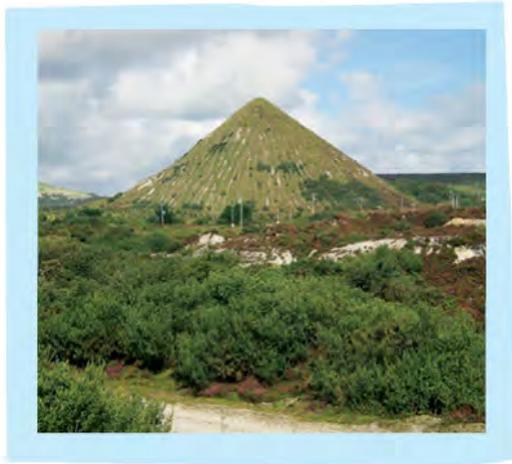


Carluddon A391 road improvement

Design and Access Statement



Carluddon A391 road improvement

Design & Access Statement

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Location Plan identifying opportunities and barriers

Proposed speed limits

Cross sections of the proposed road improvement

This Design & Access Statement has been prepared having regard for best practice and guidance as set out by the Commission of Architecture and the Built Environment (CABE). Design & Access Statements, how to write read and use them (2006) provides CABE's interpretation of Government policy at the time and remains as the best practice guide in this area.

1.0 Purpose of the Design & Access Statement

The aim of this Design and Access Statement is to present the design thinking behind the Carluddon A391 road improvement. This Statement has been prepared to support the planning application and should be read in conjunction with the Planning Statement, Statement of Community Involvement, and Environmental Statement for the project. Plans, photo montages and descriptive material should also be referred to. The objectives of the Design and Access Statement are:

- To explain the design of the A391 road improvement
- To detail how the design process evolved
- To describe the A391 route and how it responds to the local features, road layout and public transport
- To detail how everyone can move through the design on equal terms regardless of age, disability, ethnicity or social grouping.

1.1 Introduction to the Carluddon A391 road improvement

The Carluddon A391 road improvement is a 1.6km section of the primary route for traffic between St Austell and the A30 trunk road and is therefore an important link to the rest of Cornwall and beyond.

The A391 was estimated to have, in 2010, an Annual Average Daily Traffic (ADDT) of approximately 9,500 vehicles two ways, including heavy vehicles.

Several years ago the A391 between its junction with the A390 and Scredda was rerouted, providing a reasonable standard of single carriageway road, which is locally known as the North East Distributor Road.

Between Scredda and Carluddon however, although the A391 has a reasonable horizontal alignment, it is narrow and apart from the southern end has few verges, no footways and is bordered generally by Cornish hedges. There are numerous accesses to private properties some with very poor visibility. There is one house with the end wall immediately adjoining the carriageway.

The Carluddon A391 road improvement aims to:

- To improve traffic management in the area, improving highway safety and public transport infrastructure;
- Create more consistent journey times between St Austell and the A30;
- Improve walking and cycling links between Penwithick and St Austell and access to the Clay Trails;
- Unlock the identified West Carclaze and Baal Eco-community site;
- To bring about economic investment to the area through improved infrastructure enabling the proposed technology park;

- Provide infrastructure in advance of growth to the area.

1.2 The Location

The Carluddon A391 road improvement is located 3.8 km north of St Austell Town Centre and is within the Parish of Treverbyn which is part of the China Clay Area. The A391 road improvement re-positions a 1.6 km section of the A391, moving it west of Carluddon and east of the Great Treverbyn Sky Tip.

Refer to the following Location Plan identifying the main settlements in the locality, key landscape features, opportunities and barriers.

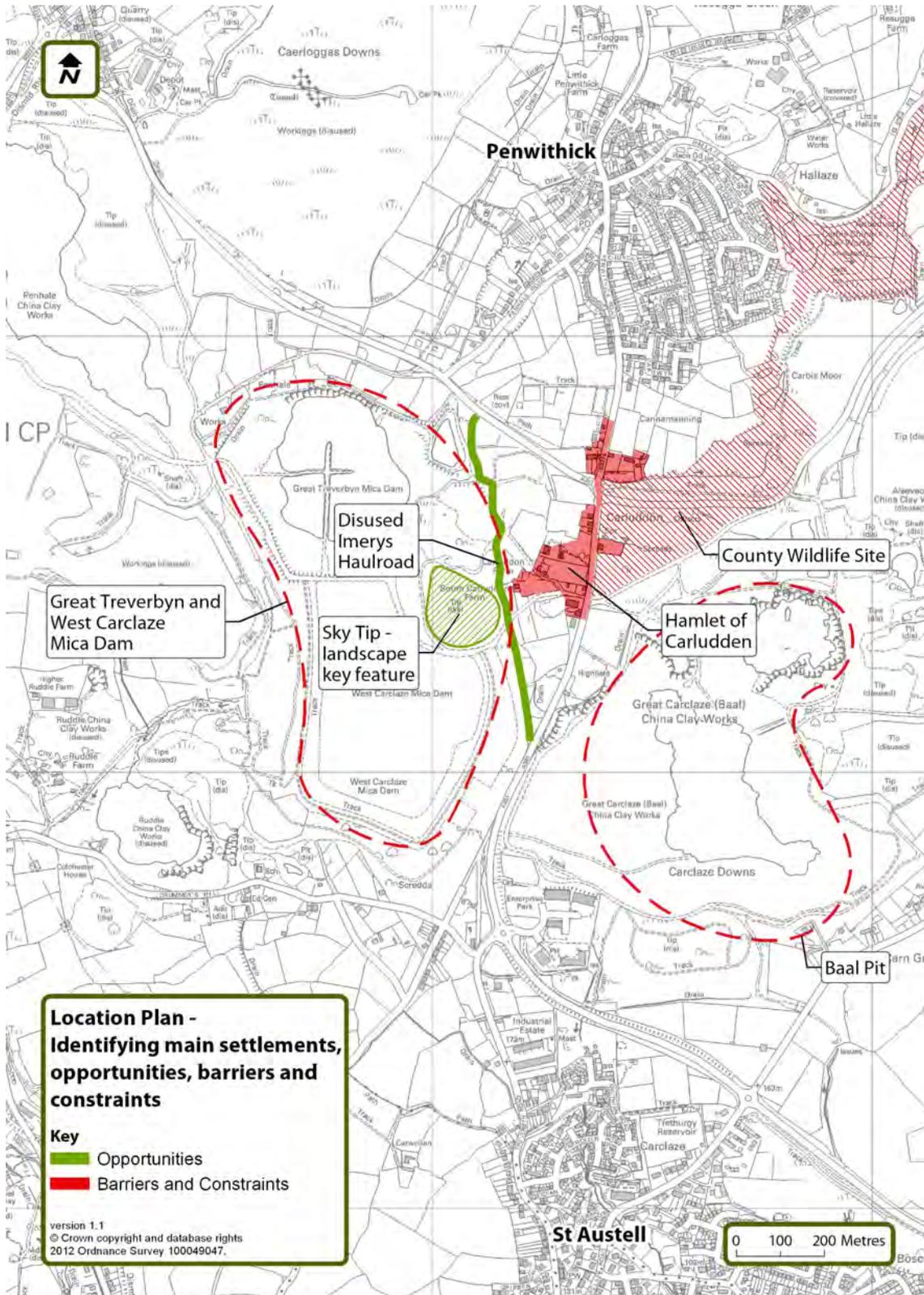
The land to which the planning application is made is partly in the ownership of Imerys and partly in the ownership of Cornwall Council.

The area of land that is in Imerys ownership forms part of the Penhale Minerals Operational Area. Refer to the Planning Statement for the plan that identifies the extent of the mineral operational area.

The proposed Carluddon A391 improved route would be bounded on the east by fields and properties including Rose Cottage, South Carluddon Farm, and Carluddon Farm. Land adjoining the improved route includes fields of improved grassland pasture used for grazing livestock.

The existing A391 route provides access to existing properties in Carluddon, and connection to the north east distributor road connecting to the A390 east of St Austell.

There are three (3) bus stops along the existing alignment of the A391 connecting the residents of Carluddon to the St Austell to Bodmin bus services.



2.0 Assessment

2.1 Physical Context

The Carluddon A391 road improvement will re-position 1.6km of the A391 west of Carluddon and east of the Great Treverbyn Tip.

The Great Treverbyn Tip is a recognised local landmark that can be seen from a distance and is iconic representing the historic land use in the area.

Complimenting this landscape feature is a network of clay trails and access to rough land which has historically been the subject of minerals operations. When combined with the lakes which are flooded pits and the mica dam adjacent to the Great Treverbyn Tip, the location has a landscape of diverse interest.

The physical context has influenced and shaped the design of the road. The design needs to compliment and sit alongside the Great Treverbyn Tip, enhance the biodiversity of the area and make West Carclaze a place of interest whether for accessing the countryside, recreation or a future eco-community.

With the existing A391 being the primary route from St Austell to the A30 its existing role is important in terms of ensuring business as usual operation in the area.

The Carluddon A391 road improvement needs to respond to the physical context and achieve the following objectives:

- Maximise the Non Motorised User experience when crossing the road and accessing the countryside;
- Incorporate biodiversity links east - west to enhance potential movement and biodiversity values in the area;
- Work with the existing topography and achieve an at grade profile as opposed to elevated;
- Compliment the Great Treverbyn Tip and reinforce landscape as a feature of the area;
- Ensure uninterrupted operation of the existing A391 during construction with seamless transition once completed.

2.2 Social Context

Carluddon is within the Parish of Treverbyn and is in the China Clay Area. The resident population of the China Clay Area is 26,200. St Austell has a resident population of 30,800 forming the largest

residential settlement within Cornwall¹. Residential groups across the villages in the China Clay Area and St Austell use the A391 for accessing facilities and services.

The A391 has a wide user group due to being the primary connection between St Austell and the A30. The road is a business conduit for St Austell and wider mid Cornwall. The China Clay area includes substantial mineral operation areas, and accordingly the user group includes existing industry and related services.

In addition to the existing road users, the user groups in the locality that may be affected by the development include pedestrians, cyclists, equestrians and the mobility impaired. The health profile for the area advises that 40% of the China Clay population and 39% of the St Austell population are registered as having 'unhealthy weight', as compared with 34% for Cornwall².

Throughout the pre-application consultation the aspirations of the community were collected through the survey. Refer to the Statement of Community Involvement for the full detail and responses. The Carluddon A391 road improvement needs to respond to the social context and achieve the following objectives:

- Maintain the operation of the existing A391 alignment during construction;
- Provide appropriately designed footpaths and access for the mobility impaired;
- Provide equestrian access within the design;
- Enhance the National Cycleway Network connection in the area;
- Provide a safe footpath connection between Penwithick and St Austell;
- Improved access to active sustainable travel and associated health outcomes.

¹ Office of National Statistics, Mid Year estimates

² Community Network Profiles (Health & Well Being), Cornwall Council using ONS data from 2009.

2.3 Economic Context

The economic profile of the area has undergone change as a result of the downturn in the China Clay Industry and as such Cornwall Council has responded to this through the policy drive expressed in the St Austell St Blazey China Clay Area Regeneration Plan. Refer to Chapter 15 of the Environmental Statement.

In 2008 the site was identified through the St Austell, St Blazey and Clay Area Strategic Investment Frameworks (SIF) which identified strategic and transformational priorities for Convergence Funding for the area. The SIF underwent a mid-term review in 2010 which assessed the delivery and outputs of the St Austell and Clay County West Carclaze site and listed it as a priority project for Convergence funding.

The 2010 Employment Land Review evidences the need for direct and reliable access by road to encourage inward investment and the establishment of successful employment space.

Through provision of direct access routes and more reliable travel times a stronger economic basis for bringing forward employment land, securing investment into the area, and new jobs can be made.

There is an existing employment park at West Carclaze, with businesses that would be potential beneficiaries of improvements to the road network. The area has the potential to grow into an employment corridor servicing growing sectors that have the potential to transform the local economy.

The Carludon A391 road improvement needs to respond to the economic context and achieve the following objectives:

- Improved reliable travel times from the A30 to St Austell;
- Improved road network to enable delivery of employment land;
- Improved infrastructure to encourage inward investment into the area;
- Deliver the investment of ERDF funding into mid Cornwall bringing about raised local expenditure.

2.4 Planning Policy

A review of the planning policy, identifying all relevant policy, and conformity to the National Planning Policy Framework is provided in the Planning Statement, and therefore is not reproduced here. The following table highlights the key policies that have influenced the road design; access policies are identified in the following sections addressing access, although it is a key design consideration.

| Key Policies influencing design of the A391 road improvement | |
|---|--|
| Restormel Local Plan Policies | Influence on Design |
| Policy 6 – Development and Design Principles | Seeks to require good design, respecting character and identity of the surroundings through design and materials, with landscaping for major developments being undertaken prior to or at the same time as construction. |
| Policy 11 – Protecting the Borough’s Heritage | Seeks to conserve and enhance landscapes, features and habitats of heritage importance. |
| Policy 16 – Sites of importance for nature conservation | Seeks to ensure developments do not harm ecology, features or characteristics of sites. |
| Policy 18 – Protecting the wider countryside | Seeks to protect the continuity of landscape features. |
| Policy 38 – Illumination | Seeks to ensure developments will not be illuminated and cause harm from light. |
| Policy 50 – Secure Environments | Seeks to ensure development provides a safe and secure environment through design, layout, lighting and landscaping to preserve and enhance the environment. |
| Policy 81 – Walking and cycling | Seeks to ensure new proposals cater for cyclists and pedestrians. |
| Policy 82 – Promotion and support for public transport | Seeks to promote and support provision of new public transport facilities. |
| Cornwall Structure Plan Policies | Influence on Design |
| Policy 2 – Character Areas, Design and Environmental Protection | Seeks to protect and enhance the quality, character, diversity and local distinctiveness. |
| Policy 3 – Use of resources | Seeks compatible and prudent use of natural and built resources and energy conservation. |
| Policy 27 – Transport Strategy | Seeks delivery of a more effective, environmentally friendly and safer transport |

| | |
|--|--|
| | system. |
| Policy 28 – Accessibility | Promotes the consideration of overall travel patterns and the travel choices when designing development. |
| Pre-submission Draft Cornwall Local Plan Policies | Influence on Design |
| Policy 2 – Key Targets and Spatial Strategy | <p>Seeks to improve conditions for business and investment</p> <p>Sets out a spatial strategy including delivering the eco-communities at West Carclaze/Baal and Par Docks and in the St Austell, St Blazey and China Clay Area Regeneration Area small scale exemplar development will be supported which positively contributes to the vision of becoming the Green Heart of Cornwall.</p> |
| Policy 12 – High quality design | Seeks to ensure that all new development is of a high quality. |
| Policy 13 – Development standards | <p>Seeks to avoid impacts from noise, dust, odour, vibration, waste, pollution and visual effects.</p> <p>Seeks to take advantage of any opportunities to minimise energy consumption.</p> |
| Policy 16 – Health and wellbeing. | <p>Seeks to protect against unsafe and unhealthy environments and avoid impacts such as noise and vibration from construction and operation of new development.</p> <p>Seeks to maximise the opportunity for physical activity through active travel networks.</p> |
| Policy 23 – Historic environment | Seeks to protect and enhance Cornwall’s historic environment and assets according to their international, national and local significance. |
| Policy 24 – Green infrastructure | <p>Seeks to protect and enhance a diverse, connected and functional network of open spaces and waterscapes.</p> <p>Connectivity for nature and people should be restored and enhanced</p> |
| Policy 26 – Transport and Accessibility | Development should be consistent with LTP3, be safe, safeguard strategic transport opportunities and be designed to provide convenient accessible and appropriate cycle and pedestrian routes. |

3.0 Involvement

3.1 Consultation Events

There have been a number of historic consultation events held in the St Austell China Clay Area relating in part to the A391. The main consultation which led to the identification of the safeguarded route was undertaken in 2002, by Mott MacDonald on behalf of the County Council.

This culminated in the submission of a planning application, that was not determined due to absence of funding at the time, however the process led to the identification of a preferred ultimate route for the A391. At that time, 848 people attended the consultation events with 927 questionnaires being completed.

More recently the proposed Carluddon A391 road improvement has undergone a six week public consultation phase between 20th August 2012 and 1st October 2012, including events from the 8th to 18th September 2012. Refer to the Statement of Community Involvement for the 2002 Consultation Report, other historic consultations and the outcome from the public exhibition of the current proposal.

Summary of the consultation results relating to the A391 road improvement

| Question | % in support |
|--|-----------------------------|
| Do you support the proposed Carluddon A391 road improvement proposals? | 74.3% |
| There are a number of proposed new bridleways, paths and bus stops. Do you support those proposals? | 76.2% |
| Landscaping, planting and hedges will be important to the overall look of the proposed scheme. Do you support the proposals? | 81.6% |
| We are hoping to provide a cycle bridge to cross the southern end of the A391 Carluddon road. Please select which colour you think the exterior of the bridge should be. | 39.5% Dark Green (majority) |

3.2 Cornwall Design Review Panel

The design team presented the proposed project to the Cornwall Design Review Panel on 9th August, 2012. Refer to the Statement of Community Involvement for the notes from the meeting and response to key issues raised.

One of the key beneficial outcomes from this design review process was evolution of the landscape design through the identified need for a

single strategy to bring the design concept together and integrate into the wider landscape.

This has had a positive outcome in terms of achieving biodiversity objectives through the project as well as articulating the landscape principles that can be delivered through adjoining future development.

4.0 Evaluation

4.1 Evolution of the design

There have been detailed investigations into the preferred route for the A391, refer to Chapter 4 of the Environmental Statement and the Planning Statement for the history in relation to the selection of the preferred route.

The design process for this application adopts the safeguarded route and then seeks to arrive at the best design solution given the selected route.

Alternative designs were considered in arriving at the proposed Carluddon A391 road improvement. The physical, social and economic context informed the design principles for the road improvement.

| Key design principles for the A391 road improvement | |
|--|---|
| Principle | Interpretation |
| Thread east - west | Build into the design east - west links creating the fabric weave for Carluddon and West Carclaze / Baal |
| Celebrate the landscape | Reinforce the rugged nature, the existing features, the rough edges |
| Create a place | Balance designing a route with creating a destination, a place of interest |
| Use the landform | Let the topography shape the extent of cut and embankment, minimising unnecessary works |
| Create opportunities to connect | Maximise the visual connection between the road user and the non-motorised users by designing at grade opportunities to connect |
| Champion sustainable travel | Incorporate signature bus stops and bus priority measures to encourage sustainable choices |

While the design principles reflect the physical, social and economic context, the community consultation brought the opinions of the community to the design process, providing the following insight:

- Concern whether the new road would cope with future traffic demands, why was the road not a dual carriageway?
- Concern to make sure the bus stops are in the right places;
- Concern the existing A391 would become a rat run and should be closed off for non-motorised users;

- Make sure the connections are made to Penwithick and Stenalees beyond the project and a footpath around Sky Tip would be good;
- Accessibility and design for all was raised in relation to the footpaths;
- Design crossing points for equestrian users;
- Various responses to the speed limit of the new road;
- Use of signage along the road to direct traffic and reduce impacts;
- Landscaping designed to be low maintenance and natural in appearance;
- Design for the wildlife in the area;
- Concern for the historic land uses and setting with the Sky Tip and Geological Site of Interest being noted.

In addition to the context and the consultation comments the following guidance has influenced the design outcome:

- Inclusive mobility (DfT)
- BT Countryside for All
- Local Transport Note 208 February 2008
- Cycle-Friendly Infrastructure – Guidelines for Planning and Design 1996
- Design Codes contained within the volumes of the design Manual for Roads and bridges manuals.

4.2 Design decisions

This section of the Design & Access Statement endeavours to make clear what the key design decisions were in relation to the A391 road improvement. It is intended to provide the rationale for the proposed road design.

4.2.1 Design at-grade

Previously, Cornwall County Council designs for the A391 in this location proposed a high elevate road with underpasses that were considered to provide the equestrian users and other non-motorised users a priority access to the countryside.

This design approach has removed the use of underpasses, adopting an at-grade approach, lowering the road so that it does not dominate the skyline. This reflects the design principle of 'use the landform' with the design decision intending to reduce the extent of cut and embankments.

In considering the alternative, design for crime advice was sought as well as the design principle 'create a place' reaffirming that in this instance the at-grade approach was the best solution so that the road did not become just an access corridor. Providing a dual carriageway was not part of the original County Council design and traffic modelling confirmed that it was not a design consideration for this scheme.

4.2.2 Design options for bridges

By providing a design at grade approach the potential for elevated and at grade non-motorised user crossing points was available.

With the design principle of 'celebrate the landscape' the decision to have a green bridge that was a landscape response to crossing as opposed to a traditionally designed bridge was taken.

With the magnificent Great Treverbyn Tip adjacent to the route, the design decision was taken to avoid light weight bridge construction adjacent to the Sky Tip, rather seek to use a land bridge to reinforce and anchor the location.

The green bridge would have the potential to incorporate hedgebanks and planting, that could lead to a biodiversity east west link, mirroring the 'thread east - west' principle that was intended to influence the movement of non-motorised users.

The National Cycle Way crosses the route and there was a design decision taken to provide both a bridge and at grade solution in this location. The decision was taken that the design concept for this bridge was to be responsive to setting, with modern buildings in the vicinity and equestrian users to be considered as part of the access for all.

4.2.3 Design for bus priority

With the design principle of 'champion sustainable travel' the decision was taken that the existing A391 should be retained as a bus only entry point, providing a rapid route for accessing employment opportunities and potential future development. The existing A391 would continue to be part of the main St Austell to Bodmin bus route and as such is a sustainable travel to work priority in the design.

4.2.4 Design footpaths to connect

The area has the benefit of Clay Trails and is proximate to the villages of Penwithick and Stenalees, as well as the West Carclaze Business Park. The design decision was taken to include footpaths that would 'create opportunities to connect' local residents, workers and visitors to the area. This design decision was seeking

to recognise that by 'creating a place' recreation opportunities would be enhanced.

4.2.5 Design with the existing landscape

The design decision was taken to 'celebrate the landscape' and recognise this through the landscape strategy which would be about working with what exists, enhancing what is envisaged by the Cornwall Biodiversity Action Plan, refer to Chapter 13 of the Environmental Statement, and not creating an artificial response. This design decision was also intended to reduce on-going maintenance costs.

5.0 Design

The following section of the Design & Access Statement describes the design of the Carluddon A391 road improvement having regard for the previous sections. Refer to the proposed plans for the detail which is described in the following sections.

5.1 Function

The proposed Carluddon A391 road improvement would connect into the existing A391 between Single Rose and Carluddon with a new roundabout. From this point the road continues south and re-connects with the A391 at the Scredda Roadabout and north east distributor road.

The footprint for the road improvement is 9.08ha, excluding the areas required temporarily for the construction phase.

The Carluddon A391 road improvement offers the opportunity to commence the delivery of the new strategic route connecting St Austell to the A30, however in isolation addresses immediate constraints of the local road network.

The 1.6km section of road has the ability to improve certainty around travel times to and from St Austell, strengthening its position as a place to invest and grow. With the existing West Carclaze Business Park and the proposed Technology Park, the A391 road improvement will make the location more attractive for business activity.

The design of the Carluddon A391 road improvement considers the potential future growth in the area as identified in the emerging local plan and proposed eco-community. It would be addressing the capacity issue of the existing local road network. In the interim prior to any development in the area it responds to the needs of the existing road users by removing the double mini roundabouts from the main A391 route, being a congested intersection that connects the Eden Road, Penwithick Road and the A391.

The alignment of the road has been designed to use the local topography as much as practically possible, to reduce the potential of import and export of material. The road improvement includes approximately 150m of cut which assists in the creation of a green bridge with embankments being used to assist with the longitudinal gradient.

The design of the road responds to the need to perform as a through route extending the link of the north east distributor road north of St Austell. It also has the additional function of creating place, adjacent to the proposed Technology Park and potential future eco-community. The proposed road improvement connect to the north eastern distributor road which, when combined, build the momentum of the area as a place for business investment.

Design speeds are proposed to maintain the through flow of traffic, vehicle movements and creation of place. With reduced speeds for the length of the road improvement, it will alleviate the segregation of the east and west sides of the road, which is further enhanced by the introduction of a potential seven (7) level crossings in addition to the proposed two bridges.

The design speed criteria that relates to a 40mph road has been selected for the route between the Scredda Roundabout and the new Great Treverbyn Roundabout. The existing alignment of the A391 has a design speed of 50 mph with the actual free flow average speed of traffic being approximately 43mph heading east and 41mph west.

The design speed between the Great Treverbyn Roundabout and the village of Penwithick is 30 mph reflecting the proximity of development and presence of non-motorised users. The following figure identifies the various sections of road and proposed speeds.

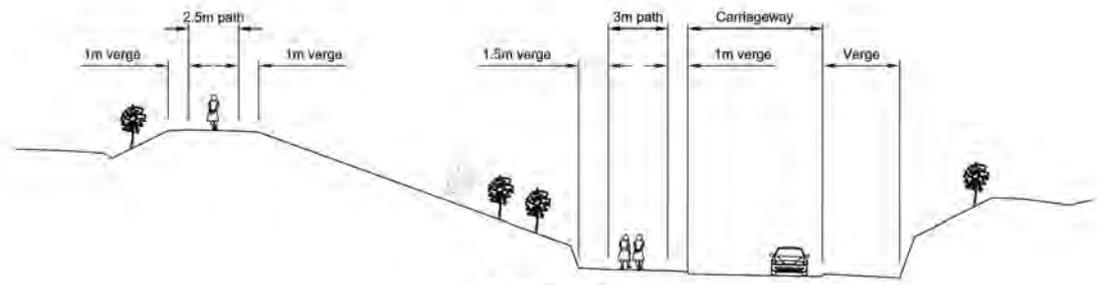


The speed design criteria has influenced the highway geometry and led to the street cross sections which are detailed on the following images. For full road plans refer to the proposed plans.

The cross section would typically be 6.75m wide with either 0.5m hardstrips or kerbing as appropriate.

Section 1 provides a cross section north of the proposed Scredda Bridge, and details the relationship of footways to the proposed A391 road improvement carriageway, and the proposed bus way.

Section 2 provides a cross section south of the proposed Carluddon Bridge, and details the relationship of footways to the proposed A391 road improvement carriageway, and cutting in this location.

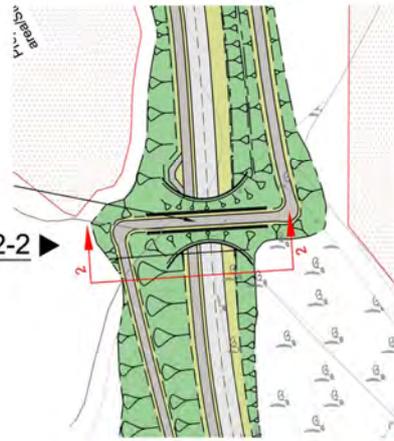


Section 2-2

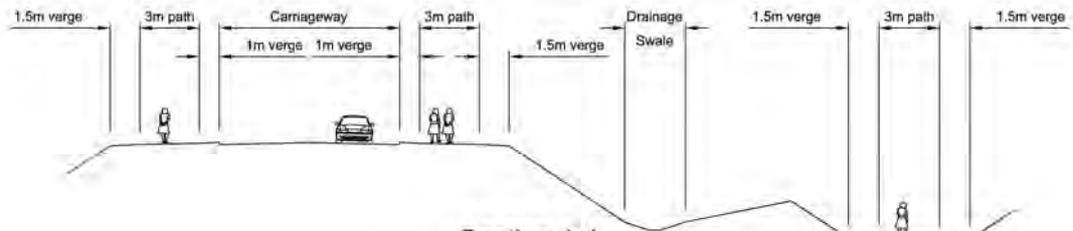
Scale: 1/200



← **Section 2-2** →



← **Section 1-1** →



Section 1-1

Scale: 1/200

5.2 Proposed Great Treverbyn Roundabout

The road improvements include a new junction in the form of a roundabout on the existing A391 Single Rose to Carluddon section. The roundabout would have a 7.3m diameter, with 0.5m hardstrips matching the existing cross section it connects with. The roundabout has two (2) lanes and incorporates stormwater management features which are detailed on the proposed Drainage Strategy Plan.

The roundabout allows for access through to Penwithick, the Eden Road, Stenalees and Bugle. There is the potential within the design to accommodate a further vehicle access on the western side of the roundabout should future development come forward in this area.

5.3 Carluddon Bridge

The proposal includes the provision of two bridges, providing east - west connections for non-motorised users accessing pathways and the clay trails.

Carluddon Bridge would provide a 5.0m wide land bridge north-east of the Great Treverbyn Tip and form the main pedestrian connection for the proposed adjacent Technology Park. Refer to the proposed General Arrangement Plan for the Carluddon Bridge. The network of pedestrian connections which extend from this bridge are detailed on the Non-motorised User Routes Plan.

Carluddon Bridge would provide a landscape statement incorporating elements of the landscape strategy into its design and potentially a biodiversity corridor for the area. With the iconic sky tip west of the bridge, these landmark features would enhance Carluddon as a place to invest.

The design concept for the bridge is that it provides a land anchor, balancing the magnificent Sky Tip and creating a place for recreation, access and business investment.

5.4 Scredda Bridge

Scredda Bridge would provide a 3.5m wide high level bridge connecting the National Cycle Way and clay trails east - west over the new A391. Refer to the Proposed General Arrangement Plan for the Scredda Bridge which details the concept design of the new bridge. With this bridge being proximate to the West Carclaze Business Park, its design has adopted a stream lined design to not detract from iconic buildings in this location.

Scredda Bridge is being designed to cater for equestrian users providing dis-mount points should that be preferred, as well as having a 625mm high solid toe board so as to provide horses with limited visual distraction while crossing.

Scredda Bridge would have the potential to reflect the colour and interest expressed by the local residents and was a main point where the community influenced the design through the consultation phase. The Statement of Community Involvement details the consultation response with dark green being the preferred colour in this location.

5.5 Cyclepaths and Footways

The proposal includes cycleway and footpath connection, refer to the Plan for Non-motorised User Routes. A total of approximately 3.7km of footpaths have been incorporated into the design. The proposed footpaths are intended to connect to the existing clay trails in the locality as well as connecting the existing West Carclaze Business Park and proposed Technology Park to bus shelters, endeavouring to promote public transport in this location.

The design will also enhance the experience for users of the National Cycle Trail, providing the option of bridge or at grade crossing points. The design is endeavouring to extend the experience of countryside recreation in the area and promote active sustainable travel.

The proposal has the potential to provide better connections for Penwithick and Stenalees in the local area.

The footpaths have been designed to achieve where possible a gradient of 1:20 so as to enable all users to access the area, and extend enjoyment and recreation in the countryside.

The proposal does not include the lighting of footways so as to reduce the potential of impacts on biodiversity of the area.

5.6 Materials

Sustainability has been adopted throughout the design of the proposed road improvement, with the intention of re-using on site material as much as can be accommodated in the design, rather than be exported from the site.

Opportunity to use secondary aggregates that are locally sourced will be sought. With the proposed road improvement seeking to achieve CEEQUAL Excellent, every opportunity to positively manage resources will be sought.

Footpaths will incorporate tactile detail in the appropriate locations to assist the visually impaired.

5.7 Lighting

The Carluddon A391 road improvement connects into the north east distributor road for St Austell. The north east distributor road limits

lighting to key intersections with the lengths of road being unlit. The proposed road improvement will adopt this approach, so as to balance road safety with the local biodiversity.

The detailed design of the road will provide ducting throughout the scheme to enable the installation of lighting in the future should that be appropriate.

5.8 Drainage

The surface water run off generated by the Carluddon A391 road improvement will be collected and managed through a range of measures including attenuation within the Great Treverbyn Roundabout, and two further ponds, refer to the Plan of the Proposed Drainage Strategy.

The surface water management has been designed to cater for a 1:100 storm event with an additional 30% for climate change. The direction of discharge and overland flow paths has been designed and sized in accordance with the design storm event.

5.9 Landscape Treatment

The landscape strategy for the road and the technology park is detailed over two plans; refer to Landscape proposals Sheets 1 and 2.

The proposal incorporates willow dominant woodland and oak dominant woodland making a positive biodiversity contribution to the area. The landscaping also incorporates wildflower meadow seeding and heather moorland seeding. Refer to Chapter 13 of the Environmental Statement for more detail in relation to the mitigation that the landscaping provides.

5.10 Bus Stops

The proposed A391 road improvements include new bus stop provision, which is detailed on the Plan of Non-motorised User Routes.

New bus stop provision is proposed adjacent to the Scredda Bridge providing access for key workers at the St Austell Enterprise Park, as well as access to the clay trails for those recreating in the area.

Further bus stop provision is proposed adjacent to the Technology Park providing access for potential key workers in this area should other future development take place.

6.0 Access

The following section of the Design & Access Statement addresses access in the design process for the Carluddon A391 road improvement having regard for the previous sections.

6.1 Policy

The following table highlights the key policies that have influenced the access design of the road improvement.

| Key Policies influencing access in the A391 road improvement | |
|---|---|
| Restormel Local Plan Policies | Influence on Access |
| Policy 38 – Illumination | Seeks to ensure developments will not be illuminated and cause harm from light. |
| Policy 46 – Access to the countryside | Seeks provision of access for disabled people. |
| Policy 47 – Access to public transport | Seeks provision of public transport with provision for disabled people. |
| Policy 50 – Secure Environments | Seeks to ensure development provides a safe and secure environment through design, layout, lighting and landscaping to preserve and enhance the environment. |
| Policy 81 – Walking and cycling | Seeks to ensure new proposals cater for cyclists and pedestrians. |
| Policy 82 – Promotion and support for public transport | Seeks to promote and support provision of new public transport facilities. |
| Cornwall Structure Plan Policies | Influence on Access |
| Policy 27 – Transport Strategy | Seeks delivery of a more effective, environmentally friendly and safer transport system. |
| Policy 28 – Accessibility | Promotes the consideration of overall travel patterns and the travel choices when designing development. |
| Pre-submission Draft Cornwall Local Plan Policies | Influence on Access |
| Policy 13 – Development standards | Seeks to avoid impacts from noise, dust, odour, vibration, waste, pollution and visual effects. Seeks to take advantage of any opportunities to minimise energy consumption. |

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| Policy 16 – Health and wellbeing. | Seeks to protect against unsafe and unhealthy environments and avoid impacts such as noise and vibration from construction and operation of new development. Seeks to maximise the opportunity for physical activity through active travel networks. |
| Policy 26 – Transport and Accessibility | Development should be consistent with LTP3, be safe, safeguard strategic transport opportunities and be designed to provide convenient accessible and appropriate cycle and pedestrian routes. |

In addition to the context and the consultation comments the following guidance has influenced the access outcome:

- Inclusive mobility (DfT)
- BT Countryside for All
- Local Transport Note 208 February 2008
- Cycle-Friendly Infrastructure – Guidelines for Planning and Design 1996
- Design Codes contained within the volumes of the design Manual for Roads and bridges manuals.

6.2 Involvement

Consultation was undertaken for the proposed Carluddon A391 road improvement as detailed in the Statement of Community Involvement. The consultation was designed to achieve as wide an access as possible for all user groups, with various mediums adopted so as to ensure information was provided and understood.

Refer to the Statement of Community Involvement for actual statistical representation and results from the consultation.

6.3 Disability Cornwall Focus Group

The design team engaged with the Disability Cornwall Focus Group during the design phase of the project so as to ensure that all considerations were being given to access throughout the design.

One of the key beneficial outcomes from this process was increasing the widths of pathways, as well as taking the time to properly review all gradients and ensure that the design would be fit for purpose and accessible for all.

Refer to the Statement of Community Involvement for detail of this consultation process.

6.4 Construction

The contract for the construction of the proposed works is anticipated to be awarded in the Autumn of 2013, providing the Council is able to secure all of the match funding required to deliver the project.

Construction plant and material would be conveyed to the site using the existing road network, specifically the A390, A391 and the A30.

6.5 Operation

The proposed Carluddon A391 road improvement will from opening commence to provide benefits locally. The redistribution of traffic from the existing A391 will be seamless with connections directing traffic onto the new section of road.

The existing A391 will continue to provide access to the existing residents of Carluddon from the north, with the southern entry point being limited to buses only.

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