

# Cribbs Patchway MetroBus Extension Gipsy Patch Lane – Traffic Management during construction Framework

## 1. Introduction

1.1 This document forms supplementary information to be read as part of the following planning applications:

- PT18/0986/F Demolition and construction of new railway bridge to provide widened carriageway, footways and cycle lanes at Gipsy Patch Lane and works to lower the highway beneath (the applicant for which is Network Rail); and
- PT18/0987/R3F Widening of Gipsy Patch Lane between the junction with Titan Road (on former Rolls Royce East Works site now known as Horizon 38) and the junction with Bush Avenue. Upgrading of two bus stops to MetroBus style bus stops on Hatchet Road (the applicant for which is South Gloucestershire Council)

1.2 These two planning applications form part of a new rapid transit scheme called the Cribbs Patchway MetroBus Extension (CPME). The CPME scheme includes two other submitted planning applications (PT18/0988/R3F and PT18/0992/R3F) which this document does not specifically relate to and the project team anticipates the requirement for a construction management plan for those two applications to be conditioned.

1.3 The proposed construction works on Gipsy Patch Lane have attracted a number of consultation responses from local residents and businesses in relation to construction impact. The CPME project team has therefore prepared this document in order to provide further information regarding how the construction works on Gipsy Patch Lane would be managed. It should be read alongside all other information submitted as part of the CPME planning applications, including the CPME Transport Assessment.

## 2. Construction Management Plans

2.1 Contractors will prepare and sign a Code of Construction Practice (an outline of which is available in Appendix H of the CPME Transport Assessment) which will include the Construction Management Plan (CMP). The CPME project team recommends that a condition for a Construction Management Plan (CMP) should be placed on planning permissions given for the CPME scheme. Table 4.2 of the CPME Transport Assessment (reproduced in Appendix A of this document) outlines proposed indicative content of the CMPs.

2.2 Detailed design and construction contractors for the Gipsy Patch Lane Railway Bridge will not be appointed until after such time that planning permission has been granted. As such, it is not possible before that time to produce detailed CMPs for the Gipsy Patch Lane applications; nor is it possible to provide confirmed detailed information about traffic management measures. However, the Project Team recognises the need to provide assurance related to how the project will be planned for and taken forwards in order to inform the Local Planning Authority's consideration of the Gipsy Patch Lane planning applications.

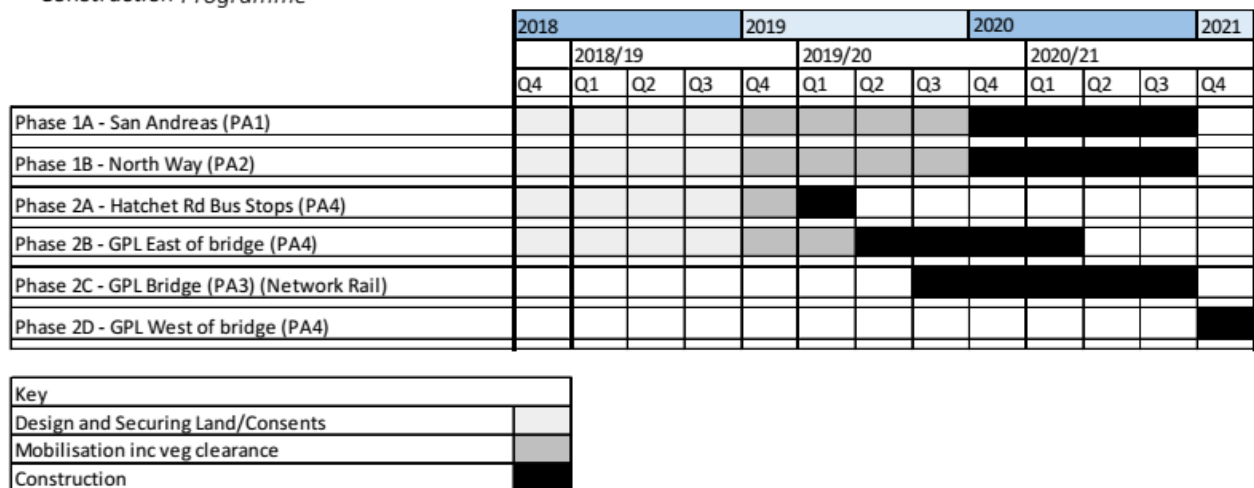
2.3 The information set out on the following pages is therefore being provided in advance of the CMPs in order to aid the Local Planning Authority's consideration of the CPME planning application related to Gipsy Patch Lane. This document provides assurance as to the kinds of measures that will be put in place and considered as part of the construction and traffic management planning for the two planning applications relating to Gipsy Patch Lane, should planning permission be granted.

## 3. Management of construction impacts on traffic and the community

### Traffic management

3.1 Figures 9.2 (see Appendix B) and 10.1 (see below) of the CPME Transport Assessment contain indicative construction programmes for PA3 - the Gipsy Patch Lane Railway Bridge works and the overall CPME scheme respectively.

**Figure 10.1**  
Construction Programme



3.2 Based on this, and other information set out in section 10.6 of the CPME Transport Assessment, the programme of works on Gypsy Patch Lane, indicative durations and anticipated traffic restrictions, are summarised in the table below (timescales are indicative):

Phase (Planning Application)	Indicative dates of works to the carriageway	Temporary Traffic Management Type	Duration
Phase 2B – Gypsy Patch Lane East of bridge (PT18/0987/R3F)	July 2019 – June 2020  June 2020	One-way closure  Full closure for final surface application	12 months  2 weeks
Phase 2C – Gypsy Patch Lane Bridge (replacement) (PT18/0986/F)	Dec 2019 – Nov 2020	Intermittent road closures, including a full closure of approximately 8 months	Whole duration, longest period will be full closure for approximately 8 months
Phase 2D - Gypsy Patch Lane West of bridge (PT18/0987/R3F)	Jan 2021 – March 2021	One way closure	3 months

3.3 Precise details of construction and traffic management cannot be confirmed until the appointment of design and build sub-contractors for the Gypsy Patch Lane railway bridge (PT18/0986/F), following receipt of planning permission. Network Rail will require their contractor to consider traffic management and once a contractor is

in place for the bridge, there will be full coordination between them and the works for PT18/0987/R3F. SGC Streetcare will undertake the works for PT18/0987/R3F and they will also consider the most appropriate traffic management on an ongoing basis throughout the project.

## Traffic management plan

3.4 Using data gathered and lessons learned from other recent construction schemes, such as the Bromley Heath Viaduct major works, a Traffic Management Plan will be developed for both of the Gipsy Patch Lane planning applications (PT18/0986/F and PT18/0987/R3F).

3.5 The council's Traffic Management team will be engaged in the production of the Traffic Management Plan, and as the highway authority will ensure that the plan is robust and that the works are planned in the most suitable, safe and considerate manner possible. It will include:

- details of signed diversion routes (sign posting regime);
- suggestions of alternative routes with typical route plans to specific destination, for example maps showing the recommended route between Yate and Filton avoiding Gipsy Patch Lane;
- scheme information signs including 'businesses open as usual' signs;
- details of how Variable Message Signs will be used to provide advanced warning of potential delays.
- details of any road closures to prevent known cut-throughs being used by inappropriate vehicles such as heavy and high sided goods vehicles;
- temporary parking restrictions where necessary so that local residents are not inconvenienced by errant parking.
- coordination with any other roadworks happening in the area and that diversion routes are the most appropriate.
- Engaging with the emergency services and ensuring they remain up to date with any traffic management that will affect their operation.
- Engaging with the council's public transport team to ensure bus operators are kept up to date with the works.

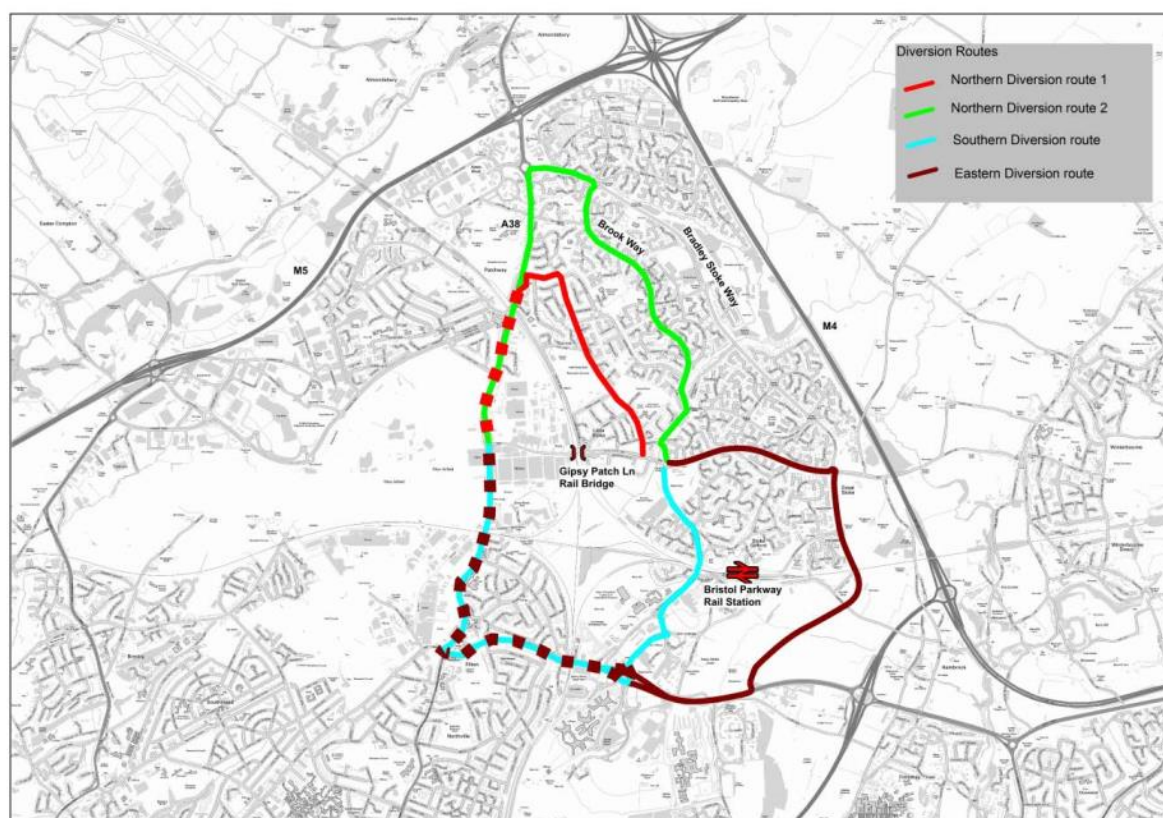
## Access to businesses during full highway closure for railway bridge replacement

3.6 The Transport Assessment has considered the need for Gipsy Patch Lane to be closed for a period of approximately eight months to facilitate preparatory works, construction and follow-up works. The area of Gipsy Patch Lane to be closed would be at the railway bridge, leaving access to side roads along the rest of Gipsy Patch Lane.

3.7 Section 9.6.14 of the Transport Assessment provides an overview of existing conditions on potential diversionary routes and section 9.8 recommends that during total closure of Gipsy Patch Lane the diversion route should be Orpheus Avenue,

Brook Way and Bradley Stoke Way. The proposed diversion routes set out in the Transport Assessment are shown below in Figure 9.5:

**Figure 9.5**  
CPME Scheme diversion routes



3.8 Table 9.29 of the Transport Assessment briefly summarises the recommended mitigation during closure periods:

**Table 9.29**  
*Gipsy Patch Lane Bridge Recommended Mitigation Actions*

Transport related impact	Scale of impact	Recommended mitigation actions	Effect
Closure of Gipsy Patch Lane	High	<ul style="list-style-type: none"> <li>Traffic management measures – A programme of traffic management measures as outlined in the CMP will be undertaken to ensure the safety of all users.</li> <li>Vehicles –northern diversionary route 2 via Orpheus Avenue/Brook Way and Bradley Stoke Way recommended as the main diversion given the constraints, journey lengths and junction delays with some of the other diversionary routes.</li> <li>HGVs routed via either the northern diversion route 2 or the eastern diversion route via Winterbourne Road, Great Stoke Way, the Stoke Gifford Transport Link and the A4174.</li> </ul>	Extended journey times for users. Minimise construction times should reduce the overall impacts

Table 9.29

*Gipsy Patch Lane Bridge Recommended Mitigation Actions*

Transport related impact	Scale of impact	Recommended mitigation actions	Effect
		<ul style="list-style-type: none"> <li>NMUs – a mixture of partial access (during partial road closure) and shuttle bus service (during full road closure) to be provided</li> <li>Minimise construction closure times to reduce wider impacts on the highway network.</li> <li>Putting in an action plan that communicates and advertises the temporary changes through existing travel information portals and channels.</li> <li>Potential diversion signage for longer distance traffic to avoid the area.</li> </ul>	
Partial closure of Gipsy Patch Lane Bridge	High	<ul style="list-style-type: none"> <li>Traffic management measures – A programme of traffic management measures as outlined in the CMP will be undertaken to ensure the safety of all users.</li> <li>Vehicles – northern diversionary route 2 via Orpheus Avenue/Brookway and Bradley Stoke Way recommended as the main diversion given the constraints, journey lengths and junction delays with some of the other diversionary routes.</li> <li>HGVs routed via either the northern diversion route 2 or the eastern diversion route via Winterbourne Road, Great Stoke Way, the Stoke Gifford Transport Link and the A4174.</li> <li>NMUs - Provision and management for NMUs required through site.</li> <li>Putting in an action plan that communicates and advertises the temporary changes through existing travel information portals and channels.</li> </ul>	The partial closure of the bridge will prolong journey times. The mitigation measures should reduce the overall impact of the temporary partial closure.
Construction related movements	Medium	<ul style="list-style-type: none"> <li>Preparation of a CMP that will indicate the level of construction related movements. This will include the volume and distribution of abnormal load movements, the amount of material to be moved to and from the site and the distribution of HGV movements; and</li> <li>The CMP will identify the permitted routes for the construction traffic. This will include a listing of roads that have restrictions for construction traffic and at particular times during the day. It is envisaged that Gipsy Patch Lane (west of the railway bridge), A38 Gloucester Road to Junction 16 of the M5 will be used as the principal route. The measures such as the use of 'just in time' delivery software will minimise construction traffic as appropriate and will be timed for non-peak periods.</li> </ul>	Whilst there will be an impact, the timing of construction related movements will be directed towards off peak traffic periods. Similarly, the agreed routes will aim to minimise impacts on residential and other sensitive areas such as local schools.
Construction staff related movements	Low	<ul style="list-style-type: none"> <li>Movement of construction workers is expected to be largely from the designated construction compound at the Horizon 38 site and will need to be timed at non-peak times. The CMP will outline the times of the largest movements as not to impede the operation of the local highway network during peak periods.</li> </ul>	Whilst there will be an impact, the timing of construction related movements will be directed towards off peak traffic periods.

3.9 Initial discussions have been held with the council's Traffic Management Team regarding the proposed diversion routes and they will provide final approval of the routes and the Traffic Management Plan.

3.10 Over the period of the full closure, mechanisms will be in place to minimise the impact this will have on users of Gipsy Patch Lane, in line with the Traffic Management Plan described above. Businesses and residents along Gipsy Patch Lane will not become stranded and will have alternative routes available to them.

3.11 Network Rail, their appointed contractors and SGC hereby commit to working with affected businesses and other relevant stakeholders so that traffic management is planned for in a manner which minimises business impact. Meetings will also take place with nearby businesses in order to ensure access to fire escapes is available at all times and that fire escape routes will either remain or be suitably diverted in order that business can continue as normal. Provision for refuse collection, emergency services access and deliveries/collections will also be planned in liaison with local businesses.

3.12 The applicants also commit to engage with affected businesses and stakeholders in the drafting of the construction management plans and traffic management plans for both Gipsy Patch Lane planning applications. This will ensure that business requirements are factored into these plans so as to minimise business impact as far as possible.

3.13 Wider communications with local residents and other relevant stakeholder groups, in line with a communications plan, will also inform the production of the construction management and traffic management plans.

## Longer distance diversions

3.14 As set out in section 9.6.15 of the CPME Transport Assessment, strategic modelling undertaken to support the CPME planning applications has identified potential impacts on routes further away from the Stoke Gifford/Bradley Stoke and Filton areas, such as Winterbourne. Given the importance of the A38 Gloucester Road and A4174 Avon Ring Road corridors, there could be a need to potentially divert longer distance traffic away from these corridors, as appropriate. Therefore as many trips as possible will be diverted away from the area, so that they disperse over the wider network which will assist in the reduction of queues on the A38 Corridor. Longer distance diversions was a method of mitigation successfully used during the works associated with the Bromley Heath viaduct in 2017 and 2018.

3.15 The traffic management plan will consider both the local highway network in the immediate vicinity of Gipsy Patch Lane as well as the wider network as far as the Strategic Road Network (Motorways). It will also examine what the most appropriate signage strategy should be for all diversion routes, whether local or further afield. This will involve coordination with Highways England to identify suitable locations for diversion signs and/or variable message signs.



## 4. Consideration of reduced construction duration

### Opportunities already taken for reducing construction impact

4.1 It is acknowledged that the likely extent of the necessary traffic management will cause disruption to the traveling public, local residents and local businesses. Therefore opportunities for reducing the duration of construction have already been taken, including:

- The replacement railway bridge structure is proposed to be pre-fabricated off-site and then manoeuvred into position during a 12 day railway possession. The project team have invested in a large site compound to do this and this action has reduced the 'on-line' construction time tremendously in comparison to constructing the bridge in situ on the highway.
- The demolition of the existing bridge and the manoeuvring of the new bridge into position during the 12 day possession will be undertaken under 24 hour working to minimise the duration of the most disruptive works.

### Opportunities for further reducing works duration and highway closure periods

4.2 Any further opportunities to reduce the duration of the works will continue to be fully explored on an ongoing basis, throughout preparing for the works (including in drafting the construction management plans) and during the works themselves. In addition, Network Rail will require any sub-contractors tendering to undertake the bridge construction and associated highway works to demonstrate how they will minimise/reduce construction duration and highway closures.

4.3 During the 12 day period when the new bridge would be manoeuvred into place there would be 24 hour working. Before and after this period working hours will normally be during daytime. However, possible methods for reducing the length of closure periods could include extended working hours and adding resource in the form of labour, dependent on any additional funding being made available. The CPME Project Team will explore whether evening working during appropriate phases of construction could help to reduce highway closure periods.

4.4 It must be recognised however that there are a number of challenges and considerations related to extended working hours, including:

- Consideration of environmental impacts such as noise and light pollution and the potential effects on identified receptors including local residents The Council has a policy which is available to view at <http://www.southglos.gov.uk/environment-and-planning/pollution/pollution-control-noise/nuisance-from-building-sites/>



- Consideration of environmental impacts such as noise and light pollution and the potential effects on ecology and ecological resource (e.g. bats).
- Reduced work output especially during the winter under colder temperatures and artificial lighting conditions.
- Higher risk of accidents/ injuries during the winter under colder temperatures and artificial lighting conditions.
- Higher risk of accidents with the general public and traffic management with a site running during hours of darkness.
- Some operations need a natural break before further operations can continue, e.g. waiting for concrete to cure.
- Availability of other organisations such as utilities and services during out of hours operations.
- Higher cost to delays on site while issues are resolved (for example, potentially two gangs unable to proceed until issues are resolved)

4.5 Opportunities for exploring reducing the length of the construction works must therefore be examined in the context of these issues and any other relevant considerations, and balanced against the benefits. At such time as planning permission is granted for the railway bridge, Network Rail would require any contractor who tenders to undertake detailed design and construction of the railway bridge to demonstrate why they require a full road closure and how they have considered reducing highway closure durations. For PT18/0987/R3F, SGC Streetcare will undertake the works and will investigate any opportunities for reducing works duration on an ongoing basis.

## Construction traffic and worker movements

4.6 Access routes and local restrictions are shown on drawing PA4-T001-316-113. All subcontractors and suppliers will be informed to use only the specified access routes. Full details of how construction traffic and worker movements will be managed will be included in the CMPs, including details in relation to the following:

- Access and egress
- Parking
- Deliveries
- Major deliveries
- Security checkpoints
- Waste and packaging
- Reporting

## PT18/0986/F Railway bridge

4.7 Movement of construction workers in relation to the Gipsy Patch Lane Railway Bridge will be largely to/from the designated construction compound at the Horizon 38 site. The Horizon38 site already benefits from planning permission for mixed employment uses and therefore the Council has already accepted the principle of construction and worker movements to and from this site.

4.8 The CMP will outline the times of the largest movements so as not to impede the operation of the local highway network during peak periods.

4.9 All heavy vehicle movements will be controlled by banksmen as required or pedestrian exclusion zones will be established around the loading / unloading area.

4.10 The main compound area including welfare, site offices, car park and storage is located within the northwest extent of the application site boundary (on the Horizon 38 site). Showers and changing facilities will be provided.

4.11 Suitable parking provision will be made within the site compound to allow all site personnel, including visitors, to park within the limits of the project. These provisions will include sufficient space to allow safe turning of vehicles so that all vehicles egress site in a forwards direction. Staff parking on adjacent public roads will not be authorised for any of the CPME planning application sites.

## PT18/0987/R3F highway works

4.12 The longitudinal nature of the works to Gipsy Patch Lane means that several locations for site compounds have been identified for use as the works progress. The primary site compound will be located in the area of Council owned land currently leased to Network Rail, south of Patchway train station, see drawing PA4-T001-316-103. Access will be made from Station Road via a new lockable entrance gate to avoid construction traffic movements through the station car park.

4.13 The compound will be fully secure on all sides. Similar to the compound for the railway bridge, this compound area will include welfare, site offices, car park and storage. Suitable parking provision will be made within the site compound to allow all site personnel, including visitors, to park. These provisions will include sufficient space to allow safe turning of vehicles so that all vehicles egress site in a forwards direction. Visitors will be required to report to the site supervisor and receive a site induction prior to accessing any works areas.

4.14 Areas shown as site compound on Gipsy Patch Lane are where physical works will be taking place, temporary traffic management in the form of cones and barriers will demarcate these areas. These areas will be required to accommodate the delivery of bulk materials and excavation arisings, also known as 'muck away', and therefore sufficient signage and banksmen will be in place to assist these movements.

## 5. Communications

5.1 Good public communication is considered essential in advance of and throughout the duration of the construction works. Therefore a communication plan will be developed well in advance of the commencement of works which will guide the engagement on the TMPs and CMPs described above.

5.2 Means of engagement and communication to be utilised include:

- creating a dedicated webpage regularly updated with ongoing progress;
- using social media to provide updates;
- holding dedicated drop-in sessions for the general public prior to works commencing to answer questions and help plan traffic management proposals;
- visiting local businesses prior to works commencing to understand their needs to help inform traffic and construction management proposals;
- letter drops; and
- press releases.

5.3 Additional information about how communication and engagement will be managed is available in the CPME Communications Framework (June 2018).

## 6. Non-motorised users

### Partial closures of Gipsy Patch Lane

6.1 As stated in Table 9.29 of the Transport Assessment (see above), access along Gipsy Patch Lane for pedestrians and cyclists will be maintained during periods of partial closure associated with PA4, PT18/0987/R3F.

### Mitigation during full closure of Gipsy Patch Lane (PA3: PT18/0986/F)

6.2 Due to the nature of the works and the requirement to effectively remove and reinstate a whole section of the existing road it is not possible to provide unrestricted access for members of the public under the bridge during the main construction period. This is something which has been considered at length by the CPME Project Team and is prevented due to the scale of the works. The nature of the construction works involves heavy plant lifting loads and this could therefore not be made safe for third party access. In addition, the site will be busy with construction plant and worker movements.

6.3 Section 9.6.17 of the CPME Transport Assessment states that the diversion routes set out in Table 9.28 (below) for pedestrians and cyclists during the full closure are above acceptable limits.

**Table 9.28***Assessment of alternative NMU routes*

Ref.	Route	Existing distance from Station Road to Gloucester Road via Gipsy Patch Lane Bridge	Distance using this route	Difference	Assessment
1	Station Road/Playing fields behind Redfield Road/Gloucester Road using railway bridge north of Patchway station	0.75km	1.94km	+1.19km	- Existence of steps and playing fields a barrier for those with mobility restrictions - Poor surveillance and lighting especially during winter
2	Station Road/Gloucester Road	0.75km	2.43km	+1.68km	Existence of steps between Station Road and Gloucester Road
3	Gipsy Patch Lane/Hatchet Road/Brierly Furlong/Station Road/Filton Avenue/Gloucester Road	0.75km	5.15km	+4.4km	Step free but would lead to very prolonged return journeys

6.4 Table 9.29 (see above) therefore sets out a number of recommended mitigations, including minimising closure periods (discussed above), effective communications (discussed above) and a shuttle bus.

6.5 The shuttle bus will follow the most appropriate vehicular diversion route. If there are any potential opportunities for the shuttle bus to drive under the bridge before the re-opening of the highway then these will be explored, although ensuring the safety of the public and workers on site will be the paramount consideration.

6.6 Precise operational arrangements for the shuttle bus will be confirmed prior to construction and communicated to the public via the channels prescribed in the communications plan.

6.7 Any other potential solutions that could aid pedestrians and cyclists will be explored on an ongoing basis as they arise during preparation for the works and during construction.

## 7. Noise and vibration

7.1 The following information has been included to respond to concerns from Strenco, a business situated next to the railway bridge, who have submitted responses to the Local Planning Authority on both Gipsy Patch Lane planning applications.

7.2 The need for accountability and responsibility for environmental issues (Network Rail Environmental Policy (September 2017) is provided at Appendix C) will be fully recognised during construction. This includes the site staff and operatives, who are a key determinant of environmental performance, and the senior

management staff who ensure that the works are undertaken in accordance with this plan. Staff, operatives and subcontractors have the authority and responsibility to protect the environment at all times during execution of the construction works. Responsibilities will be highlighted during site inductions.

7.3 The Control of Pollution Act 1974 and Noise and Statutory Nuisance Act 1993 contain powers to control noise emission and to require the employment of the best practicable means for preventing or counteracting the effect of noise. Well defined noise control procedures will be implemented for all construction plant equipment and all site activities. BS 5228: Noise control on construction sites and open sites will be complied with.

7.4 Construction will follow Best Practicable Mean of Section 72 of the control of Pollution Act 1974 to minimise noise and vibration effects.

7.5 Chapter 10 of the Environmental Statement (ES) covers noise and vibration. Noise calculations have been conducted for each of the assumed phases of construction. Vibration levels have been calculated for some activities based on the formulae provided in BS5228.

7.6 Noise surveys were undertaken in the garden of 26 Gipsy Patch Lane to provide a background level. Data from this survey have been used as a representative of the baseline noise levels. The Environmental Statement submitted to support the four CPME planning applications concludes that during the 12 day rail possession where work will take place over a 24hr period the noise level would be regarded as 'significant' due to the exceedances experienced at night-time. During the remaining period noise levels are regarded as 'not significant'.

7.7 Mitigation for noise and vibration includes good liaison between the contractor and any occupants and the provision of a Construction Environmental Management Plan (CEMP) which will include a Noise Control Plan. It is anticipated that the CEMP will be controlled via a condition whereby South Gloucestershire Council (SGC) will need to agree to the detail contained in the management plan.

7.8 No specific noise mitigation measures have been proposed within the planning submission but it is recognised that where impacts arise, mitigation will be considered and dependent upon the location, detail of this would be contained within the CEMP. Where nearby business depend on noise/vibration sensitive engineering machinery, SGC and Network Rail commit to liaising with them to investigate if any appropriate mitigation can be put in place when and where necessary to avoid or minimise any business disruption. This will be undertaken well in advance of disruptive works in order to provide advanced notice.

7.9 Measures to mitigate the potentially significant noise impacts resulting from night time working associated with the demolition and construction of the Gipsy Patch Lane Railway Bridge have included proposed off site pre- fabrication of the new bridge and phasing of works. Further potential mitigation measures will be confirmed in consultation with the appointed contractor. Measures could include careful selection of machinery, construction and demolition methodologies,

screening through portable barriers; and may also in some circumstances include the rehousing of residents during the temporary construction works.

7.10 Appendix 10.4 of the ES provides lists of each phase of activity, detailing assumed plant to be used, estimated duration of use and the calculated noise level. Table 10.4.9 gives the combined construction noise levels at identified receptor distances.

7.11 The Council's independent Planning Enforcement Team will undertake any necessary action to ensure that agreed noise limits are adhered to.

# Appendix A

**Table 4.2**

*Indicative outline and detailed CMP content*

Heading	Indicative content of the outline CMP	Indicative content of detailed CMP
Management, Programme and working hours	Outline of the estimated programme, roles and working hours	<p>The name and contact details of the Contractor's safety and control officer and information for the public;</p> <p>Details of phasing of works;</p> <p>Timing of operations with any lane closures limited to 0930 to 1530</p> <p>A register of applications for consents associated with temporary traffic management measures;</p> <p>Procedures to be followed to obtain consent to work on or over railways; and</p> <p>Monitoring requirements in relation to the plan</p>
Block plans	Outline of the extent of construction works and compounds	<p>Block and layout plans of the compounds which will comprise:</p> <p>Access/egress arrangements including visibility splays onto the public highway and vehicle tracking;</p> <p>Vehicle tracking within the site especially for articulated HGVs where appropriate so that vehicles enter and leave the site in forward gear;</p> <p>Internal parking arrangements for staff and visitors;</p> <p>Storage of materials and waste on site;</p> <p>Pedestrian/circulation routes within the compound; and</p> <p>Site boundaries / hoardings / temporary structures on the public highway.</p>
Access routes	Indicative access routes for construction traffic	<p>Permitted access routes for construction traffic:</p> <p>A list of roads which may be used by construction traffic in the vicinity of the site including any restrictions to construction traffic on these routes;</p>
Environmental impacts	General measures to reduce pollution and debris on the local highway network	<p>Listing of the measures that will be used to reduce dust, air pollution and other debris on the local highway network</p> <p>Measures to ensure that the maintenance and condition of public roads, cycleways and public Rights of Way (PRoW) do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities; and</p> <p>Outline of measures to reduce construction noise near sensitive receptors</p>
Movements	Estimated volume of construction related movements	<p>Maximum number of daily two-way vehicle trips generated by the development;</p> <p>Network peak hour two-way daily vehicle trips (usually considered to be 08:00-09:00 and 17:00-18:00) and assessment of impact on the highway network;</p> <p>Volume and distribution of abnormal load movements;</p> <p>Volume of material to be moved to and from the site;</p> <p>Volume of HGV movements (two-way);</p> <p>Distribution of HGV movements during the construction phase;</p>



**Table 4.2***Indicative outline and detailed CMP content*

Heading	Indicative content of the outline CMP	Indicative content of detailed CMP
		<p>Volume (two-way), type and distribution of all other traffic associated with the construction phase including workforce profile, shift patterns and staff catchment; and</p> <p>Mitigation measures to rectify any potential capacity impact, damage to structure or highway.</p>
Traffic Management	Outline of the proposed traffic management measures	<p>A programme of traffic management measures to be implemented;</p> <p>Measures to provide for the safety of traffic, the public and construction staff during traffic management works and temporary traffic control measures;</p> <p>Procedures to be followed for the temporary or permanent closure or diversion of roads or accesses; including details of required notice periods; and</p> <p>Drawings showing traffic management layouts, signing and apparatus to be implemented, pedestrians, equestrians and cyclists.</p> <p>Details of any delivery management procedures or software to ensure access to the site is clear for arrival.</p>

## Appendix B

Figure 9.2

### Indicative breakdown of Gipsy Patch Lane works and highway impacts

[illegible]

## Appendix C

**NetworkRail**

# Environment Policy

Network Rail runs, maintains and develops Britain's rail tracks, signalling, bridges, tunnels, level crossings and key stations. This Environment Policy sets out our approach to environmental management which is key to achieving our company's vision – 'A better railway for a better Britain'.

As part of this vision we will improve our environmental performance and leave a sustainable environmental legacy for future generations. We believe that outstanding environmental performance is a central part of being a responsible and successful company and will help us to protect and enhance the UK's environment.

We expect everyone who works for Network Rail to apply the following key principles agreed by the Executive Team to guide our work activities:

- We will as a minimum comply with all relevant environmental and social legislation and regulatory requirements
- We will identify our significant environmental impacts and manage these appropriately
- We will take action to prevent pollution to land, air and water which may occur as a result of our operations
- We will buy and use natural resources in a responsible and sustainable manner
- We will reduce the amount of material we use and minimise the amount of waste we produce
- We will manage our land sustainably including consideration of our impacts on biodiversity
- We will become more energy efficient and reduce our carbon emissions
- We will make our network resilient to weather impacts and future changes in the climate
- We will provide employees with the relevant competence and training to deliver our policy
- We will continually improve our environmental performance
- We will implement and maintain an environmental management system that follows the principles of ISO 14001:2015 with commitment from our Executive Team
- We will set objectives and targets to monitor our environmental performance

These principles and commitments complement our Energy and Carbon, Weather Resilience and Climate Change Adaptation, and Social Performance Policies.

September 2017