the existing structures and procurement of increased amounts of new steel structure.

The introduction of louvred, rather than solid, parapets to the bus concourse helps reduce wind loads on the existing structure and enables structural strengthening to be kept to a minimum.

4.9.1.2 Improved Thermal Insulation and Solar Control

To minimise carbon emissions, all existing and new heated areas within the bus station are to be constructed or upgraded to meet the u-value requirements and air permeability standards which are defined for new construction within Building Regulation Approved Document L. The insulated

construction separates heated accommodation from the outside air and also separates the heated accommodation from areas within the bus station which are unheated, such as the concourse and mall.

In addition to insulation of the heated areas there are also u-value targets set for the unheated enclosures, including the passenger concourse and mall, to reduce overheating levels and to help control temperature fluctuations. Computerised thermal modelling has been undertaken by Jacobs to determine the thermal and ventilation performance of these areas and the u-value targets have been set accordingly.

Double glazing systems with solar control interlayers have been specified in accordance with the findings of the thermal model, and the ETFE roofing has been specified with defined g-values and light transmittance values to establish the extent of fritting required to control solar gain and glare.

4.9.1.3 Glare Control

A Glare control strategy is implemented using a combination of occupant operated blinds and fritted glass / ETFE. Occupied spaces are to have suitable levels of daylight, either direct from external windows or from borrowed light from the main mall and concourse spaces.

4.9.1.4 Natural Ventilation

A natural ventilation strategy for the concourse and mall have been designed in accordance with the computerised thermal modelling which has been undertaken.

A combination of high-level louvres and opening windows, both of which are controlled by temperature sensors linked to the Building Management System, permits cross flow of ventilation within the passenger concourse and mall areas, removing any requirement for mechanical ventilation from these main spaces.

4.9.1.5 Energy Efficient Services

A complete strip-out and refurbishment of the MEP systems is proposed in order to upgrade the existing dated and inefficient services to achieve full compliance with current design standards.

New energy efficient LED lighting is to be provided throughout the bus station. Where a large quantity of glazing is provided (generally in the concourse and mall circulation areas) daylight linking via photocells is to be provided ensuring daylight is used as the primary source when sufficient daylight is provided.

Internal lighting systems are designed to minimise light spillage beyond the envelope of the building. This includes minimisation of any undesired spillage of light through glazed facades of the main concourse.

4.9.1.6 Active Energy Generation

New arrays of Photovoltaic Panels are to be provided on the south facing roof of the bus station and on the new retail unit roofs to provide renewable energy which will supplement the incoming grid supply.

A new Air Source Heat Pump is to be provided.



Figure 81 Aerial View showing new photovoltaic Panels

4.9.1.7 Encouraging Sustainable Travel

One of the main goals of the refurbishment project is to improve the passenger experience and to encourage greater uptake in the use of public transport and other sustainable travel modes. In addition to the direct improvements in bus facilities which are proposed, active modes of travel such as cycling and walking are enhanced by the scheme proposals.

- Covered and secure staff and public cycle storage facilities are to be provided and suitable showering facilities provided for staff.
- Improved paving, pedestrian crossings and enhanced public realm are provided to make walking a more attractive travel mode in and around the new bus station.
- Improved real time passenger information, linked to the rail station arrivals and departures to help encourage transfer between rail and bus modes of travel.

4.9.1.8 Electric vehicles

Provision for electric car and light goods vehicle charging is made adjacent to the staff and contractor parking bays at the southern boundary of the site.

Details of proposed electric bus fleets are not yet known and it is currently considered that EV charging will likely be undertaken at the depots rather than at the bus stations. However conduit for future cable routing is to be provided to layover and bus stands to minimise disruption should 'top-up' electric bus charging be introduced at the station at a later date.

4.9.1.9 Biodiversity

The removal of the existing coach stand and rationalisation of the vehicle circulation areas will permit a significant increase in the quantity of soft landscaping within the site area.

The new design aims to improve biodiversity value by the provision of a substantially increased area of species rich soft landscaping. Additional ornamental planting will help improve the aesthetics of the site whilst a green roof will provide additional biodiverse habitat at roof level. Low nutrient soils will be used to help reduce the management requirements of the grassland and improve the cover of native wildflowers.

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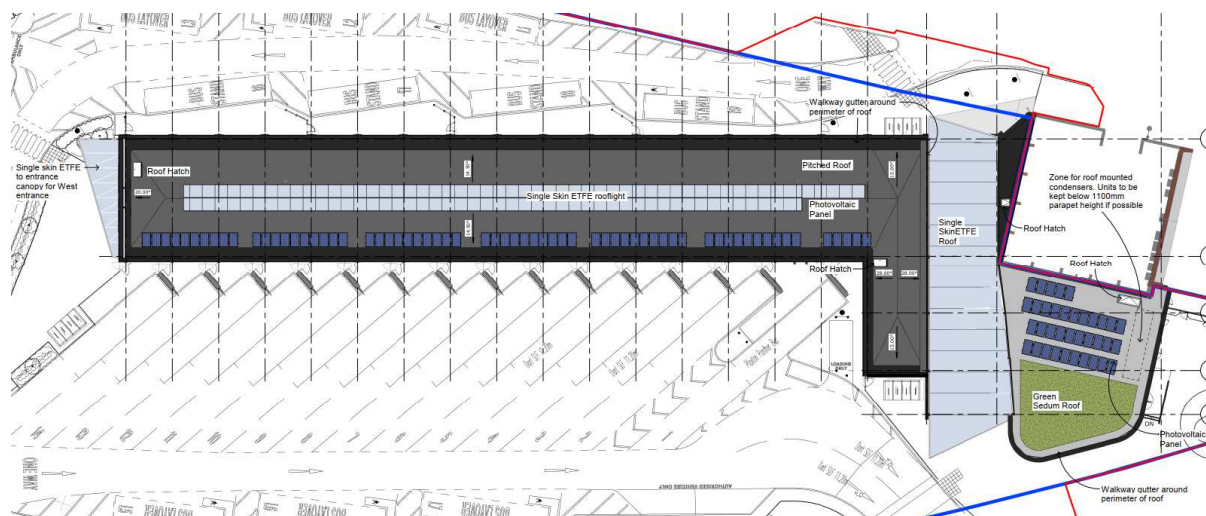


Figure 82 Proposed roof plan, showing PV panels and green roof.

A Biodiversity Net Gain Assessment has been undertaken by Jacobs and WSP. The report summarises that “the scheme represents and net gain of 2.20 habitat units (395.05%) and will generate an additional 0.13 hedgerow units”. Please refer to the submitted Biodiversity Net Gain Report for further details.

A bat survey has been undertaken and indicates several areas where bat roosting may be present. Verification will be sought through commissioning of a further emergence survey. Provisional allowance for future incorporation of bat and swift nesting boxes within the new landscaped area has been made within the design, however locations, if required, will need to be confirmed once the outputs from the emergence survey are known.

4.9.1.10 Sustainable Drainage and Flood Risk

Whilst an extensive new sustainable drainage measures not proposed due to the scheme being a refurbishment of the existing facility, the increase in soft landscaping within the site area reduces the quantity of water being disposed of via the existing below ground drains and provides a tangible improvement over the existing facility.

The majority of the site and the whole of the building falls within Flood Zone 1 (1 in 1,000 annual probability of river flooding). The southern end of the external site area falls within Flood Zone 2. Potential flooding of this Zone 2 area does not pose a significant risk of damage nor would disruption to bus services by flooding of this zone be made any worse than would already have been caused by flooding of the immediately adjacent local road network.

Further details of the flood risk and sustainable drainage approach can be found within the Jacobs Planning Statement.

4.9.2 Sustainable Material Selection

4.9.2.1 Stone

As a quarried material, the stone is not a fully renewable choice and care has been taken to minimise the quantities used whilst providing an aesthetic appearance that is in keeping with the solid stone buildings elsewhere throughout Dewsbury Town Centre. The proposed StoneLite rainscreen system provides a thin veneer of the stone, bonded to a re-cycled aluminium support framework. Large areas of façade coverage can be achieved with significantly less quarried stone than with more traditional construction techniques.

4.9.2.2 Glazing and Metal Cladding

It is proposed that glazing systems are to use recycled aluminium for the framing members and that the zinc cladding is to be from reclaimed sources where possible.

4.9.2.3 External Works

Recycled aggregate will be considered for the sub-bases of the external hardscape areas and for the foundation and ground floor constructions of the new retail units, with the potential for re-use of the aggregates from demolition of the existing retail units being considered to also avoid transfer of waste material off-site or to landfill.

4.9.2.4 General Sustainable Standards for Material and Component Selection

As the detailed specification progresses, we will ensure, wherever possible, that:

- We consider sustainable materials or product substitutes including reclaimed products, secondary materials, local / regional sourcing, lower maintenance requirements and enhanced durability.
- We select products which do not contain carcinogenic, mutagenic and reproductive disruptor ingredients and products which are not toxic to the environment.
- We select products where the manufacturer is certified by a relevant third party (e.g. ISO 14001, BES 6001, Ethical Trade initiative (ETI), Forest Stewardship Council (FSC) / Programme for the Endorsement of Forest Certification (PEFC) with full chain of custody.
- All paints and varnishes are to have limited Volatile Organic Compound content in accordance with EU Directive 2004/42/CE ('Paints Directive') and tested to BS EN ISO 11890-2:2013 – Paints and Varnishes – Determination of VPC content, Part 2 – Gas Chromatographic method.
- Any components, materials and finishes which contain traces of Formaldehyde are to be to Formaldehyde E1 class.
- Flooring adhesives and other adhesives are to be substantially free from carcinogenic or
- Where possible, materials are to be Green Guide rated A or better.
- All insulations are to be Green Guide Rating A or better and are to be responsibly sourced to BES 6001 / ISO14001.
- Vulnerable areas of the building are to be adequately protected against damage (e.g. vulnerable internal wall corners are to be provided with corner protectors).
- The relevant building elements incorporate appropriate design and specification measures to limit material degradation due to environmental factors.
- Water consumption is limited as follows:
 - Kitchenette taps – 5 Litres / minute
 - Domestic sized dishwasher – 12 litres / cycle
 - WC – 4 litres flush volume
 - Wash Basin Taps – 4.5 litres / minute
 - Showers – 6 litres / minute

4.9.3 Contractor Responsibilities

The contractor is to demonstrate that they are fully aligned with the sustainable aspirations for the project and can deliver the physical procurement and build of the project in a sustainable and environmentally responsible manner.

Please refer to the Section 6 of this report and to the Jacobs Planning Statement for more information on the sustainability commitments which are being requested as part of the contractor's contractual obligations.

5.0 STATEMENT OF COMMUNITY INVOLVEMENT

5.1 Engagement Progressed to Date

5.1.1 General Engagement

West Yorkshire Combined Authority has undertaken a wide range of Public and Stakeholder Consultation including:

- Members of the WYCA Transport Committee
- Members of Kirklees Cabinet,
- Ward Councillors from Dewsbury East Ward
- Dewsbury Town Board, including political and business stakeholders
- Bus Operators
- Accessibility Groups
- Members of the Public (via a Your Voice on-line Consultation)

The intent of this first round of consultation was to gauge support for the general principles of the proposed development and to receive comment which would shape the further development of the proposals.

5.1.2 Your Voice Event

Your Voice is a consultation and engagements platform to host all Combined Authority engagement events. Residents are able to register and receive email about projects they are interested in or have been previously engaged with.

Between Thursday 22nd July 2021 and Sunday 12th September 2021, the West Yorkshire Combined Authority, in partnership with Kirklees Council, sought feedback on the proposed transformation of the Dewsbury Bus Station building and its surroundings; including an improved interior, better accessibility and upgraded entrances. Feedback was sought on initial early-design proposals for the bus station and has helped shape the development of the more detailed plans which are now being submitted for Full Planning permission.

The event was promoted via a wide range of media, including press release, social media, newspaper advertising, direct mail to local stakeholders and interest groups, Flyers, Metrolink helpline, Freepost, Your Voice email, Real Time bus information screens and Posters within the existing bus station.

For full details of the engagement event and its outcomes and responses, please refer to the 'Transforming Dewsbury Bus Station Public Consultation 2021 Consultation Report' which is contained within **Appendix B** of this Design and Access Statement.

5.2 Proposed Engagement

Following the completion of further project development and design work, a new round of public engagement was launched on 22 June 2023. This engagement will last six weeks and close on 2 August 2023.

This engagement provides another opportunity for the public to express their views on the project, and allows them to comment on the updated detailed design features which resulted from accommodating feedback from the first round of engagement, including:

- Seating and waiting facilities.
- Accessibility improvements including wayfinding lines, a Changing Places toilet, smart timetable information (or 'head of queue') with audio and braille information.
- New bus and rail real time information and bus stand design.

- Quiet room for members of the public who need to get away from busier areas of the bus station. This can be particularly useful for people with neurodivergence, people with disabilities and anyone in need of a moment of quiet.
- Safety and security features, including more CCTV cameras and new help points.
- Increased levels of natural lighting from the new windows and part-glazed atrium roof.
- A new customer service desk on the concourse.

5.2.1 Pre-engagement events:

Pre-engagement events with political stakeholders were held at Councillor briefing sessions via Teams on 19th and 21st June.

5.2.2 Engagement events:

5.2.2.1 Live Events

The second round of engagement events has now commenced. The following events have been undertaken to date.

- 30th June – Schools engagement at Dewsbury Bus Station (DBS)
- 27th June – Public webinar via Zoom
- 5th July – Drop in event at Dewsbury Market
- 6th July – Public webinar via Zoom

Further Drop in events and accessibility workshops are planned throughout July 2023.

5.2.2.2 Social media

Extensive use of Social media is being made to help promote the current round of community involvement, including:

- Mayor's social media channels - pre-record video promoting the consultation.
- Twitter - organic (Metro, CA, Kirklees Council)
- Facebook - organic (Metro, CA, Kirklees Council)
- Instagram - organic (Metro, Kirklees Council)
- LinkedIn - organic (CA, Kirklees Council)

5.2.2.3 Website / email

A further Your Voice Consultation event is live at the time of submission of this Planning Application. The event is supplemented via a range of web based communication, including:

- Combined Authority intranet
- Metro Messenger e-newsletter
- CA partner e-newsletter
- LEP e-newsletter
- Stakeholder emails
- CA internal comms

5.2.2.4 Consultation Strategy

A formal consultation strategy has been prepared in response to feedback on the first round of engagement and is contained within **Appendix C** of this Design and Access Statement. It should be noted that this remains a live document and is subject to further development and change, however the strategy proposes means to reach out to a more diverse range of respondents in order to capture the widest range of input into the next stage of detailed design.

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6.0 CONSTRUCTION CONSIDERATIONS

6.1 Sequencing and Temporary Facilities

6.1.1 General Requirements

The bus station is to remain operational throughout the refurbishment period and any relocation of services to temporary stands is to be wholly contained within the site area.

A minimum of 10 bus stands are to be provided at all times during demolition and construction, along with suitable provision for staff accommodation and provision of travel information, security supervision and access to passenger toilet facilities.

Discussions are currently ongoing with the Bus Operator to determine if temporary accommodation will be required for drivers throughout the construction period.

Safe access is to be provided for passengers and buses in to and out of the bus station at all times.

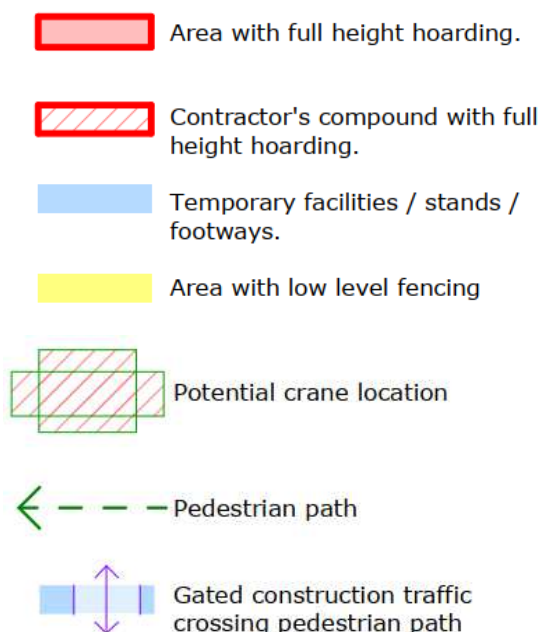
6.1.2 Construction Phasing Proposals

The RIBA Stage 3 design team has undertaken liaison with WYCA and the bus station facilities managers to determine an indicative approach to construction phasing. The proposals provide confirmation that a safe method or redeveloping the bus station site is achievable whilst maintaining provision for bus services wholly on site.

It should be noted that, whilst these proposals establish the viability of retaining bus services on site during construction, the contractor will be tasked with developing the phasing and temporary works arrangement further to suit their proposed construction methodology. Accordingly, these proposals should be considered indicative only, with future development and improvement in the sequencing and safety arrangement being requested from the appointed contractor as part of their Construction Management Plan

The indicative phasing proposals are summarised as follows:

6.1.2.1 General Key to Phasing Drawings



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6.1.2.2 Phase 1 – Temporary Facilities, Retail Units and Mall Construction

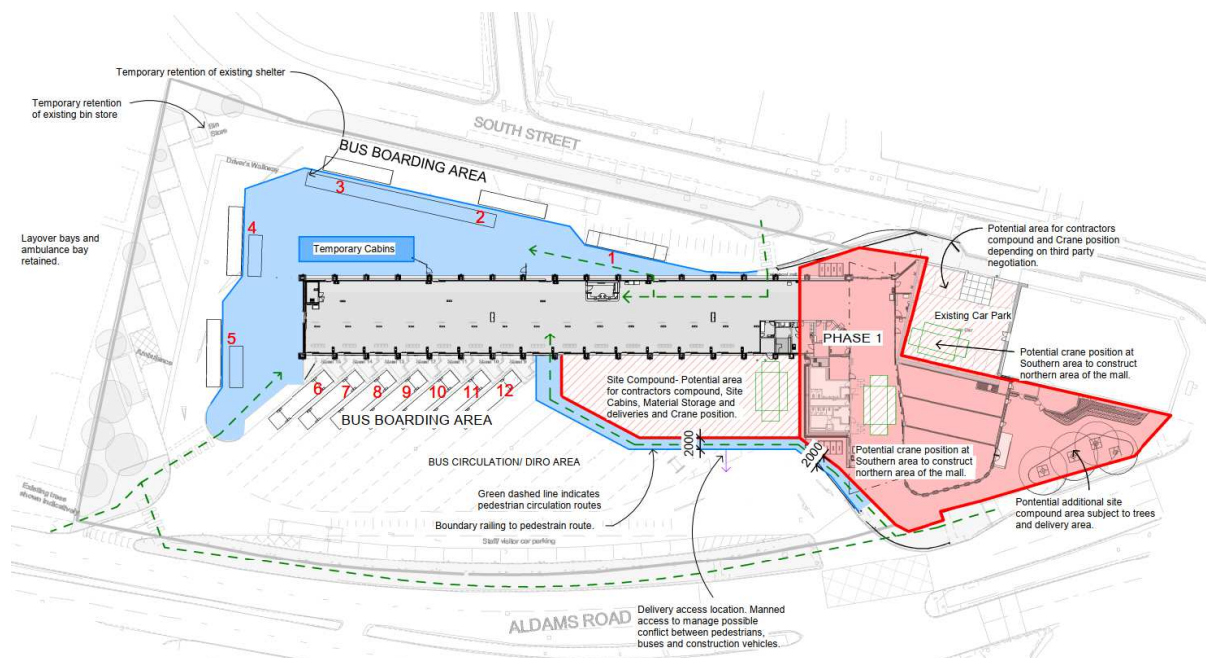


Figure 83 Phase 1 Plan – Temporary Facilities, Retail Units and Mall Construction

- Construction of temporary sawtooth bus stands (labelled 1-5 on the plan) and temporary paving overlay (shaded blue).
- Construction of temporary Cabins, to include staff office and public toilets. Note that waterless toilets or new drainage connections will be required. New Electric and water connections to be provided.
- Construction of temporary pedestrian access walkway from the South Entrance (shaded blue) and associated temporary barrier rails to separate the walkway and bus manoeuvring area.
- Construction of site hoardings around Retail Units, Mall and the site compounds
- Demolitions to Mall and Retail Units
- Construction of:
 - New Mall and canopies
 - Retail Units
 - Roof access stairs
 - Changing Places facility
 - ATM room
 - Quiet room
 - Cleaner's and General stores
 - Staff shower
 - Completion of MEP works (including to existing toilets and associated making good of fixtures and finishes). Note that access will also be required to the existing plant room during this phase.
 - Construction of external works / Bin Store enclosure in the public space facing Dewsbury Minster.
- Contractor's Security personnel required to monitor pedestrian access to North and South mall entrances during bus station operational hours.

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6.1.2.3 Phase 2 – Eastern End of Passenger Concourse

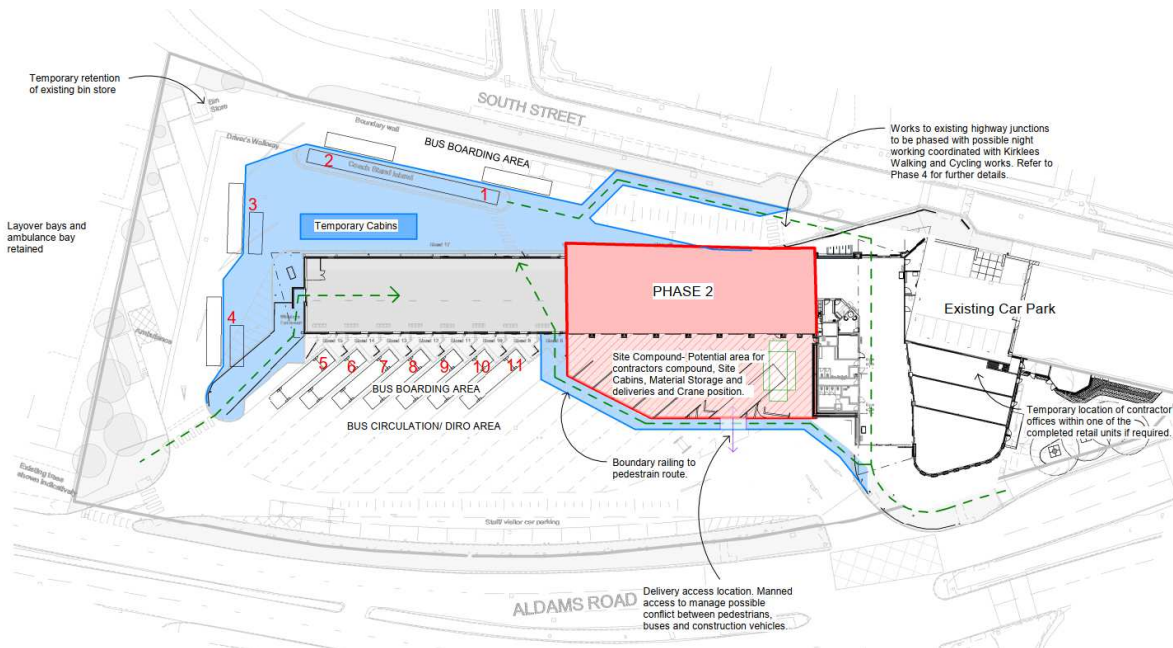


Figure 84 Phase 2 Plan – Eastern End of Passenger Concourse

- Completion of Phase 1 refurbishment and new build works to Mall, Retail Units and passenger / staff accommodation. Remove hoardings. Open Mall and Public Toilets to public.
- Construction of temporary walkway and crossing to North of Bus Station to provide direct link for pedestrians to access the temporary facility from South Street. To be complete with temporary fencing to separate pedestrians from the bus runways.
- Possible fit-out of one of the retail units to provide contractor's accommodation.
- Hoard off Phase 2 construction area and undertake refurbishment works to concourse, Security / Bus Station Manager's Office, Mess Room and Customer Information Desk. To include completion of bus overrun barriers within the Phase 2 area.
- Contractor's Security personnel required to monitor pedestrian access to North and South Mall entrances during bus station operational hours.

6.1.2.4 Phase 3 – Western End of Passenger Concourse

- Completion of Phase 2 works to the eastern half of bus concourse and associated bus overrun barriers. Remove hoardings and remove temporary crossings and footways from the north and south of the bus station.
- Open up the newly completed areas of concourse and associated bus bays for public access and bus arrivals and departures.
- Hoard off western end of concourse for Phase 3 construction. Form new external secure compound for contractor's materials, equipment, cabins etc.
- Undertake refurbishment works to concourse.

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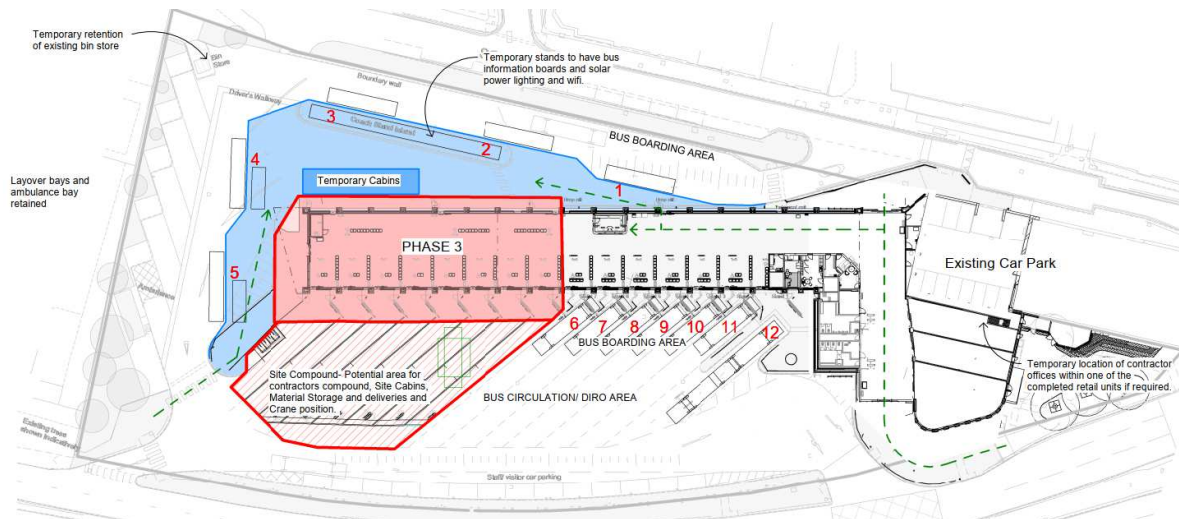


Figure 85 Phase 3 Plan – Western End of Passenger Concourse

6.1.2.5 Phase 4a – External Works to DIRO Bays

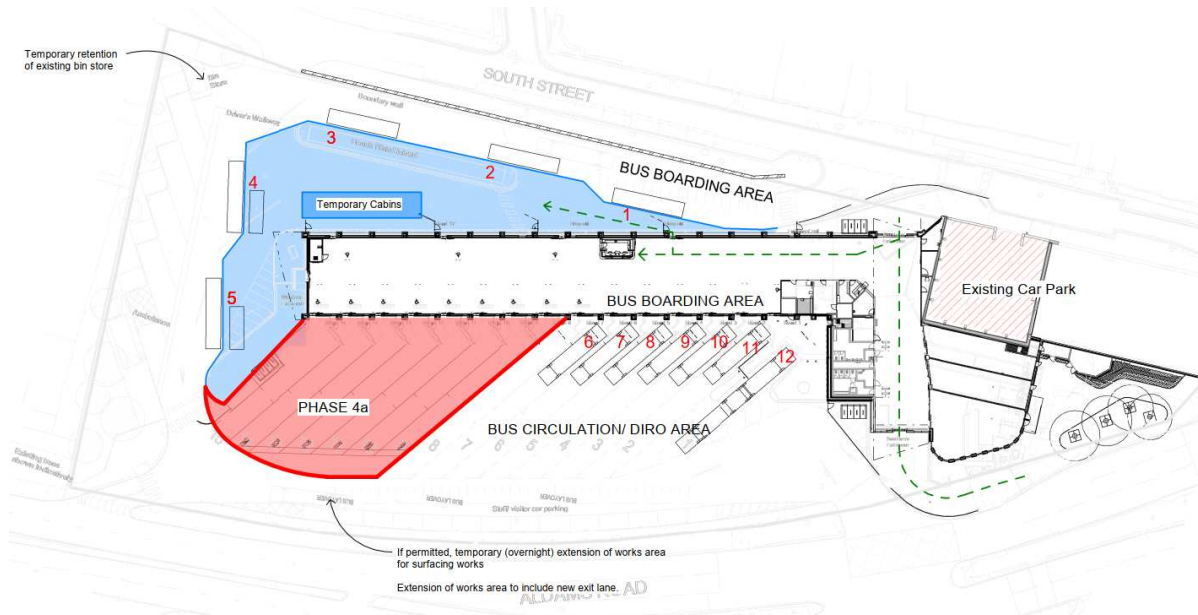


Figure 86 Phase 4a Plan – External Works to DIRO Bays

- Completion of Phase 3 works to the western half of the bus concourse. Main building works are now complete. Decommission main contractor’s site compound as only surfacing and external works construction equipment is to remain. Remove hoardings to main concourse.
- Construct runway surfacing and bus barriers to stands at western end of bus concourse.

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6.1.2.6 Phase 4b – External Works to DIRO Bays

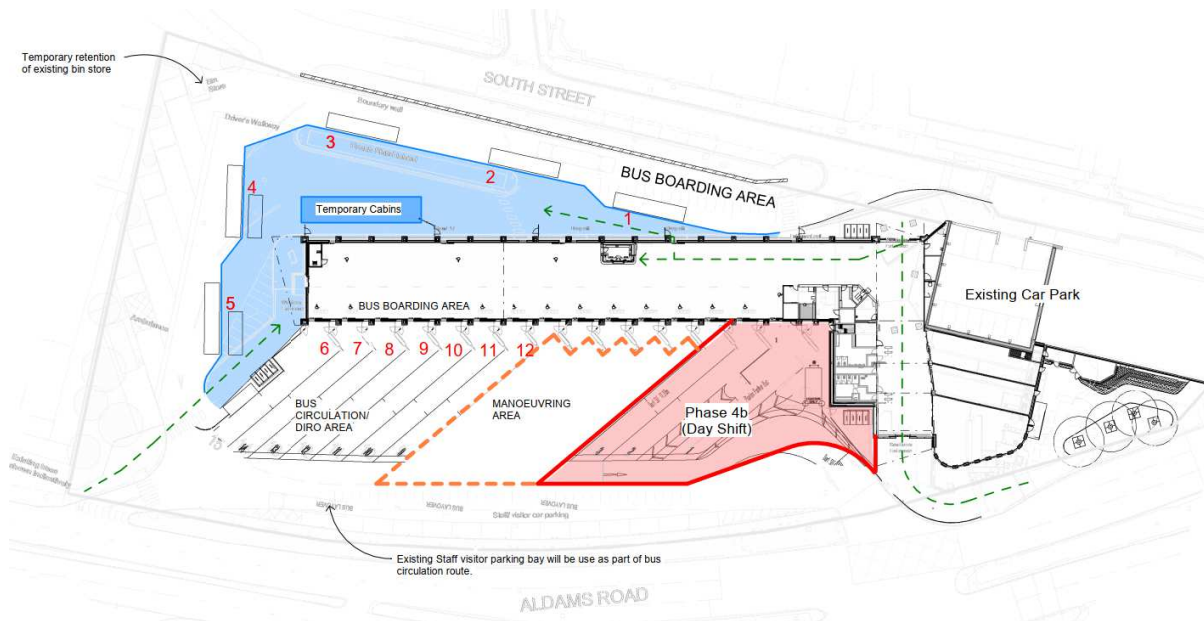


Figure 87 Phase 4b Plan – External Works to DIRO Bays

- Completion of Phase 4a resurfacing works.
- Bus bays to western end of bus station to be opened up for full bus and passenger access.
- Runway resurfacing works to progress to Phase 4b. A minimum of 5 stands to the west of the of works area are to be left unobstructed to permit buses at the western end of the DIRO bays to depart from their stands.

6.1.2.7 Phase 4c – External Works to DIRO Bays

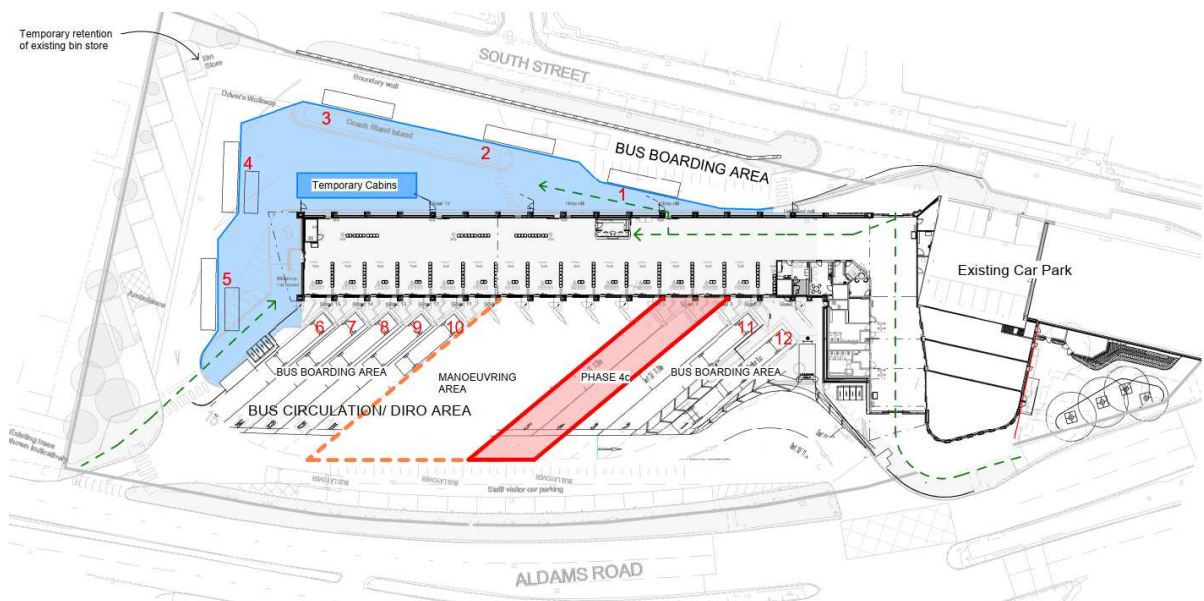


Figure 88 Phase 4c Plan – External Works to DIRO Bays

- Continuation of Phased re-surfacing of bus DIRO bays.
- A minimum of five bays to the west of the work area to be left unobstructed to permit buses to depart from the stands at the western end of the bus station.

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6.1.2.8 Phase 4d – Completion of External Works to DIRO Bays

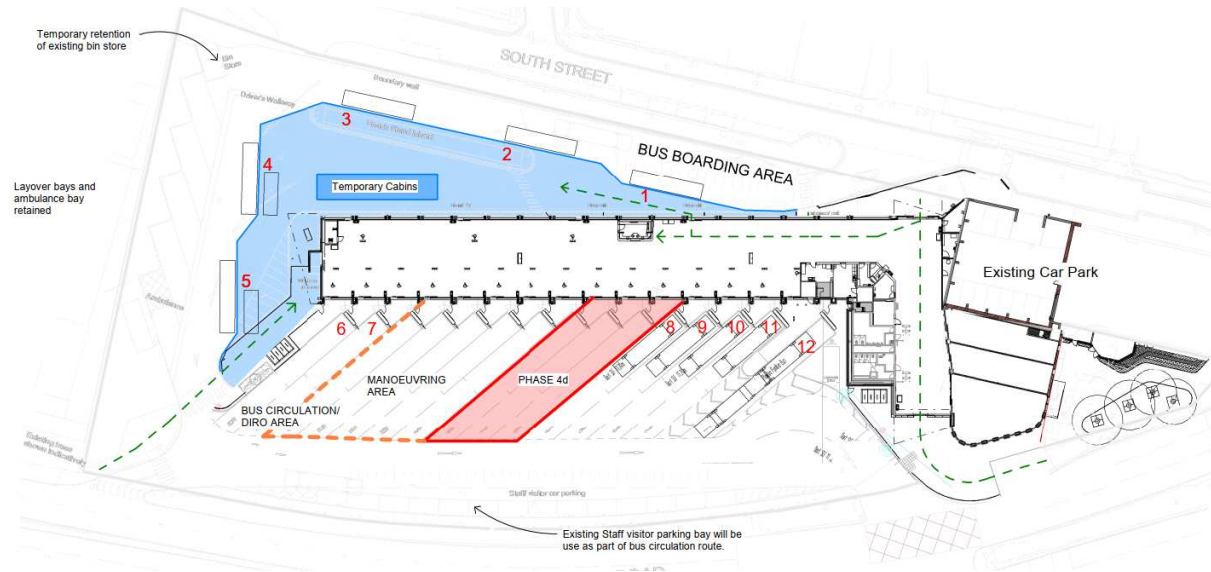


Figure 89 Phase 4d Plan – Completion of External Works to DIRO Bays

- Completion of phased re-surfacing of the bus DIRO bays.
- A minimum of five bays to the west of the work area to be left unobstructed to permit buses to depart from the stands at the western end of the bus station.

6.1.2.9 Phase 4e – Southern Access Re-surfacing

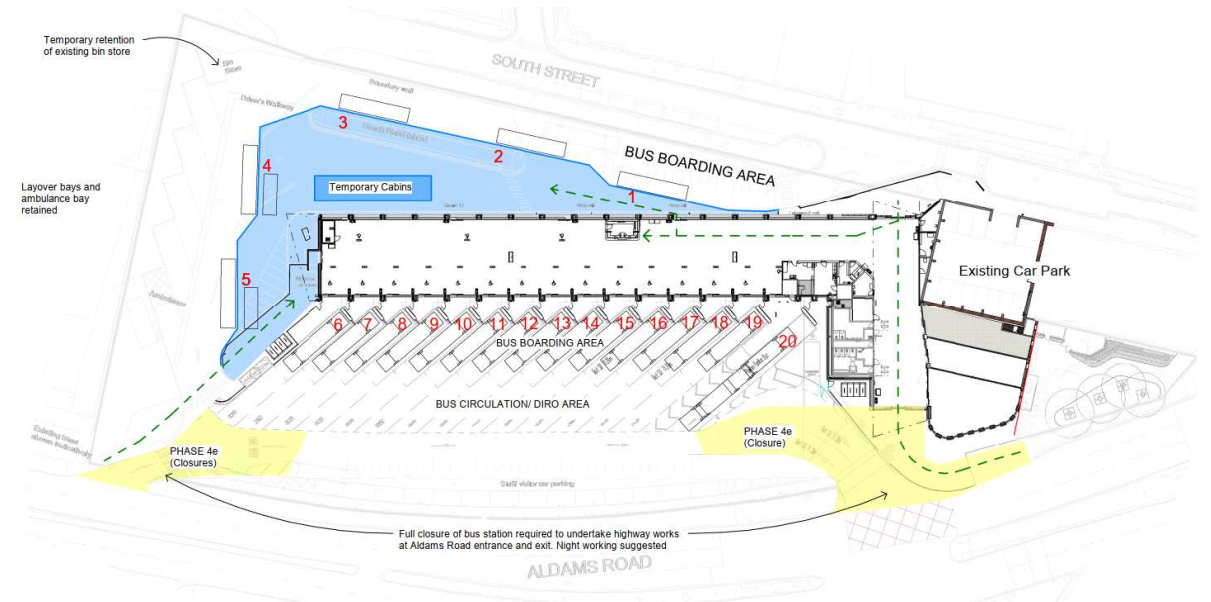


Figure 90 Phase 4e Plan – Southern Access Re-surfacing

- Temporary full closure of bus station to permit critical junction works to the South West Entrance and South East bus exits. Options for possible night working to be explored to avoid bus station closures, subject to planning permission conditions.
- External works areas (shown in yellow) to be maintained as small as possible to limit the duration of the bus station closure required. Potential to undertake more of the runway works during this period, subject to further detailed review by the contractor team.

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6.1.2.10 Phase 4f – Northern Access Re-surfacing / Remove Temporary Facilities

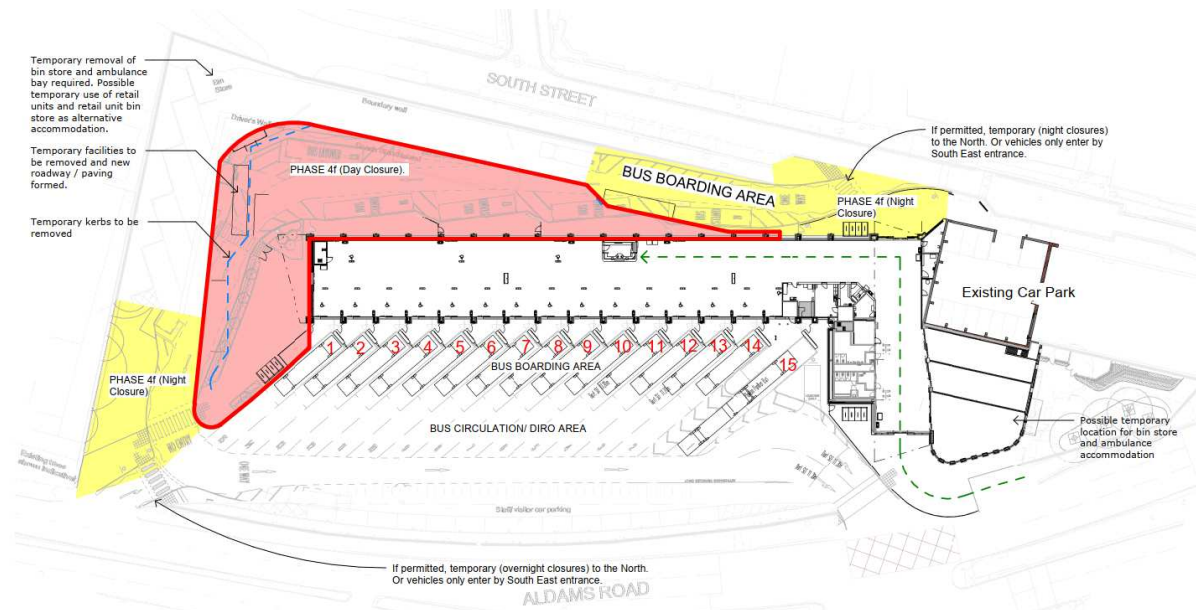


Figure 91 Phase 4f Plan – Northern Access Re-surfacing / Remove Temporary Facilities

- Temporary closure of northern access from South Street. Buses to be temporarily diverted to Aldams Road Entrance. DIRO bays remain fully operational. Options for possible night working to be explored to avoid closure of northern entrance during operational hours, subject to planning permission conditions.
- Resurfacing of critical areas at junction with South Street. Areas to be as small as possible to limit the duration of the bus station closure required. Potential to undertake more of the runway works during this period, subject to further detailed review by the contractor team.
- Decommissioning of temporary bus stands, removal of temporary cabins and removal of temporary paving to the north and west of the bus concourse.
- Undertake final paving and runway surfacing works to north and west of the bus concourse.

6.1.2.11 Phase 5 – Perimeter Layover Bays and Landscaping

- Completion of layover bays, ambulance bay, external bin store, perimeter landscaping and Aldams Road Wall.
- Decommissioning of temporary ambulance accommodation and bin store and final opening of new bus station development.

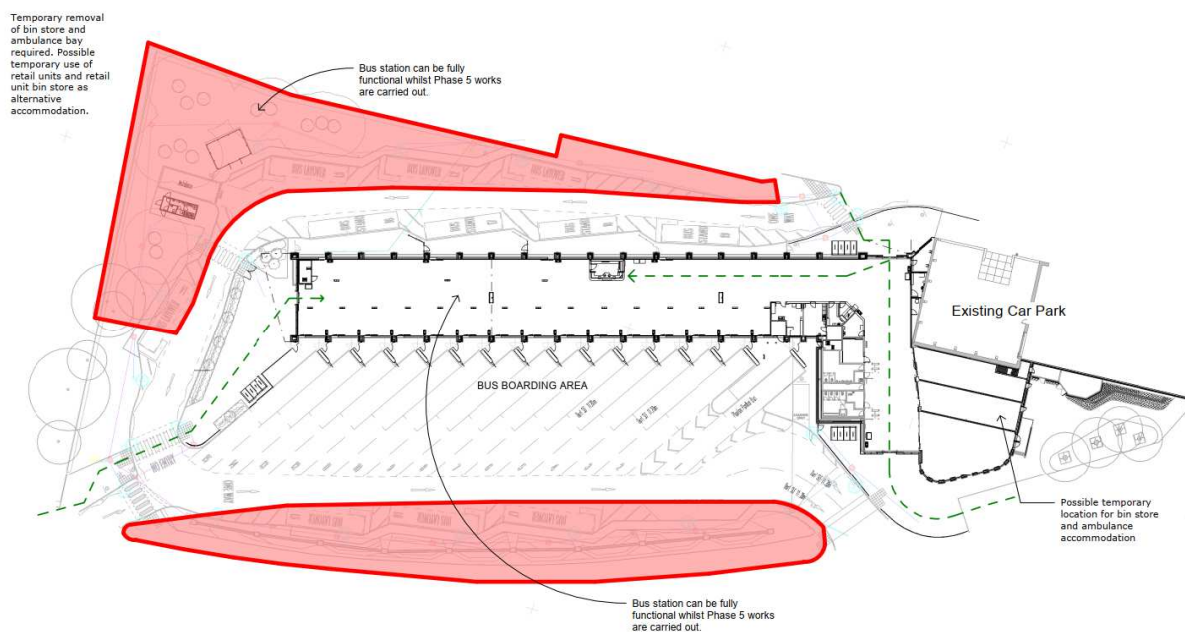


Figure 92 Phase 5 Plan – Perimeter Layover Bays and Landscaping

6.2 Construction Site Management

A full construction methodology will be requested from the main contractor prior to appointment. Several key measures to help ensure safety and minimise impact upon the local and wider environment and upon the public and adjoining owners have been identified throughout the design process and will be requested as part of the contractor appointment:

6.2.1 Construction Programme

The current envisaged programme milestone dates are:

- Appointment of Stage 4 Design Team / D&B Contractor – September 2023
- Completion of Stage 4 Designs – February 2024
- Commencement of Construction – August 2024
- Construction Completion – November 2025

It should be noted that these are currently target dates only and that statutory approvals, contractor procurement and contractor input into construction site management may impact upon the final dates achieved.

6.2.2 Site Boundary and Access

The site boundary for the construction site will be defined by the red line planning boundary.

Proposed construction access will be as defined in the Construction Access Management Plan and Bus Disruption plan, as summarised in the Jacobs Planning Statement. Construction vehicles will access the site by the existing vehicular entrance points from South Road and Aldams Road and will exit the site via the existing signalised exit point on to Aldams Road.

Where desire lines are changed or access routes narrowed, it will be a contract requirement for security personnel to supervise the arrangement and to enforce the temporary circulation routes.

6.2.3 Environmental Site Management

It is proposed that the principal contractor will implement the following:

- Responsible Construction practices (e.g. environmental management / considerate constructors)
- Responsible sourcing of materials (e.g. BES6001/ISO 14001)
- Construction Waste Management (construction resource efficiency /diversion of resources from landfill)
- Ecological Protection
- Pollution Management

6.2.4 Air Quality Management

A series of measures are being proposed to be implemented by the main contractor to alleviate any negative impact of the construction activities on the air quality of the site and its surroundings. These are as follows:

- Communication (display contact details for site manager to the public)
- Site management (record any complaints and any exceptional incidents that cause dust and/or air emissions on or off site and manage accordingly)
- Monitoring (undertake daily on and off site inspections and keep a log of findings)
- Preparing and maintaining the site (plan site so machinery and dust causing activities are away from receptors, erect solid screens/barriers around dust activities and cover/seed/fence stockpiles)
- Operating vehicles/machinery (no idling vehicles, Avoid the use of diesel or petrol powered generators)
- Impose and signpost a maximum speed limit of 10 mph on surfaced and unsurfaced haul roads and work areas)
- Operations (dust suppression techniques such as water sprays for cutting/grinding/sawing equipment, covered skips and minimise drop heights)
- Demolition (soft strip before demolition and effective water suppression)
- Earthworks (re-vegetate earthworks and exposed areas to stabilise surfaces)
- Construction (ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out)
- Track Out (use water assisted dust sweeper(s) on the access and local roads to remove, as necessary, any material tracked out of the site, avoid dry sweeping of large areas, ensure vehicles entering and leaving the site are covered to prevent escape of materials during transport and implement a wheel washing system)

6.2.5 Planning for Waste and Environmental Management

The proposed development addresses the issues of waste / resource management throughout the construction and operational stages of the project and has significantly reduced a potential waste stream by choosing to retain and refurbish the existing concourse structures rather than to replace them with new.

During the construction stage, the principal contractor will be required to devise a site waste management plan in accordance with the WRAP guidelines. This places responsibility on the contractor to set targets for waste generation and reduction of waste diverted from landfill. This process drives improvement in terms of the quantity of construction waste that is recycled and also the percentage of waste that is recycled or reused.

The contractor will also be obliged to provide and maintain a Construction Environmental Management Plan (CEMP) and Materials Management Plan (MMP) to help manage, control and record the environmental impacts of the construction. process.

Dewsbury Bus Station

Design and Access Statement



APPENDIX A: SUPPORTING PLANNING INFORMATION

DOCUMENT REFERENCE	DESCRIPTION	AUTHOR
Reports		
DBS-JSA-XX-XX-RP-A-00801	Design and Access Statement	JSA
B2382808-JAC-GEN-ZZ-RP-PL-0001	Planning Statement	Jacobs
B2382808-JAC-GEN-ZZ-RP-LO-0001	Dewsbury Bus Station Construction Traffic Management Plan	Jacobs
B2382808-JAC-GEN-ZZ-RP-TR-0001	Dewsbury Bus Station Transport Statement	Jacobs
B2382808-JAC-GEN-ZZ-RP-D-0001	Dewsbury Bus Station Refurbishment Flood Risk Assessment	Jacobs
B2382808-JAC-GEN-ZZ-RP-EN-0001	Biodiversity Net Gain Report	Jacobs
B2382808/RSA1/01 1	Dewsbury Bus Station Refurbishment – Stage 1 Road Safety Audit	Jacobs
B2382808-JAC-GEN-ZZ-RP-C-0001	Dewsbury Bus Station Refurbishment – Stage 1 Road Safety Audit Response	Jacobs
70077924-GEO-001	Dewsbury Bus Station - Desk Study and Coal Mining Risk Assessment	WSP
70077924-001	Ecological Constraints Assessment and Preliminary Bat Roosting Assessment	WSP
70089130-ARB-001	Arboricultural Assessment Report	WSP
Drawings		
DBS-JSA-ZZ-ZZ-DR-A-01800	Location Plan	JSA
DBS-JSA-ZZ-ZZ-DR-A-01801	Existing Site Plan	JSA
DBS-JSA-ZZ-ZZ-DR-A-01811	Proposed Site Plan	JSA
DBS-JSA-ZZ-ZZ-DR-A-02801	Existing GA Plan	JSA
DBS-JSA-ZZ-ZZ-DR-A-02802	Existing Roof Plan	JSA
DBS-JSA-ZZ-ZZ-DR-A-02811	Proposed GA Plan	JSA
DBS-JSA-ZZ-ZZ-DR-A-02812	Proposed Roof Plan	JSA
DBS-JSA-ZZ-ZZ-DR-A-02813	Main Building Demolition Plan	JSA
DBS-JSA-ZZ-ZZ-DR-A-02814	Concourse Accessibility and Passenger Information Concept	JSA
DBS-JSA-ZZ-ZZ-DR-A-03801	Existing Site Sections	JSA
DBS-JSA-ZZ-ZZ-DR-A-03802	Existing GA Sections, Sheet 1	JSA
DBS-JSA-ZZ-ZZ-DR-A-03803	Existing GA Sections, Sheet 2	JSA
DBS-JSA-ZZ-ZZ-DR-A-03811	Proposed Site Sections	JSA
DBS-JSA-ZZ-ZZ-DR-A-03812	Proposed GA Sections, Sheet 1	JSA

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DOCUMENT REFERENCE	DESCRIPTION	AUTHOR
DBS-JSA-ZZ-ZZ-DR-A-03813	Proposed CA Sections, Sheet 2	JSA
DBS-JSA-ZZ-ZZ-DR-A-04801	Existing Elevations Sheet 1	JSA
DBS-JSA-ZZ-ZZ-DR-A-04802	Existing Elevations Sheet 2	JSA
DBS-JSA-ZZ-ZZ-DR-A-04803	Existing Elevations Sheet 3	JSA
DBS-JSA-ZZ-ZZ-DR-A-04811	Proposed Elevations Sheet 1	JSA
DBS-JSA-ZZ-ZZ-DR-A-04812	Proposed Elevations Sheet 2	JSA
DBS-JSA-ZZ-ZZ-DR-A-04813	Proposed Elevations Sheet 3	JSA
DBS-JSA-ZZ-ZZ-DR-A-05801	Cycle Shelter / External Bin Store Detail	JSA
DBS-JSA-ZZ-ZZ-DR-A-05802	Retail Unit External Bin Store Detail	JSA
B2382808-JAC-XX-GF-DR-E-1111	General & Emergency Lighting Layout (Sheet 1 of 3)	Jacobs
B2382808-JAC-XX-GF-DR-E-1112	General & Emergency Lighting Layout (Sheet 2 of 3)	Jacobs
B2382808-JAC-XX-GF-DR-E-1113	General & Emergency Lighting Layout (Sheet 3 of 3)	Jacobs
B2382808-JAC-XX-GF-DR-E-1711	PV Layout (Sheet 1 of 3)	Jacobs
B2382808-JAC-XX-GF-DR-E-1712	PV Layout (Sheet 2 of 3)	Jacobs
B2382808-JAC-XX-GF-DR-E-1713	PV Layout (Sheet 3 of 3)	Jacobs
B2382808-JAC-GEN-XX-DR-L-3001	Landscape General Arrangement	Jacobs
B2382808-JAC-GEN-XX-DR-L-3002	Southern Wall and Planting	Jacobs
B2382808-JAC-GEN-XX-DR-L-3003	Hard Landscape	Jacobs
B2382808-JAC-GEN-XX-DR-L-3004	Soft Landscape Zone 4	Jacobs
B2382808-JAC-GEN-XX-DR-L-3005	Soft Landscape Zone 5	Jacobs
B2382808-JAC-GEN-XX-DR-L-3006	Soft Landscape Zone 6	Jacobs
B2382808-JAC-GEN-XX-DR-L-3007	Soft Landscape Zone 9	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3001	General Arrangement	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3002	Site Clearance and Demolition	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3003	Existing Site layout	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3004	Kerbs, Footways and Carriageway Pavement	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3005	Road Markings and Signs	Jacobs

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DOCUMENT REFERENCE	DESCRIPTION	AUTHOR
B2382808-JAC-GEN-XX-DR-ZZ-3006	Fencing, Guardrails and Street Furniture	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3007	Existing Services	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3008	Proposed Services	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3009	External Lighting	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3010	Proposed Drainage	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3011	Vehicle Tracking Sheet 1 of 5	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3012	Vehicle Tracking Sheet 2 of 5	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3013	Vehicle Tracking Sheet 3 of 5	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3014	Vehicle Tracking Sheet 4 of 5	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3015	Vehicle Tracking Sheet 5 of 5	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3016	Visibility from Southwest Crossing	Jacobs
B2382808-JAC-GEN-XX-DR-ZZ-3017	Visibility from Northeast Crossing	Jacobs

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APPENDIX B: 2021 PUBLIC CONSULTATION REPORT

Dewsbury Bus Station

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APPENDIX C: CONSULTATION AND ENGAGEMENT PLAN

