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Transport Interchange & Public Realm

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6.1 Transport Interchange Use / Amount

Use

An important aspect of this scheme is the creation of a new transport interchange for the station. As well as creating a new entrance on the eastern side of the station the transport hub will be linked by a new bus stop on Neasham Road and additional cycle storage. To the north of the station entrance will be a new drop off area for passengers and a short stay car park which is a significant improvement on the existing offering on the western side of the station.

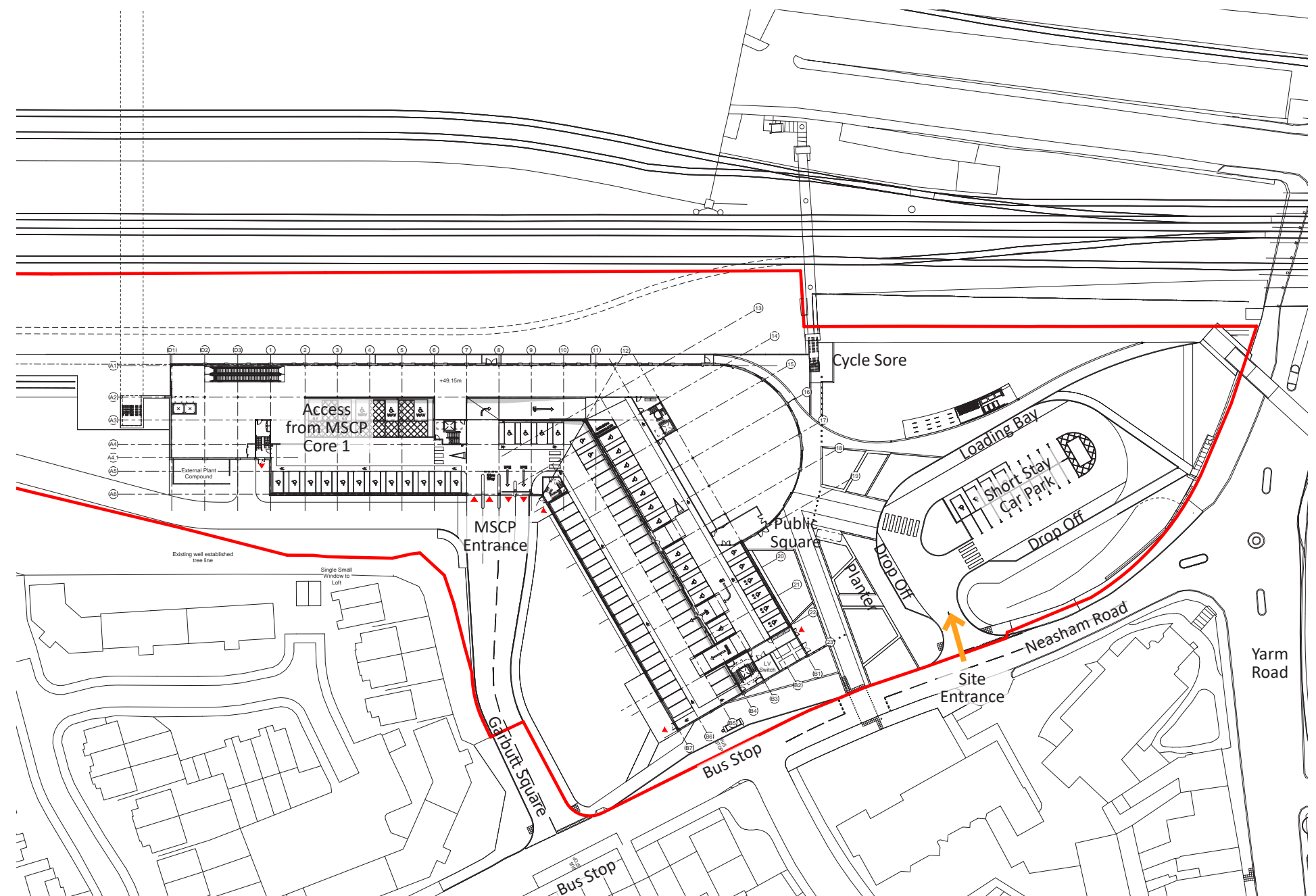
Access to the MSCP is provided by a realigned Garbutt Square. The entrance into the car park is widened to allow two cars in and two cars out at once.

The proposal will also include a high quality public square to the front of the station, including seating areas, raised planters and a plinth for some public art relating to the railway industry. Creating a new location for people to congregate in Darlington.

Amount

The total site area (within red line boundary) is 17,986m².

- 20 x Short stay parking spaces (including for accessible spaces)
- 2 x Drop off areas including an overflow drop off area
- 1 x Loading bay to service station concourse retail
- 1 x New bus stop to north bound Neasham Road plus an existing bus stop to the south bound carriageway
- Space for 4 x bus replacement service (agreed that drop off and short stay parking will be omitted in favour for bus replacement service)
- 20 x Cycle Storage (number and type TBC)



6.2 Proposed Scheme



6.3 Transport Interchange Vehicle Access

Vehicle Access

Vehicular access into the site is only possible via Neasham Road to the East. Due to the existing road layout and the retaining wall to the north of the site there is limited places for access into the site in addition to the required bus stop. There are two main vehicle access points into the site:

Garbutt Square:

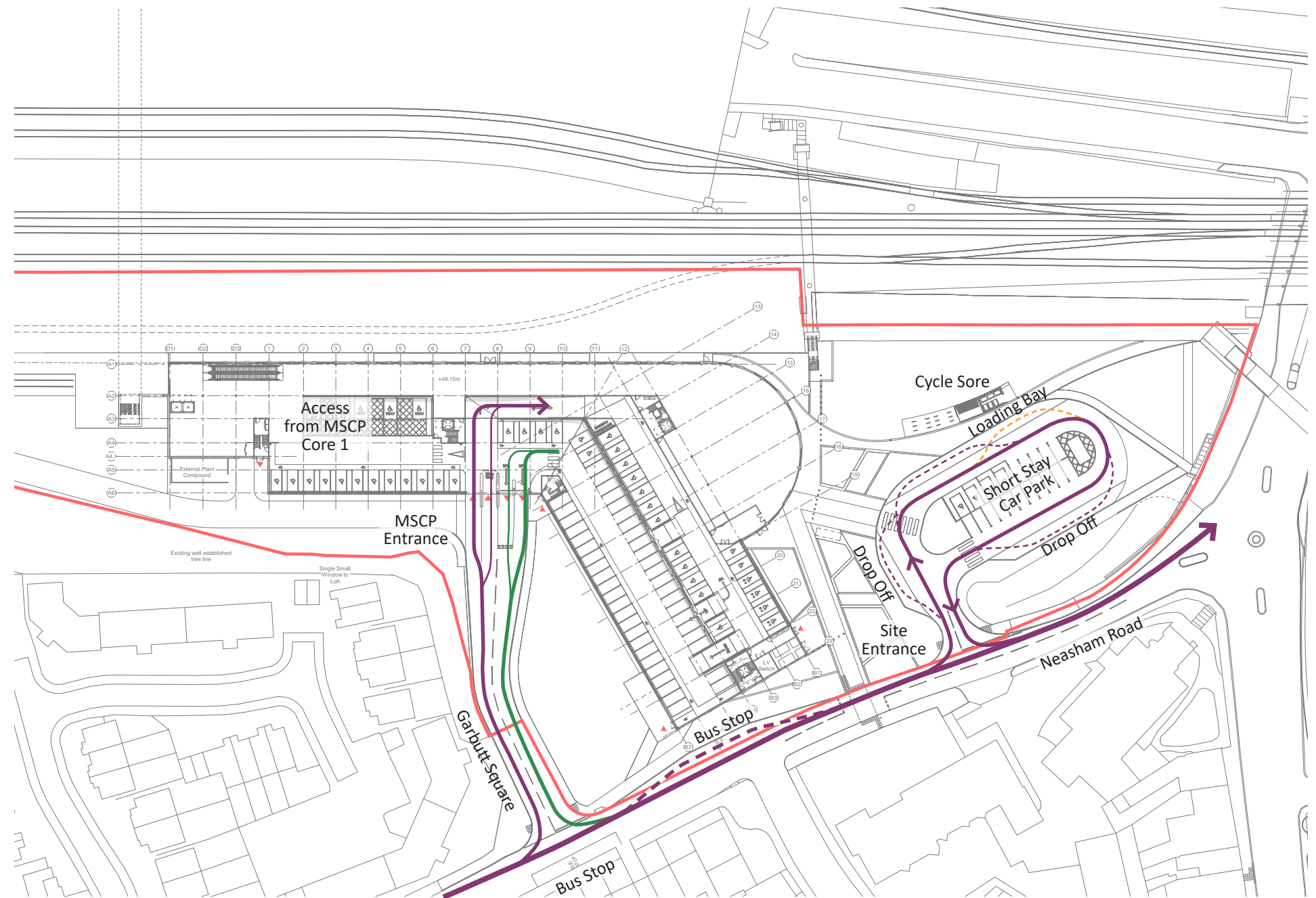
The MSCP vehicle access is via a realigned Garbutt Square to the south of Neasham Road. The road has been realigned to move it away from the existing residential properties as a way of mitigating any noise issues.

Short Stay:

A new entrance into the site is being introduced for the short stay car park and drop off. The location of the junction has been designed such that there is space between the two access points for a bus stop and a toucan crossing without affecting the visibility from the junction. As a result of the location of the access point we are proposing to demolish circa 15m of the retaining wall and to grade back the land behind it to create suitable visibility from the junction.

The short stay parking area has been designed for 20 vehicles including 4 accessible spaces. To the outside of the parking is a drop off lay by beside the station entrance as well as a secondary overflow drop off to the east. Also included is a loading bay to service the retail offerings in the station.

The drop off area has also been designed such that rail replacement buses can turn within the turning circle. When rail replacement buses are required the short stay parking will be closed, this will be managed by Network Rail. The turning circle will be able to accommodate 4 rail replacement buses.



Vehicle Routes within Site

For swept path analysis please refer to submitted drawings:

- 11590-008 Swept Path Analysis of Garbutt Square
- 11590-009 Swept Path Analysis of Proposal Access Arrangements

6.4 Transport Interchange Pedestrian Access

Pedestrian and Cycle Access

Safe pedestrian and cycle access into the site is imperative to encourage sustainable transport methods. As such please see the adjacent drawing which shows in blue the proposed cycle routes into the site.

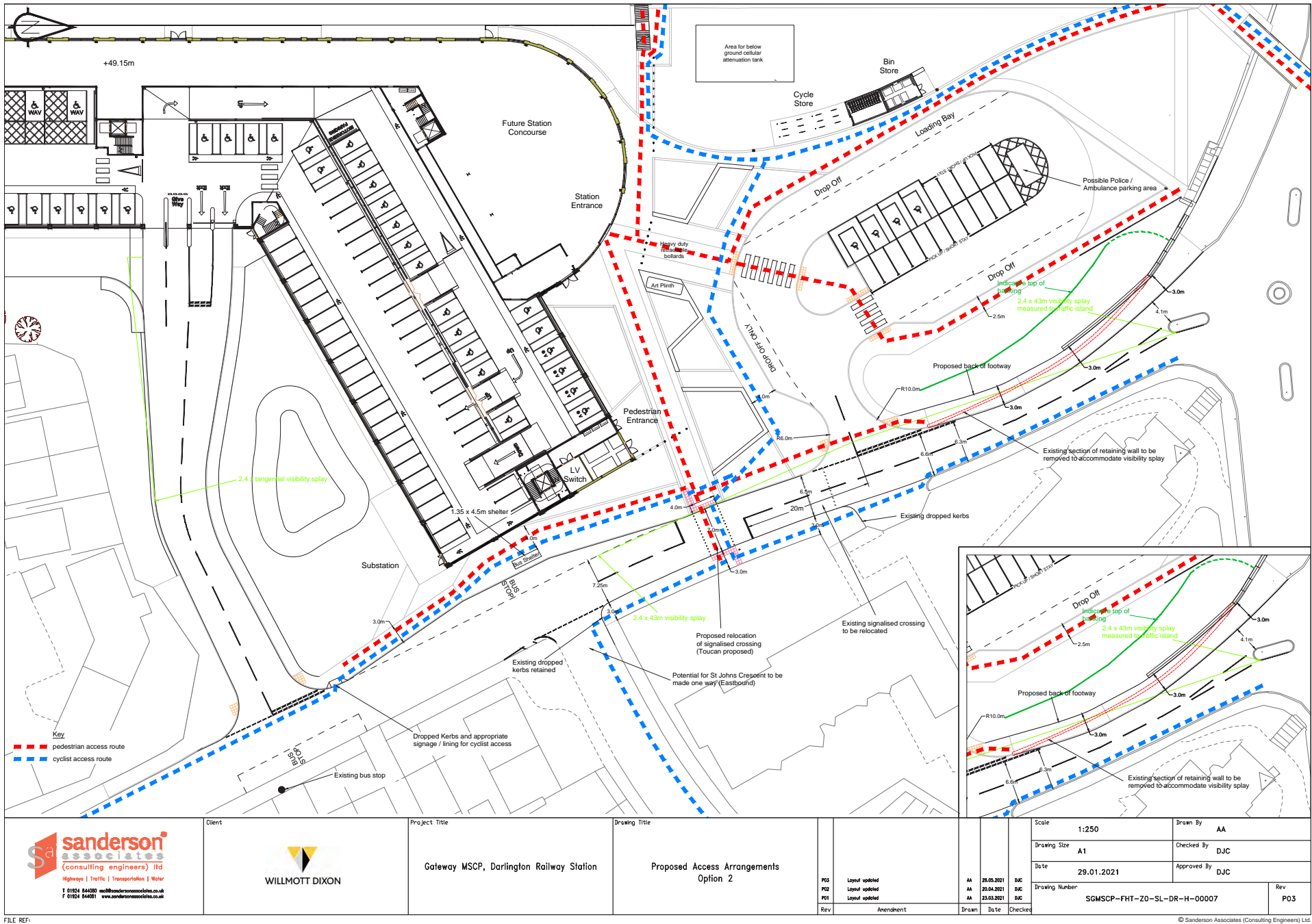
For safe access into the site from the Neasham Road southbound carriageway we are widening the pavement in front of Pembroke House to 3m to create a shared pedestrian and cycle way. From this widened pavement we are proposing a toucan crossing for safe access for pedestrians and cyclists into the site in line with the station entrance.

For access into the site from the north bound carriageway we have a 3m - 4m wide pavement beside the bus stop for a shared cycle and pedestrian path.

Cycle and pedestrian access is also provided by the new pedestrian bridge over Parkgate which connects the site to the Central Park development. Within the site we have provided a cycle store to supplement the existing cycle storage within the current station.

Within the site we have a mixture of dedicated paths and a shared surface public square. Please refer to the red lines on the drawing which show pedestrian routes. It is expected that pedestrians and cyclists will filter through the shared surfaces.

Where possible we have designed the transport interchange in such a way to avoid pedestrians having to cross roads as much as practicable. Within the short stay parking we have provided two zebra crossing points for additional safety.

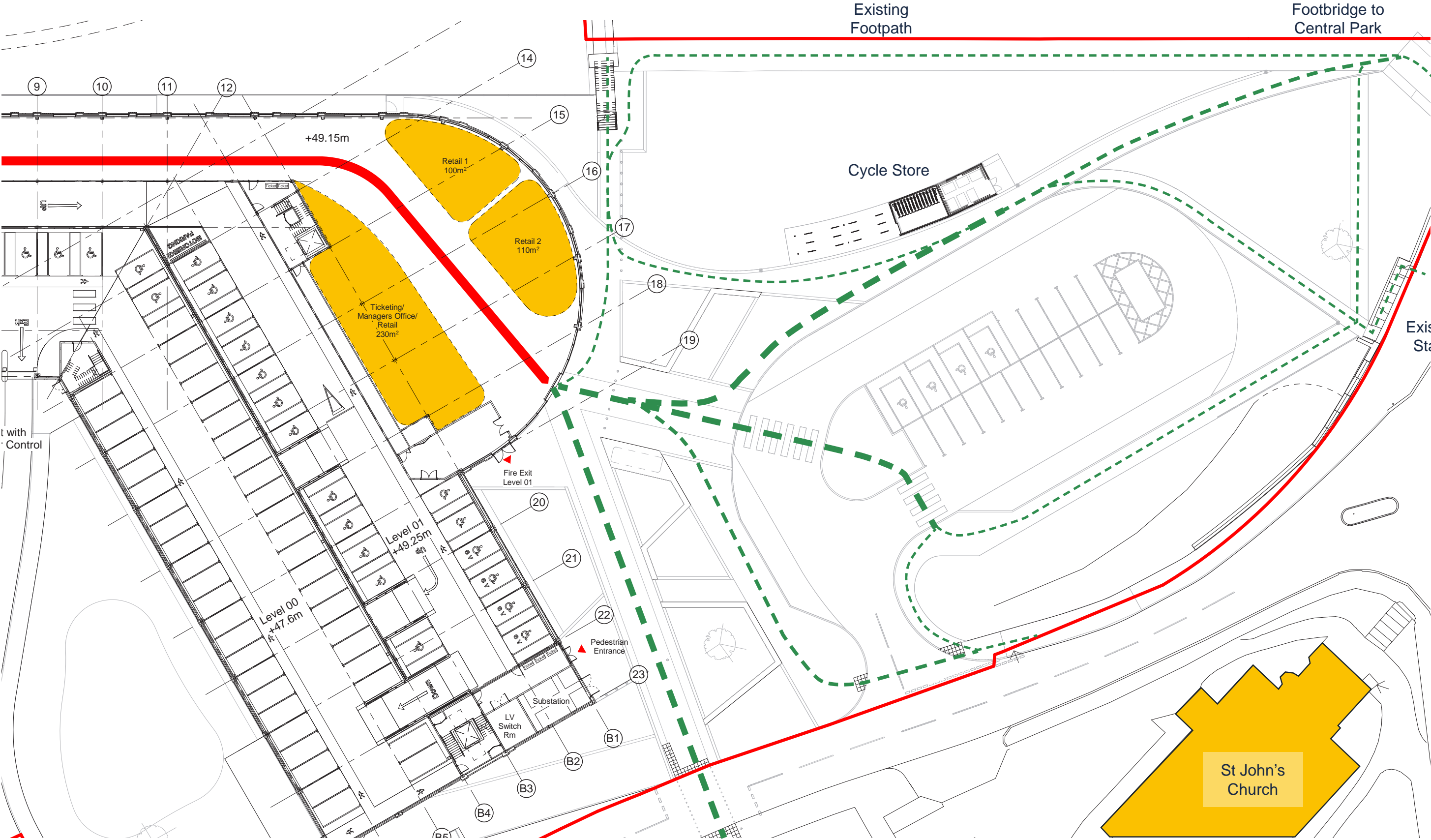


Drawing: SGMSCP-FHT-Z0-SL-DR-H-00007 P03 Proposed Access Arrangements Option 2 , Sanderson Associates

For details on wider cycle routes in towards the site please refer to drawing:

- SGMSCP-FHT-Z0-SL-DR-H-00002 P03 Non Motorised User Plan

6.4 Transport Interchange Pedestrian Access



6.5 Entrance Approach

Entrance

The new station entrance has been located to respond to passengers arriving from several directions. The full height glazed entrance follows the curved form of the rotunda. The entrance is visible for passengers arriving from Neasham Road and people arriving by car in to the transport interchange.

The two primary routes in towards the entrance have been given enhanced pavement treatments to draw users towards the station.

The paving has been a striped motif using contrasting colours of the same paving type. The motif is designed to invoke the idea of a railway track, the striped pattern representing the railway sleepers along its run.

Security

Raised planters play an important role securing the entrance of the car park from attack by creating a natural vehicle barrier. To the areas where we do not have raised planters the public square has security bollards which are spaced to allow good access for pedestrians but stop vehicles from approaching the entrance.



Approach from Neasham Road



Approach from Transport Interchange

6.6 Station Exit

Central Park

The new station entrance has also been located to increase the connectivity between the Station and the Central Park Enterprise Zone. Central Park is a strategically important development within Darlington, regenerating the site of disused railway sidings.

The aim for the area is to create a mixture of residential, commercial and educational developments to encourage job creation and economic growth. Central Park is one of the regeneration flagship projects of the Tees Valley and is one of the 12 sites which make up the Tees Valley Enterprise Zone, with emphasis on attracting digital and biological industries to the area.

It has also been recently announced that the government will be setting up satellite offices in Darlington for The Treasury and The Department for International Trade. Central Park may potentially become the location for the new offices.

The public square provides an important townscape link between the new station entrance and Central Park. It also enhances the setting of the grade II-listed St. John's church which fronts the eastern side.

As passengers exit the rotunda they are immediately presented with a view of the already built Business Central and CPI Building within Central Park. The landscaping will also provide a link to the newly constructed footbridge over Parkgate to Central Park.

As passengers exit the building they will also get a prominent view of St John's Church. With the existing run down buildings demolished there will be uninterrupted views of the Grade II listed church.



View of Interchange Exiting the Station

6.7 Public Realm Design

Landscape Design

The MSCP forms part of the redevelopment masterplan for Darlington railway station which also includes a new public square.

The public square design needed to respond to the angular 'chevron' form of the MSCP as well as the circular form of the rotunda. The result is a design with some sweeping curved elements with angular forms which radiating from the rotunda.

The sweeping curves connect the rotunda to the pedestrian bridge and existing stairs to the north of the site. The curved paving elements also respond to the curves in the drop off 'lozenge'.

The angular elements radiate out from the rotunda entrance, picking up the angles to the different access routes. The primary access routes from the Entrance to Neasham Road and to the drop off area, are defined by feature paving. The paving features a striped motif designed to invoke railway tracks.

The spaces between the access routes create quadrilateral shaped planting beds. The quadrilateral planting beds allow pedestrians to filter through the site through different routes whilst connecting people to nature.

Within the quadrilateral planting beds are raised planting walls that snake through the planting beds. The planting walls define the areas of raised planting whilst also creating places to sit and relax surrounded by planting. The raised planting walls also protect the entrance against vehicle born attack, preventing vehicles from accessing the public square.

The paving to the public square will include inset feature stripes which define the angular forms. These feature stripes break up the mass of the paving surface



Site Plan

6.7 Public Realm Design



6.8 Railway Art Opportunities

200 Years of commercial railway

2025 will be the 200 year anniversary of the worlds first commercial railway route between Darlington and Stockton. The redevelopment Darlington Railway station is going to coincide the this anniversary.

To celebrate the important history of the railway industry in Darlington a series of railway heritage public art installations are proposed across the scheme. Within the public realm we have identified two locations for the installations:

Location 1:

We are proposing to create a plinth leading up to the entrance of the rotunda, the plinth will be used for used for a sculptural installation, with the opportunity for it change over time. The plinth will be formed from a widened section of the planting bed wall which snakes around the angular planting beds.

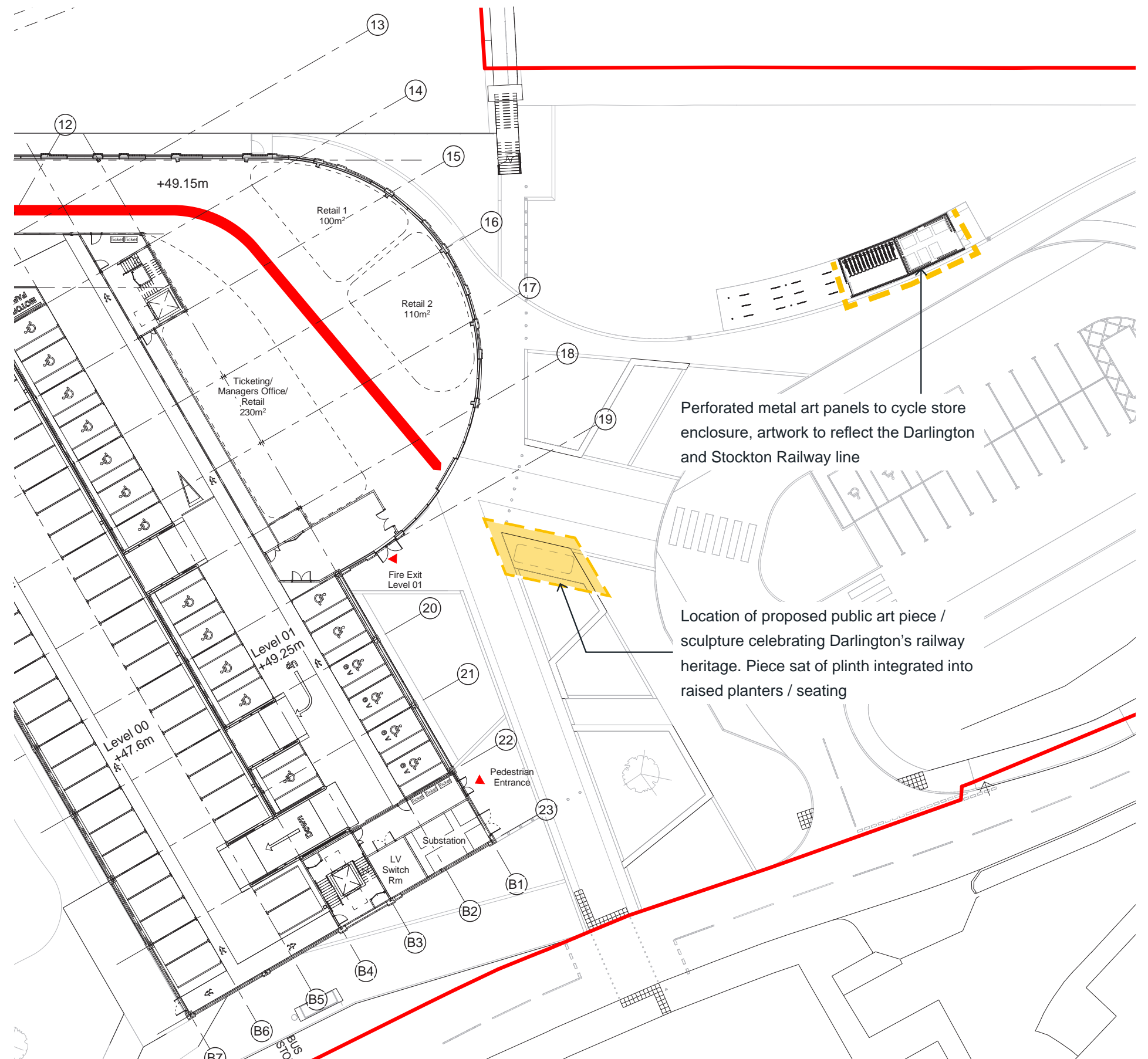
An artist will be used to create the sculpture in conjunction with the redevelopment of the Head of Steam Railway Museum.

The sculpture will be part of a separate planning application at a later date.

Location 2:

We are going to use the elevations of the cycle store / refuse store to create artwork panels which tell the story of the Darlington to Stockton railway line. The cycle store is located beside the drop off area along the route to central park so provides the perfect location with plenty of footfall for the art panels.

The artwork will be displayed on perforated metal sheets, the size and density of the perforations create the images.



6.9 Cycle Store

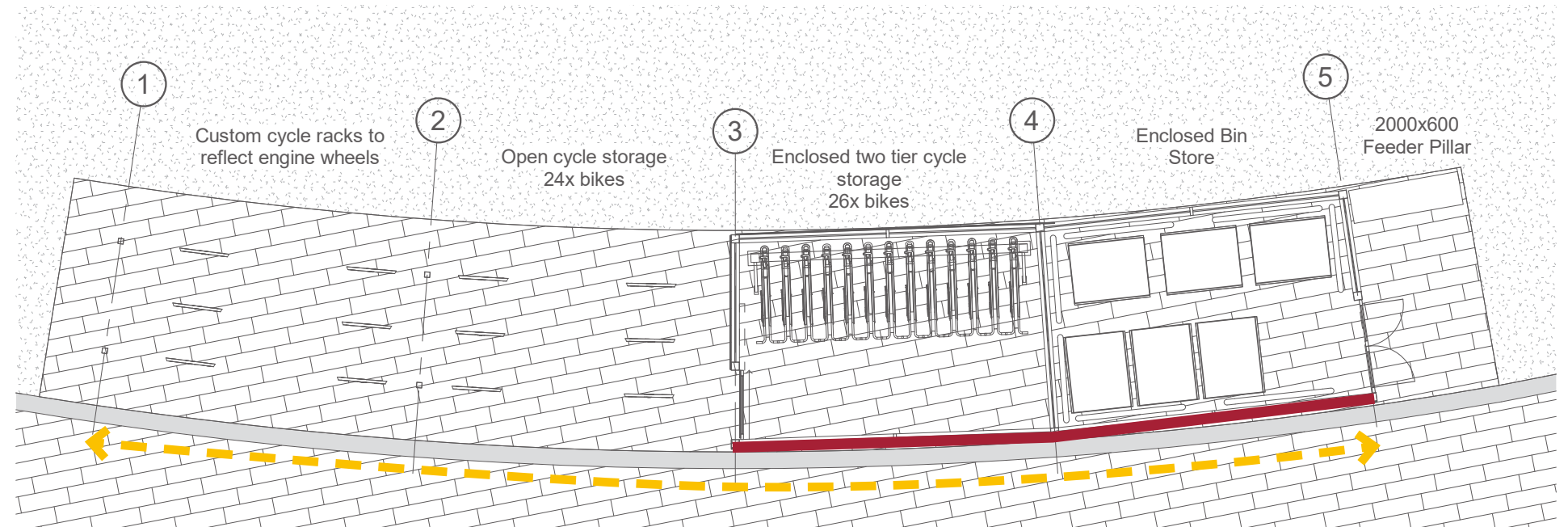
The cycle store is beside the drop-off area in the transport interchange. Its location has plenty of footfall to provide natural surveillance of the bike store to ward off potential thieves. The location also provides easy access for cyclists accessing the station. It is also far enough away from the station entrance to mitigate the risk of terrorist attack, cycle stores can be used as a convenient location to leave explosive devices.

The design of the of the cycle store follows the curvature of the paving to creating a curving canopy. The form is designed to mimic that of a train following the bend in the tracks.

The cycle store is split into three sections, the front half of the store has 12 open cycle racks which can accommodate up to 24 bikes. The round hoops are designed to look like the wheels of a train and are positioned parallel to the paving to reinforce this illusion.

The middle section incorporates a secure cycle store enclosure with locked or secure key card access (for the operator to manage). Within the secure enclosure will be two tier cycle storage for up to 26 bikes. The secure enclosure will have a semi perforate cladding which will include a mix of secure glazing behind perforated metal art panels. This means that there will still be plant of natural surveillance of the bike store through the glazed parts of the cladding.

The end section of the cycle store houses the bin store which service the retail units to the rotunda. The bin store will be fully clad in the perforated art panels which will tell the story of the Stockton & Darlington Railway. Please note that the final designs of the art panels are to be refined at a later stage.



Perforated art panel telling the story of the Stockton and Darlington Railway

6.9 Cycle Store



6.10 Parkgate Retaining Wall

To the north of the site is an existing retaining wall which dates back to when Parkgate Road was lowered below the railway line. The retaining wall separates St Johns Place from Yarm Road to the north and tapers down on the eastern boundary to Neasham road. At its highest point the height difference retained by the wall is over 5 meters.

The retaining structure is a hard constraint on the site where access can only be provided via Neasham Road on the east. There is a pedestrian stair built into the wall to provide access from Yarm Road, no vehicular access is possible.

It is proposed that part of the retaining wall to Neasham Road is to be demolished to create a safe junction into the site and to provide suitable visibility for vehicles exiting the site.

We are proposing circa 43m of retaining wall demolished and then stepped back to the existing stair access into the site. This option improves the visibility of the station entrance for pedestrians and vehicles approaching the site, as well as views of the existing listed Bank Top station. The removal of the retaining wall also allows us to create a new 3m wide footpath to access the station site.

To mitigate against the loss of the historic retaining wall, we are proposing to build a new circa 18m dwarf wall along side the widened footpath to show the rough location of the original wall. The dwarf wall will be built from the same stone and copings as the demolished retaining wall (unless the existing stone is not found to be in good enough condition to retain).

The dwarf wall visually represents the history of the retaining walls in this location. The wall also acts as a physical and visual separation between the footpath and the proposed station development.



Existing Retaining Wall



Existing Retaining Wall

Visualisations



Proposed View of Retaining Wall



Proposed Aerial View of Retaining Wall

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Sustainability

- 7.1 Environmental Assessment
- 7.2 Acoustic Assessment
- 7.3 Environmental Analysis
- 7.4 Planting
- 7.5 Risk of Flooding

7.1 Environmental Assessment

Assessment

The Darlington Station Gateway transport hub scheme is designed to encourage the use of public transport by the people of Darlington and the surrounding areas. The scheme brings together the bus network with the railway station as well as encouraging residents to cycle to the transport hub. The Systra demand study also demonstrates the need to provide additional parking with the centre of Darlington.

The project is going to be assessed under the BREEAM certification scheme for sustainability performance. There are areas of the scheme such as the MSCP and the concourse which will not be eligible for assessment as they are going to be ambient spaces. The occupied areas of the scheme such as the ticketing offices, station facilities and the operational facilities will be assessed under BREEAM targeting an Excellent score.

Air Quality Assessment

Please refer to the Air Quality report produced by Stroma which show that in terms of introducing new exposure, predicted NO₂ and PM₁₀ concentrations across the study area are below the relevant air quality objectives. Therefore air quality is a low priority consideration with regards to the impact of the proposed development.

Surveys

As part of the scheme there is going to be a general 'greening' of the site with the introduction of extensive soft landscaping to the northern public realm and also to the land adjacent to Garbutt Square.

As part of the works please find submitted a Tree Survey undertaken by Eco North Ecological Consultants for the areas of the site affected by this development.

Also find as part of this submission a Preliminary Ecological Appraisal & Bat Roost Assessment for the scheme by Eco North Ecological Consultants. As part of their recommendations we will be introducing additional bird and bat boxes within the scheme to mitigate the loss of any natural nesting sites.

Geo-Environmental Desk Study Report

Please find submitted alongside this application a Geo-Environmental Desk Study Report by Arup. The desk study comprised a walk-over survey and a review of readily available geological, historical and environmental information on the site. This report presents a preliminary contamination risk assessment, gives preliminary ground related constraints for development and makes recommendations for an intrusive ground investigation.

Geo-Environmental Interpretative Report

In addition to the Geo-Environmental Desk Study please also find submitted a Geo-Environmental Interpretive Report prepared by Fairhurst. The aims of the ground investigation were to provide geotechnical and environmental assessment of the site to assist with foundation design and confirm the on-site chemical conditions.

7.2 Acoustic Assessment

Due to a new 672 space MSCP being built there is a concern that the increase in vehicles entering the site will cause an increase in associated noise. Therefore a Planning Acoustic Assessment has been undertaken by Stroma as part of this application.

The report assessed the impact of noise on the residential properties adjacent to the site. The assessor took acoustic readings at three points across the site with noise sensitive receptors. The area of most concern was the increased noise for residents in the properties overlooking Garbutt Square beside the proposed entrance and exit into the MSCP.

The study looked at two scenarios to mitigate the noise for this location:

- Scenario 1: Access to the MSCP uses the existing Garbutt Square access road, in addition to a 1.8 m barrier, such as close boarded timber fence along its South perimeter
- Scenario 2: Access to the MSCP uses a realigned Garbutt Square road to move traffic away from the properties

The assessment found that:

On the basis of the details presented, it is considered that noise from the development for either scenario will not have either an adverse impact or significant adverse impact on the nearest noise sensitive receptors.

To the south of the site we proposing a ground level plant compound for the emergency generator and sprinkler tank. To mitigate against the noise generated from the equipment we are surrounding the compound in an acoustic timber fence. Please refer to the Stroma acoustic report for further detail.



Scenario 1, noise contours at 4m showing the AM ambient noise level
Diagram taken from Stroma Planning Acoustic Assessment



Scenario 2, noise contours at 4m showing the AM ambient noise level
Diagram taken from Stroma Planning Acoustic Assessment

7.3 Environmental Analysis

The concourse and entrance is designed to be an unheated ambient space. As such the internal temperature will vary along with climate outside. The space will be fully naturally ventilated without any heating or cooling to reduce energy consumption.

In the summer there is the risk that the west facing concourse could overheat in the long summer afternoons. We simulated the effect of overheating within the concourse with different types of cladding.

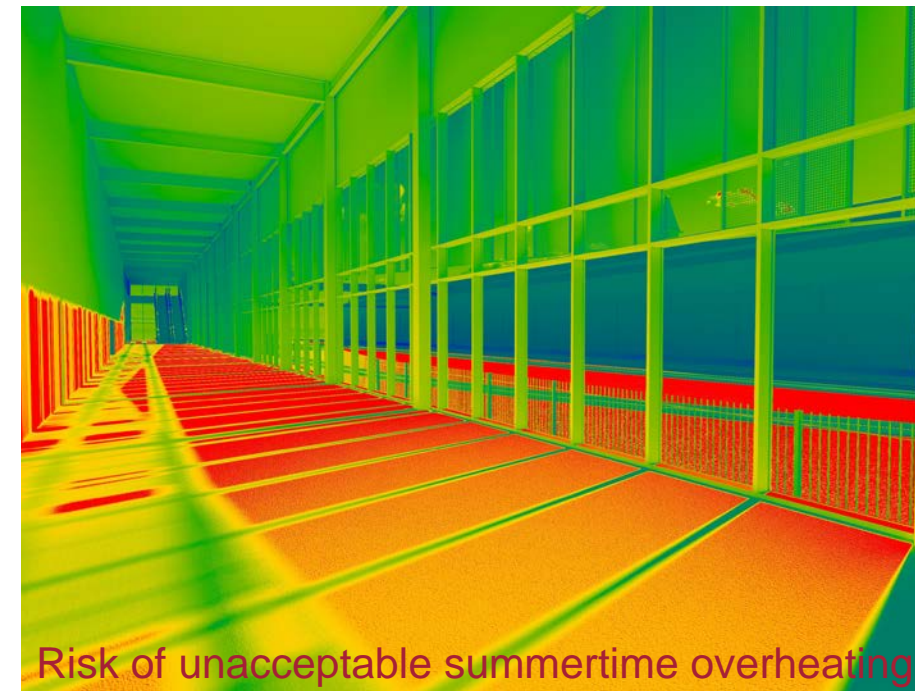
In the first scenario we simulated a fully glazed concourse with a perforated metal brise soleil to the outside of the glazing to reduce the solar gain. The modelling showed that even with the brise soleil the internal temperature rose to over 40C in the summer which was deemed unacceptable.

In the second scenario we reduced the area of glazing to roughly 40% of scenario one, this reduced the effects of overheating with a more acceptable summertime temperature. This informed the eventual design of the concourse elevation, with brick cladding and punched two storey windows, which reduced the overall area of cladding.

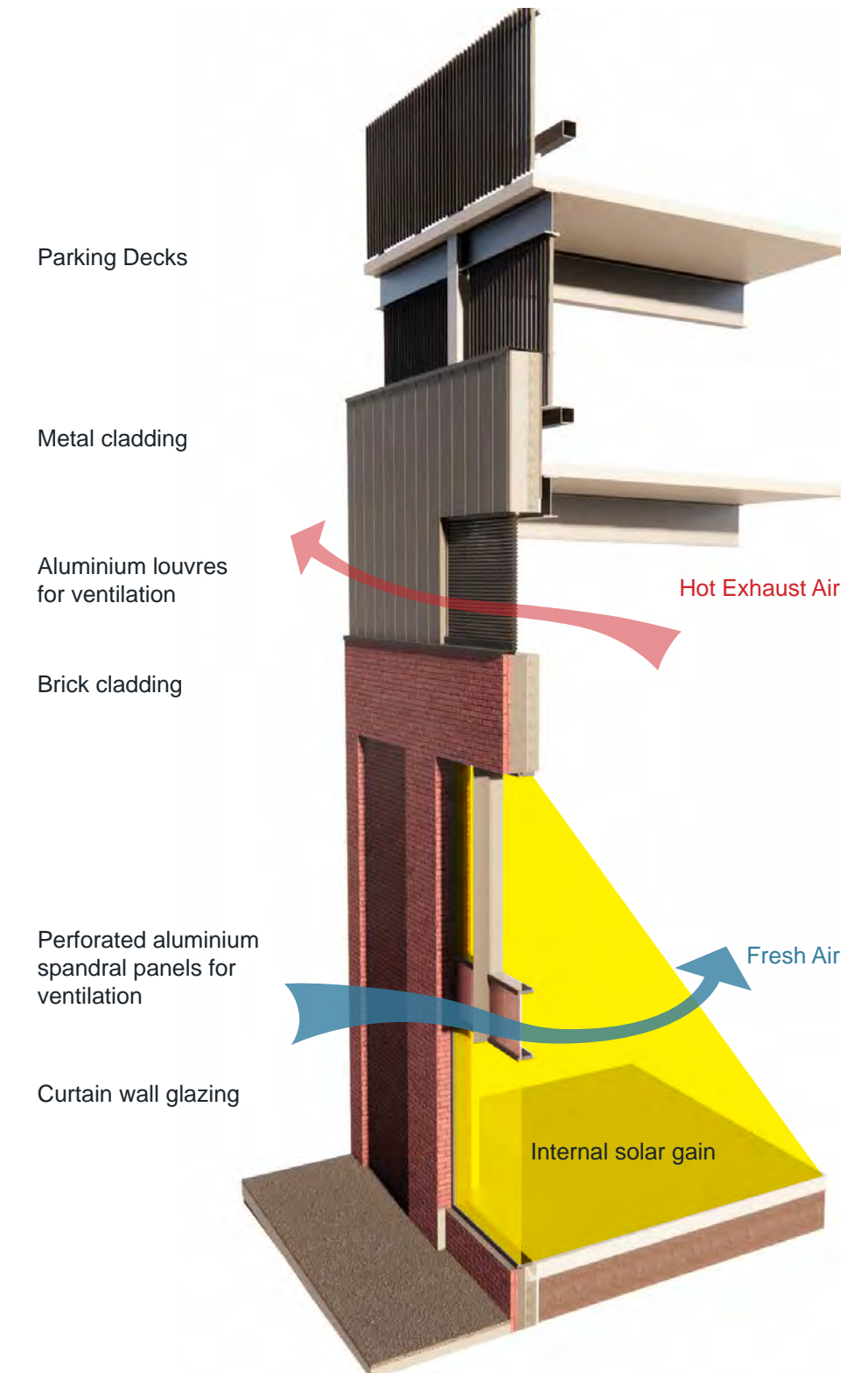
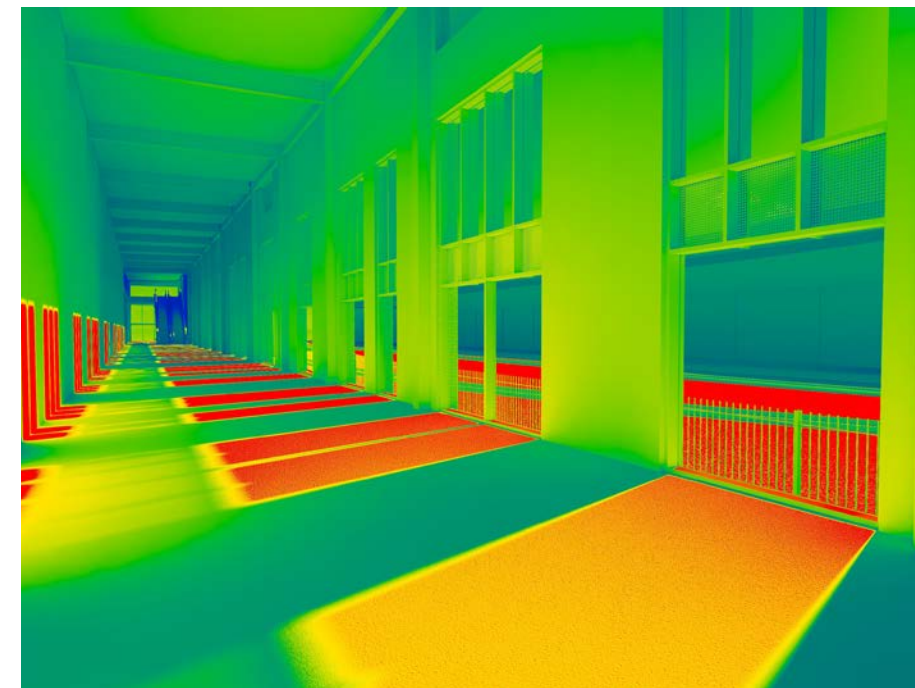
At higher levels the windows include additional vertical mullions with to act as additional solar shading to further reduce overheating.

For ventilation the glazing includes perforated spandral panels to provide fresh air to cool the concourse. Above the glazing are sections of louvred panels which exhausts the hot air which has risen to the top.

Fully glazed with solar screening at high level



Punched windows with Masonry Cladding



7.4 Planting

The proposed scheme greatly improves the ecological environments across the site. As can be seen from the diagrams to the right we are greatly increasing the amount of soft landscaping across the whole development.




To the north of the site we are proposing a new transport interchange and public square. To soften the effect of the new paving we are introducing extensive areas of greening. Around the drop off area will be lawns to which the paths will criss-cross, connecting as users walk towards Central Park Enterprise Zone.

To the public square beside the entrance areas of ground level and raised beds will be filled with extensive planting. The new planting will create a biodiverse environment for station users to stop and enjoy on their way to the station.

To the west of the site a new green will be created between the realigned Garbutt Square and the MSCP. The green will mostly be seeded with grass seed but will also include shrub planting around the SUDs detention basin.

Where some trees will be lost to make way for the new MSCP and concourse they will be replaced with new trees to transport interchange, public square or green beside Garbutt Square.

Overall the scheme is increasing the area of public greening and promoting biodiversity with a range of different environments.

-  Areas of grass and embankments
-  Areas of high density planting
-  Location of trees



Areas of Planting Existing



Areas of Planting Proposed

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Appendices

Appendix

Please refer to submitted documents for appendices

Reports		Drawings	
A	EIA Screening Letter Darlington Station Gateway	SGMSCP-NAP-Z1-ZZ-DR-A-00001-P2_Location Plan	SGMSCP-FHT-Z0-SL-DR-C-00001-P05_Proposed Drainage Layout
B	North of England Civic Trust - Statement of Significance Bank Top Station	SGMSCP-NAP-Z1-00-DR-A-00010-P5_Site Plan	SGMSCP-FHT-Z0-SL-DR-C-00101-P03_S278 Works General Arrangement
C	Heritage Statement - Darlington Station Gateway East	SGMSCP-NAP-Z0-XX-DR-A-90001-P6_Landscape General Arrangement	SGMSCP-FHT-Z0-SL-DR-H-00002-P03_Non Motorised User Plans
D	Darlington Station MSCP Demand Study 06012021	SGMSCP-NAP-Z1-00-DR-A-01000-P11_Level 00-01	SGMSCP-FHT-Z0-SL-DR-H-00005-P03_Areas of highway to be Stopped
E	11590-001-02 Transport Assessment	SGMSCP-NAP-Z1-02-DR-A-01002-P9_Level 02-03	SGMSCP-FHT-Z0-SL-DR-H-00007-P03_Proposed Access Arrangements
F	Preliminary Ecological Appraisal & Bat Roost Assessment V02	SGMSCP-NAP-Z1-04-DR-A-01004-P9_Level 04-05	SGMSCP-FHT-Z0-SL-DR-H-00008-P03_Garbutt Sq Swept Path
G	ECN20 004 Darlington MSCP Arb Report V01	SGMSCP-NAP-Z1-06-DR-A-01006-P9_Level 06-07	SGMSCP-FHT-Z0-SL-DR-H-00009-P03_Access Swept Path
H	Darlington Bank Top Geo-Environmental Desk Study	SGMSCP-NAP-Z1-08-DR-A-01008-P9_Level 08-09	SGMSCP-FHT-Z0-SL-DR-H-00010-P03_Access Arrangements Swept Path
I	Geo-Environmental Interpretative Report V02	SGMSCP-NAP-Z1-XX-DR-A-02001-P5_North East Elevation	SGMSCP-FHT-Z0-SL-DR-H-00011-P02_Garbutt Sq Swept Path
J	Darlington MSCP - Planning Acoustic Assessment V03	SGMSCP-NAP-Z1-XX-DR-A-02002-P5_North West Elevation	
K	Environment Agency Flood Map Planning	SGMSCP-NAP-Z1-XX-DR-A-02003-P5_South East Elevation	
L	DID.137397.06_Flood Risk Assessment and Drainage Strategy	SGMSCP-NAP-Z1-XX-DR-A-02004-P5_West Elevation	
M	DID.137397.07 - Drainage Management and Maintenance Plan	SGMSCP-NAP-Z1-XX-DR-A-02005-P5_South Elevation	
N	Air Quality Assessment	SGMSCP-NAP-Z1-XX-DR-A-03000-P15_GA Sections Block A	
O	Public Consultation Responses	SGMSCP-NAP-Z1-XX-DR-A-03001-P14_GA Sections Block B	
		SGMSCP-NAP-Z1-XX-DR-A-03002-P6_GA Sections Station	
		SGMSCP-NAP-Z0-XX-DR-A-00020-P4_Site Sections	

NAPPER

RIBA  Chartered Practice

Napper Architects Ltd
3 Waterloo Square
Newcastle upon Tyne
NE1 4DR

T: 0191 2610491
E: info@napperarchitects.co.uk
W: www.napperarchitects.co.uk