

PULBOROUGH PARISH COUNCIL
Working together for a better future

Pulborough Transport and Infrastructure Working Group Agenda

Friday 10th November 2023 Sports Club Meeting Room – 1130 -1330

Councillors (all PPC apart from Charlotte Kenyon):

Paul Clarke (Chair of the Working Party)
Jon Campbell
Len Ellis Brown (Parish Chair)
John Wallace
Charlotte Kenyon (WSCC)

Other Stakeholders:

David Hurst Pulborough Partnership
Adam Bazley WSCC
Nigel Weston HDC
Harry Quenault PPC Clerk

1. Apologies for absence

2. To note 'Sinclair Drive Footpath Link' options report. (appendix A)

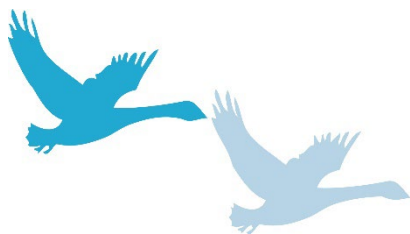
3. Short Term issues

- A29 Church Hill Closure lessons
- Sopers Hill tree branch reporting and land movement

4. A29 issues

- What are the plans for the A29 and possible impacts on Pulborough and neighbouring communities?
- What are the mechanisms to limit the weight, speed and or width of vehicles on A roads?
- What could be done about the A29 in Pulborough practically?
- What are the steps to secure a successful TRO and cost to do so?

5. Review and update the Pulborough priorities. Please see attached the summary document for Transport Options in Pulborough. (appendix B)



PULBOROUGH PARISH COUNCIL

Working together for a better future

PULBOROUGH PARISH COUNCIL

Working together for a better future

6. Date of next meeting



Horsham District Council

SINCLAIR DRIVE FOOTPATH LINK

STRUCTURE OPTIONS REPORT





Horsham District Council

SINCLAIR DRIVE FOOTPATH LINK

STRUCTURE OPTIONS REPORT

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 70097712

OUR REF. NO. 70097713-WSP-RP-BR-0001

DATE: OCTOBER 2023

WSP

Matrix House
Basing View
Basingstoke, Hampshire
RG21 4FF
Phone: +44 1256 318 800

WSP.com



QUALITY CONTROL

Issue/revision	Issue 1	Issue 2	Issue 3
Remarks	First Issue		
Date	October 2023		
Prepared by	Robert McMillan		
Signature			
Checked by	Andrew Cook		
Signature	A Cook		
Authorised by	Andrew Cook		
Signature			
Project number	70097713		
Report number	70097713-WSP-RP-BR-0001		
File reference	Sinclair Drive - Structure Options Report - Rev 0		

CONTENTS

EXECUTIVE SUMMARY

1	INTRODUCTION AND CONSTRAINTS	1
	PROJECT DETAILS	1
1.1	INTRODUCTION	1
1.2	CONSULTATIONS AND REQUIREMENTS	4
1.3	GEOLOGY	6
1.4	ENVIRONMENT	6
1.5	LAND AND PROPERTY	6
1.6	OTHER CONSTRAINTS	9
2	OPTIONS	14
2.1	DESCRIPTION OF PROPOSED STRUCTURE OPTIONS	14
2.2	CAPITAL COST AND WHOLE LIFE COST	14
2.3	APPEARANCE	16
2.4	SUSTAINABILITY AND USE OF NATURAL RESOURCES	16
2.5	ECOLOGICAL IMPACT	17
2.6	DURABILITY / DESIGN LIFE	17
2.7	HEALTH AND SAFETY, AND POTENTIAL RISKS AND CONSTRAINTS TO THE PROJECT	17
2.8	PROPOSED DESIGN METHOD	18
2.9	DEPARTURES FROM STANDARDS	19
2.10	CONSTRUCTION ISSUES	19
2.11	OPERATION AND MAINTENANCE	20
2.12	SOCIAL IMPACT ON ADJACENT PROPERTIES	20
2.13	SOCIAL IMPACT ON FOOTPATH USERS	20
2.14	PREFERRED OPTION	21

TABLES

Table 2-1 – Cost Estimates	16
Table 2-2 – Options Comparison Table	22

FIGURES

Figure 1-1 - Location map	2
Figure 1-4 - Plan showing Land Ownership Boundaries	6
Figure 1-5 - Photos showing possible site compound locations	7
Figure 1-6 - Image showing the possible site compound location	8
Figure 1-7 - Map showing possible site compound locations	8
Figure 1-8 - Photos showing the redundant lighting lamp	10
Figure 1-9 - Eco-Crib Retaining Wall	11
Figure 1-10 - Insitex formwork liner feature finish	12
Figure 1-11 – Flex-MSE – live staked and hydroseeded	13

APPENDICES

APPENDIX A

GENERAL ARRANGEMENT DRAWINGS

APPENDIX B

C2 STATUTORY UNDERTAKER PLANS

APPENDIX C

COST ESTIMATES

APPENDIX D

DESIGN RISK REGISTER

EXECUTIVE SUMMARY

Horsham District Council have instructed WSP to undertake an Options Study to consider options for the provision of a new pedestrian footpath linking Sinclair Drive / Corden Place housing development to the A29 Stane Street.



There are numerous constraints identified within this Structure Options Report, particularly with the proximity of the preferred option with a Southern Water trunk main. Also, with neighbouring properties that would be negatively affected with a new footpath in such close proximity.

A number of different footpath alignments and various forms of retaining walls were considered as part of this SOR. The following options have been explored:

Option 1) Footpath linking to Stane Street

Option 2) Footpath linking to Stane Street Close

The preferred option is Option 1) Footpath linking to Stane Street, this option is marginally more expensive, however the improved safety that this option would bring to the footpath users is considered to be worth the additional cost. Also, this option will result in less issues with the neighbouring properties.

The significant project risks are:

- Environmental surveys have not yet been undertaken so the environmental risks are unclear.
- Ground Investigations have not yet been undertaken so the geotechnical risks are unclear.
- Neighbours backing onto the new footpath could be objectionable to the scheme.
- The costs for alterations to the UKPN pole and stay supporting the overhead electricity plant may be unpalatable / prove cost prohibitive.
- It is possible that the topographical survey undertaken at present is insufficient to undertake the detailed design of the preferred option.
- While considered to be a small, there is a risk of contaminated soil being found on site.

It is recommended to undertake the following steps:

- Select an option from those proposed in this report.
- Engage with UKPN to discuss the alterations associated to movement of the pole stay.
- Undertake pedestrian surveys in the local area to establish flows and peak times, and validate the assumptions made on the safety aspects provided by the preferred option.
- Undertake Phase 1 Habitat Survey for the site.
- Undertake Ground Investigations.



- Undertake Ground Penetrating Radar surveys or targeted trial pits of the site to confirm the location of the utilities identified within the utility searches.
- Engage with the owners of the properties on Stane Street Close that have gardens that back onto the proposed footpath.
- Engage with Southern Water to confirm the details of the easement, their requirements for maintaining access to the foul sewer manhole, and likelihood of gaining their consent for the proposed works.
- Discussion with WSCC regarding the scheme with a view towards adoption of the new highway assets, including Technical Approval processes for the designs of the path, retaining walls, and lighting.
- Procure detailed design(s).

Contact name Robert McMillan

Contact details 01256 318811 | robert.mcmillan@wsp.com

1 INTRODUCTION AND CONSTRAINTS

PROJECT DETAILS

Name of project: Sinclair Drive Footpath Link – Structure Options Report
Name of structure: Sinclair Drive Footpath Link
Structure reference no.: TBC

1.1 INTRODUCTION

1.1.1 REPORT PURPOSE AND SCOPE

Horsham District Council have instructed WSP to undertake an options study to consider options for the provision of a new pedestrian footpath and associated retaining structure linking Sinclair Drive / Corden Place housing development to the A29, Stane Street.

To the north of Pulborough and the south of Codmore Hill is the Sinclair Drive / Corden Place housing development that was constructed circa 2016. Refer to Section 1.1.2, Location.

The planning application for the Sinclair Drive / Corden Place housing development (planning application number: DC/15/1084) makes reference to the construction of a footpath link as a means for residents to access nearby amenities.

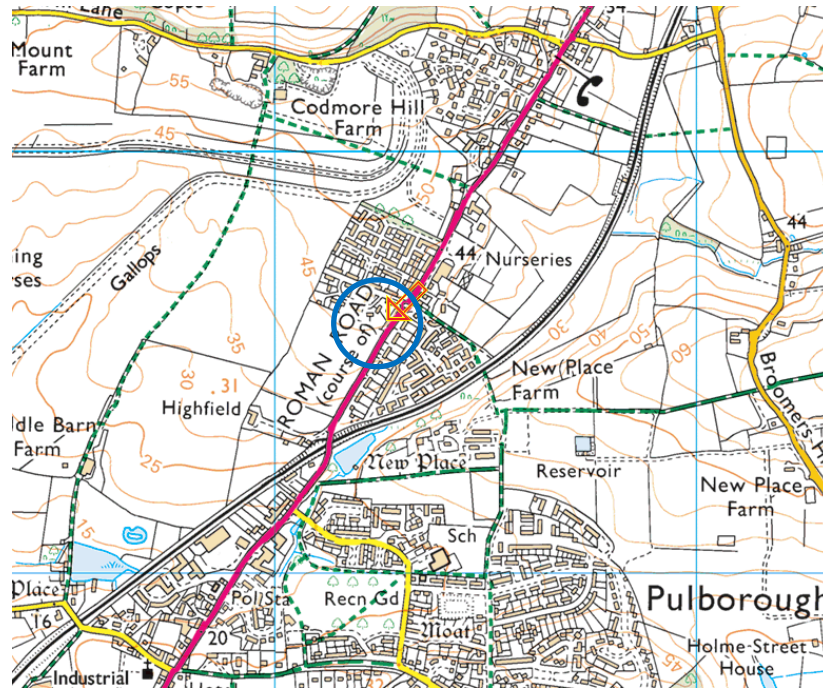
As part of this Structure Options Report (SOR), a topographical survey, C2 utility searches and land ownership plans have provided by Horsham District Council.

A number of different footpath alignments and various forms of retaining walls were considered as part of this SOR. The following options have been explored:

Option 1) Footpath linking to Stane Street

Option 2) Footpath linking to Stane Street Close

1.1.2 LOCATION



Contains Ordnance Survey data © Crown copyright and database right 2020

Scale 1:25,000

Grid Ref: 505264, 119597

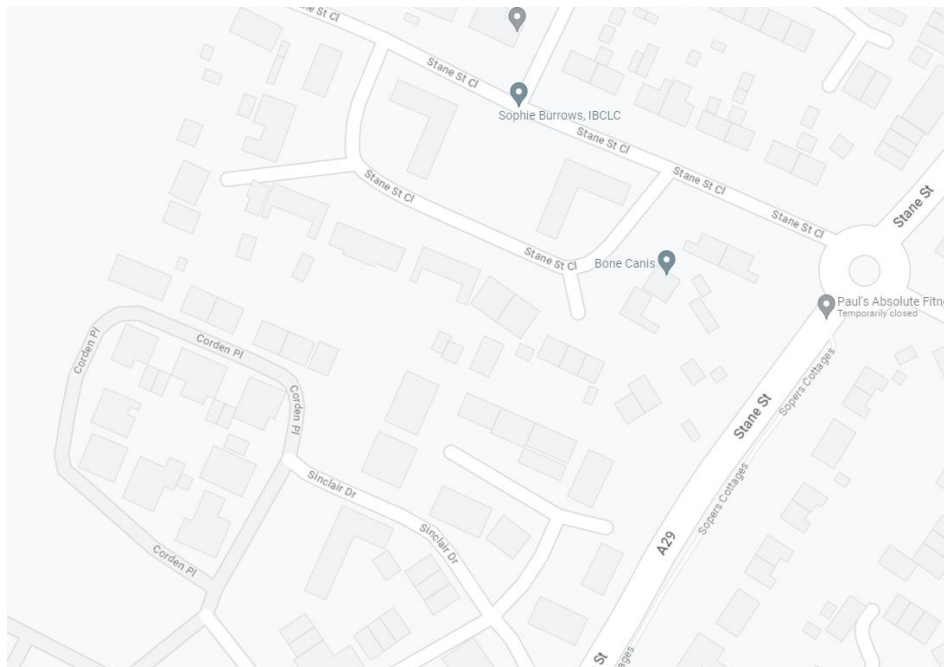


Figure 1-1 - Location map showing the area surrounding the proposed footpath
(Google Maps, <https://www.google.com/maps/@50.9663794,-0.5019701,377m/data=!3m1!1e3?entry=tту>)

1.1.3 SCHEME DESCRIPTION

This new footpath link is anticipated to be delivered in conjunction with a wider suite of pedestrian/cycle improvement schemes within the local area. Improvements are being considered to the A29 highway bridge (Pigeons Gate) crossing the railway to the south along Stane Street, and with the planned closure of New Place level crossing with the construction of a new footbridge.

1.1.4 DESCRIPTION OF EXISTING STRUCTURE

There are no existing structures at this location. However, there is a footpath through the Sinclair Drive / Corden Place housing development leading to the top of the embankment which the new footpath will link into, see Figure 1-2. Footpaths also currently exist on the west side of Stane Street and both sides of Stane Street Close. See Figure 1-3.



Figure 1-2 - Photo showing the existing footpath within Sinclair Drive (new path to join just behind the close boarded fence in foreground)



Figure 1-3 - Photo showing the existing footpaths

1.2 CONSULTATIONS AND REQUIREMENTS

A summary of the consultations and requirements can be found in Table 1-1 below.

Table 1-1 – Summary of Consultations

Consultee	Requirements	Comments
Horsham District Council	HDC are to consider the options available to provide a footpath for local residents.	
Local Landowners	Landowners likely to be affected by the works: - Properties on Stane Street Close that back onto the proposed footpath location - Residents and property owners with properties backing onto the proposed new footpath	No direct consultations have been undertaken as part of this SOR.
Local Residents	Local residents are likely to benefit from new footpath. However, factors surrounding safety, noise and lighting are likely to determine if the new footpath has a positive or	No direct consultations have been undertaken as part of this SOR.

Consultee	Requirements	Comments
	negative impact on local residents.	
Services	Utility companies have not been consulted as part of this SOR. That will have to be undertaken as part of the detailed design phase to confirm the interface between the new footpath and their apparatus. The position of the services has been shown in the options drawings in Appendix A.	Additional service tracing works using GPR (Ground Penetrating Radar) or localised trial pits will be required to confirm utility locations shown on the C2 searches.
Southern Water	There is an 18" dia trunk main along Stane Street that changes course towards the Sinclair Drive housing development. There is a foul water sewer with manholes that crosses the proposed footpath near to the start of the proposed footpath next to the Sinclair Drive housing development. The position of these services has been shown in the options drawings in Appendix A.	Communication between Southern Water and the adjacent housing developer (which was submitted as part of the planning application) indicates that there is an easement in place for 6.0m either side of the water main which requires consent from Southern Water for any new structures, excavation, mounding or tree planting.
BT Openreach	There are buried cables within the west footpath along Stane Street.	
SGN	There is a 180mm (PE pipe) Low Pressure gas main along Stane Street and turning the corner down Stane Street Close within the footpath.	SGN has highlighted uncertainty in their mapping at the corner between Stane Street and Stane Street Close.
UKPN	There are overhead low voltage cables along Stane Street. These low voltage cables transition into buried cables on the approach to Stane Street Close and they continue around the corner into Stane Street. The overhead cables are supported on a poles along Stane Street, one of which has a cable stay that projects back on the existing embankment	The accuracy of the mapping at the corner of Stane Street and Stane Street Close appears to be poor.

Consultee	Requirements	Comments
	that could end up within the proposed works and therefore alterations might be required.	

1.3 GEOLOGY

From site visits it appears that there is sandstone within the embankment, although prior to the detailed design, ground investigations will be required.

1.4 ENVIRONMENT

No ecology reporting has been undertaken at present. Prior to the detailed design a *Phase 1 Habitat Survey* will be required.

1.5 LAND AND PROPERTY

1.5.1 LAND OWNERSHIP

Land Registries are shown in Figure1-4.

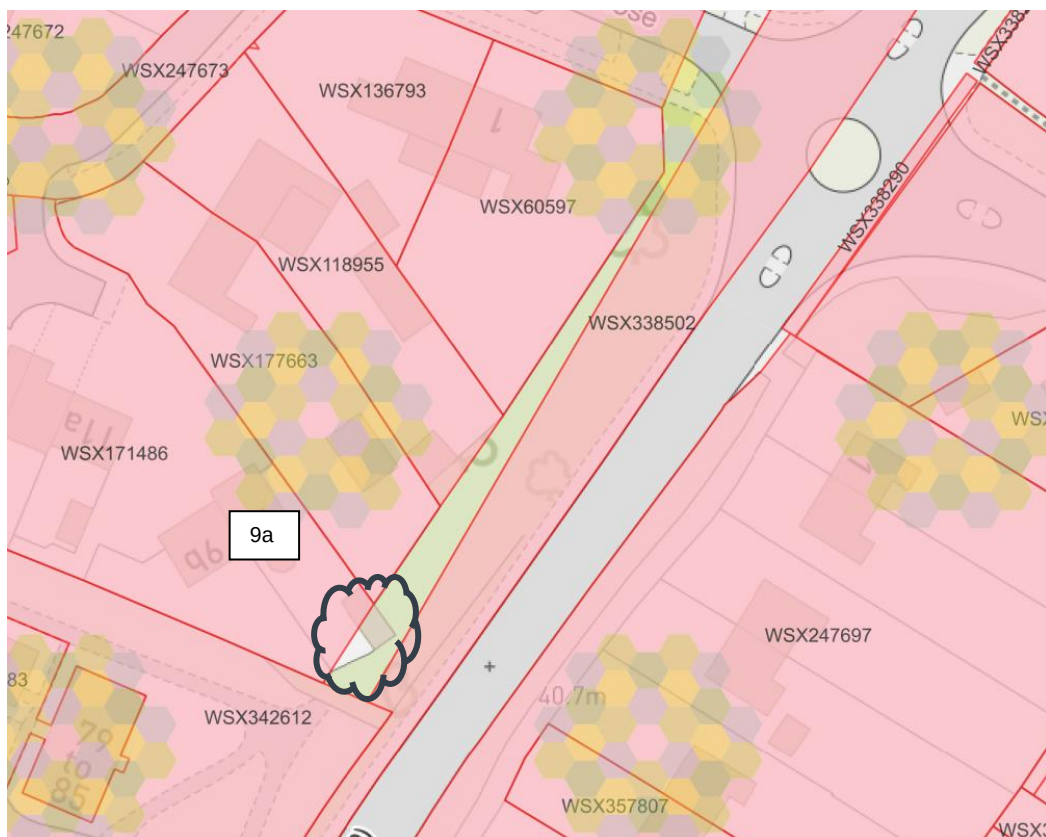


Figure 1-2 - Plan showing Land Ownership Boundaries

Land Registries have been provided to WSP by HDC but the Title Plan for WSX338502, which covers the embankment adjacent to the carriageway, was not provided.

The residents living at 9a Stane Street Close have a garden that backs onto the embankment and has taken land outside of their boundary, which is shown on the Title Plan above. The resident has part of a shed sited on the council land and has guttering emptying onto the ground at the proposed footpath location. Communication with HDC indicates that this land has been occupied for long enough for it to now be considered as owned by the landowner, however communication is ongoing as the landowner might be in agreement to return the property boundary to its original location. However, as that is an ongoing issue, the options have been developed on the assumption that the land will not be regained by HDC.

Some of the residents of Stane Street Close that have gardens backing onto the top of the embankment, have been using the land as a dumping ground for garden waste material. This garden waste will be required to be cleared as part of the site preparation works.

Some of the residents of Stane Street Close that have gardens backing onto the top of the embankment, have gates that provide access to the top of the embankment (presumably to facilitate garden waste dumping). It is foreseeable that those that have gates will wish to retain access, albeit for a different purpose, and possible that additional properties will wish to install gates should a footpath be constructed. There is no automatic right for the landowners to have direct access to the path so for the purposes of this SOR the provision of private access gates has been ignored.

1.5.2 SITE COMPOUND

A site compound could possibly be located on Stane Street Close which is a side road adjacent to the site. One of the lanes is predominantly used for residents parking. Alternatively, there is a limited amount of space that could be utilised within the Sinclair Drive / Corden Place housing development at the top of where the new footpath would link into the existing footpaths. See Figures 1-5, 1-6 and 1-7.



Figure 1-3 - Photos showing possible site compound locations within Sinclair Drive housing development



Figure 1-4 - Image showing the possible site compound location along Stane Street Close (Google Street View image)



Figure 1-5 - Map showing possible site compound locations

1.6 OTHER CONSTRAINTS

1.6.1 FOOTPATH WIDTH

As defined in the client brief, this new link is to be for pedestrians, as such provision for cyclists will not be accounted for.

The Department for Transport guidance document “Inclusive Mobility” – December 2021 states that the minimum required width is 2.0m.

British Standard BS8300-1:2018 states that ramps widths should be not less than 1.50m wide but a minimum width of 2.0m is preferable to accommodate larger electric mobility scooters.

Therefore, a useable width of 2.0m has been used as a key design parameter.

1.6.2 FOOTPATH GRADIENT

The Department for Transport guidance document ‘Inclusive Mobility’ – December 2021 states that a ramp should have the lowest practicable gradient, but 1 in 20 is preferred; landings should be provided for every 500mm height gained. Additionally, should a crossfall be necessary for drainage, then it is preferable to have a crossfall between 1 and 2%. The above guidance on gradients has been complied with for both options, the guidance on crossfalls will have to be accommodated for in the design.

1.6.3 LIGHTING

The requirement for lighting along the proposed footpath is anticipated to be necessary for personal security and safety. The neighbouring properties on Stane Street Close that back onto the embankment / new link would be adversely affected by any light pollution from the proposed footpath. Careful consideration should be given to the type of lighting to be installed, be it low level lighting or medium height lighting with directional controls. A lighting design would be required to select the best solution.

There is a redundant lighting column, heavily covered in vegetation, located near the top of the proposed footpath close to Sinclair Drive development, see photos in Figure 1-8. The current designs do not require for this to be removed. There is an opportunity for this to be incorporated into the design.



Figure 1-6 - Photos showing the redundant lighting lamp

1.6.4 DRAINAGE

The proposed footpath will require a drainage design, this is likely to be limited to a channel drain at the bottom of any ramps and natural drainage afforded by a crossfall towards the embankment / A29.

1.6.5 RETAINING WALL SOLUTIONS

The A29 Stane Street is located in a cutting for approximately 270m between the entrance to Sinclair Drive housing estate and the roundabout with Stane Street Close. As the proposed footpath exits the Sinclair Drive housing development, it will be located at the top of the cutting embankment, at this location there is a level difference of approximately 3.6m between the carriageway and the top of the cutting embankment.

The cutting embankment is approximately 10m wide from the back of the carriageway footpath to the property boundaries, although where a resident has taken some land the embankment is reduced to approximately 7m wide.

Unreinforced earthworks are generally installed at a 1(v):3(h) gradient and are normally the preferred slope formation, if there is sufficient space, because of the obvious reduced capital costs, maintenance liabilities and reduced environmental impact. However, it is clear that there is insufficient space for a purely unreinforced earthwork solution to be utilised at this

location. Where it makes sense to, unreinforced earthworks will be utilised, however a form of retaining element will be required. Types of retaining walls are discussed below.

1.6.5.1 Gabion Basket Retaining Wall

Gabions are used in many situations including the stabilisation of earth movement and erosion, river control, reservoirs, canal refurbishment, landscaping and retaining walls. They can be manufactured in welded mesh or woven wire. Welded mesh gabions are faster to erect and do not need tensioning. This allows them to keep their shape and be free from bulges and depressions.

A 120 year design life is achievable, but the gabion baskets would need a high level of specification and to be hand filled.

1.6.5.2 Eco-Crib Retaining Wall

Eco-Crib provides a retaining wall system that is comprised of a series of recycled plastic components which form a crib, wherein these are filled with aggregate to create a retaining wall. See Figure 1-9.

The system is manufactured using 100% recycled waste polymers. Plastics such as bags, packaging, car bumpers and bottle tops are selected and processed into the profiles used in the construction of the wall system, the material is 100% recyclable at the end of its required life cycle. Eco-Crib is certified by the British Board of Agreement (BBA), and can achieve a design life greater than 120 years.



Figure 1-7 - Eco-Crib Retaining Wall

1.6.5.3 Reinforced concrete

Reinforced concrete could be used to construct the retaining walls, it is durable form of construction with relatively low maintenance requirements throughout its design life. It can achieve a 120-year design life if detailed and maintained adequately.

A range of finishes are available to concrete structures including those achieved through formwork liners. Such a solution is cost-effective and can improve a schemes aesthetics through a subtle patterned finish to exposed concrete facing; Figure 1-10. There are a variety of standard textures which are attractive, easy to apply and applicable for reuse.



Figure 1-8 - Insitex formwork liner feature finish

Concrete has a high level of embodied carbon, however this can be reduced using specialist concretes, the individual manufactures would have to be chosen for its low environmental impact.

1.6.5.4 Vegetated Bagwork Retaining Walls

Vegetated bagwork walls can be either unreinforced or reinforced to provide greater loading capacity. Reinforcement typically comprises geogrids tied into the courses of the bagwork that extend into the fill to rear. The positions and lengths of the geogrids vary but they are typically specified at lengths embedded into the backfill up to 80% of the wall height and spaced every three to four layers of bags (450mm-600mm). When building with the vegetated wall system, vegetation should be 'installed' by live plugs staked into the bags, seeding within the bags, and/or hydroseeded post construction. The vegetation is integral to the system's strength and lifetime rating. It is suggested that full vegetation be achieved within 6 months of completion to ensure the system's 120-year lifespan. See Figure 1-11.



Figure 1-9 – Flex-MSE – live staked and hydroseeded

For the purposes of this report the retaining wall solution that will be used within the options is unreinforced earthworks with and unreinforced vegetated bagwork retaining wall. This retaining wall solution has a very low amount of embodied carbon and will blend in with the surrounding embankment which will allow the retaining wall to blend in with the surrounding embankment. While this option has been chosen, this could be something that HDC might choose to change based on their own aesthetic concept for this stretch of road.

2 OPTIONS

2.1 DESCRIPTION OF PROPOSED STRUCTURE OPTIONS

2.1.1 DISCOUNTED OPTIONS

Various structural forms have been considered, see Section 1.6.5. By engineering judgement alone the unreinforced vegetated bagwork system has been selected, with all other forms discounted due to the considered life span, cost efficiency and green credentials of the vegetated bagwork systems.

2.1.2 DEVELOPED OPTIONS

The following options have been developed:

2.1.2.1 Option 1) Footpath linking to Stane Street

This option takes a relatively direct path down to the A29 carriageway from the housing development keeping the public away from the neighbouring properties. This option will require some of the sandstone to be excavated. This option requires two retaining walls, the first to support the footpath fill material and the second to support the remaining embankment above the height of the footpath. This option is presented on drawing 70097712-WSP-DR-BR-001 in Appendix A.

2.1.2.2 Option 2) Footpath linking to Stane Street Close

This option follows the boundary fence line of the properties in Stane Street Close that back onto the proposed footpath. This option takes advantage of the local topography of Stane Street which rises out of the cutting to reach approximately the same level of the embankment at Stane Street Close where the new footpath will meet the existing carriageway / footpath. This option requires a retaining wall to be built midway along the path to support the path, it also requires a retaining wall towards the end of the footpath to support the boundary fence line of the adjacent gardens. This option is presented on drawing 70097712-WSP-DR-BR-002 in Appendix A.

2.2 CAPITAL COST AND WHOLE LIFE COST

2.2.1 DETERMINING COSTS

To ensure that the cost estimates provided are realistic, budget cost estimates have been obtained from a retaining wall designer and contractor, GeoGrow Ltd. and the prices included in this report take these into account, a breakdown is available within Appendix C. Other costs have been estimated based on WSP's experience of similar structures.

The costs given do not include for the following [non-exhaustive]:

- VAT
- Costs for legal matters
- Inflation

- Diversion of any statutory undertaker services
- Design costs (bagwork supplier, WSP or others)
- Further survey work (geotechnical, Arboricultural, bats etc.)
- Provision for a Principal Contractor to set up and maintain the site
- Traffic management
- Provision of any temporary works
- Risk of contaminated soil

The costs should primarily be used for the purposes of option comparison only, not budgeting.

2.2.2 DESIGN LIFE

A key factor in determining the Whole Life Cost (WLC) of a structure is the estimated design life and maintenance intervals. For the purposes of deriving these costs, the design life is taken as 120 years, with major maintenance, such as fence renewal and resurfacing, carried out every 10 and 25 years respectively.

2.2.3 METHODOLOGY

An overview of the Whole Life Costing methodology and explanation of the key terms are shown in the following sections.

2.2.3.1 Net Present Value (NPV)

The WLC has been displayed in terms of Net Present Value (NPV) over the 120-year period. The NPV is the sum of the cost of the works discounted back to present day values. A lower NPV is regarded as the most economically beneficial option.

For this structure, it is assumed that at the end of the 120-year period, the structure will be life expired and so there will be nil residual value.

2.2.3.2 Discount rates

The whole life costs have been discounted to a present-day value using discount rates. Discounting is a technique used to compare costs and benefits that occur at different times throughout the analysis period. It represents the 'time value of money' – i.e. that a sum of money today is worth more than the identical sum in the future due to its potential earning capacity. It essentially reflects the cost of loan repayments or loss of interest accumulation that will occur from the start of the analysis period.

For the purposes of this report both discounted and non-discounted rates are included. The rates have been applied in accordance with the UK HM Treasury Green Book, which recommends the use of declining, long-term discount rates as follows:

- **Years 0 to 30:** 3.5%
- **Years 31 to 75:** 3.0%

- **Years 76 to 120:** 2.5%

The discount rates are not a means of estimating the effect of inflation and the costs are given in the terms of present-day values.

2.2.4 SUMMARY

The following summary Table 2-1 gives the initial 'Year 0' costs and the whole life costing after the 120 year period, taking into account the maintenance carried out over the life of the structure. The detailed breakdown of the initial cost and whole life cost is provided within Appendix C.

Table 2-1 – Cost Estimates

Option	Capital Cost (£)	Whole Life Cost (£)
Option 1) Footpath linking to Stane Street	£92,000	£105,000
Option 2) Footpath linking to Stane Street Close	£74,000	£101,000

2.3 APPEARANCE

2.3.1 OPTION 1) FOOTPATH LINKING TO STANE STREET

This option would be more visible from Stane Street compared to Option 2, although using a vegetated bagwork wall system would disguise the retaining walls required to construct the footpath.

Therefore, this option is considered to result in a medium impact on the appearance of a new footpath.

2.3.2 OPTION 2) FOOTPATH LINKING TO STANE STREET CLOSE

This option, located on top of the embankment along the property boundaries will largely keep the footpath out of site along Stane Street until the roundabout at Stane Street Close.

Therefore, this option is considered to result in a small impact on the appearance of a new footpath.

2.4 SUSTAINABILITY AND USE OF NATURAL RESOURCES

2.4.1 OPTION 1) FOOTPATH LINKING TO STANE STREET

Initial estimates indicate that this option will require a greater area of vegetated bagwork wall and more fill material to be brought to site and used within the ramp construction. The amount of earthworks for each option is approximately comparable to one another.



Therefore, this option is considered to result in a medium impact on the sustainability and use of natural resources.

2.4.2 OPTION 2) FOOTPATH LINKING TO STANE STREET CLOSE

Initial estimates indicate that this option will require a smaller area of vegetated bagwork wall and less fill material to be brought to site and used within the ramp construction. The amount of earthworks for each option is approximately comparable to one another.

Therefore, this option is considered to result in a small impact on the sustainability and use of natural resources.

2.5 ECOLOGICAL IMPACT

2.5.1 OPTION 1) FOOTPATH LINKING TO STANE STREET

This option results in the clearance of approximately 5No. mature trees, the type and quality of which are known at this stage, further advice should be sought from an arboriculturist.

Therefore, this option is considered to result in a small ecological impact.

2.5.2 OPTION 2) FOOTPATH LINKING TO STANE STREET CLOSE

This option would result in approximately 2No. mature trees to construct the retaining wall midway along the paths length and an additional 5No. mature trees cleared at the end of the footpath at the interface with Stane Street Close. The type and quality of which are known at this stage, further advice should be sought from an arboriculturist.

A longer expanse of vegetation clearance will be required for this option at the top of the embankment, the implications on the habitat of the local ecology is unknown at present and advice should be sought from an ecologist.

Therefore, this option is considered to result in a medium ecological impact.

2.6 DURABILITY / DESIGN LIFE

Both options will be constructed using unreinforced earthworks with unreinforced vegetated bagwork walls which have a design life of 120 years. Therefore, the durability and design life of both options will have the same impact. The impact on operation and maintenance is discussed in Section 2.11.

2.7 HEALTH AND SAFETY, AND POTENTIAL RISKS AND CONSTRAINTS TO THE PROJECT

See the Design Risk Register provided within Appendix D.

2.7.1 OPTION 1) FOOTPATH LINKING TO STANE STREET

The path will need to pass over an existing water main (and manhole). The current understanding is that there is an easement in place for 6.0m either side of the water main which requires consent from Southern Water for any new structures, excavation, mounding or tree planting. However, given the path will be a shallow form of construction crossing over the main it is considered unlikely to be a significant H&S constraint.

As the path goes down the embankment it clashes with a cable stay to an existing pole supporting overhead electricity plant, this present a significant risk that will need to be managed by alterations / diversions.

Stability of the embankment will have to be considered within the detailed design for all stages of the construction and operation of the footpath.

Health and Safety Risks for both options are similar, as such both options are considered to result in a medium impact on the Health and safety, and potential risks and constraints to the project.

2.7.2 OPTION 2) FOOTPATH LINKING TO STANE STREET CLOSE

The path will need to pass over an existing water main (and manhole). The current understanding is that there is an easement in place for 6.0m either side of the water main which requires consent from Southern Water for any new structures, excavation, mounding or tree planting. However, given the path will be a shallow form of construction crossing over the main it is considered unlikely to be a significant H&S constraint.

At the Stane Street Close end of the route the new path would be close to a buried SGN low pressure gas main and buried UKPN services, which has highlighted uncertainty in the accuracy of the supplied mapping. However, given the path will be a shallow form of construction and may not even pass over the services, it is considered unlikely that either will be a significant constraint.

Stability of the embankment will have to be considered within the detailed design for all stages of the construction and operation of the footpath.

Health and Safety Risks for both options are similar, as such both options are considered to result in a medium impact on the Health and safety, and potential risks and constraints to the project.

2.8 PROPOSED DESIGN METHOD

The design analysis method of all of the options is likely to reside with the manufacturer, therefore the proposed design method will have negligible influence in the outcomes of this SOR and are all considered to be broadly equal.

It should be noted that the proposed unreinforced vegetated bagwork retaining walls assume a design live loading of 5kN/m² which is standard for a footway, or say a footbridge. It should also be possible to design for a small service vehicle, and / or up to a 10kN/m² surcharge without the need for reinforcing geo-grids that would have a negative effect on the



extents of the excavations. The level of loading will need to be determined at the detailed design stage with the designer and TAA.

2.9 DEPARTURES FROM STANDARDS

None for either option.

2.10 CONSTRUCTION ISSUES

2.10.1 OPTION 1) FOOTPATH LINKING TO STANE STREET

The path will need to pass over an existing water main (and manhole) but similar to the H&S issues discussed in the section above, consent from Southern Water will be required, but it is considered unlikely to be a significant construction constraint.

As the path goes down the embankment it clashes with a cable stay to an existing pole supporting overhead electricity plant, this presents a significant risk that will need to be managed by alterations / diversions.

This option will require some excavation, particularly at the top of the footpath ramp where the existing embankment needs to be re-profiled to accommodate the ramps. Although no ground investigations have been undertaken at present, it has been noted during site visits that there appears to be a degree of sandstone within the embankment which is likely to be more difficult to excavate. Until ground investigations are undertaken, the impact of this will remain unknown and will be difficult to compare the two options on.

It is likely that due to the proximity of these works to the carriageway, there would be more traffic management required on Stane Street for this option compared to Option 2.

Therefore, this option is considered to result in a medium impact on the Constructability of a new footpath.

2.10.2 OPTION 2) FOOTPATH LINKING TO STANE STREET CLOSE

The path will need to pass over an existing water main (and manhole), and at the Stane Street close end, close to buried SGN and UKPN services, but similar to the H&S issues discussed in the section above, consent from Southern Water will be required and none of the 3No. services are considered to be a significant construction constraint.

There could be slope stability issues associated with working adjacent to the property boundaries, this could require the ramps to be moved slightly further from the property boundaries or some kind of temporary works.

Similarly to Option 1, ground excavations will be required for this option, although these will be located at the end of the footpath for the ramps. Although no ground investigations have been undertaken at present, it has been noted during site visits that there appears to be a degree of sandstone within the embankment which is likely to be more difficult to excavate. Until ground investigations are undertaken, the impact of this will remain unknown and will be difficult to compare the two options on.



It is likely that most of these works could be undertaken from either on the embankment or on the footpath with relatively small machinery.

Therefore, this option is considered to result in a small impact on the Constructability of a new footpath.

2.11 OPERATION AND MAINTENANCE

There are no significant maintenance requirements for the retaining wall structure for either of the options.

Maintenance liabilities for both options will be limited to the maintenance of the footpath surfacing, fencing, drainage and lighting. All of these items are considered to be minor with minimal difference between the two options.

Operation and maintenance liabilities for both options are similar, as such both options are considered to result in a small impact on Operation and Maintenance.

2.12 SOCIAL IMPACT ON ADJACENT PROPERTIES

2.12.1 OPTION 1) FOOTPATH LINKING TO STANE STREET

This option connects directly with Stane Street, this will provide the least interaction between the new footpath link and the adjacent properties. For the properties that the new footpath will be next to, despite a sensitive design, it seems likely that a degree of light pollution will still impact upon these properties. With a new footpath this will bring members of the public along this fence line, this is likely to create additional noise compared with people on the highway footpath. There is also a chance of antisocial behaviour that would affect these properties.

Therefore, this option is considered to result in a low social impact on adjacent properties.

2.12.2 OPTION 2) FOOTPATH LINKING TO STANE STREET CLOSE

This option connects with Stane Street Close, taking users along the top of the embankment adjacent to the property fence line. The issues mentioned above regarding light, noise pollution and antisocial behaviour would not only affect more properties but could be worsened due to the slightly more secluded nature of the footpath in this option.

Therefore, this option is considered to result in a high social impact on adjacent properties.

2.13 SOCIAL IMPACT ON FOOTPATH USERS

2.13.1 OPTION 1) FOOTPATH LINKING TO STANE STREET

This option requires a longer length of footpath ramp at a gradient of 1:20 at approx. 37m long compared with only 26m for Option 2. Despite providing the necessary landings it would still be slightly easier for mobility impaired users to use option 2. However, as the ramps

provided in this option are compliant with current standards on gradient, this marginal negative when compared with Option 2 will not be given much weight.

This option results in the footpath users being connected in with the existing footpath on Stane Street. The footpath users would be subjected to marginally increased levels of vehicle pollution that they would not experience at the top of the embankment. This option could also be considered a less scenic route for users.

By creating a footpath open to members of the public consideration needs to be given to preventing antisocial behaviour and ensuring that all users of the footpath feel safe enough to fully utilise the new link. The new footpath is likely to be used by residents of Sinclair Drive / Corden Place housing development to access the local convenience store north up Stane Street, it is therefore worth noting that Sainsburys is currently open from 7am until 8pm and during the winter months users are likely to be using this footpath to access those amenities in the dark. While lighting will be provided, footpath users could still feel unsafe while using a path with limited natural surveillance. To this end, this option will feel quite open for users and it provides a line of sight from the start of the footpath within the housing development, down to the highway and along the existing footpaths.

More weight is placed on the safety of footpath users compared to vehicle pollution levels and the route pleasantness. Therefore, this option is considered to result in a positive Social Impact on footpath users.

2.13.2 OPTION 2) FOOTPATH LINKING TO STANE STREET CLOSE

This option connects with Stane Street Close, taking users along the top of the embankment adjacent to the property boundaries, trees and undergrowth are currently on the embankment slope, it is foreseeable for this vegetation to either be retained or for it to return once the construction works have been completed.

The footpath would provide a link that is separated from the carriageway which is likely to be more pleasant in daylight hours.

As discussed in Section 2.13.1, the footpath users at all hours must feel safe to provide a solution that truly is accessible to all. This option will not provide a line of sight along the full length of the path and with the afore mentioned vegetation it could feel quite closed in with limited natural surveillance.

More weight is placed on the safety of footpath users compared to vehicle pollution levels and the route pleasantness. Therefore, this option is considered to result in a negative Social Impact on footpath users.

2.14 PREFERRED OPTION

2.14.1 OPTIONS COMPARISON

Option comparison Table 2-2 is shown below.



Table 2-2 – Options Comparison Table

	Initial cost	Whole Life Cost	Appearance	Ecological Impact	Sustainability and use of natural resources	Durability	Health & Safety	Design	Departures	Construction Issues	Operation and Maintenance	Social Impact on Adjacent Properties	Social Impact on footpath users
Option 1: Footpath linking to Stane Street	£92,000	£105,000	Medium	Small	Medium	Neutral	Medium	Neutral	None	Medium	Neutral	Low	Positive
Option 2: Footpath linking to Stane Street Close	£74,000	£101,000	Small	Medium	Small	Neutral	Medium	Neutral	None	Small	Neutral	High	Negative

2.14.2 PREFERRED OPTION AND RECOMMENDATIONS

The chosen option needs to balance the needs of local residents, the environmental impact, and the wider aspirations of the District Council in conjunction with the Local Transport Plan, along with the financial constraints.

The preferred option is Option 1) Footpath linking to Stane Street, this option is marginally more expensive, however the improved safety that this option would bring to the footpath users is considered to be worth the additional fee. Also, this option will result in less issues with the neighbouring properties.

The significant project risks are:

- Environmental surveys have not yet been undertaken so the environmental risks are unclear.
- Ground Investigations have not yet been undertaken so the geotechnical risks are unclear.
- Neighbours backing onto the new footpath could be objectionable to the scheme.
- The costs for alterations to the UKPN pole and stay supporting the overhead electricity plant may be unpalatable / prove cost prohibitive.
- It is possible that the topographical survey undertaken at present is insufficient to undertake the detailed design of the preferred option.
- While considered to be a small, there is a risk of contaminated soil being found on site.

It is recommended to undertake the following steps:

- Select an option from those proposed in this report.
- Engage with UKPN to discuss the alterations associated to movement of the pole stay.
- Undertake pedestrian surveys in the local area to establish flows and peak times, and validate the assumptions made on the safety aspects provided by the preferred option.
- Undertake Phase 1 Habitat Survey for the site.
- Undertake Ground Investigations.
- Undertake Ground Penetrating Radar surveys or targeted trial pits of the site to confirm the location of the utilities identified within the utility searches.
- Engage with the owners of the properties on Stane Street Close that have gardens that back onto the proposed footpath.
- Engage with Southern Water to confirm the details of the easement, their requirements for maintaining access to the foul sewer manhole, and likelihood of gaining their consent for the proposed works.
- Discussion with WSCC regarding the scheme with a view towards adoption of the new highway assets, including Technical Approval processes for the designs of the path, retaining walls, and lighting.
- Procure detailed design(s).

3 SIGNATURE PAGE

THE ABOVE IS SUBMITTED FOR ACCEPTANCE

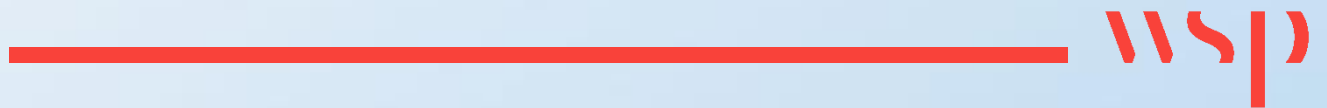
Signed	_____
Name	<u>Andrew Cook</u>
Position held	<u>Associate Director</u>
Engineering qualifications	<u>BEng, CEng, MICE</u>
Name of organisation	<u>WSP</u>
Date	<u>As per digital signature</u>

PREFERRED OPTION AGREED

Signed	_____
Name	_____
Position held	_____
Engineering qualifications	_____
TAA	_____
Date	_____

Appendix A

GENERAL ARRANGEMENT DRAWINGS



DO NOT SCALE

Notes:

- Utility locations are based on C2 searches provided by HDC, to be used as a guide only.
- All dimensions are in millimetres unless mentioned otherwise

Health and Safety Symbols Legend

-  INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION
-  INDICATES A RESIDUAL RISK FOR INFORMATION
-  INDICATES A RESIDUAL RISK AS A WARNING

REV	DATE	BY	DESCRIPTION	CHK	APD

DRAWING STATUS: S2 - FOR INFORMATION



Matrix house, Basing View, Basingstoke, RG21 4FF, UK
T+ 44 (0) 1256 318 800, F+ 44 (0) 1256 318 700
wsp.com

CLIENT:



PROJECT:

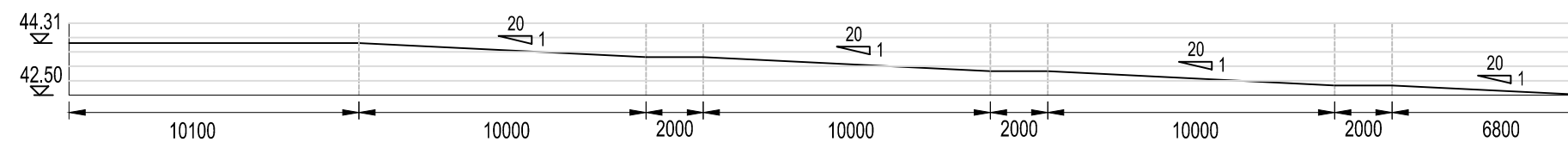
SINCLAIR DRIVE FOOTWAY LINK

TITLE:

OPTION 1
GENERAL ARRANGEMENT

SCALE @ A3:	CHECKED:	APPROVED:
AS SHOWN	RM	APC
CAD FILE:	DESIGN-DRAWN:	DATE:
70097710	MT	September 23
DRAWING No:	REV:	
70097712-WSP-DR-BR-001	P01	

WSP UK Ltd



PROPOSED LONGSECTION

SCALE 1:225

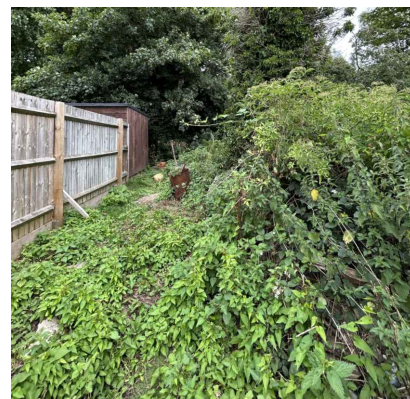


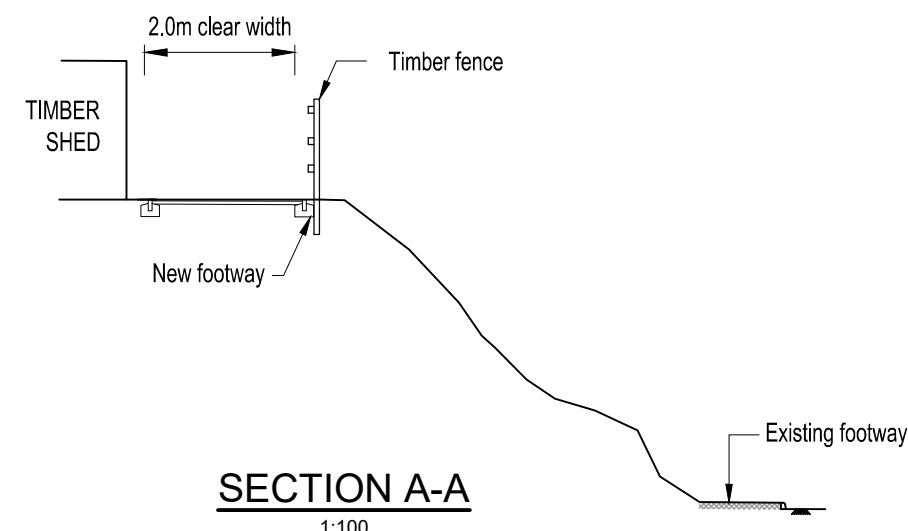
Photo 1: Adjacent landowners shed looking north



Photo 2: Adjacent land boundary fence

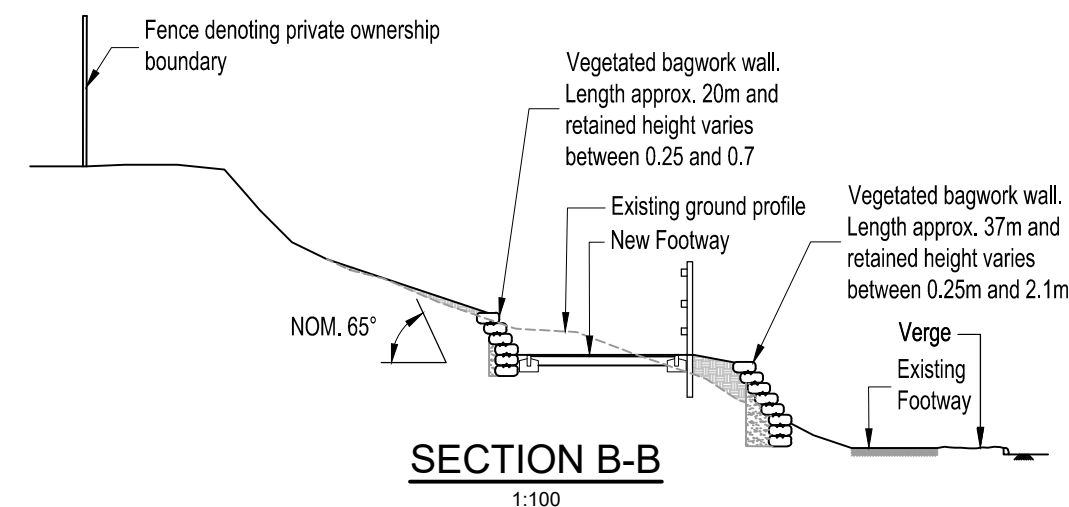


Photo 3: Footpath looking south



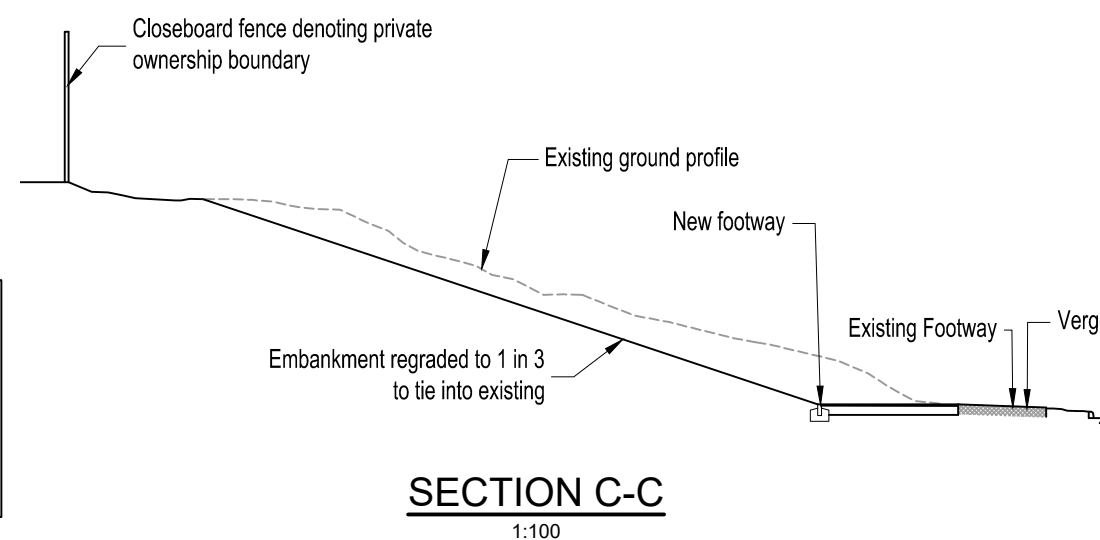
SECTION A-A

1:100



SECTION B-B

1:100



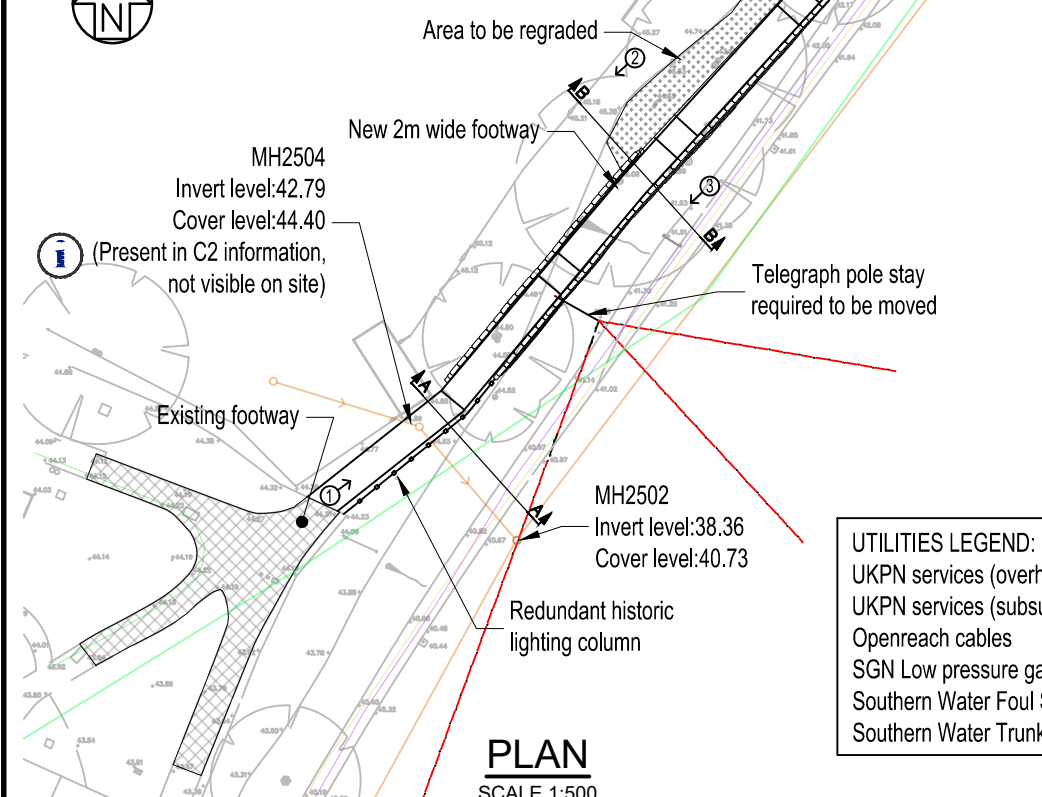
SECTION C-C

1:100

 GROUND CONDITIONS UNKNOWN, GROUND INVESTIGATION TO BE UNDERTAKEN ALONG WITH DETAILED DESIGN.

 SOUTHERN WATER TRUNK MAIN PRESENT IN THE VICINITY, ALIGNMENT AND DEPTH TO BE CONFIRMED PRIOR TO CONSTRUCTION

 SOUTHERN WATER FOUL WATER MANHOLES PRESENT IN THE PROPOSED LOCATION, ACCESS NEEDS TO BE MAINTAINED

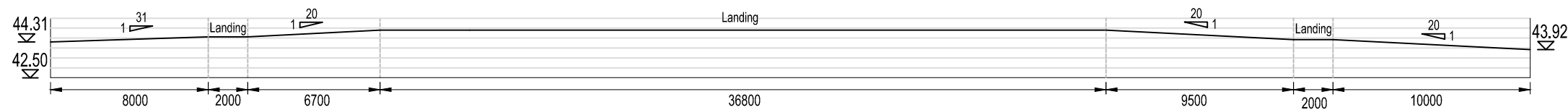


UTILITIES LEGEND:

- UKPN services (overhead)
- UKPN services (subsurface)
- Openreach cables
- SGN Low pressure gas main
- Southern Water Foul Sewer
- Southern Water Trunk Main

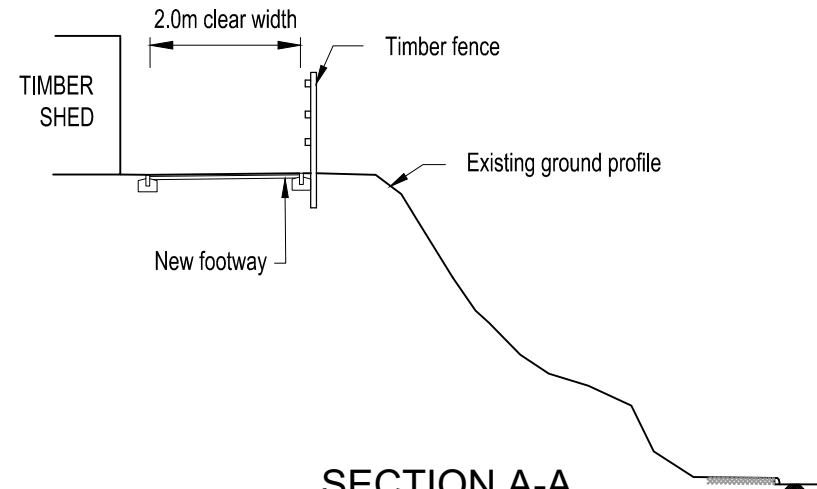
PLAN

SCALE 1:500



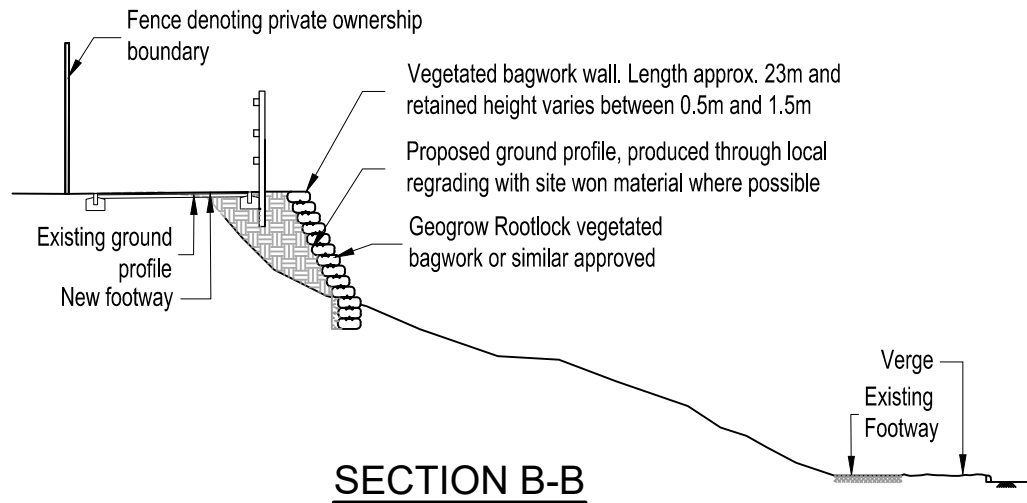
PROPOSED LONGSECTION

SCALE 1:275



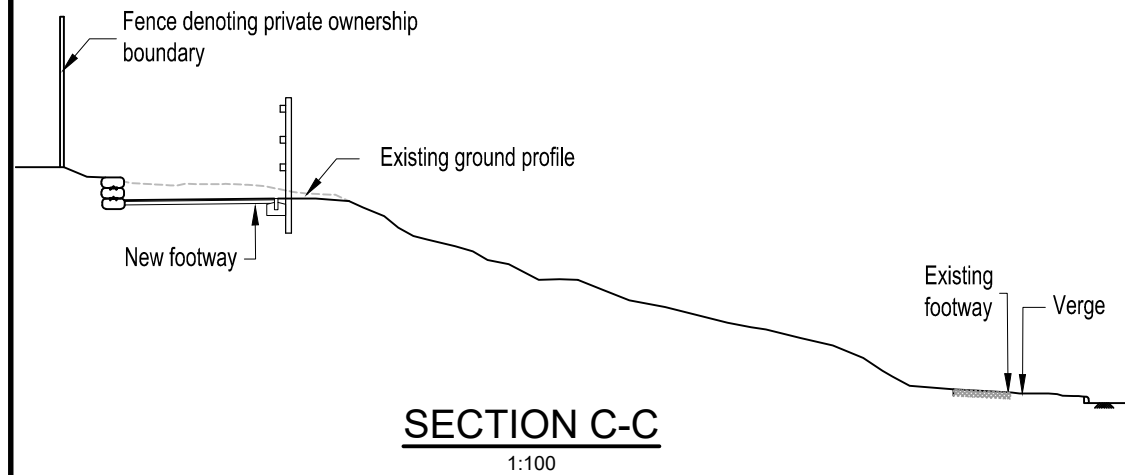
SECTION A-A

1:100



SECTION B-B

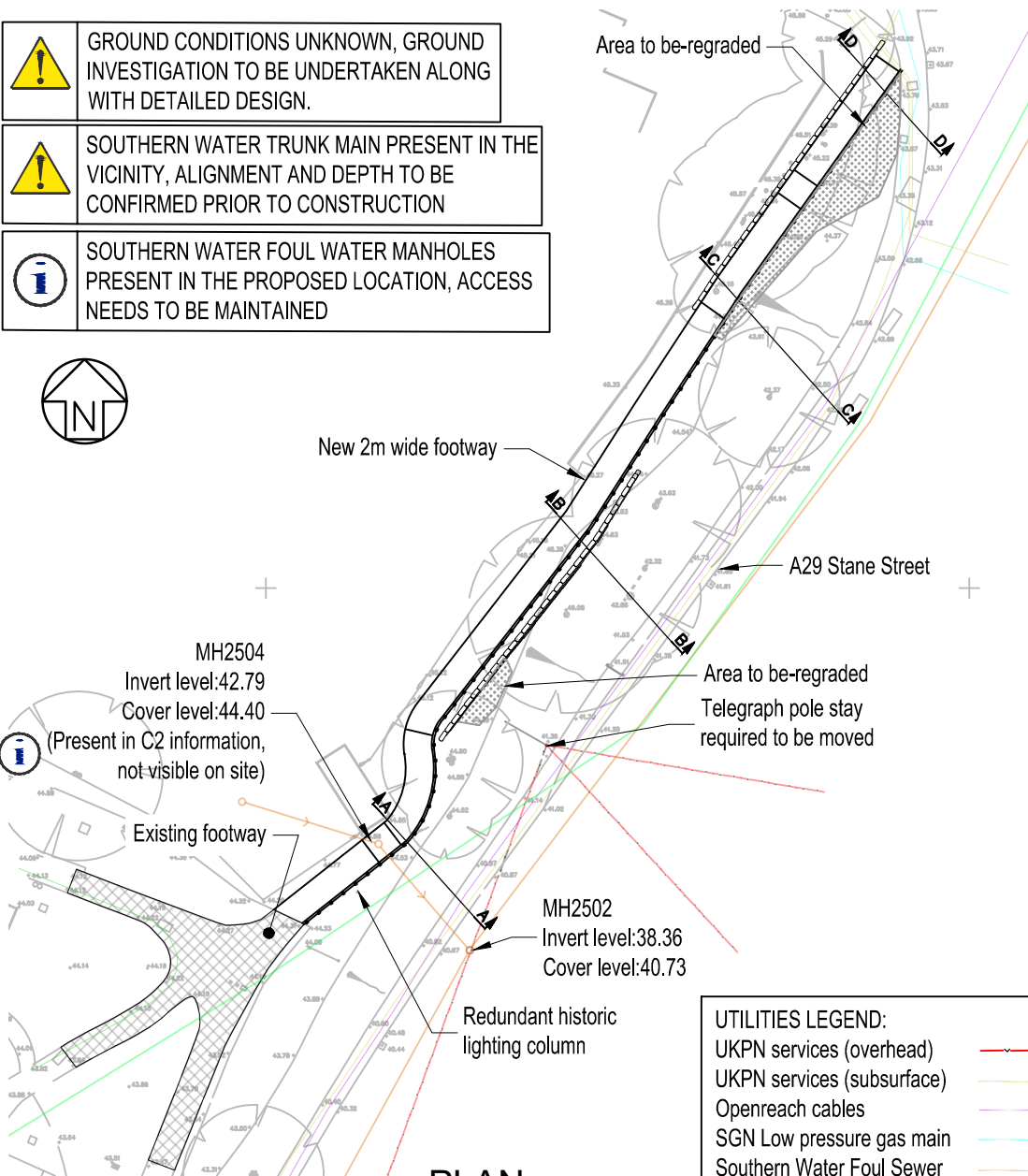
1:100



SECTION C-C

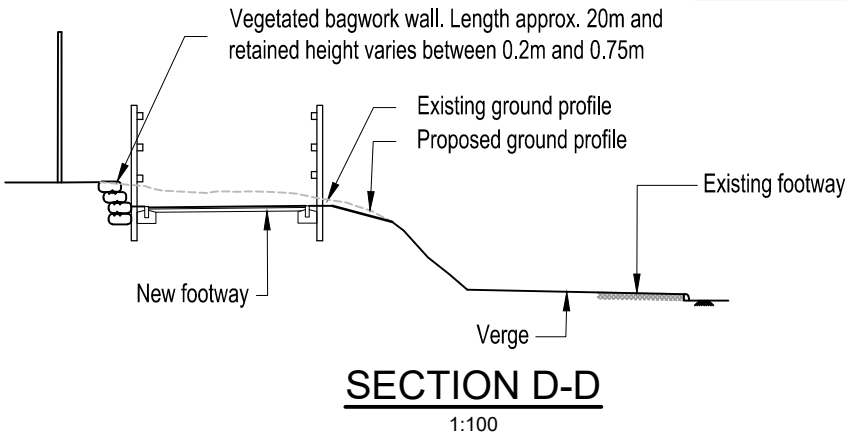
1:100

- GROUND CONDITIONS UNKNOWN, GROUND INVESTIGATION TO BE UNDERTAKEN ALONG WITH DETAILED DESIGN.
- SOUTHERN WATER TRUNK MAIN PRESENT IN THE VICINITY, ALIGNMENT AND DEPTH TO BE CONFIRMED PRIOR TO CONSTRUCTION
- SOUTHERN WATER FOUL WATER MANHOLES PRESENT IN THE PROPOSED LOCATION, ACCESS NEEDS TO BE MAINTAINED



PLAN

- UTILITIES LEGEND:
- UKPN services (overhead)
 - UKPN services (subsurface)
 - Openreach cables
 - SGN Low pressure gas main
 - Southern Water Foul Sewer
 - Southern Water Trunk Main



SECTION D-D

1:100

DO NOT SCALE

- Notes:
- Utility locations are based on C2 searches provided by HDC, to be used as a guide only.
 - All dimensions are in millimetres unless mentioned otherwise
 - Refer to WSCC std drg 1100-041 for typical footway makeup

Health and Safety Symbols Legend

- INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION
- INDICATES A RESIDUAL RISK FOR INFORMATION
- INDICATES A RESIDUAL RISK AS A WARNING

REV	DATE	BY	DESCRIPTION	CHK	APD
-----	------	----	-------------	-----	-----

DRAWING STATUS: S2 - FOR INFORMATION



Matrix house, Basing View, Basingstoke, RG21 4FF, UK
T+ 44 (0) 1256 318 800, F+ 44 (0) 1256 318 700
wsp.com



PROJECT: SINCLAIR DRIVE FOOTWAY LINK

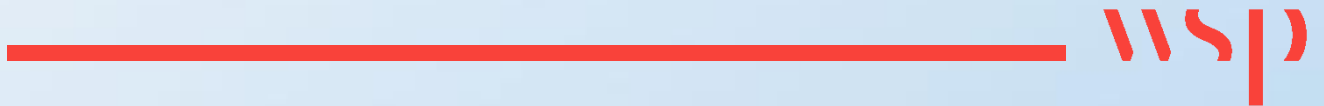
TITLE: OPTION 2
GENERAL ARRANGEMENT

SCALE @ A3: AS SHOWN	CHECKED: RM	APPROVED: APC
CAD FILE: 70097710	DESIGN-DRAWN: MT	DATE: JULY 23
DRAWING No: 70097712-WSP-DR-BR-002	REV: P01	

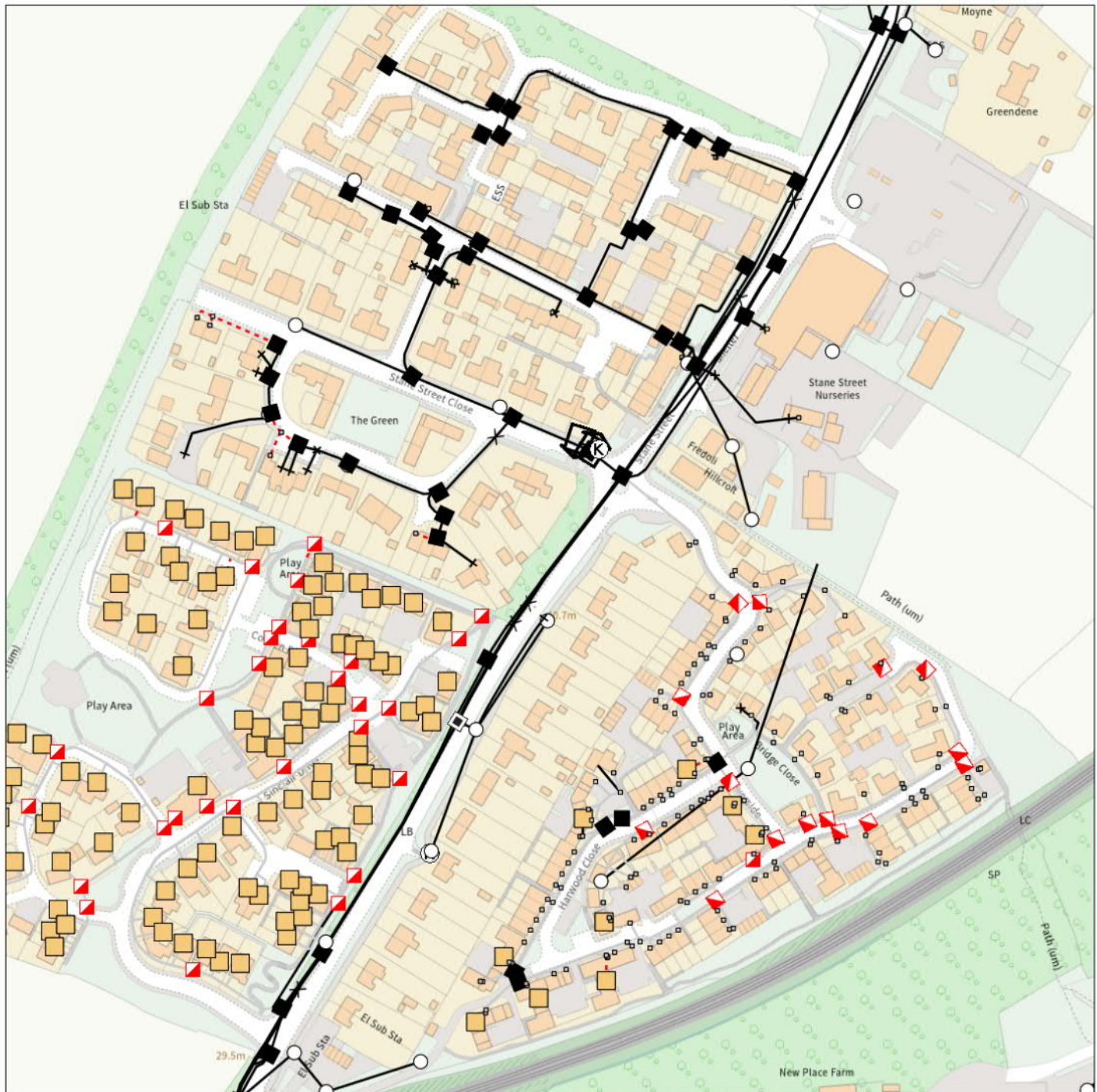
WSP UK Ltd

Appendix B

C2 STATUTORY UNDERTAKER PLANS



Maps by email Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.



openreach

CLICK BEFORE YOU DIG

FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE

email cbyd@openreach.co.uk

ADVANCE NOTICE REQUIRED

(Office hours: Monday - Friday 08.00 to 17.00)

www.openreach.co.uk/cbyd

Accidents happen

If you do damage any Openreach equipment please let us know by calling 0800 023 2023 (opt 1 + opt 1) and we can get it fixed ASAP

KEY TO BT SYMBOLS

	Planned	Live	Change Of State	+	Hatchings	
PCP			Split Coupling		Built	
Pole			Duct Tee		Planned	
Box			Building		Inferred	
Manhole			Kiosk		Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : UHL01204H

Map Reference : (centre) TQ0527619607

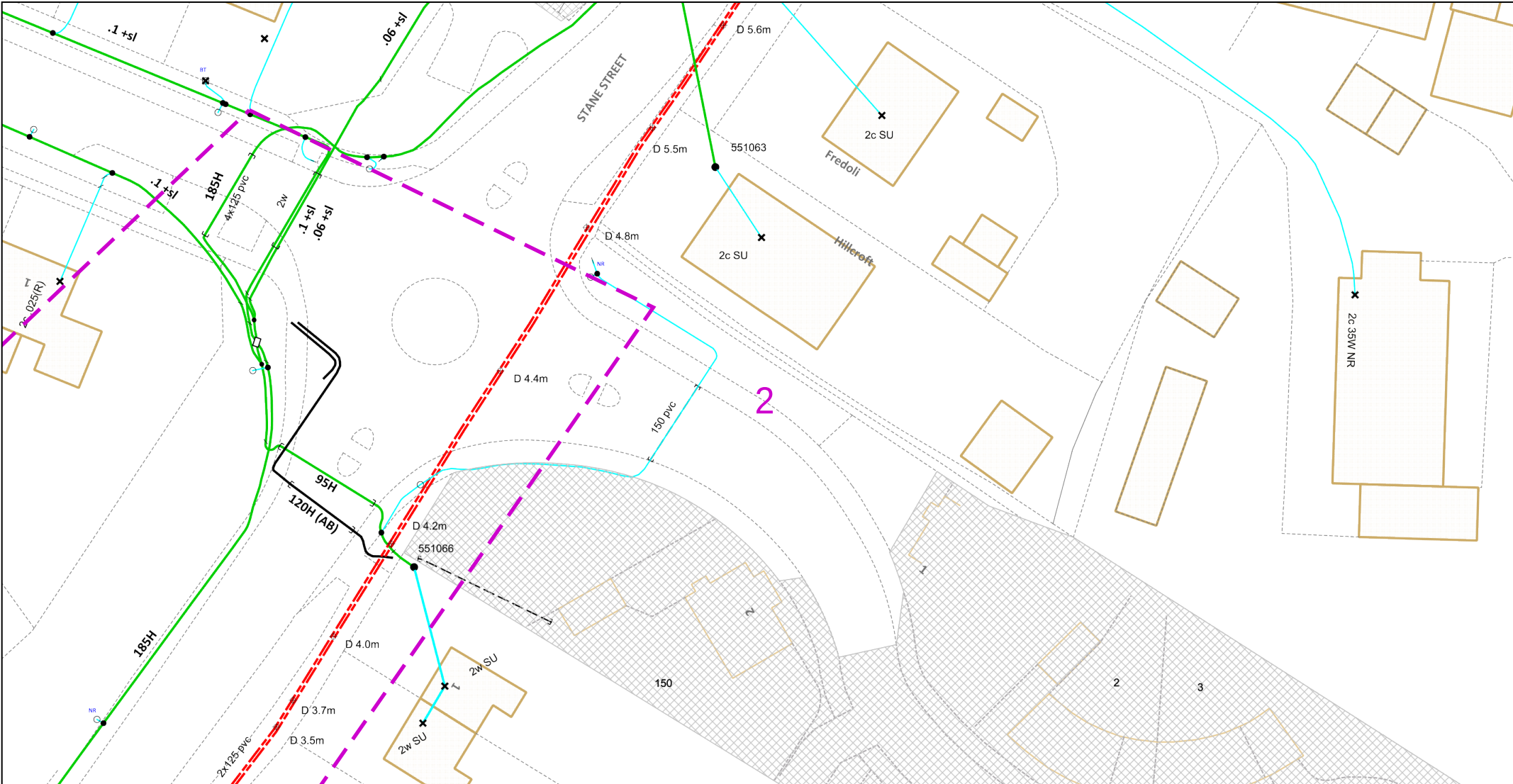
Easting/Northing : (centre) 505276,119607

Issued : 26/09/2022 13:20:22

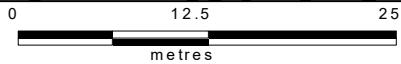
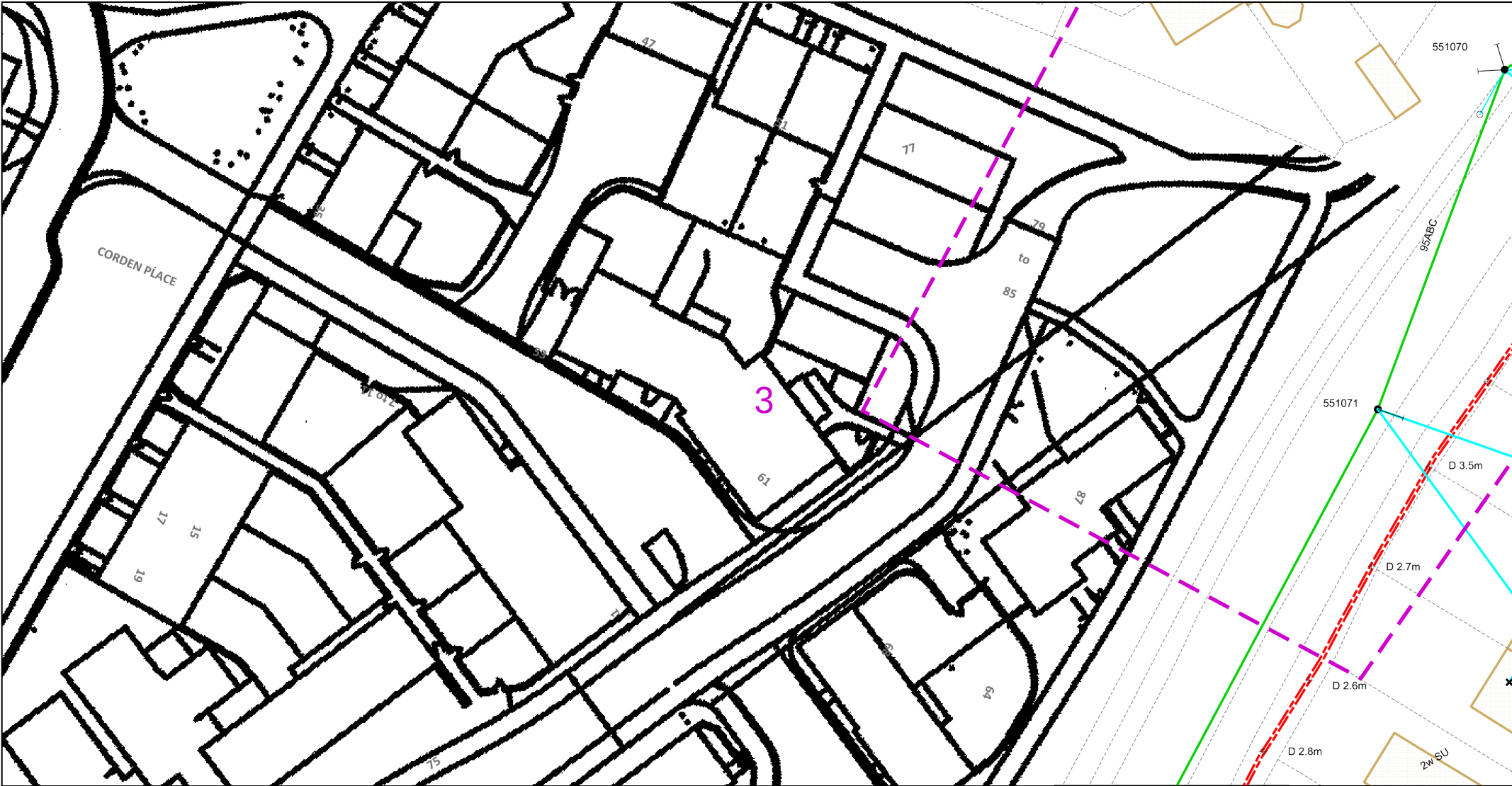
WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk

Reproduced from the Ordnance Survey map by BT by permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationary Office
(C) Crown Copyright British Telecommunications plc 100028040





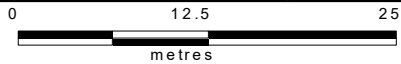
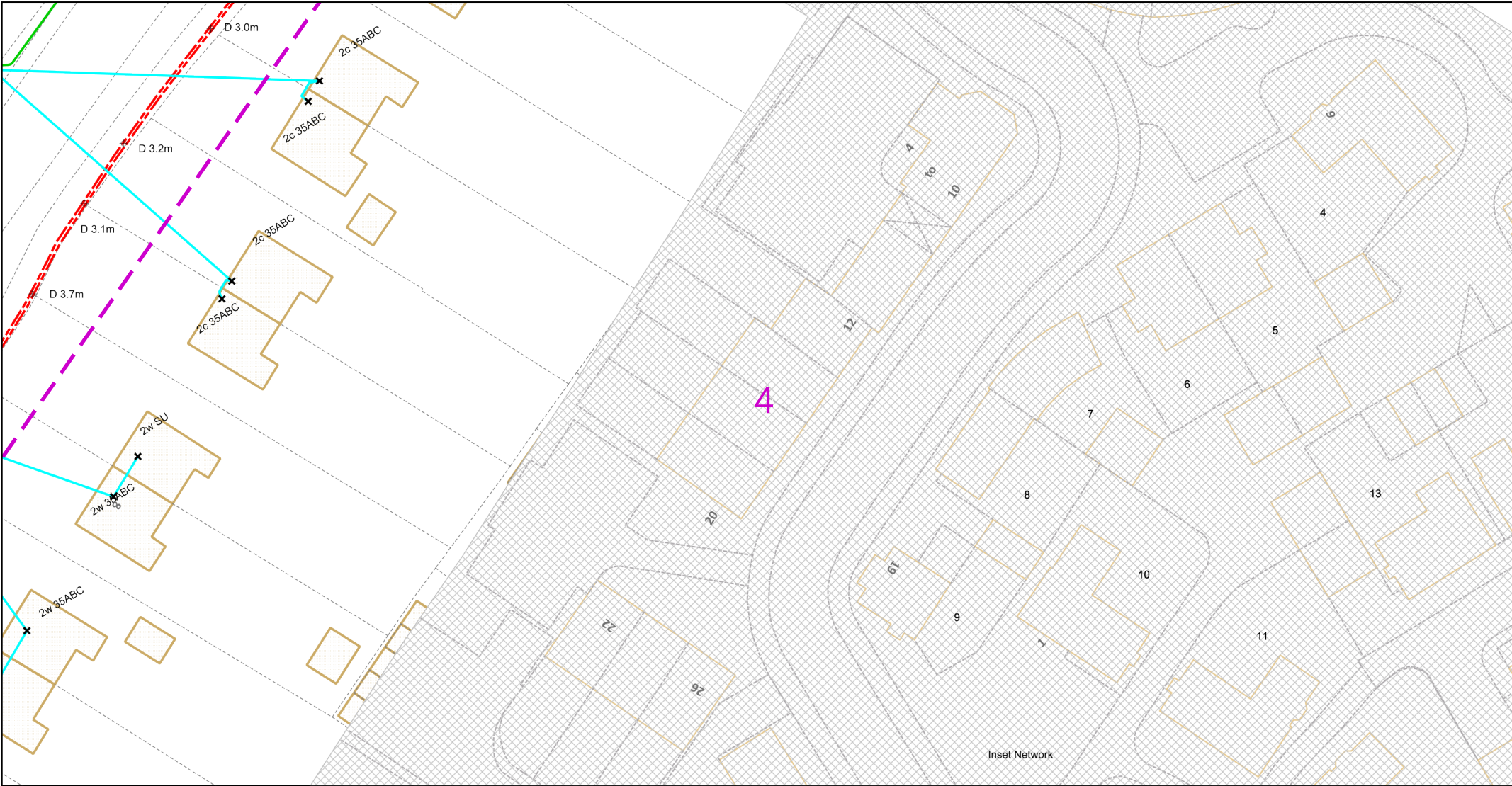
0 12.5 25 metres Dig Sites Area: Line:		The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.					
This plan must be used with the attached 'Symbols' document. Date Requested: 23/09/2022 Job Reference: 27015125 Site Location: 505207 119530 Requested by: Mr Nigel Weston Your Scheme/Reference: Sinclair Drive Footway Scale: 1:500 (When plotted at A4)		1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed. 2. The exact position of the apparatus should be verified - use approved cable avoidance tools prior to excavation using suitable hand tools. 3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined. 4. It must be assumed that there is a service cable into each property, lamp column and street sign, etc. 5. All cables must be treated as being live unless proved otherwise by UK Power Networks. 6. The information proved must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes. 7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location. 8. Please be aware the Low Voltage Overhead power lines are not currently displayed for the Eastern Region via this service, if you require records on the location of these please contact our Plan Provision team directly via plans@ukpowernetworks.co.uk.		1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk. 2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person. 3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever. 4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter. 5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party. 6. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network please view the relevant page as highlighted in the Overview map.		IF IN DOUBT - ASK! PHONE 0800 056 5866 EMERGENCY - If you damage a cable or line Phone 0800 783 8838 (24hrs) URGENTLY ALWAYS LOOK UP BEFORE YOU START WORK Refer to HSE Guidance note GS6	
Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database rights 2020. All rights reserved. Ordnance Survey Licence numbers 100019626, 100019826 and 100019450. Data has been added to the Ordnance Survey base map; all proprietary rights in such additional data are and shall remain the exclusive property of © London Power Networks plc or Eastern Power Networks plc or South Eastern Power Networks plc each being a distribution licensee under section 6(1)(c) of the Electricity Act 1989 for the relevant distribution services area as that term is defined in such licensee's distribution licence. All rights in such data reserved. Plans generated by DigSAFE Pro™ software provided by LinesearchbeforeUdig.							



Dig Sites Area: Line:

The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.

This plan must be used with the attached 'Symbols' document.	1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed. 2. The exact position of the apparatus should be verified - use approved cable avoidance tools prior to excavation using suitable hand tools. 3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined. 4. It must be assumed that there is a service cable into each property, lamp column and street sign, etc. 5. All cables must be treated as being live unless proved otherwise by UK Power Networks. 6. The information proved must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes. 7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location. 8. Please be aware the Low Voltage Overhead power lines are not currently displayed for the Eastern Region via this service, if you require records on the location of these please contact our Plan Provision team directly via plans@ukpowernetworks.co.uk. 1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk. 2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person. 3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever. 4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter. 5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party. 6. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network please view the relevant page as highlighted in the Overview map.		
Date Requested: 23/09/2022 Job Reference: 27015125 Site Location: 505207 119530 Requested by: Mr Nigel Weston Your Scheme/Reference: Sinclair Drive Footway Scale: 1:500 (When plotted at A4)		IF IN DOUBT - ASK! PHONE 0800 056 5866 EMERGENCY - If you damage a cable or line Phone 0800 783 8838 (24hrs) URGENTLY	ALWAYS LOOK UP BEFORE YOU START WORK Refer to HSE Guidance note GS6



Dig Sites Area: Line:

The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.



This plan must be used with the attached 'Symbols' document.
Date Requested: 23/09/2022
Job Reference: 27015125
Site Location: 505207 119530
Requested by: Mr Nigel Weston
Your Scheme/Reference:
Sinclair Drive Footway
Scale: 1:500 (When plotted at A4)

1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.
2. The exact position of the apparatus should be verified - use approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined.
4. It must be assumed that there is a service cable into each property, lamp column and street sign, etc.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.
8. Please be aware the Low Voltage Overhead power lines are not currently displayed for the Eastern Region via this service, if you require records on the location of these please contact our Plan Provision team directly via plans@ukpowernetworks.co.uk.

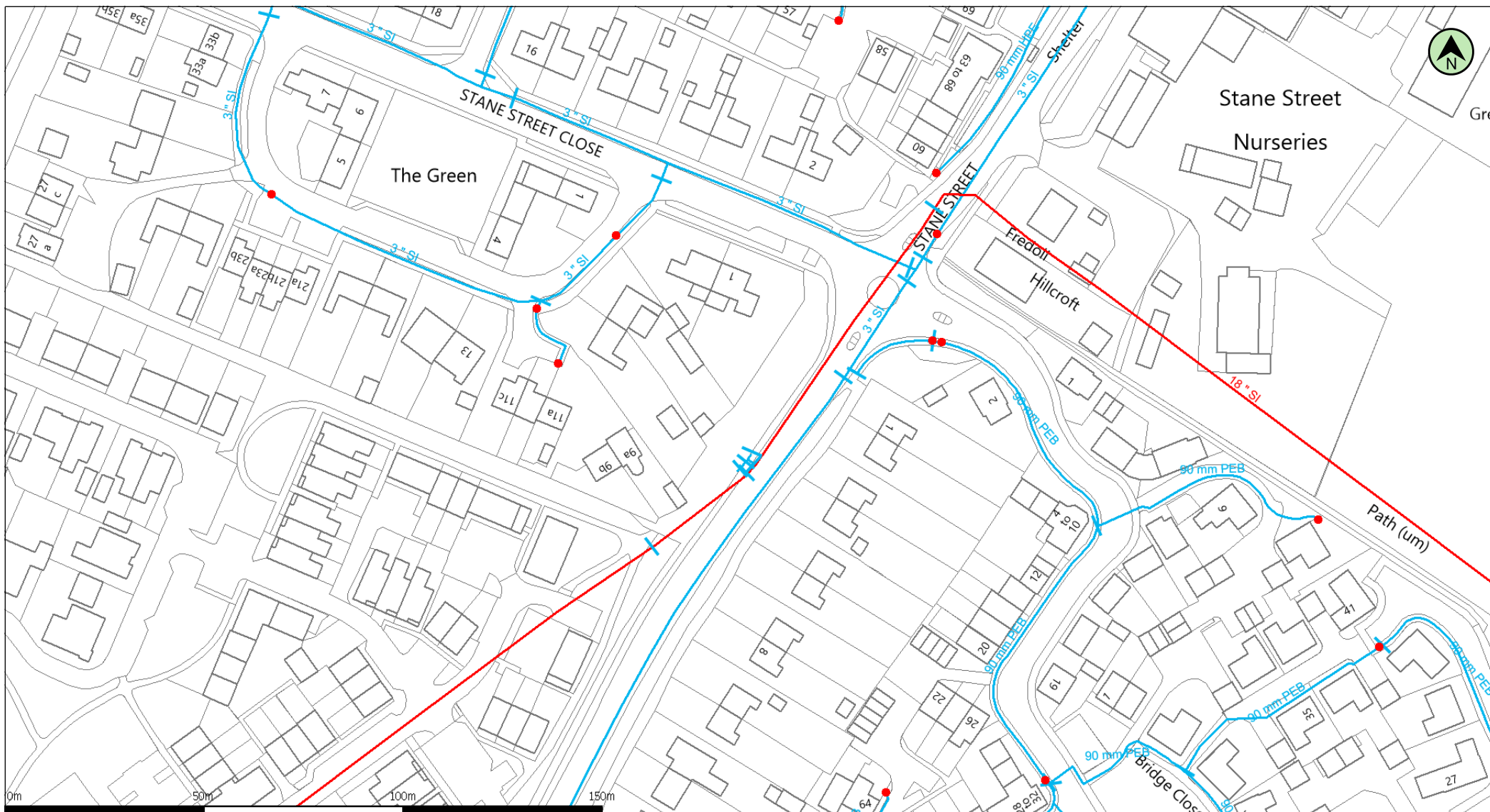
1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.
3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter.
5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.
6. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network please view the relevant page as highlighted in the Overview map.

IF IN DOUBT - ASK! PHONE
0800 056 5866
EMERGENCY - If you damage a
cable or line
Phone 0800 783 8838 (24hrs)
URGENTLY



ALWAYS LOOK UP
BEFORE
YOU START WORK
Refer to HSE Guidance
note GS6

Maps produced at 1:2500 scale are Geo-Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.



(c) Crown copyright and database rights 2022 Ordnance Survey 100031673

Date: 23/09/22

Scale: 1:1355

Map Centre: 505276,119607

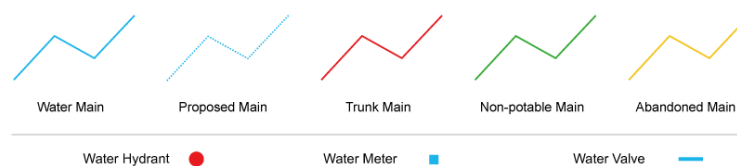
Data updated: 16/08/22

Clean Water Plan A4

The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. This plan is produced by Southern Water Services Ltd (c) Crown copyright and database rights 2022 Ordnance Survey 100031673. This map is to be used for the purposes of viewing the location of Southern Water plant only. Any other uses of the map data or further copies is not permitted.

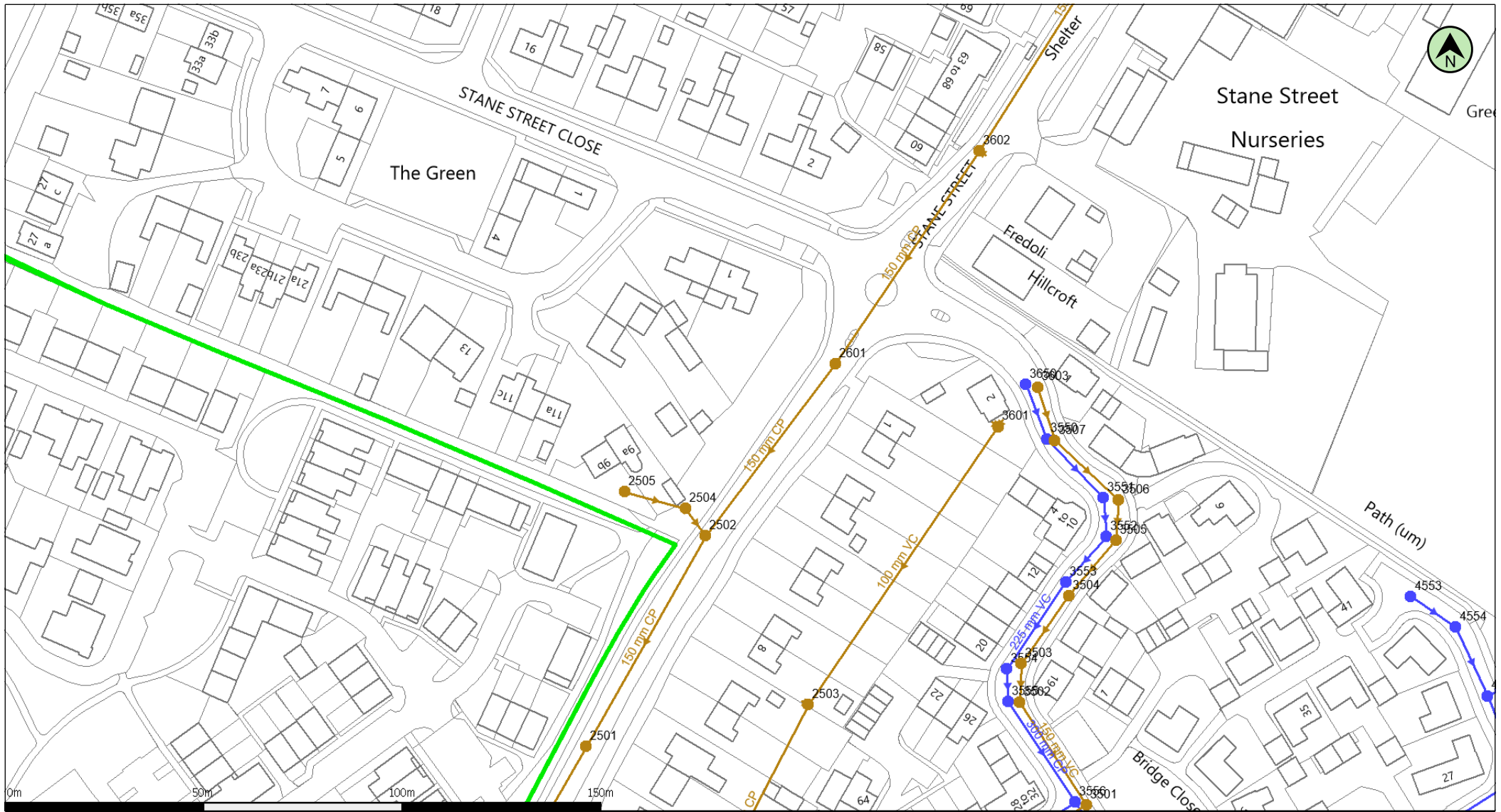
WARNING: BAC pipes are constructed of Bonded Asbestos Cement.

WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement.



nigel.weston@horsham.gov.uk





(c) Crown copyright and database rights 2022 Ordnance Survey 100031673

Date: 23/09/22

Scale: 1:1355

Map Centre: 505276,119607

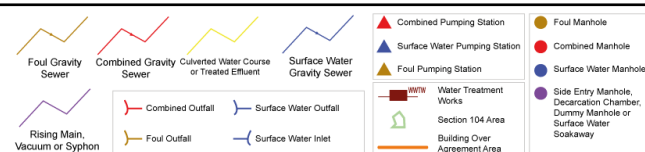
Data updated: 16/08/22

Wastewater Plan A4

The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. This plan is produced by Southern Water Services Ltd (c) Crown copyright and database rights 2022 Ordnance Survey 100031673. This map is to be used for the purposes of viewing the location of Southern Water plant only. Any other uses of the map data or further copies is not permitted.

WARNING: BAC pipes are constructed of Bonded Asbestos Cement.

WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement.

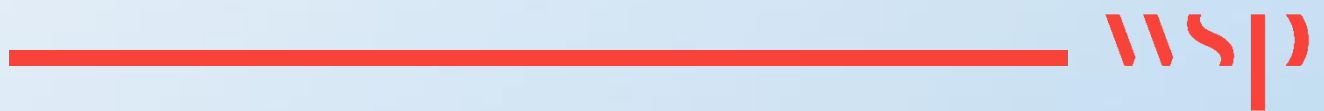


nigel.weston@horsham.gov.uk



Appendix C

COST ESTIMATES



Option 1) Footpath to Stane Street

Works to be carried out	Year No.	0	1-30	31-60	61-90	91-120
Construction cost	cost	£92,000	£0	£0	£0	£0
	dis. cost	£92,000	£0	£0	£0	£0
Resurfacing (assume req. every 20 years).	cost	£0	£6,000	£12,000	£6,000	£12,000
	dis. cost	£0	£3,015	£1,839	£832	£818
Fence replacement (assume req. every 20 years).	cost	£0	£200,000	£200,000	£200,000	£10,000
	dis. cost	£0	£2,513	£2,381	£694	£682
	Works cost	£92,000	£206,000	£212,000	£206,000	£22,000
	Dis. works cost	£92,000	£5,528	£4,221	£1,526	£1,499
	Residual value	-£92,000	-£69,000	-£46,000	-£23,000	£0
	Dis. residual value	-£92,000	-£24,583	-£5,839	-£1,040	£0
	Non-dis. NPV =	£0	£34,000	£79,000	£113,000	£158,000
	Dis. NPV=	£0	£73,000	£96,000	£103,000	£105,000

Option 2) Footpath to Stane Street Close

Works to be carried out	Year No.	0	1-30	31-60	61-90	91-120
Construction cost	cost	£74,000	£0	£0	£0	£0
	dis. cost	£74,000	£0	£0	£0	£0
Resurfacing (assume req. every 20 years).	cost	£0	£13,000	£26,000	£13,000	£26,000
	dis. cost	£0	£6,533	£6,192	£1,803	£1,772
Fence replacement (assume req. every 20 years).	cost	£0	£8,000	£16,000	£8,000	£16,000
	dis. cost	£0	£4,021	£3,810	£1,110	£1,090
	Works cost	£74,000	£21,000	£42,000	£21,000	£42,000
	Dis. works cost	£74,000	£10,554	£10,002	£2,913	£2,862
	Residual value	-£74,000	-£55,500	-£37,000	-£18,500	£0
	Dis. residual value	-£74,000	-£19,773	-£4,697	-£837	£0
	Non-dis. NPV =	£0	£39,500	£100,000	£139,500	£200,000
	Dis. NPV=	£0	£65,000	£90,000	£97,000	£101,000

F.A.O Rob Mcmillan
WSP

15/09/2023

Quote valid to 14/11/2023

Dear Rob ,

Following your enquiry, we are pleased to provide you with our budget estimate for the supply materials and installation for the following:

2 footpath Retaining walls -Option 1

At RH20 1BB

Based on a total wall face area of 72m2 (footings included)

Our budget estimate for the Supply and Construction of the Rootlok Wall is detailed in the schedule of rates enclosed. Our budget estimate is based on a typical wall, is subject to final design, site visit and the attached conditions. We will issue a formal quote after the final design and site visit has been completed.

Our estimated programme from receipt of order is set out below. This can be reviewed to meet your specific requirements upon request:

Lead time for formal design:	1-2 weeks
Procurment of materials and mobilisation:	4 weeks
Build time :	2 weeks
Approx start date:	TBC

There is at this stage, a lack of ground investigation available for this element of work. We would recommend a phase of GI be completed prior to design. This is something GeoGrow can facilitate, for more information please ask.

We hope that you find our quote is of interest and should you require any further information, please do not hesitate to contact me.

Kind regards



Dan Roberts
Technical Director

Supply and Install Quote

Item	No.	
Pre-seeded filled bags with standard seed mix inc plate	1125	<u>included</u>
GeoGrid roll	1	<u>included</u>
Geotextile wrapped perforated land drain coil pipe 100mm x 50m	2	<u>included</u>
Post sleeves 6m length 300mm diameter (based on 1.8m spacing 1m depth)	6	<u>excluded</u>
Carriage via artic to RH20 1BB	2	<u>included</u>
Supply and Delivery of type 1 stone loose delivery (T)	240	<u>excluded</u>

Other Items	Qty

Sub-Totals of Materials £ 17,621.14

Sub-Totals of Installation of Rootlok Elements £ 23,722.82

Sub-Totals Other Items £ - Excluded

Sub-Totals for Formal Design £ 2,500.00

Stone price valid for 30 days

Net Cost- Supply, Install, Hydroseed and Other Items	£ <u>41,343.96</u>
Formal Design	£ <u>2,500.00</u>
E/o For Supply and Delivery of type 1 stone loose delivery (T)	£ <u>-</u>

Retention – Our estimate does not allow for retention monies to be retained by you during the completion of these works. If a retention is retained @ 5% this will be added to the total above £ 2,192.20

Net Value Including Retention of 5% and Design £ 46,036.16



☎ 01543 224 800

🌐 www.geogrow.com

✉ Sales@geogrow.co.uk



Assumptions				
Suitable access for plant/ equipment and materials				
Materials can be stored within 75m of the work area				
Based on ground conditions as per the SI report				
Backslope cut as per drawings provided				
Site will accept deliveries on articulated vehicles				
No provision made for additional dig out/ stone due to poor ground				
Client will supply stone approximately	240	Tonnes		
Estimated programme of	2	weeks		
Assumed all sections are available to be completed in	1	visits		
Price based upon a wall face area of	72	m2		
Total Wall Length	57	m		
Is the site team over 1 hour from site- accomodation is required		yes		
Assumed Responsibilities and scope of works	Client	GeoGrow	N/A	Comments
Offload of materials	x			
Setting out	x			
Formation testing		x		
Provision of welfare facilities for GeoGrow staff	x			
Supply of materials for the Rootlok wall		x		
Supply of stone	x			
Supply of labour		x		
Supply of plant (8T excavator, 6t dumper suggested)		x		
Installation of fence post sleeves	x			
Installation of fence posts and panels	x			
Hydroseeding			x	
Material storage area by client adjacent to works (within 75m)	x			
Provision of SSSTS site supervisor		x		
Provision of engineer with GPS equipment		x		
As built drawings			x	
Traffic management	x			
Preparation of back slope to safe angle	x			
Dig out of footings		x		
Temp works designs	x			
Risk on contaminated waste / spoil	x			
Local authority approvals	x			
Fall protection (air deck bags/ block and harness)		x		
Cartaway of spoils	x			
Water course management and creation of dry working area	x			
Provision of skips	x			



☎ 01543 224 800
➦ www.geogrow.com
✉ Sales@geogrow.co.uk
in yt fb tw p in

Mobilisation

Mobilisation is 4 weeks as standard upon receipt of an order, this can be reduced at GeoGrow's discretion.

Unless otherwise stated in our quote we expect that there will be a level hardstanding suitable for unloading articulated lorries and a storage area of 15m x 15m for a minimum of 20T of Rootlok bags and 40T of fill stone

Should a mobilisation be cancelled by the client within 5 working days of the planned mobilisation then GeoGrow reserve the right to recover costs in accordance with standard rates, which can be provided upon request.

Welfare and Attendances by Main Contractor

Unless otherwise stated in our quote we will expect that welfare units, drying rooms, toilets and office space will be provided by others for our use within 500m of the work area.

Provision of traffic marshals and a traffic management plan will be provided by the main contractor.

Provision of road sweepers by the main contractor.

Provision of traffic management systems by the main contractor.

Site Works

All existing services will have been identified and located by trial holes by the main contractor prior to us commencing works.

Contaminated ground and contaminants (if applicable) will have been identified by the main contractor prior to us commencing works and an agreed safe system of work will be in place prior to mobilisation.

No allowance has been made to work with or around protected habitats or species.

No allowance has been made for working around invasive species.

Unless otherwise stated in our quote we have assumed the main contractor will provide scaffold edge protection throughout the course of the works and will carry out the weekly scaffold inspections.

We have not allowed for removing any excavated materials off site.

All setting out of the wall will be by your site engineer.

When preparing the quote we have assumed that the normal site hours are 07.30 to 16.30 Monday to Friday, if works are to be completed outside of these hours then we reserve the right to charge premium time.

We have assumed that all of the works can be completed on a single visit and remobilisation costs have not been included in our quote.

We have assumed free and unhindered access to construction work areas.

We have assumed that there are no ecological, environmental and archaeological restrictions.

Quote is based on GeoGrow staff having continued, uninterrupted access to the work area through the duration of the job. Any delays caused by other contractors will incur standing costs at standard rates, which are available upon request.

Sign off and Acceptance

We have not allowed for the provision of an as built report, details or O&M manuals, should these items be required then we will provide a quote for the specifics as identified by the client.

The client will be asked to inspect the works before demobilisation and produce where necessary a snagging list prior to demobilisation, it is our policy to complete all of the works in one visit including any snagging and any revisits.

Seeding and Aftercare

Once completed the client is responsible for the aftercare and maintenance of the vegetation and must follow the specific aftercare guidelines specified in the formal design/ provided to you post construction. All additional maintenance visits will be charged at rate if it is deemed that the guidelines have not been adhered to.

GeoGrow do offer a maintenance service, for more information please contact us.



☎ 01543 224 800
➦ www.geogrow.com
✉ Sales@geogrow.co.uk
in yt fb tw p in

Commercial

Valuations will be at month end with payment strictly 30 days thereafter.

Our offer will remain valid for 60 days from the date of this quote document.

Retention – we have not allowed for retention within our quote, should you wish to hold a retention sum then we reserve the right to revisit our quote for the works.

We have based the quote on receiving a fair and reasonable subcontract order, should this not be the case then we reserve the right to revisit the quote for the works.

Standard rates for time and labour are available on request.

Should you require us to carry out works on a dayworks basis, our site supervisor will present a daywork return on a daily basis for your site representative to agree.

Insurance

Our insurance details are as follow;

Employers Liability Insurance	£10,000,000
Public Liability Insurance	£ 5,000,000
Professional Indemnity Insurance	£ 5,000,000

No allowance has been made within our quote for any additional premiums involved in increasing our insurance cover to levels deemed necessary by the Main Contractor or client.

No allowance has been made for entering into a collateral warranty agreement with any party in relation to this contract. If this is required, an administration fee of £1,200.00 will apply.

No allowance has been made for the provision of a Bond/Guarantee in respect of this contract. GeoGrow Ltd reserve the right to cover any bank charges and administrative costs accrued through the provision of any such bond.

This quotation is net of VAT and any other deductions.

These terms and conditions will be deemed to form part of the order from the client.

The following assumptions, terms and conditions would apply to Subcontracts/Orders which involve design:

Design Assumptions:

GeoGrow Ltd undertake to act as the Element Designer for the Retaining Wall only.

It is the responsibility of the Project Scheme Designer to confirm that the GeoGrow Ltd design element is suitable for the project and ensure coordination with all other elements, including providing setting out coordinates.

The Design includes the provision of a construction drawings and supporting calculations. The production of as-built drawings is not included.

Detailed Design will not commence until an order has been received. A period of 2 weeks will usually be required to finalise designs, from receipt of all necessary design information (SI and drawings etc).

Any changes that result in a redesign of the structures will incur an additional cost, which will be confirmed in advance of the design being started.

GeoGrow's liability shall not exceed the limit of the Company's insurances.

The design has been based on the information in the SI report provided by yourselves.

Drawings will be issued for approval, works will not commence until the client has approved the drawings in writing. Commencement of works will be at your risk.

Provision of a response to one round of comments. It is assumed that this will not require significant re-working of design details.

Existing client drawings to be provided in AutoCAD format, most up to date design drawings to be provided prior to design.

GeoGrow®

☎ 01543 224 800

➦ www.geogrow.com

✉ Sales@geogrow.co.uk



Extra Over rates

Description	Rate	total
Re-mobilisation cost for each separate visit to site	£POA	rate only
Re-design of project inc small report changes	£POA	rate only
Re-design of project inc new model	£POA	rate only
H and S 'As-Built' Report/ O and M manual	£POA	rate only

Standing time for plant and labour is available on request

F.A.O Rob Mcmillan
WSP

15/09/2023

Quote valid to 14/11/2023

Dear Rob ,

Following your enquiry, we are pleased to provide you with our budget estimate for the supply materials and installation for the following:

2 footpath Retaining walls -option 2

At RH20 1BB

Based on a total wall face area of 45m2 (footings included)

Our budget estimate for the Supply and Construction of the Rootlok Wall is detailed in the schedule of rates enclosed. Our budget estimate is based on a typical wall, is subject to final design, site visit and the attached conditions. We will issue a formal quote after the final design and site visit has been completed.

Our estimated programme from receipt of order is set out below. This can be reviewed to meet your specific requirements upon request:

Lead time for formal design:	1-2 weeks
Procurment of materials and mobilisation:	4 weeks
Build time :	1 weeks
Approx start date:	TBC

There is at this stage, a lack of ground investigation available for this element of work. We would recommend a phase of GI be completed prior to design. This is something GeoGrow can facilitate, for more information please ask.

We hope that you find our quote is of interest and should you require any further information, please do not hesitate to contact me.

Kind regards



Dan Roberts
Technical Director

Supply and Install Quote

Item	No.	
Pre-seeded filled bags with standard seed mix inc plate	708	<u>included</u>
Geotextile wrapped perforated land drain coil pipe 100mm x 50m	1	<u>included</u>
Post sleeves 6m length 300mm diameter (based on 1.8m spacing 1m depth)	4	<u>excluded</u>
Carriage via artic to RH20 1BB	1	<u>included</u>
Supply and Delivery of type 1 stone loose delivery (T)	120	<u>excluded</u>

Other Items	Qty

Sub-Totals of Materials £ 10,472.52

Sub-Totals of Installation of Rootlok Elements £ 15,845.50

Sub-Totals Other Items £ - Excluded

Sub-Totals for Formal Design £ 2,500.00

Stone price valid for 30 days

Net Cost- Supply, Install, Hydroseed and Other Items	£ <u>26,318.02</u>
Formal Design	£ <u>2,500.00</u>
E/o For Supply and Delivery of type 1 stone loose delivery (T)	£ <u>-</u>

Retention – Our estimate does not allow for retention monies to be retained by you during the completion of these works. If a retention is retained @ 5% this will be added to the total above £ 1,440.90

Net Value Including Retention of 5% and Design £ 30,258.92



☎ 01543 224 800

➦ www.geogrow.com

✉ Sales@geogrow.co.uk



Assumptions				
Suitable access for plant/ equipment and materials				
Materials can be stored within 75m of the work area				
Based on ground conditions as per the SI report				
Backslope cut as per drawings provided				
Site will accept deliveries on articulated vehicles				
No provision made for additional dig out/ stone due to poor ground				
Client will supply stone approximately	120	Tonnes		
Estimated programme of	1	weeks		
Assumed all sections are available to be completed in	1	visits		
Price based upon a wall face area of	45	m2		
Total Wall Length	43	m		
Is the site team over 1 hour from site- accomodation is required		yes		
Assumed Responsibilities and scope of works	Client	GeoGrow	N/A	Comments
Offload of materials	x			
Setting out	x			
Formation testing		x		
Provision of welfare facilities for GeoGrow staff	x			
Supply of materials for the Rootlok wall		x		
Supply of stone	x			
Supply of labour		x		
Supply of plant (8T excavator, 6t dumper suggested)		x		
Installation of fence post sleeves	x			
Installation of fence posts and panels	x			
Hydroseeding			x	
Material storage area by client adjacent to works (within 75m)	x			
Provision of SSSTS site supervisor		x		
Provision of engineer with GPS equipment		x		
As built drawings			x	
Traffic management	x			
Preparation of back slope to safe angle	x			
Dig out of footings		x		
Temp works designs	x			
Risk on contaminated waste / spoil	x			
Local authority approvals	x			
Fall protection (air deck bags/ block and harness)		x		
Cartaway of spoils	x			
Water course management and creation of dry working area	x			
Provision of skips	x			



☎ 01543 224 800
➦ www.geogrow.com
✉ Sales@geogrow.co.uk
in yt fb tw p in

Mobilisation

Mobilisation is 4 weeks as standard upon receipt of an order, this can be reduced at GeoGrow's discretion.

Unless otherwise stated in our quote we expect that there will be a level hardstanding suitable for unloading articulated lorries and a storage area of 15m x 15m for a minimum of 20T of Rootlok bags and 40T of fill stone

Should a mobilisation be cancelled by the client within 5 working days of the planned mobilisation then GeoGrow reserve the right to recover costs in accordance with standard rates, which can be provided upon request.

Welfare and Attendances by Main Contractor

Unless otherwise stated in our quote we will expect that welfare units, drying rooms, toilets and office space will be provided by others for our use within 500m of the work area.

Provision of traffic marshals and a traffic management plan will be provided by the main contractor.

Provision of road sweepers by the main contractor.

Provision of traffic management systems by the main contractor.

Site Works

All existing services will have been identified and located by trial holes by the main contractor prior to us commencing works.

Contaminated ground and contaminants (if applicable) will have been identified by the main contractor prior to us commencing works and an agreed safe system of work will be in place prior to mobilisation.

No allowance has been made to work with or around protected habitats or species.

No allowance has been made for working around invasive species.

Unless otherwise stated in our quote we have assumed the main contractor will provide scaffold edge protection throughout the course of the works and will carry out the weekly scaffold inspections.

We have not allowed for removing any excavated materials off site.

All setting out of the wall will be by your site engineer.

When preparing the quote we have assumed that the normal site hours are 07.30 to 16.30 Monday to Friday, if works are to be completed outside of these hours then we reserve the right to charge premium time.

We have assumed that all of the works can be completed on a single visit and remobilisation costs have not been included in our quote.

We have assumed free and unhindered access to construction work areas.

We have assumed that there are no ecological, environmental and archaeological restrictions.

Quote is based on GeoGrow staff having continued, uninterrupted access to the work area through the duration of the job. Any delays caused by other contractors will incur standing costs at standard rates, which are available upon request.

Sign off and Acceptance

We have not allowed for the provision of an as built report, details or O&M manuals, should these items be required then we will provide a quote for the specifics as identified by the client.

The client will be asked to inspect the works before demobilisation and produce where necessary a snagging list prior to demobilisation, it is our policy to complete all of the works in one visit including any snagging and any revisits.

Seeding and Aftercare

Once completed the client is responsible for the aftercare and maintenance of the vegetation and must follow the specific aftercare guidelines specified in the formal design/ provided to you post construction. All additional maintenance visits will be charged at rate if it is deemed that the guidelines have not been adhered to.

GeoGrow do offer a maintenance service, for more information please contact us.



☎ 01543 224 800
➦ www.geogrow.com
✉ Sales@geogrow.co.uk
in YouTube Facebook Twitter Pinterest Instagram

Commercial

Valuations will be at month end with payment strictly 30 days thereafter.

Our offer will remain valid for 60 days from the date of this quote document.

Retention – we have not allowed for retention within our quote, should you wish to hold a retention sum then we reserve the right to revisit our quote for the works.

We have based the quote on receiving a fair and reasonable subcontract order, should this not be the case then we reserve the right to revisit the quote for the works.

Standard rates for time and labour are available on request.

Should you require us to carry out works on a dayworks basis, our site supervisor will present a daywork return on a daily basis for your site representative to agree.

Insurance

Our insurance details are as follow;

Employers Liability Insurance	£10,000,000
Public Liability Insurance	£ 5,000,000
Professional Indemnity Insurance	£ 5,000,000

No allowance has been made within our quote for any additional premiums involved in increasing our insurance cover to levels deemed necessary by the Main Contractor or client.

No allowance has been made for entering into a collateral warranty agreement with any party in relation to this contract. If this is required, an administration fee of £1,200.00 will apply.

No allowance has been made for the provision of a Bond/Guarantee in respect of this contract. GeoGrow Ltd reserve the right to cover any bank charges and administrative costs accrued through the provision of any such bond.

This quotation is net of VAT and any other deductions.

These terms and conditions will be deemed to form part of the order from the client.

The following assumptions, terms and conditions would apply to Subcontracts/Orders which involve design:

Design Assumptions:

GeoGrow Ltd undertake to act as the Element Designer for the Retaining Wall only.

It is the responsibility of the Project Scheme Designer to confirm that the GeoGrow Ltd design element is suitable for the project and ensure coordination with all other elements, including providing setting out coordinates.

The Design includes the provision of a construction drawings and supporting calculations. The production of as-built drawings is not included.

Detailed Design will not commence until an order has been received. A period of 2 weeks will usually be required to finalise designs, from receipt of all necessary design information (SI and drawings etc).

Any changes that result in a redesign of the structures will incur an additional cost, which will be confirmed in advance of the design being started.

GeoGrow's liability shall not exceed the limit of the Company's insurances.

The design has been based on the information in the SI report provided by yourselves.

Drawings will be issued for approval, works will not commence until the client has approved the drawings in writing. Commencement of works will be at your risk.

Provision of a response to one round of comments. It is assumed that this will not require significant re-working of design details.

Existing client drawings to be provided in AutoCAD format, most up to date design drawings to be provided prior to design.

GeoGrow®

☎ 01543 224 800
 ➦ www.geogrow.com
 ✉ Sales@geogrow.co.uk







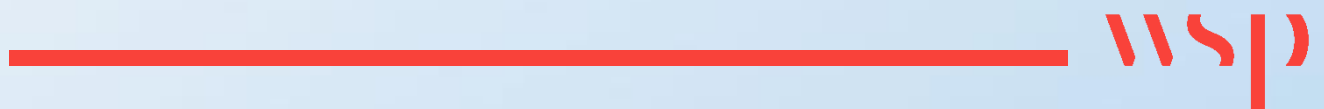
Extra Over rates

Description	Rate	total
Re-mobilisation cost for each separate visit to site	£POA	rate only
Re-design of project inc small report changes	£POA	rate only
Re-design of project inc new model	£POA	rate only
H and S 'As-Built' Report/ O and M manual	£POA	rate only

Standing time for plant and labour is available on request

Appendix D

DESIGN RISK REGISTER



Project No	70097712	Project Name	HDC - Sinclair Drive Footway Link
------------	----------	--------------	-----------------------------------

[illegible]

Issue 3.1



Matrix House
Basing View
Basingstoke, Hampshire
RG21 4FF

wsp.com

PUBLIC

Pulborough Possible Transport Options

23/09/2020

West Sussex County Council (WSCC) were asked by Pulborough Parish Council (PPC) to assist in identifying a scheme or package of schemes that would improve the safety and accessibility for all transport modes through the village, particularly along the A29 and A283. There was also an ambition to update the Pulborough Village Transport Plan to tie in with the updated Neighbourhood Plan. After a series of stakeholder meetings to discuss the current transport issues experienced in the village a list of possible options was presented to PPC. This document will provide some detail on the preferred schemes that were identified.

This document refers to issues, delivery programmes, funding and priorities.

Issues – Please refer to the issue numbers listed in the Pulborough Possible Options spreadsheet.

WSCC delivery programmes – The WSCC Highways Annual Delivery Programme (shown below) is comprised of three delivery programmes that may be used to deliver options:-

Delivery programme	Further information
Community Highways Schemes (CHS)	Please use following link for information on CHSs and to submit an application:- https://www.westsussex.gov.uk/leisure-recreation-and-community/supporting-local-communities/apply-for-a-community-highways-scheme/
Local Transport Improvement Programme (LTIP)	An annual review of the Local Transport Improvement Programme (LTIP), usually takes place annually in September. Due to the COVID-19 crisis, much of the LTIP resource has been diverted to supporting the Government's Emergency Active Travel Fund (EATF) Pop Up Cycle Scheme Programme. All LTIP schemes are assessed using an approved prioritisation criteria to make recommendations for funding and progression each year. The 20/21 programme value is in region of £1.5m which combines a number of funding sources. Schemes are predominantly prioritised based on data and evidence that supports WSCC policy and strategic goals and are in competition with existing and new applications. The number of applications regularly exceed the funding available. Any LTIP requests can start as a CHS request and then get elevated at moderation stage.

Strategic Transport Investment Programme (STIP)	An annual review of the Strategic Transport Investment Programme (STIP), usually takes place in the Autumn, setting out the WSCC revenue requirement for the forthcoming financial year, to identify the revenue requirement to undertake feasibility studies. This will also depend on resources and how previous feasibility studies have been progressing. All STIP schemes will be assessed against criteria based on that used by the Department for Transport for assessment of transport projects. Schemes will be prioritised from the long STIP list and identified for revenue funding to allow feasibility studies to commence. A key decision report will then be required to seek approval from the Cabinet Member for the proposed programme of feasibility studies in the forthcoming financial year.
---	--

Please note: It is important not to raise expectations as prioritisation by WSCC will depend on funding/resources available and other schemes being considered. For example, WSCC have not reviewed the STIP list this year, as the current STIP programme has needed to be extended over two financial years. This is partly due to resources and existing studies taking longer to complete as we are being required to produce more evidence during the feasibility phase and engaging more with key stakeholders.

Funding – there are three main funding opportunities shown below:-

Funding opportunity	Further information
WSCC highway capital funding	The County Council is allocated block highway funding grants from central Government which are allocated annually through the Highways Annual Delivery Programme.
Government grants	As opportunities arise, applications for funding can be submitted; for example to central Government or the Coast to Capital Local Enterprise Partnership (LEP). These are typically related to specific themes, issues or objectives such as schemes on the Major Road Network. Funding rounds are typically every five years. Other roads in West Sussex might be considered a higher priority (for example, the A24 or the A259) depending on funding criteria specified at the time of bidding.
Developer contributions	Where improvements would help to mitigate the impact of development in Horsham District, funding for mitigation measures may be secured through developer contributions. If a scheme is necessary to make development acceptable in planning terms, this would be through a section 106 agreement.

Priorities – The issues were prioritised and ratified by the Parish Council.

Please note that a risk register is being developed alongside this document to give more information on each of the options.

The prioritised list of issues now follows:-

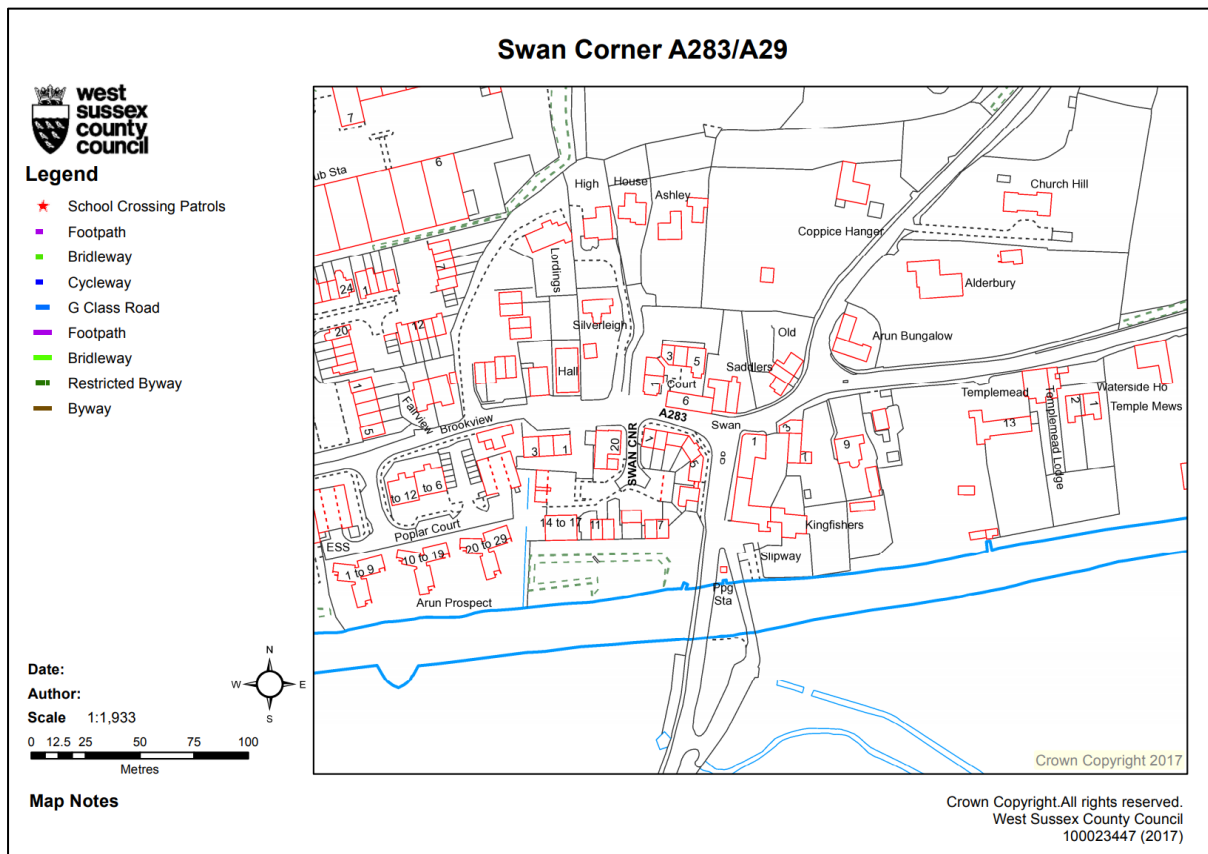
Swan Corner

Identified Issue ID: PUL001, PUL002, PUL022

Potential Delivery Programme: LTIP

Funding Opportunity: Government grants, WSCC highways & developer contributions

Parish Council Priority: High



Issues:

- The two mini roundabout junctions on the A29/A283, known locally as Swan Corner, are beginning to approach capacity. Several incidents of varying severity have been recorded in the vicinity of these junctions and reflects a conflict between multiple motor vehicles, and/or between motor vehicles and cyclists or pedestrians.
- There is poor visibility for pedestrians crossing the Swan Corner mini roundabout junctions and there are narrow pavements leading up to these

junctions. Several accidents of varying severity have been recorded in the vicinity.

- During the winter of 2019 the A29 at the Swan Bridge mini-roundabout junctions was flooded twice, closing the A29 for several days.

Options:

- Priority Junctions: To redesign both mini roundabouts to become priority junctions.
- Signalisation and pavement widening: To redesign both mini roundabouts to have traffic signals at each arm and widen the pavement between the two junctions. Include pedestrian crossing opportunities in the traffic signal sequence.
- Signalisation: To redesign both mini roundabouts to have traffic signals at each arm and include pedestrian crossing opportunities in the traffic signal sequence.
- Do Nothing: Make no changes to the existing mini roundabouts.
- Pedestrian crossings: Signal controlled pedestrian crossing points across the southern A29 arm and along the A283 in between the two mini roundabouts. Possible minor road buildouts, surface treatments and / or raising of the road level.
- Alternative network of Footpaths and Bridleways: Improve the condition of key Footpaths and Bridleways linking popular destinations in the village.
- Adopt a Drain scheme: Community led checks on state of drains.
- Additional maintenance / road resurfacing: Increased maintenance of drains in area. Potential resurfacing works if road surface is covering kerb drainage holes.

No solution was identified as preferable to mitigate the traffic situation at the Swan Corner Roundabouts or for improving pedestrian visibility and safety at these junctions, but it was noted that any chosen option must provide safe, signal-controlled crossings for pedestrians and cyclists to improve the perceived safety across both junctions.

Cllr John Wallace provided a document prior to the meeting providing details on flooding in the area and what is suspected to be causing it. Further investigation is likely to be required to fully understand the cause of the flooding.

Suggested next steps:

Pursue improvements to the alternative network of Footpaths and Bridleways through LTIP and adopt a drain scheme as signalisation is unlikely to be viable without major development on value for money grounds. This is because the benefits to existing traffic and pedestrians are unlikely to outweigh the required investment to the extent that this would attract the level of funding necessary to deliver the scheme. (LTIP would not deal with drainage. This would need to be a stand-alone issue dealt with separately).

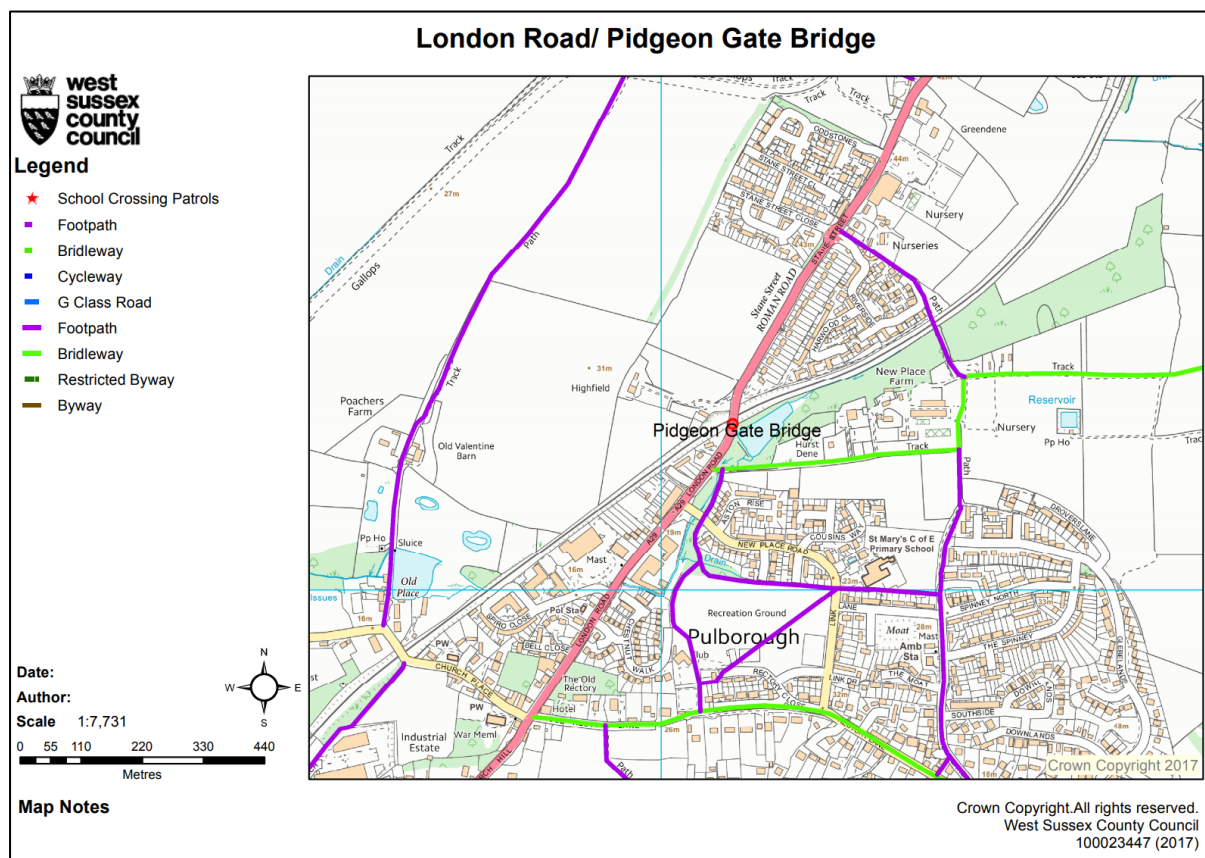
Pidgeon Gate Bridge

Identified Issue ID: PUL010

Potential Delivery Programme: LTIP

Funding Opportunity: Government grants, WSCC highways & developer contributions

Parish Council Priority: High



Issue: The pedestrian footway along western edge of the Pidgeon Gate Bridge is narrow and is further narrowed by protective barriers. It is difficult for pedestrians to pass one another and inaccessible to large pushchairs or wide wheelchairs. This is the main pedestrian connection between the northern and southern parts of the village.

Options:

- New footbridge adjacent to the existing road bridge: New footbridge adjacent to existing road bridge that meets current accessibility requirements.
- Alternative network of Footpaths and Bridleways: Routes for possible improvements highlighted in PUL/006.
- Do Nothing: Make no changes to pedestrian facilities at Pidgeon Gate Bridge.

- One-way traffic flow over the road bridge: Widen the existing footway along the bridge. Utilise priority working or possibly signalling the traffic over the bridge.
- Extend protective barriers: Extend the length of the protection barriers on the approach to the bridge to improve perceived safety for pedestrians using the bridge.

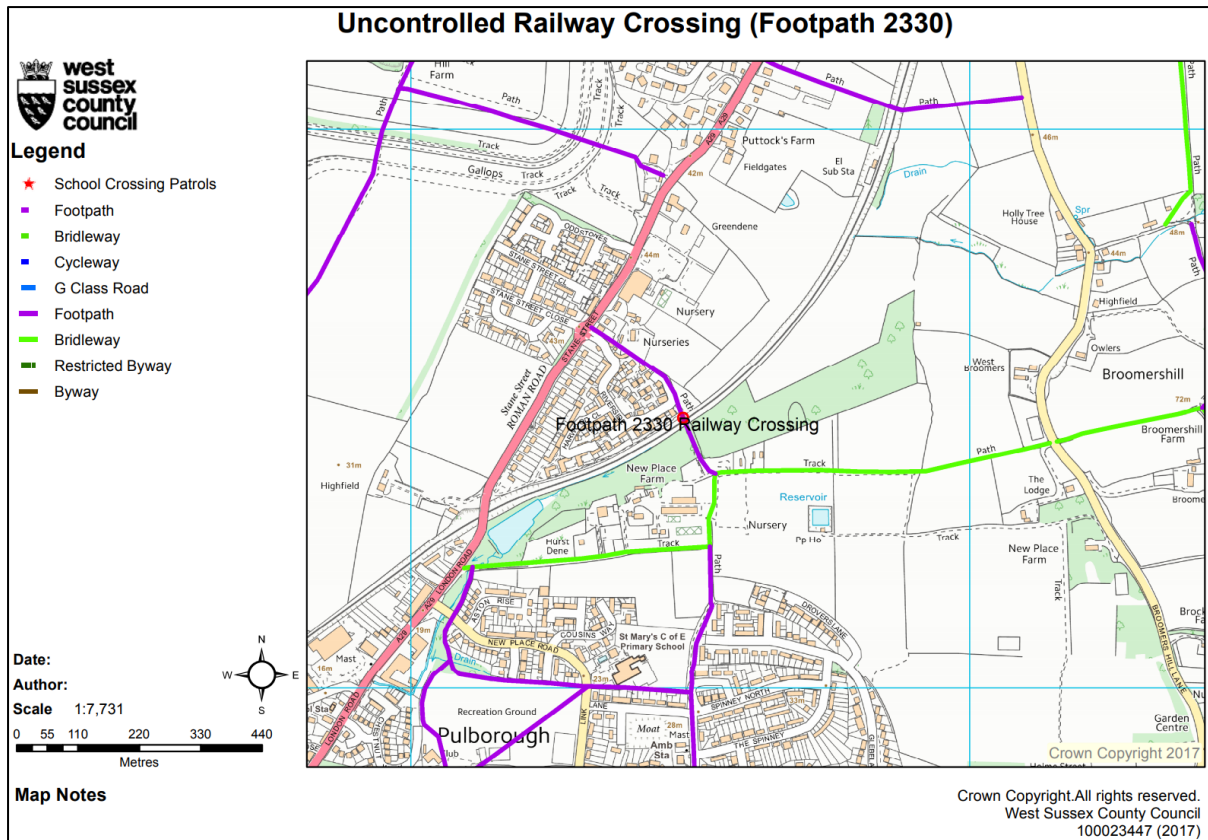
It was requested that the extension of the pedestrian barrier leading up to the bridge is included within the options for this issue, although this particular solution would not be considered strategic as it does not solve the issue, only improve perceived safety of the existing situation. The dominant topic of conversation was the provision of a footbridge.

Suggested next steps:

Pursue improvements to the alternative network of Footpaths and Bridleways through LTIP as a new footbridge is unlikely to be viable without major development on value for money grounds. This is because the benefits to existing pedestrians are unlikely to outweigh the required investment to the extent that this would attract the level of funding necessary to deliver the scheme.

Uncontrolled Railway Crossing and Footpath 2330

Identified Issue ID:	PUL011
Potential Delivery Programme:	Development opportunity
Funding Opportunity:	Developer funding
Parish Council Priority:	High



Issue: The pedestrian link between the eastern end of Rectory Lane to the A29 via the primary school, goes across the railway (uncontrolled crossing) and through the Riverside development. This route is well used by children accessing the school and provides a potential safety risk.

Options:

- Upgrade railway crossing to provide foot / cycle bridge: Provide a new foot / cycle bridge to replace the existing railway crossing on this route and improve surfacing, drainage and wayfinding along this route.
- Do Nothing: Make no changes to railway crossing facilities at this location.
- Close uncontrolled railway crossing: Improve route safety by removing uncontrolled railway crossing.

Footpath 2330 has the potential to provide a separate north-south pedestrian and cyclist route away from the A29. This could be a more viable foot / cycle bridge option than the scheme along the A29 if houses are to be built on the southern side of the railway and may be easier to deliver. However further investigation would be needed for ground conditions and structural designs etc. to gain a better understanding of how the scheme could be delivered and more accurate costs.

Suggested next steps:

Pursue upgrade to railway crossing through development opportunity as this scheme requires land at the Riverside development and will provide sustainable transport links to the development.

Pedestrian Facilities and Verge Parking Around Stopham Rd Bridge

Identified Issue ID:

PUL003 and PUL004

Potential Delivery Programme:

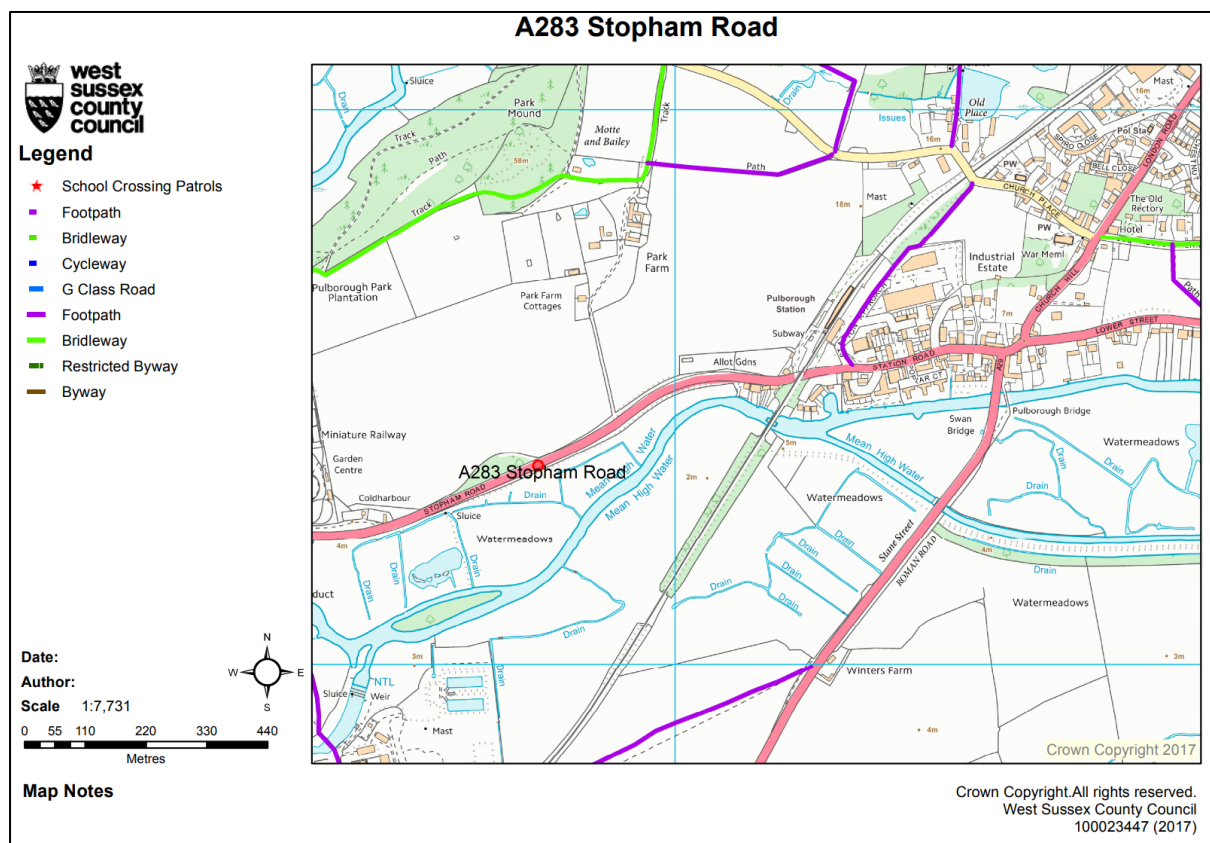
LTIP (although TRO could be pursued through CHS)

Funding Opportunity:

Developer funding and/or WSCC highways

Parish Council Priority:

Medium/High



Issues:

- Numerous cars are parked on the grass verges on both sides of the A283 going west out of the village.
- There is no dedicated footway leading up to or through the Stopham Road bridge. This area is also prone to flooding which increases difficulty for pedestrians accessing the village from the west of the structure.

Options:

- Parking controls: Individual TROs for locations that present a safety concern. (TROs can be applied for via the WSCC website. This would be separate from LTIP).
- Area-wide parking controls: Village-wide Road Space Audit followed by appropriate road space control strategy. (This would be pursued separately from LTIP).
- Signalised solution under bridge: Create footways going up to the bridge from the east and west. Install traffic lights at both ends of the bridge. Pedestrians can request a red signal phase to allow them to walk through the bridge with traffic being held at each end of the bridge.
- Provide a footway on one side of the road through the bridge: Create footways going up to bridge from the east and west. Provide footway along one side of the road under the bridge (may require guard rail also).
- Provide a footway on both sides of the road through the bridge: Create footways going up to bridge from east and west. Provide a footway along both sides of the road under the bridge (narrower footway than option above).
- Do nothing. Contact Network Rail about mitigating the flooding: Make no changes to existing highway or footways.

If the verge parking is removed without providing additional parking, due to be provided by planning application DC/16/0728, it is thought that there would be an increase in on-street parking within other residential roads within Pulborough. It is seen to be important to protect roads within a 20 minute walk from Pulborough Railway Station from additional on-street parking. Some additional parking controls may be required even with the new car park at the Railway Station (required by development DC/16/0728) if some users refuse to pay to park.

Given the shape of the Stopham Bridge it is thought unlikely that there would be a safe footway width if footways on both side of the road were provided under the bridge. The signalised option was favoured as it provides the greatest safety for pedestrian users. The development to the west of Pulborough Railway Station (DC/16/0728) is required to provide a signalised pedestrian footway under the railway bridge, including the associated footways leading to the structure. The S106 also requires this development to provide bollards along the grass verges in order to secure visibility splays.

Suggested next steps:

Pursue TRO through CHS process and pursue improvements to footway on one side of the road through LTIP as these appear to be deliverable at a cost that is likely to be available, particularly if nearby development comes forward.

Footpaths and Bridleways Around Pulborough

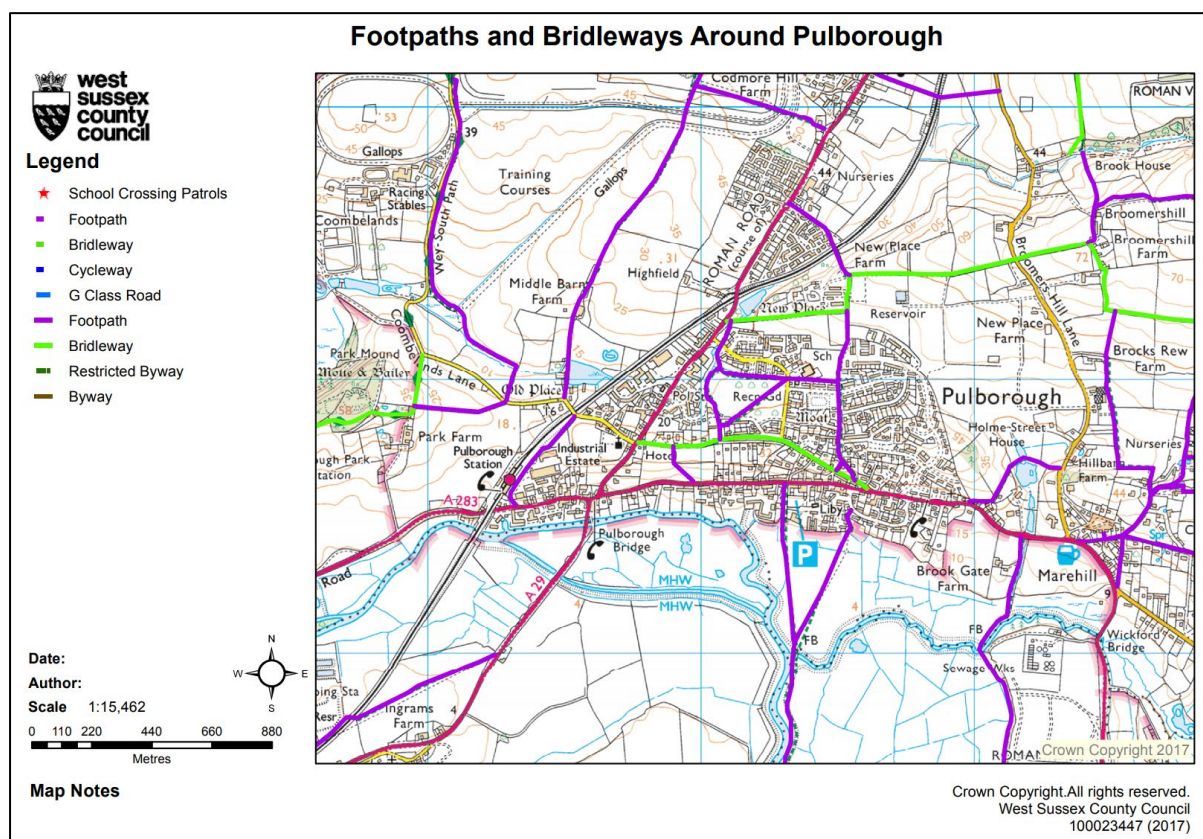
Identified Issue ID:

PUL006, PUL012 and PUL016

Potential Delivery Programme: CHS and LTIP,also STIP for PUL012

Funding Opportunity: Government grants, WSCC highways & developer contributions

Parish Council Priority: Medium



Issues:

- (PUL/006) Several Footpaths and Bridleways have the potential to provide an alternative pedestrian network throughout the village. However surfacing, drainage and physical restrictions (sufficient width) are amongst some of the issues that prevent more people from using these alternative routes.
- (PUL/012) Current access to Brinsbury College is designed for bus and motor vehicle use. Given the number of students and employees that currently travel to the site, providing an alternative active travel route will promote access and opportunity for all socio-economic groups and allow for longer journeys to / from Pulborough Train Station. Particularly as the site has plans to expand its employment area.
- (PUL/016) Generally no cycle route facilities and limited cycle parking facilities within the village. Perception of unsafe cycling in the vicinity of village.

Options:

- Improve the condition of Footpaths and Bridleways: Surface treatment and drainage improvements to the routes and improvements to the environment such as lighting, where necessary [CHS].
- Upgrade Footpaths and Bridleways: Upgrade Footpaths to Bridleways to create wider routes that can allow for cycling and horse riding uses also [CHS/LTIP].
- West of A29 walking / cycling route Pulborough to Wisborough Green: The planned route would utilise FP2327 known as the Cinder Path which runs north from Pulborough Train Station to Coombelands Lane (requires widening). Following Coombelands Lane north to the junction with Toat Lane and Pickhurst Lane. Take Pickhurst Lane east to join Blackgate Lane and follow this north, passing the entrance to Brinsbury College via Stable Barn Farm. Continue north to Lee Place and join BW775 which continues north to meet the A272 at Wisborough Green. Additionally it is possible to follow Toat Lane northwards to join BW 3421 which runs west to cross the River Arun at Pallingham Bridge and continue into the area known as The Mens. (resurfacing required for this last section, otherwise majority of route can be achieved with signage) [CHS / LTIP].
- East of A29 walking / cycling route Pulborough to Billingshurst: The planned route would utilise / require a new PROW link north from FP2330 along the Network Rail boundary fence up to Cray Lane (to meet planned extension of Broomers Hill Industrial Estate). At Cray Lane follow east to cross Broomers Hill Lane and take the farm road to join BW 2308 and head north to meet Nutbourne Lane at North Heath. Take a left, then a right to go up Stall House Lane to join BW2299 and then 2307 to meet B2133 Adversane Lane. Cross the road and take FP1323 and 1322 to join Lower Station Road and up to Billingshurst Railway Station. This route would require negotiation with landowners, upgrading of footpaths to bridleways and improvements of surfaces [LTIP / STIP].
- Segregated cycle route along A29: Secure additional land along one side of the A29 from surrounding land owners to provide a segregated cycle route [STIP].
- Upgrade footpaths to bridleways and provide cycle parking at key destinations within the village: Identify footpaths that can be upgraded to a bridleway. Provide cycle parking at key centres within the village [CHS].
- Do Nothing: Make no changes to the existing footpaths and bridleways.

The less frequently used routes in the vicinity of the village are not a huge problem, only sections would require improvements. Since the initial discussion members of the Parish and Stakeholder group met to discuss what was required for the FP and BW in Pulborough and listed the following projects:

- BW 2328 between Rectory Lane and Old Rectory Lane was identified as needing resurfacing [CHS].
- The northern end of FP 3500 between the Recreation Ground and BW 2332 needs resurfacing [CHS].

- A short twitten at the southern end of FP 2003 has an uneven surface on a steep slope and would need some work and resurfacing to improve the condition of the footpath [CHS].
- S106 money exists to convert the two permissive footpaths associated with DC/11/0952 and DC/15/1084 into permanent footpaths and improve the surfacing of the footpath and create a permanent link into FP 1995 which provides access to the train station [CHS/LTIP].

The west side of the A29 route would be cheaper to deliver if the signage is improved. Stable Barn Farm provides good access to Brinsbury College, if they are willing to contribute / be involved in the delivery of this new cycle route. The eastern route along the A29 is more complex to deliver.

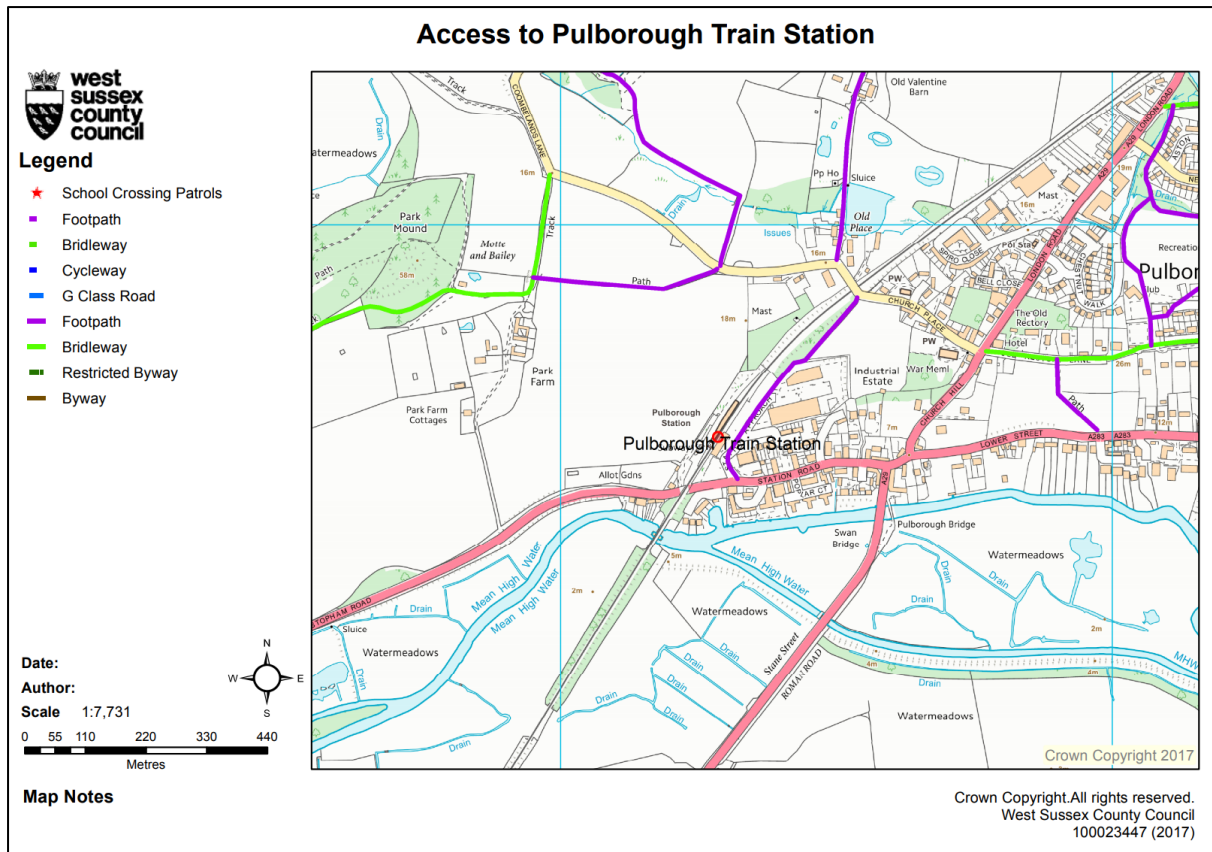
Suggested next steps:

Pursue improvements to maintenance of existing footpaths and bridleways through PROW team and improvements to the alternative network of Footpaths and Bridleways through LTIP.

Pursue improvements to access Brinsbury College (PUL/012) through STIP as this would be strategic scale and may help to facilitate future development.

Access to Train Platforms Without Using Stairs

Identified Issue ID:	PUL013
Potential Delivery Programme:	Network Rail / GTR (potentially Access For All scheme)
Parish Council Priority:	Medium



Issue: No accessible access between the two platforms.

Option:

- Provide a lift between platforms: Improve platform facilities to include lifts as this will allow for less able users to access the subway beneath the railway tracks and reach the opposite platform.

Not much can be done as this area is controlled by Network Rail or others and not WSCC.

Suggested next steps:

Pursue lift access through GTR/Network Rail.

Bus Infrastructure Improvements

Identified Issue ID:

PUL015

Potential Delivery Programme:

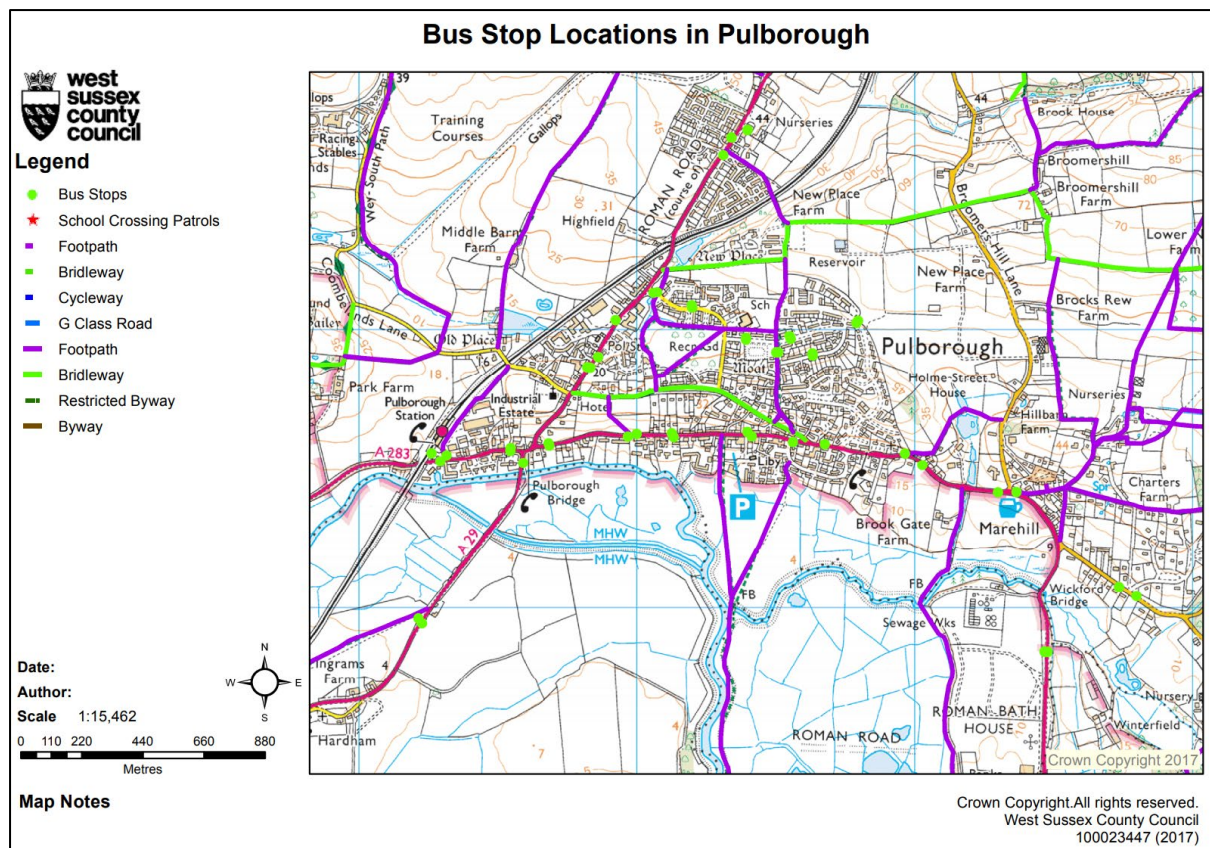
Development opportunities

Funding Opportunities:

Developer contributions

Parish Council Priority:

Minor



Issue: Some bus stops are in potentially dangerous locations with insufficient footway width.

Options:

- Bus Infrastructure Audit with a view to removing or relocating bus infrastructure / street furniture: Consider whether all bus infrastructure is safe and appropriate. Also highlight to users which buses turn around at the train station, so they know they can access the service from opposite side of road. Where appropriate bus infrastructure can be provided, a pedestrian refuge should also be considered to stop people from overtaking bus when stationary.
- Do Nothing: Make no changes to the existing infrastructure.

It was agreed that some bus infrastructure could be removed or improved.

Suggested next steps:

Do nothing as there are other higher priorities for investment of resources but pursue development opportunities if they arise.

A29 Flooding by Ingrams Farm

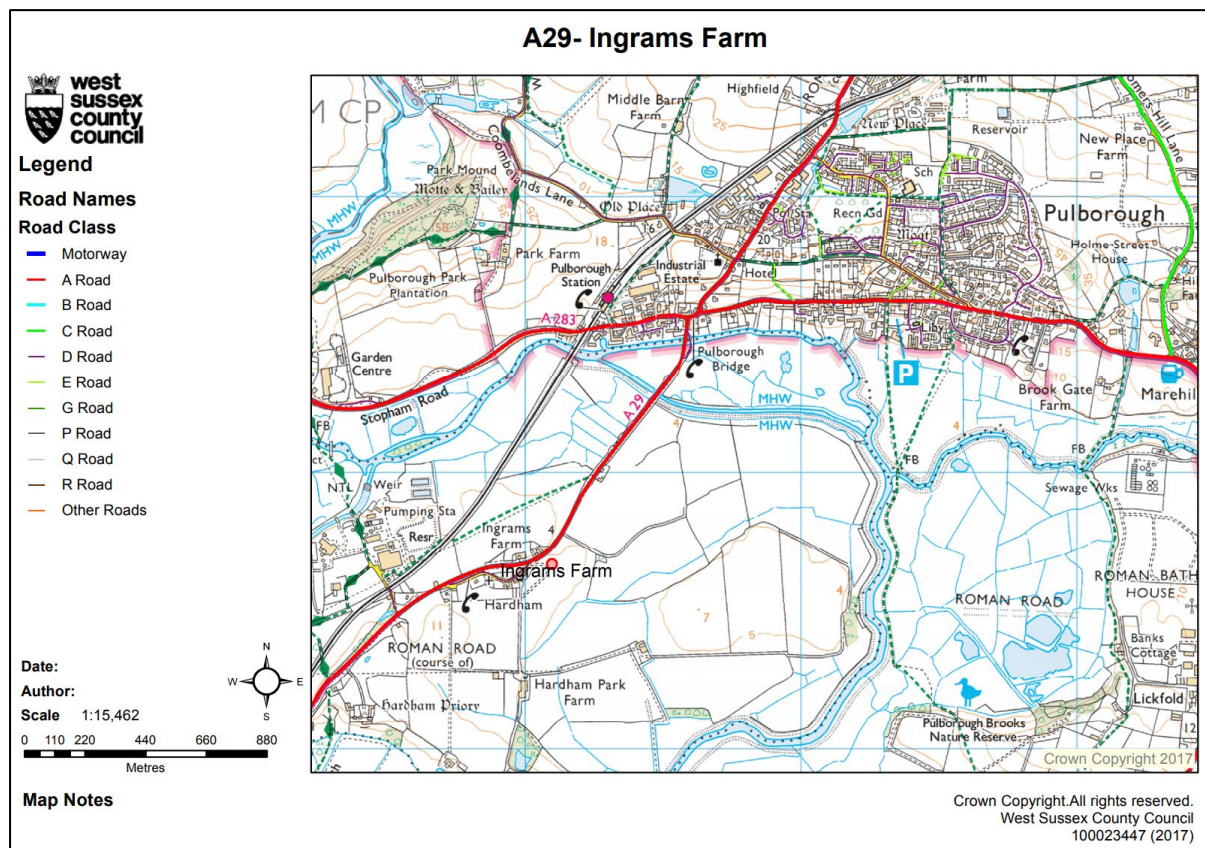
Identified Issue ID:

PUL019

Potential Delivery Programme: **Development opportunities**

Funding Opportunities: **Developer contributions**

Parish Council Priority: **Minor**



Issue: Flooding of A29 on the bend by Ingrams Farm.

Options:

- Review of road drainage: Consider existing drainage provision and whether it can be improved in the immediate or wider vicinity.
- Review of road structure and camber: Consider existing geometry of road, can any improvements be provided?
- Do Nothing: Make no changes to the existing layout and drainage.

Technically this section of the A29 is in Hardham / Coldwaltham. Cllr John Wallace provided a document prior to the meeting providing additional details on the flooding in the area and what is suspected to be causing it.

Suggested next steps:

Do nothing as there are other higher priorities for investment of resources but pursue development opportunities if they arise. Consider an Operation Watershed application.

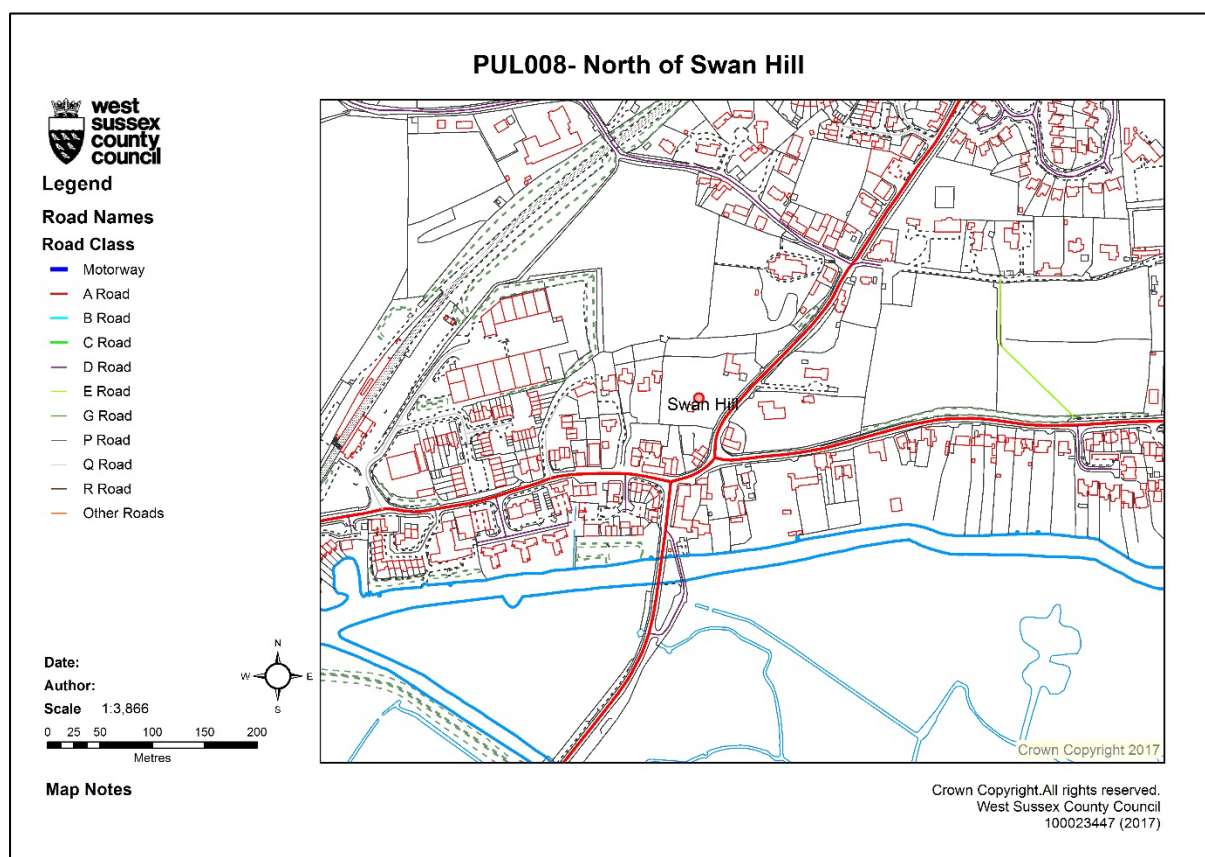
Pedestrian Facilities North of Swan Corner

Identified Issue ID: PUL008

Potential Delivery Programme: Highway maintenance

Funding Opportunity: WSCC Highways Funding

Parish Council Priority: Minor



Issue: Narrow pavements north of Swan Corner junction, pedestrians perceive footway to be unsafe.

Option(s):

- Alternative network of Footpaths and Bridleways: Routes for possible improvements highlighted in PUL/006.
- Changes to maintenance schedule: Increase the frequency and / or intensity of maintenance to reduce the build-up of sediment and fallen leaves.
- Changes to road markings: Remove white lines / paint white lines further away from pavement.
- Do Nothing: Make no changes to the pedestrian facilities at Swan Corner junction or alternative routes.

Clarified that S106 spending restrictions relate to the Parish paying for additional, deep cleaning and maintenance of this footway as WSCC

maintenance will not cover this (depending on wording in S106). Footways are further narrowed by earth and leaves falling/slipping down onto the footway, maintenance issue.

Suggested next steps:

Pass concern about cleanliness of footways to local highways team and report future incidents when they occur.

Dip in Road and Speeding at Northern end of the Village

Identified Issue ID:

PUL007

Potential Delivery Programme:

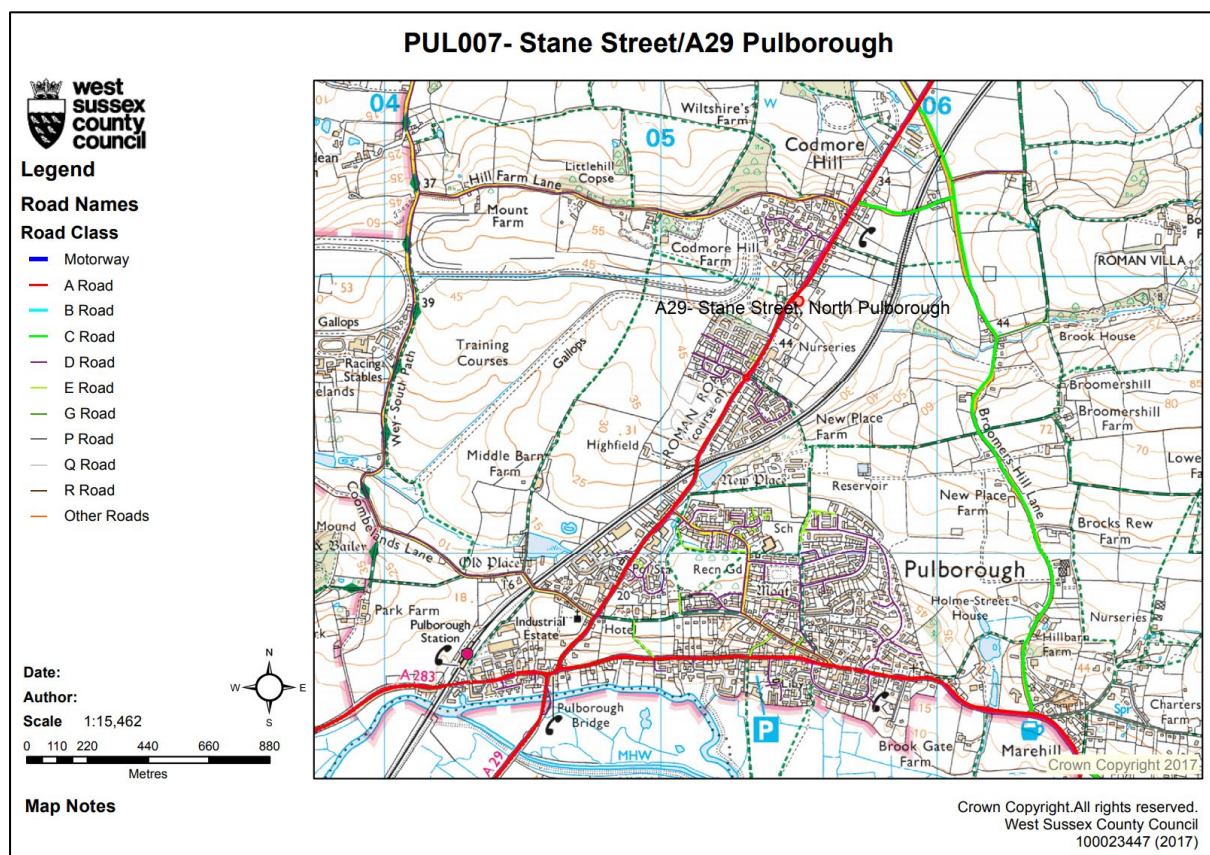
Development opportunities

Funding Opportunities:

Developer contributions

Parish Council Priority:

Minor



Issue: Hidden dip in road to the south of the staggered junctions on the A29 heading North out of the village. Vehicles travelling relatively fast along this stretch of road. Several accidents of varying severity have been recorded in the vicinity of these junctions.

Option(s):

- Speed limit reduction with self-enforcing measures: Changes to the speed limit with self-enforcing measures such as light up signs or gateways.
- Fill in the dip in the road to improve visibility: Strip back road surfacing and part of foundations also if needed, rebuild and resurface.
- Do Nothing: Make no changes to the existing road layout and do not implement any speed reduction measures.

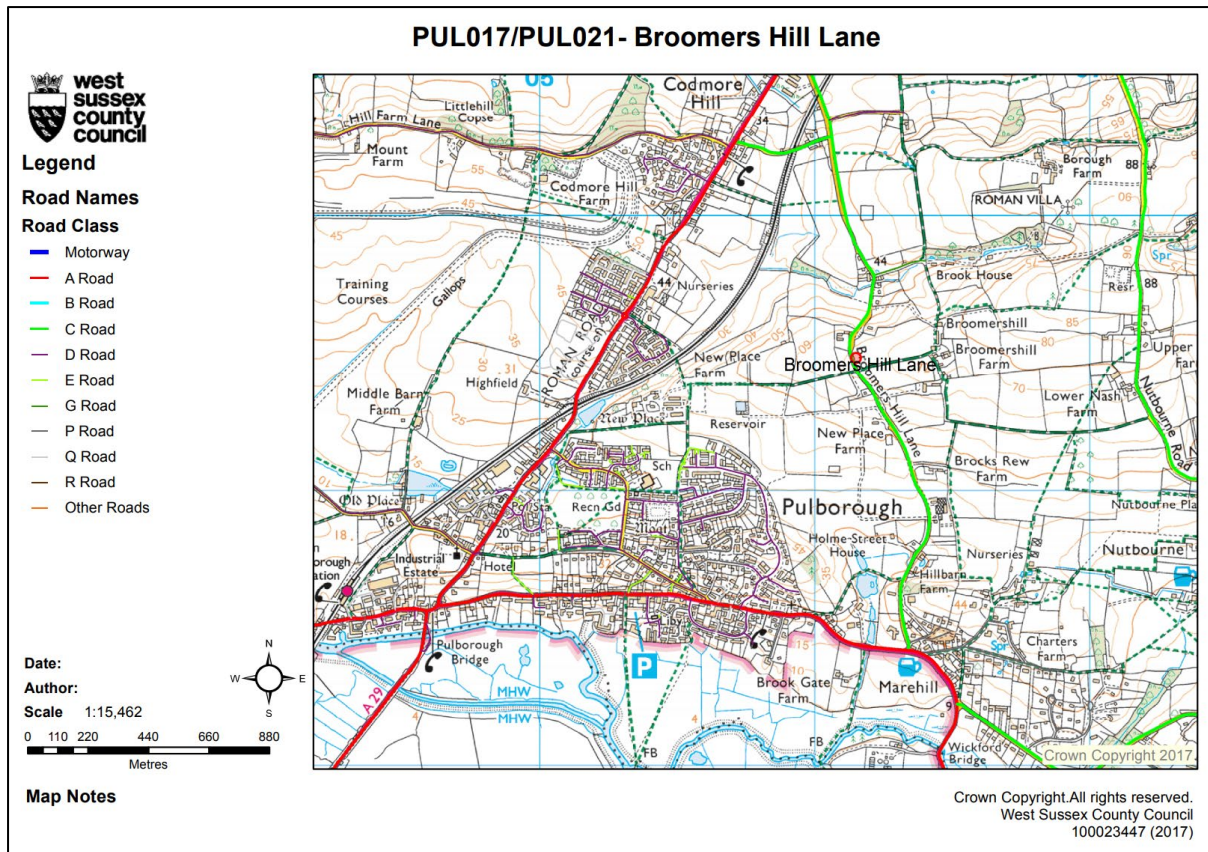
The speed limit option is considered more realistic. Dip in road mostly effects vehicles heading North out of the village. The Broomers Hill industrial estate expansion south to Cray Lane currently proposes an access from the site directly onto the A29, opposite the current access to the scrapyard. A roundabout access could be considered in the future, depending on the predicted volume of traffic likely to be accessing the Industrial Estate. Visibility from any access here is likely to also be impacted by the dip in the road which may hide oncoming vehicles from the south.

Suggested next steps:

Do nothing as there are other higher priorities for investment of resources but pursue development opportunities if they arise.

Broomers Hill Lane

Identified Issue ID:	PUL017 and PUL021
Potential Delivery Programme:	Development opportunities
Funding Opportunities:	Developer contributions
Parish Council Priority:	Minor



Issues:

- Speeding and rat-running to avoid Swan Corner mini roundabout junctions
- Erosion of road edge due vehicles pulling over to give way to oncoming vehicles

Options:

- (PUL/017) Speed Management: Put in speed cushions of other speed management infrastructure, such as parking controls and buildouts to restrict speed. Particularly on approach to residential sections of the road.
- (PUL/017) Do nothing: Leave road in the current state.
- (PUL/021) In-fill gaps created by erosion: Gravel or road repairs.

Suggested next steps:

Do nothing as there are other higher priorities for investment of resources but pursue development opportunities if they arise.

Lower Street

Identified Issue ID:

PUL005 (Separate Parish submission scheme currently being assessed)

Potential Delivery Programme:

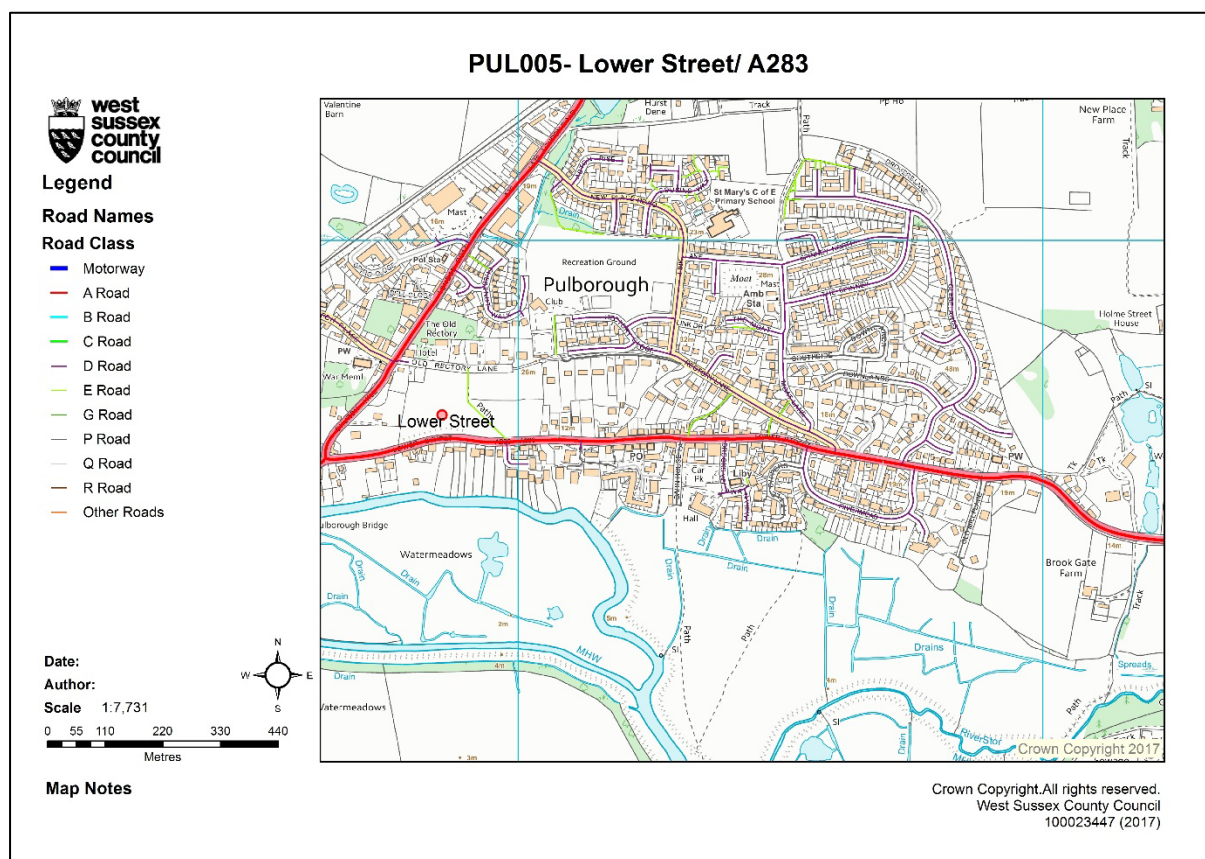
Development opportunity

Funding Opportunity:

Developer contributions

Parish Council Priority:

Minor



Issue: Narrow pavements have resulted in several injury accidents between cars and pedestrians. Pedestrians perceive Lower Street as unsafe due to HGVs and other vehicles frequently overhanging the pavement.

Option(s):

- Footway build outs: Footway build outs in well used locations to provide more space for pedestrians, requires motor vehicles to give way to one another (current PPC proposal, favours west bound traffic).
- Changes to white lines: Remove white lines / place white lines further away from pavement edge.
- Changes to kerbs: Increase kerb height and provide/improve kerb drainage.
- Pedestrian protection from cars parking: Install bollards around parking bays / remove parking bays.
- Do Nothing: Make no changes to the existing layout.

Additional issues for the area were raised such as the existing laybys are too narrow for delivery vehicles which results in passing cars driving in the centre of the road and that speeding vehicles are also a concern along Lower Street. There were considerations of turning Waterloo Square into a feature, possibly done by turning all of Lower Street into a single track road with traffic lights, but this idea was generally dismissed as too extreme. Also suggested was creating a

shared road surface environment with staggered buildouts or using bollards to separate pedestrians from motor vehicles, similar to traffic calming measures currently installed in the village of Bramber.

Suggested next steps:

Do nothing as this is not a high or medium priority but monitor situation and pursue development opportunities if they arise.

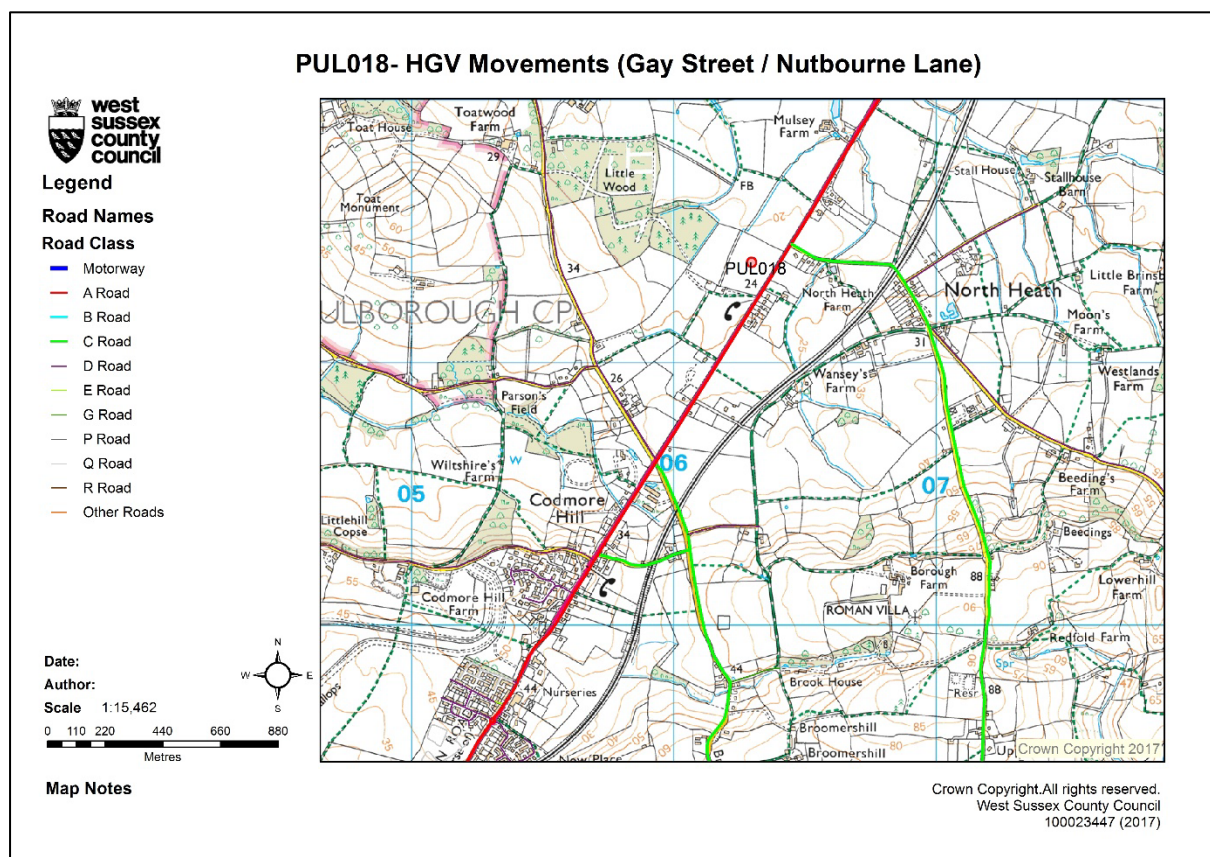
HGV Movements

Identified Issue ID: PUL018

Potential Funding Stream: Development opportunity

Funding Opportunity: Developer contributions

Parish Council Priority: Minor



Issue: Increasing number of HGV movements to and from industrial / commercial / agricultural land uses along Gay Street / Nutbourne Lane.

Options:

- HGV routes – prevent HGVs having to turn around and re-route via Nutbourne Lane: Consider height and width restrictions of roads in the area.
- Travel Plans required for new developments: Developers/site owners to provide details on delivery routes to be used for access by HGVs.
- Do Nothing: Make no changes.

Height restrictions are posted at one end of Gay Street Lane / Nutbourne Road but not the other, review restrictions.

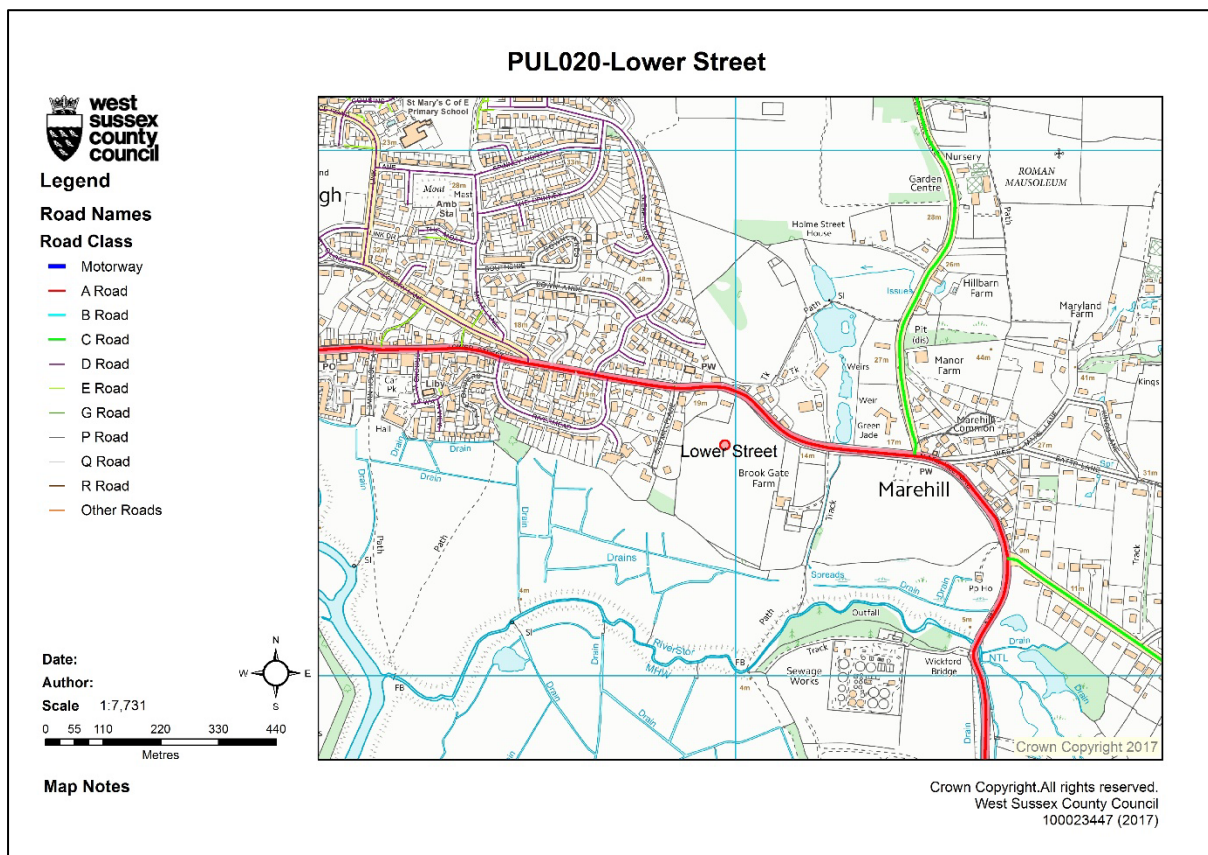
Suggested next steps:

Do nothing as this is not a high or medium priority and we cannot restrict the number of HGV movements.

Village Wide

Identified Issue ID: PUL020 (Local Plan Transport Assessment HDC/WSCC)

Parish Council Priority: Minor



Issue: Multiple small developments never fully mitigating transport increases. Individual site impacts are seen as minimal and the overall impact is not assessed for solutions. No forward thinking or future proofing schemes identified

Option:

- Conduct a study of potential cumulative development impacts and possible mitigations (with and without Adversane strategic development): Identify all potential development sites and likely uses. Model the likely traffic impacts on the existing road network. Identify pinch points and safety issues. Create solutions to mitigate areas of concern.
- Do Nothing: Do not conduct any studies or assessments.

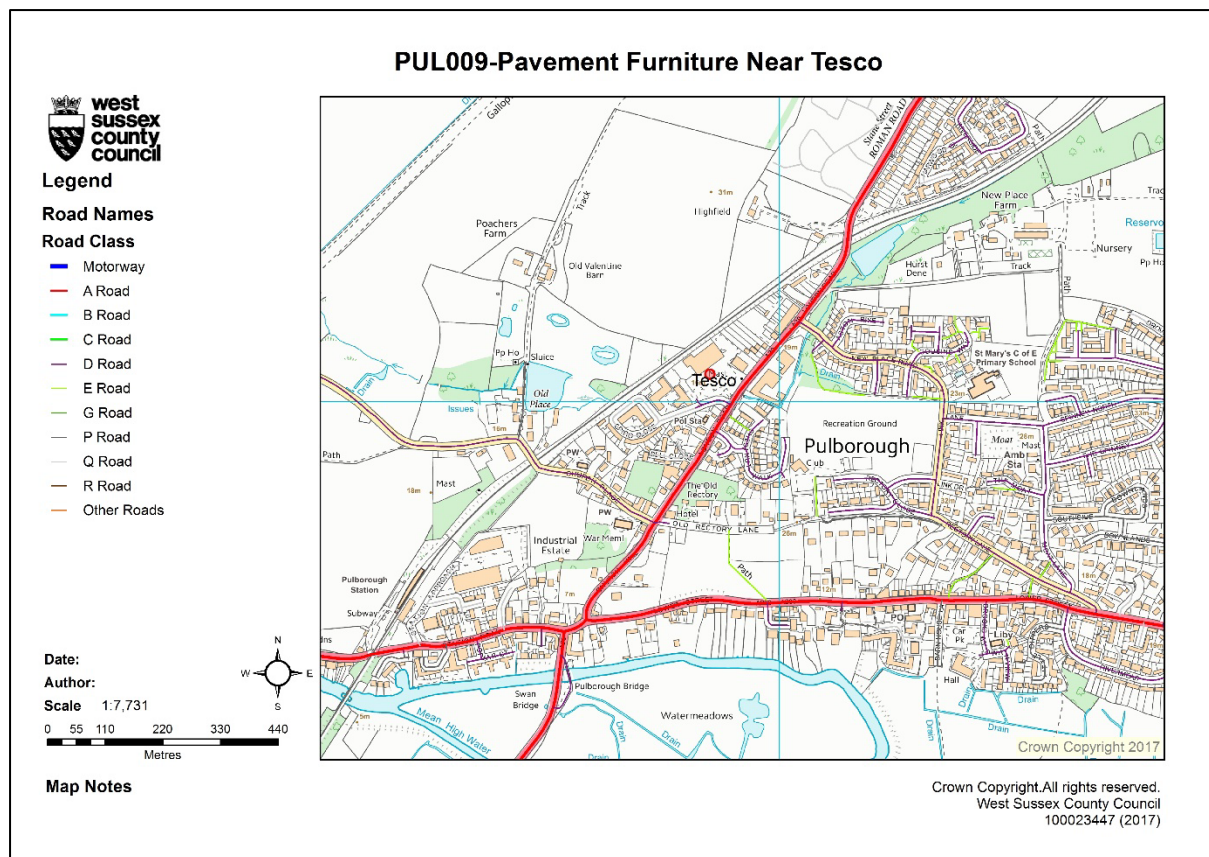
A Transport Assessment is being developed by Horsham District Council to identify potential future increases in traffic within the district and identify possible mitigation measures where necessary, to support the Horsham Local Plan review and proposed strategic development sites.

Suggested next steps:

Cumulative impacts are being assessed by HDC and WSCC to support the local plan review. PPC to respond to future consultations on the Local Plan to ensure that where possible, the associated infrastructure package will address local concerns in addition to mitigating development impacts.

Pavement Furniture Near Tesco

Identified Issue ID:	PUL009
Potential Delivery Programme:	CHS
Funding Opportunity:	Developer contributions
Parish Council Priority:	Low



Issue: Pavement narrowed by street furniture and bus infrastructure near the entrance to Tesco which reduces the footway width. There has been a recorded injury accident in this area.

Options:

- Reduce Street furniture: Consider existing street furniture and infrastructure and whether it is still required.
- Relocate bus stop: Move the bus stop further along the road where the footway is unobstructed by other street furniture or infrastructure.
- Do Nothing: Make no changes.

Not seen as a significant issue most of the time as it is mainly linked to school travel times and school buses.

Suggested next steps:

Do nothing as this is not a high or medium priority but monitor situation and pursue development opportunities if they arise.

Train Station Forecourt

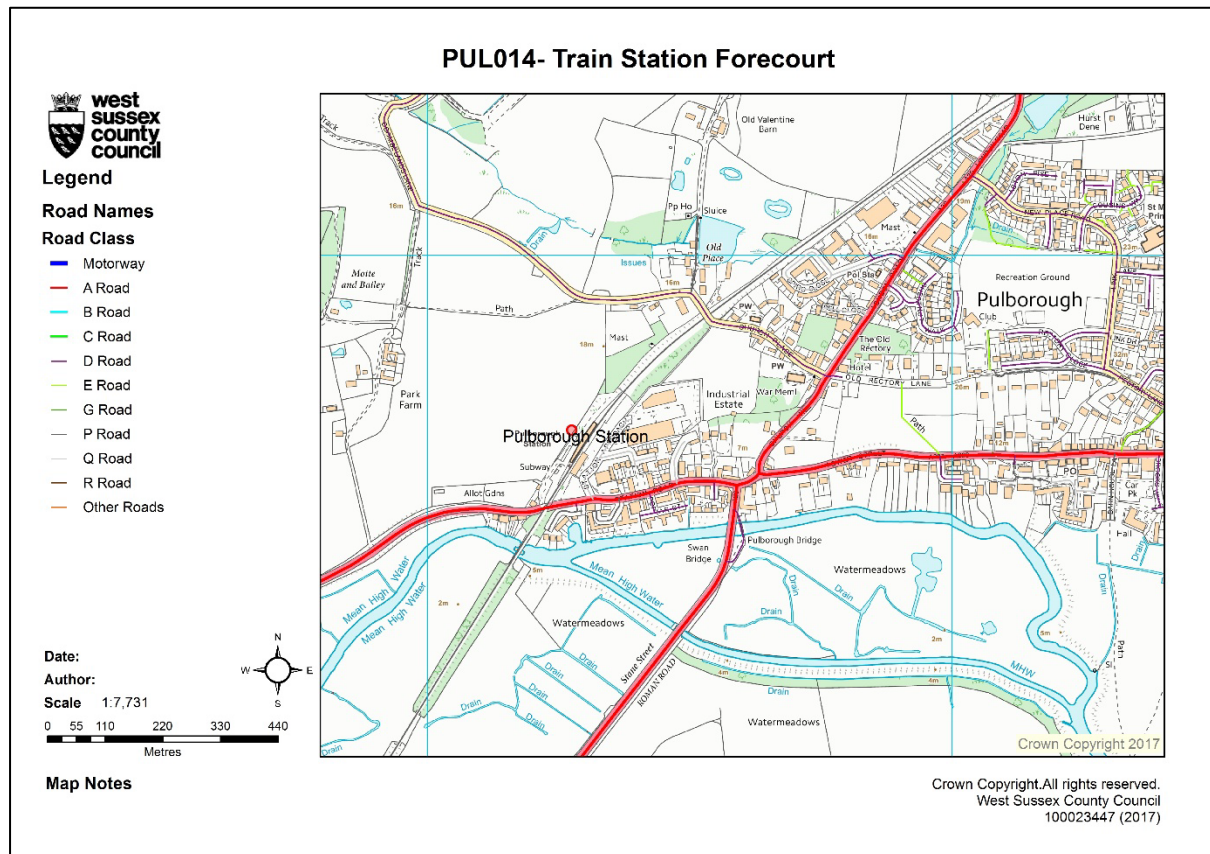
Identified Issue ID:

PUL014

Potential Delivery Programme:

Network Rail/car park owner

Low



Issue: Confused access and priorities between users of the station forecourt.

Options:

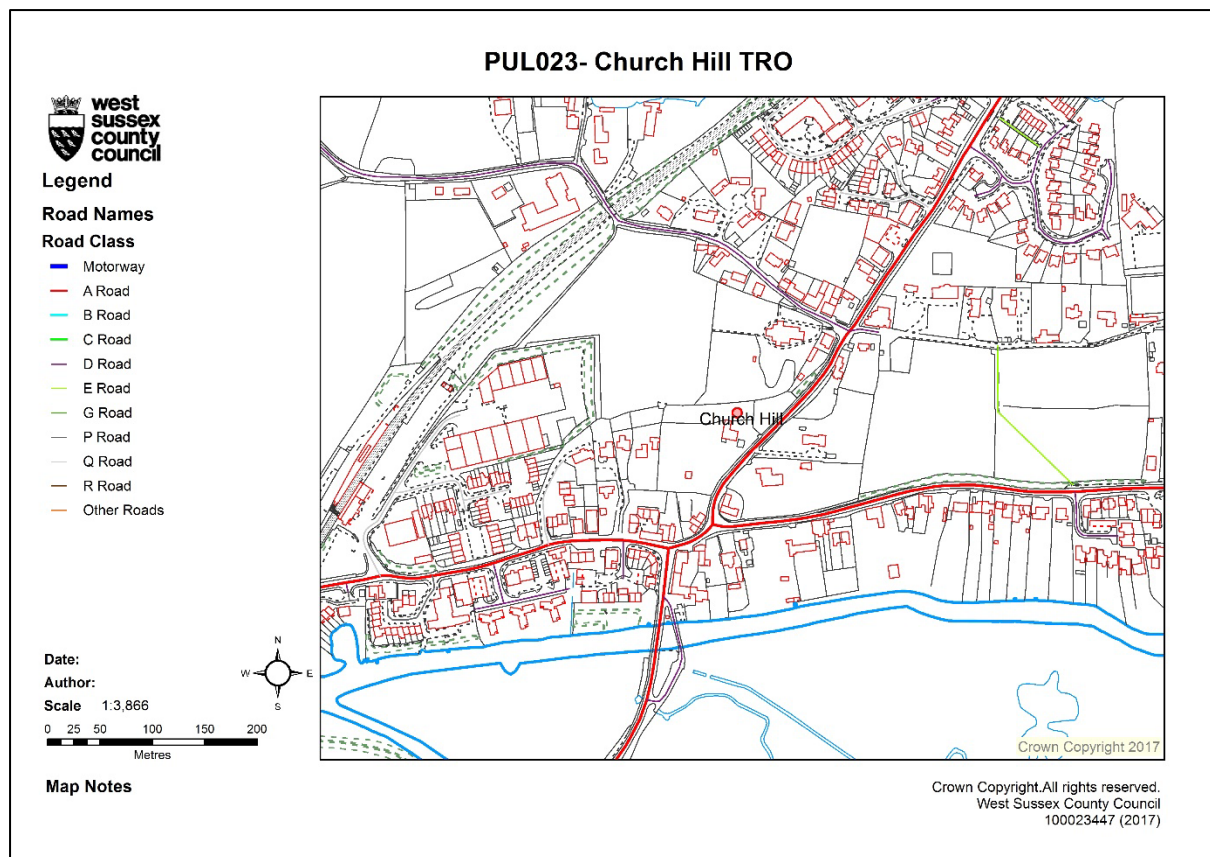
- **Changes to existing road markings:** Review existing road markings and signage within the access and forecourt. Identify clear areas for buses, pedestrians and other vehicles and their relative priorities.
- **CCTV Monitoring of forecourt usage:** Introduce CCTV monitoring of the forecourt area to dissuade misuse of the forecourt area.
- **Do Nothing:** Make no changes to the existing mini roundabouts.

Not much can be done as areas are controlled by Network Rail or other, not WSCC. In the car park forecourt, it is seen that most users are aware of potential conflict with other users and therefore are more cautious when using this space.

Suggested next steps:

Pursue changes through GTR/Network Rail.

PUL/023 Not seen as an issue – TRO to remove tree has been approved



Issue: The application to remove the tree currently overhanging Church Hill has now been approved. There is concern that the removal of this tree may reduce the number of HGVs that currently slow down along this section of road.

Option:

- Improve the crossing facilities where Old Rectory Lane (BW2328) and Church Place meet the A29 including signs to warn of pedestrians crossing in this location. This would provide a safer crossing point of the A29 for pedestrians in this location and in doing so could increase awareness for motor vehicles that pedestrians are crossing here and potentially slow down vehicles on approach to this crossing.
- Do Nothing: Make no changes at this location.

Although there was some interest to do something here regarding vehicle speeds, there were concerns over placing a more formal pedestrian crossing in this location as it is on the brow of a hill and visibility may be an issue.

Suggested next steps:

Do nothing as this is not a high or medium priority but report overhanging vegetation to local highways team if it occurs.

Future Concerns

Within the Neighbourhood Plan the main development site is at New Clays Nurseries which is currently proposed to be accessed via Glebelands. However, given the likely demand for traffic from the site wanting to access the A29, particularly going north, it is also proposed to access the A29 from the current site access. This existing access currently meets the A29 at an acute angle making it very difficult and potentially dangerous to turn right from here. The island crossing point near the existing access to the Nurseries from the A29 is frequently used by pedestrians using the Pidgeon Gate Bridge as the footway is only along one side of the bridge. The northern section of the current Harwoods site may become available for purchase if the company continue with their proposed site relocation. This land may provide a future opportunity for access improvements to the new development site access / alignment of the A29, but there is a water main running through the northern section of the Harwoods site.

Suggested next steps:

Engage with HDC over future development opportunities.

ID	Location	Identified Issue	Possible Options	Scheme Description	Dependencies	Additional Comments	Strategic Scheme
PUL/001	Swan Bridge and Swan Corner	The Swan Corner mini roundabouts are starting to approach capacity. Several accidents of varying severity have been recorded in the vicinity of these junctions. This reflects a conflict between multiple motor vehicles and/or between motor vehicles and cyclists or pedestrians.	Priority junctions	Redesign of both mini-roundabouts to become priority junctions.	Sufficient highway space. Creative solution for junctions that allows for visibility splays between all arms - safety requirement, any proposal must be approved by a safety audit. Acceptable management or improvement of road capacity. An awareness of the air quality monitoring location. Consider pedestrian and cyclist safety also.	Should consider pedestrian and cyclist safety improvements also, such as in PUL/002. Ensure awareness of the air quality monitoring location.	Yes
			Signalisation and pavement widening	Redesign of both mini-roundabouts junctions with each arm being signal controlled and pavement widening along the A283 between the two junctions. Pedestrian crossings included in signal sequence.			
			Signalisation	Redesign of mini-roundabout junctions with each arm being signal controlled and pedestrian crossings included in signal sequence.			
PUL/002	Swan Bridge and Swan Corner	Poor visibility for pedestrians crossing the two mini roundabout junctions and narrow pavements. Several accidents of varying severity have been recorded in the vicinity.	Do Nothing	Make no changes to existing mini-roundabouts.		Further details of alternative network under ID PUL/006. Consider cyclist usage of these crossings also.	No
			Pedestrian crossings	Pedestrian crossing across southern A29 arm and along A283 in between the two junctions. Possible minor road buildouts, surface treatments and / or raising the road level.	Signals need to be located an appropriate distance from accesses / junctions. Pedestrians would divert from desire lines. Tie in to PUL/001 options where possible.		
			Alternative network of Footpaths and Bridleways	Improve condition of Footpaths and Bridleways linking key destinations in the village			
PUL/003	Stopham Road / Station Road	Numerous cars parked on the grass verges on both sides of the road going west out of the village.	Parking Controls	Individual TROs for locations that present a safety concern	Available resources to process request / priorities of other TRO requests from CLC	Junction protection linked to development application DC/16/0728 may reduce some of the verge space currently	No
			Area-wide parking controls	Village-wide Road Space Audit followed by an appropriate road space			

PUL/004	Stopham Road / Station Road	No dedicated footway leading up to or through the Stopham Road bridge. This area is also prone to a degree of flooding which increases difficulty for pedestrians accessing the village from the west of the structure.	Signalised solution under bridge	Create footways going up to bridge from the east and west. Install traffic lights at both ends of the bridge. Pedestrians can request a red signal phase to allow them to walk through the bridge with traffic being held at each end of the bridge.	Provision of footways leading up to bridge. Waiting times for traffic will need to be within an acceptable wait time.	Requires Network Rail approval for any additions to structure including lighting and sensors through bridge. Note that this option does not provide a dedicated footway under the bridge. Flooding thought to be worsened by recent improvements works carried out by Network Rail. Partly linked to PUL/013.	Yes
			Provide a footway on one side of the road through the bridge	Create footways going up to bridge from the east and west. Provide footway along one side of the road under the bridge (may require guard rail also).	Provision of footways leading up to bridge. Network Rail agree to reduced maximum height under bridge. Ensure that a suitable footway width is available within highways constraints	Requires Network Rail approval for any additions to structure including lighting. Flooding thought to be worsened by recent improvements works carried out by Network Rail. Partly linked to PUL/013.	
			Provide a footway on both sides of the road through the bridge	Create footways going up to bridge from east and west. Provide a footway along both sides of the road under the bridge (narrower footway than option above).	Ensure that a suitable footway width is available within highways constraints	Requires Network Rail approval for any additions to structure including lighting. Flooding thought to be worsened by recent improvements works carried out by Network Rail. Partly linked to PUL/013.	
		Do nothing. Contact Network Rail about mitigating flooding here.		Make no changes to existing highway or footways.		Flooding thought to be worsened by recent improvements works carried out by Network Rail. Partly linked to PUL/013.	

PUL/005	Lower Street	Narrow pavements have resulted in several injury accidents between cars and pedestrians. Pedestrians perceive Lower Street as unsafe due to HGVs and other vehicles frequently overhanging the pavement.	Footway build outs	Footway build outs in well used locations to provide more space for pedestrians, requires motor vehicles to give way to one another (current PPC proposal). Remove white lines / place white lines further away from pavement edge	Scheme meets road safety requirements	No
			Changes to white lines			
			Changes to kerbs	Increase kerb height and provide in kerb drainage	Need to check style is in keeping with the area and the footway may need to be re-layed	
			Pedestrian protection from cars parking	Install bollards around parking bays / remove		
PUL/006	Village Wide	Several Footpaths and Bridleways have the potential to provide an alternative pedestrian network throughout the village. However surfacing, drainage and physical restrictions (sufficient width) are amongst some of the issues that prevent more people from using these alternative routes.	Improve condition of Footpaths and Bridleways	Surface treatment and drainage improvements to the routes and as well as improvements to the environment such as lighting, where necessary	Pedestrians are willing to divert from their more direct routes. Awareness of this alternative network of routes will need to be highlighted to locals and visitors, potentially through clear wayfinding.	Yes
			Upgrade Footpaths to Bridleways	Upgrade Footpaths to Bridleways to create wider routes that can allow for cycling and horseriding uses also		
			List of FP and BW to potentially be upgraded / improved: FP 2327 (Cinder Path), FP 2329 (Lower Street to Old Rectory Lane), BW 2328 (Rectory Lane / Old Rectory Lane), FP 2331 (Old Rectory Lane, across playing fields and along past the school), FP 2330 (end of FP 2331 to BW 2332, cross railway tracks and through Riverside to A29), FP 3500 (Sports Pavillion to New Place Road and on to BW 2332), FP 3501 (FP 2331 to FP 3500), FP 1995 (Coombelands Lane to Hill Farm Lane)			

PUL/007	Broomers Hill Lane / Black Gate Lane / A29 junctions	Hidden dip in road to the south of the staggered junctions. Vehicles travelling relatively fast along this stretch of road. Several accidents of varying severity have been recorded in the vicinity of these junctions.	Speed limit reduction with self-enforcing measures	Changes to the speed limit with self-enforcing measures such as light up signs or gateways	Appropriate speed data to support the need for a lower speed limit. Self-enforcing measures to support the reduced speed limit	No
			Fill in the dip in the road to improve visibility	Strip back road surfacing and part of foundations also if needed, rebuild and resurface road	Relatively high cost scheme due to stat relocation and cut/fill operations	
PUL/008	London Road (A29)	Narrow pavements north of Swan Corner junction, pedestrians perceive footway to be unsafe	Alternative network of Footpaths and Bridleways	Routes for possible improvements highlighted in PUL/006	Pedestrians are willing to divert from their more direct routes. Awareness of this alternative network of routes will need to be highlighted to locals and visitors, potentially through	No
			Changes to maintenance schedule	Increase the frequency and / or intensity of maintenance to reduce the build up of sediment and fallen leaves	WSCC maintenance budget, S106 spending restrictions	
			Changes to road markings	Remove white lines / paint white closer further away from pavement		
			Reduce street furniture	Consider existing street furniture and infrastructure and whether it is still required	Check street furniture and / or infrastructure can be removed / relocated	
	London Road	Narrow pavement and street furniture in the vicinity of Tesco reduces			This could be beneficial in other areas of the village also. Partly linked to	

PUL/009	London Road (A29)	vicinity of Tesco reduces footway width. There has been a recorded injury accident in this area	Relocate bus stop	Move the bus stop further along the road where the footway is unobstructed by other street furniture or infrastructure	Check bus stop can be relocated	No
PUL/010	Pidgeon Gate Bridge (A29)	Pedestrian footway along western edge of bridge is narrow and is narrowed further by barriers. Difficult for pedestrians to pass one another and inaccessible to large pushchairs or wide wheelchairs. This is the main pedestrian connection between the northern and southern parts of the village.	New footbridge adjacent to existing road bridge.	New footbridge adjacent to existing road bridge that meets current accessibility requirements.	Check land is secured north and south of the railway. Must be at least 5m away from existing Network Rail structure. Bridge would need to be built at a higher level than existing road bridge height to allow for potential Pedestrians are willing to divert from their more direct routes. Awareness of this alternative network of routes will need to be highlighted to locals and visitors, potentially through	Yes
			Alternative network of Footpaths and Bridleways	Routes for possible improvements highlighted in PUL/006	Network Rail agreement to changes	
			One-way traffic flow over the bridge	Widen the existing footway along the bridge. Utilise priority working or possibly signalling the traffic over		
PUL/011	FP 2330	Pedestrian link between eastern end of Rectory Lane to the A29 via the primary school, goes across the railway (uncontrolled crossing) and through the Riverside development. This route is well used by children	Upgrade railway crossing to provide foot / cycle bridge	Provide new foot / cycle bridge to replace existing railway crossing on this route and improve surfacing, drainage and wayfinding along this route.	Check land available and suitable for structure of this size, including suitable geological conditions.	Provides an alternative pedestrian crossing point to potential location along the A29.

		accessing the school and provides a potential safety risk.	Close uncontrolled railway crossing	Improve route safety by removing uncontrolled railway crossing	Only possible if an alternative segregated railway crossing is provided in an alternative		
				The planned route would utilise / require: Coombelands Lane / upgrade FP1994, Pickhurst Lane / upgrade FP1989, upgrade FP1983, Blackgate Lane, upgrade FP1985, upgrade FP1985_1, and upgrade	Land owner permissions to upgrade existing and create new Bridleways along the route		
PUL/012	Cycle Route to Brinsbury College	Current access to the site is for bus and motor vehicles only. Given the number of students and employees that currently travel to the site, providing an alternative active travel route will promote access and opportunity for all socio-economic groups and allow for longer journeys to / from Pulborough Train Station. Particularly as the site has plans to expand its employment area.	West of A29 route (avoids any crossing of the railway tracks)	The planned route would utilise / require: A new PROW link between Todhurst Farm and Stall House Farm. Then upgrade FP 1998 and FP2297 to Stall House Lane, Gay Street Lane, BW2308, BW2308_4, upgrade FP2308_3, BW2309, BW2332. Secure additional land along one side of the A29 from surrounding land owners to provide a segregated cycle route	Land owner permissions to upgrade existing and create new Bridleways along the route	Potential to extend cycle route to Billingshurst Train Station. Brings cycle route close to Broomers Hill Industrial estate which is also planning on expanding in the future	Yes
			East of A29 route (goes under railway)				
			Segregated cycle route along A29				
PUL/013	Railway station	No accessible access between the two platforms	Provide a lift between platforms	Improve platform facilities to include lifts as this will allow for less able users to access the subway beneath the railway tracks and reach the opposite platform	Network Rail / Southern willing to improve access and see improvements as a priority	Included in STIP list. Linked to development DC/16/0728 as this proposes to provide an accessible access to the northern platform. Partly	Yes
				Review existing road markings and signage within the access and forecourt. Identify clear areas for buses, pedestrians and other vehicles and their relative	Work with Network Rail / Southern to improve access. Work with local businesses and users utilising access.	HGVs, cars, vans, pedestrians and buses using this space.	
PUL/014	Railway	Confused access and priorities between users of					No

PUL/014	station	priorities between users of the station forecourt	CCTV Monitoring of forecourt usage	Introduce CCTV monitoring of the forecourt area to dissuade misuse of the forecourt area.	Work with Network Rail / Southern to improve access. Work with local businesses and users also utilising access.		No
PUL/015	Bus Infrastructure	Some bus stops are in potentially dangerous locations with insufficient footway width	Bus Infrastructure Audit with a view to removing or relocating bus infrastructure/street furniture	Consider whether all bus infrastructure is safe and appropriate. Also highlight to users which buses turn around at the train station, so they know they can access the service from opposite side of road. Where appropriate bus infrastructure can be provided, a pedestrian refuge should also be considered to stop people	Working with bus companies to communicate clearly with bus users. Safety audit compliant also.	Partially linked to PUL/009.	No
PUL/016	Cycle Infrastructure	Generally no cycle route facilities and limited cycle parking facilities within the village. Perception of unsafe cycling in vicinity of	Upgrade footpaths to bridleways and provide cycle parking at key destinations within the village.	Identify footpaths that can be upgraded to a bridleway. Provide cycle parking at key centres within the village.	Land owner consent	Linked to PUL/012 and PUL/006.	Yes
PUL/017	Broomers Hill Lane	Speeding and rat-running to avoid Swan Corner mini roundabout junctions	Speed Management	Put in speed cushions or other speed management infrastructure, such as parking controls and buildouts to restrict speed. Particularly on approach to residential sections of the Leave road in the current state	Need for speed reduction would need to be evidenced.		No
PUL/018	Gay Street / Nutbourne Lane	Increasing number of HGV movements to and from industrial / commercial / agricultural land uses	Do nothing HGV routes - prevent HGVs having to turn round and re-route via Nutbourne Lane Travel Plans required for new developments	Consider height and width restrictions of roads in the area Developers/site owners to provide details on delivery routes to be used for access by HGVs		Local Transport Plan, Lorry route network Local Transport Plan, Lorry route network	No

PUL/019	Ingrams Farm (A29)	Flooding of A29 on this bend	Review of road drainage	Consider existing drainage provision and whether it can be improved in the immediate or wider vicinity		No
			Review of road structure and camber	Consider existing geometry of road, can any improvements be provided?		
PUL/020	Village Wide	Multiple small developments never fully mitigating transport increases. Individual site impacts are seen as minimal and the overall impact is not assessed for solutions. No forward thinking or future proofing	Conduct a study of potential cumulative development impacts and possible mitigations (with and without Adversane strategic development)	Identify all potential development sites and likely uses. Model the likely traffic impacts on the existing road network. Identify pinch points and safety issues. Create solutions to mitigate areas of concern		Yes
PUL/021	Broomers Hill Lane	Erosion of road edge due to vehicles pulling over to give way to oncoming	In-fill gaps created by erosion	Gravel or road repairs		No
			Adopt a Drain	Community led checks on state of drains	Funding for equipment available	
PUL/022	Swan Bridge and Corner	Flooding of A29 at southern mini-roundabout junction	Additional maintenance / road resurfacing	Increased maintenance of drains in area. Potential resurfacing works if road surface is covering kerb drainage holes.	Further research into cause of flooding	No
PUL/023	Church Hill	Application to remove tree currently overhanging Church Hill which may reduce the number of HGVs that currently slow down along this section of road	Upgrade road surfacing and signage to warn of pedestrians crossing	Provide coloured / textured road surfacing and corresponding signage / lighting to warn vehicles of pedestrians crossing at this location.	Visibility of crossing point as location is close to brow of hill, space within highway land to provide appropriate infrastructure	No