

Application for Planning Permission.  
Town and Country Planning Act 1990

**Publication of applications on planning authority websites.**

Please note that the information provided on this application form and in supporting documents may be published on the Authority's website. If you require any further clarification, please contact the Authority's planning department.

**1. Site Address**

Number	<input type="text"/>
Suffix	<input type="text"/>
Property name	<input type="text"/>
Address line 1	Land to the rear of 101 Reservoir Road
Address line 2	<input type="text"/>
Address line 3	<input type="text"/>
Town/city	Gloucester
Postcode	GL4 6SZ

Description of site location must be completed if postcode is not known:

Easting (x)	383946
Northing (y)	216045

Description

**2. Applicant Details**

Title	Mr & Mrs
First name	<input type="text"/>
Surname	Wall
Company name	<input type="text"/>
Address line 1	C/o Eclipse Planning Services
Address line 2	12 Church Green
Address line 3	Ramsey
Town/city	Huntingdon, Cambs
Country	<input type="text"/>

## 2. Applicant Details

Postcode

Are you an agent acting on behalf of the applicant?  Yes  No

Primary number

Secondary number

Fax number

Email address

## 3. Agent Details

Title

First name

Surname

Company name

Address line 1

Address line 2

Address line 3

Town/city

Country

Postcode

Primary number

Secondary number

Fax number

Email

## 4. Site Area

What is the measurement of the site area? (numeric characters only)

Unit

## 5. Description of the Proposal

Please note in regard to:

- Fire Statements - From 1 August 2021, planning applications for buildings of over 18 metres (or 7 stories) tall containing more than one dwelling will require a 'Fire Statement' for the application to be considered valid. There are some exemptions. View government planning guidance on fire statements or access the fire statement template and guidance.
- Permission In Principle - If you are applying for Technical Details Consent on a site that has been granted Permission In Principle, please include the relevant details in the description below.
- Public Service Infrastructure - From 1 August 2021, applications for certain public service infrastructure developments will be eligible for faster determination timeframes. See help for further details or view government planning guidance on determination periods.

Description

Please describe details of the proposed development or works including any change of use.

## 5. Description of the Proposal

Has the work or change of use already started?

Yes  No

## 6. Existing Use

Please describe the current use of the site

vacant

Is the site currently vacant?

Yes  No

If Yes, please describe the last use of the site

vacant

When did this use end  
(if known)?  
DD/MM/YYYY

**Does the proposal involve any of the following? If Yes, you will need to submit an appropriate contamination assessment with your application.**

Land which is known to be contaminated

Yes  No

Land where contamination is suspected for all or part of the site

Yes  No

A proposed use that would be particularly vulnerable to the presence of contamination

Yes  No

## 7. Materials

Does the proposed development require any materials to be used externally?

Yes  No

**Please provide a description of existing and proposed materials and finishes to be used externally (including type, colour and name for each material):**

Walls

Description of existing materials and finishes (optional):

N/A

Description of proposed materials and finishes:

Red multi brick

Roof

Description of existing materials and finishes (optional):

N/A

Description of proposed materials and finishes:

Plain tile - grey

Windows

Description of existing materials and finishes (optional):

N/A

Description of proposed materials and finishes:

White UPVC

Are you supplying additional information on submitted plans, drawings or a design and access statement?

Yes  No

If Yes, please state references for the plans, drawings and/or design and access statement

21/111/E1, GA1A, GA2A, GA3A,

## 8. Pedestrian and Vehicle Access, Roads and Rights of Way

Is a new or altered vehicular access proposed to or from the public highway?

Yes  No

Is a new or altered pedestrian access proposed to or from the public highway?

Yes  No

## 8. Pedestrian and Vehicle Access, Roads and Rights of Way

Are there any new public roads to be provided within the site?  Yes  No

Are there any new public rights of way to be provided within or adjacent to the site?  Yes  No

Do the proposals require any diversions/extinguishments and/or creation of rights of way?  Yes  No

If you answered Yes to any of the above questions, please show details on your plans/drawings and state their reference numbers

See drawing nos. 21/111/SP1A, 402.12095.00001.14.001.2

## 9. Vehicle Parking

Does the site have any existing vehicle/cycle parking spaces or will the proposed development add/remove any parking spaces?  Yes  No

Please provide information on the existing and proposed number of on-site parking spaces

Type of vehicle	Existing number of spaces	Total proposed (including spaces retained)	Difference in spaces
Cars	0	14	14
Cycle spaces	0	10	10

## 10. Trees and Hedges

Are there trees or hedges on the proposed development site?  Yes  No

And/or: Are there trees or hedges on land adjacent to the proposed development site that could influence the development or might be important as part of the local landscape character?  Yes  No

**If Yes to either or both of the above, you may need to provide a full tree survey, at the discretion of your local planning authority. If a tree survey is required, this and the accompanying plan should be submitted alongside your application. Your local planning authority should make clear on its website what the survey should contain, in accordance with the current 'BS5837: Trees in relation to design, demolition and construction - Recommendations'.**

## 11. Assessment of Flood Risk

Is the site within an area at risk of flooding? (Check the location on the Government's Flood map for planning. You should also refer to national standing advice and your local planning authority requirements for information as necessary.)  Yes  No

**If Yes, you will need to submit a Flood Risk Assessment to consider the risk to the proposed site.**

Is your proposal within 20 metres of a watercourse (e.g. river, stream or beck)?  Yes  No

Will the proposal increase the flood risk elsewhere?  Yes  No

**How will surface water be disposed of?**

Sustainable drainage system

Existing water course

Soakaway

Main sewer

Pond/lake

## 12. Biodiversity and Geological Conservation

**Is there a reasonable likelihood of the following being affected adversely or conserved and enhanced within the application site, or on land adjacent to or near the application site?**

## 12. Biodiversity and Geological Conservation

To assist in answering this question correctly, please refer to the help text which provides guidance on determining if any important biodiversity or geological conservation features may be present or nearby; and whether they are likely to be affected by the proposals.

a) Protected and priority species:

- Yes, on the development site  
 Yes, on land adjacent to or near the proposed development  
 No

b) Designated sites, important habitats or other biodiversity features:

- Yes, on the development site  
 Yes, on land adjacent to or near the proposed development  
 No

c) Features of geological conservation importance:

- Yes, on the development site  
 Yes, on land adjacent to or near the proposed development  
 No

## 13. Foul Sewage

Please state how foul sewage is to be disposed of:

- Mains Sewer  
 Septic Tank  
 Package Treatment plant  
 Cess Pit  
 Other  
 Unknown

Are you proposing to connect to the existing drainage system?

Yes  No  Unknown

## 14. Waste Storage and Collection

Do the plans incorporate areas to store and aid the collection of waste?

Yes  No

If Yes, please provide details:

See drawing no. 21-111SP1A

Have arrangements been made for the separate storage and collection of recyclable waste?

Yes  No

If Yes, please provide details:

See drawing no. 21-111SP1A

## 15. Trade Effluent

Does the proposal involve the need to dispose of trade effluents or trade waste?

Yes  No

## 16. Residential/Dwelling Units

**Please note: This question has been updated to include the latest information requirements specified by government. Applications created before 23 May 2020 will not have been updated, please read the 'Help' to see details of how to workaroud this issue.**

Does your proposal include the gain, loss or change of use of residential units?

Yes  No

Please select the proposed housing categories that are relevant to your proposal.

## 16. Residential/Dwelling Units

- Market Housing
- Social, Affordable or Intermediate Rent
- Affordable Home Ownership
- Starter Homes
- Self-build and Custom Build

Add 'Market Housing - Proposed' residential units

Market Housing - Proposed						
	Number of bedrooms					Total
	1	2	3	4+	Unknown	
Houses	0	0	5	0	0	5
Total	0	0	5	0	0	5

Please select the existing housing categories that are relevant to your proposal.

- Market Housing
- Social, Affordable or Intermediate Rent
- Affordable Home Ownership
- Starter Homes
- Self-build and Custom Build

Total proposed residential units

5

Total existing residential units

0

Total net gain or loss of residential units

5

## 17. All Types of Development: Non-Residential Floorspace

Does your proposal involve the loss, gain or change of use of non-residential floorspace?  
Note that 'non-residential' in this context covers all uses except Use Class C3 Dwellinghouses.

Yes  No

## 18. Employment

Are there any existing employees on the site or will the proposed development increase or decrease the number of employees?

Yes  No

## 19. Hours of Opening

Are Hours of Opening relevant to this proposal?

Yes  No

## 20. Industrial or Commercial Processes and Machinery

Does this proposal involve the carrying out of industrial or commercial activities and processes?

Yes  No

Is the proposal for a waste management development?

Yes  No

**If this is a landfill application you will need to provide further information before your application can be determined. Your waste planning authority should make it clear what information it requires on its website**

## 21. Hazardous Substances

Does the proposal involve the use or storage of any hazardous substances?

Yes  No

## 22. Site Visit

Can the site be seen from a public road, public footpath, bridleway or other public land?

Yes  No

If the planning authority needs to make an appointment to carry out a site visit, whom should they contact?

- The agent  
 The applicant  
 Other person

## 23. Pre-application Advice

Has assistance or prior advice been sought from the local authority about this application?

Yes  No

## 24. Authority Employee/Member

With respect to the Authority, is the applicant and/or agent one of the following:

- (a) a member of staff  
(b) an elected member  
(c) related to a member of staff  
(d) related to an elected member

It is an important principle of decision-making that the process is open and transparent.

Yes  No

For the purposes of this question, "related to" means related, by birth or otherwise, closely enough that a fair-minded and informed observer, having considered the facts, would conclude that there was bias on the part of the decision-maker in the Local Planning Authority.

Do any of the above statements apply?

## 25. Ownership Certificates and Agricultural Land Declaration

**CERTIFICATE OF OWNERSHIP - CERTIFICATE A - Town and Country Planning (Development Management Procedure) (England) Order 2015 Certificate under Article 14**

I certify/The applicant certifies that on the day 21 days before the date of this application nobody except myself/the applicant was the owner\* of any part of the land or building to which the application relates, and that none of the land to which the application relates is, or is part of, an agricultural holding\*\*

\* 'owner' is a person with a freehold interest or leasehold interest with at least 7 years left to run. \*\* 'agricultural holding' has the meaning given by reference to the definition of 'agricultural tenant' in section 65(8) of the Act.

**NOTE: You should sign Certificate B, C or D, as appropriate, if you are the sole owner of the land or building to which the application relates but the land is, or is part of, an agricultural holding.**

Person role

- The applicant  
 The agent

Title

First name

Surname

Declaration date (DD/MM/YYYY)

Declaration made

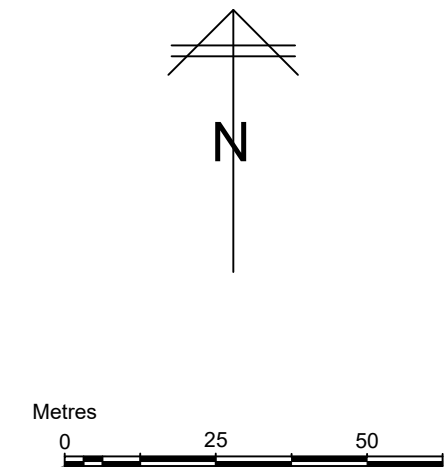
## 26. Declaration

I/we hereby apply for planning permission/consent as described in this form and the accompanying plans/drawings and additional information. I/we confirm that, to the best of my/our knowledge, any facts stated are true and accurate and any opinions given are the genuine opinions of the person(s) giving them.

Date (cannot be pre-application)

GENERAL NOTES

1. Do not scale from this print or use as a template.
2. All dimensions must be verified on site before any work is put in hand and any discrepancies must be reported to the Architect. Where any variations occur between small scale and detailed drawings, detail drawings should be worked from.
3. Copyright of this drawing is reserved by Osbornes and is issued on condition that it is not copied or disclosed to any third party either wholly or in part without the consent of Osbornes in writing.



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**OSBORNES** CHARTERED ARCHITECTS  
The Balconies • Hanley Swan • Malvern • Worcestershire • WR8 0DN

CLIENT MR IAIN WALL  
PROJECT 101 RESERVOIR ROAD  
TITLE LOCATION PLAN  
SCALE 1:1250 @ A3  
DATE AUG 2021  
DRAWN TL

DRAWING NUMBER 21-111-LOC1B

Our ref: 4885/RS

17 September 2021

Dear [REDACTED]

RE: 99-101 RESERVOIR ROAD, GLOUCESTER, GL4 6SZ

At your instruction we recently attended the above site to undertake percolation testing to assess ground suitability for soakaway drainage and permeable pavement design (in connection with a proposed residential development), to provide robust data to aid the design (by others) of the drainage strategy. Having now processed the field results I report as follows.

This report has been prepared in accordance with quotation reference Q21213 dated 30<sup>th</sup> July 2021, with instruction confirmed 16<sup>th</sup> August 2021 by receipt of our quotation acceptance form from Mr Iain Wall to whom reliance on this report is presently restricted.

### **Summary of Ground Conditions**

Percolation testing was undertaken on 6<sup>th</sup> September 2021 in general accordance with BRE DG365 "Soakaway Design" (2016); this comprised the rapid filling of three machine-excavated trial pits to depths of 2.00m (TP1 and TP2) and 0.45m (TP3) using clean water delivered via IBC, and monitoring of subsequent outflow. The trial pit logs are attached and their positions are indicated upon drawing 4885/2. Upon completion of logging and insitu testing of each excavation, arisings were used to backfill the pits, and compacted with the excavator bucket.

British Geological Survey (BGS) mapping indicates that the site lies entirely within the outcrop of the undifferentiated Blue Lias Formation / Charmouth Mudstone Formation (BLi/ChM). The former comprises thinly interbedded limestone and the latter dark blueish-grey, friable, shaley mudstone. They both commonly weather near surface to firm to stiff, mottled grey-brown plastic clay and occasional localised 'rubbly' weathered limestone bands are also present. There are no

areas of recorded made ground, superficial deposits or geological faulting either on or within influencing distance of the site.

Beneath 0.25m-0.30m of topsoil and localised made ground all pits encountered a ground profile consistent with expectation and mapping, with all pits terminating in clay of the recorded BLi/ChM. Whilst the groundwater table was not encountered, the groundwater level is of course subject to seasonal fluctuation according to prevailing weather conditions, and the situation encountered and described above could potentially change in the future, especially in a period of seemingly ever-apparent but unpredictable climate change; which would of course have an effect on soakaway founding depth.

In accordance with BRE365 guidance three full-scale tests were carried out within TP3, however it was only possible to perform a single test in TP1 and TP2 due to a gradual rise in the water level. The test locations are shown on drawing number 4885/2 whilst a graph showing depth to water against time plus test zone depths are presented on the pit logs.

### **Results and Implications**

BRE365 calculations suggest infiltration rates as summarised below.

TP No.	Test No.	Test Response Zone (m)	Calculated Soil Infiltration Rate (m/sec)	Geology	Time to drain 50% storage (minutes)
TP1	1	1.14 – 2.00	NA	BLi/ChM	NA
TP2	1	1.18 – 2.00	NA		NA
TP3	1	0.30 – 0.45	$5.90 \times 10^{-4}$		1.45
	2	0.25 – 0.45	$1.60 \times 10^{-4}$		6.50
	3	0.23 – 0.45	* $1.10 \times 10^{-4}$		10

BLi/ChM = undifferentiated Blue Lias Formation and Charmouth Mudstone Formation

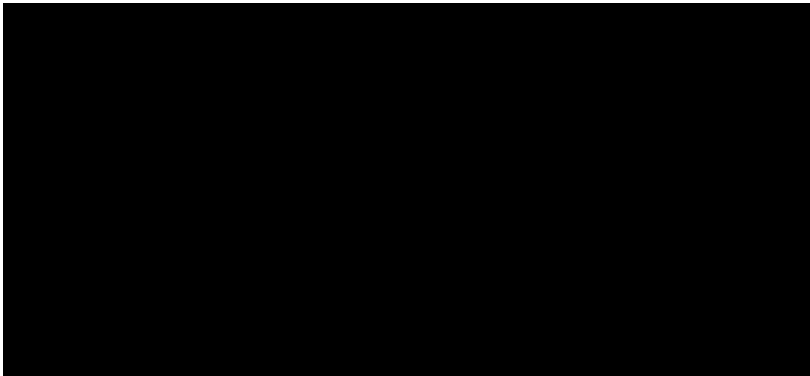
\*Denotes shallow site design value

With reference to the foregoing it will be seen that 'deep' soakaways will not be feasible since tests failed to meet minimum BRE requirements for water to drain to 50% storage capacity within a period of 24 hours. The shallow test performed in the proposed roadway provides favourable results, indicating that permeable paving should be possible in such areas (to be confirmed by the drainage engineer). On the basis of the foregoing ground conditions at this site are considered unsuitable for the adoption of conventional, 'deep' SUD-type drainage systems, thus alternative drainage options will need to be considered. Given that testing has shown ground conditions may be suitable for the adoption of permeable paving, this solution could presumably be used in conjunction with a degree of rainwater harvesting or transmission of storm water run-off to the existing drainage network. In the case of the latter it will be necessary to provide evidence to the local drainage provider (Severn Trent Water) that the construction of deep soakaways within the

site is not practical, given the impermeable nature of the natural ground, and the results presented on the trial pit logs as part of this report should suffice. It is understood that these results will be provided to the drainage consultant for their use in design of the site drainage strategy.

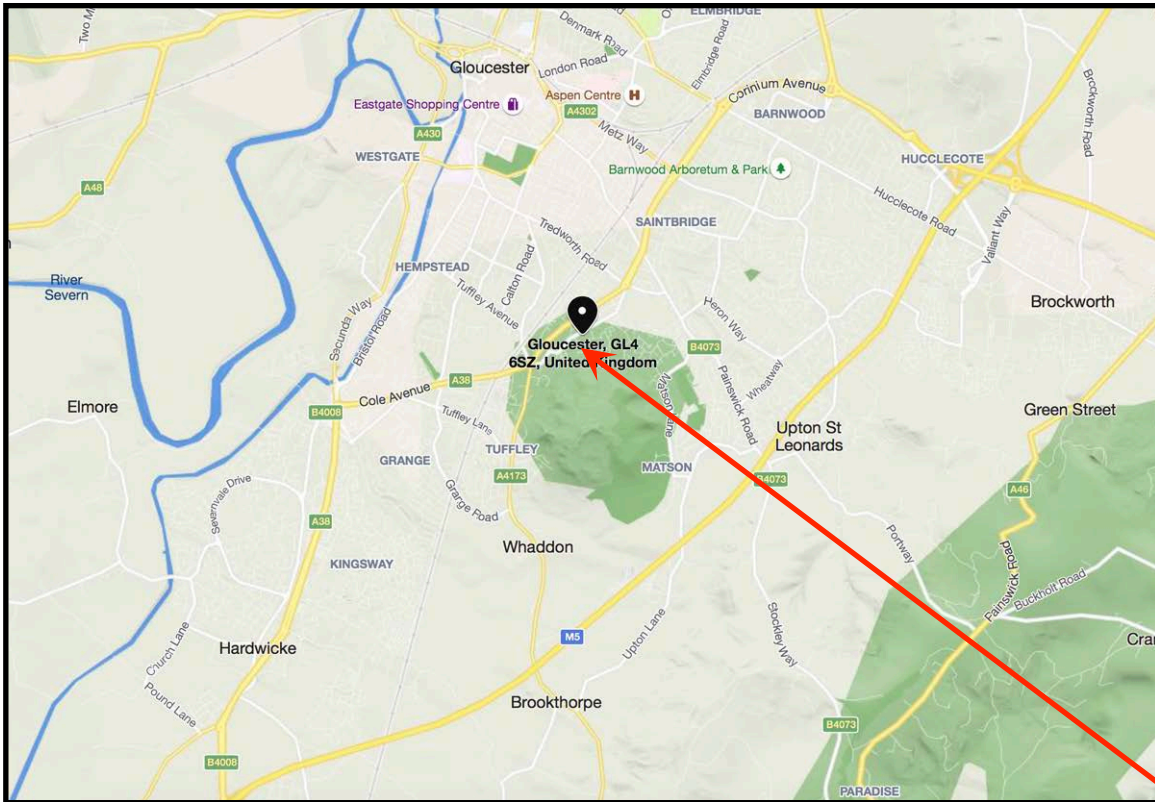
The field-testing methodology and subsequent data-processing and calculations have been undertaken in general accordance with BRE DG365, so in the event of any local authority consultation the results should be acceptable. The digest includes a requirement to consider ground contamination, although no such evidence was forthcoming from our observations which suggests a negligible risk.

I trust that the above and attached suitably address your requirements, however please do not hesitate to contact me should you require anything further. This report is subject to our standard terms and conditions.



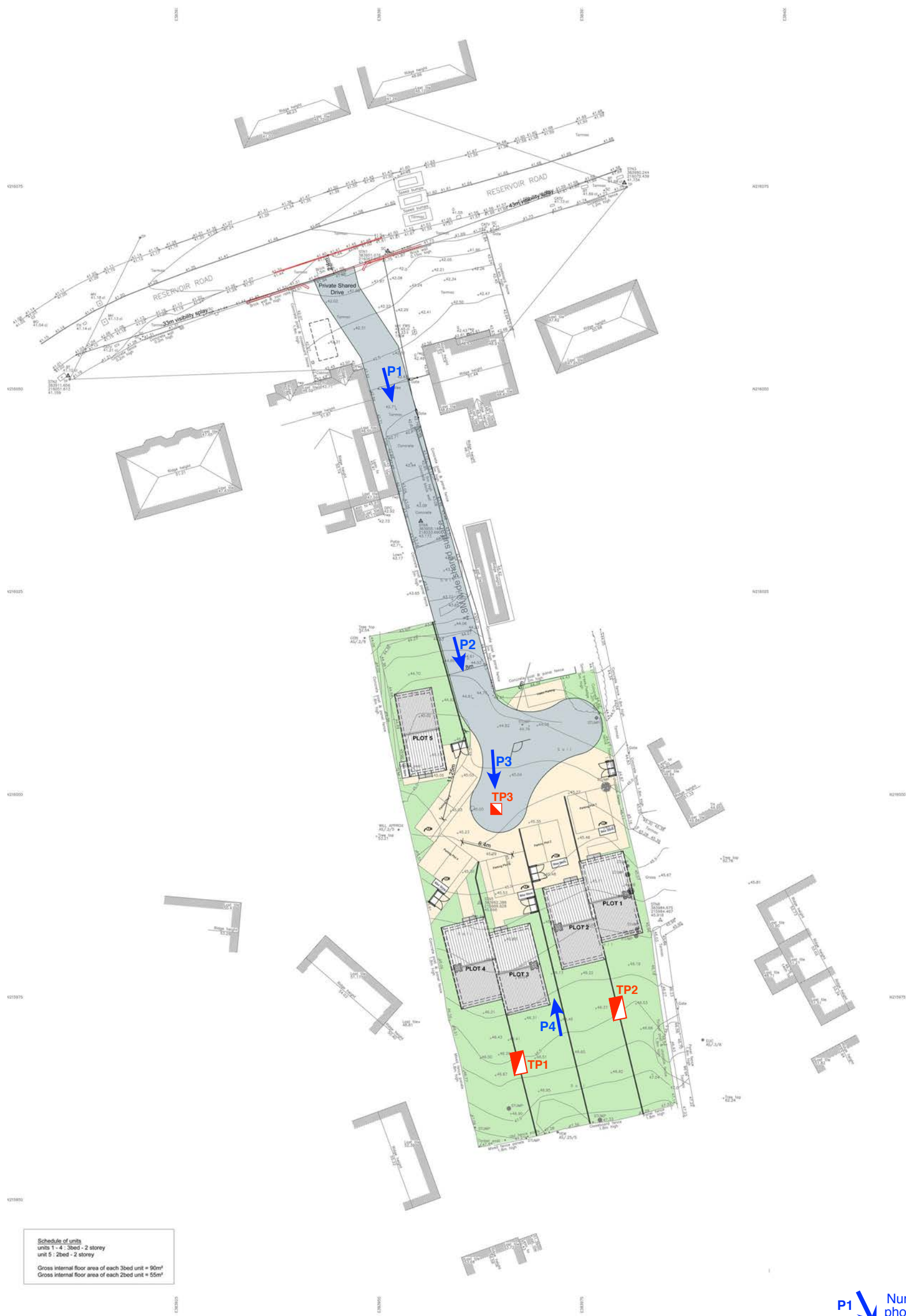
SITE LOCATION (based on Microsoft Bing Mapping)

Job No.	Drawing No.	Scale:	Date:
4885	4885/1	NTS	15-09-21



THE SITE





Schedule of units  
 units 1 - 4 : 3bed - 2 storey  
 unit 5 : 2bed - 2 storey  
 Gross internal floor area of each 3bed unit = 90m<sup>2</sup>  
 Gross internal floor area of each 2bed unit = 55m<sup>2</sup>

P1 ↓ Number and direction of photograph (Appendix 1)



99-101 RESERVOIR ROAD, GLOUCESTER GL4 6SZ



PROPOSED DEVELOPMENT LAYOUT (based upon Obornes drg 21-111-SK4, dated May 2021)  
 SHOWING INVESTIGATION LOCATIONS

Job No. 4885	Drawing No. 4885/2	Scale: 1:500 @A3	Date: 15-09-21
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# APPENDIX 1

## SITE PHOTOGRAPHS



Photograph P1



Photograph P2



Photograph P3

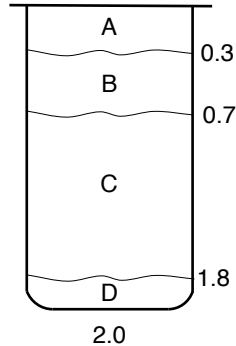


Photograph P4

## **APPENDIX 2**

### **TRIAL PIT LOGS WITH PHOTOGRAPHS**

<b>Site:</b> 99-101 RESERVOIR ROAD, GLOUCESTER GL4 6SZ				<b>TRIAL PIT No.</b>  <b>TP1</b>
<b>Job No.</b> 4885	<b>Date</b> 06-09-21	<b>Ground Level (c.m, AOD)</b> 47m	<b>Co-Ordinates (c.)</b> E 383,968 N 215,951	

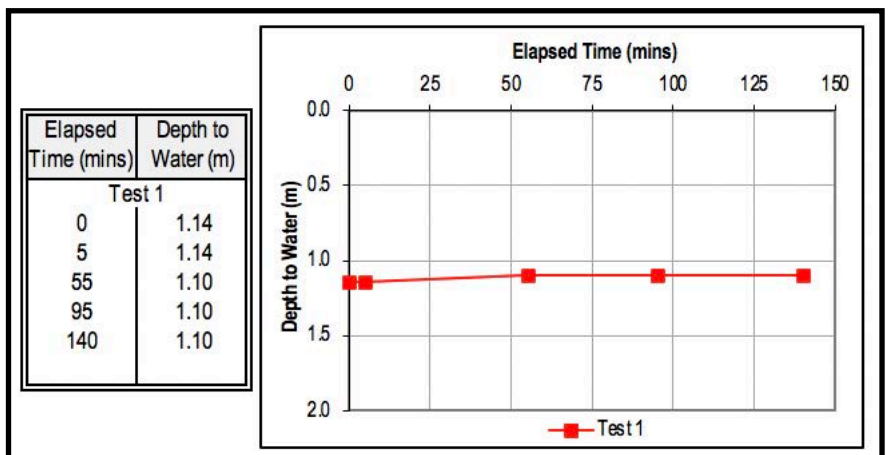


**DETAILS OF SUBSOIL**

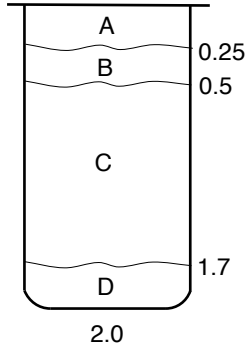
- A TOPSOIL: firm, dry and desiccated, dark brown, organic TOPSOIL; abundant roots and rootlets (up to 6mm diameter)
- B CLAY: firm, brown, slightly gravelly, slightly sandy CLAY (gravel is subangular to subrounded, fine to medium quartzite); frequent roots (up to 4mm diameter) and rootlets
- C CLAY: firm, orangish-brown mottled bluish-grey, fissured CLAY; frequent rootlets and slightly gravelly, subangular to subrounded, fine to medium limestone
- D MUDSTONE: extremely weak and thinly bedded, dark grey MUDSTONE, with rare limestone cobbles

**NOTES**

- 1 Pit logged from surface
- 2 Pit dry and stable
- 3 Falling head testing carried out:  
Pit dimensions (2.0 x 1.5 x 0.5m) (DxLxW)



<b>Site:</b> 99-101 RESERVOIR ROAD, GLOUCESTER GL4 6SZ				<b>TRIAL PIT No.</b>  <b>TP2</b>
<b>Job No.</b> 4885	<b>Date</b> 06-09-21	<b>Ground Level (c.m, AOD)</b> 47m	<b>Co-Ordinates (c.)</b> E 383,979 N 215,965	

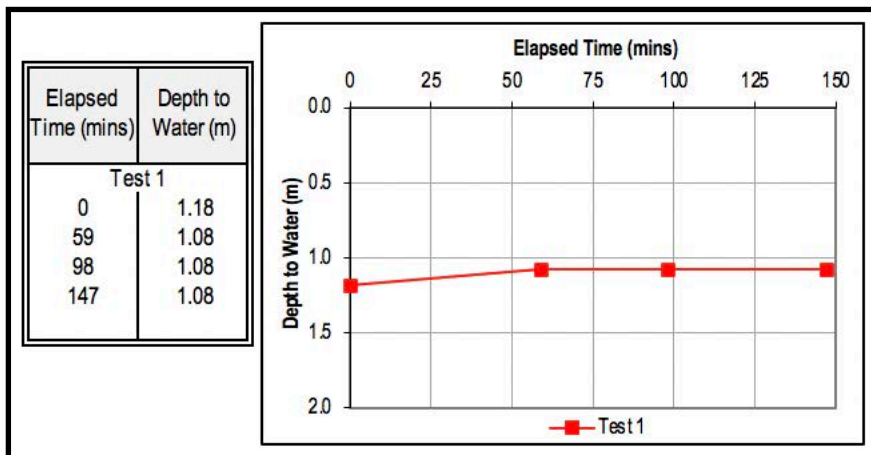


**DETAILS OF SUBSOIL**

- A TOPSOIL: firm, dry and desiccated, dark brown, organic TOPSOIL; abundant roots and rootlets (up to 6mm diameter)
- B CLAY: firm, brown, slightly gravelly, slightly sandy CLAY (gravel is subangular to subrounded, fine to medium quartzite); frequent roots (up to 4mm diameter) and rootlets
- C CLAY: firm, orangish-brown mottled bluish-grey, fissured CLAY; frequent rootlets and slightly gravelly, subangular to subrounded, fine to medium limestone
- D MUDSTONE: extremely weak and thinly bedded, dark grey MUDSTONE, with rare limestone cobbles

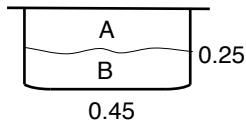
**NOTES**

- 1 Pit logged from surface
- 2 Pit dry and stable
- 3 Falling head testing carried out:  
Pit dimensions (2.0 x 1.5 x 0.5m) (DxLxW)



<b>Scale:</b> 1:50	<b>Client</b> Mr Iain Wall	<b>Logged By:</b> RS
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<b>Site:</b> 99-101 RESERVOIR ROAD, GLOUCESTER GL4 6SZ				<b>TRIAL PIT No.</b>  <b>TP3</b>
<b>Job No.</b> 4885	<b>Date</b> 06-09-21	<b>Ground Level (c.m, AOD)</b> 46m	<b>Co-Ordinates (c.)</b> E 383,961 N 215,990	

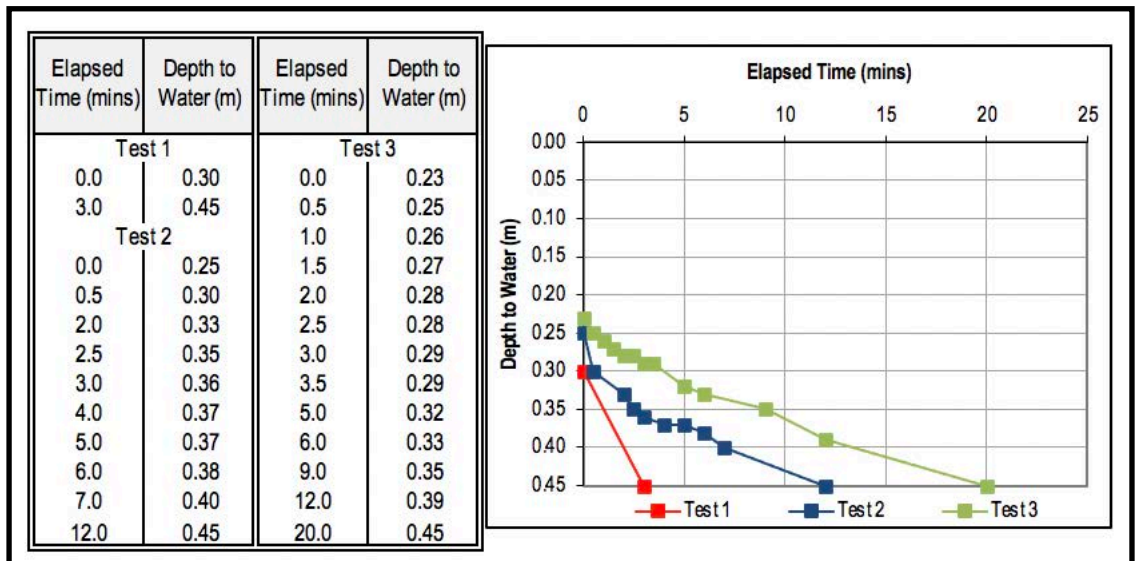


**DETAILS OF SUBSOIL**

- A **MADE GROUND:** firm, dry desiccated, dark brown, organic, slightly sandy, slightly gravelly
- B **CLAY:** firm, brown, slightly gravelly, slightly sandy CLAY (gravel is subangular to subrounded, fine to medium quartzite); frequent roots (up to 4mm diameter) and rootlets

**NOTES**

- 1 Pit logged from surface
- 2 Pit dry and stable
- 3 Falling head testing carried out:  
Pit dimensions (0.45 x 0.9 x 0.5m) (DxLxW)



<b>Scale:</b> 1:50	<b>Client</b> Mr Iain Wall	<b>Logged By:</b> RS
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## CONDITIONS OF CONTRACT - CONSULTANCY SERVICES

- 1 Wilson Associates (Consulting) Limited ("the Consultant") shall carry out the Services, including any proposal, report or other document, as detailed in any relevant correspondence, which forms part of this Agreement, for the Client with reasonable skill, care and diligence. The Consultant shall use reasonable endeavours to adhere to any agreed programme. Each instruction or acceptance of a quotation shall be deemed to be an offer to purchase the services subject to the conditions laid out in this document.
- 2 An interim invoice will normally be submitted upon completion of the site works, to include all disbursements and fees to date, and for contracts extending over a long period, monthly invoices will be submitted for payment. The final report will not be issued until payment of the first interim invoice has been received, unless agreed with this Practice beforehand. Invoices are not to be assigned to a third party without prior agreement. Should the contract be cancelled after either preparatory or fieldwork has commenced then a claim will be made for work completed to that date.
- 3 The rates quoted, are net of Value Added Tax (VAT) which will be added to invoices at the standard prevailing rate, and are valid for a period of 12 weeks from the date of the quote. The Consultant shall issue accounts monthly in respect of that part of the Services carried out in the preceding period. The Client shall make payment of accounts without discount or retention within 30 days of submission. Disputes should be raised within 10 days. In the event of non-payment of the account(s) within the specified period the Consultant reserves the right to charge, from time to time, interest on the unpaid amount at the rate of 2% per calendar month above the Bank of England base rate (at time of original invoice date).
- 4 In the event of non-payment of the account(s), the Client undertakes to pay to the Consultant all costs and expenses, on an indemnity basis, incurred by the Consultant in: (i) the recovery from the Client of money or arrears (ii) the enforcement of any of the provisions of these conditions of contract (iii) the service of any notice relating to the breach by the Client of any of their obligations under this contract whether or not the same shall result in court proceedings (iv) the cost of any bank or other charges incurred by the Consultant if any cheque written by the Client is dishonoured or if any standing order payment is withdrawn by the Client's bankers (v) compensation for the breach of any terms of this agreement.
- 5 Unless expressly stipulated to the contrary, payment of the account(s) is not dependent upon the Client achieving regulatory approval for or discharge of a planning condition relating to the project, nor is it dependent upon the Client's securing of funding for the development where this may be conditional upon the prior granting of planning or building regulations approval, nor the Client's onward sale of the site to another party. In the case of provision of services to another consultant, payment of our account is not dependent upon the prior settlement of their own account by their Client.
- 6 No work will commence until an official written order or completed Quote Acceptance form has been received by post or email. Such order will be deemed to constitute acceptance of the quotation and these terms and conditions. Where the instruction to undertake the Services may have been issued by an intermediary on behalf of the Client, full Client details including confirmation of and contact details for the person responsible for authorising payment must be provided to the Consultant. In the event that the Client defaults or otherwise fails to pay the due account, the Consultant reserves the right to pursue and recover any unpaid amount from the instructing intermediary.
- 7 Neither party shall assign any obligation or benefit under this Agreement without prior written consent of the other Party. The Client shall not be entitled to assign the report(s) or any part of it without our prior written consent. Re-assignment of reports can be provided on request, subject to liaison with our Insurers and standard administration costs. Any assignment shall exclude the Contracts (Rights of Third Parties) Act 1999. Provision of a Collateral Warranty can only be considered if it is agreed at the pre-works stage, and fees for legal advice and warranty provision agreed before the works commence.
- 8 The Client guarantees that it has the right to have the Services performed and that he has obtained all the necessary certificates, licences, permits and consents required by Statute or any order or regulation made there under or by any regulation or by-law of any authority undertaker. The Client shall indemnify and hold harmless the Consultant from and against all consequences of a failure in this respect. The Client shall arrange such rights of access to property and use of Client's facilities as described in (or reasonably to be inferred from) this Agreement. The Client shall use reasonable endeavours to supply to the Consultant, promptly and free of charge: (a) any other necessary things in accordance with this Agreement; (b) any instructions, decisions, consents and approvals; and (c) any relevant data and information in the Client's possession; all of which the Consultant may reasonably require in order to carry out the Services. The Client will indemnify the Consultant in respect of any failure by the Client under this Clause.
- 9 In line with the Construction (Design & Management) Regulations 2015 and AGS guidance, neither the Consultant nor any sub-contractor shall be held responsible for any accidental damage or the consequences of any damage to buried services such as cables, pipes, sewers, etc., the positions and nature of which have not been clearly indicated to the Consultant in writing prior to the commencement of the work, unless the locating of same is expressly part of the Services. Where necessary it is assumed that the Client will permit the use of their toilet/welfare facilities by Consultant's staff and sub-contractors, including domestic properties. We will normally undertake the role of Contractor on a ground investigation project, but may occasionally 'inherit' the role of Principal Contractor. In either case that role is restricted to the ground investigation phase ONLY and not the subsequent build.
- 10 The Consultant shall not be held responsible for any loss, damage or injury arising from actions or omissions of the Client, his agents, servants and/or independent contractors. The Client shall indemnify the Consultant from any such acts or omissions.
- 11 Each Party shall retain the copyright of its documents. Information relating to the contract will only be disclosed to those employees who require it to carry out their job. If necessary this may include subcontractors. Any other third party enquiry about the purposes of these works will be referred back to the Client. Upon completion any technical information or ground investigation data obtained as part of your commission will thereafter be archived as 'in-house' data, and may be used (without specific reference to your site) on other projects in the future; this specifically excludes any personal data.
- 12 Copyright And Non-Disclosure Notice - The contents and layout of any report produced by the Consultant are subject to copyright owned by Wilson Associates save to the extent that copyright has been legally assigned by us to another party or is used by Wilson Associates under licence. To the extent that we own the copyright of a particular report, it may not be copied or used without our prior written agreement for any purpose other than the purpose indicated in that report. The methodology (if any) contained in that report is provided to you in confidence and must not be disclosed or copied to third parties without the prior written agreement of Wilson Associates. Disclosure of such a information may constitute an actionable breach of confidence or may otherwise prejudice our commercial interests. Any third party who obtains access to that report by any means will, in any event, be subject to the Third Party Disclaimer set out below.
- 13 Third Party Disclaimer - Any disclosure of our report(s) to a third party is subject to this disclaimer. Reports are prepared by Wilson Associates at the instruction of, and for use by, our client named on the front of that report. It does not in any way constitute advice to any third party who is able to access it by any means. Wilson Associates excludes to the fullest extent lawfully permitted all liability whatsoever for any loss or damage howsoever arising from reliance on the contents of that report. We do not however exclude our liability (if any) for personal injury or death resulting from our negligence, for fraud or any other matter in relation to which we cannot legally exclude liability. Legal re-assignment to another party can be arranged - see Clause 7.
- 14 The Consultant's liability under this Agreement shall be limited to £500,000 (five hundred thousand pounds). The Consultant shall maintain professional indemnity insurance in this amount providing that such insurance cover is available at commercially reasonable rates.
- 15 To comply with the General Data Protection Regulation (GDPR) 2018, we will only request contact details sufficient to complete our project with you, name/job title, address/postcode/email. Any data collected will be used only by authorised personnel in the context of that project. We are committed to ensuring that your information is secure and in order to prevent unauthorised access or disclosure, we have put in place suitable physical, electronic and managerial procedures to safeguard and secure the information we collect. We will not share your information with third parties.

27062 GLOUCESTER									
JUNE 2021									
Site	Location	Direction	Start Date	End Date	Posted Speed Limit (PSL)	Total Vehicles	5 Day Ave.	7 Day Ave.	Average 85%ile Speed
Site No: 27062001	Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P) OSGR - SO 83909 16055	Channel: Eastbound	Fri 11-Jun-21	Thu 17-Jun-21	30	25640	3874	3663	28.8
		Channel: Westbound	Fri 11-Jun-21	Thu 17-Jun-21		26993	4070	3856	30.0

27062		GLOUCESTER				
JUNE 2021						Posted Speed Limit (PSL)
Site	Location	Direction	Start Date	End Date	Posted Speed Limit (PSL)	Average Mean Speed
Site No: 27062001	Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P) OSGR - SO 83909 16055	Channel: Eastbound	Fri 11-Jun-21	Thu 17-Jun-21	30	25.0
		Channel: Westbound	Fri 11-Jun-21	Thu 17-Jun-21		26.2

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Eastbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
<b>Fri 11-Jun-21</b>																
00:00	13	0	13	0	0	0	0	0	0	0	0	0	0	0		
01:00	6	0	5	1	0	0	0	0	0	0	0	0	0	0		
02:00	3	0	3	0	0	0	0	0	0	0	0	0	0	0		
03:00	8	0	7	1	0	0	0	0	0	0	0	0	0	0		
04:00	5	1	4	0	0	0	0	0	0	0	0	0	0	0		
05:00	32	2	25	5	0	0	0	0	0	0	0	0	0	0		
06:00	63	2	52	9	0	0	0	0	0	0	0	0	0	0		
07:00	197	4	163	30	0	0	0	0	0	0	0	0	0	0		
08:00	286	2	250	28	0	0	3	0	3	0	0	0	0	0		
09:00	233	3	202	24	0	1	2	0	1	0	0	0	0	0		
10:00	183	0	166	16	0	0	1	0	0	0	0	0	0	0		
11:00	197	2	178	16	0	0	1	0	0	0	0	0	0	0		
12:00	254	4	221	28	0	0	1	0	0	0	0	0	0	0		
13:00	259	1	225	29	0	0	3	0	1	0	0	0	0	0		
14:00	346	2	311	26	1	2	2	0	2	0	0	0	0	0		
15:00	384	5	344	28	2	1	0	0	4	0	0	0	0	0		
16:00	376	6	331	35	0	0	1	0	2	1	0	0	0	0		
17:00	381	4	332	41	0	0	0	0	3	1	0	0	0	0		
18:00	325	5	301	17	0	0	1	0	1	0	0	0	0	0		
19:00	246	4	233	9	0	0	0	0	0	0	0	0	0	0		
20:00	174	2	165	6	0	0	0	0	1	0	0	0	0	0		
21:00	99	2	91	6	0	0	0	0	0	0	0	0	0	0		
22:00	85	0	83	2	0	0	0	0	0	0	0	0	0	0		
23:00	53	1	46	6	0	0	0	0	0	0	0	0	0	0		
12H,7-19	3421	38	3024	318	3	4	15	0	17	2	0	0	0	0		
16H,6-22	4003	48	3565	348	3	4	15	0	18	2	0	0	0	0		
18H,6-24	4141	49	3694	356	3	4	15	0	18	2	0	0	0	0		
24H,0-24	4208	52	3751	363	3	4	15	0	18	2	0	0	0	0		

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
<b>Sat 12-Jun-21</b>															
00:00	32	1	31	0	0	0	0	0	0	0	0	0	0	0	
01:00	8	0	8	0	0	0	0	0	0	0	0	0	0	0	
02:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0	
03:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	
04:00	8	1	7	0	0	0	0	0	0	0	0	0	0	0	
05:00	20	0	20	0	0	0	0	0	0	0	0	0	0	0	
06:00	39	0	34	4	0	0	1	0	0	0	0	0	0	0	
07:00	74	0	66	8	0	0	0	0	0	0	0	0	0	0	
08:00	123	1	108	13	0	0	0	0	1	0	0	0	0	0	
09:00	208	2	189	15	0	0	1	0	1	0	0	0	0	0	
10:00	211	3	192	13	0	0	0	0	3	0	0	0	0	0	
11:00	267	5	236	22	0	1	1	0	2	0	0	0	0	0	
12:00	319	6	286	24	0	1	1	0	1	0	0	0	0	0	
13:00	300	7	273	17	0	0	1	0	2	0	0	0	0	0	
14:00	262	6	241	14	0	0	0	0	0	1	0	0	0	0	
15:00	215	3	199	9	1	0	1	0	2	0	0	0	0	0	
16:00	251	4	225	21	0	0	0	0	1	0	0	0	0	0	
17:00	237	3	211	21	0	0	0	0	2	0	0	0	0	0	
18:00	190	5	172	13	0	0	0	0	0	0	0	0	0	0	
19:00	169	3	162	4	0	0	0	0	0	0	0	0	0	0	
20:00	127	2	117	8	0	0	0	0	0	0	0	0	0	0	
21:00	99	0	98	1	0	0	0	0	0	0	0	0	0	0	
22:00	109	0	106	2	0	0	1	0	0	0	0	0	0	0	
23:00	48	1	45	2	0	0	0	0	0	0	0	0	0	0	
12H,7-19	2657	45	2398	190	1	2	5	0	15	0	1	0	0	0	
16H,6-22	3091	50	2809	207	1	2	6	0	15	0	1	0	0	0	
18H,6-24	3248	51	2960	211	1	2	7	0	15	0	1	0	0	0	
24H,0-24	3330	53	3039	212	1	2	7	0	15	0	1	0	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
Sun 13-Jun-21															
00:00	26	1	25	0	0	0	0	0	0	0	0	0	0	0	
01:00	18	0	17	1	0	0	0	0	0	0	0	0	0	0	
02:00	16	0	16	0	0	0	0	0	0	0	0	0	0	0	
03:00	12	0	12	0	0	0	0	0	0	0	0	0	0	0	
04:00	11	0	10	1	0	0	0	0	0	0	0	0	0	0	
05:00	10	0	9	1	0	0	0	0	0	0	0	0	0	0	
06:00	22	0	22	0	0	0	0	0	0	0	0	0	0	0	
07:00	50	0	48	2	0	0	0	0	0	0	0	0	0	0	
08:00	87	2	73	12	0	0	0	0	0	0	0	0	0	0	
09:00	145	2	133	10	0	0	0	0	0	0	0	0	0	0	
10:00	207	4	195	8	0	0	0	0	0	0	0	0	0	0	
11:00	213	1	205	6	0	0	0	0	1	0	0	0	0	0	
12:00	279	5	261	11	0	0	0	1	0	0	1	0	0	0	
13:00	278	2	267	9	0	0	0	0	0	0	0	0	0	0	
14:00	203	7	182	12	0	0	0	0	2	0	0	0	0	0	
15:00	200	7	180	13	0	0	0	0	0	0	0	0	0	0	
16:00	217	1	206	9	0	0	1	0	0	0	0	0	0	0	
17:00	204	2	187	13	0	1	1	0	0	0	0	0	0	0	
18:00	207	5	190	11	0	0	0	0	1	0	0	0	0	0	
19:00	180	4	170	5	0	0	0	0	1	0	0	0	0	0	
20:00	159	4	144	9	0	0	2	0	0	0	0	0	0	0	
21:00	105	0	101	4	0	0	0	0	0	0	0	0	0	0	
22:00	70	1	63	6	0	0	0	0	0	0	0	0	0	0	
23:00	22	1	21	0	0	0	0	0	0	0	0	0	0	0	
12H,7-19	2290	38	2127	116	0	1	2	1	4	0	0	1	0	0	
16H,6-22	2756	46	2564	134	0	1	4	1	5	0	0	1	0	0	
18H,6-24	2848	48	2648	140	0	1	4	1	5	0	0	1	0	0	
24H,0-24	2941	49	2737	143	0	1	4	1	5	0	0	1	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
<b>Mon 14-Jun-21</b>															
00:00	9	0	9	0	0	0	0	0	0	0	0	0	0	0	
01:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	
02:00	5	1	4	0	0	0	0	0	0	0	0	0	0	0	
03:00	9	0	8	1	0	0	0	0	0	0	0	0	0	0	
04:00	5	0	5	0	0	0	0	0	0	0	0	0	0	0	
05:00	30	2	25	3	0	0	0	0	0	0	0	0	0	0	
06:00	65	2	58	5	0	0	0	0	0	0	0	0	0	0	
07:00	202	8	175	19	0	0	0	0	0	0	0	0	0	0	
08:00	270	2	238	29	0	0	1	0	0	0	0	0	0	0	
09:00	222	3	190	27	0	1	1	0	0	0	0	0	0	0	
10:00	160	2	146	12	0	0	0	0	0	0	0	0	0	0	
11:00	211	3	181	26	0	0	0	0	1	0	0	0	0	0	
12:00	215	3	188	22	1	0	0	0	1	0	0	0	0	0	
13:00	209	0	189	19	0	1	0	0	0	0	0	0	0	0	
14:00	267	9	230	28	0	0	0	0	0	0	0	0	0	0	
15:00	299	2	265	27	0	2	1	0	2	0	0	0	0	0	
16:00	325	4	288	31	0	0	0	0	1	0	0	1	0	0	
17:00	363	10	322	28	0	1	0	0	2	0	0	0	0	0	
18:00	291	3	269	19	0	0	0	0	0	0	0	0	0	0	
19:00	204	6	185	12	0	0	1	0	0	0	0	0	0	0	
20:00	147	3	139	5	0	0	0	0	0	0	0	0	0	0	
21:00	86	2	80	4	0	0	0	0	0	0	0	0	0	0	
22:00	49	2	47	0	0	0	0	0	0	0	0	0	0	0	
23:00	33	4	27	1	0	0	0	0	1	0	0	0	0	0	
12H,7-19	3034	49	2681	287	1	5	3	0	7	0	0	1	0	0	
16H,6-22	3536	62	3143	313	1	5	4	0	7	0	0	1	0	0	
18H,6-24	3618	68	3217	314	1	5	4	0	8	0	0	1	0	0	
24H,0-24	3683	71	3274	319	1	5	4	0	8	0	0	1	0	0	

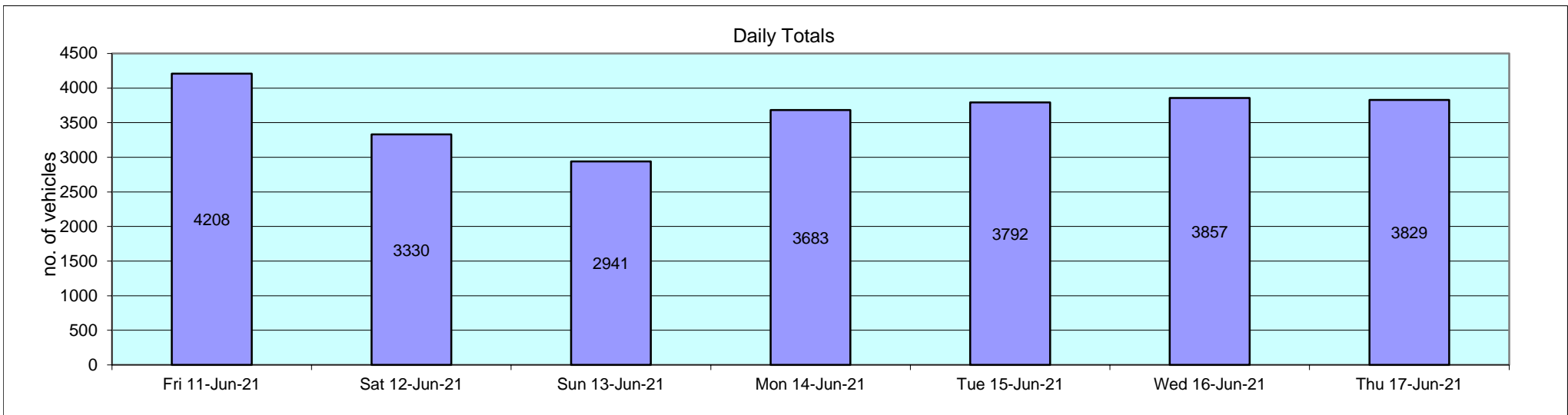
27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
<b>Tue 15-Jun-21</b>															
00:00	8	0	8	0	0	0	0	0	0	0	0	0	0	0	
01:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
02:00	6	0	5	1	0	0	0	0	0	0	0	0	0	0	
03:00	13	0	12	1	0	0	0	0	0	0	0	0	0	0	
04:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	
05:00	22	1	19	2	0	0	0	0	0	0	0	0	0	0	
06:00	67	4	54	8	0	0	1	0	0	0	0	0	0	0	
07:00	192	3	155	30	0	0	3	0	1	0	0	0	0	0	
08:00	278	4	245	26	0	0	2	0	0	0	1	0	0	0	
09:00	194	1	173	18	0	0	1	0	1	0	0	0	0	0	
10:00	177	1	154	22	0	0	0	0	0	0	0	0	0	0	
11:00	195	3	169	22	0	1	0	0	0	0	0	0	0	0	
12:00	221	4	191	24	0	0	1	0	0	0	1	0	0	0	
13:00	246	3	213	30	0	0	0	0	0	0	0	0	0	0	
14:00	274	8	234	28	0	2	2	0	0	0	0	0	0	0	
15:00	330	3	297	29	0	1	0	0	0	0	0	0	0	0	
16:00	350	12	304	31	0	1	1	0	1	0	0	0	0	0	
17:00	383	6	336	35	0	0	2	1	3	0	0	0	0	0	
18:00	240	2	219	17	0	0	0	0	1	0	0	1	0	0	
19:00	195	7	177	11	0	0	0	0	0	0	0	0	0	0	
20:00	173	2	155	16	0	0	0	0	0	0	0	0	0	0	
21:00	117	3	110	3	0	0	1	0	0	0	0	0	0	0	
22:00	70	0	67	2	0	0	1	0	0	0	0	0	0	0	
23:00	34	1	29	3	0	0	1	0	0	0	0	0	0	0	
12H,7-19	3080	50	2690	312	0	5	12	1	7	0	0	3	0	0	
16H,6-22	3632	66	3186	350	0	5	14	1	7	0	0	3	0	0	
18H,6-24	3736	67	3282	355	0	5	16	1	7	0	0	3	0	0	
24H,0-24	3792	68	3333	359	0	5	16	1	7	0	0	3	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
<b>Wed 16-Jun-21</b>															
00:00	14	0	12	2	0	0	0	0	0	0	0	0	0	0	
01:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0	
02:00	6	1	5	0	0	0	0	0	0	0	0	0	0	0	
03:00	8	1	6	1	0	0	0	0	0	0	0	0	0	0	
04:00	10	0	7	3	0	0	0	0	0	0	0	0	0	0	
05:00	27	2	21	4	0	0	0	0	0	0	0	0	0	0	
06:00	55	3	45	7	0	0	0	0	0	0	0	0	0	0	
07:00	189	4	157	24	1	0	3	0	0	0	0	0	0	0	
08:00	275	2	229	41	0	1	0	0	1	0	0	1	0	0	
09:00	210	0	181	25	0	1	1	0	2	0	0	0	0	0	
10:00	189	1	165	15	0	0	7	0	0	0	0	1	0	0	
11:00	185	0	158	26	0	0	1	0	0	0	0	0	0	0	
12:00	254	3	214	35	0	0	0	0	1	0	0	1	0	0	
13:00	204	2	181	19	0	0	1	0	0	0	1	0	0	0	
14:00	275	4	243	26	0	0	1	0	1	0	0	0	0	0	
15:00	329	8	296	20	0	3	0	0	1	0	1	0	0	0	
16:00	351	9	308	33	0	0	0	0	1	0	0	0	0	0	
17:00	373	1	341	29	0	0	0	0	1	0	0	1	0	0	
18:00	297	5	265	24	0	1	1	0	1	0	0	0	0	0	
19:00	217	9	189	18	0	0	1	0	0	0	0	0	0	0	
20:00	169	2	158	7	0	0	1	0	1	0	0	0	0	0	
21:00	122	1	116	5	0	0	0	0	0	0	0	0	0	0	
22:00	68	1	66	1	0	0	0	0	0	0	0	0	0	0	
23:00	28	1	26	1	0	0	0	0	0	0	0	0	0	0	
12H,7-19	3131	39	2738	317	1	6	15	0	9	0	2	4	0	0	
16H,6-22	3694	54	3246	354	1	6	17	0	10	0	2	4	0	0	
18H,6-24	3790	56	3338	356	1	6	17	0	10	0	2	4	0	0	
24H,0-24	3857	60	3391	366	1	6	17	0	10	0	2	4	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
Thu 17-Jun-21															
00:00	11	0	9	2	0	0	0	0	0	0	0	0	0	0	
01:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0	
02:00	5	0	5	0	0	0	0	0	0	0	0	0	0	0	
03:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	
04:00	9	0	7	2	0	0	0	0	0	0	0	0	0	0	
05:00	26	4	19	3	0	0	0	0	0	0	0	0	0	0	
06:00	86	4	74	8	0	0	0	0	0	0	0	0	0	0	
07:00	179	2	144	33	0	0	0	0	0	0	0	0	0	0	
08:00	285	1	247	36	0	0	0	0	0	0	1	0	0	0	
09:00	182	1	160	21	0	0	0	0	0	0	0	0	0	0	
10:00	160	0	139	18	0	0	2	0	1	0	0	0	0	0	
11:00	187	0	170	14	0	1	1	0	1	0	0	0	0	0	
12:00	242	2	210	27	0	0	0	0	2	0	0	1	0	0	
13:00	240	0	208	32	0	0	0	0	0	0	0	0	0	0	
14:00	269	10	236	21	0	0	1	0	1	0	0	0	0	0	
15:00	318	3	285	23	0	0	4	0	2	0	0	1	0	0	
16:00	357	5	316	31	0	0	2	0	2	0	0	1	0	0	
17:00	344	5	312	21	1	1	3	0	0	0	0	1	0	0	
18:00	279	3	255	19	0	0	0	0	2	0	0	0	0	0	
19:00	243	2	224	17	0	0	0	0	0	0	0	0	0	0	
20:00	194	1	177	13	0	0	2	0	0	0	0	1	0	0	
21:00	107	1	101	5	0	0	0	0	0	0	0	0	0	0	
22:00	72	1	67	4	0	0	0	0	0	0	0	0	0	0	
23:00	21	0	20	1	0	0	0	0	0	0	0	0	0	0	
12H,7-19	3042	32	2682	296	1	2	13	0	11	0	1	4	0	0	
16H,6-22	3672	40	3258	339	1	2	15	0	11	0	1	5	0	0	
18H,6-24	3765	41	3345	344	1	2	15	0	11	0	1	5	0	0	
24H,0-24	3829	45	3398	351	1	2	15	0	11	0	1	5	0	0	

27062 GLOUCESTER Site No: 27062001 Location Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)  
 Channel: Eastbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	FIVE OR LESS AXLE		SEVEN OR MORE AXLE ARTIC	
											SIX OR MORE AXLE ARTIC	SIX AXLE MULTI-TRAILER ARTIC		
<b>Daily Totals</b>														
Fri 11-Jun-21	4208	52	3751	363	3	4	15	0	18	2	0	0	0	0
Sat 12-Jun-21	3330	53	3039	212	1	2	7	0	15	0	1	0	0	0
Sun 13-Jun-21	2941	49	2737	143	0	1	4	1	5	0	0	1	0	0
Mon 14-Jun-21	3683	71	3274	319	1	5	4	0	8	0	0	1	0	0
Tue 15-Jun-21	3792	68	3333	359	0	5	16	1	7	0	0	3	0	0
Wed 16-Jun-21	3857	60	3391	366	1	6	17	0	10	0	2	4	0	0
Thu 17-Jun-21	3829	45	3398	351	1	2	15	0	11	0	1	5	0	0
<b>Total Vehicles</b>														
[--]	25640	398	22923	2113	7	25	78	2	74	2	4	14	0	0



27062		GLOUCESTER		Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)								
				Channel: Eastbound												
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76	
<b>Fri 11-Jun-21</b>																
00:00	13	31.5	28.3	0	2	7	3	1	0	0	0	0	0	0	0	
01:00	6	-	26	0	1	4	1	0	0	0	0	0	0	0	0	
02:00	3	-	32.1	0	0	2	0	1	0	0	0	0	0	0	0	
03:00	8	-	30.3	0	0	4	4	0	0	0	0	0	0	0	0	
04:00	5	-	24.2	0	1	4	0	0	0	0	0	0	0	0	0	
05:00	32	31.1	28.3	0	1	21	8	2	0	0	0	0	0	0	0	
06:00	63	31.3	26.6	0	4	44	15	0	0	0	0	0	0	0	0	
07:00	197	28.4	25.5	1	13	159	23	1	0	0	0	0	0	0	0	
08:00	286	27.7	23.7	1	52	215	18	0	0	0	0	0	0	0	0	
09:00	233	28	24.7	0	17	198	17	0	0	1	0	0	0	0	0	
10:00	183	29.1	25.4	0	19	143	21	0	0	0	0	0	0	0	0	
11:00	197	28.9	24.9	0	23	155	19	0	0	0	0	0	0	0	0	
12:00	254	29.3	25.2	0	30	194	27	0	0	0	0	0	3	0	0	
13:00	259	27.7	24.1	0	33	211	15	0	0	0	0	0	0	0	0	
14:00	346	27.5	24	0	46	278	22	0	0	0	0	0	0	0	0	
15:00	384	27.1	23.3	0	77	285	22	0	0	0	0	0	0	0	0	
16:00	376	27.3	23.6	0	72	278	25	0	0	0	0	0	0	0	1	
17:00	381	28	24	1	62	285	29	0	4	0	0	0	0	0	0	
18:00	325	28.4	24.7	1	37	256	31	0	0	0	0	0	0	0	0	
19:00	246	28.6	25.4	1	15	210	18	0	0	2	0	0	0	0	0	
20:00	174	28.4	24.8	0	18	145	11	0	0	0	0	0	0	0	0	
21:00	99	30.4	26	3	7	71	15	2	1	0	0	0	0	0	0	
22:00	85	28.9	24.8	0	6	71	8	0	0	0	0	0	0	0	0	
23:00	53	31.3	26.5	1	1	39	12	0	0	0	0	0	0	0	0	
12H,7-19	3421	28.2	24.3	4	481	2657	269	1	4	1	0	0	3	0	1	
16H,6-22	4003	28.2	24.5	8	525	3127	328	3	5	3	0	0	3	0	1	
18H,6-24	4141	28.4	24.5	9	532	3237	348	3	5	3	0	0	3	0	1	
24H,0-24	4208	28.4	24.6	9	537	3279	364	7	5	3	0	0	3	0	1	

27062 GLOUCESTER Site No: 27062001 Location Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)  
Channel: Eastbound

Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Sat 12-Jun-21</b>															
00:00	32	33.3	29.5	0	2	18	10	1	0	0	0	1	0	0	0
01:00	8	-	26.8	0	0	7	1	0	0	0	0	0	0	0	0
02:00	7	-	28.2	0	0	5	2	0	0	0	0	0	0	0	0
03:00	7	-	26.4	0	1	4	2	0	0	0	0	0	0	0	0
04:00	8	-	25.9	0	1	5	2	0	0	0	0	0	0	0	0
05:00	20	29.3	26.5	0	0	18	2	0	0	0	0	0	0	0	0
06:00	39	29.8	27.4	0	0	34	5	0	0	0	0	0	0	0	0
07:00	74	31.5	27	0	2	55	17	0	0	0	0	0	0	0	0
08:00	123	30.4	25.6	0	9	94	20	0	0	0	0	0	0	0	0
09:00	208	29.3	25.7	0	14	169	25	0	0	0	0	0	0	0	0
10:00	211	28.4	24.9	0	23	169	19	0	0	0	0	0	0	0	0
11:00	267	28.4	24.8	0	32	219	16	0	0	0	0	0	0	0	0
12:00	319	28.4	24.6	0	44	249	26	0	0	0	0	0	0	0	0
13:00	300	28.6	25	0	23	250	27	0	0	0	0	0	0	0	0
14:00	262	28.4	25	0	24	219	19	0	0	0	0	0	0	0	0
15:00	215	28	24.4	1	24	177	11	1	1	0	0	0	0	0	0
16:00	251	28.6	25	0	22	204	25	0	0	0	0	0	0	0	0
17:00	237	28.9	25.4	0	17	191	28	1	0	0	0	0	0	0	0
18:00	190	29.3	25.5	0	13	153	24	0	0	0	0	0	0	0	0
19:00	169	29.3	24.9	1	21	128	19	0	0	0	0	0	0	0	0
20:00	127	29.5	25.7	0	7	108	11	1	0	0	0	0	0	0	0
21:00	99	29.5	25.3	1	9	78	11	0	0	0	0	0	0	0	0
22:00	109	28.6	24.8	0	12	85	10	2	0	0	0	0	0	0	0
23:00	48	30.9	25.6	0	7	31	6	3	1	0	0	0	0	0	0
12H,7-19	2657	28.6	25.1	1	247	2149	257	2	1	0	0	0	0	0	0
16H,6-22	3091	28.9	25.1	3	284	2497	303	3	1	0	0	0	0	0	0
18H,6-24	3248	28.9	25.1	3	303	2613	319	8	2	0	0	0	0	0	0
24H,0-24	3330	28.9	25.2	3	307	2670	338	9	2	0	0	1	0	0	0

27062		GLOUCESTER		Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)							
				Channel: Eastbound											
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Sun 13-Jun-21</b>															
00:00	26	30	27.5	0	3	18	3	0	2	0	0	0	0	0	0
01:00	18	35.3	31.3	0	0	12	4	0	0	1	1	0	0	0	0
02:00	16	31.1	27.6	0	0	11	5	0	0	0	0	0	0	0	0
03:00	12	39.6	32.6	0	1	3	6	1	1	0	0	0	0	0	0
04:00	11	25.7	25	0	0	9	2	0	0	0	0	0	0	0	0
05:00	10	-	28	0	1	6	2	0	1	0	0	0	0	0	0
06:00	22	31.3	28.2	0	0	17	5	0	0	0	0	0	0	0	0
07:00	50	32	27.6	0	0	34	16	0	0	0	0	0	0	0	0
08:00	87	30.4	27.2	0	2	67	18	0	0	0	0	0	0	0	0
09:00	145	29.8	26.2	0	6	118	21	0	0	0	0	0	0	0	0
10:00	207	28.9	25.4	0	14	172	21	0	0	0	0	0	0	0	0
11:00	213	29.3	25.7	1	13	176	23	0	0	0	0	0	0	0	0
12:00	279	29.1	25.3	2	22	223	32	0	0	0	0	0	0	0	0
13:00	278	28.9	24.7	0	35	220	23	0	0	0	0	0	0	0	0
14:00	203	29.1	25.3	0	15	168	20	0	0	0	0	0	0	0	0
15:00	200	28.6	25.1	0	18	163	19	0	0	0	0	0	0	0	0
16:00	217	29.5	25.4	0	24	168	23	1	0	1	0	0	0	0	0
17:00	204	29.5	25.9	0	18	158	28	0	0	0	0	0	0	0	0
18:00	207	29.8	25.6	0	21	157	27	2	0	0	0	0	0	0	0
19:00	180	30	25.4	0	25	126	29	0	0	0	0	0	0	0	0
20:00	159	29.1	25.3	1	22	120	16	0	0	0	0	0	0	0	0
21:00	105	29.5	25.8	0	12	82	10	1	0	0	0	0	0	0	0
22:00	70	28.9	25.6	0	2	60	8	0	0	0	0	0	0	0	0
23:00	22	32.4	27.3	0	2	12	7	1	0	0	0	0	0	0	0
12H,7-19	2290	29.3	25.5	3	188	1824	271	3	0	1	0	0	0	0	0
16H,6-22	2756	29.3	25.5	4	247	2169	331	4	0	1	0	0	0	0	0
18H,6-24	2848	29.3	25.6	4	251	2241	346	5	0	1	0	0	0	0	0
24H,0-24	2941	29.5	25.7	4	256	2300	368	6	4	2	1	0	0	0	0

27062		GLOUCESTER		Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)							
				Channel: Eastbound											
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Mon 14-Jun-21</b>															
00:00	9	-	28.9	0	0	5	4	0	0	0	0	0	0	0	0
01:00	7	-	26.7	0	0	6	1	0	0	0	0	0	0	0	0
02:00	5	-	27.6	0	1	2	2	0	0	0	0	0	0	0	0
03:00	9	-	28.9	0	0	4	5	0	0	0	0	0	0	0	0
04:00	5	-	23.2	0	0	5	0	0	0	0	0	0	0	0	0
05:00	30	30.6	26.7	0	3	20	6	1	0	0	0	0	0	0	0
06:00	65	30.2	26.2	0	7	47	11	0	0	0	0	0	0	0	0
07:00	202	29.1	25.4	0	14	169	19	0	0	0	0	0	0	0	0
08:00	270	29.1	25.1	0	30	215	25	0	0	0	0	0	0	0	0
09:00	222	29.3	25.1	0	30	163	29	0	0	0	0	0	0	0	0
10:00	160	29.1	24.6	0	25	120	14	0	0	1	0	0	0	0	0
11:00	211	28.9	25.3	1	15	174	21	0	0	0	0	0	0	0	0
12:00	215	29.5	25.5	2	14	172	26	0	1	0	0	0	0	0	0
13:00	209	28.6	25.1	0	22	164	23	0	0	0	0	0	0	0	0
14:00	267	27.5	23.7	1	43	209	14	0	0	0	0	0	0	0	0
15:00	299	27.5	23.8	1	41	239	18	0	0	0	0	0	0	0	0
16:00	325	28	24	0	45	264	14	2	0	0	0	0	0	0	0
17:00	363	28	24.1	0	54	281	28	0	0	0	0	0	0	0	0
18:00	291	28.6	25.5	0	21	245	24	0	1	0	0	0	0	0	0
19:00	204	28.6	24.9	1	22	160	21	0	0	0	0	0	0	0	0
20:00	147	29.1	25	0	12	119	16	0	0	0	0	0	0	0	0
21:00	86	30	25.7	1	7	64	13	1	0	0	0	0	0	0	0
22:00	49	30.2	25.7	0	5	35	9	0	0	0	0	0	0	0	0
23:00	33	29.8	27.2	0	1	27	3	2	0	0	0	0	0	0	0
12H,7-19	3034	28.6	24.7	5	354	2415	255	2	2	1	0	0	0	0	0
16H,6-22	3536	28.6	24.8	7	402	2805	316	3	2	1	0	0	0	0	0
18H,6-24	3618	28.6	24.8	7	408	2867	328	5	2	1	0	0	0	0	0
24H,0-24	3683	28.9	24.8	7	412	2909	346	6	2	1	0	0	0	0	0

27062		GLOUCESTER		Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)								
				Channel: Eastbound												
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76	
<b>Tue 15-Jun-21</b>																
00:00	8	-	29.6	0	0	5	3	0	0	0	0	0	0	0	0	
01:00	1	-	26.3	0	0	1	0	0	0	0	0	0	0	0	0	
02:00	6	-	27.9	0	0	5	1	0	0	0	0	0	0	0	0	
03:00	13	32.7	28.9	0	0	8	5	0	0	0	0	0	0	0	0	
04:00	6	-	26.9	0	0	4	2	0	0	0	0	0	0	0	0	
05:00	22	30	26.1	0	2	16	3	1	0	0	0	0	0	0	0	
06:00	67	31.5	26.5	0	3	51	13	0	0	0	0	0	0	0	0	
07:00	192	29.8	26	0	10	154	28	0	0	0	0	0	0	0	0	
08:00	278	28	24.6	0	26	241	11	0	0	0	0	0	0	0	0	
09:00	194	28.6	25.5	0	9	164	21	0	0	0	0	0	0	0	0	
10:00	177	29.8	25.8	0	17	133	27	0	0	0	0	0	0	0	0	
11:00	195	28.9	24.7	0	21	160	14	0	0	0	0	0	0	0	0	
12:00	221	28.2	24.9	1	17	186	16	1	0	0	0	0	0	0	0	
13:00	246	28.4	25.1	0	19	199	28	0	0	0	0	0	0	0	0	
14:00	274	27.7	24	3	45	204	20	2	0	0	0	0	0	0	0	
15:00	330	28.2	24.8	0	25	285	20	0	0	0	0	0	0	0	0	
16:00	350	28	24.2	0	45	286	18	1	0	0	0	0	0	0	0	
17:00	383	27.7	24.5	0	48	305	26	4	0	0	0	0	0	0	0	
18:00	240	29.1	25.4	0	26	192	18	0	1	0	3	0	0	0	0	
19:00	195	29.1	24.9	0	33	141	21	0	0	0	0	0	0	0	0	
20:00	173	29.8	26	0	10	139	22	1	1	0	0	0	0	0	0	
21:00	117	29.3	25	0	17	86	13	1	0	0	0	0	0	0	0	
22:00	70	29.8	26.6	0	2	59	9	0	0	0	0	0	0	0	0	
23:00	34	29.8	26.8	0	0	29	5	0	0	0	0	0	0	0	0	
12H,7-19	3080	28.4	24.9	4	308	2509	247	8	1	0	3	0	0	0	0	
16H,6-22	3632	28.6	24.9	4	371	2926	316	10	2	0	3	0	0	0	0	
18H,6-24	3736	28.6	25	4	373	3014	330	10	2	0	3	0	0	0	0	
24H,0-24	3792	28.6	25	4	375	3053	344	11	2	0	3	0	0	0	0	

27062		GLOUCESTER		Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)								
				Channel: Eastbound												
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76	
<b>Wed 16-Jun-21</b>																
00:00	14	34	29.2	0	1	8	4	1	0	0	0	0	0	0	0	
01:00	2	-	28.5	0	0	1	1	0	0	0	0	0	0	0	0	
02:00	6	-	27.3	0	0	4	2	0	0	0	0	0	0	0	0	
03:00	8	-	26.4	0	1	5	1	1	0	0	0	0	0	0	0	
04:00	10	-	25.1	0	0	10	0	0	0	0	0	0	0	0	0	
05:00	27	32.7	27.4	0	2	17	7	1	0	0	0	0	0	0	0	
06:00	55	33.6	27.4	0	2	39	14	0	0	0	0	0	0	0	0	
07:00	189	28.4	23.6	3	38	135	13	0	0	0	0	0	0	0	0	
08:00	275	28.6	24.4	1	38	209	26	1	0	0	0	0	0	0	0	
09:00	210	29.3	25.3	0	23	163	23	0	1	0	0	0	0	0	0	
10:00	189	28.6	25	2	11	159	16	1	0	0	0	0	0	0	0	
11:00	185	28	24.7	0	21	153	11	0	0	0	0	0	0	0	0	
12:00	254	27.1	23.1	0	63	179	12	0	0	0	0	0	0	0	0	
13:00	204	28	24.6	1	13	175	15	0	0	0	0	0	0	0	0	
14:00	275	28.4	25.1	0	12	245	18	0	0	0	0	0	0	0	0	
15:00	329	28.2	24.8	0	31	276	18	4	0	0	0	0	0	0	0	
16:00	351	26.6	23	0	72	265	14	0	0	0	0	0	0	0	0	
17:00	373	28.4	25.2	1	30	315	27	0	0	0	0	0	0	0	0	
18:00	297	29.5	25.7	0	20	237	38	2	0	0	0	0	0	0	0	
19:00	217	29.3	25.2	0	20	173	24	0	0	0	0	0	0	0	0	
20:00	169	29.5	25.8	0	14	132	21	1	0	1	0	0	0	0	0	
21:00	122	29.1	25.5	0	7	102	13	0	0	0	0	0	0	0	0	
22:00	68	30	25.6	0	2	55	11	0	0	0	0	0	0	0	0	
23:00	28	32.7	27.7	0	2	21	5	0	0	0	0	0	0	0	0	
12H,7-19	3131	28.2	24.5	8	372	2511	231	8	1	0	0	0	0	0	0	
16H,6-22	3694	28.4	24.7	8	415	2957	303	9	1	1	0	0	0	0	0	
18H,6-24	3790	28.4	24.7	8	419	3033	319	9	1	1	0	0	0	0	0	
24H,0-24	3857	28.6	24.8	8	423	3078	334	12	1	1	0	0	0	0	0	

27062		GLOUCESTER		Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)							
				Channel: Eastbound											
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Thu 17-Jun-21</b>															
00:00	11	32.9	30.1	0	0	7	3	0	1	0	0	0	0	0	0
01:00	7	-	29.9	0	1	2	4	0	0	0	0	0	0	0	0
02:00	5	-	27	0	0	4	1	0	0	0	0	0	0	0	0
03:00	6	-	25.6	0	0	4	2	0	0	0	0	0	0	0	0
04:00	9	-	27.3	0	1	6	1	1	0	0	0	0	0	0	0
05:00	26	29.3	26.6	0	0	24	1	1	0	0	0	0	0	0	0
06:00	86	30.9	27.7	1	4	58	22	1	0	0	0	0	0	0	0
07:00	179	29.8	26.5	0	3	149	27	0	0	0	0	0	0	0	0
08:00	285	28.4	25.5	0	12	252	21	0	0	0	0	0	0	0	0
09:00	182	27.7	24.7	1	16	149	15	1	0	0	0	0	0	0	0
10:00	160	28.6	24.2	2	28	115	15	0	0	0	0	0	0	0	0
11:00	187	27.3	24.1	0	19	157	11	0	0	0	0	0	0	0	0
12:00	242	27.3	23.5	1	36	198	7	0	0	0	0	0	0	0	0
13:00	240	28.6	25	0	22	194	24	0	0	0	0	0	0	0	0
14:00	269	27.7	24.4	0	30	223	14	1	1	0	0	0	0	0	0
15:00	318	27.1	23.7	0	54	243	20	0	1	0	0	0	0	0	0
16:00	357	26.8	23.4	2	58	284	13	0	0	0	0	0	0	0	0
17:00	344	27.3	23.4	1	50	284	9	0	0	0	0	0	0	0	0
18:00	279	29.5	25.4	0	29	215	34	0	1	0	0	0	0	0	0
19:00	243	28.6	24.9	3	19	202	19	0	0	0	0	0	0	0	0
20:00	194	28.9	24.7	0	22	150	22	0	0	0	0	0	0	0	0
21:00	107	29.1	24.3	0	21	77	9	0	0	0	0	0	0	0	0
22:00	72	30.4	26.8	0	2	57	12	1	0	0	0	0	0	0	0
23:00	21	33.1	27.7	0	2	13	5	1	0	0	0	0	0	0	0
12H,7-19	3042	28.2	24.4	7	357	2463	210	2	3	0	0	0	0	0	0
16H,6-22	3672	28.2	24.5	11	423	2950	282	3	3	0	0	0	0	0	0
18H,6-24	3765	28.4	24.6	11	427	3020	299	5	3	0	0	0	0	0	0
24H,0-24	3829	28.4	24.6	11	429	3067	311	7	4	0	0	0	0	0	0

27062 GLOUCESTER Site No: 27062001 Location Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)  
 Channel: Eastbound

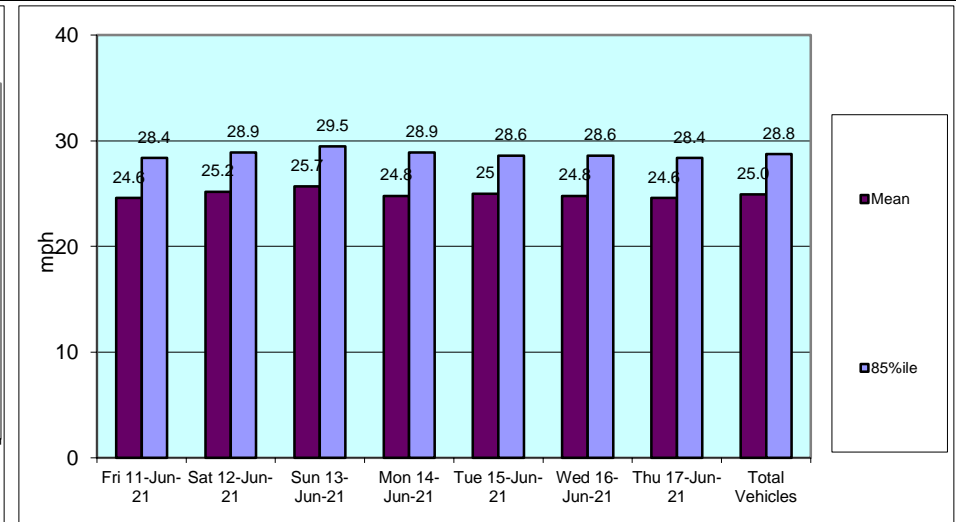
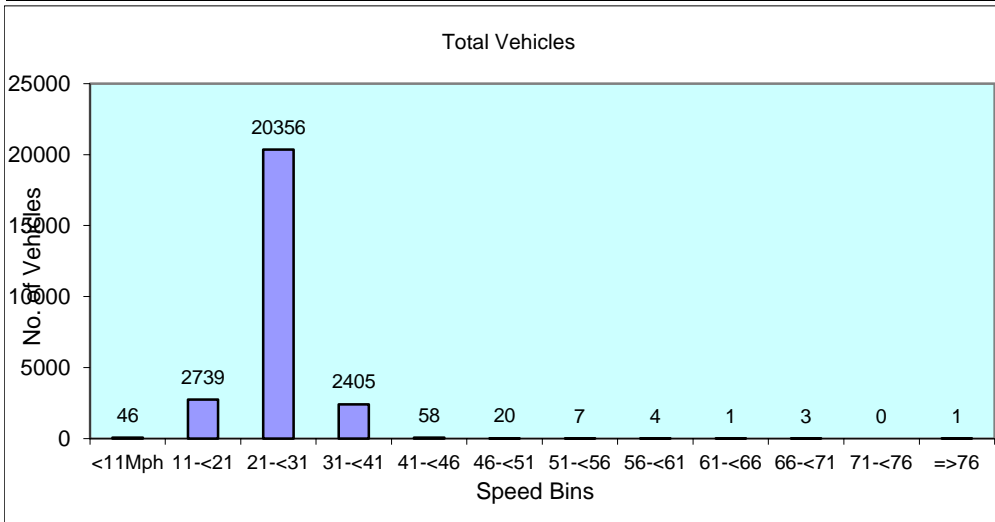
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
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**Daily Totals**

Fri 11-Jun-21	4208	28.4	24.6	9	537	3279	364	7	5	3	0	0	3	0	1
Sat 12-Jun-21	3330	28.9	25.2	3	307	2670	338	9	2	0	0	1	0	0	0
Sun 13-Jun-21	2941	29.5	25.7	4	256	2300	368	6	4	2	1	0	0	0	0
Mon 14-Jun-21	3683	28.9	24.8	7	412	2909	346	6	2	1	0	0	0	0	0
Tue 15-Jun-21	3792	28.6	25	4	375	3053	344	11	2	0	3	0	0	0	0
Wed 16-Jun-21	3857	28.6	24.8	8	423	3078	334	12	1	1	0	0	0	0	0
Thu 17-Jun-21	3829	28.4	24.6	11	429	3067	311	7	4	0	0	0	0	0	0

**Total Vehicles**

[--]	25640	28.8	25.0	46	2739	20356	2405	58	20	7	4	1	3	0	1
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27062	GLOUCESTER			Site No: 27062001	Location	Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)			
	Channel: Eastbound								
TIME PERIOD	Fri 11/06/21	Sat 12/06/21	Sun 13/06/21	Mon 14/06/21	Tue 15/06/21	Wed 16/06/21	Thu 17/06/21	5-Day Av	7-Day Av
<b>Week Begin: 11-Jun-21</b>									
00:00	13	32	26	9	8	14	11	11	16
01:00	6	8	18	7	1	2	7	5	7
02:00	3	7	16	5	6	6	5	5	7
03:00	8	7	12	9	13	8	6	9	9
04:00	5	8	11	5	6	10	9	7	8
05:00	32	20	10	30	22	27	26	27	24
06:00	63	39	22	65	67	55	86	67	57
07:00	197	74	50	202	192	189	179	192	155
08:00	286	123	87	270	278	275	285	279	229
09:00	233	208	145	222	194	210	182	208	199
10:00	183	211	207	160	177	189	160	174	184
11:00	197	267	213	211	195	185	187	195	208
12:00	254	319	279	215	221	254	242	237	255
13:00	259	300	278	209	246	204	240	232	248
14:00	346	262	203	267	274	275	269	286	271
15:00	384	215	200	299	330	329	318	332	296
16:00	376	251	217	325	350	351	357	352	318
17:00	381	237	204	363	383	373	344	369	326
18:00	325	190	207	291	240	297	279	286	261
19:00	246	169	180	204	195	217	243	221	208
20:00	174	127	159	147	173	169	194	171	163
21:00	99	99	105	86	117	122	107	106	105
22:00	85	109	70	49	70	68	72	69	75
23:00	53	48	22	33	34	28	21	34	34
12H,7-19	3421	2657	2290	3034	3080	3131	3042	3142	2951
16H,6-22	4003	3091	2756	3536	3632	3694	3672	3707	3483
18H,6-24	4141	3248	2848	3618	3736	3790	3765	3810	3592
24H,0-24	4208	3330	2941	3683	3792	3857	3829	3874	3663
Am	08:00	11:00	11:00	08:00	08:00	08:00	08:00		
Peak	286	267	213	270	278	275	285		
Pm	15:00	12:00	12:00	17:00	17:00	17:00	16:00		
Peak	384	319	279	363	383	373	357		

27062

GLOUCESTER

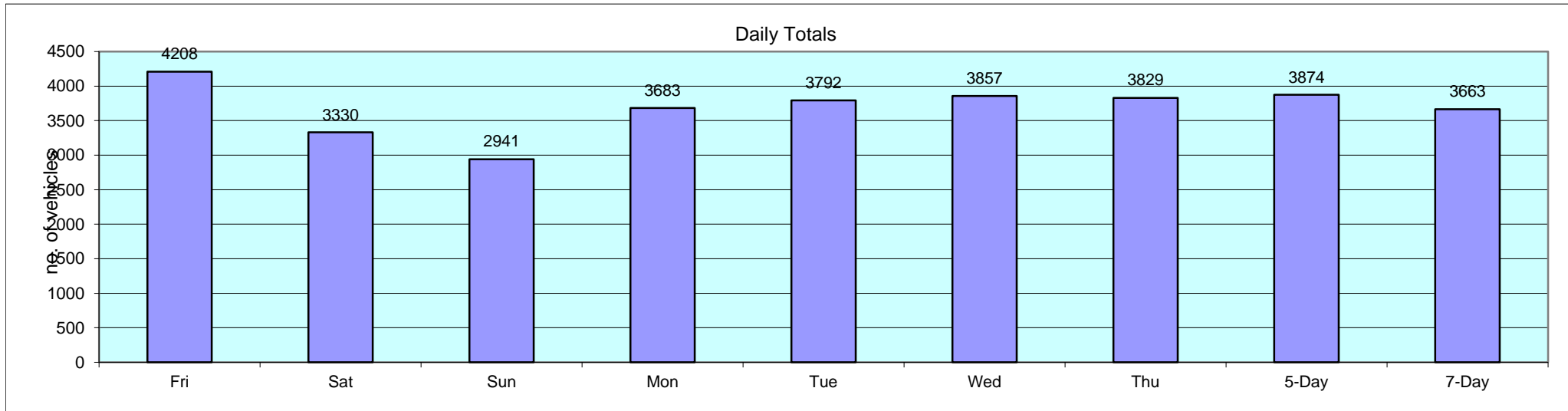
Site No: 27062001

Location

Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)

Channel: Eastbound

TIME PERIOD	Fri 11/06/21	Sat 12/06/21	Sun 13/06/21	Mon 14/06/21	Tue 15/06/21	Wed 16/06/21	Thu 17/06/21	5-Day Av	7-Day Av
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27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Westbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
Fri 11-Jun-21																
00:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0		
01:00	8	0	7	1	0	0	0	0	0	0	0	0	0	0		
02:00	5	0	4	0	0	1	0	0	0	0	0	0	0	0		
03:00	3	0	2	1	0	0	0	0	0	0	0	0	0	0		
04:00	9	0	9	0	0	0	0	0	0	0	0	0	0	0		
05:00	60	4	49	7	0	0	0	0	0	0	0	0	0	0		
06:00	151	5	131	12	0	2	0	0	1	0	0	0	0	0		
07:00	274	4	224	42	0	0	3	0	1	0	0	0	0	0		
08:00	351	10	298	42	0	1	0	0	0	0	0	0	0	0		
09:00	218	1	191	24	0	1	1	0	0	0	0	0	0	0		
10:00	211	2	182	26	0	0	0	0	1	0	0	0	0	0		
11:00	229	2	199	25	0	0	2	1	0	0	0	0	0	0		
12:00	242	0	215	25	1	0	1	0	0	0	0	0	0	0		
13:00	236	3	209	23	0	0	0	0	1	0	0	0	0	0		
14:00	341	2	295	37	0	1	6	0	0	0	0	0	0	0		
15:00	380	2	335	39	0	2	1	0	0	0	1	0	0	0		
16:00	307	3	268	33	0	0	1	0	2	0	0	0	0	0		
17:00	330	6	290	32	0	0	2	0	0	0	0	0	0	0		
18:00	259	5	231	20	0	0	2	0	1	0	0	0	0	0		
19:00	202	2	190	5	0	0	2	0	2	0	1	0	0	0		
20:00	147	4	135	6	0	0	2	0	0	0	0	0	0	0		
21:00	102	3	95	4	0	0	0	0	0	0	0	0	0	0		
22:00	68	1	64	3	0	0	0	0	0	0	0	0	0	0		
23:00	54	0	52	1	0	0	0	1	0	0	0	0	0	0		
12H,7-19	3378	40	2937	368	1	5	19	1	6	0	1	0	0	0		
16H,6-22	3980	54	3488	395	1	7	23	1	9	0	2	0	0	0		
18H,6-24	4102	55	3604	399	1	7	23	2	9	0	2	0	0	0		
24H,0-24	4193	59	3681	408	1	8	23	2	9	0	2	0	0	0		

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Westbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
<b>Sat 12-Jun-21</b>															
00:00	31	1	29	1	0	0	0	0	0	0	0	0	0	0	
01:00	12	0	11	1	0	0	0	0	0	0	0	0	0	0	
02:00	9	0	9	0	0	0	0	0	0	0	0	0	0	0	
03:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	
04:00	3	0	3	0	0	0	0	0	0	0	0	0	0	0	
05:00	26	3	23	0	0	0	0	0	0	0	0	0	0	0	
06:00	56	2	47	7	0	0	0	0	0	0	0	0	0	0	
07:00	99	1	88	10	0	0	0	0	0	0	0	0	0	0	
08:00	180	3	155	22	0	0	0	0	0	0	0	0	0	0	
09:00	239	3	211	20	0	1	3	0	0	0	1	0	0	0	
10:00	304	4	285	15	0	0	0	0	0	0	0	0	0	0	
11:00	275	8	243	20	0	0	4	0	0	0	0	0	0	0	
12:00	334	1	300	33	0	0	0	0	0	0	0	0	0	0	
13:00	266	2	251	12	0	0	1	0	0	0	0	0	0	0	
14:00	239	7	219	13	0	0	0	0	0	0	0	0	0	0	
15:00	228	5	208	15	0	0	0	0	0	0	0	0	0	0	
16:00	232	2	217	11	0	0	1	0	1	0	0	0	0	0	
17:00	200	2	181	16	0	0	0	0	1	0	0	0	0	0	
18:00	188	4	177	7	0	0	0	0	0	0	0	0	0	0	
19:00	165	1	154	9	0	0	1	0	0	0	0	0	0	0	
20:00	118	3	110	4	0	0	1	0	0	0	0	0	0	0	
21:00	93	4	87	2	0	0	0	0	0	0	0	0	0	0	
22:00	87	0	80	4	0	0	2	0	1	0	0	0	0	0	
23:00	47	1	43	2	0	0	1	0	0	0	0	0	0	0	
12H,7-19	2784	42	2535	194	0	1	9	0	2	0	1	0	0	0	
16H,6-22	3216	52	2933	216	0	1	11	0	2	0	1	0	0	0	
18H,6-24	3350	53	3056	222	0	1	14	0	3	0	1	0	0	0	
24H,0-24	3438	57	3137	225	0	1	14	0	3	0	1	0	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Westbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
<b>Sun 13-Jun-21</b>																
00:00	31	3	26	2	0	0	0	0	0	0	0	0	0	0		
01:00	14	0	13	1	0	0	0	0	0	0	0	0	0	0		
02:00	13	0	13	0	0	0	0	0	0	0	0	0	0	0		
03:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0		
04:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0		
05:00	19	1	16	2	0	0	0	0	0	0	0	0	0	0		
06:00	31	2	27	1	0	0	1	0	0	0	0	0	0	0		
07:00	55	4	44	7	0	0	0	0	0	0	0	0	0	0		
08:00	89	3	77	8	0	0	1	0	0	0	0	0	0	0		
09:00	169	4	153	11	0	0	0	0	0	0	0	0	0	1		
10:00	239	4	223	11	0	0	0	0	1	0	0	0	0	0		
11:00	262	4	246	12	0	0	0	0	0	0	0	0	0	0		
12:00	299	2	287	10	0	0	0	0	0	0	0	0	0	0		
13:00	303	5	288	8	0	0	1	0	1	0	0	0	0	0		
14:00	278	4	255	17	0	0	1	0	0	0	1	0	0	0		
15:00	210	5	190	13	0	0	0	1	1	0	0	0	0	0		
16:00	256	7	232	17	0	0	0	0	0	0	0	0	0	0		
17:00	236	3	220	12	0	0	0	0	1	0	0	0	0	0		
18:00	201	6	186	9	0	0	0	0	0	0	0	0	0	0		
19:00	174	3	164	7	0	0	0	0	0	0	0	0	0	0		
20:00	129	2	121	5	0	0	0	0	1	0	0	0	0	0		
21:00	103	6	89	8	0	0	0	0	0	0	0	0	0	0		
22:00	62	1	60	1	0	0	0	0	0	0	0	0	0	0		
23:00	16	0	16	0	0	0	0	0	0	0	0	0	0	0		
12H,7-19	2597	51	2401	135	0	0	3	1	4	0	1	0	0	1		
16H,6-22	3034	64	2802	156	0	0	4	1	5	0	1	0	0	1		
18H,6-24	3112	65	2878	157	0	0	4	1	5	0	1	0	0	1		
24H,0-24	3203	69	2960	162	0	0	4	1	5	0	1	0	0	1		

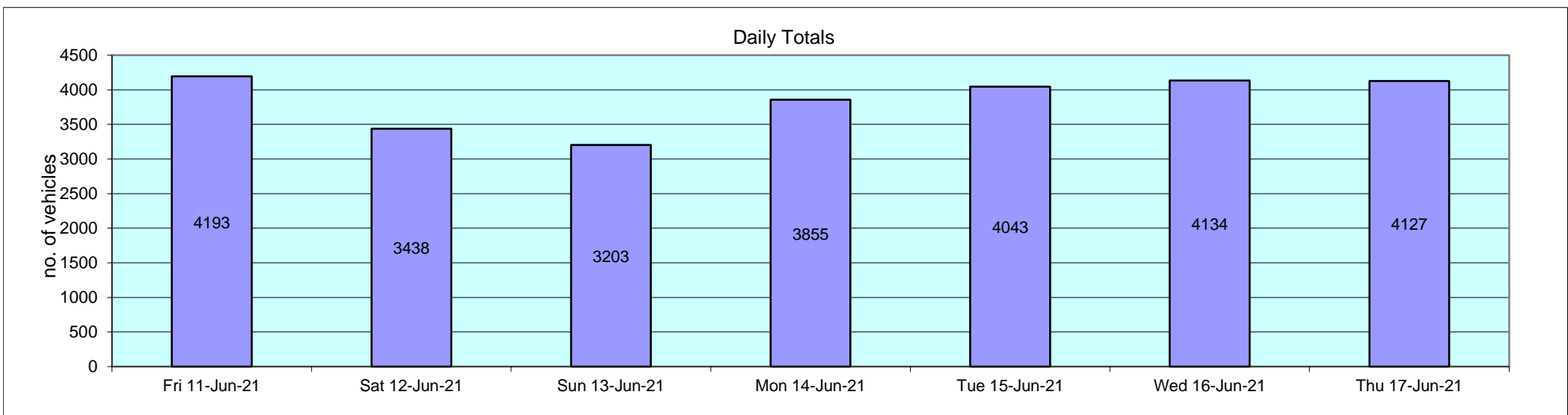
27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Westbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
<b>Mon 14-Jun-21</b>																
00:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0		
01:00	5	0	4	1	0	0	0	0	0	0	0	0	0	0		
02:00	2	0	1	0	0	1	0	0	0	0	0	0	0	0		
03:00	5	0	3	2	0	0	0	0	0	0	0	0	0	0		
04:00	9	3	5	1	0	0	0	0	0	0	0	0	0	0		
05:00	60	1	51	8	0	0	0	0	0	0	0	0	0	0		
06:00	154	5	129	20	0	0	0	0	0	0	0	0	0	0		
07:00	292	6	248	37	0	1	0	0	0	0	0	0	0	0		
08:00	323	8	285	30	0	0	0	0	0	0	0	0	0	0		
09:00	250	2	220	28	0	0	0	0	0	0	0	0	0	0		
10:00	199	1	172	26	0	0	0	0	0	0	0	0	0	0		
11:00	196	8	166	19	0	2	1	0	0	0	0	0	0	0		
12:00	223	4	198	19	0	0	1	0	1	0	0	0	0	0		
13:00	206	3	173	28	1	1	0	0	0	0	0	0	0	0		
14:00	251	6	218	23	0	0	3	0	1	0	0	0	0	0		
15:00	317	5	272	39	0	0	1	0	0	0	0	0	0	0		
16:00	319	7	280	31	0	0	0	1	0	0	0	0	0	0		
17:00	326	7	296	21	0	0	1	0	0	0	1	0	0	0		
18:00	236	8	209	19	0	0	0	0	0	0	0	0	0	0		
19:00	192	2	185	5	0	0	0	0	0	0	0	0	0	0		
20:00	117	5	107	5	0	0	0	0	0	0	0	0	0	0		
21:00	85	3	77	4	0	0	1	0	0	0	0	0	0	0		
22:00	48	2	45	1	0	0	0	0	0	0	0	0	0	0		
23:00	34	1	33	0	0	0	0	0	0	0	0	0	0	0		
12H,7-19	3138	65	2737	320	1	4	7	1	2	0	1	0	0	0		
16H,6-22	3686	80	3235	354	1	4	8	1	2	0	1	0	0	0		
18H,6-24	3768	83	3313	355	1	4	8	1	2	0	1	0	0	0		
24H,0-24	3855	87	3383	367	1	5	8	1	2	0	1	0	0	0		

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Westbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
Tue 15-Jun-21																
00:00	8	1	7	0	0	0	0	0	0	0	0	0	0	0		
01:00	4	0	2	2	0	0	0	0	0	0	0	0	0	0		
02:00	6	0	4	2	0	0	0	0	0	0	0	0	0	0		
03:00	6	0	5	0	0	0	1	0	0	0	0	0	0	0		
04:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0		
05:00	61	2	56	2	0	0	1	0	0	0	0	0	0	0		
06:00	149	7	123	17	0	2	0	0	0	0	0	0	0	0		
07:00	289	5	245	35	0	0	2	0	2	0	0	0	0	0		
08:00	357	8	318	30	0	1	0	0	0	0	0	0	0	0		
09:00	226	7	193	24	0	0	2	0	0	0	0	0	0	0		
10:00	175	2	156	16	0	1	0	0	0	0	0	0	0	0		
11:00	198	4	171	21	0	0	1	0	0	0	0	1	0	0		
12:00	242	3	211	25	1	0	1	0	1	0	0	0	0	0		
13:00	216	8	179	27	1	0	0	0	1	0	0	0	0	0		
14:00	276	4	244	27	0	0	0	0	1	0	0	0	0	0		
15:00	399	5	352	40	0	0	0	0	2	0	0	0	0	0		
16:00	331	6	282	42	0	0	0	1	0	0	0	0	0	0		
17:00	346	12	302	30	0	0	0	1	0	0	0	1	0	0		
18:00	218	6	195	15	0	0	2	0	0	0	0	0	0	0		
19:00	199	6	179	12	0	0	1	1	0	0	0	0	0	0		
20:00	149	5	137	6	0	0	1	0	0	0	0	0	0	0		
21:00	103	2	93	8	0	0	0	0	0	0	0	0	0	0		
22:00	48	1	45	2	0	0	0	0	0	0	0	0	0	0		
23:00	30	1	27	2	0	0	0	0	0	0	0	0	0	0		
12H,7-19	3273	70	2848	332	2	2	8	2	7	0	0	2	0	0		
16H,6-22	3873	90	3380	375	2	4	10	3	7	0	0	2	0	0		
18H,6-24	3951	92	3452	379	2	4	10	3	7	0	0	2	0	0		
24H,0-24	4043	95	3532	386	2	4	12	3	7	0	0	2	0	0		

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Westbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
<b>Wed 16-Jun-21</b>																
00:00	14	2	12	0	0	0	0	0	0	0	0	0	0	0	0	
01:00	8	1	5	2	0	0	0	0	0	0	0	0	0	0	0	
02:00	8	0	7	1	0	0	0	0	0	0	0	0	0	0	0	
03:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	0	
04:00	11	1	8	2	0	0	0	0	0	0	0	0	0	0	0	
05:00	60	3	52	4	0	1	0	0	0	0	0	0	0	0	0	
06:00	155	7	132	15	0	1	0	0	0	0	0	0	0	0	0	
07:00	303	6	263	34	0	0	0	0	0	0	0	0	0	0	0	
08:00	340	9	288	35	2	1	3	0	1	1	0	0	0	0	0	
09:00	250	5	217	25	0	1	2	0	0	0	0	0	0	0	0	
10:00	194	3	167	23	1	0	0	0	0	0	0	0	0	0	0	
11:00	212	1	192	17	0	1	1	0	0	0	0	0	0	0	0	
12:00	238	2	212	24	0	0	0	0	0	0	0	0	0	0	0	
13:00	243	3	205	31	0	0	1	0	2	0	0	1	0	0	0	
14:00	273	8	242	22	0	0	1	0	0	0	0	0	0	0	0	
15:00	345	5	299	39	0	0	0	1	0	0	0	0	0	0	1	
16:00	332	5	287	35	0	0	1	1	3	0	0	0	0	0	0	
17:00	336	2	309	23	0	1	0	1	0	0	0	0	0	0	0	
18:00	252	6	230	16	0	0	0	0	0	0	0	0	0	0	0	
19:00	196	3	175	17	0	0	1	0	0	0	0	0	0	0	0	
20:00	159	5	140	13	0	0	1	0	0	0	0	0	0	0	0	
21:00	97	4	85	7	0	0	1	0	0	0	0	0	0	0	0	
22:00	66	2	62	2	0	0	0	0	0	0	0	0	0	0	0	
23:00	35	1	32	1	0	0	1	0	0	0	0	0	0	0	0	
12H,7-19	3318	55	2911	324	3	4	9	3	6	1	0	1	0	1	1	
16H,6-22	3925	74	3443	376	3	5	12	3	6	1	0	1	0	1	1	
18H,6-24	4026	77	3537	379	3	5	13	3	6	1	0	1	0	1	1	
24H,0-24	4134	84	3627	389	3	6	13	3	6	1	0	1	0	1	1	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Westbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
<b>Thu 17-Jun-21</b>																
00:00	10	1	9	0	0	0	0	0	0	0	0	0	0	0	0	
01:00	8	0	4	4	0	0	0	0	0	0	0	0	0	0	0	
02:00	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	
03:00	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
04:00	12	1	9	2	0	0	0	0	0	0	0	0	0	0	0	
05:00	63	3	54	6	0	0	0	0	0	0	0	0	0	0	0	
06:00	152	4	129	17	0	2	0	0	0	0	0	0	0	0	0	
07:00	294	4	240	44	0	0	4	0	2	0	0	0	0	0	0	
08:00	343	6	301	30	0	1	3	0	2	0	0	0	0	0	0	
09:00	235	7	203	22	0	1	2	0	0	0	0	0	0	0	0	
10:00	210	3	182	24	0	1	0	0	0	0	0	0	0	0	0	
11:00	253	2	230	19	0	0	2	0	0	0	0	0	0	0	0	
12:00	208	6	181	19	0	1	0	0	1	0	0	0	0	0	0	
13:00	229	1	193	35	0	0	0	0	0	0	0	0	0	0	0	
14:00	245	6	212	24	0	0	0	0	2	0	1	0	0	0	0	
15:00	402	4	358	35	0	0	2	1	2	0	0	0	0	0	0	
16:00	338	4	286	44	0	1	1	0	2	0	0	0	0	0	0	
17:00	328	4	299	24	0	0	1	0	0	0	0	0	0	0	0	
18:00	238	5	217	16	0	0	0	0	0	0	0	0	0	0	0	
19:00	204	3	189	9	0	0	3	0	0	0	0	0	0	0	0	
20:00	175	4	153	17	0	0	1	0	0	0	0	0	0	0	0	
21:00	91	3	82	5	0	0	1	0	0	0	0	0	0	0	0	
22:00	50	0	48	1	0	0	0	0	1	0	0	0	0	0	0	
23:00	31	1	30	0	0	0	0	0	0	0	0	0	0	0	0	
12H,7-19	3323	52	2902	336	0	5	15	1	11	0	1	0	0	0	0	
16H,6-22	3945	66	3455	384	0	7	20	1	11	0	1	0	0	0	0	
18H,6-24	4026	67	3533	385	0	7	20	1	12	0	1	0	0	0	0	
24H,0-24	4127	72	3617	397	0	7	20	1	12	0	1	0	0	0	0	

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	FIVE OR LESS AXLE		SEVEN OR MORE AXLE	
											SIX OR MORE AXLE ARTIC	SIX AXLE MULTI-TRAILER ARTIC		
<b>Daily Totals</b>														
Fri 11-Jun-21	4193	59	3681	408	1	8	23	2	9	0	2	0	0	0
Sat 12-Jun-21	3438	57	3137	225	0	1	14	0	3	0	1	0	0	0
Sun 13-Jun-21	3203	69	2960	162	0	0	4	1	5	0	1	0	0	1
Mon 14-Jun-21	3855	87	3383	367	1	5	8	1	2	0	1	0	0	0
Tue 15-Jun-21	4043	95	3532	386	2	4	12	3	7	0	0	2	0	0
Wed 16-Jun-21	4134	84	3627	389	3	6	13	3	6	1	0	1	0	1
Thu 17-Jun-21	4127	72	3617	397	0	7	20	1	12	0	1	0	0	0
<b>Total Vehicles</b>														
[--]	26993	523	23937	2334	7	31	94	11	44	1	6	3	0	2



Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Fri 11-Jun-21</b>															
00:00	6	-	26.8	0	0	4	2	0	0	0	0	0	0	0	0
01:00	8	-	29.4	0	0	4	4	0	0	0	0	0	0	0	0
02:00	5	-	26.4	0	0	4	1	0	0	0	0	0	0	0	0
03:00	3	-	39	0	0	1	1	0	0	0	1	0	0	0	0
04:00	9	-	28.7	0	1	3	5	0	0	0	0	0	0	0	0
05:00	60	33.6	29.5	0	3	31	25	1	0	0	0	0	0	0	0
06:00	151	32.9	28.7	0	9	86	55	0	1	0	0	0	0	0	0
07:00	274	30	26.8	1	12	213	48	0	0	0	0	0	0	0	0
08:00	351	29.3	25.8	0	23	283	44	1	0	0	0	0	0	0	0
09:00	218	29.5	26.7	0	5	185	28	0	0	0	0	0	0	0	0
10:00	211	29.8	26.5	0	14	165	32	0	0	0	0	0	0	0	0
11:00	229	29.8	26.1	0	14	183	31	1	0	0	0	0	0	0	0
12:00	242	30.4	27.1	1	11	181	49	0	0	0	0	0	0	0	0
13:00	236	29.5	26.3	0	14	191	31	0	0	0	0	0	0	0	0
14:00	341	28.9	25.6	2	22	285	32	0	0	0	0	0	0	0	0
15:00	380	29.5	26	0	21	312	47	0	0	0	0	0	0	0	0
16:00	307	29.5	26.5	1	11	252	43	0	0	0	0	0	0	0	0
17:00	330	28.6	25.1	2	23	276	29	0	0	0	0	0	0	0	0
18:00	259	29.5	25.9	1	26	196	36	0	0	0	0	0	0	0	0
19:00	202	30.6	27.3	0	5	156	41	0	0	0	0	0	0	0	0
20:00	147	30	26	0	13	111	23	0	0	0	0	0	0	0	0
21:00	102	31.5	27.5	1	6	66	25	4	0	0	0	0	0	0	0
22:00	68	31.3	26.3	1	2	54	11	0	0	0	0	0	0	0	0
23:00	54	32.9	27.6	0	2	36	15	0	1	0	0	0	0	0	0
12H,7-19	3378	29.5	26.1	8	196	2722	450	2	0	0	0	0	0	0	0
16H,6-22	3980	30	26.3	9	229	3141	594	6	1	0	0	0	0	0	0
18H,6-24	4102	30	26.3	10	233	3231	620	6	2	0	0	0	0	0	0
24H,0-24	4193	30	26.4	10	237	3278	658	7	2	0	1	0	0	0	0







Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Tue 15-Jun-21</b>															
00:00	8	-	27.9	0	0	5	3	0	0	0	0	0	0	0	0
01:00	4	-	33.7	0	0	0	4	0	0	0	0	0	0	0	0
02:00	6	-	30.9	0	0	4	2	0	0	0	0	0	0	0	0
03:00	6	-	23.6	0	2	3	1	0	0	0	0	0	0	0	0
04:00	7	-	28.1	0	0	4	3	0	0	0	0	0	0	0	0
05:00	61	33.1	28.5	0	5	34	22	0	0	0	0	0	0	0	0
06:00	149	33.1	29.2	0	5	85	57	2	0	0	0	0	0	0	0
07:00	289	30.4	28.2	1	7	215	60	2	4	0	0	0	0	0	0
08:00	357	29.5	26.1	1	26	283	46	1	0	0	0	0	0	0	0
09:00	226	30	26.8	0	10	181	35	0	0	0	0	0	0	0	0
10:00	175	29.5	26.5	0	7	145	23	0	0	0	0	0	0	0	0
11:00	198	29.5	25	1	26	149	22	0	0	0	0	0	0	0	0
12:00	242	29.1	25.3	0	26	191	24	1	0	0	0	0	0	0	0
13:00	216	29.5	26.3	0	11	176	29	0	0	0	0	0	0	0	0
14:00	276	28.6	25.4	0	20	231	25	0	0	0	0	0	0	0	0
15:00	399	28.2	24.9	0	25	345	29	0	0	0	0	0	0	0	0
16:00	331	29.1	25.2	0	26	267	38	0	0	0	0	0	0	0	0
17:00	346	28	24.6	0	37	294	15	0	0	0	0	0	0	0	0
18:00	218	29.8	25.2	0	24	163	30	1	0	0	0	0	0	0	0
19:00	199	29.5	25.5	0	21	153	24	1	0	0	0	0	0	0	0
20:00	149	29.8	25.5	0	16	111	22	0	0	0	0	0	0	0	0
21:00	103	31.5	28	0	3	72	28	0	0	0	0	0	0	0	0
22:00	48	29.1	26	0	1	43	4	0	0	0	0	0	0	0	0
23:00	30	35.3	28.9	0	1	21	7	0	0	1	0	0	0	0	0
12H,7-19	3273	29.3	25.7	3	245	2640	376	5	4	0	0	0	0	0	0
16H,6-22	3873	29.5	25.9	3	290	3061	507	8	4	0	0	0	0	0	0
18H,6-24	3951	29.5	25.9	3	292	3125	518	8	4	1	0	0	0	0	0
24H,0-24	4043	29.8	26	3	299	3175	553	8	4	1	0	0	0	0	0



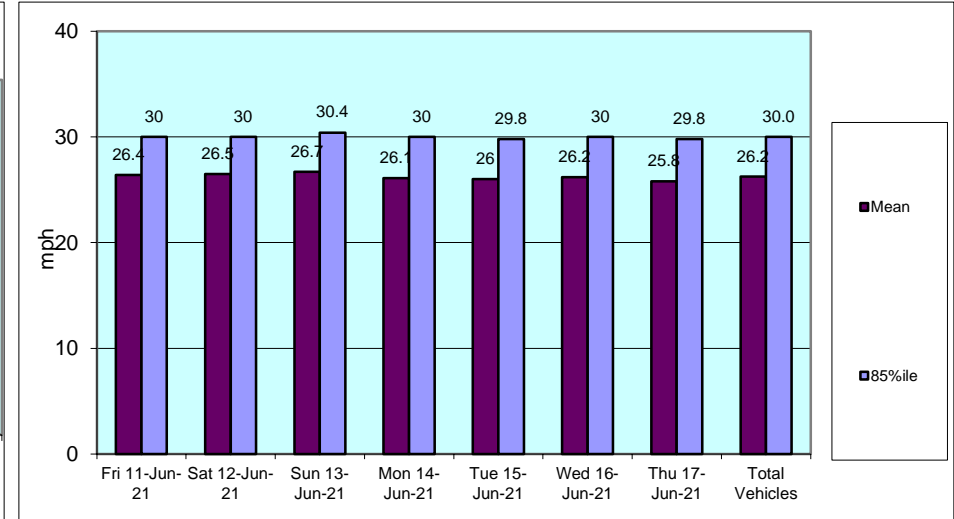
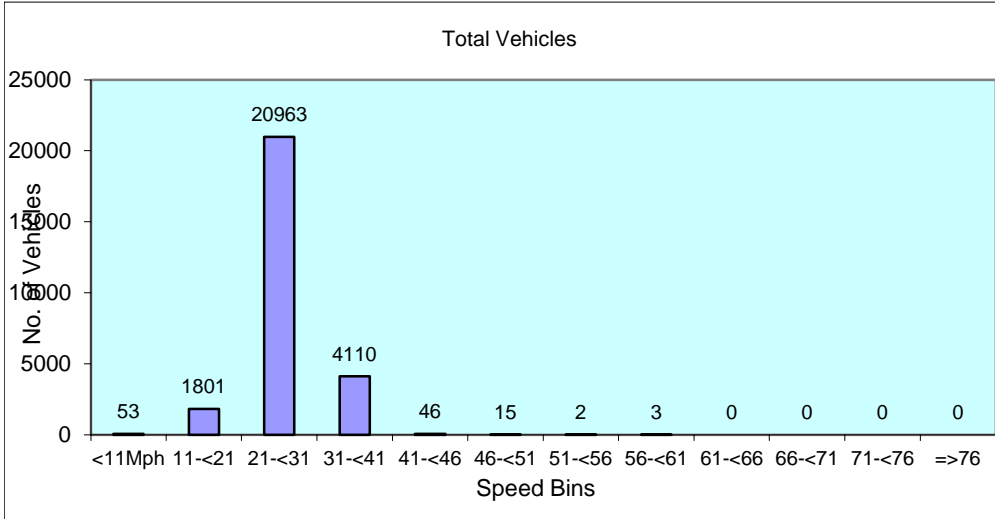
27062 GLOUCESTER Site No: 27062001 Location Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)  
Channel: Westbound

Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Thu 17-Jun-21</b>															
00:00	10	-	28.5	0	1	4	5	0	0	0	0	0	0	0	0
01:00	8	-	29	0	0	4	4	0	0	0	0	0	0	0	0
02:00	5	-	28.8	0	0	2	3	0	0	0	0	0	0	0	0
03:00	3	-	27.1	0	0	2	1	0	0	0	0	0	0	0	0
04:00	12	32.4	28.6	0	1	4	7	0	0	0	0	0	0	0	0
05:00	63	32.2	28.6	0	2	38	23	0	0	0	0	0	0	0	0
06:00	152	33.8	30.1	0	3	72	74	2	1	0	0	0	0	0	0
07:00	294	31.1	27.7	0	9	218	67	0	0	0	0	0	0	0	0
08:00	343	29.1	26.1	1	17	294	31	0	0	0	0	0	0	0	0
09:00	235	29.5	24.8	1	27	180	27	0	0	0	0	0	0	0	0
10:00	210	29.5	25.7	0	16	168	26	0	0	0	0	0	0	0	0
11:00	253	29.1	25.5	2	11	215	25	0	0	0	0	0	0	0	0
12:00	208	29.5	25.5	1	22	155	30	0	0	0	0	0	0	0	0
13:00	229	28.9	25.3	0	17	196	16	0	0	0	0	0	0	0	0
14:00	245	28.9	25.3	0	19	202	24	0	0	0	0	0	0	0	0
15:00	402	27.7	24.4	0	36	353	13	0	0	0	0	0	0	0	0
16:00	338	28	24.3	2	42	274	20	0	0	0	0	0	0	0	0
17:00	328	29.1	25.3	0	35	260	33	0	0	0	0	0	0	0	0
18:00	238	29.3	26.1	0	12	198	28	0	0	0	0	0	0	0	0
19:00	204	29.5	25.6	0	21	156	27	0	0	0	0	0	0	0	0
20:00	175	30	25.9	0	20	128	26	1	0	0	0	0	0	0	0
21:00	91	31.5	26.8	0	6	57	28	0	0	0	0	0	0	0	0
22:00	50	30	26.4	0	2	40	8	0	0	0	0	0	0	0	0
23:00	31	33.3	30.9	0	0	14	14	2	1	0	0	0	0	0	0
12H,7-19	3323	29.1	25.5	7	263	2713	340	0	0	0	0	0	0	0	0
16H,6-22	3945	29.5	25.7	7	313	3126	495	3	1	0	0	0	0	0	0
18H,6-24	4026	29.5	25.7	7	315	3180	517	5	2	0	0	0	0	0	0
24H,0-24	4127	29.8	25.8	7	319	3234	560	5	2	0	0	0	0	0	0

Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
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Daily Totals															
Fri 11-Jun-21	4193	30	26.4	10	237	3278	658	7	2	0	1	0	0	0	0
Sat 12-Jun-21	3438	30	26.5	6	183	2683	556	7	2	1	0	0	0	0	0
Sun 13-Jun-21	3203	30.4	26.7	8	172	2446	569	7	1	0	0	0	0	0	0
Mon 14-Jun-21	3855	30	26.1	7	285	2967	588	5	1	0	2	0	0	0	0
Tue 15-Jun-21	4043	29.8	26	3	299	3175	553	8	4	1	0	0	0	0	0
Wed 16-Jun-21	4134	30	26.2	12	306	3180	626	7	3	0	0	0	0	0	0
Thu 17-Jun-21	4127	29.8	25.8	7	319	3234	560	5	2	0	0	0	0	0	0

Total Vehicles															
[--]	26993	30.0	26.2	53	1801	20963	4110	46	15	2	3	0	0	0	0



27062	GLOUCESTER			Site No: 27062001	Location	Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)			
	Channel: Westbound								
TIME PERIOD	Fri 11/06/21	Sat 12/06/21	Sun 13/06/21	Mon 14/06/21	Tue 15/06/21	Wed 16/06/21	Thu 17/06/21	5-Day Av	7-Day Av
<b>Week Begin: 11-Jun-21</b>									
00:00	6	31	31	6	8	14	10	9	15
01:00	8	12	14	5	4	8	8	7	8
02:00	5	9	13	2	6	8	5	5	7
03:00	3	7	7	5	6	7	3	5	5
04:00	9	3	7	9	7	11	12	10	8
05:00	60	26	19	60	61	60	63	61	50
06:00	151	56	31	154	149	155	152	152	121
07:00	274	99	55	292	289	303	294	290	229
08:00	351	180	89	323	357	340	343	343	283
09:00	218	239	169	250	226	250	235	236	227
10:00	211	304	239	199	175	194	210	198	219
11:00	229	275	262	196	198	212	253	218	232
12:00	242	334	299	223	242	238	208	231	255
13:00	236	266	303	206	216	243	229	226	243
14:00	341	239	278	251	276	273	245	277	272
15:00	380	228	210	317	399	345	402	369	326
16:00	307	232	256	319	331	332	338	325	302
17:00	330	200	236	326	346	336	328	333	300
18:00	259	188	201	236	218	252	238	241	227
19:00	202	165	174	192	199	196	204	199	190
20:00	147	118	129	117	149	159	175	149	142
21:00	102	93	103	85	103	97	91	96	96
22:00	68	87	62	48	48	66	50	56	61
23:00	54	47	16	34	30	35	31	37	35
<b>12H,7-19</b>	<b>3378</b>	<b>2784</b>	<b>2597</b>	<b>3138</b>	<b>3273</b>	<b>3318</b>	<b>3323</b>	<b>3286</b>	<b>3116</b>
<b>16H,6-22</b>	<b>3980</b>	<b>3216</b>	<b>3034</b>	<b>3686</b>	<b>3873</b>	<b>3925</b>	<b>3945</b>	<b>3882</b>	<b>3666</b>
<b>18H,6-24</b>	<b>4102</b>	<b>3350</b>	<b>3112</b>	<b>3768</b>	<b>3951</b>	<b>4026</b>	<b>4026</b>	<b>3975</b>	<b>3762</b>
<b>24H,0-24</b>	<b>4193</b>	<b>3438</b>	<b>3203</b>	<b>3855</b>	<b>4043</b>	<b>4134</b>	<b>4127</b>	<b>4070</b>	<b>3856</b>
<b>Am</b>	<b>08:00</b>	<b>10:00</b>	<b>11:00</b>	<b>08:00</b>	<b>08:00</b>	<b>08:00</b>	<b>08:00</b>		
<b>Peak</b>	<b>351</b>	<b>304</b>	<b>262</b>	<b>323</b>	<b>357</b>	<b>340</b>	<b>343</b>		
<b>Pm</b>	<b>15:00</b>	<b>12:00</b>	<b>13:00</b>	<b>17:00</b>	<b>15:00</b>	<b>15:00</b>	<b>15:00</b>		
<b>Peak</b>	<b>380</b>	<b>334</b>	<b>303</b>	<b>326</b>	<b>399</b>	<b>345</b>	<b>402</b>		

27062

GLOUCESTER

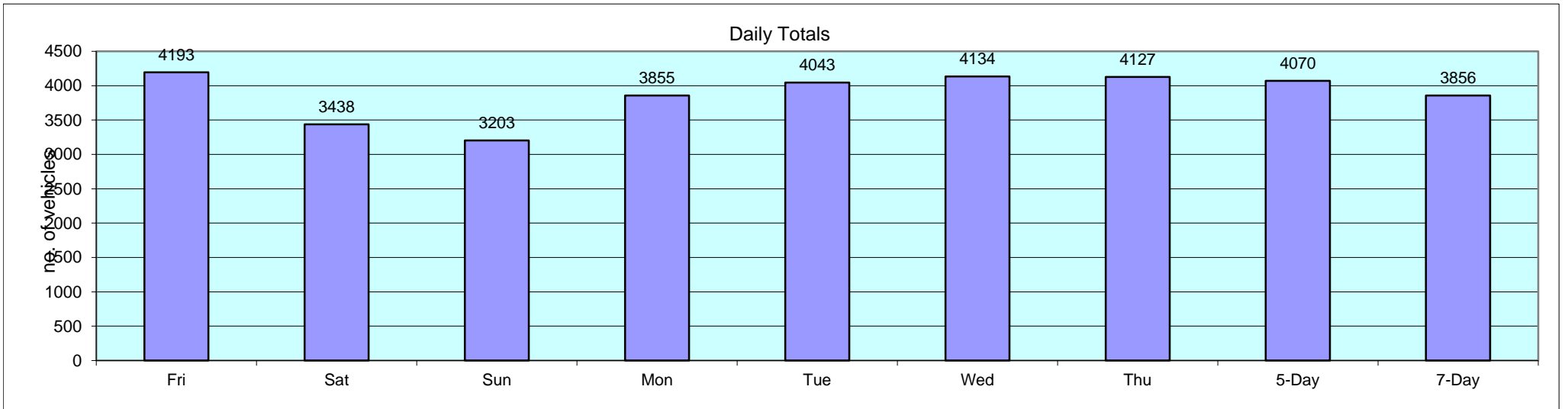
Site No: 27062001

Location

Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)

Channel: Westbound

TIME PERIOD	Fri 11/06/21	Sat 12/06/21	Sun 13/06/21	Mon 14/06/21	Tue 15/06/21	Wed 16/06/21	Thu 17/06/21	5-Day Av	7-Day Av
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# Classification Schemes

## Scheme F Classification Scheme (Non-metric)

Scheme F is an attempt to implement the FWHA's visual classification scheme as an axle-based classification scheme. This is one of several interpretations.

Class	Vehicle Type	No. of Axles	Axle spacing in feet				
			Axle 1 to 2	Axle 2 to 3	Axle 3 to 4	Axle 4 to 5	Axle 5 to 6
1	motorcycle	2	<6.0				
2	passenger car	2	6.0 - 10.0				
	car + 1 axle trailer	3	<10.0	10.0 - 18.0			
	car + 2 axle trailer	4	<10.0		<3.5		
3	pickup	2	10.0 - 15.0				
	pickup + 1 axle trailer	3	10.0 - 15.0	10.0 - 18.0			
	pickup + 2 axle trailer	4	10.0 - 15.0		<3.5		
	pickup + 3 axle trailer	5	9.9 - 15.0			<3.5	
4	Traditional bus/coach	2	>20.0				
	Traditional bus/coach	3	>19.0				
5	single unit truck/bus - dual rear axle	2	14.9 - 20.0			<3.5	
6	3 axle truck	3		<18.0			
7	4 axle truck	4					
8	2S1	3		>18.0			
	2S2	4		>5.0	>3.5		
	3S1	4		<5.0	>10.0		
9	3S2	5		<6.1		3.5 - 8.0	
	5 axle combination	5					
10	6 axle combination	6			3.5 - 5.0		
	3S3	6					
11	2S1-2	5		>6.0			
12	3S1-2	6					>10.0
13	truck	7 or more					





Land to the rear of 101 Reservoir Road, Gloucester

**Planning Statement**

On behalf of [REDACTED]

Our Reference: 1171

October 2021

# Contents

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1	Introduction	1
2	Site and Surrounding Area	2
3	Proposed Development	4
4	Planning Policy Assessment	5
5	Conclusions	15

Appendix 1 Site Location Plan

Appendix 2 Micro Drainage Calculations

Appendix 3 Severn Trent Water Letter

# 1 Introduction

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1.1 This Planning Statement has been prepared on behalf of Mr and Mrs Wall (the Applicants). It is intended to assist Gloucester City Council (GCC) in its consideration of a planning application to construct 5 dwellings and associated infrastructure, including access, parking, and ancillary works on land to the rear of 101 Reservoir Road, Gloucester (the Site).

1.2 In addition to this Planning Statement, the planning application submission is accompanied by:

- Drawings: site layout, proposed floor plans, elevations and access plan;
- Percolation Testing Report and proposed drainage strategy;
- Drainage Maintenance and Management Plan;
- SuDs Implementation Plan;
- Phase 1 Environmental Desk Study; and
- Results of a speed survey.

## **Scope of the Planning Statement**

1.3 This Statement is structured as follows:

- Section 2 describes the application site and surrounding area, including current land use designations and relevant planning history;
- Section 3 describes the proposed development;
- Section 4 assesses the proposed development against the development plan and other material considerations; and
- Section 5 draws overall conclusions on the acceptability of the proposals.

## 2 Site and Surrounding Area

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### The Site

- 2.1 The Site is located approximately 3km south of Gloucester city centre. It lies to the south of Reservoir Road and includes land to the rear of Nos. 99 and 101 Reservoir Road. It is approximately 79m west of Darwin Road and 113m east of Ashmore Road. A site location plan is attached at **Appendix 1**.
- 2.2 The Site is accessed from Reservoir Road between Nos. 99 and 101 which are also within the ownership of the Applicants. It extends to the rear of both properties, although it is separate to both of their residential curtilages. It covers an area of 1,710m<sup>2</sup> and rises in height from north to south by approximately 5.6m over a distance of approximately 109m. The Site is currently vacant and has been cleared.
- 2.3 The Site is enclosed by timber fencing that forms the garden boundaries of adjoining dwellings in Ashmore Road to the south and west and Reservoir Road to the north east and north west. The eastern boundary is marked with a post and wire fence adjoining a footpath that provides access to rear gardens and garages in Robinswood Gardens.
- 2.4 This is a predominantly suburban residential area. Nos. 99, 101 and 103 to the north are red brick, Victorian detached and semi-detached dwellings respectively, in an area otherwise characterised by 20<sup>th</sup> century post war semi-detached and terraced housing, with more recent infill development.
- 2.5 The Site is not located within a conservation area and there are no nearby listed buildings. It falls within Flood Zone 1 and has a low probability of flooding.

### Planning History

- 2.6 There are two relevant planning applications relating to this site:
- i. 10/00574/OUT – outline planning application for two detached dwellings. Refused 04.08.2010;
  - ii. 10/01283/OUT - outline planning application for erection of two detached dwellings with parking, car port or garage space together with provision of parking, car port or garage space associated with exiting dwelling and improvement to vehicular and

pedestrian access. All matters except means of access reserved for future consideration. Approved 02.02.2011.

### 3 Proposed Development

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3.1 Planning permission is sought to develop the site for market housing. The proposals, as shown on the submitted plans, comprise:

- The construction of 5 x 3 bedroom dwellings;
- On plot parking for 2 cars, together with appropriate cycle parking and bin storage;
- The materials and architectural style of the proposed dwellings have been informed by those found locally;
- Each dwelling has been designed to comply with the national Residential Space Standards;
- There is opportunity for new landscaping and planting on site. The details can be secured by a planning condition;
- Access is proposed from Reservoir Road through the forecourt of No. 101. The front boundary wall of No. 101 would be retained and modified to accommodate the access. A new boundary fence will separate the forecourts of Nos. 99 and 101.

#### **Sustainability Strategy**

3.2 The proposed development will incorporate measures to improve energy efficiency and reduce energy demand, thereby reducing the long-term carbon emissions. These measures will be in accordance with the Council's requirements. As the development will not be constructed by the Applicants however, the details of the energy strategy can be secured by a planning condition.

## 4 Planning Policy Assessment

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4.1 Section 38(6) of the Town and Country Planning Act 1990 requires local planning authorities to determine applications in accordance with the provisions of the development plan unless material considerations indicate otherwise. This requirement is repeated in the 2021 National Planning Policy Framework (NPPF) at paragraphs 2 and 47. This section of the Planning Statement addresses the degree of compliance of the proposed development with relevant development plan policies and takes account of relevant material considerations, including national policy and guidance.

### **The Development Plan**

4.2 The development plan for these purposes comprises:

- The Gloucester, Cheltenham and Tewkesbury Joint Core Strategy (JCS), adopted 11<sup>th</sup> December 2017; and
- Saved polices within the City of Gloucester Local Plan, adopted 14<sup>th</sup> September 1983.

4.3 With regards to the 1983 saved policies, paragraph 219 of the NPPF states that due weight should be given to relevant policies in existing plans according to their degree of consistency with the Framework (the closer the policies in the plan to the policies in the Framework, the greater the weight that may be given). The majority of the policies in the 1983 Local Plan are out-of-date and superseded by later planning policy including the NPPF and the Joint Core Strategy. None of the saved policies are relevant to the consideration of this application and they are not considered further

4.4 A new Gloucester City Plan (GCP) is being prepared which will deliver the JCS at the local level. The Pre-Submission version was consulted on in early 2020 and submitted for examination on 18<sup>th</sup> November 2020. Hearings were completed in June 2021. Relevant policies have been referred to as necessary.

### Other Material Considerations

4.5 Relevant National Planning Policies and Guidance includes:

- National Planning Policy Framework (NPPF). This was first published in 2012. It was replaced in July 2018 and further amended in February 2019 and July 2021; and
- National Planning Practice Guidance.

- 4.6 Relevant Supplementary Planning Guidance (SPD) includes:
- SUDs Design Guide, adopted 2013.
- 4.7 The approach taken in this section is to deal with policies on a topic by topic basis under the following headings:
- Principle of development, including the Council’s five year housing land supply; and
  - Other matters:
    - Housing density, mix and affordable housing;
    - Design, layout and landscaping;
    - Residential amenity;
    - Traffic and transport;
    - Flood risk and drainage;
    - Ecology;
    - Land Contamination; and
  - National Planning Policy and Guidance.

### **Principle of Development**

- 4.8 The JCS considers housing supply and demand under Policies SP1 (The Need for New Development and SP2 (Distribution of New Development). It identifies the need to make provision for 14,359 new homes over the plan period with the vast majority to be accommodated within the City’s administrative boundary.
- 4.9 JCS Policy SD10 refers to residential development and allows for “infilling” (defined as the development of an under-developed plot well related to existing built development) within the existing built up area of the City Gloucester.
- 4.10 The application site lies within the built up area of the City and is surrounded by residential development. The Site is an appropriate and sustainable location for residential use. The proposed development would make efficient use of an undeveloped site that is well related to existing built development and services in accordance with these JCS policies. The principle of developing this site has already been accepted by virtue of the 2011 outline consent for two dwellings, albeit this has now lapsed.
- 4.11 Furthermore, the recently revised NPPF (July 2021) still seeks to significantly boost the supply of homes (paragraph 60) and continues to require local planning authorities to maintain a minimum of a five years supply of land for housing (paragraph 74). GCC is currently unable to demonstrate a five year housing land supply. Whilst this proposal is

modest in scale, it would still make a positive contribution to the City's housing supply. In this case, the acknowledged absence of such a supply weighs in favour of the proposed development.

## **Other Matters**

### Housing Density, Mix and Affordable Housing

- 4.12 In terms of density, the NPPF states that planning decisions should promote an effective use of land (paragraph 119) and supports the development of under-utilised land, especially where this would help to meet identified needs for housing (paragraph 120(d)). JCS Policy SD10 is clear that residential development should seek to achieve the maximum density compatible with good design and other planning considerations. In the emerging GCP, Policy A1 requires development to make effective and efficient use of land and buildings.
- 4.13 In this case 5 dwellings are proposed on this 0.171ha site equating to a density of 29.2 dwellings per hectare. This is considered to be an effective use of the site. The impact of other planning considerations are considered in turn below.
- 4.14 JCS Policy SD11 refers to housing mix and standards and requires an appropriate mix of dwelling sizes, and tenures. This development proposes 5 x 3 bedroom dwellings which is considered to be appropriate.
- 4.15 JCS Policy SD12 states that on sites of 10 dwellings or less, which have a combined floorspace of no more than 1,000m<sup>2</sup> no affordable housing contribution will be sought. This is reflected in Policy A2 of the emerging GCP. This proposal falls below these thresholds and as such no affordable dwellings are proposed.

### Design, Layout and Landscaping

- 4.16 The NPPF promotes the creation of high quality, beautiful and sustainable buildings and places (paragraph 126) and paragraph 130 states that developments should add to the overall quality of the area (a), be visually attractive (b), be sympathetic to local character, the surrounding built environment and landscape setting (c).
- 4.17 JCS Policy SD3 requires all developments to demonstrate how they contribute to the principles of sustainability, Policy SD4 sets out requirements for high quality design and Policy SD6 requires development to protect or enhance landscape character.

- 4.18 In the emerging GCP, Policy A1 requires development to result in overall improvements to the built and natural environment and be of a suitable scale for the site. Policy E5 states that development must contribute towards the provision, protection and enhancement of Gloucester's Green Infrastructure Network. Policy F1 states the development proposals should achieve high quality architectural detailing, external materials and finishes that are locally distinctive. Developments should make a positive contribution to the character and appearance of the locality and respect the wider landscape. Policy F3 requires community safety to be a fundamental design principle. Policy G7 requires development to demonstrate that the estimated consumption of wholesome water per dwelling does not exceed 110 litres per person per day.
- 4.19 The Site is located within a residential area characterised by a mix of two storey semi-detached dwellings to the west and south in Ashmore Road, larger semi-detached and detached dwellings to the north on Reservoir Road and terraced dwellings to the east in Robinswood Gardens.
- 4.20 The proposed development has been designed to respect the traditional architectural form, height and scale of the adjoining dwellings to the east, south and west and will be two storeys in height, with a pitched roof. A mix of 3 detached (Plots 1, 2 and 5) and one pair of semi-detached dwellings (Plots 3 and 4) is proposed.
- 4.21 The adjoining Victorian properties to the north on Reservoir Road are larger in scale, form and height. Whilst there is a rise in ground levels towards the southern site boundary, the proposed dwellings would be sufficiently inset from Reservoir Road such that they would not adversely affect the street scene. They would in any event be seen in the context of Ashmore Road and Robinswood Gardens. The scale of proposed development is considered to be appropriate for its context.
- 4.22 It is proposed to use traditional materials comprising red brick and plain roof tile to reflect the local character of the area.
- 4.23 Each dwelling would benefit from a private rear garden. Plots 2, 3 and 4 would also have a front garden. The details of the new landscaping can be secured by planning condition.
- 4.24 The layout of the development has been designed to create secure and private rear gardens by orientating the new dwellings so that they each back on to adjacent rear gardens. They will all face into the Site, creating an active frontage and natural surveillance over the publicly accessible areas and access. On plot parking to the front of each dwelling is

proposed, together with 4 visitor parking space which will be overlooked by Plots 1-4 for security.

- 4.25 Overall, it is considered that the proposal is a high quality, sustainable development that would make a positive contribution to the character and appearance of the locality.

#### Residential Amenity

- 4.26 Paragraph 130(f) of the NPPF states that planning decisions should ensure that developments create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users.
- 4.27 JCS Policy SD4 sets out design requirements and clause (iii) refers to amenity and space and states new development should enhance comfort, convenience and enjoyment through assessment of the opportunities for light, privacy and external space, and the avoidance or mitigation of potential disturbances, including visual intrusion, noise, smell and pollution. Policy SD14 (clause 2i) states that new development must cause no harm to local amenity including the amenity of neighbouring occupants.
- 4.28 Part 2 of JCS Policy SD11 refers to housing standards and requires new housing to meet and where possible exceed appropriate minimum space standards. Paragraph 4.12.12 of the JCS refers to the Government's national space standards. Compliance with these standards is required by the emerging GCP Policy F6.
- 4.29 GCP Policy A1(6) also requires the provision of outdoors amenity space and a garden space at a level that reflects the character of the area and the scale of the development.

#### *Impact on Existing Residential Amenity*

- 4.30 The proposed layout comprises four dwellings located to the south of the site (Plots 1-4) and one dwelling (Plot 5) to the north of the site primarily backing on to No. 101 Reservoir Road.
- 4.31 Plots 1-4 are staggered to take account of the adjoining development to the east and west respectively.
- 4.32 The nearest dwellings to the east are Nos. 30A and 32 Robinswood Gardens. No. 30A is an end terrace, broadly orientated north-south, with its flank elevation facing the Site. No. 32 has a west facing garden and its rear elevation faces the Site. Plot 1 would be closest to these dwellings. The proposed dwelling is located to the north east of No. 32, within the widest part of Plot 1 and is inset 1.1m from the boundary at this point. The outlook from No.

32 will be over Plot 1's garden. Given the distance from Plot 1 to both Nos. 30A and 32 and its orientation at an oblique angle, it is considered that it would not have an overbearing impact on their respective outlook or light. No windows are proposed in the eastern (side) elevation to safeguard their privacy.

- 4.33 The nearest dwellings to the west are Nos. 7-10 Ashmore Road. The rear elevations of these dwellings face the Site and their respective gardens adjoin it. Plot 4 would be the closest. The proposed dwelling is inset from the boundary by 1.1m and positioned to the south east of No.8 and north east of No. 9, again at an oblique angle. There would be no windows in the western (side) elevation. It is considered that there would be no adverse impact on residential amenity in terms of overshadowing, overbearing impact or loss of light or privacy from Plot 4.
- 4.34 Plots 1-4 would all have rear, south facing gardens, that range in depth from 9.5m to 21.5m respectively. These are considered to be an appropriate depth to safeguard adjoining residential amenity.
- 4.35 The rear gardens of No.7 Ashmore Road and Nos. 101 and 103 Reservoir Road adjoin Plot 5 to the west and north. Plot 5 is the widest at 8.1m and the proposed dwelling would be inset from the western boundary by 1.2m and 23.4m from the rear of No.103. Its rear garden would be 9.6m deep. No windows are proposed in either side elevation. It is considered that there would be no adverse impact on residential amenity arising from Plot 5.
- 4.36 Whilst it is acknowledged that this proposal will introduce new dwellings that back onto the rear boundaries of existing dwellings, it is considered that the levels of activity associated with the new development would not result in undue noise and disturbance for neighbours.

*Impact on The Amenity of Future Occupiers*

- 4.37 The Gross Internal Areas proposed for the new dwellings is 95m<sup>2</sup> which exceeds the national space standard requirement of 93m<sup>2</sup> for a two storey, three bedroom, five persons dwelling.
- 4.38 Each dwelling would have 2 double bedrooms and a single. The doubles would exceed the minimum requirement of 11.5m<sup>2</sup>, extending to 12.m<sup>2</sup> and 12.9m<sup>2</sup> respectively. Bedroom 1 would also be 2.77m wide and Bedroom 2 would be 2.57m; both exceed the required dimensions of 2.75m and 2.55m. The single room (Bedroom 3) would have a floor area of 7.7m<sup>2</sup> and extend to a width of 2.21m. The dimensions and size of all the bedrooms would therefore comply with the national space standards, JCS Policy SD11 and GCP Policy F6.

- 4.39 Each dwelling would have its own rear private garden, ranging in size from 62m<sup>2</sup> (Plot 4) to 123m<sup>2</sup> (Plot 1). In addition, Plots 2, 3 and 4 will have reasonable front gardens of extending to 48m<sup>2</sup>, 40.5m<sup>2</sup> and 54m<sup>2</sup> respectively. The amount of external amenity space for each dwelling is considered to be appropriate relative to the scale of the proposed development and its context.
- 4.40 The proposed development would not be unacceptably overlooked or overshadowed by existing dwellings.
- 4.41 Overall, it is considered that that there would be no adverse impact to neighbouring residential amenity from the proposed development or to the amenity of prospective occupiers.

#### Traffic and Transport

- 4.42 JCS Policy INF1 requires safe and accessible connections to the transport network.
- 4.43 GCP Policy A1(4) and (7) requires the provision of adequate off-street parking, access, covered and secure cycle storage and bin storage. Policy G1 refers to sustainable travel and requires car and cycle parking in accordance with Manual for Streets. Policy G2 requires an electric vehicle charge point/socket for every new residential property which has a garage or dedicated car parking space within its curtilage.
- 4.44 Section 9 of NPPF refers to 'Promoting Sustainable Transport' and is relevant. Paragraph 104 highlights the importance of considering transport issues from the earliest stages of development proposals. Paragraph 111 is clear that development should only be refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe. Paragraph 112 goes on to say that applications for developments should give priority first to pedestrians and cyclists and facilitate access to high quality public transport so far as is possible; address the needs of people with disabilities, create safe, secure and attractive places; allow for the efficient delivery of goods and access for service/emergency vehicles; and enable electric vehicle charging.
- 4.45 Given the small-scale nature of the proposed development, a Transport Statement has not been submitted with the planning application, although the existing highway conditions and access to pedestrian and public transport, are set out below.

- 4.46 Reservoir Road, from which the Site is accessed, is subject to a 30mph speed limit. There are footways on both sides of the road which are lit and provide access to key local services.
- 4.47 The nearest bus stops to the Site are to the east approximately 320m (eastbound service) and 480m (westbound service) providing alternative means of travel to the City centre.
- 4.48 A total of 14 car parking spaces are proposed; 2 for each dwelling and 4 visitor parking spaces. Each dwelling will have an electric vehicle charge point within its curtilage. Secure cycle parking will be provided to the rear of each property.
- 4.49 Access will be direct from Reservoir Road, a speed survey has been undertaken and the results have been submitted with this application. They confirm that the proposed visibility splays are appropriate and the access is safe. The access has been designed to accommodate service and emergency vehicles.
- 4.50 Refuse storage is also proposed to the rear of each dwelling and there will be a collection point close to the access from Reservoir Road.
- 4.51 Overall, the proposed development complies with JCS, emerging GCP and national planning policy.

#### Flood Risk and Drainage

- 4.52 Paragraphs 159-169 of the NPPF refers to planning and flood risk and seeks to direct development away from areas of highest risk of flooding and ensure that flood risk is not increased elsewhere. Footnote 55 sets out when a site specific flood risk assessment is required.
- 4.53 In accordance with the NPPF, JCS Policy INF2 applies a risk based sequential approach and requires new development to contribute to a reduction in flood risk, as well as the use of sustainable drainage systems where appropriate. This is reflected in GCP Policy E6.
- 4.54 In this case the application site is less than 1 ha and located within Flood Zone 1, with a low probability of flooding. A site specific flood risk assessment is not necessary to accompany this planning application.
- 4.55 The Site was subject to percolation testing in September 2021 and the report from Wilson Associates has been submitted with the planning application. Based on their findings, it is understood that infiltration is possible at shallow depths and soakaways at shallow depths are therefore suitable. Details of the drainage strategy are outlined on drawing no. P21-599-

SK100 and the Micro Drainage Calculations and pre-application response received from Severn Trent Water are attached at **Appendix 2** and **3** respectively.

- 4.56 The surface water strategy will comprise a mix of permeable surfacing, soakaways and the use of a geocellular tank below the proposed turning head, whilst the foul water drainage will connect into the mains network on Reservoir Road.
- 4.57 Overall, it is considered that the proposed development accords with both policies within the JCS and GCP, as well as the NPPF.

#### Ecology

- 4.58 JCS Policy SD9 seeks to protect and enhance biodiversity. GCP Policy E2 requires the conservation of biodiversity and provision of net gains. The NPPF also requires development to minimise impacts on and provide net gains for biodiversity (paragraph 174(d)).
- 4.59 There are no trees within the application site and it has little existing vegetation. Overall, it is considered to have a low ecological value. The new development provides opportunities for new landscaping and biodiversity enhancement and the details can be secured by planning condition.

#### Land Contamination

- 4.60 JCS Policy SD14 refers to health and environmental quality. It requires that new development must not result in exposure to unacceptable risk from existing or potential sources of pollution and to incorporate the investigation and remediation of any land contamination within the site.
- 4.61 Paragraph 183 of the NPPF seeks to ensure that a site is suitable for the proposed use taking account of ground conditions and any contamination risks.
- 4.62 A Phase 1 Environmental Desk Study has been submitted with the planning application. It assesses the presence of any potential contaminant linkages, which may either be active at the Site in its current condition or could become active in future and if any further risk assessment, investigation or remedial action is required.
- 4.63 The Study notes that the Site is undeveloped and has no history of former industrial use or areas of above or below ground fuel storage. It is considered to have a relatively low environmental sensitivity, given the absence of any on-site watercourses and the presence of underlying mudstone geology, which is considered to have limited resource material.

- 4.64 Plausible contaminant linkages do have the potential to become active as a result of the proposed development. These are associated with the quality of the shallow soil across the site (noted to comprise made ground) and the potential for on-site migration of ground gas from the nearby reservoirs in-filled during the mid twentieth century.
- 4.65 Some further intrusive investigation is recommended, to include the collection of shallow soil samples across the site, installation of gas monitoring wells and completion of ground gas monitoring, followed by a risk assessment. This can be secured by a planning condition.
- 4.66 The proposed development therefore accords with JCS Policy SD14.

**National Planning Policy and Guidance**

- 4.67 As previously stated, NPPF reaffirms the importance of the development plan in decision making, at paragraph 2 and again at paragraph 47. This section has shown that the proposed development complies with the development plan in all relevant respects.
- 4.68 Paragraph 11 and the three over-arching objectives for sustainable development, are addressed in the conclusion.

## 5 Conclusions

---

- 5.1 This Planning Statement has been prepared to assist GCC in its consideration of this planning application to construct 5 dwellings and associated infrastructure including access, parking and ancillary works on land to the rear of 101 Reservoir Road, Gloucester.
- 5.2 It has been demonstrated that the proposed development complies with the JCS and emerging GCP and that there would be no significant harm arising. Notwithstanding, given the current shortfall in the City's five year housing land supply it is concluded that paragraph 11 (d) is engaged.
- 5.3 The proposal is considered to be sustainable development, in terms of the three overarching objectives of sustainable development set out in paragraph 8 of the NPPF:
- In economic terms, it would provide modest but useful levels of employment in the construction stage and the occupiers of the new homes would increase spending and general activity within the local area, supporting existing local services and businesses;
  - In social terms, it would provide new houses on an under used and accessible site within the City boundary and make a positive contribution to housing land supply which is a significant benefit; and
  - In environmental terms, the proposed development would make a more efficient use of this Site, without detriment to residential amenity, drainage, highway safety or the environment and with opportunities to enhance biodiversity.
- 5.4 The development plan is out of date by virtue of the shortfall in housing land supply. The test set out in paragraph 11(d) of the NPPF is whether any adverse impacts would significantly and demonstrably outweigh the benefits of the proposal. It is considered that adverse impacts do not outweigh the benefits and that this is a development to which the presumption in favour of sustainable development should apply.

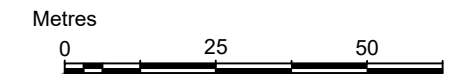
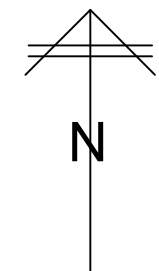
# Appendix 1

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## Site Location Plan

GENERAL NOTES

1. Do not scale from this print or use as a template.
2. All dimensions must be verified on site before any work is put in hand and any discrepancies must be reported to the Architect. Where any variations occur between small scale and detailed drawings, detail drawings should be worked from.
3. Copyright of this drawing is reserved by Osbornes and is issued on condition that it is not copied or disclosed to any third party either wholly or in part without the consent of Osbornes in writing.



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 The Balconies • Hanley Swan • Malvern • Worcestershire • WR8 0DN


CLIENT MR IAIN WALL  
 PROJECT 101 RESERVOIR ROAD  
 TITLE LOCATION PLAN  
 SCALE 1:1250 @ A3  
 DATE AUG 2021

DRAWN TL DRAWING NUMBER 21-111-LOC1B

## Appendix 2

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### Micro Drainage Calculations

Simpson Associates		Page 1
Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 1	
Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR	

Innovyze Source Control 2020.1.3

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 40 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	44.465	0.215	3.2	9.0	O K
30 min Summer	44.500	0.250	3.7	12.1	Flood Risk
60 min Summer	44.523	0.273	4.0	14.4	Flood Risk
120 min Summer	44.534	0.284	4.2	15.5	Flood Risk
180 min Summer	44.530	0.280	4.1	15.1	Flood Risk
240 min Summer	44.522	0.272	4.0	14.2	Flood Risk
360 min Summer	44.503	0.253	3.7	12.3	Flood Risk
480 min Summer	44.485	0.235	3.5	10.7	O K
600 min Summer	44.470	0.220	3.3	9.4	O K
720 min Summer	44.456	0.206	3.1	8.2	O K
960 min Summer	44.434	0.184	2.7	6.5	O K
1440 min Summer	44.401	0.151	2.2	4.4	O K
2160 min Summer	44.369	0.119	1.8	2.7	O K
2880 min Summer	44.349	0.099	1.5	1.9	O K
4320 min Summer	44.323	0.073	1.1	1.0	O K
5760 min Summer	44.309	0.059	0.9	0.7	O K
7200 min Summer	44.300	0.050	0.7	0.5	O K
8640 min Summer	44.296	0.046	0.6	0.4	O K
10080 min Summer	44.293	0.043	0.6	0.4	O K
15 min Winter	44.484	0.234	3.5	10.6	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	117.448	0.0	17
30 min Summer	79.010	0.0	30
60 min Summer	50.812	0.0	46
120 min Summer	31.621	0.0	80
180 min Summer	23.637	0.0	114
240 min Summer	19.105	0.0	148
360 min Summer	14.037	0.0	212
480 min Summer	11.286	0.0	274
600 min Summer	9.522	0.0	336
720 min Summer	8.282	0.0	398
960 min Summer	6.640	0.0	518
1440 min Summer	4.854	0.0	752
2160 min Summer	3.541	0.0	1108
2880 min Summer	2.828	0.0	1472
4320 min Summer	2.055	0.0	2204
5760 min Summer	1.637	0.0	2928
7200 min Summer	1.371	0.0	3592
8640 min Summer	1.186	0.0	4400
10080 min Summer	1.049	0.0	4984
15 min Winter	117.448	0.0	17

Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 1
Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR




Innovyze Source Control 2020.1.3

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	44.522	0.272	4.0	14.2	Flood Risk
60 min Winter	44.544	0.294	4.4	16.5	Flood Risk
120 min Winter	44.550	0.300	4.4	17.1	Flood Risk
180 min Winter	44.540	0.290	4.3	16.1	Flood Risk
240 min Winter	44.527	0.277	4.1	14.7	Flood Risk
360 min Winter	44.499	0.249	3.7	12.0	O K
480 min Winter	44.475	0.225	3.3	9.8	O K
600 min Winter	44.454	0.204	3.0	8.1	O K
720 min Winter	44.437	0.187	2.8	6.8	O K
960 min Winter	44.409	0.159	2.4	4.9	O K
1440 min Winter	44.373	0.123	1.8	2.9	O K
2160 min Winter	44.341	0.091	1.4	1.6	O K
2880 min Winter	44.323	0.073	1.1	1.0	O K
4320 min Winter	44.303	0.053	0.8	0.5	O K
5760 min Winter	44.296	0.046	0.6	0.4	O K
7200 min Winter	44.292	0.042	0.5	0.3	O K
8640 min Winter	44.289	0.039	0.4	0.3	O K
10080 min Winter	44.286	0.036	0.4	0.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	79.010	0.0	30
60 min Winter	50.812	0.0	48
120 min Winter	31.621	0.0	86
180 min Winter	23.637	0.0	122
240 min Winter	19.105	0.0	158
360 min Winter	14.037	0.0	222
480 min Winter	11.286	0.0	286
600 min Winter	9.522	0.0	348
720 min Winter	8.282	0.0	408
960 min Winter	6.640	0.0	530
1440 min Winter	4.854	0.0	764
2160 min Winter	3.541	0.0	1120
2880 min Winter	2.828	0.0	1468
4320 min Winter	2.055	0.0	2204
5760 min Winter	1.637	0.0	2880
7200 min Winter	1.371	0.0	3624
8640 min Winter	1.186	0.0	4256
10080 min Winter	1.049	0.0	4968

Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 1	
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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.067

<b>Time (mins)</b>	<b>Area</b>
<b>From: To:</b>	<b>(ha)</b>
0	4 0.067

Simpson Associates		Page 4
Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 1	
Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR	

Innovyze Source Control 2020.1.3

Model Details

Storage is Online Cover Level (m) 44.800

Complex Structure

Porous Car Park


Infiltration Coefficient Base (m/hr)	0.39600	Width (m)	11.7
Membrane Percolation (mm/hr)	1000	Length (m)	23.0
Max Percolation (l/s)	74.8	Slope (1:X)	23.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.95	Evaporation (mm/day)	3
Invert Level (m)	44.250	Cap Volume Depth (m)	0.250

Porous Car Park

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	23.0
Max Percolation (l/s)	38.3	Slope (1:X)	23.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.95	Evaporation (mm/day)	3
Invert Level (m)	44.250	Cap Volume Depth (m)	0.250

Porous Car Park

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	18.5
Membrane Percolation (mm/hr)	1000	Length (m)	23.0
Max Percolation (l/s)	118.2	Slope (1:X)	23.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	44.500	Membrane Depth (m)	0

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Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR	


Innovyze Source Control 2020.1.3

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 10 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	43.497	0.297	0.8	0.7	Flood Risk
30 min Summer	43.527	0.327	0.9	0.8	Flood Risk
60 min Summer	43.529	0.329	0.9	0.8	Flood Risk
120 min Summer	43.499	0.299	0.9	0.7	Flood Risk
180 min Summer	43.467	0.267	0.8	0.6	O K
240 min Summer	43.441	0.241	0.7	0.5	O K
360 min Summer	43.400	0.200	0.6	0.3	O K
480 min Summer	43.372	0.172	0.5	0.2	O K
600 min Summer	43.351	0.151	0.4	0.2	O K
720 min Summer	43.334	0.134	0.4	0.1	O K
960 min Summer	43.311	0.111	0.3	0.1	O K
1440 min Summer	43.282	0.082	0.2	0.1	O K
2160 min Summer	43.260	0.060	0.2	0.0	O K
2880 min Summer	43.249	0.049	0.1	0.0	O K
4320 min Summer	43.242	0.042	0.1	0.0	O K
5760 min Summer	43.237	0.037	0.1	0.0	O K
7200 min Summer	43.234	0.034	0.1	0.0	O K
8640 min Summer	43.232	0.032	0.1	0.0	O K
10080 min Summer	43.230	0.030	0.1	0.0	O K
15 min Winter	43.520	0.320	0.9	0.8	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	117.448	0.0	14
30 min Summer	79.010	0.0	22
60 min Summer	50.812	0.0	38
120 min Summer	31.621	0.0	70
180 min Summer	23.637	0.0	102
240 min Summer	19.105	0.0	132
360 min Summer	14.037	0.0	192
480 min Summer	11.286	0.0	250
600 min Summer	9.522	0.0	310
720 min Summer	8.282	0.0	370
960 min Summer	6.640	0.0	490
1440 min Summer	4.854	0.0	734
2160 min Summer	3.541	0.0	1096
2880 min Summer	2.828	0.0	1460
4320 min Summer	2.055	0.0	2204
5760 min Summer	1.637	0.0	2848
7200 min Summer	1.371	0.0	3624
8640 min Summer	1.186	0.0	4256
10080 min Summer	1.049	0.0	4960
15 min Winter	117.448	0.0	14


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Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 2	
Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR	

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
30 min Winter	43.545	0.345	1.0	0.9	Flood Risk
60 min Winter	43.536	0.336	1.0	0.9	Flood Risk
120 min Winter	43.488	0.288	0.8	0.6	Flood Risk
180 min Winter	43.445	0.245	0.7	0.5	O K
240 min Winter	43.412	0.212	0.6	0.3	O K
360 min Winter	43.365	0.165	0.5	0.2	O K
480 min Winter	43.336	0.136	0.4	0.1	O K
600 min Winter	43.316	0.116	0.3	0.1	O K
720 min Winter	43.301	0.101	0.3	0.1	O K
960 min Winter	43.281	0.081	0.2	0.1	O K
1440 min Winter	43.260	0.060	0.2	0.0	O K
2160 min Winter	43.247	0.047	0.1	0.0	O K
2880 min Winter	43.242	0.042	0.1	0.0	O K
4320 min Winter	43.235	0.035	0.1	0.0	O K
5760 min Winter	43.232	0.032	0.1	0.0	O K
7200 min Winter	43.229	0.029	0.0	0.0	O K
8640 min Winter	43.227	0.027	0.0	0.0	O K
10080 min Winter	43.225	0.025	0.0	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
30 min Winter	79.010	0.0	23
60 min Winter	50.812	0.0	40
120 min Winter	31.621	0.0	74
180 min Winter	23.637	0.0	104
240 min Winter	19.105	0.0	134
360 min Winter	14.037	0.0	194
480 min Winter	11.286	0.0	252
600 min Winter	9.522	0.0	310
720 min Winter	8.282	0.0	370
960 min Winter	6.640	0.0	490
1440 min Winter	4.854	0.0	726
2160 min Winter	3.541	0.0	1080
2880 min Winter	2.828	0.0	1452
4320 min Winter	2.055	0.0	2152
5760 min Winter	1.637	0.0	2848
7200 min Winter	1.371	0.0	3656
8640 min Winter	1.186	0.0	4240
10080 min Winter	1.049	0.0	5184

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Innovyze	Source Control 2020.1.3
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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.006

<b>Time (mins)</b>	<b>Area</b>
<b>From: To:</b>	<b>(ha)</b>
0	4 0.006

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Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 2	
Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR	


Innovyze Source Control 2020.1.3

Model Details

Storage is Online Cover Level (m) 43.780

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.39600	Width (m)	4.0
Membrane Percolation (mm/hr)	1000	Length (m)	13.0
Max Percolation (l/s)	14.4	Slope (1:X)	13.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	43.200	Membrane Depth (m)	0

Simpson Associates		Page 1
Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 3	
Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR	

Innovyze Source Control 2020.1.3

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 10 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	42.467	0.297	0.8	0.7	Flood Risk
30 min Summer	42.497	0.327	0.9	0.8	Flood Risk
60 min Summer	42.499	0.329	0.9	0.8	Flood Risk
120 min Summer	42.469	0.299	0.9	0.7	Flood Risk
180 min Summer	42.437	0.267	0.8	0.6	O K
240 min Summer	42.411	0.241	0.7	0.5	O K
360 min Summer	42.370	0.200	0.6	0.3	O K
480 min Summer	42.342	0.172	0.5	0.2	O K
600 min Summer	42.321	0.151	0.4	0.2	O K
720 min Summer	42.304	0.134	0.4	0.1	O K
960 min Summer	42.281	0.111	0.3	0.1	O K
1440 min Summer	42.252	0.082	0.2	0.1	O K
2160 min Summer	42.230	0.060	0.2	0.0	O K
2880 min Summer	42.219	0.049	0.1	0.0	O K
4320 min Summer	42.212	0.042	0.1	0.0	O K
5760 min Summer	42.207	0.037	0.1	0.0	O K
7200 min Summer	42.204	0.034	0.1	0.0	O K
8640 min Summer	42.202	0.032	0.1	0.0	O K
10080 min Summer	42.200	0.030	0.1	0.0	O K
15 min Winter	42.490	0.320	0.9	0.8	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	117.448	0.0	14
30 min Summer	79.010	0.0	22
60 min Summer	50.812	0.0	38
120 min Summer	31.621	0.0	70
180 min Summer	23.637	0.0	102
240 min Summer	19.105	0.0	132
360 min Summer	14.037	0.0	192
480 min Summer	11.286	0.0	250
600 min Summer	9.522	0.0	310
720 min Summer	8.282	0.0	370
960 min Summer	6.640	0.0	490
1440 min Summer	4.854	0.0	734
2160 min Summer	3.541	0.0	1096
2880 min Summer	2.828	0.0	1460
4320 min Summer	2.055	0.0	2204
5760 min Summer	1.637	0.0	2848
7200 min Summer	1.371	0.0	3624
8640 min Summer	1.186	0.0	4256
10080 min Summer	1.049	0.0	4960
15 min Winter	117.448	0.0	14

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	42.515	0.345	1.0	0.9	Flood Risk
60 min Winter	42.506	0.336	1.0	0.9	Flood Risk
120 min Winter	42.458	0.288	0.8	0.6	Flood Risk
180 min Winter	42.415	0.245	0.7	0.5	O K
240 min Winter	42.382	0.212	0.6	0.3	O K
360 min Winter	42.335	0.165	0.5	0.2	O K
480 min Winter	42.306	0.136	0.4	0.1	O K
600 min Winter	42.286	0.116	0.3	0.1	O K
720 min Winter	42.271	0.101	0.3	0.1	O K
960 min Winter	42.251	0.081	0.2	0.1	O K
1440 min Winter	42.230	0.060	0.2	0.0	O K
2160 min Winter	42.217	0.047	0.1	0.0	O K
2880 min Winter	42.212	0.042	0.1	0.0	O K
4320 min Winter	42.205	0.035	0.1	0.0	O K
5760 min Winter	42.202	0.032	0.1	0.0	O K
7200 min Winter	42.199	0.029	0.0	0.0	O K
8640 min Winter	42.197	0.027	0.0	0.0	O K
10080 min Winter	42.195	0.025	0.0	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	79.010	0.0	23
60 min Winter	50.812	0.0	40
120 min Winter	31.621	0.0	74
180 min Winter	23.637	0.0	104
240 min Winter	19.105	0.0	134
360 min Winter	14.037	0.0	194
480 min Winter	11.286	0.0	252
600 min Winter	9.522	0.0	310
720 min Winter	8.282	0.0	370
960 min Winter	6.640	0.0	490
1440 min Winter	4.854	0.0	726
2160 min Winter	3.541	0.0	1080
2880 min Winter	2.828	0.0	1452
4320 min Winter	2.055	0.0	2152
5760 min Winter	1.637	0.0	2848
7200 min Winter	1.371	0.0	3656
8640 min Winter	1.186	0.0	4240
10080 min Winter	1.049	0.0	5184

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.006

<b>Time (mins)</b>	<b>Area</b>
<b>From: To:</b>	<b>(ha)</b>
0	4 0.006

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Model Details

Storage is Online Cover Level (m) 42.750

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.39600	Width (m)	4.0
Membrane Percolation (mm/hr)	1000	Length (m)	13.0
Max Percolation (l/s)	14.4	Slope (1:X)	13.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	42.170	Membrane Depth (m)	0

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Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 4 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	42.201	0.101	1.7	0.5	O K
30 min Summer	42.206	0.106	1.8	0.5	O K
60 min Summer	42.196	0.096	1.6	0.4	O K
120 min Summer	42.176	0.076	1.3	0.3	O K
180 min Summer	42.162	0.062	1.0	0.2	O K
240 min Summer	42.153	0.053	0.9	0.1	O K
360 min Summer	42.145	0.045	0.7	0.1	O K
480 min Summer	42.141	0.041	0.5	0.1	O K
600 min Summer	42.138	0.038	0.5	0.1	O K
720 min Summer	42.135	0.035	0.4	0.1	O K
960 min Summer	42.131	0.031	0.3	0.0	O K
1440 min Summer	42.127	0.027	0.2	0.0	O K
2160 min Summer	42.123	0.023	0.2	0.0	O K
2880 min Summer	42.121	0.021	0.1	0.0	O K
4320 min Summer	42.118	0.018	0.1	0.0	O K
5760 min Summer	42.116	0.016	0.1	0.0	O K
7200 min Summer	42.114	0.014	0.1	0.0	O K
8640 min Summer	42.113	0.013	0.1	0.0	O K
10080 min Summer	42.113	0.013	0.1	0.0	O K
15 min Winter	42.206	0.106	1.8	0.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	117.448	0.0	12
30 min Summer	79.010	0.0	20
60 min Summer	50.812	0.0	36
120 min Summer	31.621	0.0	66
180 min Summer	23.637	0.0	96
240 min Summer	19.105	0.0	124
360 min Summer	14.037	0.0	184
480 min Summer	11.286	0.0	244
600 min Summer	9.522	0.0	306
720 min Summer	8.282	0.0	364
960 min Summer	6.640	0.0	488
1440 min Summer	4.854	0.0	712
2160 min Summer	3.541	0.0	1100
2880 min Summer	2.828	0.0	1460
4320 min Summer	2.055	0.0	2172
5760 min Summer	1.637	0.0	2848
7200 min Summer	1.371	0.0	3616
8640 min Summer	1.186	0.0	4288
10080 min Summer	1.049	0.0	4968
15 min Winter	117.448	0.0	13


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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
30 min Winter	42.206	0.106	1.8	0.5	O K
60 min Winter	42.189	0.089	1.5	0.4	O K
120 min Winter	42.164	0.064	1.1	0.2	O K
180 min Winter	42.150	0.050	0.8	0.1	O K
240 min Winter	42.145	0.045	0.7	0.1	O K
360 min Winter	42.139	0.039	0.5	0.1	O K
480 min Winter	42.135	0.035	0.4	0.1	O K
600 min Winter	42.132	0.032	0.3	0.0	O K
720 min Winter	42.130	0.030	0.3	0.0	O K
960 min Winter	42.127	0.027	0.2	0.0	O K
1440 min Winter	42.123	0.023	0.2	0.0	O K
2160 min Winter	42.120	0.020	0.1	0.0	O K
2880 min Winter	42.117	0.017	0.1	0.0	O K
4320 min Winter	42.115	0.015	0.1	0.0	O K
5760 min Winter	42.113	0.013	0.1	0.0	O K
7200 min Winter	42.112	0.012	0.0	0.0	O K
8640 min Winter	42.111	0.011	0.0	0.0	O K
10080 min Winter	42.111	0.011	0.0	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
30 min Winter	79.010	0.0	21
60 min Winter	50.812	0.0	36
120 min Winter	31.621	0.0	66
180 min Winter	23.637	0.0	94
240 min Winter	19.105	0.0	124
360 min Winter	14.037	0.0	186
480 min Winter	11.286	0.0	240
600 min Winter	9.522	0.0	306
720 min Winter	8.282	0.0	360
960 min Winter	6.640	0.0	478
1440 min Winter	4.854	0.0	734
2160 min Winter	3.541	0.0	1076
2880 min Winter	2.828	0.0	1432
4320 min Winter	2.055	0.0	2144
5760 min Winter	1.637	0.0	2968
7200 min Winter	1.371	0.0	3768
8640 min Winter	1.186	0.0	4200
10080 min Winter	1.049	0.0	5008

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.006

Time (mins)	Area
From:	To: (ha)
0	4 0.006

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Model Details

Storage is Online Cover Level (m) 42.550

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.39600	Width (m)	4.0
Membrane Percolation (mm/hr)	1000	Length (m)	15.0
Max Percolation (l/s)	16.7	Slope (1:X)	75.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	42.100	Membrane Depth (m)	0

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Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 10 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	41.297	0.297	0.8	0.7	Flood Risk
30 min Summer	41.327	0.327	0.9	0.8	Flood Risk
60 min Summer	41.329	0.329	0.9	0.8	Flood Risk
120 min Summer	41.299	0.299	0.9	0.7	Flood Risk
180 min Summer	41.267	0.267	0.8	0.6	O K
240 min Summer	41.241	0.241	0.7	0.5	O K
360 min Summer	41.200	0.200	0.6	0.3	O K
480 min Summer	41.172	0.172	0.5	0.2	O K
600 min Summer	41.151	0.151	0.4	0.2	O K
720 min Summer	41.134	0.134	0.4	0.1	O K
960 min Summer	41.111	0.111	0.3	0.1	O K
1440 min Summer	41.082	0.082	0.2	0.1	O K
2160 min Summer	41.060	0.060	0.2	0.0	O K
2880 min Summer	41.049	0.049	0.1	0.0	O K
4320 min Summer	41.042	0.042	0.1	0.0	O K
5760 min Summer	41.037	0.037	0.1	0.0	O K
7200 min Summer	41.034	0.034	0.1	0.0	O K
8640 min Summer	41.032	0.032	0.1	0.0	O K
10080 min Summer	41.030	0.030	0.1	0.0	O K
15 min Winter	41.320	0.320	0.9	0.8	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	117.448	0.0	14
30 min Summer	79.010	0.0	22
60 min Summer	50.812	0.0	38
120 min Summer	31.621	0.0	70
180 min Summer	23.637	0.0	102
240 min Summer	19.105	0.0	132
360 min Summer	14.037	0.0	192
480 min Summer	11.286	0.0	250
600 min Summer	9.522	0.0	310
720 min Summer	8.282	0.0	370
960 min Summer	6.640	0.0	490
1440 min Summer	4.854	0.0	734
2160 min Summer	3.541	0.0	1096
2880 min Summer	2.828	0.0	1460
4320 min Summer	2.055	0.0	2204
5760 min Summer	1.637	0.0	2848
7200 min Summer	1.371	0.0	3624
8640 min Summer	1.186	0.0	4256
10080 min Summer	1.049	0.0	4960
15 min Winter	117.448	0.0	14

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
30 min Winter	41.345	0.345	1.0	0.9	Flood Risk
60 min Winter	41.336	0.336	1.0	0.9	Flood Risk
120 min Winter	41.288	0.288	0.8	0.6	Flood Risk
180 min Winter	41.245	0.245	0.7	0.5	O K
240 min Winter	41.212	0.212	0.6	0.3	O K
360 min Winter	41.165	0.165	0.5	0.2	O K
480 min Winter	41.136	0.136	0.4	0.1	O K
600 min Winter	41.116	0.116	0.3	0.1	O K
720 min Winter	41.101	0.101	0.3	0.1	O K
960 min Winter	41.081	0.081	0.2	0.1	O K
1440 min Winter	41.060	0.060	0.2	0.0	O K
2160 min Winter	41.047	0.047	0.1	0.0	O K
2880 min Winter	41.042	0.042	0.1	0.0	O K
4320 min Winter	41.035	0.035	0.1	0.0	O K
5760 min Winter	41.032	0.032	0.1	0.0	O K
7200 min Winter	41.029	0.029	0.0	0.0	O K
8640 min Winter	41.027	0.027	0.0	0.0	O K
10080 min Winter	41.025	0.025	0.0	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
30 min Winter	79.010	0.0	23
60 min Winter	50.812	0.0	40
120 min Winter	31.621	0.0	74
180 min Winter	23.637	0.0	104
240 min Winter	19.105	0.0	134
360 min Winter	14.037	0.0	194
480 min Winter	11.286	0.0	252
600 min Winter	9.522	0.0	310
720 min Winter	8.282	0.0	370
960 min Winter	6.640	0.0	490
1440 min Winter	4.854	0.0	726
2160 min Winter	3.541	0.0	1080
2880 min Winter	2.828	0.0	1452
4320 min Winter	2.055	0.0	2152
5760 min Winter	1.637	0.0	2848
7200 min Winter	1.371	0.0	3656
8640 min Winter	1.186	0.0	4240
10080 min Winter	1.049	0.0	5184

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.006

Time (mins)		Area
From:	To:	(ha)
0	4	0.006

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Model Details

Storage is Online Cover Level (m) 41.580

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.39600	Width (m)	4.0
Membrane Percolation (mm/hr)	1000	Length (m)	13.0
Max Percolation (l/s)	14.4	Slope (1:X)	13.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	41.000	Membrane Depth (m)	0

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Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 18 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	44.309	0.309	0.7	1.1	Flood Risk
30 min Summer	44.351	0.351	0.7	1.2	Flood Risk
60 min Summer	44.352	0.352	0.7	1.2	Flood Risk
120 min Summer	44.305	0.305	0.7	1.1	Flood Risk
180 min Summer	44.250	0.250	0.7	0.9	Flood Risk
240 min Summer	44.200	0.200	0.6	0.7	Flood Risk
360 min Summer	44.123	0.123	0.6	0.4	O K
480 min Summer	44.075	0.075	0.5	0.3	O K
600 min Summer	44.051	0.051	0.5	0.2	O K
720 min Summer	44.044	0.044	0.5	0.2	O K
960 min Summer	44.036	0.036	0.4	0.1	O K
1440 min Summer	44.026	0.026	0.3	0.1	O K
2160 min Summer	44.019	0.019	0.2	0.1	O K
2880 min Summer	44.016	0.016	0.2	0.1	O K
4320 min Summer	44.011	0.011	0.1	0.0	O K
5760 min Summer	44.009	0.009	0.1	0.0	O K
7200 min Summer	44.008	0.008	0.1	0.0	O K
8640 min Summer	44.007	0.007	0.1	0.0	O K
10080 min Summer	44.006	0.006	0.1	0.0	O K
15 min Winter	44.355	0.355	0.7	1.2	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	117.448	0.0	15
30 min Summer	79.010	0.0	24
60 min Summer	50.812	0.0	42
120 min Summer	31.621	0.0	74
180 min Summer	23.637	0.0	108
240 min Summer	19.105	0.0	138
360 min Summer	14.037	0.0	198
480 min Summer	11.286	0.0	254
600 min Summer	9.522	0.0	308
720 min Summer	8.282	0.0	368
960 min Summer	6.640	0.0	490
1440 min Summer	4.854	0.0	734
2160 min Summer	3.541	0.0	1080
2880 min Summer	2.828	0.0	1456
4320 min Summer	2.055	0.0	2188
5760 min Summer	1.637	0.0	2920
7200 min Summer	1.371	0.0	3616
8640 min Summer	1.186	0.0	4392
10080 min Summer	1.049	0.0	5072
15 min Winter	117.448	0.0	15


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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
30 min Winter	44.402	0.402	0.8	1.4	Flood Risk
60 min Winter	44.393	0.393	0.8	1.4	Flood Risk
120 min Winter	44.311	0.311	0.7	1.1	Flood Risk
180 min Winter	44.229	0.229	0.6	0.8	Flood Risk
240 min Winter	44.159	0.159	0.6	0.6	O K
360 min Winter	44.065	0.065	0.5	0.2	O K
480 min Winter	44.044	0.044	0.5	0.2	O K
600 min Winter	44.037	0.037	0.4	0.1	O K
720 min Winter	44.032	0.032	0.3	0.1	O K
960 min Winter	44.026	0.026	0.3	0.1	O K
1440 min Winter	44.019	0.019	0.2	0.1	O K
2160 min Winter	44.014	0.014	0.2	0.0	O K
2880 min Winter	44.011	0.011	0.1	0.0	O K
4320 min Winter	44.008	0.008	0.1	0.0	O K
5760 min Winter	44.007	0.007	0.1	0.0	O K
7200 min Winter	44.006	0.006	0.1	0.0	O K
8640 min Winter	44.005	0.005	0.1	0.0	O K
10080 min Winter	44.004	0.004	0.0	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
30 min Winter	79.010	0.0	25
60 min Winter	50.812	0.0	44
120 min Winter	31.621	0.0	80
180 min Winter	23.637	0.0	112
240 min Winter	19.105	0.0	144
360 min Winter	14.037	0.0	196
480 min Winter	11.286	0.0	248
600 min Winter	9.522	0.0	304
720 min Winter	8.282	0.0	368
960 min Winter	6.640	0.0	492
1440 min Winter	4.854	0.0	728
2160 min Winter	3.541	0.0	1088
2880 min Winter	2.828	0.0	1428
4320 min Winter	2.055	0.0	2200
5760 min Winter	1.637	0.0	2856
7200 min Winter	1.371	0.0	3640
8640 min Winter	1.186	0.0	4296
10080 min Winter	1.049	0.0	5120

Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 6	
Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR	

Innovyze	Source Control 2020.1.3
----------	-------------------------

Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.007

<b>Time (mins)</b>	<b>Area</b>
<b>From: To:</b>	<b>(ha)</b>
0	4 0.007

Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 6
--	---



Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR
--	---------------------------------

Innovyze Source Control 2020.1.3

Model Details

Storage is Online Cover Level (m) 44.500

Lined Soakaway Structure

Infiltration Coefficient Base (m/hr)	0.39600	Ring Diameter (m)	1.20
Infiltration Coefficient Side (m/hr)	0.39600	Pit Multiplier	2.5
Safety Factor	2.0	Number Required	1
Porosity	0.30	Cap Volume Depth (m)	0.000
Invert Level (m)	44.000	Cap Infiltration Depth (m)	0.000

## **Appendix 3**

---

### **Severn Trent Water Letter**

# WONDERFUL ON TAP

SEVERN

TRENT

Severn Trent Water Ltd

Regis Road  
Wolverhampton  
WV6 8RU

www.stwater.co.uk

Contact: Michael Taylor

Your ref:

Our ref: 1014281

24<sup>th</sup> August 2021

Dear Sir

## **Proposed Redevelopment at Reservoir Road Gloucester**

I refer to your 'Development Enquiry Request' in respect of the above site for the 5 property development. Please find enclosed the sewer records that are included in the fee together with the Supplementary Guidance Notes which refer to surface water disposal from development sites.

### **Public Sewers in Site – Required Protection**

Due to a change in legislation on 1 October 2011, there may be former private sewers on the site which have transferred to the responsibility of Severn Trent Water Ltd, which are not shown on the statutory sewer records, but are located in your client's land. These sewers would also have protective strips that we will not allow to be built over. If such sewers are identified to be present on the site, please contact us for further guidance.

### **Foul Water Drainage**

Foul flows to the 300mm combined water sewer in Reservoir Road to the North, is available and can accommodate approx. flows of 0.07l/s 2xdwf. The development should not therefore have an adverse hydraulic impact on our network. A connection is acceptable to the Company at any convenient location subject to formal S106 approval (see later).

### **Surface Water Drainage**

# WONDERFUL ON TAP



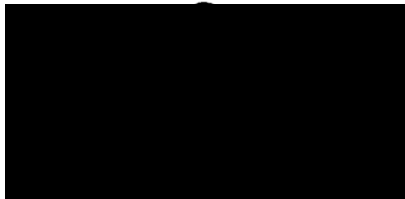
Our primary surface water disposal would be via soakways. If soak ways are not possible then 5l/s into the 225mm surface water sewer to the east adjacent to the site, or flow rates agreed with the LLFA would be acceptable with no adverse effect on the existing network. The Lead Local Flood Authority should also be consulted as statutory consultee in the planning process.

## New Connections

For any new connections (including the re-use of existing connections) to the public sewerage system, the developer will need to submit Section 106 application forms. Our New Connections department are responsible for handling all such enquiries and applications. To contact them for an application form and associated guidance notes please call [REDACTED] or download from [www.stwater.co.uk](http://www.stwater.co.uk).

Please quote 1014281 in any future correspondence (including e-mails) with STW Limited. Please note that 'Development Enquiry' responses are only valid for 6 months from the date of this letter.

Yours sincerely



Asset Protection (Waste Water) West  
Wholesale Production

**DRAINAGE MAINTENANCE & MANAGEMENT PLAN**  
**RESERVOIR ROAD,**  
**GLOUCESTER**  
**GL4 6SZ**

- 1.1 The Drainage Management and Maintenance Plan provides details of the plan proposed for maintenance and management of the drainage scheme associated with the proposed development at Reservoir Road, Gloucester, GL4 6SZ.
- 1.2 On occupation of the development, the maintenance and management plan should be incorporated into the sites Operation and Maintenance Manual with the as-built drainage system operated and maintained in accordance with the regime set out in the tables below.

*Table 1: Below Ground Drainage System - Operation and Maintenance Requirements*

Maintenance schedule	Required action	Frequency
Regular maintenance	Remove all litter and debris from external hard landscaped areas and adjacent landscaping, which may pose a risk to the performance of the system.	Monthly.
	Remove build-up of sediment / silt in catch-pits and dispose of oils / petrol residues using safe standard practices.	As required.
	Stabilise and mow adjacent landscaped areas and remove weeds.	
Remedial actions	Repair or rehabilitate inlet and outlets to ensure they are in good condition and operating as designed.	As required.
	Remediate any landscaping, which has raised to within 50mm of the level of adjacent hard landscaping.	
Monitoring	Check of all inlets / outlets for blockages or evidence of physical damage with any necessary remedial action or clearance carried out if required.	On a monthly basis for the first 3 months of operation, thereafter every 6 months & following severe rainfall events.
	Inspect all surfaces for ponding, or silt accumulation. Record areas where water is ponding for more than 48 hours and carry out any remedial work deemed necessary.	After severe storms.

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Table 2: Permeable Paving - Operation and Maintenance Requirements

Maintenance schedule	Required action	Frequency
Regular maintenance	Remove all litter and debris from drained surfaces areas and adjacent hard / soft landscaping, which may pose a risk to the performance of the system.	Monthly.
	Stabilise and mow adjacent landscaped areas and remove weeds.	Three times a year at end of winter, mid-summer, after autumn leaf fall, or as required based on site-specific observations of clogging.
Remedial actions	Remediate any landscaping, which has raised to within 50mm of the level of adjacent hard landscaping.	
	Carry out repair / rehabilitation works to inlets, outlets, overflows and vents.	
Monitoring	Inspect silt accumulation rates within the permeable paved areas and establish appropriate brushing frequencies.	Annually.
	Check of all inlets, outlets, overflows and vents for blockages or evidence of physical damage with any necessary remedial action or clearance carried out if required.	On a monthly basis for the first 3 months of operation, thereafter every 6 months & following severe rainfall events.
	Inspect and identify any areas that are not operating correctly	On a monthly basis for the first 3 months of operation, thereafter every 6 months & following severe rainfall events.

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Table 3: Gravel Filter Drain/ - Operation and Maintenance Requirements

Maintenance schedule	Required action	Frequency
Regular maintenance	Litter and debris removal from trench surface, access chambers and pre-treatment devices.	Monthly (or as required).
	Removal and washing of exposed stones on the trench surface.	Annual (bi-annual the first year) or when silt is evident on the surface.
	Trimming of any roots that may be causing blockages.	Annually (semi-annual the first year).
	Remove weeds on the trench surface.	Monthly (at start, then as required)
Occasional Maintenance	Removal of sediment from pre-treatment devices.	Every 6 months.
	Remove tree roots or trees that grow close to the trench.	As required.
	At locations with high pollution loads, remove surface geotextile and replace, and wash or replace filter media.	Every 5 years.
Remedial actions	Clear perforated pipework of blockages.	As required.
	Rehabilitate infiltration or filtration surfaces.	
	Excavate trench walls to expose clean soils if infiltration performance reduces to unacceptable levels.	
	Replace geotextiles and clean and replace filter media, if clogging occurs.	
	Inspect inlets, outlets and inspection points for blockages, clogging, standing water and structural damage.	Monthly
Monitoring	Inspect pre-treatment systems, inlets, trench surfaces and perforated pipework for silt accumulation. Establish appropriate silt removal frequencies.	Every 6 months.

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*Table 4: Geocellular Storage Tanks / Soakaways - Operation and Maintenance Requirements*

<b>Maintenance schedule</b>	<b>Required action</b>	<b>Frequency</b>
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for first 3 months of operation, then every 6 months.
	Debris removal from catchment surface (where may cause risks to performance).	Monthly.
	Where rainfall infiltrates into blocks from above, check surface of filter for blockage by silt, algae or other matter. Remove and replace surface infiltration medium as necessary.	Monthly / after severe storms.
	Remove sediment from pre-treatment structures.	Annually, or as required.
Remedial actions	Repair/rehabilitation of inlets, outlet, overflows and vents.	As required.
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed.	Annually and after large storms.

*Table 5: Concrete Ring Soakaways - Operation and Maintenance Requirements*

<b>Maintenance schedule</b>	<b>Required action</b>	<b>Frequency</b>
Regular maintenance	Remove sediment and debris from pre-treatment devices and floor of inspection tube or chamber.	Annually.
	Cleaning of gutters and any filters on downpipes.	
	Trimming any roots that may be causing blockages.	Annually or as required.
Remedial actions	Reconstruct soakaway and/or replace or clean void fill, if performance deteriorates or failure occurs.	As required.
	Replacement of clogged geotextile.	
Monitoring	Inspect catch pits / silt traps and note rate of sediment accumulation.	Monthly in the first year and then annually.
	Check soakaway to ensure emptying is occurring.	Annually.

1.3 The Site Manager should ensure that the Maintenance Contractor tasked with carrying out any maintenance works provides a risk assessment and method statement that adopts best practice health and safety policies for maintenance personnel throughout the duration of any maintenance works. Measures may include:

- Ensure the use of safe systems of work and procedures are followed.
- Certificated operatives only to be used for all confined space entry.
- Ensure appropriate ppe is worn at all times including the use of safety goggles, ear defenders and other relevant equipment when using high pressure jetting.
- Do not work in weather conditions where flooding or surging is likely.
- Erect barriers where appropriate and provide adequate lighting.
- No operations to be carried out by operatives working alone.
- Time maintenance to not conflict with other on-site activities.
- Method statement to be prepared and approved prior to entry into confined space.

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**SUDS IMPLEMENTATION PLAN**  
*RESERVOIR ROAD,*  
*GLOUCESTER*

1.1 This SUDS Implementation Plan sets out measures to be implemented during construction of the surface water drainage system for the scheme to ensure the site and areas downstream are protected from runoff during construction of the development. It is recommended that the plan is incorporated into the Contractors Construction Health and Safety Plan with the development carried out in accordance with the measures proposed.

1.2 It may not always be possible to ensure that new impermeable areas are immediately connected to the drainage system. Therefore, the following additional measures should be implemented to ensure construction runoff is appropriately managed

- Protective coverings should be used to help prevent runoff stripping material stockpiles.
- Plant and wheel washing should take place in a designated location. The area will be discharge into a suitable silt trap and petrol interceptor.
- Surfaces used as access roads and storage areas during construction should be swept regularly to prevent the accumulation of dust and mud.
- Should groundwater be encountered in excavations such water should not be discharged to the drainage system until the amount of suspended solids has been reduced though the controlled use of skips or tanks, which will act as stilling basins.
- To prevent contamination associated with the use of oils and hydrocarbons during construction, the Contractor should ensure that the following precautionary measures are employed during construction:
  - Regular maintenance of machinery and plant.
  - Use of drip trays.
  - Regular checking of machinery and plant for oil leaks.
  - Use of correct storage facilities.
  - Regular checks for signs of wear and tear on tanks.
  - Specific procedures are followed when refuelling.
  - Use of a designated area for refuelling.
  - Emergency spill kit to be located near refuelling area.
  - Regular emptying of bunds.
  - Tanks should be located in secure areas to stop vandalism.

1.3 The above measures would help to ensure that untreated construction runoff would not be discharged to the surface water drainage system.

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- 1.4 During construction all components of the drainage system should be constructed in accordance with relevant drawings, specifications, and manufacturer's guidelines. Further to this Building Control should visit site on a regular basis to inspect completed works and ensure that the drainage system is installed correctly.

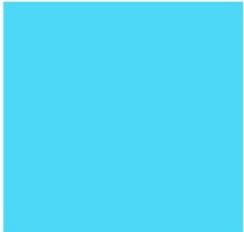
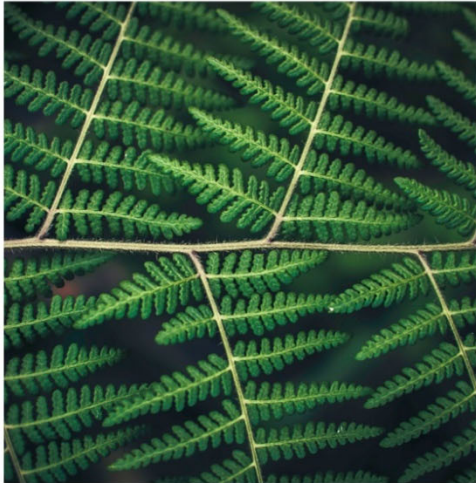
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20 October  
2021



# PHASE I ENVIRONMENTAL DESK STUDY



Land rear of 99-101  
Reservoir Road  
Gloucester  
Gloucestershire  
GL4 6SZ



Prepared For:



## LAND R/O 99-101 RESERVOIR ROAD, GLOUCESTER

---

### *EXECUTIVE SUMMARY*

The site currently includes an area of hardstanding at the northern end with an undeveloped, vegetated area to the rear.

Following a review of historic maps of the area, the site appears to have been originally used as an orchard, prior to construction of the existing properties along Reservoir Road. Two reservoirs were formerly located in the area to the west of the site, which were filled during the mid-twentieth century.

The area is considered to have a relatively low environmental sensitivity, given the absence of any on-site watercourses and the presence of the underlying mudstone geology, which is considered to have limited resource potential.

However, risks to future site users have been identified associated with the quality of the shallow soil across the site (noted to comprise made ground) and the potential for on-site migration of ground gas from the nearby in-filled reservoirs.

### *ACTION REQUIRED*

Some intrusive site investigation has therefore been recommended in order to determine the level of risk posed to future residents. This should include collection of shallow soil samples from across the site, installation of gas monitoring wells, and completion of a period of ground gas monitoring. A risk assessment should be produced based on the findings of this work.

It may be appropriate to combine this work with geotechnical investigation, should this be required to support the proposed development.

It is recommended that a copy of this report is forwarded to Gloucester City Council in support of the planning application. Prior to commencement of any Phase II Site Investigation, a scope of works should be agreed in writing with the Contaminated Land Officer.

Phase I Environmental Desk Study  
Land rear of 99-101 Reservoir Road, Gloucester  
Ref: SE-2021-183



<b>Report Reference</b>	SE-2021-183
<b>Status</b>	Final
<b>Date</b>	October 2021
<b>Client</b>	[REDACTED]
<b>Site Address</b>	Land rear of 99-101 Reservoir Road, Gloucester, Gloucestershire, GL4 6SZ
<b>Author</b>	[REDACTED]
<b>Authorised</b>	[REDACTED]
<b>Contact Details</b>	[REDACTED]

This report has been prepared following instruction from the client listed above for their sole use and is confidential to them. Sequoia Environmental Ltd. accepts no liability or responsibility for use of, or reliance upon information contained within this report by third parties.



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Appendix I	Preliminary Risk Assessment Process

## 1 INTRODUCTION

---

In June 2021 Sequoia Environmental Ltd. (Sequoia Environmental) was commissioned by Eclipse Planning Services Ltd. on behalf of Mr. Iain Wall ('the client') to undertake a Phase I Environmental Desk Study at the land rear of 99-101 Reservoir Road, Gloucester, Gloucestershire, GL4 6SZ ('the site').

The work was carried out to support a forthcoming planning application for construction of five residential properties with domestic garden areas. An indicative proposed development plan is included as Appendix A.

### 1.1 Regulatory Context

This report has been carried out in accordance with relevant sections of the following publications and guidance:

- CIRIA C552 *Contaminated Land Risk Assessment - A Guide to Good Practice*, 2001.
- SC050021/SR3 - *Updated Technical Background to the CLEA Model*, 2009.
- BS10175 - *Investigation of Potentially Contaminated Sites: Code of Practice*, 2017.
- *National Planning Policy Framework (NPPF)*, 2019.
- BS5930 - *Code of Practice for Ground Investigations*, 2015.
- *Land Contamination: Risk Management -Environment Agency*, 2020

### 1.2 Managing Risks from Land Contamination

The work presented in the following sections comprises a 'Preliminary Risk Assessment' which should be the first tier in the process of managing the risks from land contamination, as set out within the Environment Agency's Land Contamination Risk Management (LCRM) guidance. There are three essential elements to the concept of 'risk' in the context of land contamination, which combine to form a 'contaminant linkage'. In order for a contaminant linkage to be active, all three of the following elements must be present:



#### Source

The location from which a contaminative substance (i.e. that which has the potential to cause harm to human health or pollution to controlled waters) is derived.



#### Pathway

A route or means by which a receptor can be exposed to, or affected by, a source of contamination.



#### Receptor

Something that could be adversely affected by a contaminant, e.g. a person, an organism, an ecosystem, property, or controlled waters.

Each of these elements can exist independently. However, if all three elements are identified, there is the potential for a contaminant linkage to be active, which could result in significant harm being caused to human health or the surrounding environment.

### 1.3 Objective

The principal objective of this assessment is to assess the presence of any potential contaminant linkages, which may either be active at the site in its current condition, or could become active in future. This exercise will determine if the site is suitable for its proposed end-use, or if any further risk assessment, investigation or remedial action is required.

### 1.4 Scope of Works

The following tasks were undertaken to achieve the objective detailed above:

- Completion of a site walkover.
- Interview with site personnel, where available/appropriate.
- Characterisation of the site's environmental sensitivity through examination of geological, hydrogeological and topographic maps, borehole logs, records held by the Local Authority, and the Environment Agency.
- Examination of the site history from the late nineteenth century up to the present day, by review of historic maps and aerial photographs.
- Consideration of available existing and proposed development plans for the site.
- Development of a Conceptual Site Model (CSM) and Preliminary Risk Assessment (PRA).

### 1.5 Project Limitations and Constraints

Where information has been provided by third parties (Landmark, the Environment Agency, British Geological Survey, or other regulatory authorities), the validity of this information has been assessed as far as possible by Sequoia Environmental. However, the validity of this information cannot be guaranteed. Conclusions drawn on the basis of information obtained from third parties are made in good faith and on the assumption that this information is accurate.

This report is subject to amendment in light of additional information becoming available or statutory consultee review (including, but not limited to the Environment Agency, Local Authority or National House Building Council).

It is possible that the site conditions observed following completion of the site walkover may change. This may result in changes to the Conceptual Site Model which were unforeseen and beyond the control of Sequoia Environmental.

The copyright in the written materials herein shall remain the property of Sequoia Environmental, but with a royalty-free perpetual license to the Client deemed to be granted upon payment in full. No part of this report may be included in published documents of any kind without approval from Sequoia Environmental.

This report does not comprise a survey to identify the presence (or absence) of asbestos in buildings, infrastructure, or shallow soils. A suitably qualified specialist contractor should be commissioned to undertake a detailed assessment if Potentially Asbestos Containing Material (PACM) is suspected.

This report does not comprise a survey to identify the presence (or absence) of invasive plant species (including Japanese Knotweed). Sequoia Environmental takes no responsibility for failing to identify, or the incorrect identification of, any tree or plant species on site. Where invasive species are suspected, a suitably qualified arboricultural contractor should be commissioned.

This report does not comprise an Unexploded Ordnance (UXO) Assessment. However a Preliminary UXO Assessment may be required under Construction (Design and Management) Regulations, should the site be redeveloped.

This report represents the professional opinion of experienced environmental professionals. However, Sequoia Environmental does not provide legal advice. If legal advice is required, the services of a suitably qualified legal professional should be sought.

These terms apply in addition to Sequoia Environmental's "Standard Terms & Conditions" (or in addition to another written contract which may be in place instead thereof) unless specifically agreed in writing.

## 2 SITE CONTEXT

The following section provides information collected in relation to the site location and site walkover.

### 2.1 Site Location

A plan showing the site location is provided as Figure 1, the current site layout is detailed as Figure 2.

Detail	Description
Location	The site is located in White City, approximately 2.5km south of Gloucester city centre.
National Grid Reference	383986 215995
Area	Approximately 900m <sup>2</sup>
Local Authority	Gloucester City Council
Topographic Elevation	Approximately 45m Above Ordnance Datum (AOD).

### 2.2 Site Walkover

A site walkover was completed by a Sequoia Environmental representative on 4<sup>th</sup> July 2021. Selected site photographs are included as Appendix B and a copy of the checklist completed during the walkover is included as Appendix C.

Detail	Description
Site Description	The site comprised an area of hardstanding at the northern end, which was used as a driveway to an adjacent care home building (101 Reservoir Road). The southern area of the site was undeveloped and overgrown.
Ownership and Occupation	The site is within the ownership of the client. No buildings are present within the planning boundary.
Interview with Site Personnel	No personnel were interviewed during the site walkover.
Topographic Gradient	The site falls in topographic elevation gently from south to north.
Fuel Storage	No areas of above or below ground fuel storage were identified on-site during the site walkover.
Surfacing	The driveway at the northern end of the site was surfaced with a combination of asphalt and concrete hardstanding.
Vegetation	The site was overgrown with a mixture of trees and bushes. Some vegetation had recently been cut and remained on-site.
Surface Watercourses	No surface watercourses were noted either within or adjacent to the site.
Physical	The shallow soil across the site appeared to comprise made-ground,

Detail	Description
Evidence of Contamination	including pieces of brick, metal, ceramic, ash and wood. Some areas of fly-tipped waste were reported, including a mixture of clay soil and waste material in the south-eastern corner of the site. Two areas of burnt material were noted around the northern and eastern boundaries.
Services & Drainage	The adjacent building is anticipated to benefit from connection to services located within Reservoir Road to the north.
Surrounding Land Use	The site is surrounded by residential properties on all sides and the properties to the north 99 and 101 Reservoir Road are currently used as care homes. Some lock-up garages are present adjacent to the east, associated with residential properties on Robinswood Gardens.

### 3 ENVIRONMENTAL SETTING

The following section provides information collected in relation to the environmental setting of the site and surrounding area.

#### 3.1 Geology

The anticipated ground conditions at the site are detailed within the following table:

Geology	Strata	Description
Drift Geology	n/a	n/a
Solid Geology	Blue Lias Formation & Charnmouth Mudstone	Mudstone
n/a	none reported	

No historic borehole records were available from the British Geological Survey (BGS) within a 500m search radius of the site. Geological maps of the area are included as Appendix D.

#### 3.2 Geological Hazards

Geological hazards associated with the underlying strata are detailed within the following table:

Hazard	On-Site Risk
Mining	No Hazard
Collapsible Ground	Very Low
Compressible Ground	No Hazard
Ground Dissolution	No Hazard
Running Sand	No Hazard
Landslide	Very Low (Low 37m south and moderate 196m south)
Shrinking / Swelling Clay	Low

Two areas of mineral extraction were reported by the BGS within 1km of the site. The nearest of these was for opencast sand and gravel extraction at Yewtree Cottage Sand Pit, approximately 800m to the northeast. Operations at this site have now ceased.

#### 3.3 Radon

Information reported by the British Geological Survey, National Geoscience Information Service, indicates that the site lies within a lower probability radon area, where less than 1% of homes are estimated to be at or above the action level.

On this basis, no radon protective measures are considered necessary in the construction of new dwellings or extensions.

#### 3.4 Hydrogeology

The Environment Agency provides aquifer designation based on geological mapping produced by BGS (see section 3.1). The aquifer designation for the underlying strata is detailed within the following table:

Strata	Aquifer Classification	Description
Mudstone	Secondary (undifferentiated)	Variable by rock type.

The site does not lie within a Source Protection Zone (SPZ) for local groundwater abstraction and the Landmark Envirocheck (Envirocheck) report does not list any private groundwater abstractions within a 1km search radius. Groundwater vulnerability maps are included as Appendix E.

### 3.5 Hydrology & Flooding

The nearest surface water feature to the site is a small pond, located approximately 390m to the southwest. The nearest watercourse is an unnamed drain, which is located approximately 750m to the northeast and flows in a generally northerly direction.

A single discharge consent is reported within 1km of the site and this relates to a sewer overflow to Sud Brook, 880m north. No surface water abstractions are reported within a 1km search radius.

Information relating to the risk of flooding posed to the site and surrounding area is detailed within the following table:

Detail	Description
Flood Zone	Flood zone 1 – Low probability (land having a less than 1 in 1,000 annual probability of flooding from rivers or the sea).
Flood Defences	Not within an area which benefits from flood defences.
Groundwater Flooding	Not located within an area where there is potential for groundwater flooding to occur.
Surface Water flooding	Very low risk of surface water flooding.

### 3.6 Sensitive Land Use

Land Use	Distance (Direction)	Details
Ancient woodland	958m (southeast)	Ancient and semi-natural.
	966m (southeast)	Ancient and semi-natural.
Nitrate Vulnerable Zone	On-site	Where surface water and groundwater are identified as being at risk from nitrates leaching from agricultural land.

## 4 LANDFILL, WASTE & INDUSTRY

The following section provides information collected in relation to the anthropological use of the surrounding area. Relevant extracts of the Envirocheck Report detailing the uses closest to the site are included as Appendix F.

### 4.1 Landfill

Details of landfill sites recorded by the Environment Agency and local authority, within a 1km search radius are presented within the following table:

Landfill	Distance (Direction)	Details
EA Landfill	n/a	n/a
EA Historic Landfill	138m (southwest)	The Deanery, near Tuffley – waste type and operational period unknown
Local Authority Landfill	75m (southwest)	Reservoir Road – waste type and operational period unknown (closed)

n/a None present within a 1km search radius.

The Envirocheck report lists five areas of potentially infilled ground within 500m of the site. The nearest of these comprises an area of water filled ground (pond, marsh, river etc.) approximately 140m to the west.

### 4.2 Waste

Details of any waste management facilities, waste transfer sites and waste treatment/disposal sites, within a 1km search radius are presented within the following table:

Site	Distance (Direction)	Details
Waste management facilities	n/a	n/a
Waste transfer sites	n/a	n/a
Waste treatment/disposal sites	n/a	n/a

n/a None present within a 1km search radius.

### 4.3 Licenses, Authorisations & Incidents

Details of licenses, authorisations, and incidents, along with any other pollution incidents and recorded contaminated land within 1km are presented within the following table:

Site	Distance (Direction)	Details
Contaminated Land Register Entries/Notices	n/a	n/a
Authorised Industrial Processes (PPC/IPPC/LAPPC*)	934m (northeast)	Petrol filling station
Enforcements, prohibitions or prosecutions	n/a	n/a
Pollution incidents to controlled waters	649m (southeast)	Minor incident – sewage
	655m (northeast)	Minor incident – diesel

Site	Distance (Direction)	Details
	786m (northeast)	Minor incident - petrol
	790m (northeast)	Minor incident - petrol
	842m (northeast)	Minor incident – diesel
	886m (northeast)	Minor incident – miscellaneous
	928m (east)	Minor incident – miscellaneous
	960m (north)	Minor incident – oils
Registered radioactive substances	n/a	n/a

n/a None present within a 1km search radius.

\* Pollution Prevention & Control/Integrated Pollution Prevention & Control/Local Authority Pollution Prevention & Control

#### 4.4 Industrial Land Use

Details of industrial land use/points of interest at the site and in the nearby surrounding area are presented within the following table:

Land Use	Distance (Direction)	Status
Precision engineers	124m (south)	Inactive
Carpet, curtain, upholstery cleaners	169m (north)	Active
Kitchen furniture manufacturers	189m (north)	Inactive
Copying services	211m (northeast)	Inactive
Breakdown and recovery services	259m (north)	Inactive
Vehicle cleaning services	301m (northeast)	n/a
Damp and dry rot control	386m (northeast)	Inactive
Cladding suppliers	408m (west)	Inactive
Breakdown and recovery services	446m (southeast)	Inactive
Commercial cleaning services	471m (southwest)	Active
Vehicle repair, testing, servicing	473m (west)	n/a

n/a Point of interest, no status available.

## 5 SITE HISTORY

The following section provides information relating to the history of the site, derived from historic map, planning and local authority records.

### 5.1 Historical Map Review

Analysis of historic mapping from 1884 to the present day is presented within the following tables: Relevant historic maps (i.e. where changes are reported) are included as Appendix G.

#### 5.1.1 Historical Site Use

Date	Scale	Changes
1884	1:2,500	The site comprises an orchard.
1884	1:10,560	No significant changes.
1902	1:2,500	No significant changes.
1903	1:10,560	No significant changes.
1923	1:2,500	The orchard occupies the southern half of the site only.
1924	1:10,560	No significant changes.
1938	1:2,500	A small square building has been constructed on the eastern boundary.
1938	1:10,560	No significant changes.
1954-1955	1:10,000	No significant changes.
1956	1:2,500	No significant changes.
1960-1968	1:10,000	No significant changes.
1965-1972	1:1,250	The small square building has been removed.
1971-1974	1:10,000	No significant changes.
1972-1983	1:1,250	No significant changes.
1975	1:10,000	No significant changes.
1990	1:10,000	No significant changes.
1994	1:1,250	No significant changes.
1994	1:10,000	No significant changes.
2000	1:10,000	No significant changes.
2006	1:10,000	No significant changes.
2021	1:10,000	No significant changes.

#### 5.1.2 Historical Surrounding Land Use

Date	Scale	Changes
1884	1:2,500	Orchard adjacent to west and south. Reservoirs (x2) from 130m west.
1884	1:10,560	Cemetery 750m north. Railway 500m west. Sand pit 800m northeast.
1902	1:2,500	Allotment gardens 150m west. Residential properties have been constructed adjacent to the northern site boundary.
1903	1:10,560	No significant changes.

Date	Scale	Changes
1923	1:2,500	No significant changes.
1924	1:10,560	No significant changes.
1938	1:2,500	Residential development adjacent north. Allotment gardens adjacent east.
1938	1:10,560	No significant changes.
1954-1955	1:10,000	No significant changes.
1956	1:2,500	Tank 160m southeast.
1960-1968	1:10,000	No significant changes.
1965-1972	1:1,250	Reservoirs to the west are no longer marked. Residential development adjacent east. Electricity substation 80m west.
1971-1974	1:10,000	No significant changes.
1972-1983	1:1,250	No significant changes.
1975	1:10,000	No significant changes.
1990	1:10,000	No significant changes.
1994	1:1,250	No significant changes.
1994	1:10,000	No significant changes.
2000	1:10,000	No significant changes.
2006	1:10,000	No significant changes.
2021	1:10,000	No significant changes.

## 5.2 Aerial Photography

Aerial photography is available for the years 1946, 1947, and 1999. Whilst the resolution on the earlier images is low, the northern part of the site appears to be occupied by a dwelling, with woodland to the south. By 1999 the dwelling remains in place but many of the trees have been removed. Copies of these aerial photographs are included as Appendix H.

## 5.3 Planning History

Planning records for the site and nearby surrounding area were obtained from Gloucester City Council's online planning system. Relevant applications are summarised within the following table, along with any pertinent information.

Location	Application	Description	Decision
Adjacent	13/00314/FUL	Side and rear extensions	Granted
Adjacent	11/00687/FUL	Conservatory	Granted
Site	10/01283/OUT	Construction of two dwellings	Granted
50m east	10/00090/FUL	Front extension	Granted
80m west	07/00980/FUL	Garage and side extension	Granted
70m west	03/01447/FUL	Rear extension	Granted
Adjacent east	01/00153/COU	Change of use to care home	Granted

Planning permissions granted for the surrounding area appear to be limited to minor development and extensions. The permission granted at the site for two dwellings does not appear to have been implemented.

## 6 CONCEPTUAL SITE MODEL AND PRELIMINARY RISK ASSESSMENT

The following section characterises the potential sources of contamination, identifies human/environmental receptors which may be present at the site and determines the pathways by which interaction between these sources and receptors may occur. Both the historic and existing use of the site and surrounding area have been considered.

### 6.1 Sources of Contamination

The following potential contaminant sources have been identified at the site and surrounding area:

Source	Origin of Information	Description	Isolated/Diffuse?	Associated Contaminants
Current Site Use	Site walkover	Made ground beneath existing hardstanding	Diffuse	PAH, Metals, ACM
	Site walkover	Made ground visible at surface and evidence of burnt material	Diffuse	PAH, Metals, ACM
	Site walkover	Fly-tipped waste	Isolated	PAH, Metals, ACM
Current Surrounding Land Use	Envirocheck report	Engineers within 150m of the site	Isolated	TPH (including PAH), Metals, ACM
	Historic mapping	Electricity substation to west	Isolated	TPH (including PAH), PCB
Historic Surrounding Land Use	Envirocheck report	Historic landfill within 100m	Diffuse	Landfill Gas (CO <sub>2</sub> , CH <sub>4</sub> )

Notes: PAH Polycyclic Aromatic Hydrocarbons ACM Asbestos Containing Materials  
 TPH Total Petroleum Hydrocarbons PCB Polychlorinated Biphenyls  
 CO<sub>2</sub> Carbon Dioxide CH<sub>4</sub> Methane

### 6.2 Potential Pathways

#### 6.2.1 Pathways to Human Receptors

There are a number of pathways through which human receptors can come into contact with contaminants in soil. The most direct of these pathways (as detailed within Environment Agency Science Report SC050021/SR3) are summarised within the following table:

Receptor	Exposure	Pathway
Humans	Ingestion via the mouth	Ingestion of airborne dust
		Ingestion of soil
Ingestion of soil attached to vegetables		
Ingestion of home-grown vegetables		
	Inhalation via the nose and mouth	Inhalation of airborne dust

Receptor	Exposure	Pathway
		Inhalation of vapour or gas
	Absorption through the skin	Dermal contact with dust Dermal contact with soil

However, not all of these potential pathways will apply to every end-use and many will be ‘broken’ as a result of the proposed end-use. For example, home grown vegetables will clearly not be produced within a commercial setting and therefore human receptors will not be exposed to contaminants via this pathway.

### 6.2.2 Pathways to Controlled Waters

There are a number of transport mechanisms through which contaminants in soil can enter controlled waters such as surface watercourses or groundwater. These are summarised within the following table:

Receptor	Pathway
Groundwater	Vertical migration of contaminants in unsaturated soil
Surface waters	Lateral migration of contaminants dissolved in groundwater Direct seepage of contaminants in soil Saturation of contaminated soil by flood water

Once impacted, contaminated groundwater may also pose a risk to future users via the vapour inhalation pathway as detailed within section 6.2.1 above.

### 6.2.3 Pathways to Vegetation

Plants themselves may also be exposed to contaminants in soils via the following pathways:

Receptor	Pathway
Plants	Root uptake Leaf Uptake

Where a source and receptor have been identified, an examination of the site’s environmental setting must be made in order to determine if any of the pathways described above are active, or could have the potential to become active as a result of the proposed development.

Where a source, pathway and receptor are all deemed to be present, a contaminant linkage has the potential to exist and should be included within the final Conceptual Site Model.

## 6.3 Potential Receptors

Science Report SC050021/SR3’ also sets out a series of standard land-uses, which form a basis for the development of a Conceptual Site Model. The proposed development plan for the site includes construction of five dwellings. The site’s most sensitive end-use is therefore considered to be **residential**.

On the basis of the site’s environmental setting and the current and proposed land use, a summary of the potential receptors is given within the table below:

Receptor Class	Site Specific Description	Sensitivity
Human	Future residents and their visitors	High
	Construction workers involved in the site redevelopment	High
	People living and working in the surrounding area	High
Groundwater	Any shallow groundwater perched above underlying mudstone	Low
Surface Water	Surface watercourse 750m northeast	Low (given distance)
Flora and Fauna	The proposed development will include domestic garden areas	Moderate
Buildings	Concrete used in building foundations	Low
Buried Services	Buried potable water supply pipes and other underground utilities.	Moderate
Adjacent Land	Nearby residential and commercial buildings	Moderate

#### 6.4 Summary of Contaminant Linkages & Preliminary Risk Assessment

Following consideration of the above sources, pathways and receptors, contaminant linkages that have been considered plausible are summarised in the following table:

Each contaminant linkage has been assigned a Risk Rating. The preliminary risk assessment process is based on guidance provided in CIRIA C552 *Contaminated Land Risk Assessment – A Guide to Good Practice*. The overall contamination risk is a function of the probability and the consequence of an event occurring. Further details on this process are included within Appendix I.

Source	Pathway	Receptor	Risk Rating
Contaminated soil	Dermal contact and ingestion	Site users and construction workers	High
	Inhalation of airborne soil and soil dust	Site users and construction workers	High
	On-site migration of landfill gas	Site users	Moderate
	Uptake and adherence of contaminated soil to vegetation and ingestion	Site users	Moderate
	Ingress/diffusion into potable water supply pipework	Site users	Moderate/Low
	Root and leaf uptake	Plants	Moderate/Low

A number of contaminant linkages have been identified which, whilst theoretically possible, are not considered to be 'plausible', given the context of the site and surrounding area. Justification for exclusion of these linkages from the Conceptual Site Model is made within the table below:

Source & Receptor	Risk Rating	Justification
Risks to controlled waters from made ground.	No plausible linkage	Contaminants associated with any made ground are relatively immobile in the environment by virtue of their very low solubility and volatility.
On site migration and volatilisation of organic contaminants in groundwater	No plausible linkage	Although several commercial sites are present within the surrounding area, including an engineers to the south, these all lie at a significant distance from the site. Furthermore, the underlying geology is considered to have limited permeability.
On-site migration of PCBs	No plausible linkage	An electricity substation is located to the west of the site. However, this is located off-site and within a pre-fabricated building. Most modern transformer insulation oils do not contain PCBs. This source is therefore not considered to pose a risk to future site users.

## 7 CONCLUSIONS & RECOMMENDATIONS

### 7.1 Conclusions

This assessment has demonstrated that the site has been predominately undeveloped, throughout its history. The site has not comprised any former industrial use and no areas of above or below ground fuel storage are reported. On this basis, the risks to future users are considered to be relatively low.

However, several plausible contaminant linkages do have the potential to become active as a result of the proposed development. These are associated with the quality of the shallow soil across the site, given the visible presence of made ground and also the potential for ground gas to migrate on-site from the nearby area of landfill. The contaminant linkages identified as being of greatest concern are therefore as follows:

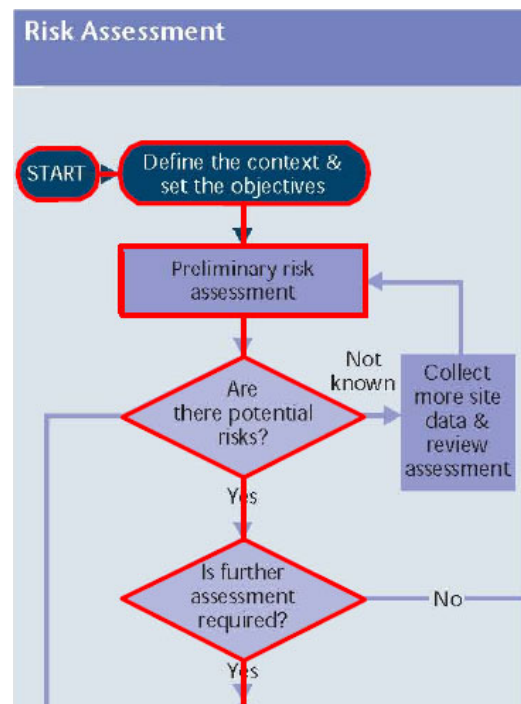
- Human health risks associated with direct interaction between future residents and potentially contaminated soils within proposed domestic garden areas.
- Exposure of potentially contaminated soils to construction workers during any groundworks.
- On-site migration of ground gas from an area of land-filling located to the southwest.

### 7.2 Recommendations

The flow diagram presented on the right (reproduced from the withdrawn publication *Model Procedures for Management of Land Contamination, CLR11<sup>1</sup>*) indicates that the risks identified by this work will require further assessment.

This work should include collection of a number of shallow soil samples from across the site. Boreholes should be completed to facilitate the installation of ground gas monitoring wells and a brief period of ground gas monitoring should be carried out in accordance with BS8576 (2013) and CIRIA C665 (2007).

All soil samples should be submitted to an appropriately accredited laboratory and a generic quantitative risk assessment produced in order to determine the site's suitability for use under the planning regime.



Assessment pathway for the site

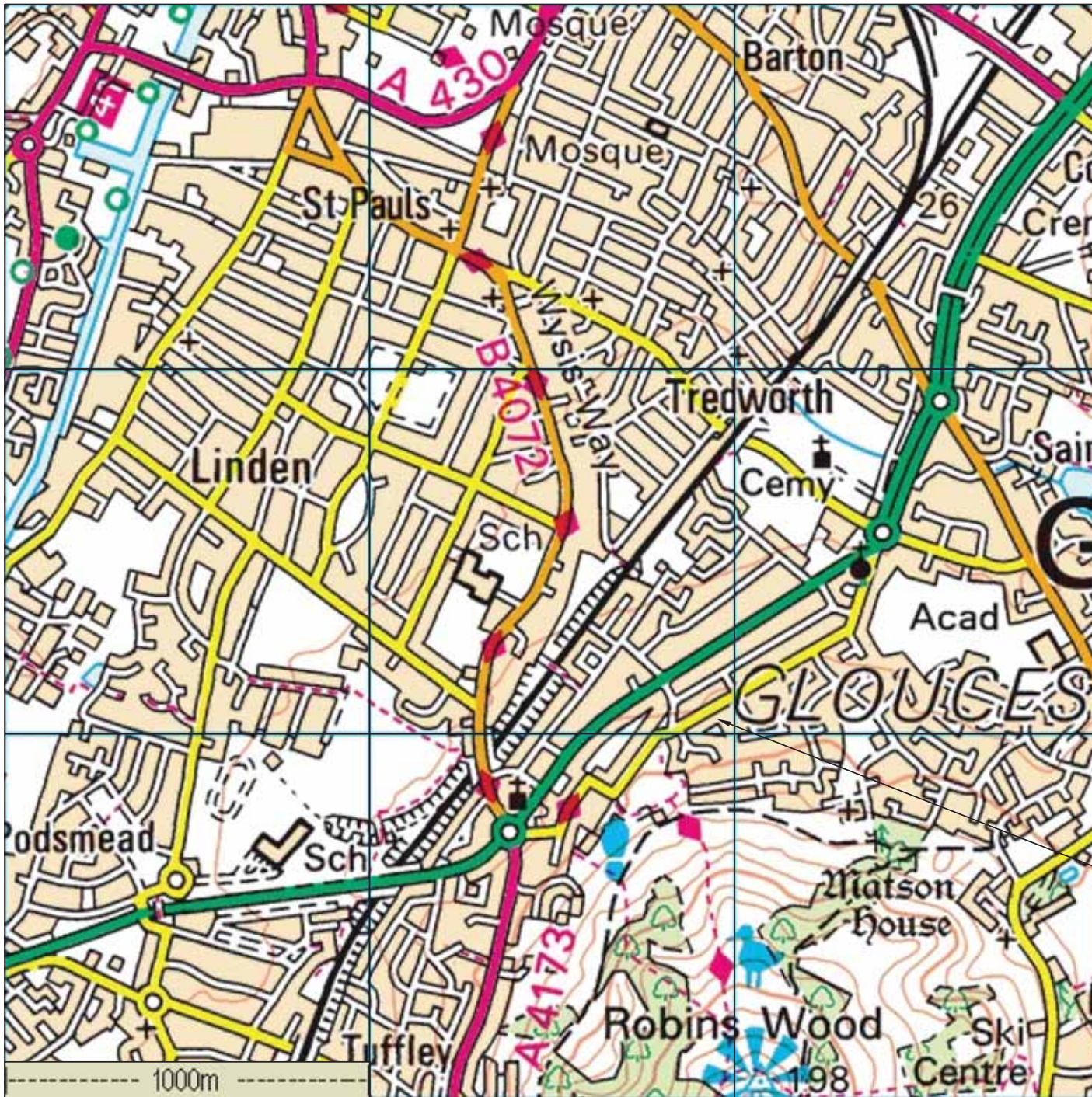
<sup>1</sup> Model Procedures for Management of Land Contamination, Contaminated Land Report 11 was withdrawn on 8<sup>th</sup> October 2020 and replaced by Land Contamination Risk Management guidance. However, the flow charts included in CLR11 are still considered a useful tool in detailing a phased approach to assessment of contaminated land.

A copy of this report should be submitted to Gloucester City Council in support of the planning application and a scope of work for site investigation should be agreed prior to commencement.

If any ground investigation work is required to support the proposed development, then the required site investigation would be most effectively undertaken at this stage.

# FIGURES

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Title: Figure 1 - Site Location on  
 Site: Land r/o 99-101 Reservoir Road





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Title: Figure 2 - Site Layout  
Site: Land r/o 99-101 Reservoir Road

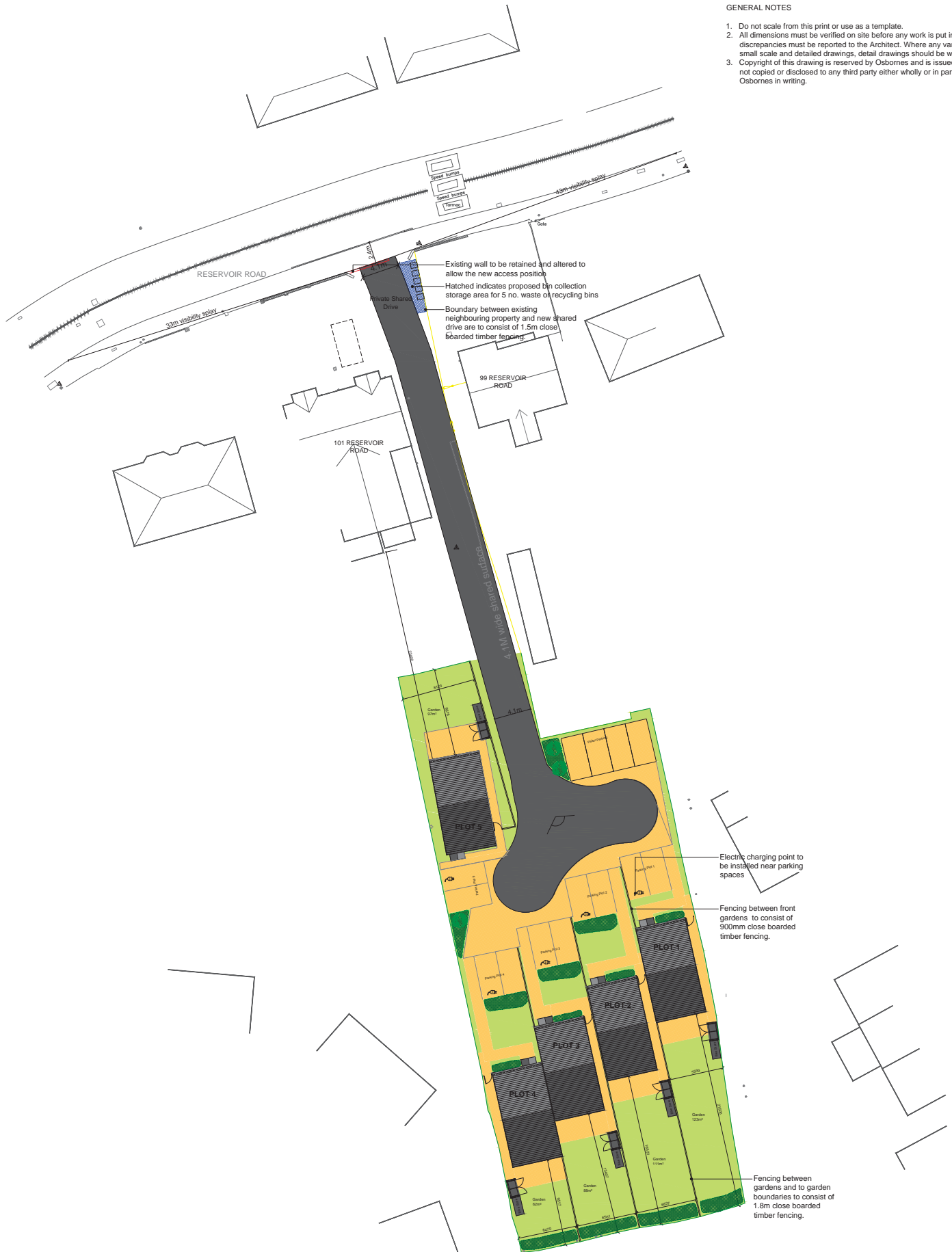


# APPENDIX A – PROPOSED DEVELOPMENT PLAN

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GENERAL NOTES

1. Do not scale from this print or use as a template.
2. All dimensions must be verified on site before any work is put in hand and any discrepancies must be reported to the Architect. Where any variations occur between small scale and detailed drawings, detail drawings should be worked from.
3. Copyright of this drawing is reserved by Osbornes and is issued on condition that it is not copied or disclosed to any third party either wholly or in part without the consent of Osbornes in writing.



SCHEDULE OF UNITS

UNIT	NUMBER OF BEDROOMS	NUMBER OF STOREYS	GROSS INTERNAL FLOOR AREA	ALLOCATED PARKING SPACES	SIZE OF REAR GARDEN
PLOT 1	3	2	95m <sup>2</sup>	2	123m <sup>2</sup>
PLOT 2	3	2	95m <sup>2</sup>	2	111m <sup>2</sup>
PLOT 3	3	2	95m <sup>2</sup>	2	88m <sup>2</sup>
PLOT 4	3	2	95m <sup>2</sup>	2	62m <sup>2</sup>
PLOT 5	3	2	95m <sup>2</sup>	2	97m <sup>2</sup>

4 No. additional Visitor parking spaces provided on site.

REV A: 20/09/2021 Drive way altered

**OSBORNES** CHARTERED ARCHITECTS  
The Balconies • Hanley Swan • Malvern • Worcestershire • WR8 0DN

CLIENT MR IAIN WALL  
PROJECT 101 RESERVOIR ROAD  
TITLE PROPOSED SITE PLAN  
SCALE 1:200 @ A1  
DATE AUG 2021  
DRAWN TL DRAWING NUMBER 21-11-SP1A

## APPENDIX B – SITE PHOTOGRAPHS

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Photo 1. View looking south at 101 Reservoir Road.



Photo 2: View looking south to the rear of the building.



Photo 3: View looking south from the northern part of the site.



Photo 4: View looking north from the southern site boundary.



Photo 5: View looking south along the eastern site boundary.



Photo 6: View looking northeast from the southern site boundary.



## APPENDIX C – WALKOVER CHECKLIST

---

Site Walkover Checklist

	Street names	Access is gained off Reservoir Road.
	Site boundary	<ul style="list-style-type: none"> <li>- wooden gated access via the northern bound</li> <li>- wood panel fencing around north, west &amp; south.</li> <li>- East is wood posts with PVC chainlink fence wh</li> <li>- In poor condition &amp; broken in many places, w</li> <li>- lined with bushes &amp; dead trees.</li> </ul>
	Topography	<ul style="list-style-type: none"> <li>- Generally level with slight undulations.</li> <li>- Very slight gradient from north rising to south</li> </ul>
	Neighbouring land use	<ul style="list-style-type: none"> <li>- Predominantly residential buildings.</li> <li>- 99 Reservoir Road used as care home</li> <li>- Residential garages on Robinswood gardens east of</li> </ul>
	Vegetation & trees	<ul style="list-style-type: none"> <li>- Generally overgrown with grass &amp; weeds with some</li> <li>- Many dead trees along eastern boundary (cut at base)</li> <li>- Frequent spots of vegetative stress (likely due to clay)</li> </ul>
	Surfacing	<ul style="list-style-type: none"> <li>- Concrete &amp; tarmac hardstanding at northern access point</li> <li>- Predominantly clayey made ground (lots of brick/gener</li> <li>- building through</li> </ul>
	On-site or adjacent watercourses & outfalls	N/A
	Nature and use of buildings	<ul style="list-style-type: none"> <li>- Care home to north</li> <li>- Residential garages on Robinswood gardens to east</li> <li>- Rest mainly residential homes</li> </ul>
	Processes	N/A
	Raw material storage	Postcrete bags (2)
	Evidence of debris or fly-tipped waste	<ul style="list-style-type: none"> <li>- General made ground ubiquitous across site</li> <li>- Partially buried waste in southeast corner</li> </ul> <p>(brick/cement/wood)</p>
	Evidence of surface staining or odour	<ul style="list-style-type: none"> <li>- Evidence of ash/burning on eastern boundary</li> <li>- Metal bins used for burning waste on hardstanding in</li> <li>- No evidence of fuels/oils.</li> </ul>
	Above or below ground fuel storage	None identified.

Site Walkover Checklist



Evidence of previous site investigations None, however amount of brick/cement in soil suggests previous site use or waste tipping



Potential asbestos containing material None specific, however may be present in made ground.



Anecdotal evidence N/A

Sequoia Representative  
Date  
Project Ref



4/7/21

## APPENDIX D – GEOLOGICAL MAPS





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## Geology 1:50,000 Maps Legends








### Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	SLIP	Landslide Deposit	Unknown/Unclassified Entry	Not Supplied - Quaternary

### Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	TFD	Tidal Flat Deposits	Clay, Silt and Sand	Not Supplied - Holocene
	CHSG	Cheltenham Sand and Gravel	Sand and Gravel	Not Supplied - Quaternary
	RTD1	River Terrace Deposits, 1	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary

### Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WHM	Whitby Mudstone Formation	Mudstone	Not Supplied - Toarcian
	BDS	Bridport Sand Formation	Sandstone	Not Supplied - Toarcian
	DYS	Dyrham Formation	Siltstone and Mudstone, Interbedded	Not Supplied - Pliensbachian
	MRB	Marlstone Rock Formation	Limestone, Ferruginous	Not Supplied - Pliensbachian
	CHAM	Charmouth Mudstone Formation	Mudstone	Not Supplied - Sinemurian
	BLCR	Blue Lias Formation and Charmouth Mudstone Formation (Undifferentiated)	Mudstone	Not Supplied - Rhaetian
	LIIO	Lias Group and Inferior Oolite Group (Undifferentiated)	Limestone, Argillaceous Rocks and Subordinate Sandstone, Interbedded	Not Supplied - Rhaetian



### Geology 1:50,000 Maps

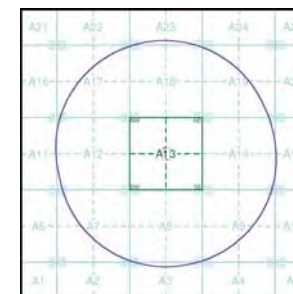
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

### Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	234
Map Name:	Gloucester
Map Date:	1972
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

### Geology 1:50,000 Maps - Slice A

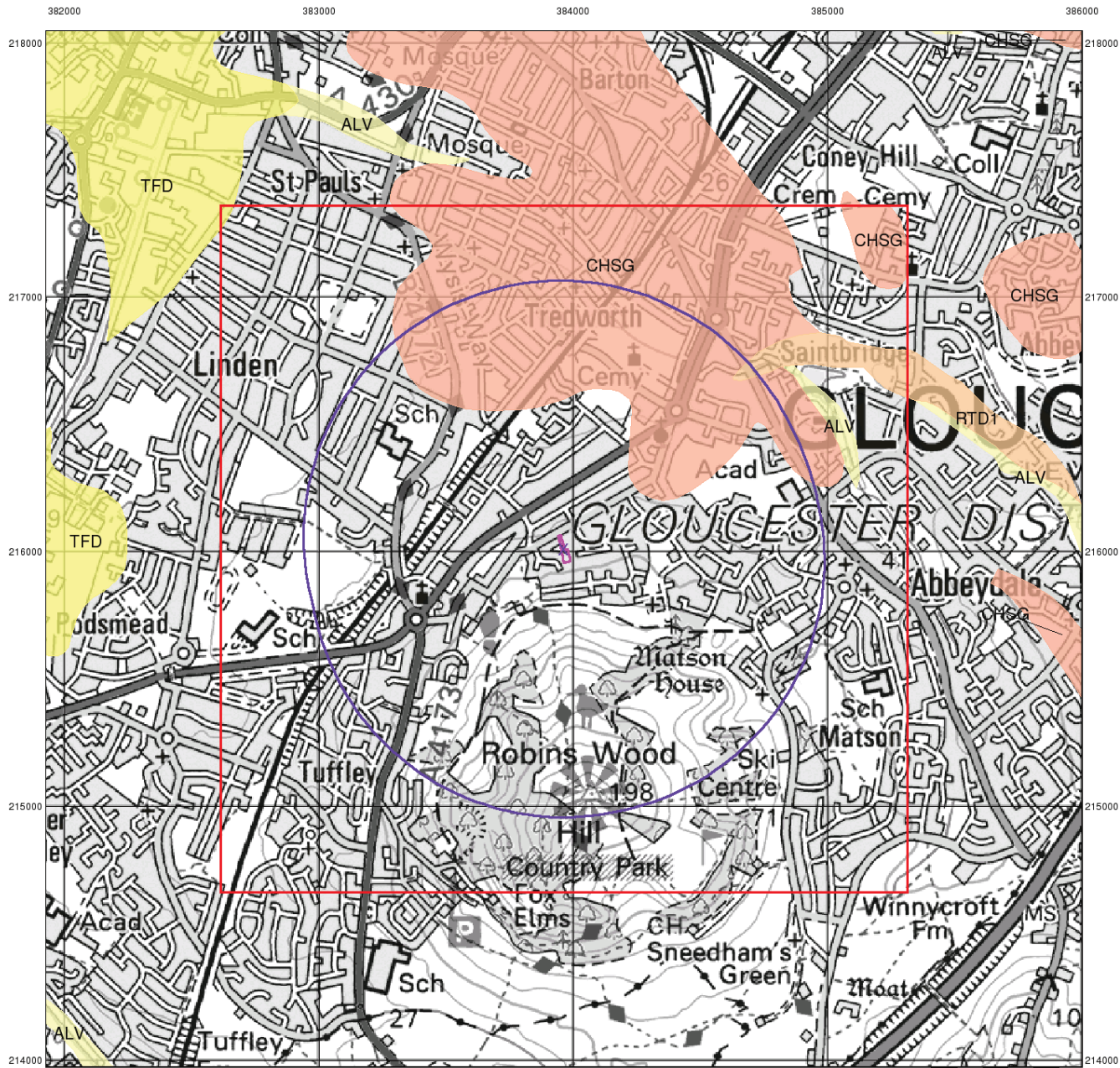


### Order Details:

Order Number:	281999455_1_1
Customer Reference:	SE-2021-183
National Grid Reference:	383960, 216010
Site Area (Ha):	0.2
Search Buffer (m):	1000

### Site Details:

101, Reservoir Road, GLOUCESTER, GL4 6SZ



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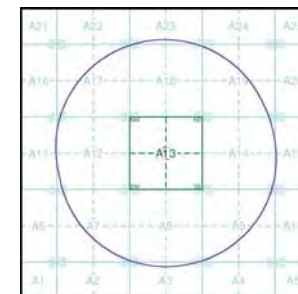
### Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

### Superficial Geology Map - Slice A



### Order Details:

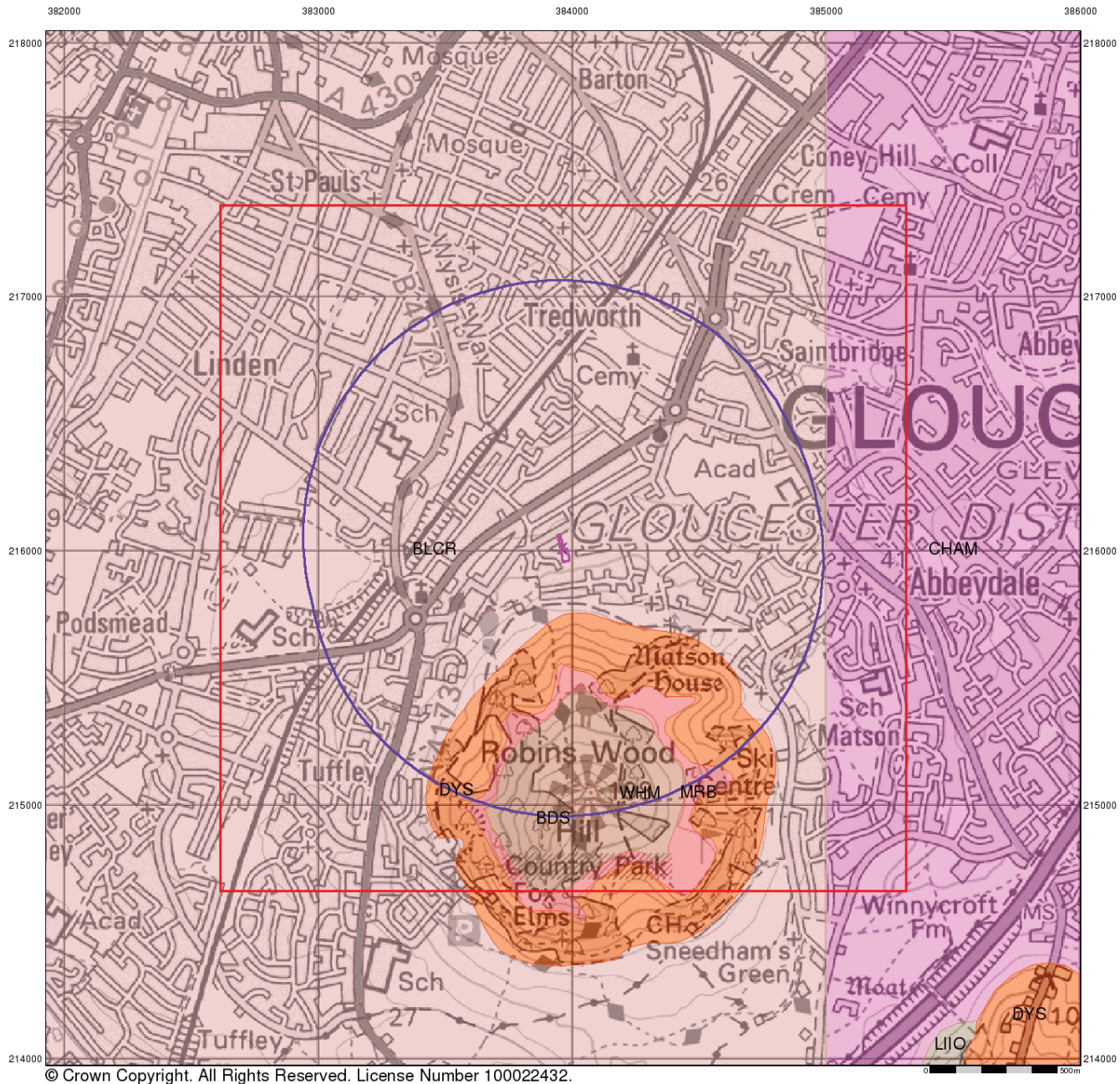
Order Number: 281999455\_1\_1  
 Customer Reference: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

### Site Details:

101, Reservoir Road, GLOUCESTER, GL4 6SZ



Web: [www.enwirocheck.co.uk](http://www.enwirocheck.co.uk)



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**Bedrock and Faults**

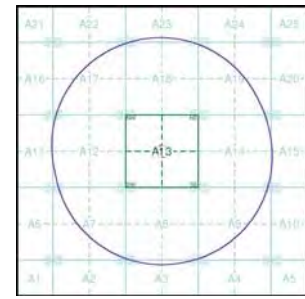
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

**Bedrock and Faults Map - Slice A**



**Order Details:**

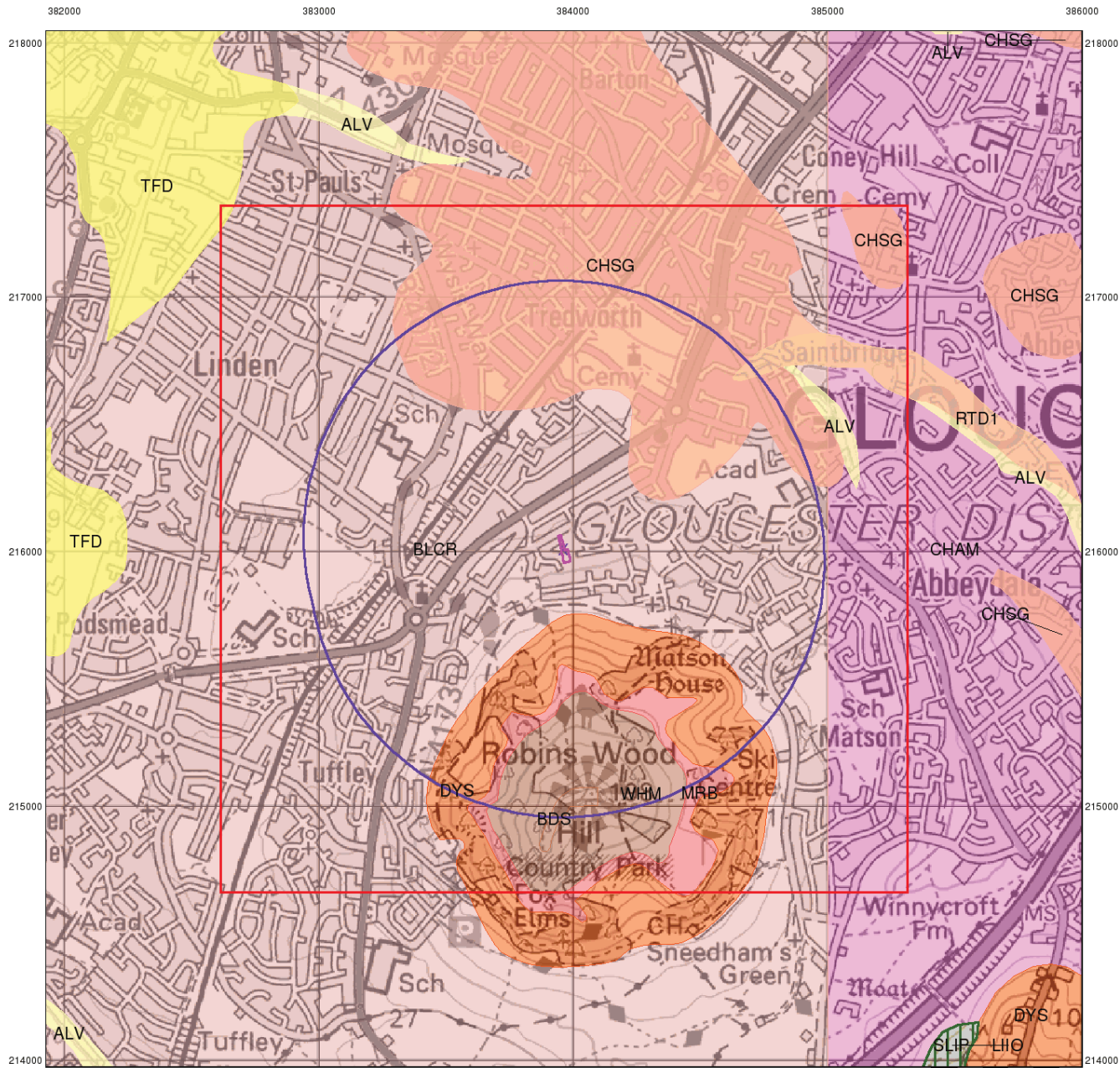
Order Number: 281999455\_1\_1  
 Customer Reference: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

**Site Details:**

101, Reservoir Road, GLOUCESTER, GL4 6SZ



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**Combined Surface Geology**

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

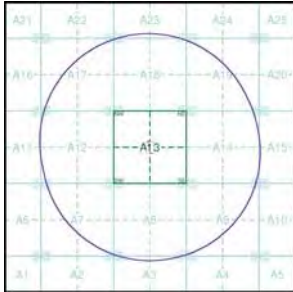
**Additional Information**

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

**Contact**

British Geological Survey  
 Kingsley Dunham Centre  
 Keyworth  
 Nottingham  
 NG12 5GG  
 Telephone: 0115 936 3143  
 Fax: 0115 936 3276  
 email: enquiries@bgs.ac.uk  
 website: www.bgs.ac.uk

**Combined Geology Map - Slice A**



**Order Details:**

Order Number: 281999455\_1\_1  
 Customer Reference: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

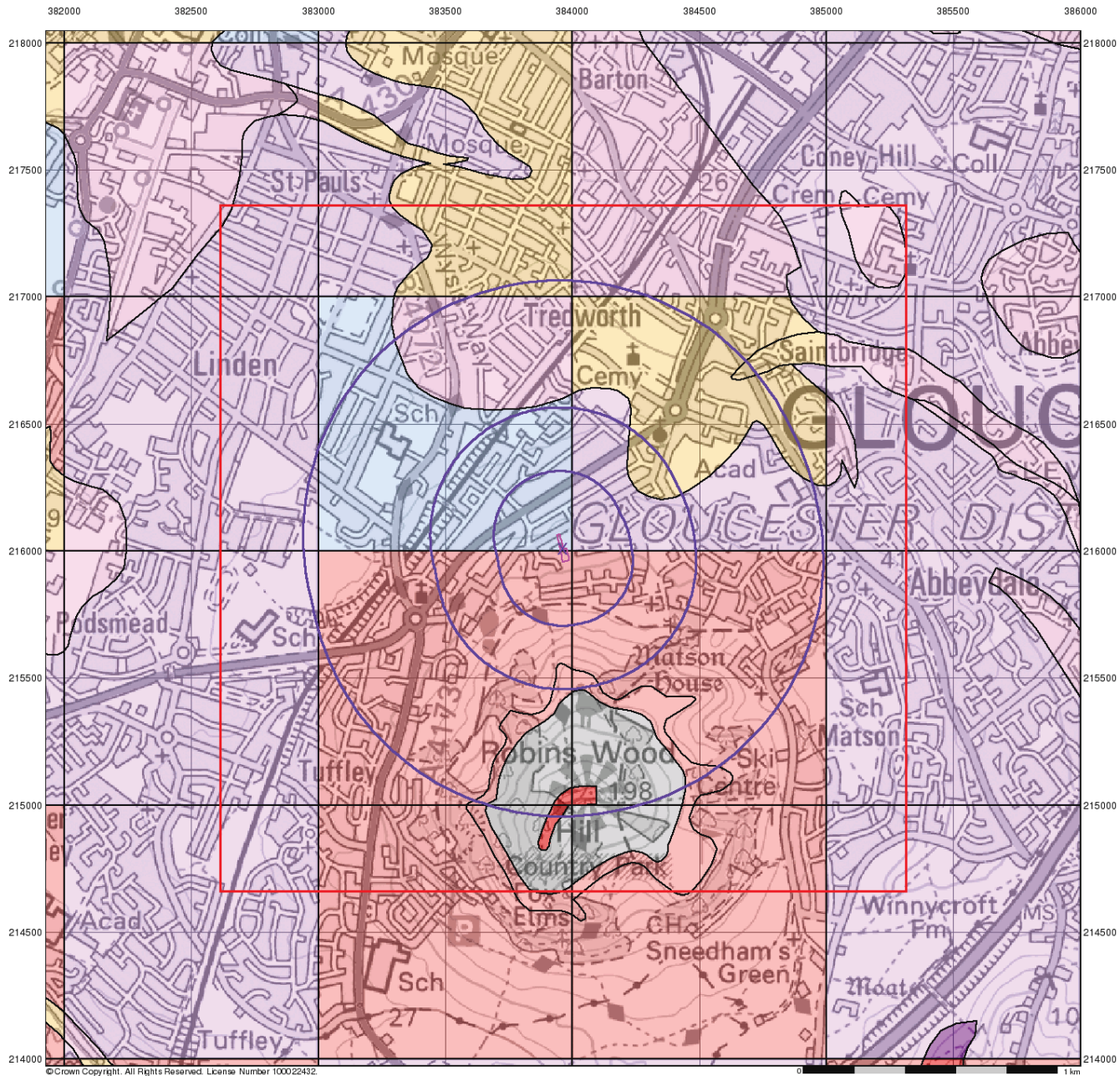
**Site Details:**

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# APPENDIX E – GROUNDWATER VULNERABILITY MAPS

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0 1 km



## Groundwater Vulnerability

### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

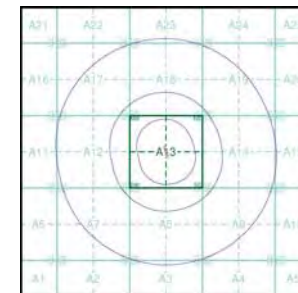
#### Bedrock Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer
- Unproductive Aquifer
- Soluble Rock

#### Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

### Site Sensitivity Context Map - Slice A



### Order Details

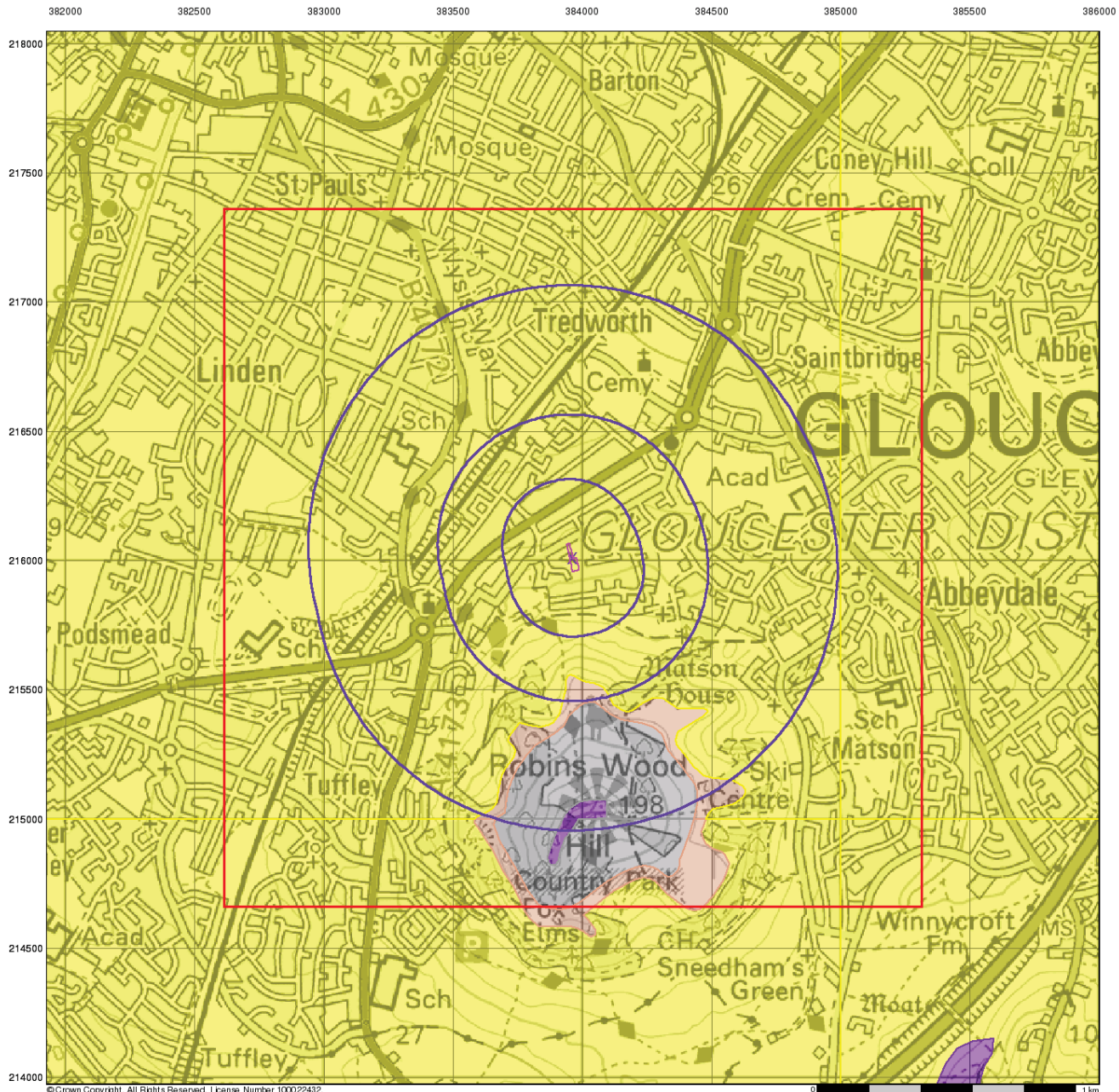
Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

### Site Details

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## Bedrock Aquifer Designation

### General

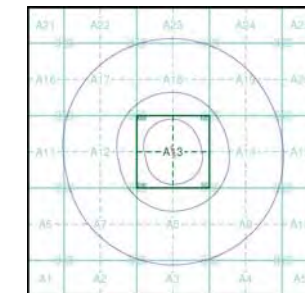
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice A



### Order Details

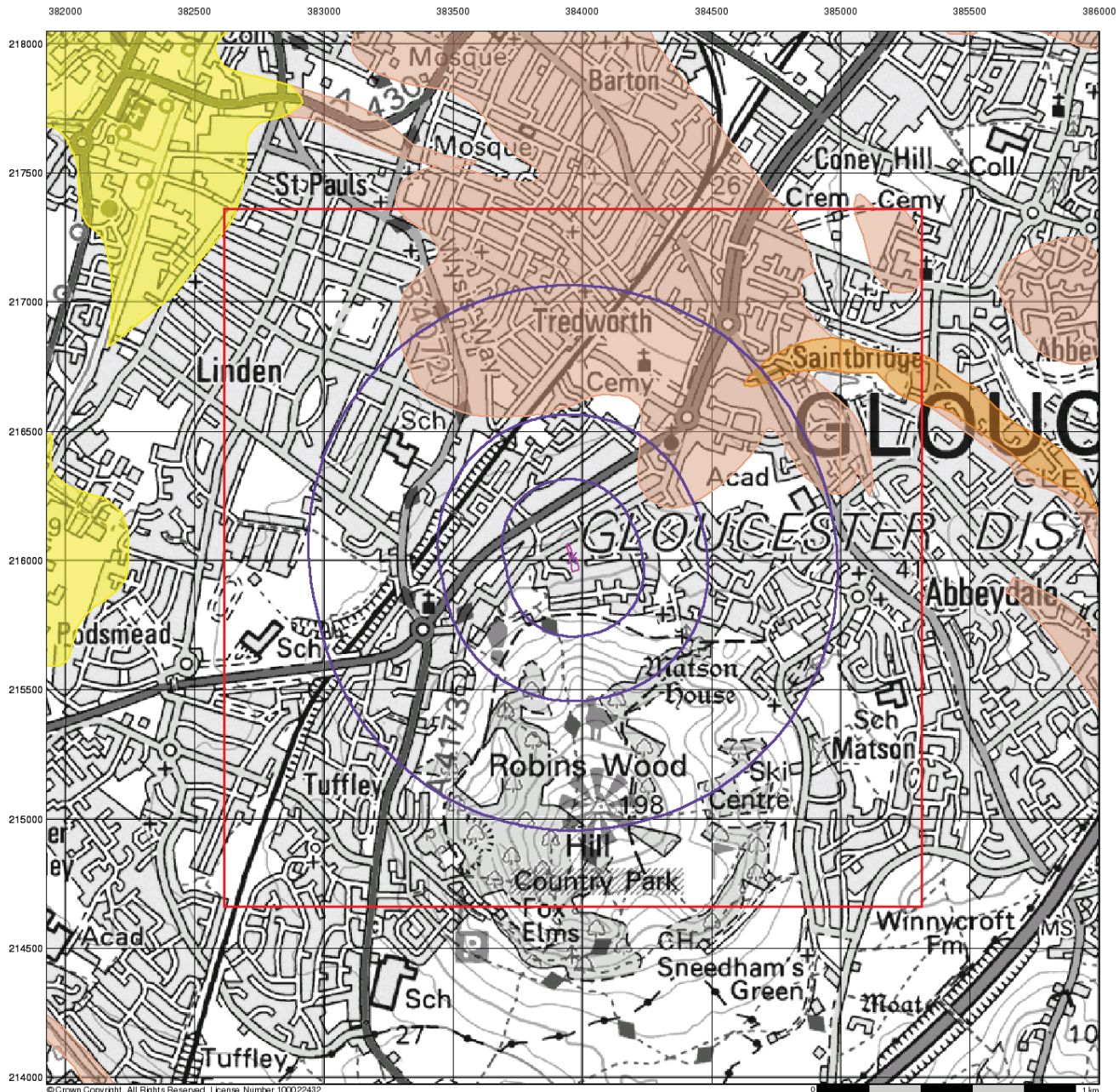
Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



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## Superficial Aquifer Designation

### General

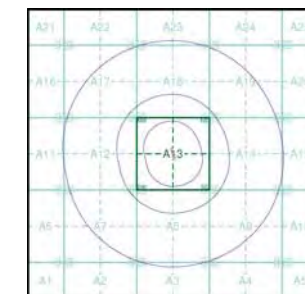
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ

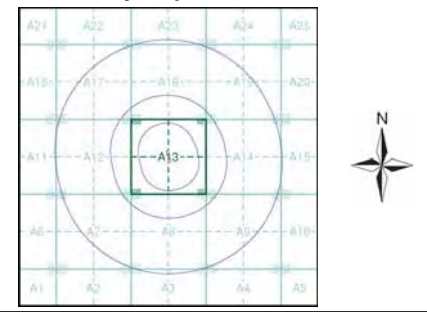


# APPENDIX F – ENVIROCHECK EXTRACTS

---

- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Map ID
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
  - Contaminated Land Register Entry or Notice
  - Discharge Consent
  - Enforcement or Prohibition Notice
  - Integrated Pollution Control
  - Integrated Pollution Prevention and Control
  - Local Authority Integrated Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control Enforcement
  - Pollution Incident to Controlled Waters
  - Prosecution Relating to Authorised Processes
  - Prosecution Relating to Controlled Waters
  - Registered Radioactive Substance
  - River Network or Water Feature
  - River Quality Sampling Point
  - Substantiated Pollution Incident Register
  - Water Abstraction
  - Water Industry Act Referral
- Hazardous Substances**
- COMAH Site
  - Explosive Site
  - NIHHS Site
  - Planning Hazardous Substance Consent
  - Registered Hazardous Substance Enforcement
- Geological**
- BGS Recorded Mineral Site
- Waste**
- BGS Recorded Landfill Site (Location)
  - BGS Recorded Landfill Site
  - EA Historic Landfill (Buffered Point)
  - EA Historic Landfill (Polygon)
  - Integrated Pollution Control Registered Waste Site
  - Licensed Waste Management Facility (Landfill Boundary)
  - Licensed Waste Management Facility (Location)
  - Local Authority Recorded Landfill Site (Location)
  - Local Authority Recorded Landfill Site
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Registered Landfill Site
  - Registered Landfill Site (Location)
  - Registered Landfill Site (Point Buffered to 100m)
  - Registered Landfill Site (Point Buffered to 250m)
  - Registered Waste Transfer Site (Location)
  - Registered Waste Transfer Site
  - Registered Waste Treatment or Disposal Site (Location)
  - Registered Waste Treatment or Disposal Site

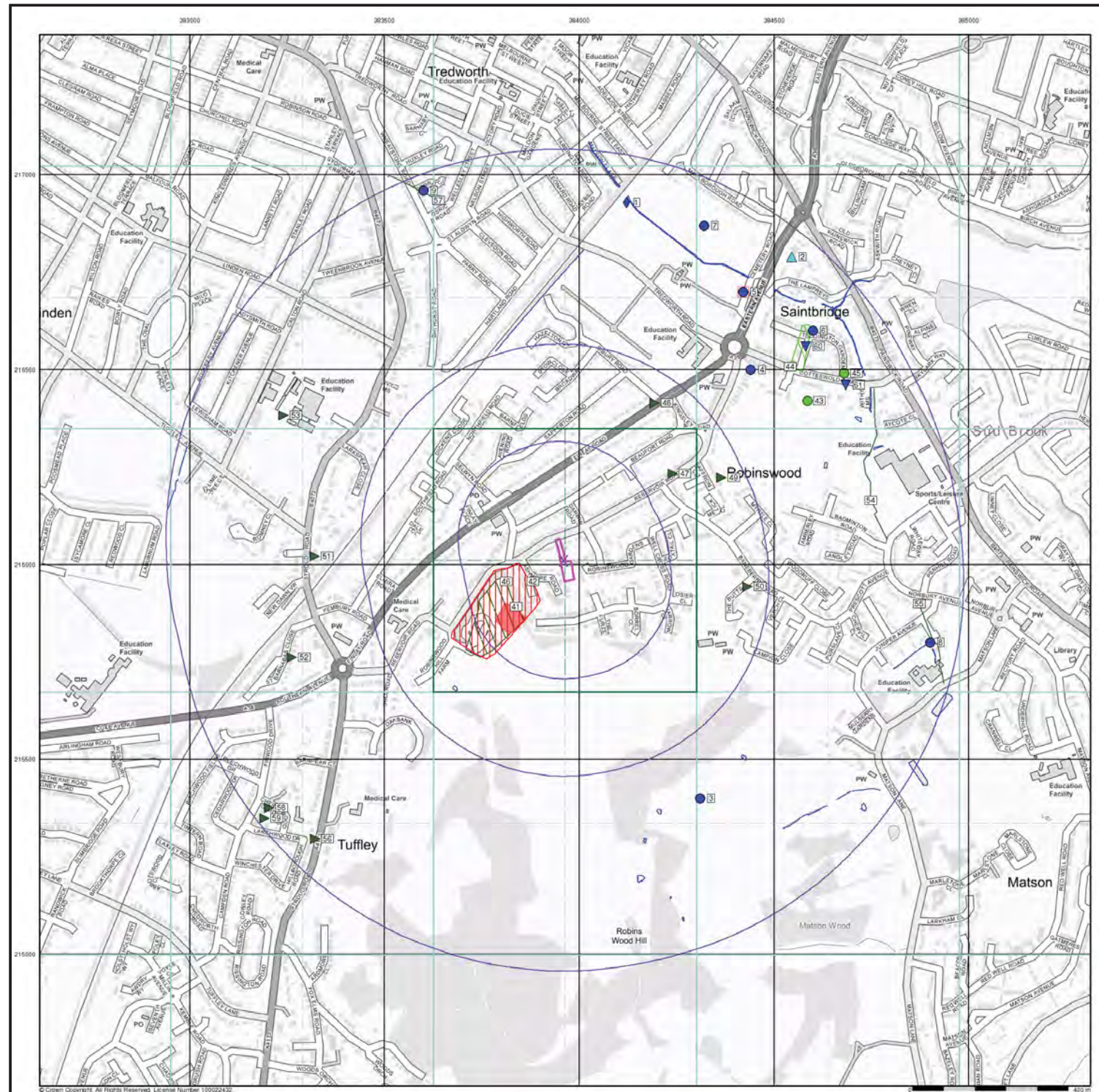
**Site Sensivity Map - Slice A**



**Order Details**

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

**Site Details**  
 101, Reservoir Road, GLOUCESTER, GL4 6SZ



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## APPENDIX G – HISTORIC MAPPING

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Note: the red line detailed on Figure 2 represents the most up-to-date planning boundary for the site.

# Historical Mapping Legends

## Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

**Quarry** (circular with radiating lines), **Gravel Pit** (circular with concentric lines), **Sand Pit** (circular with concentric lines), **Clay Pit** (circular with concentric lines), **Shingle** (circular with concentric lines), **Refuse Heap** (circular with concentric lines), **Sloping Masonry** (hatched pattern), **Flat Rock** (hatched pattern), **Marsh** (wavy lines), **Reeds** (wavy lines), **Osiers** (wavy lines), **Rough Pasture** (dotted pattern), **Furze** (dotted pattern), **Wood** (dotted pattern), **Mixed Wood** (dotted pattern), **Brushwood** (dotted pattern), **Orchard** (dotted pattern), **Fir** (dotted pattern), **Ford** (dotted pattern), **Stepping Stones** (dotted pattern), **Ferry** (dotted pattern), **Waterfall** (dotted pattern), **Lock** (dotted pattern), **Trig. Station** (triangle with '507'), **Altitude at Trig. Station** (triangle with '507'), **B.M. 325.9** (upward arrow), **Bench Mark** (upward arrow), **Surface Level** (upward arrow), **Arrow denotes flow of water** (arrow), **Antiquities (site of)** (circle with cross), **Cutting** (hatched pattern), **Embankment** (hatched pattern), **Railway crossing Road** (crossing lines), **Level Crossing** (crossing lines), **Road crossing Railway** (crossing lines), **Railway crossing River or Canal** (crossing lines), **Road over single stream** (crossing lines), **Road over River or Canal** (crossing lines), **County Boundary (Geographical)** (dashed line), **County & Civil Parish Boundary** (dashed line), **Administrative County & Civil Parish Boundary** (dashed line), **County Borough Boundary (England)** (dashed line), **County Borough Boundary (Scotland)** (dashed line), **B.P. B.S. Boundary Post or Stone**, **P.C.B. Police Call Box**, **B.R. Bridle Road**, **P. Pump**, **E.P. Electricity Pylon**, **S.P. Signal Post**, **F.B. Foot Bridge**, **SL. Sluice**, **F.P. Foot Path**, **Sp. Spring**, **G.P. Guide Post or Board**, **T.C.B. Telephone Call Box**, **M.S. Mile Stone**, **Tr. Trough**, **M.P. M.R. Mooring Post or Ring**, **W. Well**

## Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

**Inactive Quarry, Chalk Pit or Clay Pit** (circular with radiating lines), **Active Quarry, Chalk Pit or Clay Pit** (circular with radiating lines), **Rock** (dotted pattern), **Boulders** (dotted pattern), **Cliff** (hatched pattern), **Slopes** (hatched pattern), **Roofed Building** (hatched pattern), **Glazed Roof Building** (hatched pattern), **Sloping Masonry** (hatched pattern), **Archway** (hatched pattern), **Non-Coniferous Tree (surveyed)** (circle with cross), **Coniferous Tree (surveyed)** (circle with cross), **Non-Coniferous Trees (not surveyed)** (circle with cross), **Coniferous Trees (not surveyed)** (circle with cross), **Orchard Tree** (circle with cross), **Scrub** (circle with cross), **Bracken** (circle with cross), **Coppice, Osier** (circle with cross), **Reeds** (circle with cross), **Marsh, Saltings** (circle with cross), **Rough Grassland** (circle with cross), **Heath** (circle with cross), **Culvert** (circle with cross), **Direction of water flow** (arrow), **Bench Mark** (upward arrow), **Antiquity (site of)** (circle with cross), **Cave Entrance** (circle with cross), **Triangulation Station** (triangle), **Electricity Pylon** (square with cross), **Electricity Transmission Line** (line with cross), **County Boundary (Geographical)** (dashed line), **County & Civil Parish Boundary** (dashed line), **Civil Parish Boundary** (dotted line), **Admin. County or County Bor. Boundary** (dotted line), **London Borough Boundary** (dotted line), **Symbol marking point where boundary mereing changes** (circle with cross), **BH Beer House**, **P. Pillar, Pole or Post**, **BP, BS Boundary Post or Stone**, **PO Post Office**, **Cn, C Capstan, Crane**, **PC Public Convenience**, **Chy Chimney**, **PH Public House**, **D Fn Drinking Fountain**, **Pp Pump**, **Ei P Electricity Pillar or Post**, **SB, S Br Signal Box or Bridge**, **FAP Fire Alarm Pillar**, **SP, SL Signal Post or Light**, **FB Foot Bridge**, **Spr Spring**, **GP Guide Post**, **Tk Tank or Track**, **H Hydrant or Hydraulic**, **TCB Telephone Call Box**, **LC Level Crossing**, **TCP Telephone Call Post**, **MH Manhole**, **Tr Trough**, **MP Mile Post or Mooring Post**, **W Pt, W T Water Point, Water Tap**, **MS Mile Stone**, **W Well**, **NTL Normal Tidal Limit**, **Wd Pp Wind Pump**

## Large-Scale National Grid Data 1:2,500 and 1:1,250

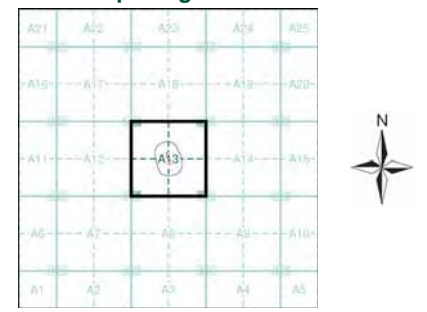
**Cliff** (hatched pattern), **Slopes** (hatched pattern), **Rock** (dotted pattern), **Rock (scattered)** (dotted pattern), **Boulders** (dotted pattern), **Boulders (scattered)** (dotted pattern), **Positioned Boulder** (circle with cross), **Scree** (circle with cross), **Non-Coniferous Tree (surveyed)** (circle with cross), **Coniferous Tree (surveyed)** (circle with cross), **Non-Coniferous Trees (not surveyed)** (circle with cross), **Coniferous Trees (not surveyed)** (circle with cross), **Orchard Tree** (circle with cross), **Scrub** (circle with cross), **Bracken** (circle with cross), **Coppice, Osier** (circle with cross), **Reeds** (circle with cross), **Marsh, Saltings** (circle with cross), **Rough Grassland** (circle with cross), **Heath** (circle with cross), **Culvert** (circle with cross), **Direction of water flow** (arrow), **Triangulation Station** (triangle), **Antiquity (site of)** (circle with cross), **Electricity Transmission Line** (line with cross), **Electricity Pylon** (square with cross), **B.M. 231.60n Bench Mark**, **Buildings with Building Seed**, **Roofed Building** (hatched pattern), **Glazed Roof Building** (hatched pattern), **Civil parish/community boundary** (dotted line), **District boundary** (dotted line), **County boundary** (dotted line), **Boundary post/stone** (circle with cross), **Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)** (circle with cross), **Bks Barracks**, **P. Pillar, Pole or Post**, **Bty Battery**, **PO Post Office**, **Cemy Cemetery**, **PC Public Convenience**, **Chy Chimney**, **Pp Pump**, **Cis Cistern**, **Ppg Sta Pumping Station**, **Dismtd Rly Dismantled Railway**, **PW Place of Worship**, **Ei Gen Sta Electricity Generating Station**, **Sewage Ppg Sta Sewage Pumping Station**, **Ei P Electricity Pole, Pillar**, **SB, S Br Signal Box or Bridge**, **Ei Sub Sta Electricity Sub Station**, **SP, SL Signal Post or Light**, **FB Filter Bed**, **Spr Spring**, **Fn / D Fn Fountain / Drinking Ftn.**, **Tk Tank or Track**, **Gas Gov Gas Valve Compound**, **Tr Trough**, **GVC Gas Governor**, **Wd Pp Wind Pump**, **GP Guide Post**, **W Pt, W T Water Point, Water Tap**, **MH Manhole**, **Wks Works (building or area)**, **MP, MS Mile Post or Mile Stone**, **W Well**



## Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Gloucestershire	1:2,500	1884	2
Gloucestershire	1:2,500	1902	3
Gloucestershire	1:2,500	1923	4
Gloucestershire	1:2,500	1938	5
Historical Aerial Photography	1:1,250	1946	6
Ordnance Survey Plan	1:2,500	1956	7
Ordnance Survey Plan	1:1,250	1956	8
Ordnance Survey Plan	1:1,250	1965 - 1972	9
Ordnance Survey Plan	1:2,500	1971	10
Additional SIMs	1:1,250	1972 - 1983	11
Supply of Unpublished Survey Information	1:1,250	1973	12
Additional SIMs	1:1,250	1979 - 1984	13
Additional SIMs	1:1,250	1984 - 1992	14
Large-Scale National Grid Data	1:1,250	1994	15
Historical Aerial Photography	1:2,500	1999	16

## Historical Map - Segment A13



## Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

## Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



# Historical Mapping Legends

## Ordnance Survey County Series 1:10,560

**Other Pits**  
Gravel Pit, Sand Pit, Other Pits

**Quarry**  
Quarry, Shingle, Orchard

**Osiers**  
Osiers, Reeds, Marsh

**Mixed Wood**  
Mixed Wood, Deciduous, Brushwood

**Fir**  
Fir, Furze, Rough Pasture

**Water**  
Arrow denotes flow of water, Trigonometrical Station, Site of Antiquities, Bench Mark, Pump, Guide Post, Signal Post, Well, Spring, Boundary Post

**Surface Level**  
• 285 Surface Level

**Contours**  
Sketched Contour, Instrumental Contour

**Roads**  
Main Roads (Fenced, Un-Fenced), Minor Roads (Fenced, Un-Fenced), Sunken Road, Raised Road, Road over Railway, Railway over River, Railway over Road, Level Crossing, Road over River or Canal, Road over Stream, Road over Stream

**Boundaries**  
County Boundary (Geographical), County & Civil Parish Boundary, Administrative County & Civil Parish Boundary, County Borough Boundary (England), Co. Boro. Bdy., County Borough Boundary (Scotland), Co. Burgh Bdy., Rural District Boundary, RD. Bdy., Civil Parish Boundary

## Ordnance Survey Plan 1:10,000

**Pits**  
Chalk Pit, Clay Pit or Quarry, Gravel Pit, Sand Pit, Disused Pit or Quarry

**Vegetation**  
Refuse or Slag Heap, Lake, Loch or Pond, Dunes, Boulders, Coniferous Trees, Non-Coniferous Trees, Orchard, Scrub, Coppice, Bracken, Heath, Rough Grassland, Marsh, Reeds, Saltings

**Buildings**  
Building, Glasshouse, Sloping Masonry, Pylon, Electricity Transmission Line, Pole

**Railways**  
Cutting, Embankment, Standard Gauge Multiple Track, Standard Gauge Single Track, Siding, Tramway or Mineral Line, Narrow Gauge

**Boundaries**  
Geographical County, Administrative County, County Borough or County of City, Municipal Borough, Urban or Rural District, Burgh or District Council, Borough, Burgh or County Constituency (Shown only when not coincident with other boundaries), Civil Parish (Shown alternately when coincidence of boundaries occurs)

**Points of Interest**  
BP, BS: Boundary Post or Stone; Ch: Church; CH: Club House; F E Sta: Fire Engine Station; FB: Foot Bridge; Fn: Fountain; GP: Guide Post; MP: Mile Post; MS: Mile Stone; Pol Sta: Police Station; PO: Post Office; PC: Public Convenience; PH: Public House; SB: Signal Box; Spr: Spring; TCB: Telephone Call Box; TCP: Telephone Call Post; W: Well

## 1:10,000 Raster Mapping

**Pits**  
Gravel Pit, Refuse tip or slag heap, Rock (scattered), Boulders (scattered), Shingle, Sand, Sand Pit

**Vegetation**  
Slopes, Top of cliff, Area of wooded vegetation, Non-coniferous trees, Coniferous trees, Positioned tree, Coppice or Osiers, Heath, Marsh, Salt Marsh or Reeds, Flow arrows

**Boundaries**  
General detail, Overhead detail, Multi-track railway, Single track railway, County boundary (England only), District, Unitary, Metropolitan, London Borough boundary, Civil, parish or community boundary, Constituency boundary

**Water**  
Mean high water (springs), Mean low water (springs), Telephone line (where shown), Electricity transmission line (with poles), Triangulation station

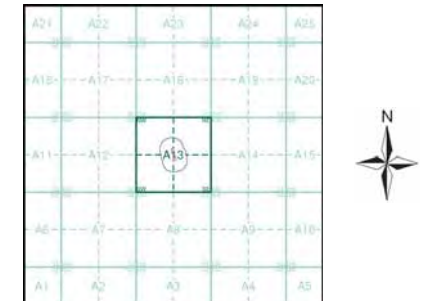
**Other**  
Bench mark (where shown), Point feature (e.g. Guide Post or Mile Stone), Site of (antiquity), General Building, Important Building



## Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Gloucestershire	1:10,560	1884	3
Gloucestershire	1:10,560	1903	4
Gloucestershire	1:10,560	1924	5
Gloucestershire	1:10,560	1938	6
Historical Aerial Photography	1:10,560	1947 - 1949	7
Historical Aerial Photography	1:10,560	1947	8
Ordnance Survey Plan	1:10,000	1954 - 1955	9
Ordnance Survey Plan	1:10,000	1954	10
Ordnance Survey Plan	1:10,000	1960 - 1968	11
Ordnance Survey Plan	1:10,000	1971 - 1974	12
Ordnance Survey Plan	1:10,000	1975	13
Ordnance Survey Plan	1:10,000	1988	14
Gloucester	1:10,000	1989	15
Ordnance Survey Plan	1:10,000	1990	16
Ordnance Survey Plan	1:10,000	1994	17
10K Raster Mapping	1:10,000	2000	18
10K Raster Mapping	1:10,000	2006	19
VectorMap Local	1:10,000	2021	20

## Historical Map - Slice A



## Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

## Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



## Gloucestershire

Published 1884

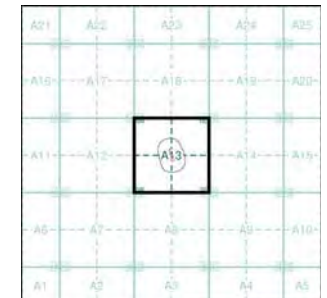
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)



### Historical Map - Segment A13

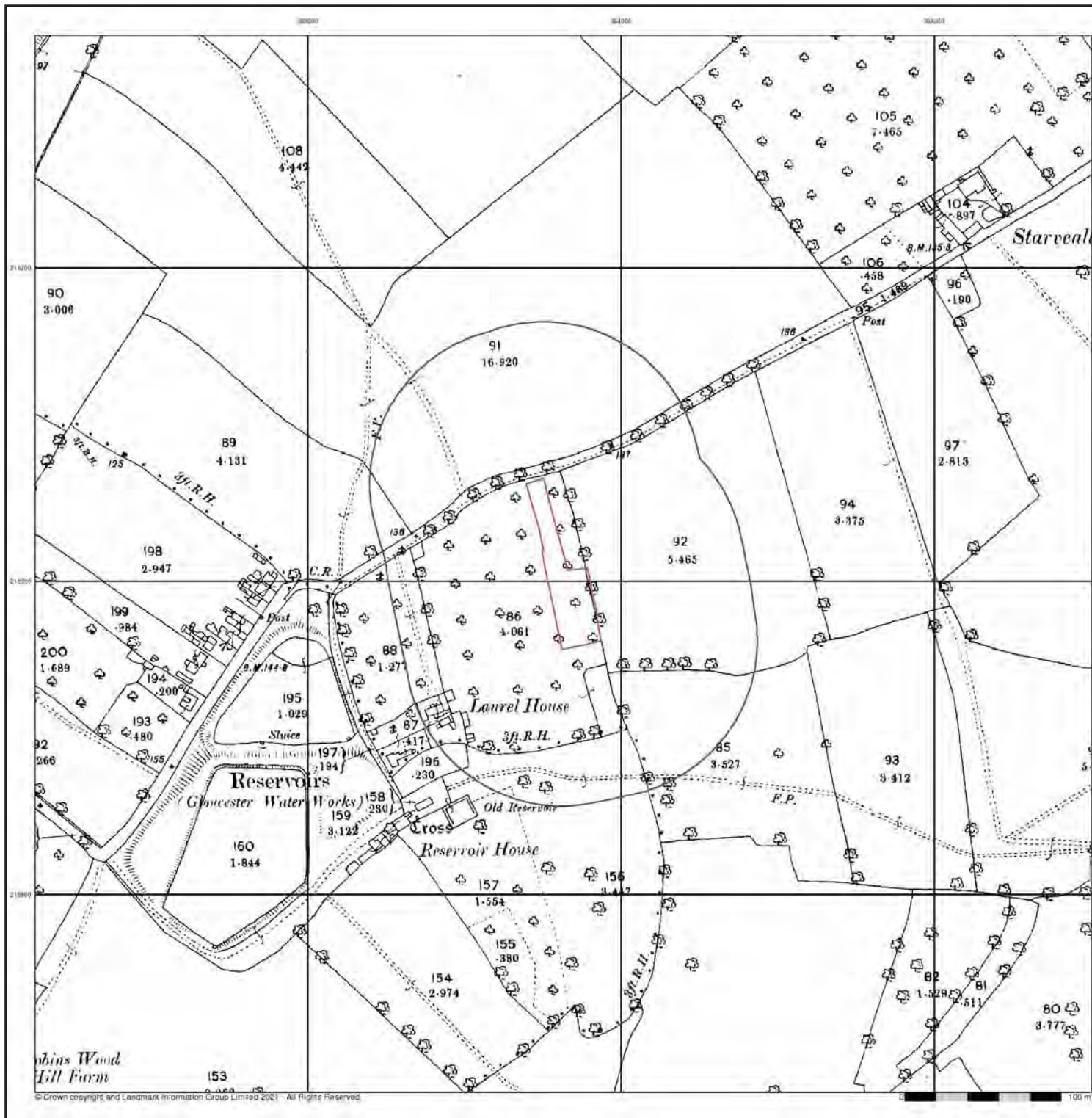


### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ





### Gloucestershire

Published 1884

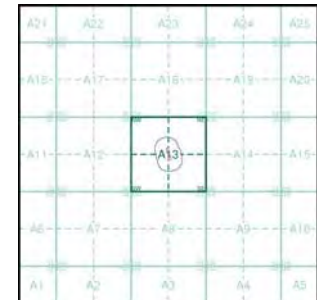
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)

033NW 1884 1:10,560	033NE 1884 1:10,560
033SW 1884 1:10,560	033SE 1884 1:10,560

### Historical Map - Slice A



### Order Details

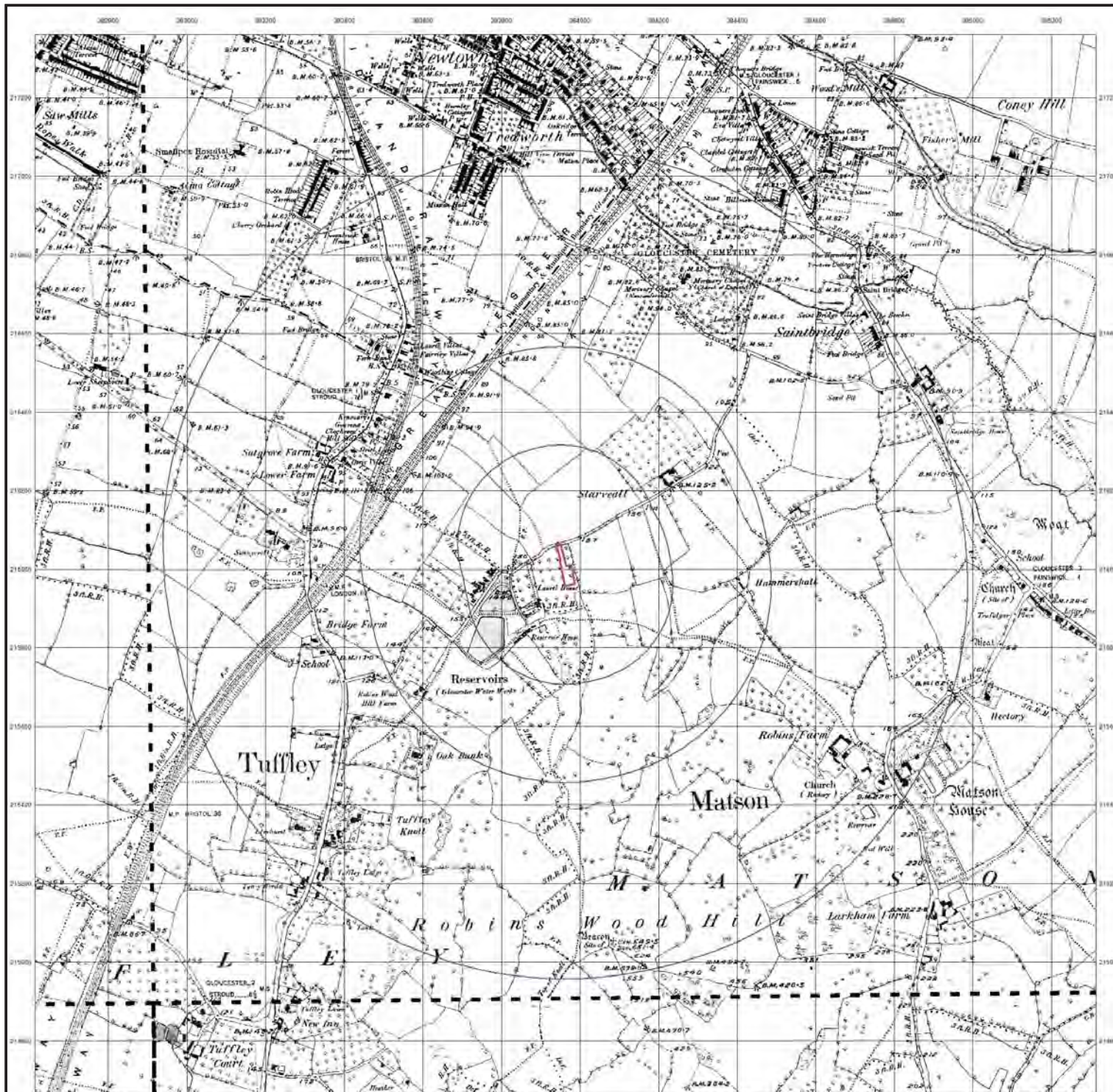
Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216100  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



web: www.environmental.co.uk

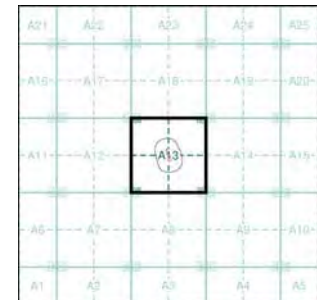


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

**Map Name(s) and Date(s)**



**Historical Map - Segment A13**

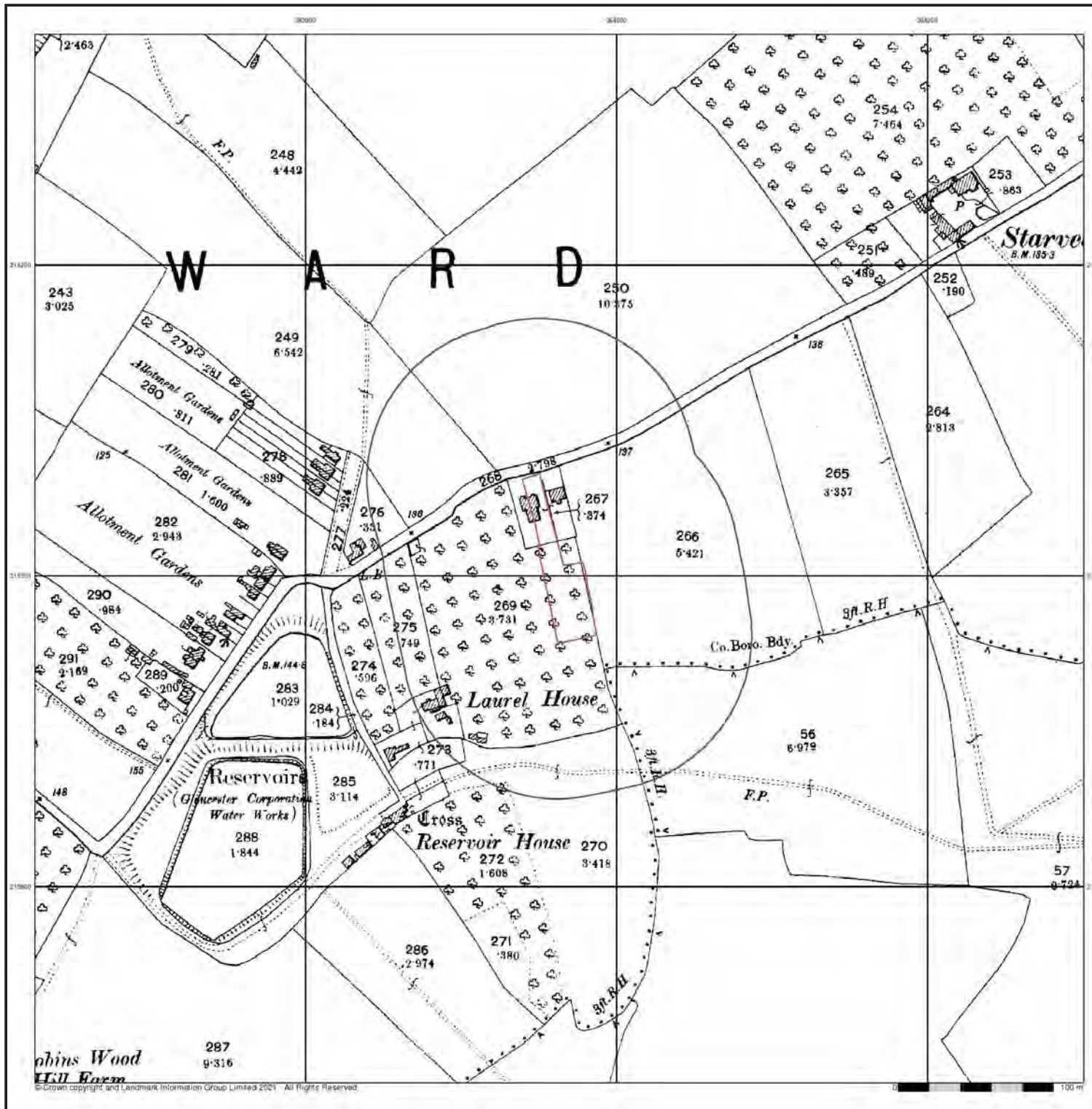


**Order Details**

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

**Site Details**

101, Reservoir Road, GLOUCESTER, GL4 6SZ



obins Wood  
 Hill Farm

## Gloucestershire

Published 1923

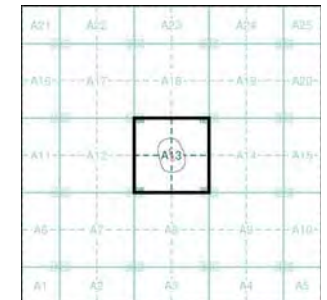
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)



### Historical Map - Segment A13

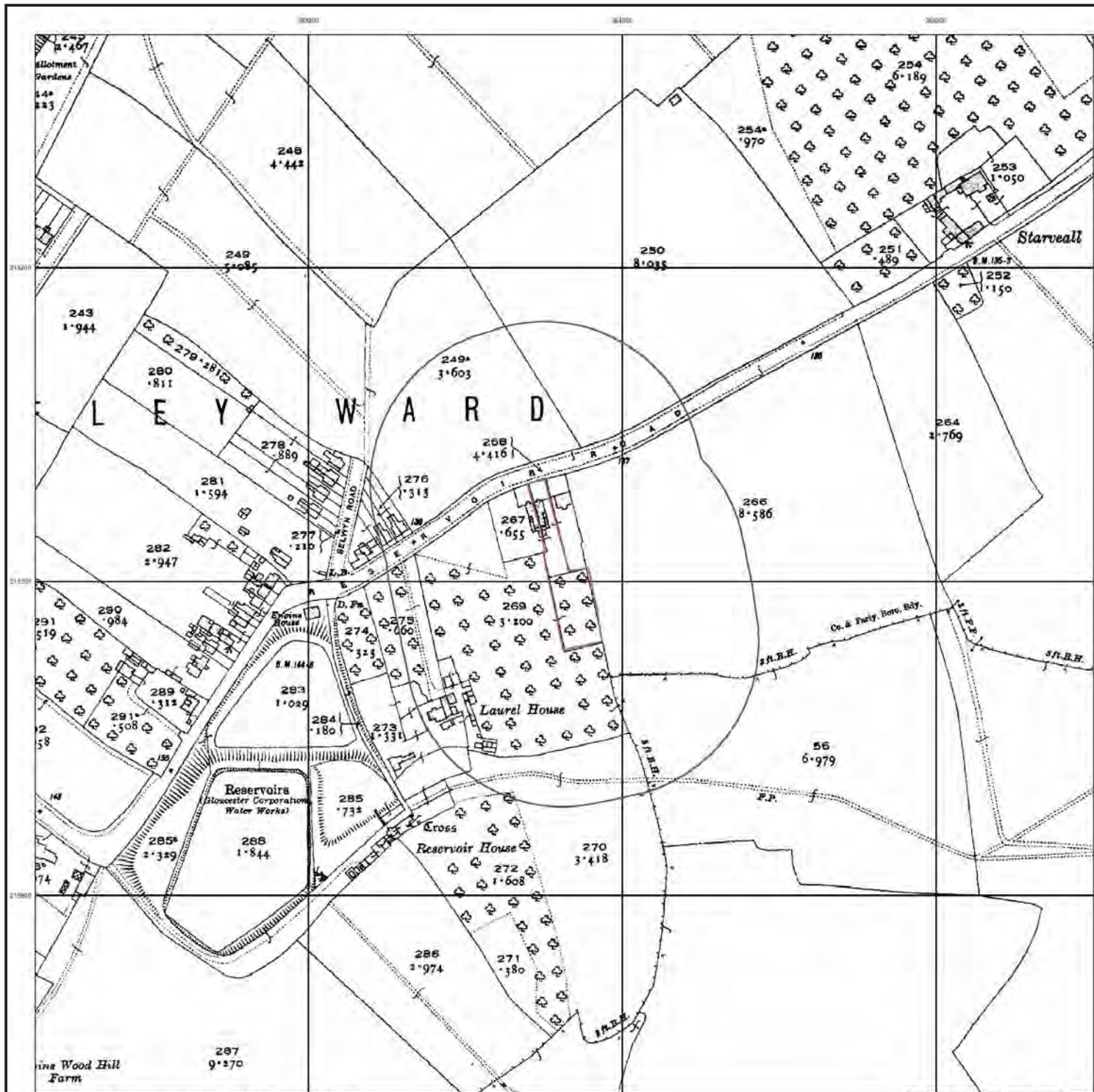


### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



## Gloucestershire

Published 1938

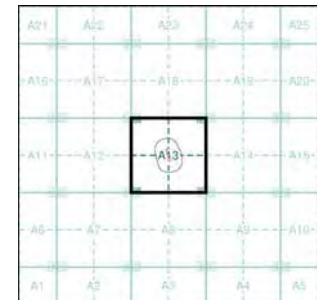
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)



### Historical Map - Segment A13

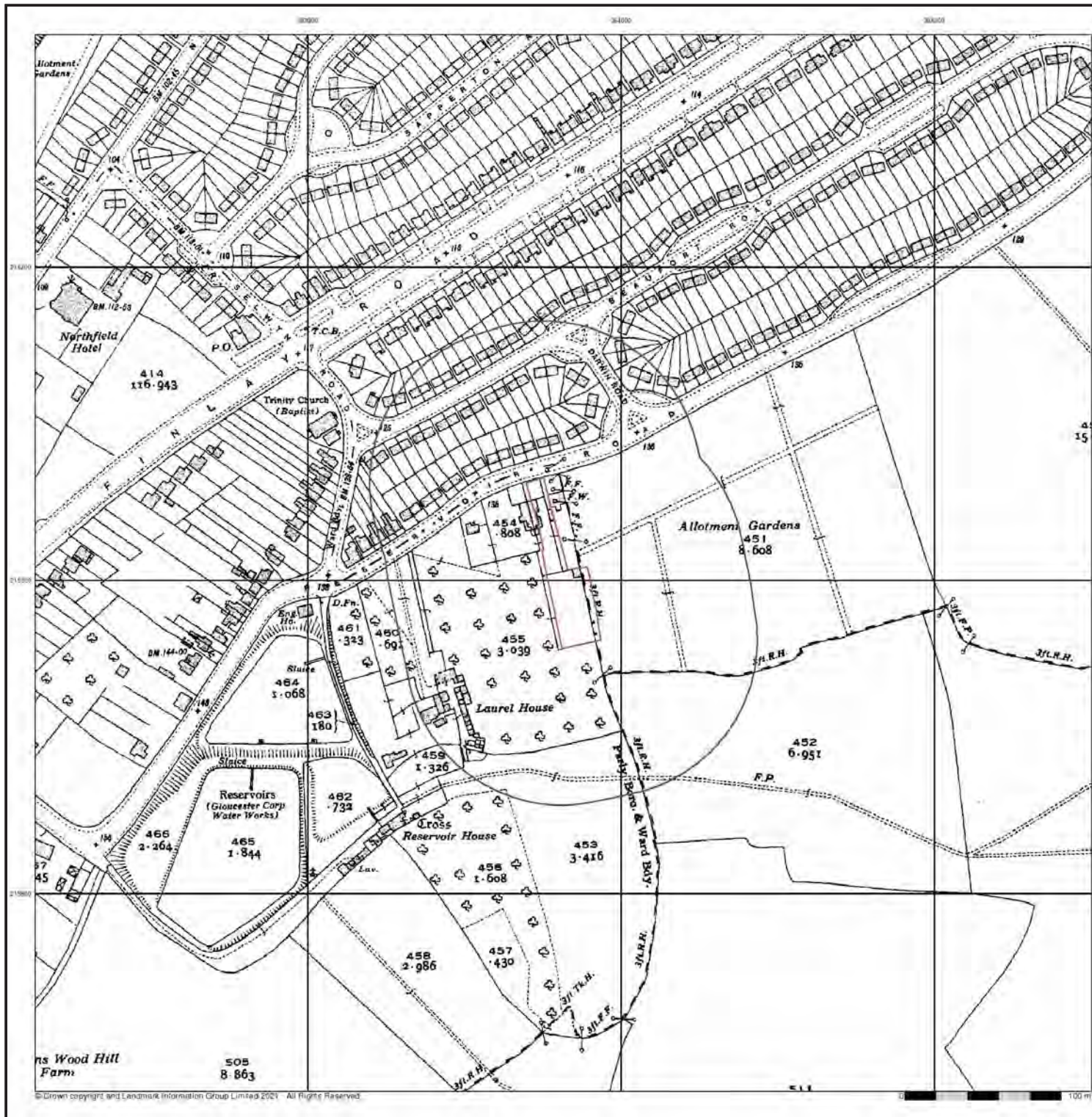


### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ





## Ordnance Survey Plan

Published 1956

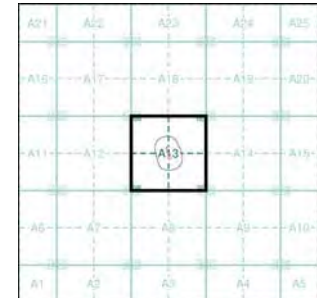
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)

SOB16SE	SOB16SW
1956	1956
1:1,250	1:1,250
SOB16NE	SOB415NW
1956	1956
1:1,250	1:1,250

### Historical Map - Segment A13



### Order Details

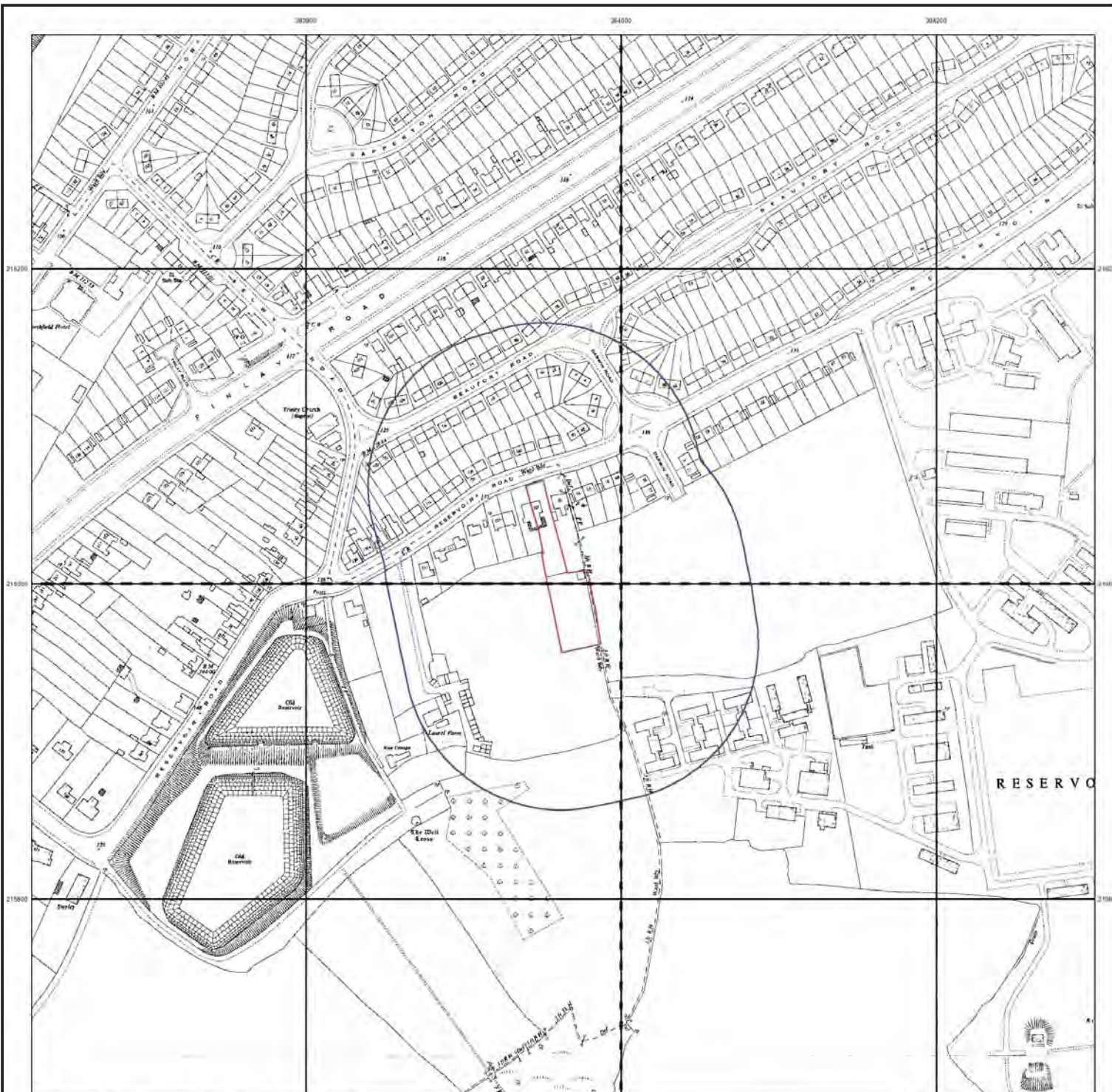
Order Number: 281999455\_1\_1  
Customer Ref: SE-2021-183  
National Grid Reference: 383960, 216010  
Slice: A  
Site Area (Ha): 0.2  
Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



www.birminghamblock.co.uk





### Ordnance Survey Plan

Published 1965 - 1972

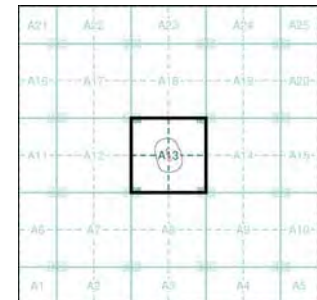
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)

SO8316SE 1972 1:1,250	SO8416SW 1966 1:1,250
SO8316NE 1965 1:1,250	SO8415NW 1971 1:1,250

### Historical Map - Segment A13



### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ





## Large-Scale National Grid Data Published 1994

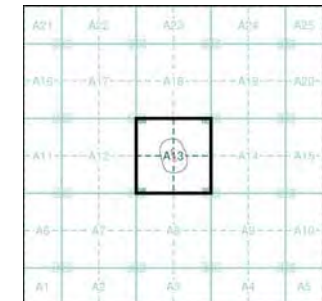
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

### Map Name(s) and Date(s)

SO8316SE	SO8416SW
1994	1994
1:1,250	1:1,250
SO8316NE	SO8416NW
1994	1994
1:1,250	1:1,250

### Historical Map - Segment A13



### Order Details

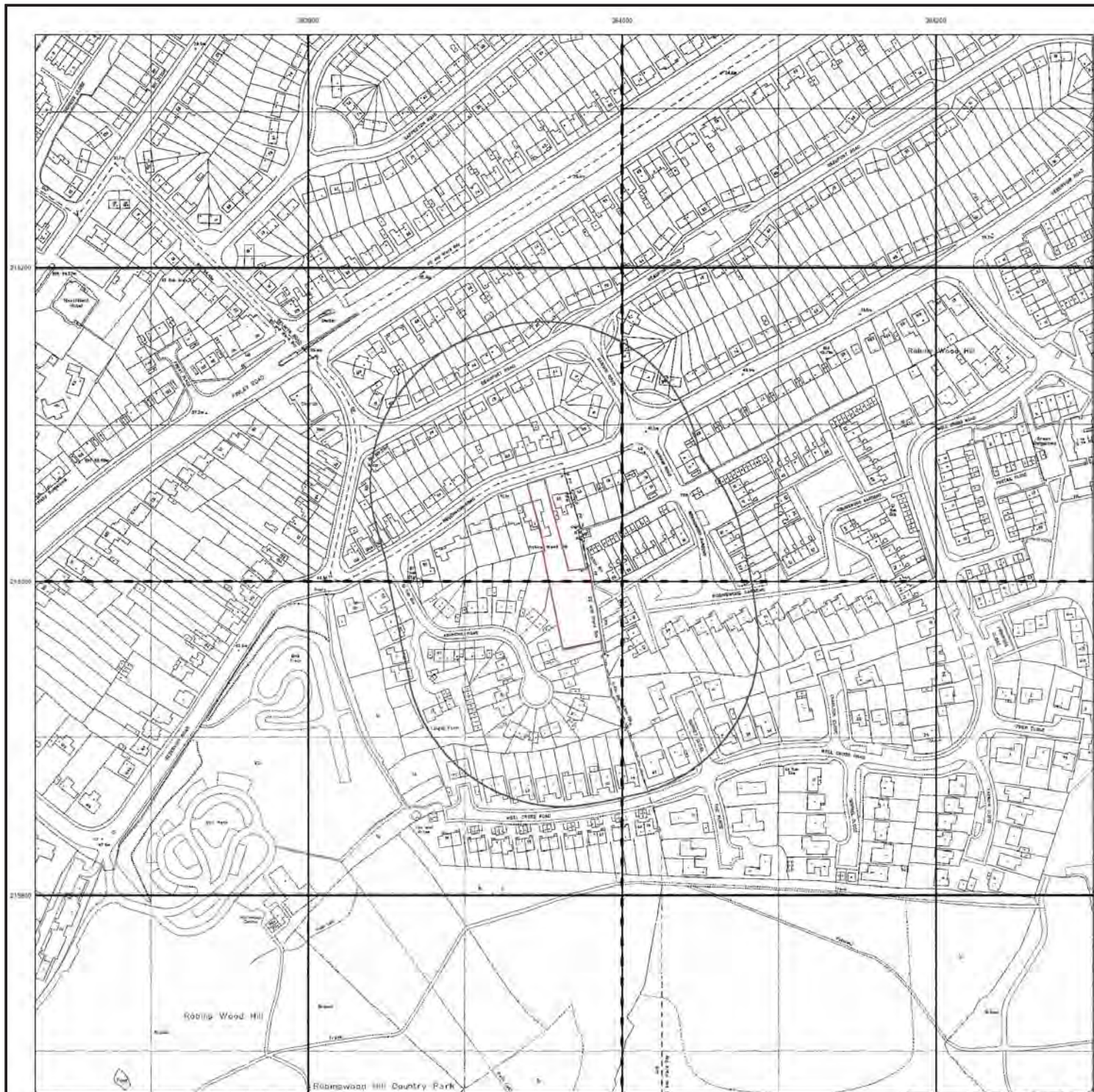
Order Number: 281999455\_1\_1  
Customer Ref: SE-2021-183  
National Grid Reference: 383960, 216010  
Slice: A  
Site Area (Ha): 0.2  
Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)





### VectorMap Local

Published 2021

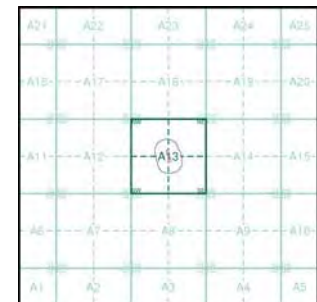
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

### Map Name(s) and Date(s)

SO81NW 2021 Variable	SO81NE 2021 Variable
SO81SW 2021 Variable	SO81SE 2021 Variable

### Historical Map - Slice A

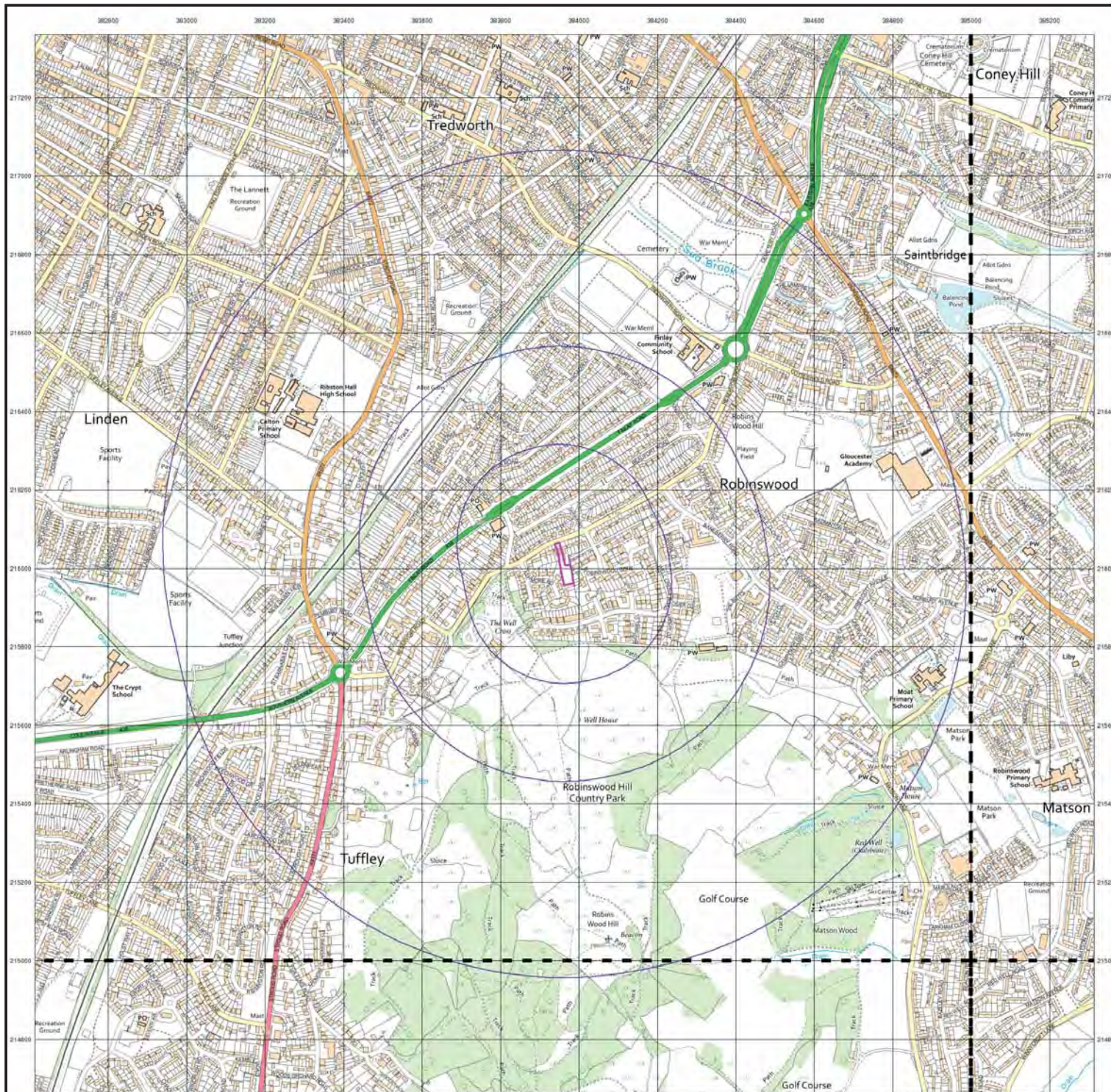


### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



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## APPENDIX H – AERIAL PHOTOGRAPHS

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Note: the red line detailed on Figure 2 represents the most up-to-date planning boundary for the site.



## Historical Aerial Photography Published 1946

Source map scale - 1:1,250

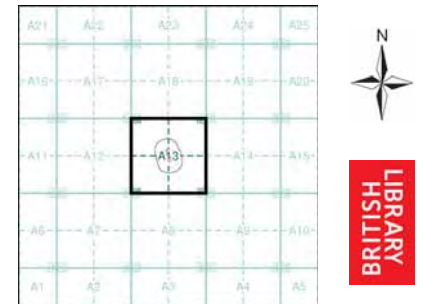
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

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### Map Name(s) and Date(s)

SC0816SE 1946 1:1,250	SC0816SW 1946 1:1,250
SC0815NE 1946 1:1,250	SC0815NW 1946 1:1,250

### Historical Aerial Photography - Segment A13



### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



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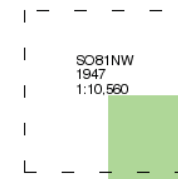
## Historical Aerial Photography Published 1947

### Source map scale - 1:10,560

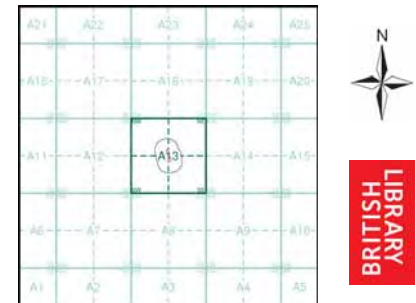
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

© Landmark Information Group and/or Data Suppliers 2010.

### Map Name(s) and Date(s)



### Historical Aerial Photography - Slice A

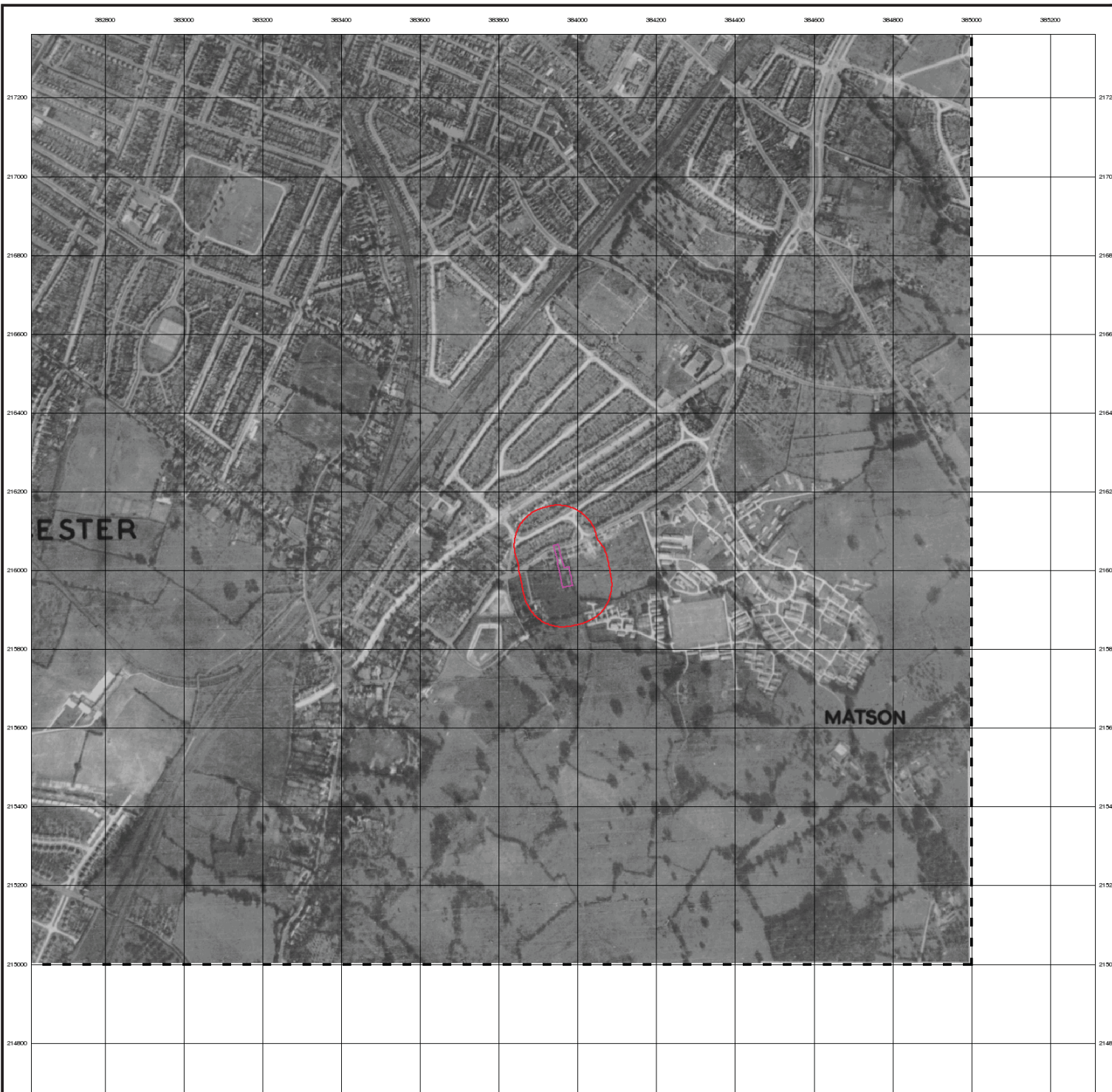


### Order Details

Order Number: 281999455\_1\_1  
Customer Ref: SE-2021-183  
National Grid Reference: 383960, 216010  
Slice: A  
Site Area (Ha): 0.2  
Search Buffer (m): 1000

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ

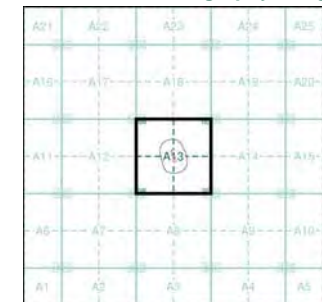


## Historical Aerial Photography Published 1999

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain



### Historical Aerial Photography - Segment A13



### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ

# APPENDIX I – RISK ASSESSMENT PROCESS

The risk assessment process undertaken in this report has been completed in general accordance with CIRIA report C552 *Contaminated land risk assessment – A guide to good practice*.

## Classification of Risk Consequence

Category	Definition
Severe	Short-term (acute) risk to human health likely to result in ‘significant harm’ as defined within Part IIA of the Environment Protection Act (1990). Short-term risk of pollution of a sensitive water resource. Catastrophic damage to buildings or property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem.
Medium	Chronic damage to human health (significant harm). Pollution of sensitive water resources. A significant change in a particular ecosystem, or organism forming part of such ecosystem.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings, structures, services, or the environment
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health. Easily repairable effects of damage to buildings, structures and services.

## Classification of Risk Probability

Category	Definition
High Likelihood	There is a contaminant linkage and an event, which would either appear, very likely in the short term and almost inevitable over the long term, or, there is evidence at the receptor of harm or pollution.
Likely	There is a contaminant linkage and all the elements are present and in the right place, which means that, it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a contaminant linkage and circumstances are possible under which and event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely	There is a contaminant linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

## Risk as a Function of Consequence and Probability

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low risk
	Low	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low risk	Very Low Risk	Very Low Risk

27062 GLOUCESTER									
JUNE 2021									
Site	Location	Direction	Start Date	End Date	Posted Speed Limit (PSL)	Total Vehicles	5 Day Ave.	7 Day Ave.	Average 85%ile Speed
Site No: 27062001	Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P) OSGR - SO 83909 16055	Channel: Eastbound	Fri 11-Jun-21	Thu 17-Jun-21	30	25640	3874	3663	28.8
		Channel: Westbound	Fri 11-Jun-21	Thu 17-Jun-21		26993	4070	3856	30.0

27062		GLOUCESTER				
JUNE 2021						Posted Speed Limit (PSL)
Site	Location	Direction	Start Date	End Date	Posted Speed Limit (PSL)	Average Mean Speed
Site No: 27062001	Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P) OSGR - SO 83909 16055	Channel: Eastbound	Fri 11-Jun-21	Thu 17-Jun-21	30	25.0
		Channel: Westbound	Fri 11-Jun-21	Thu 17-Jun-21		26.2

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
<b>Fri 11-Jun-21</b>															
00:00	13	0	13	0	0	0	0	0	0	0	0	0	0	0	
01:00	6	0	5	1	0	0	0	0	0	0	0	0	0	0	
02:00	3	0	3	0	0	0	0	0	0	0	0	0	0	0	
03:00	8	0	7	1	0	0	0	0	0	0	0	0	0	0	
04:00	5	1	4	0	0	0	0	0	0	0	0	0	0	0	
05:00	32	2	25	5	0	0	0	0	0	0	0	0	0	0	
06:00	63	2	52	9	0	0	0	0	0	0	0	0	0	0	
07:00	197	4	163	30	0	0	0	0	0	0	0	0	0	0	
08:00	286	2	250	28	0	0	3	0	3	0	0	0	0	0	
09:00	233	3	202	24	0	1	2	0	1	0	0	0	0	0	
10:00	183	0	166	16	0	0	1	0	0	0	0	0	0	0	
11:00	197	2	178	16	0	0	1	0	0	0	0	0	0	0	
12:00	254	4	221	28	0	0	1	0	0	0	0	0	0	0	
13:00	259	1	225	29	0	0	3	0	1	0	0	0	0	0	
14:00	346	2	311	26	1	2	2	0	2	0	0	0	0	0	
15:00	384	5	344	28	2	1	0	0	4	0	0	0	0	0	
16:00	376	6	331	35	0	0	1	0	2	1	0	0	0	0	
17:00	381	4	332	41	0	0	0	0	3	1	0	0	0	0	
18:00	325	5	301	17	0	0	1	0	1	0	0	0	0	0	
19:00	246	4	233	9	0	0	0	0	0	0	0	0	0	0	
20:00	174	2	165	6	0	0	0	0	1	0	0	0	0	0	
21:00	99	2	91	6	0	0	0	0	0	0	0	0	0	0	
22:00	85	0	83	2	0	0	0	0	0	0	0	0	0	0	
23:00	53	1	46	6	0	0	0	0	0	0	0	0	0	0	
12H,7-19	3421	38	3024	318	3	4	15	0	17	2	0	0	0	0	
16H,6-22	4003	48	3565	348	3	4	15	0	18	2	0	0	0	0	
18H,6-24	4141	49	3694	356	3	4	15	0	18	2	0	0	0	0	
24H,0-24	4208	52	3751	363	3	4	15	0	18	2	0	0	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
<b>Sat 12-Jun-21</b>															
00:00	32	1	31	0	0	0	0	0	0	0	0	0	0	0	
01:00	8	0	8	0	0	0	0	0	0	0	0	0	0	0	
02:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0	
03:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	
04:00	8	1	7	0	0	0	0	0	0	0	0	0	0	0	
05:00	20	0	20	0	0	0	0	0	0	0	0	0	0	0	
06:00	39	0	34	4	0	0	1	0	0	0	0	0	0	0	
07:00	74	0	66	8	0	0	0	0	0	0	0	0	0	0	
08:00	123	1	108	13	0	0	0	0	1	0	0	0	0	0	
09:00	208	2	189	15	0	0	1	0	1	0	0	0	0	0	
10:00	211	3	192	13	0	0	0	0	3	0	0	0	0	0	
11:00	267	5	236	22	0	1	1	0	2	0	0	0	0	0	
12:00	319	6	286	24	0	1	1	0	1	0	0	0	0	0	
13:00	300	7	273	17	0	0	1	0	2	0	0	0	0	0	
14:00	262	6	241	14	0	0	0	0	0	1	0	0	0	0	
15:00	215	3	199	9	1	0	1	0	2	0	0	0	0	0	
16:00	251	4	225	21	0	0	0	0	1	0	0	0	0	0	
17:00	237	3	211	21	0	0	0	0	2	0	0	0	0	0	
18:00	190	5	172	13	0	0	0	0	0	0	0	0	0	0	
19:00	169	3	162	4	0	0	0	0	0	0	0	0	0	0	
20:00	127	2	117	8	0	0	0	0	0	0	0	0	0	0	
21:00	99	0	98	1	0	0	0	0	0	0	0	0	0	0	
22:00	109	0	106	2	0	0	1	0	0	0	0	0	0	0	
23:00	48	1	45	2	0	0	0	0	0	0	0	0	0	0	
12H,7-19	2657	45	2398	190	1	2	5	0	15	0	1	0	0	0	
16H,6-22	3091	50	2809	207	1	2	6	0	15	0	1	0	0	0	
18H,6-24	3248	51	2960	211	1	2	7	0	15	0	1	0	0	0	
24H,0-24	3330	53	3039	212	1	2	7	0	15	0	1	0	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
<b>Sun 13-Jun-21</b>															
00:00	26	1	25	0	0	0	0	0	0	0	0	0	0	0	
01:00	18	0	17	1	0	0	0	0	0	0	0	0	0	0	
02:00	16	0	16	0	0	0	0	0	0	0	0	0	0	0	
03:00	12	0	12	0	0	0	0	0	0	0	0	0	0	0	
04:00	11	0	10	1	0	0	0	0	0	0	0	0	0	0	
05:00	10	0	9	1	0	0	0	0	0	0	0	0	0	0	
06:00	22	0	22	0	0	0	0	0	0	0	0	0	0	0	
07:00	50	0	48	2	0	0	0	0	0	0	0	0	0	0	
08:00	87	2	73	12	0	0	0	0	0	0	0	0	0	0	
09:00	145	2	133	10	0	0	0	0	0	0	0	0	0	0	
10:00	207	4	195	8	0	0	0	0	0	0	0	0	0	0	
11:00	213	1	205	6	0	0	0	0	1	0	0	0	0	0	
12:00	279	5	261	11	0	0	0	1	0	0	1	0	0	0	
13:00	278	2	267	9	0	0	0	0	0	0	0	0	0	0	
14:00	203	7	182	12	0	0	0	0	2	0	0	0	0	0	
15:00	200	7	180	13	0	0	0	0	0	0	0	0	0	0	
16:00	217	1	206	9	0	0	1	0	0	0	0	0	0	0	
17:00	204	2	187	13	0	1	1	0	0	0	0	0	0	0	
18:00	207	5	190	11	0	0	0	0	1	0	0	0	0	0	
19:00	180	4	170	5	0	0	0	0	1	0	0	0	0	0	
20:00	159	4	144	9	0	0	2	0	0	0	0	0	0	0	
21:00	105	0	101	4	0	0	0	0	0	0	0	0	0	0	
22:00	70	1	63	6	0	0	0	0	0	0	0	0	0	0	
23:00	22	1	21	0	0	0	0	0	0	0	0	0	0	0	
12H,7-19	2290	38	2127	116	0	1	2	1	4	0	0	1	0	0	
16H,6-22	2756	46	2564	134	0	1	4	1	5	0	0	1	0	0	
18H,6-24	2848	48	2648	140	0	1	4	1	5	0	0	1	0	0	
24H,0-24	2941	49	2737	143	0	1	4	1	5	0	0	1	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
<b>Mon 14-Jun-21</b>															
00:00	9	0	9	0	0	0	0	0	0	0	0	0	0	0	
01:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	
02:00	5	1	4	0	0	0	0	0	0	0	0	0	0	0	
03:00	9	0	8	1	0	0	0	0	0	0	0	0	0	0	
04:00	5	0	5	0	0	0	0	0	0	0	0	0	0	0	
05:00	30	2	25	3	0	0	0	0	0	0	0	0	0	0	
06:00	65	2	58	5	0	0	0	0	0	0	0	0	0	0	
07:00	202	8	175	19	0	0	0	0	0	0	0	0	0	0	
08:00	270	2	238	29	0	0	1	0	0	0	0	0	0	0	
09:00	222	3	190	27	0	1	1	0	0	0	0	0	0	0	
10:00	160	2	146	12	0	0	0	0	0	0	0	0	0	0	
11:00	211	3	181	26	0	0	0	0	1	0	0	0	0	0	
12:00	215	3	188	22	1	0	0	0	1	0	0	0	0	0	
13:00	209	0	189	19	0	1	0	0	0	0	0	0	0	0	
14:00	267	9	230	28	0	0	0	0	0	0	0	0	0	0	
15:00	299	2	265	27	0	2	1	0	2	0	0	0	0	0	
16:00	325	4	288	31	0	0	0	0	1	0	0	1	0	0	
17:00	363	10	322	28	0	1	0	0	2	0	0	0	0	0	
18:00	291	3	269	19	0	0	0	0	0	0	0	0	0	0	
19:00	204	6	185	12	0	0	1	0	0	0	0	0	0	0	
20:00	147	3	139	5	0	0	0	0	0	0	0	0	0	0	
21:00	86	2	80	4	0	0	0	0	0	0	0	0	0	0	
22:00	49	2	47	0	0	0	0	0	0	0	0	0	0	0	
23:00	33	4	27	1	0	0	0	0	1	0	0	0	0	0	
12H,7-19	3034	49	2681	287	1	5	3	0	7	0	0	1	0	0	
16H,6-22	3536	62	3143	313	1	5	4	0	7	0	0	1	0	0	
18H,6-24	3618	68	3217	314	1	5	4	0	8	0	0	1	0	0	
24H,0-24	3683	71	3274	319	1	5	4	0	8	0	0	1	0	0	

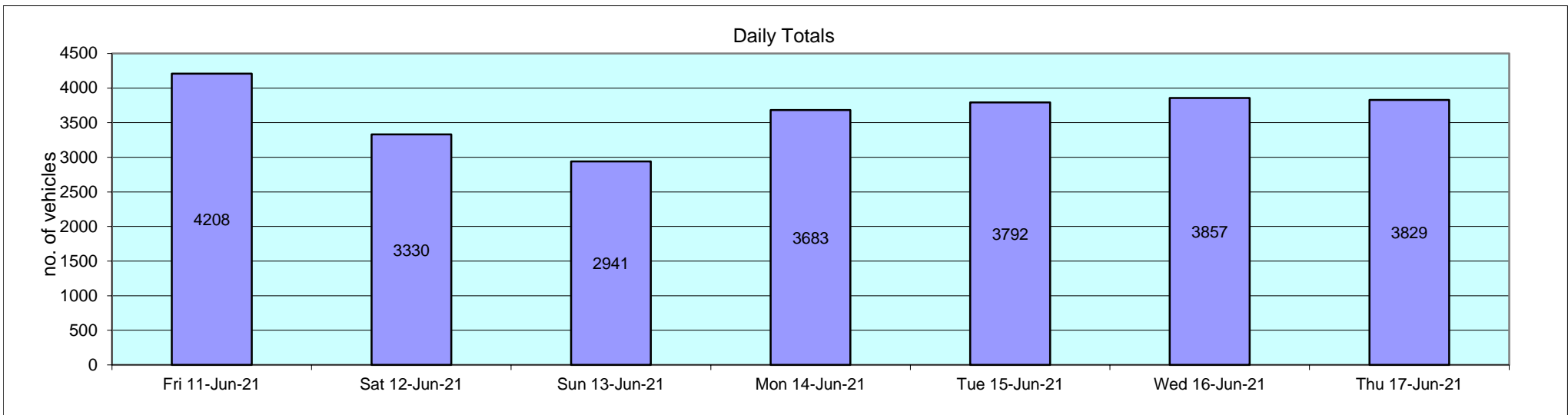
27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
<b>Tue 15-Jun-21</b>															
00:00	8	0	8	0	0	0	0	0	0	0	0	0	0	0	
01:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
02:00	6	0	5	1	0	0	0	0	0	0	0	0	0	0	
03:00	13	0	12	1	0	0	0	0	0	0	0	0	0	0	
04:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	
05:00	22	1	19	2	0	0	0	0	0	0	0	0	0	0	
06:00	67	4	54	8	0	0	1	0	0	0	0	0	0	0	
07:00	192	3	155	30	0	0	3	0	1	0	0	0	0	0	
08:00	278	4	245	26	0	0	2	0	0	0	1	0	0	0	
09:00	194	1	173	18	0	0	1	0	1	0	0	0	0	0	
10:00	177	1	154	22	0	0	0	0	0	0	0	0	0	0	
11:00	195	3	169	22	0	1	0	0	0	0	0	0	0	0	
12:00	221	4	191	24	0	0	1	0	0	0	1	0	0	0	
13:00	246	3	213	30	0	0	0	0	0	0	0	0	0	0	
14:00	274	8	234	28	0	2	2	0	0	0	0	0	0	0	
15:00	330	3	297	29	0	1	0	0	0	0	0	0	0	0	
16:00	350	12	304	31	0	1	1	0	1	0	0	0	0	0	
17:00	383	6	336	35	0	0	2	1	3	0	0	0	0	0	
18:00	240	2	219	17	0	0	0	0	1	0	0	1	0	0	
19:00	195	7	177	11	0	0	0	0	0	0	0	0	0	0	
20:00	173	2	155	16	0	0	0	0	0	0	0	0	0	0	
21:00	117	3	110	3	0	0	1	0	0	0	0	0	0	0	
22:00	70	0	67	2	0	0	1	0	0	0	0	0	0	0	
23:00	34	1	29	3	0	0	1	0	0	0	0	0	0	0	
12H,7-19	3080	50	2690	312	0	5	12	1	7	0	0	3	0	0	
16H,6-22	3632	66	3186	350	0	5	14	1	7	0	0	3	0	0	
18H,6-24	3736	67	3282	355	0	5	16	1	7	0	0	3	0	0	
24H,0-24	3792	68	3333	359	0	5	16	1	7	0	0	3	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
<b>Wed 16-Jun-21</b>															
00:00	14	0	12	2	0	0	0	0	0	0	0	0	0	0	
01:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0	
02:00	6	1	5	0	0	0	0	0	0	0	0	0	0	0	
03:00	8	1	6	1	0	0	0	0	0	0	0	0	0	0	
04:00	10	0	7	3	0	0	0	0	0	0	0	0	0	0	
05:00	27	2	21	4	0	0	0	0	0	0	0	0	0	0	
06:00	55	3	45	7	0	0	0	0	0	0	0	0	0	0	
07:00	189	4	157	24	1	0	3	0	0	0	0	0	0	0	
08:00	275	2	229	41	0	1	0	0	1	0	0	1	0	0	
09:00	210	0	181	25	0	1	1	0	2	0	0	0	0	0	
10:00	189	1	165	15	0	0	7	0	0	0	0	1	0	0	
11:00	185	0	158	26	0	0	1	0	0	0	0	0	0	0	
12:00	254	3	214	35	0	0	0	0	1	0	0	1	0	0	
13:00	204	2	181	19	0	0	1	0	0	0	1	0	0	0	
14:00	275	4	243	26	0	0	1	0	1	0	0	0	0	0	
15:00	329	8	296	20	0	3	0	0	1	0	1	0	0	0	
16:00	351	9	308	33	0	0	0	0	1	0	0	0	0	0	
17:00	373	1	341	29	0	0	0	0	1	0	0	1	0	0	
18:00	297	5	265	24	0	1	1	0	1	0	0	0	0	0	
19:00	217	9	189	18	0	0	1	0	0	0	0	0	0	0	
20:00	169	2	158	7	0	0	1	0	1	0	0	0	0	0	
21:00	122	1	116	5	0	0	0	0	0	0	0	0	0	0	
22:00	68	1	66	1	0	0	0	0	0	0	0	0	0	0	
23:00	28	1	26	1	0	0	0	0	0	0	0	0	0	0	
12H,7-19	3131	39	2738	317	1	6	15	0	9	0	2	4	0	0	
16H,6-22	3694	54	3246	354	1	6	17	0	10	0	2	4	0	0	
18H,6-24	3790	56	3338	356	1	6	17	0	10	0	2	4	0	0	
24H,0-24	3857	60	3391	366	1	6	17	0	10	0	2	4	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Eastbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
Thu 17-Jun-21															
00:00	11	0	9	2	0	0	0	0	0	0	0	0	0	0	
01:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0	
02:00	5	0	5	0	0	0	0	0	0	0	0	0	0	0	
03:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	
04:00	9	0	7	2	0	0	0	0	0	0	0	0	0	0	
05:00	26	4	19	3	0	0	0	0	0	0	0	0	0	0	
06:00	86	4	74	8	0	0	0	0	0	0	0	0	0	0	
07:00	179	2	144	33	0	0	0	0	0	0	0	0	0	0	
08:00	285	1	247	36	0	0	0	0	0	0	1	0	0	0	
09:00	182	1	160	21	0	0	0	0	0	0	0	0	0	0	
10:00	160	0	139	18	0	0	2	0	1	0	0	0	0	0	
11:00	187	0	170	14	0	1	1	0	1	0	0	0	0	0	
12:00	242	2	210	27	0	0	0	0	2	0	0	1	0	0	
13:00	240	0	208	32	0	0	0	0	0	0	0	0	0	0	
14:00	269	10	236	21	0	0	1	0	1	0	0	0	0	0	
15:00	318	3	285	23	0	0	4	0	2	0	0	1	0	0	
16:00	357	5	316	31	0	0	2	0	2	0	0	1	0	0	
17:00	344	5	312	21	1	1	3	0	0	0	0	1	0	0	
18:00	279	3	255	19	0	0	0	0	2	0	0	0	0	0	
19:00	243	2	224	17	0	0	0	0	0	0	0	0	0	0	
20:00	194	1	177	13	0	0	2	0	0	0	0	1	0	0	
21:00	107	1	101	5	0	0	0	0	0	0	0	0	0	0	
22:00	72	1	67	4	0	0	0	0	0	0	0	0	0	0	
23:00	21	0	20	1	0	0	0	0	0	0	0	0	0	0	
12H,7-19	3042	32	2682	296	1	2	13	0	11	0	1	4	0	0	
16H,6-22	3672	40	3258	339	1	2	15	0	11	0	1	5	0	0	
18H,6-24	3765	41	3345	344	1	2	15	0	11	0	1	5	0	0	
24H,0-24	3829	45	3398	351	1	2	15	0	11	0	1	5	0	0	

27062 GLOUCESTER Site No: 27062001 Location Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)  
 Channel: Eastbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	FIVE OR LESS AXLE		SEVEN OR MORE AXLE ARTIC	
											SIX OR MORE AXLE ARTIC	SIX AXLE MULTI-TRAILER ARTIC		
<b>Daily Totals</b>														
Fri 11-Jun-21	4208	52	3751	363	3	4	15	0	18	2	0	0	0	0
Sat 12-Jun-21	3330	53	3039	212	1	2	7	0	15	0	1	0	0	0
Sun 13-Jun-21	2941	49	2737	143	0	1	4	1	5	0	0	1	0	0
Mon 14-Jun-21	3683	71	3274	319	1	5	4	0	8	0	0	1	0	0
Tue 15-Jun-21	3792	68	3333	359	0	5	16	1	7	0	0	3	0	0
Wed 16-Jun-21	3857	60	3391	366	1	6	17	0	10	0	2	4	0	0
Thu 17-Jun-21	3829	45	3398	351	1	2	15	0	11	0	1	5	0	0
<b>Total Vehicles</b>														
[--]	25640	398	22923	2113	7	25	78	2	74	2	4	14	0	0



27062		GLOUCESTER		Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)								
				Channel: Eastbound												
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76	
<b>Fri 11-Jun-21</b>																
00:00	13	31.5	28.3	0	2	7	3	1	0	0	0	0	0	0	0	
01:00	6	-	26	0	1	4	1	0	0	0	0	0	0	0	0	
02:00	3	-	32.1	0	0	2	0	1	0	0	0	0	0	0	0	
03:00	8	-	30.3	0	0	4	4	0	0	0	0	0	0	0	0	
04:00	5	-	24.2	0	1	4	0	0	0	0	0	0	0	0	0	
05:00	32	31.1	28.3	0	1	21	8	2	0	0	0	0	0	0	0	
06:00	63	31.3	26.6	0	4	44	15	0	0	0	0	0	0	0	0	
07:00	197	28.4	25.5	1	13	159	23	1	0	0	0	0	0	0	0	
08:00	286	27.7	23.7	1	52	215	18	0	0	0	0	0	0	0	0	
09:00	233	28	24.7	0	17	198	17	0	0	1	0	0	0	0	0	
10:00	183	29.1	25.4	0	19	143	21	0	0	0	0	0	0	0	0	
11:00	197	28.9	24.9	0	23	155	19	0	0	0	0	0	0	0	0	
12:00	254	29.3	25.2	0	30	194	27	0	0	0	0	0	3	0	0	
13:00	259	27.7	24.1	0	33	211	15	0	0	0	0	0	0	0	0	
14:00	346	27.5	24	0	46	278	22	0	0	0	0	0	0	0	0	
15:00	384	27.1	23.3	0	77	285	22	0	0	0	0	0	0	0	0	
16:00	376	27.3	23.6	0	72	278	25	0	0	0	0	0	0	0	1	
17:00	381	28	24	1	62	285	29	0	4	0	0	0	0	0	0	
18:00	325	28.4	24.7	1	37	256	31	0	0	0	0	0	0	0	0	
19:00	246	28.6	25.4	1	15	210	18	0	0	2	0	0	0	0	0	
20:00	174	28.4	24.8	0	18	145	11	0	0	0	0	0	0	0	0	
21:00	99	30.4	26	3	7	71	15	2	1	0	0	0	0	0	0	
22:00	85	28.9	24.8	0	6	71	8	0	0	0	0	0	0	0	0	
23:00	53	31.3	26.5	1	1	39	12	0	0	0	0	0	0	0	0	
12H,7-19	3421	28.2	24.3	4	481	2657	269	1	4	1	0	0	3	0	1	
16H,6-22	4003	28.2	24.5	8	525	3127	328	3	5	3	0	0	3	0	1	
18H,6-24	4141	28.4	24.5	9	532	3237	348	3	5	3	0	0	3	0	1	
24H,0-24	4208	28.4	24.6	9	537	3279	364	7	5	3	0	0	3	0	1	

27062 GLOUCESTER Site No: 27062001 Location Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)  
Channel: Eastbound

Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Sat 12-Jun-21</b>															
00:00	32	33.3	29.5	0	2	18	10	1	0	0	0	1	0	0	0
01:00	8	-	26.8	0	0	7	1	0	0	0	0	0	0	0	0
02:00	7	-	28.2	0	0	5	2	0	0	0	0	0	0	0	0
03:00	7	-	26.4	0	1	4	2	0	0	0	0	0	0	0	0
04:00	8	-	25.9	0	1	5	2	0	0	0	0	0	0	0	0
05:00	20	29.3	26.5	0	0	18	2	0	0	0	0	0	0	0	0
06:00	39	29.8	27.4	0	0	34	5	0	0	0	0	0	0	0	0
07:00	74	31.5	27	0	2	55	17	0	0	0	0	0	0	0	0
08:00	123	30.4	25.6	0	9	94	20	0	0	0	0	0	0	0	0
09:00	208	29.3	25.7	0	14	169	25	0	0	0	0	0	0	0	0
10:00	211	28.4	24.9	0	23	169	19	0	0	0	0	0	0	0	0
11:00	267	28.4	24.8	0	32	219	16	0	0	0	0	0	0	0	0
12:00	319	28.4	24.6	0	44	249	26	0	0	0	0	0	0	0	0
13:00	300	28.6	25	0	23	250	27	0	0	0	0	0	0	0	0
14:00	262	28.4	25	0	24	219	19	0	0	0	0	0	0	0	0
15:00	215	28	24.4	1	24	177	11	1	1	0	0	0	0	0	0
16:00	251	28.6	25	0	22	204	25	0	0	0	0	0	0	0	0
17:00	237	28.9	25.4	0	17	191	28	1	0	0	0	0	0	0	0
18:00	190	29.3	25.5	0	13	153	24	0	0	0	0	0	0	0	0
19:00	169	29.3	24.9	1	21	128	19	0	0	0	0	0	0	0	0
20:00	127	29.5	25.7	0	7	108	11	1	0	0	0	0	0	0	0
21:00	99	29.5	25.3	1	9	78	11	0	0	0	0	0	0	0	0
22:00	109	28.6	24.8	0	12	85	10	2	0	0	0	0	0	0	0
23:00	48	30.9	25.6	0	7	31	6	3	1	0	0	0	0	0	0
12H,7-19	2657	28.6	25.1	1	247	2149	257	2	1	0	0	0	0	0	0
16H,6-22	3091	28.9	25.1	3	284	2497	303	3	1	0	0	0	0	0	0
18H,6-24	3248	28.9	25.1	3	303	2613	319	8	2	0	0	0	0	0	0
24H,0-24	3330	28.9	25.2	3	307	2670	338	9	2	0	0	1	0	0	0

27062		GLOUCESTER		Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)							
				Channel: Eastbound											
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Sun 13-Jun-21</b>															
00:00	26	30	27.5	0	3	18	3	0	2	0	0	0	0	0	0
01:00	18	35.3	31.3	0	0	12	4	0	0	1	1	0	0	0	0
02:00	16	31.1	27.6	0	0	11	5	0	0	0	0	0	0	0	0
03:00	12	39.6	32.6	0	1	3	6	1	1	0	0	0	0	0	0
04:00	11	25.7	25	0	0	9	2	0	0	0	0	0	0	0	0
05:00	10	-	28	0	1	6	2	0	1	0	0	0	0	0	0
06:00	22	31.3	28.2	0	0	17	5	0	0	0	0	0	0	0	0
07:00	50	32	27.6	0	0	34	16	0	0	0	0	0	0	0	0
08:00	87	30.4	27.2	0	2	67	18	0	0	0	0	0	0	0	0
09:00	145	29.8	26.2	0	6	118	21	0	0	0	0	0	0	0	0
10:00	207	28.9	25.4	0	14	172	21	0	0	0	0	0	0	0	0
11:00	213	29.3	25.7	1	13	176	23	0	0	0	0	0	0	0	0
12:00	279	29.1	25.3	2	22	223	32	0	0	0	0	0	0	0	0
13:00	278	28.9	24.7	0	35	220	23	0	0	0	0	0	0	0	0
14:00	203	29.1	25.3	0	15	168	20	0	0	0	0	0	0	0	0
15:00	200	28.6	25.1	0	18	163	19	0	0	0	0	0	0	0	0
16:00	217	29.5	25.4	0	24	168	23	1	0	1	0	0	0	0	0
17:00	204	29.5	25.9	0	18	158	28	0	0	0	0	0	0	0	0
18:00	207	29.8	25.6	0	21	157	27	2	0	0	0	0	0	0	0
19:00	180	30	25.4	0	25	126	29	0	0	0	0	0	0	0	0
20:00	159	29.1	25.3	1	22	120	16	0	0	0	0	0	0	0	0
21:00	105	29.5	25.8	0	12	82	10	1	0	0	0	0	0	0	0
22:00	70	28.9	25.6	0	2	60	8	0	0	0	0	0	0	0	0
23:00	22	32.4	27.3	0	2	12	7	1	0	0	0	0	0	0	0
12H,7-19	2290	29.3	25.5	3	188	1824	271	3	0	1	0	0	0	0	0
16H,6-22	2756	29.3	25.5	4	247	2169	331	4	0	1	0	0	0	0	0
18H,6-24	2848	29.3	25.6	4	251	2241	346	5	0	1	0	0	0	0	0
24H,0-24	2941	29.5	25.7	4	256	2300	368	6	4	2	1	0	0	0	0

27062		GLOUCESTER		Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)							
				Channel: Eastbound											
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Mon 14-Jun-21</b>															
00:00	9	-	28.9	0	0	5	4	0	0	0	0	0	0	0	0
01:00	7	-	26.7	0	0	6	1	0	0	0	0	0	0	0	0
02:00	5	-	27.6	0	1	2	2	0	0	0	0	0	0	0	0
03:00	9	-	28.9	0	0	4	5	0	0	0	0	0	0	0	0
04:00	5	-	23.2	0	0	5	0	0	0	0	0	0	0	0	0
05:00	30	30.6	26.7	0	3	20	6	1	0	0	0	0	0	0	0
06:00	65	30.2	26.2	0	7	47	11	0	0	0	0	0	0	0	0
07:00	202	29.1	25.4	0	14	169	19	0	0	0	0	0	0	0	0
08:00	270	29.1	25.1	0	30	215	25	0	0	0	0	0	0	0	0
09:00	222	29.3	25.1	0	30	163	29	0	0	0	0	0	0	0	0
10:00	160	29.1	24.6	0	25	120	14	0	0	1	0	0	0	0	0
11:00	211	28.9	25.3	1	15	174	21	0	0	0	0	0	0	0	0
12:00	215	29.5	25.5	2	14	172	26	0	1	0	0	0	0	0	0
13:00	209	28.6	25.1	0	22	164	23	0	0	0	0	0	0	0	0
14:00	267	27.5	23.7	1	43	209	14	0	0	0	0	0	0	0	0
15:00	299	27.5	23.8	1	41	239	18	0	0	0	0	0	0	0	0
16:00	325	28	24	0	45	264	14	2	0	0	0	0	0	0	0
17:00	363	28	24.1	0	54	281	28	0	0	0	0	0	0	0	0
18:00	291	28.6	25.5	0	21	245	24	0	1	0	0	0	0	0	0
19:00	204	28.6	24.9	1	22	160	21	0	0	0	0	0	0	0	0
20:00	147	29.1	25	0	12	119	16	0	0	0	0	0	0	0	0
21:00	86	30	25.7	1	7	64	13	1	0	0	0	0	0	0	0
22:00	49	30.2	25.7	0	5	35	9	0	0	0	0	0	0	0	0
23:00	33	29.8	27.2	0	1	27	3	2	0	0	0	0	0	0	0
12H,7-19	3034	28.6	24.7	5	354	2415	255	2	2	1	0	0	0	0	0
16H,6-22	3536	28.6	24.8	7	402	2805	316	3	2	1	0	0	0	0	0
18H,6-24	3618	28.6	24.8	7	408	2867	328	5	2	1	0	0	0	0	0
24H,0-24	3683	28.9	24.8	7	412	2909	346	6	2	1	0	0	0	0	0

27062		GLOUCESTER		Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)								
				Channel: Eastbound												
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76	
<b>Tue 15-Jun-21</b>																
00:00	8	-	29.6	0	0	5	3	0	0	0	0	0	0	0	0	
01:00	1	-	26.3	0	0	1	0	0	0	0	0	0	0	0	0	
02:00	6	-	27.9	0	0	5	1	0	0	0	0	0	0	0	0	
03:00	13	32.7	28.9	0	0	8	5	0	0	0	0	0	0	0	0	
04:00	6	-	26.9	0	0	4	2	0	0	0	0	0	0	0	0	
05:00	22	30	26.1	0	2	16	3	1	0	0	0	0	0	0	0	
06:00	67	31.5	26.5	0	3	51	13	0	0	0	0	0	0	0	0	
07:00	192	29.8	26	0	10	154	28	0	0	0	0	0	0	0	0	
08:00	278	28	24.6	0	26	241	11	0	0	0	0	0	0	0	0	
09:00	194	28.6	25.5	0	9	164	21	0	0	0	0	0	0	0	0	
10:00	177	29.8	25.8	0	17	133	27	0	0	0	0	0	0	0	0	
11:00	195	28.9	24.7	0	21	160	14	0	0	0	0	0	0	0	0	
12:00	221	28.2	24.9	1	17	186	16	1	0	0	0	0	0	0	0	
13:00	246	28.4	25.1	0	19	199	28	0	0	0	0	0	0	0	0	
14:00	274	27.7	24	3	45	204	20	2	0	0	0	0	0	0	0	
15:00	330	28.2	24.8	0	25	285	20	0	0	0	0	0	0	0	0	
16:00	350	28	24.2	0	45	286	18	1	0	0	0	0	0	0	0	
17:00	383	27.7	24.5	0	48	305	26	4	0	0	0	0	0	0	0	
18:00	240	29.1	25.4	0	26	192	18	0	1	0	3	0	0	0	0	
19:00	195	29.1	24.9	0	33	141	21	0	0	0	0	0	0	0	0	
20:00	173	29.8	26	0	10	139	22	1	1	0	0	0	0	0	0	
21:00	117	29.3	25	0	17	86	13	1	0	0	0	0	0	0	0	
22:00	70	29.8	26.6	0	2	59	9	0	0	0	0	0	0	0	0	
23:00	34	29.8	26.8	0	0	29	5	0	0	0	0	0	0	0	0	
12H,7-19	3080	28.4	24.9	4	308	2509	247	8	1	0	3	0	0	0	0	
16H,6-22	3632	28.6	24.9	4	371	2926	316	10	2	0	3	0	0	0	0	
18H,6-24	3736	28.6	25	4	373	3014	330	10	2	0	3	0	0	0	0	
24H,0-24	3792	28.6	25	4	375	3053	344	11	2	0	3	0	0	0	0	

27062		GLOUCESTER		Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)									
				Channel: Eastbound													
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76		
<b>Wed 16-Jun-21</b>																	
00:00	14	34	29.2	0	1	8	4	1	0	0	0	0	0	0	0		
01:00	2	-	28.5	0	0	1	1	0	0	0	0	0	0	0	0		
02:00	6	-	27.3	0	0	4	2	0	0	0	0	0	0	0	0		
03:00	8	-	26.4	0	1	5	1	1	0	0	0	0	0	0	0		
04:00	10	-	25.1	0	0	10	0	0	0	0	0	0	0	0	0		
05:00	27	32.7	27.4	0	2	17	7	1	0	0	0	0	0	0	0		
06:00	55	33.6	27.4	0	2	39	14	0	0	0	0	0	0	0	0		
07:00	189	28.4	23.6	3	38	135	13	0	0	0	0	0	0	0	0		
08:00	275	28.6	24.4	1	38	209	26	1	0	0	0	0	0	0	0		
09:00	210	29.3	25.3	0	23	163	23	0	1	0	0	0	0	0	0		
10:00	189	28.6	25	2	11	159	16	1	0	0	0	0	0	0	0		
11:00	185	28	24.7	0	21	153	11	0	0	0	0	0	0	0	0		
12:00	254	27.1	23.1	0	63	179	12	0	0	0	0	0	0	0	0		
13:00	204	28	24.6	1	13	175	15	0	0	0	0	0	0	0	0		
14:00	275	28.4	25.1	0	12	245	18	0	0	0	0	0	0	0	0		
15:00	329	28.2	24.8	0	31	276	18	4	0	0	0	0	0	0	0		
16:00	351	26.6	23	0	72	265	14	0	0	0	0	0	0	0	0		
17:00	373	28.4	25.2	1	30	315	27	0	0	0	0	0	0	0	0		
18:00	297	29.5	25.7	0	20	237	38	2	0	0	0	0	0	0	0		
19:00	217	29.3	25.2	0	20	173	24	0	0	0	0	0	0	0	0		
20:00	169	29.5	25.8	0	14	132	21	1	0	1	0	0	0	0	0		
21:00	122	29.1	25.5	0	7	102	13	0	0	0	0	0	0	0	0		
22:00	68	30	25.6	0	2	55	11	0	0	0	0	0	0	0	0		
23:00	28	32.7	27.7	0	2	21	5	0	0	0	0	0	0	0	0		
12H,7-19	3131	28.2	24.5	8	372	2511	231	8	1	0	0	0	0	0	0		
16H,6-22	3694	28.4	24.7	8	415	2957	303	9	1	1	0	0	0	0	0		
18H,6-24	3790	28.4	24.7	8	419	3033	319	9	1	1	0	0	0	0	0		
24H,0-24	3857	28.6	24.8	8	423	3078	334	12	1	1	0	0	0	0	0		

27062		GLOUCESTER		Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)							
				Channel: Eastbound											
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Thu 17-Jun-21</b>															
00:00	11	32.9	30.1	0	0	7	3	0	1	0	0	0	0	0	0
01:00	7	-	29.9	0	1	2	4	0	0	0	0	0	0	0	0
02:00	5	-	27	0	0	4	1	0	0	0	0	0	0	0	0
03:00	6	-	25.6	0	0	4	2	0	0	0	0	0	0	0	0
04:00	9	-	27.3	0	1	6	1	1	0	0	0	0	0	0	0
05:00	26	29.3	26.6	0	0	24	1	1	0	0	0	0	0	0	0
06:00	86	30.9	27.7	1	4	58	22	1	0	0	0	0	0	0	0
07:00	179	29.8	26.5	0	3	149	27	0	0	0	0	0	0	0	0
08:00	285	28.4	25.5	0	12	252	21	0	0	0	0	0	0	0	0
09:00	182	27.7	24.7	1	16	149	15	1	0	0	0	0	0	0	0
10:00	160	28.6	24.2	2	28	115	15	0	0	0	0	0	0	0	0
11:00	187	27.3	24.1	0	19	157	11	0	0	0	0	0	0	0	0
12:00	242	27.3	23.5	1	36	198	7	0	0	0	0	0	0	0	0
13:00	240	28.6	25	0	22	194	24	0	0	0	0	0	0	0	0
14:00	269	27.7	24.4	0	30	223	14	1	1	0	0	0	0	0	0
15:00	318	27.1	23.7	0	54	243	20	0	1	0	0	0	0	0	0
16:00	357	26.8	23.4	2	58	284	13	0	0	0	0	0	0	0	0
17:00	344	27.3	23.4	1	50	284	9	0	0	0	0	0	0	0	0
18:00	279	29.5	25.4	0	29	215	34	0	1	0	0	0	0	0	0
19:00	243	28.6	24.9	3	19	202	19	0	0	0	0	0	0	0	0
20:00	194	28.9	24.7	0	22	150	22	0	0	0	0	0	0	0	0
21:00	107	29.1	24.3	0	21	77	9	0	0	0	0	0	0	0	0
22:00	72	30.4	26.8	0	2	57	12	1	0	0	0	0	0	0	0
23:00	21	33.1	27.7	0	2	13	5	1	0	0	0	0	0	0	0
12H,7-19	3042	28.2	24.4	7	357	2463	210	2	3	0	0	0	0	0	0
16H,6-22	3672	28.2	24.5	11	423	2950	282	3	3	0	0	0	0	0	0
18H,6-24	3765	28.4	24.6	11	427	3020	299	5	3	0	0	0	0	0	0
24H,0-24	3829	28.4	24.6	11	429	3067	311	7	4	0	0	0	0	0	0

27062 GLOUCESTER Site No: 27062001 Location Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)  
 Channel: Eastbound

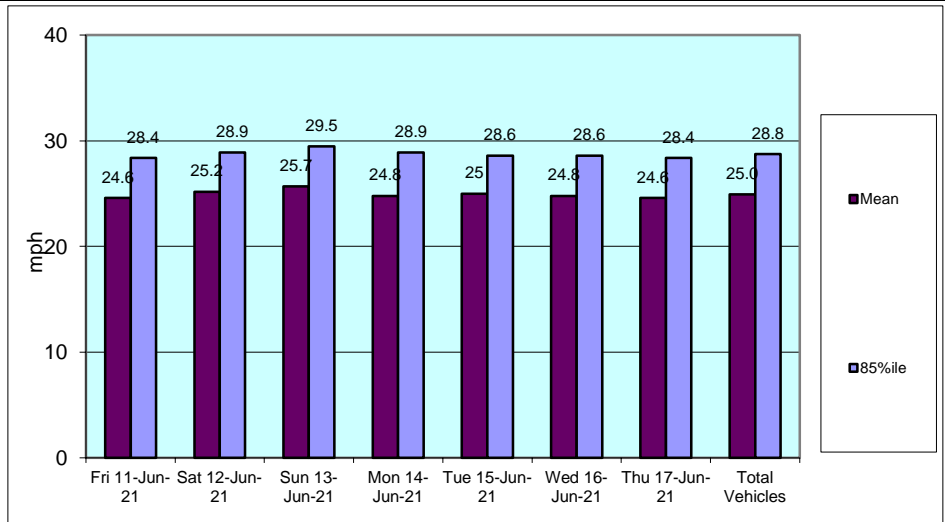
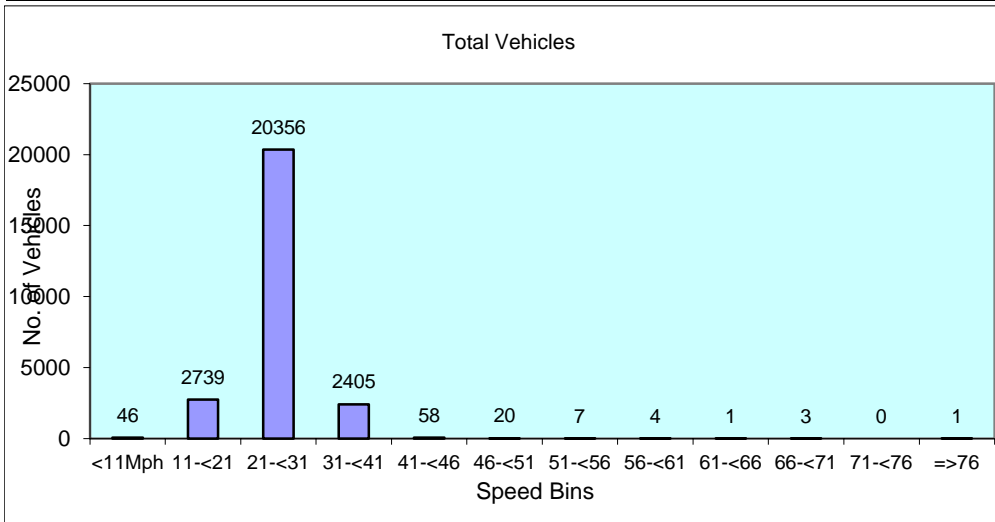
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
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**Daily Totals**

Fri 11-Jun-21	4208	28.4	24.6	9	537	3279	364	7	5	3	0	0	3	0	1
Sat 12-Jun-21	3330	28.9	25.2	3	307	2670	338	9	2	0	0	1	0	0	0
Sun 13-Jun-21	2941	29.5	25.7	4	256	2300	368	6	4	2	1	0	0	0	0
Mon 14-Jun-21	3683	28.9	24.8	7	412	2909	346	6	2	1	0	0	0	0	0
Tue 15-Jun-21	3792	28.6	25	4	375	3053	344	11	2	0	3	0	0	0	0
Wed 16-Jun-21	3857	28.6	24.8	8	423	3078	334	12	1	1	0	0	0	0	0
Thu 17-Jun-21	3829	28.4	24.6	11	429	3067	311	7	4	0	0	0	0	0	0

**Total Vehicles**

[--]	25640	28.8	25.0	46	2739	20356	2405	58	20	7	4	1	3	0	1
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27062	GLOUCESTER			Site No: 27062001	Location	Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)			
	Channel: Eastbound								
TIME PERIOD	Fri 11/06/21	Sat 12/06/21	Sun 13/06/21	Mon 14/06/21	Tue 15/06/21	Wed 16/06/21	Thu 17/06/21	5-Day Av	7-Day Av
<b>Week Begin: 11-Jun-21</b>									
00:00	13	32	26	9	8	14	11	11	16
01:00	6	8	18	7	1	2	7	5	7
02:00	3	7	16	5	6	6	5	5	7
03:00	8	7	12	9	13	8	6	9	9
04:00	5	8	11	5	6	10	9	7	8
05:00	32	20	10	30	22	27	26	27	24
06:00	63	39	22	65	67	55	86	67	57
07:00	197	74	50	202	192	189	179	192	155
08:00	286	123	87	270	278	275	285	279	229
09:00	233	208	145	222	194	210	182	208	199
10:00	183	211	207	160	177	189	160	174	184
11:00	197	267	213	211	195	185	187	195	208
12:00	254	319	279	215	221	254	242	237	255
13:00	259	300	278	209	246	204	240	232	248
14:00	346	262	203	267	274	275	269	286	271
15:00	384	215	200	299	330	329	318	332	296
16:00	376	251	217	325	350	351	357	352	318
17:00	381	237	204	363	383	373	344	369	326
18:00	325	190	207	291	240	297	279	286	261
19:00	246	169	180	204	195	217	243	221	208
20:00	174	127	159	147	173	169	194	171	163
21:00	99	99	105	86	117	122	107	106	105
22:00	85	109	70	49	70	68	72	69	75
23:00	53	48	22	33	34	28	21	34	34
12H,7-19	3421	2657	2290	3034	3080	3131	3042	3142	2951
16H,6-22	4003	3091	2756	3536	3632	3694	3672	3707	3483
18H,6-24	4141	3248	2848	3618	3736	3790	3765	3810	3592
24H,0-24	4208	3330	2941	3683	3792	3857	3829	3874	3663
Am	08:00	11:00	11:00	08:00	08:00	08:00	08:00		
Peak	286	267	213	270	278	275	285		
Pm	15:00	12:00	12:00	17:00	17:00	17:00	16:00		
Peak	384	319	279	363	383	373	357		

27062

GLOUCESTER

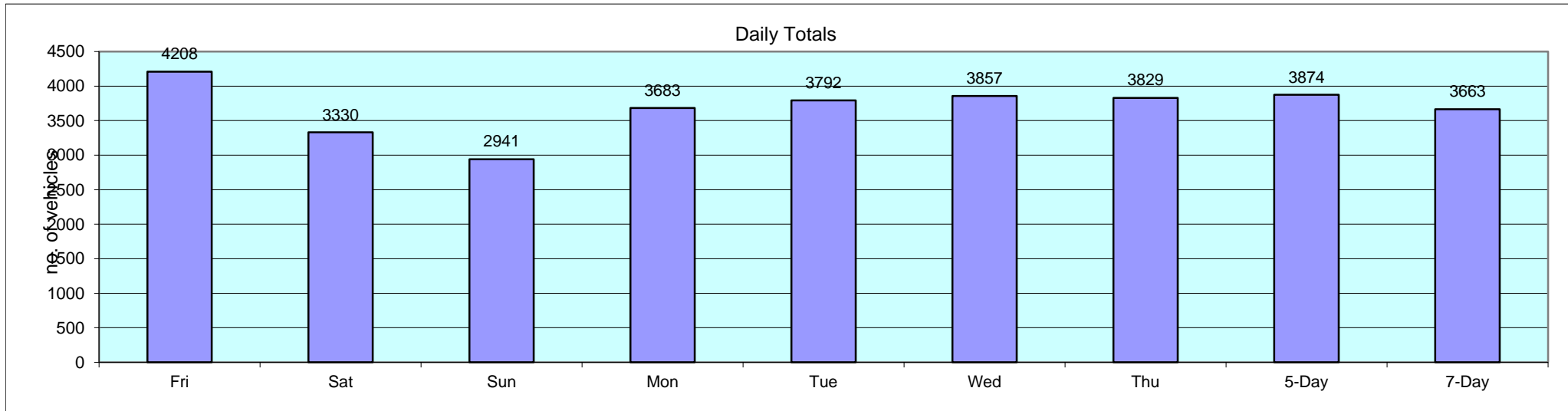
Site No: 27062001

Location

Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)

Channel: Eastbound

TIME PERIOD	Fri 11/06/21	Sat 12/06/21	Sun 13/06/21	Mon 14/06/21	Tue 15/06/21	Wed 16/06/21	Thu 17/06/21	5-Day Av	7-Day Av
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27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Westbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
Fri 11-Jun-21																
00:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	
01:00	8	0	7	1	0	0	0	0	0	0	0	0	0	0	0	
02:00	5	0	4	0	0	1	0	0	0	0	0	0	0	0	0	
03:00	3	0	2	1	0	0	0	0	0	0	0	0	0	0	0	
04:00	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	
05:00	60	4	49	7	0	0	0	0	0	0	0	0	0	0	0	
06:00	151	5	131	12	0	2	0	0	1	0	0	0	0	0	0	
07:00	274	4	224	42	0	0	3	0	1	0	0	0	0	0	0	
08:00	351	10	298	42	0	1	0	0	0	0	0	0	0	0	0	
09:00	218	1	191	24	0	1	1	0	0	0	0	0	0	0	0	
10:00	211	2	182	26	0	0	0	0	1	0	0	0	0	0	0	
11:00	229	2	199	25	0	0	2	1	0	0	0	0	0	0	0	
12:00	242	0	215	25	1	0	1	0	0	0	0	0	0	0	0	
13:00	236	3	209	23	0	0	0	0	1	0	0	0	0	0	0	
14:00	341	2	295	37	0	1	6	0	0	0	0	0	0	0	0	
15:00	380	2	335	39	0	2	1	0	0	0	1	0	0	0	0	
16:00	307	3	268	33	0	0	1	0	2	0	0	0	0	0	0	
17:00	330	6	290	32	0	0	2	0	0	0	0	0	0	0	0	
18:00	259	5	231	20	0	0	2	0	1	0	0	0	0	0	0	
19:00	202	2	190	5	0	0	2	0	2	0	1	0	0	0	0	
20:00	147	4	135	6	0	0	2	0	0	0	0	0	0	0	0	
21:00	102	3	95	4	0	0	0	0	0	0	0	0	0	0	0	
22:00	68	1	64	3	0	0	0	0	0	0	0	0	0	0	0	
23:00	54	0	52	1	0	0	0	1	0	0	0	0	0	0	0	
12H,7-19	3378	40	2937	368	1	5	19	1	6	0	1	0	0	0	0	
16H,6-22	3980	54	3488	395	1	7	23	1	9	0	2	0	0	0	0	
18H,6-24	4102	55	3604	399	1	7	23	2	9	0	2	0	0	0	0	
24H,0-24	4193	59	3681	408	1	8	23	2	9	0	2	0	0	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)					
						Channel: Westbound									
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
<b>Sat 12-Jun-21</b>															
00:00	31	1	29	1	0	0	0	0	0	0	0	0	0	0	
01:00	12	0	11	1	0	0	0	0	0	0	0	0	0	0	
02:00	9	0	9	0	0	0	0	0	0	0	0	0	0	0	
03:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	
04:00	3	0	3	0	0	0	0	0	0	0	0	0	0	0	
05:00	26	3	23	0	0	0	0	0	0	0	0	0	0	0	
06:00	56	2	47	7	0	0	0	0	0	0	0	0	0	0	
07:00	99	1	88	10	0	0	0	0	0	0	0	0	0	0	
08:00	180	3	155	22	0	0	0	0	0	0	0	0	0	0	
09:00	239	3	211	20	0	1	3	0	0	0	1	0	0	0	
10:00	304	4	285	15	0	0	0	0	0	0	0	0	0	0	
11:00	275	8	243	20	0	0	4	0	0	0	0	0	0	0	
12:00	334	1	300	33	0	0	0	0	0	0	0	0	0	0	
13:00	266	2	251	12	0	0	1	0	0	0	0	0	0	0	
14:00	239	7	219	13	0	0	0	0	0	0	0	0	0	0	
15:00	228	5	208	15	0	0	0	0	0	0	0	0	0	0	
16:00	232	2	217	11	0	0	1	0	1	0	0	0	0	0	
17:00	200	2	181	16	0	0	0	0	1	0	0	0	0	0	
18:00	188	4	177	7	0	0	0	0	0	0	0	0	0	0	
19:00	165	1	154	9	0	0	1	0	0	0	0	0	0	0	
20:00	118	3	110	4	0	0	1	0	0	0	0	0	0	0	
21:00	93	4	87	2	0	0	0	0	0	0	0	0	0	0	
22:00	87	0	80	4	0	0	2	0	1	0	0	0	0	0	
23:00	47	1	43	2	0	0	1	0	0	0	0	0	0	0	
12H,7-19	2784	42	2535	194	0	1	9	0	2	0	1	0	0	0	
16H,6-22	3216	52	2933	216	0	1	11	0	2	0	1	0	0	0	
18H,6-24	3350	53	3056	222	0	1	14	0	3	0	1	0	0	0	
24H,0-24	3438	57	3137	225	0	1	14	0	3	0	1	0	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Westbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
<b>Sun 13-Jun-21</b>																
00:00	31	3	26	2	0	0	0	0	0	0	0	0	0	0		
01:00	14	0	13	1	0	0	0	0	0	0	0	0	0	0		
02:00	13	0	13	0	0	0	0	0	0	0	0	0	0	0		
03:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0		
04:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0		
05:00	19	1	16	2	0	0	0	0	0	0	0	0	0	0		
06:00	31	2	27	1	0	0	1	0	0	0	0	0	0	0		
07:00	55	4	44	7	0	0	0	0	0	0	0	0	0	0		
08:00	89	3	77	8	0	0	1	0	0	0	0	0	0	0		
09:00	169	4	153	11	0	0	0	0	0	0	0	0	0	1		
10:00	239	4	223	11	0	0	0	0	1	0	0	0	0	0		
11:00	262	4	246	12	0	0	0	0	0	0	0	0	0	0		
12:00	299	2	287	10	0	0	0	0	0	0	0	0	0	0		
13:00	303	5	288	8	0	0	1	0	1	0	0	0	0	0		
14:00	278	4	255	17	0	0	1	0	0	0	1	0	0	0		
15:00	210	5	190	13	0	0	0	1	1	0	0	0	0	0		
16:00	256	7	232	17	0	0	0	0	0	0	0	0	0	0		
17:00	236	3	220	12	0	0	0	0	1	0	0	0	0	0		
18:00	201	6	186	9	0	0	0	0	0	0	0	0	0	0		
19:00	174	3	164	7	0	0	0	0	0	0	0	0	0	0		
20:00	129	2	121	5	0	0	0	0	1	0	0	0	0	0		
21:00	103	6	89	8	0	0	0	0	0	0	0	0	0	0		
22:00	62	1	60	1	0	0	0	0	0	0	0	0	0	0		
23:00	16	0	16	0	0	0	0	0	0	0	0	0	0	0		
12H,7-19	2597	51	2401	135	0	0	3	1	4	0	1	0	0	1		
16H,6-22	3034	64	2802	156	0	0	4	1	5	0	1	0	0	1		
18H,6-24	3112	65	2878	157	0	0	4	1	5	0	1	0	0	1		
24H,0-24	3203	69	2960	162	0	0	4	1	5	0	1	0	0	1		

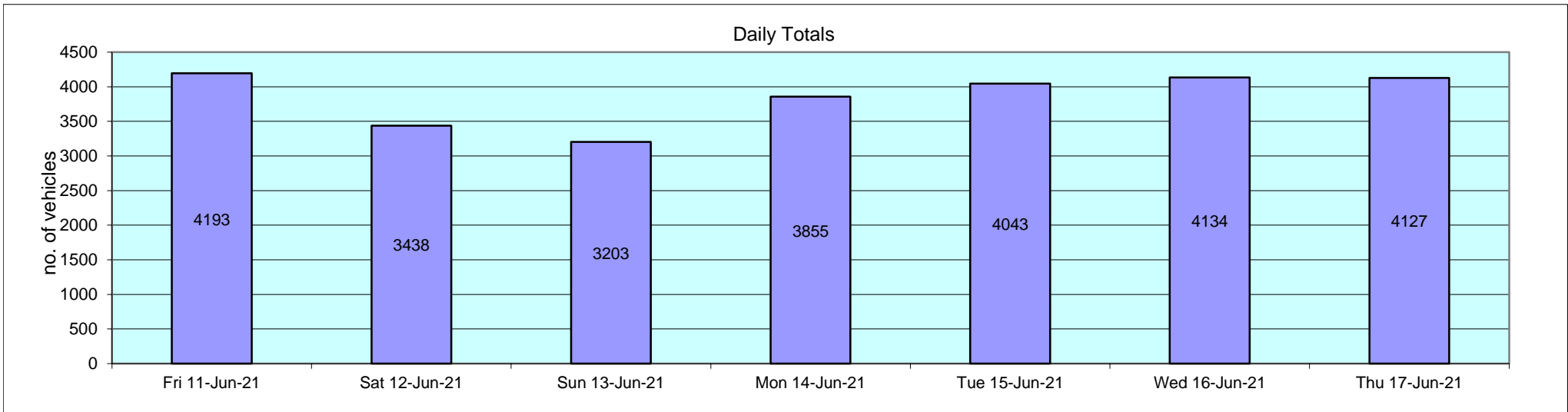
27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Westbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
<b>Mon 14-Jun-21</b>																
00:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	
01:00	5	0	4	1	0	0	0	0	0	0	0	0	0	0	0	
02:00	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	
03:00	5	0	3	2	0	0	0	0	0	0	0	0	0	0	0	
04:00	9	3	5	1	0	0	0	0	0	0	0	0	0	0	0	
05:00	60	1	51	8	0	0	0	0	0	0	0	0	0	0	0	
06:00	154	5	129	20	0	0	0	0	0	0	0	0	0	0	0	
07:00	292	6	248	37	0	1	0	0	0	0	0	0	0	0	0	
08:00	323	8	285	30	0	0	0	0	0	0	0	0	0	0	0	
09:00	250	2	220	28	0	0	0	0	0	0	0	0	0	0	0	
10:00	199	1	172	26	0	0	0	0	0	0	0	0	0	0	0	
11:00	196	8	166	19	0	2	1	0	0	0	0	0	0	0	0	
12:00	223	4	198	19	0	0	1	0	1	0	0	0	0	0	0	
13:00	206	3	173	28	1	1	0	0	0	0	0	0	0	0	0	
14:00	251	6	218	23	0	0	3	0	1	0	0	0	0	0	0	
15:00	317	5	272	39	0	0	1	0	0	0	0	0	0	0	0	
16:00	319	7	280	31	0	0	0	1	0	0	0	0	0	0	0	
17:00	326	7	296	21	0	0	1	0	0	0	1	0	0	0	0	
18:00	236	8	209	19	0	0	0	0	0	0	0	0	0	0	0	
19:00	192	2	185	5	0	0	0	0	0	0	0	0	0	0	0	
20:00	117	5	107	5	0	0	0	0	0	0	0	0	0	0	0	
21:00	85	3	77	4	0	0	1	0	0	0	0	0	0	0	0	
22:00	48	2	45	1	0	0	0	0	0	0	0	0	0	0	0	
23:00	34	1	33	0	0	0	0	0	0	0	0	0	0	0	0	
12H,7-19	3138	65	2737	320	1	4	7	1	2	0	1	0	0	0	0	
16H,6-22	3686	80	3235	354	1	4	8	1	2	0	1	0	0	0	0	
18H,6-24	3768	83	3313	355	1	4	8	1	2	0	1	0	0	0	0	
24H,0-24	3855	87	3383	367	1	5	8	1	2	0	1	0	0	0	0	

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Westbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
<b>Tue 15-Jun-21</b>																
00:00	8	1	7	0	0	0	0	0	0	0	0	0	0	0		
01:00	4	0	2	2	0	0	0	0	0	0	0	0	0	0		
02:00	6	0	4	2	0	0	0	0	0	0	0	0	0	0		
03:00	6	0	5	0	0	0	1	0	0	0	0	0	0	0		
04:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0		
05:00	61	2	56	2	0	0	1	0	0	0	0	0	0	0		
06:00	149	7	123	17	0	2	0	0	0	0	0	0	0	0		
07:00	289	5	245	35	0	0	2	0	2	0	0	0	0	0		
08:00	357	8	318	30	0	1	0	0	0	0	0	0	0	0		
09:00	226	7	193	24	0	0	2	0	0	0	0	0	0	0		
10:00	175	2	156	16	0	1	0	0	0	0	0	0	0	0		
11:00	198	4	171	21	0	0	1	0	0	0	0	1	0	0		
12:00	242	3	211	25	1	0	1	0	1	0	0	0	0	0		
13:00	216	8	179	27	1	0	0	0	1	0	0	0	0	0		
14:00	276	4	244	27	0	0	0	0	1	0	0	0	0	0		
15:00	399	5	352	40	0	0	0	0	2	0	0	0	0	0		
16:00	331	6	282	42	0	0	0	1	0	0	0	0	0	0		
17:00	346	12	302	30	0	0	0	1	0	0	0	1	0	0		
18:00	218	6	195	15	0	0	2	0	0	0	0	0	0	0		
19:00	199	6	179	12	0	0	1	1	0	0	0	0	0	0		
20:00	149	5	137	6	0	0	1	0	0	0	0	0	0	0		
21:00	103	2	93	8	0	0	0	0	0	0	0	0	0	0		
22:00	48	1	45	2	0	0	0	0	0	0	0	0	0	0		
23:00	30	1	27	2	0	0	0	0	0	0	0	0	0	0		
12H,7-19	3273	70	2848	332	2	2	8	2	7	0	0	2	0	0		
16H,6-22	3873	90	3380	375	2	4	10	3	7	0	0	2	0	0		
18H,6-24	3951	92	3452	379	2	4	10	3	7	0	0	2	0	0		
24H,0-24	4043	95	3532	386	2	4	12	3	7	0	0	2	0	0		

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Westbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
<b>Wed 16-Jun-21</b>																
00:00	14	2	12	0	0	0	0	0	0	0	0	0	0	0		
01:00	8	1	5	2	0	0	0	0	0	0	0	0	0	0		
02:00	8	0	7	1	0	0	0	0	0	0	0	0	0	0		
03:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0		
04:00	11	1	8	2	0	0	0	0	0	0	0	0	0	0		
05:00	60	3	52	4	0	1	0	0	0	0	0	0	0	0		
06:00	155	7	132	15	0	1	0	0	0	0	0	0	0	0		
07:00	303	6	263	34	0	0	0	0	0	0	0	0	0	0		
08:00	340	9	288	35	2	1	3	0	1	1	0	0	0	0		
09:00	250	5	217	25	0	1	2	0	0	0	0	0	0	0		
10:00	194	3	167	23	1	0	0	0	0	0	0	0	0	0		
11:00	212	1	192	17	0	1	1	0	0	0	0	0	0	0		
12:00	238	2	212	24	0	0	0	0	0	0	0	0	0	0		
13:00	243	3	205	31	0	0	1	0	2	0	0	1	0	0		
14:00	273	8	242	22	0	0	1	0	0	0	0	0	0	0		
15:00	345	5	299	39	0	0	0	1	0	0	0	0	0	1		
16:00	332	5	287	35	0	0	1	1	3	0	0	0	0	0		
17:00	336	2	309	23	0	1	0	1	0	0	0	0	0	0		
18:00	252	6	230	16	0	0	0	0	0	0	0	0	0	0		
19:00	196	3	175	17	0	0	1	0	0	0	0	0	0	0		
20:00	159	5	140	13	0	0	1	0	0	0	0	0	0	0		
21:00	97	4	85	7	0	0	1	0	0	0	0	0	0	0		
22:00	66	2	62	2	0	0	0	0	0	0	0	0	0	0		
23:00	35	1	32	1	0	0	1	0	0	0	0	0	0	0		
12H,7-19	3318	55	2911	324	3	4	9	3	6	1	0	1	0	1		
16H,6-22	3925	74	3443	376	3	5	12	3	6	1	0	1	0	1		
18H,6-24	4026	77	3537	379	3	5	13	3	6	1	0	1	0	1		
24H,0-24	4134	84	3627	389	3	6	13	3	6	1	0	1	0	1		

27062		GLOUCESTER				Site No: 27062001		Location		Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)						
						Channel: Westbound										
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC		
<b>Thu 17-Jun-21</b>																
00:00	10	1	9	0	0	0	0	0	0	0	0	0	0	0	0	
01:00	8	0	4	4	0	0	0	0	0	0	0	0	0	0	0	
02:00	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	
03:00	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
04:00	12	1	9	2	0	0	0	0	0	0	0	0	0	0	0	
05:00	63	3	54	6	0	0	0	0	0	0	0	0	0	0	0	
06:00	152	4	129	17	0	2	0	0	0	0	0	0	0	0	0	
07:00	294	4	240	44	0	0	4	0	2	0	0	0	0	0	0	
08:00	343	6	301	30	0	1	3	0	2	0	0	0	0	0	0	
09:00	235	7	203	22	0	1	2	0	0	0	0	0	0	0	0	
10:00	210	3	182	24	0	1	0	0	0	0	0	0	0	0	0	
11:00	253	2	230	19	0	0	2	0	0	0	0	0	0	0	0	
12:00	208	6	181	19	0	1	0	0	1	0	0	0	0	0	0	
13:00	229	1	193	35	0	0	0	0	0	0	0	0	0	0	0	
14:00	245	6	212	24	0	0	0	0	2	0	1	0	0	0	0	
15:00	402	4	358	35	0	0	2	1	2	0	0	0	0	0	0	
16:00	338	4	286	44	0	1	1	0	2	0	0	0	0	0	0	
17:00	328	4	299	24	0	0	1	0	0	0	0	0	0	0	0	
18:00	238	5	217	16	0	0	0	0	0	0	0	0	0	0	0	
19:00	204	3	189	9	0	0	3	0	0	0	0	0	0	0	0	
20:00	175	4	153	17	0	0	1	0	0	0	0	0	0	0	0	
21:00	91	3	82	5	0	0	1	0	0	0	0	0	0	0	0	
22:00	50	0	48	1	0	0	0	0	1	0	0	0	0	0	0	
23:00	31	1	30	0	0	0	0	0	0	0	0	0	0	0	0	
12H,7-19	3323	52	2902	336	0	5	15	1	11	0	1	0	0	0	0	
16H,6-22	3945	66	3455	384	0	7	20	1	11	0	1	0	0	0	0	
18H,6-24	4026	67	3533	385	0	7	20	1	12	0	1	0	0	0	0	
24H,0-24	4127	72	3617	397	0	7	20	1	12	0	1	0	0	0	0	

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID/BUSES	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	FIVE OR LESS AXLE		SEVEN OR MORE AXLE	
											SIX OR MORE AXLE ARTIC	MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	OR MORE AXLE ARTIC
<b>Daily Totals</b>														
Fri 11-Jun-21	4193	59	3681	408	1	8	23	2	9	0	2	0	0	0
Sat 12-Jun-21	3438	57	3137	225	0	1	14	0	3	0	1	0	0	0
Sun 13-Jun-21	3203	69	2960	162	0	0	4	1	5	0	1	0	0	1
Mon 14-Jun-21	3855	87	3383	367	1	5	8	1	2	0	1	0	0	0
Tue 15-Jun-21	4043	95	3532	386	2	4	12	3	7	0	0	2	0	0
Wed 16-Jun-21	4134	84	3627	389	3	6	13	3	6	1	0	1	0	1
Thu 17-Jun-21	4127	72	3617	397	0	7	20	1	12	0	1	0	0	0
<b>Total Vehicles</b>														
[--]	26993	523	23937	2334	7	31	94	11	44	1	6	3	0	2





27062 GLOUCESTER Site No: 27062001 Location Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)  
Channel: Westbound

Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Sat 12-Jun-21</b>															
00:00	31	30.2	26.9	0	1	24	6	0	0	0	0	0	0	0	0
01:00	12	30.9	27	0	1	8	2	1	0	0	0	0	0	0	0
02:00	9	-	33.1	0	0	2	6	1	0	0	0	0	0	0	0
03:00	7	-	28.1	0	0	5	2	0	0	0	0	0	0	0	0
04:00	3	-	28.9	0	0	1	2	0	0	0	0	0	0	0	0
05:00	26	35.3	30.6	0	1	12	13	0	0	0	0	0	0	0	0
06:00	56	32.7	28.7	0	4	30	21	1	0	0	0	0	0	0	0
07:00	99	32.2	28.3	0	5	56	36	1	1	0	0	0	0	0	0
08:00	180	31.5	28.2	0	4	128	48	0	0	0	0	0	0	0	0
09:00	239	30	26.4	1	13	186	39	0	0	0	0	0	0	0	0
10:00	304	29.1	26.1	0	19	249	36	0	0	0	0	0	0	0	0
11:00	275	30	26.2	2	12	215	46	0	0	0	0	0	0	0	0
12:00	334	28.9	25.8	0	17	286	31	0	0	0	0	0	0	0	0
13:00	266	28.9	25.6	0	15	227	24	0	0	0	0	0	0	0	0
14:00	239	29.8	26.1	0	16	187	36	0	0	0	0	0	0	0	0
15:00	228	29.3	26.3	0	14	185	29	0	0	0	0	0	0	0	0
16:00	232	29.1	25.7	1	15	194	21	1	0	0	0	0	0	0	0
17:00	200	29.8	26.7	0	10	161	29	0	0	0	0	0	0	0	0
18:00	188	30.2	26.7	0	10	144	34	0	0	0	0	0	0	0	0
19:00	165	30.6	27.5	0	5	128	32	0	0	0	0	0	0	0	0
20:00	118	30.4	26.9	1	5	88	23	0	0	1	0	0	0	0	0
21:00	93	31.8	27.4	1	5	65	19	2	1	0	0	0	0	0	0
22:00	87	29.5	26.3	0	6	70	11	0	0	0	0	0	0	0	0
23:00	47	30.2	25.8	0	5	32	10	0	0	0	0	0	0	0	0
12H,7-19	2784	29.8	26.3	4	150	2218	409	2	1	0	0	0	0	0	0
16H,6-22	3216	30	26.5	6	169	2529	504	5	2	1	0	0	0	0	0
18H,6-24	3350	30	26.5	6	180	2631	525	5	2	1	0	0	0	0	0
24H,0-24	3438	30	26.5	6	183	2683	556	7	2	1	0	0	0	0	0

27062		GLOUCESTER		Site No: 27062001			Location Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)									
				Channel: Westbound												
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76	
<b>Sun 13-Jun-21</b>																
00:00	31	36.5	30.4	0	0	18	11	2	0	0	0	0	0	0	0	
01:00	14	29.8	28	0	0	12	2	0	0	0	0	0	0	0	0	
02:00	13	34	31.6	0	0	5	8	0	0	0	0	0	0	0	0	
03:00	7	-	26.7	1	0	3	3	0	0	0	0	0	0	0	0	
04:00	7	-	29.9	0	0	4	3	0	0	0	0	0	0	0	0	
05:00	19	35.8	30.2	0	1	9	8	0	1	0	0	0	0	0	0	
06:00	31	33.8	29.8	0	2	13	16	0	0	0	0	0	0	0	0	
07:00	55	32	27.6	0	4	31	20	0	0	0	0	0	0	0	0	
08:00	89	31.5	28	0	3	61	25	0	0	0	0	0	0	0	0	
09:00	169	30.9	27.6	0	6	125	38	0	0	0	0	0	0	0	0	
10:00	239	30.2	26.8	1	12	182	43	1	0	0	0	0	0	0	0	
11:00	262	30	27	1	6	212	43	0	0	0	0	0	0	0	0	
12:00	299	30.2	27	0	8	241	50	0	0	0	0	0	0	0	0	
13:00	303	29.3	26	1	24	248	30	0	0	0	0	0	0	0	0	
14:00	278	29.8	26.3	1	12	224	41	0	0	0	0	0	0	0	0	
15:00	210	29.5	25.8	0	19	164	27	0	0	0	0	0	0	0	0	
16:00	256	29.3	25.8	3	15	212	26	0	0	0	0	0	0	0	0	
17:00	236	29.8	26.2	0	15	187	34	0	0	0	0	0	0	0	0	
18:00	201	30.6	26.7	0	15	151	34	1	0	0	0	0	0	0	0	
19:00	174	30.9	27	0	8	129	37	0	0	0	0	0	0	0	0	
20:00	129	30.6	26.1	0	17	86	26	0	0	0	0	0	0	0	0	
21:00	103	31.5	27.4	0	4	72	25	2	0	0	0	0	0	0	0	
22:00	62	31.1	27.7	0	1	44	16	1	0	0	0	0	0	0	0	
23:00	16	31.3	27.3	0	0	13	3	0	0	0	0	0	0	0	0	
12H,7-19	2597	30	26.6	7	139	2038	411	2	0	0	0	0	0	0	0	
16H,6-22	3034	30.2	26.6	7	170	2338	515	4	0	0	0	0	0	0	0	
18H,6-24	3112	30.2	26.7	7	171	2395	534	5	0	0	0	0	0	0	0	
24H,0-24	3203	30.4	26.7	8	172	2446	569	7	1	0	0	0	0	0	0	

Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Mon 14-Jun-21</b>															
00:00	6	-	30.6	0	0	2	4	0	0	0	0	0	0	0	0
01:00	5	-	29.7	0	0	3	2	0	0	0	0	0	0	0	0
02:00	2	-	25.9	0	0	2	0	0	0	0	0	0	0	0	0
03:00	5	-	28.2	0	0	3	2	0	0	0	0	0	0	0	0
04:00	9	-	29.9	0	1	4	3	1	0	0	0	0	0	0	0
05:00	60	33.6	29.8	0	0	30	29	1	0	0	0	0	0	0	0
06:00	154	32.7	29.5	0	4	78	71	1	0	0	0	0	0	0	0
07:00	292	30.4	27.1	0	15	218	59	0	0	0	0	0	0	0	0
08:00	323	30.6	26.6	0	25	232	66	0	0	0	0	0	0	0	0
09:00	250	30	26.9	0	6	205	39	0	0	0	0	0	0	0	0
10:00	199	30	26.7	0	5	165	28	0	0	0	1	0	0	0	0
11:00	196	30.6	26.5	2	13	141	39	1	0	0	0	0	0	0	0
12:00	223	29.3	26.3	0	8	189	26	0	0	0	0	0	0	0	0
13:00	206	29.5	26.2	0	15	164	27	0	0	0	0	0	0	0	0
14:00	251	28.6	24.6	3	33	195	20	0	0	0	0	0	0	0	0
15:00	317	28	24.1	2	45	256	14	0	0	0	0	0	0	0	0
16:00	319	28.4	25.1	0	24	277	18	0	0	0	0	0	0	0	0
17:00	326	28.2	24.7	0	34	273	19	0	0	0	0	0	0	0	0
18:00	236	29.3	25.2	0	33	176	27	0	0	0	0	0	0	0	0
19:00	192	30	25.9	0	14	148	30	0	0	0	0	0	0	0	0
20:00	117	30.4	27.1	0	5	88	24	0	0	0	0	0	0	0	0
21:00	85	30.6	27	0	4	63	18	0	0	0	0	0	0	0	0
22:00	48	31.1	27.9	0	1	34	12	0	1	0	0	0	0	0	0
23:00	34	32	30.7	0	0	21	11	1	0	0	1	0	0	0	0
12H,7-19	3138	29.3	25.7	7	256	2491	382	1	0	0	1	0	0	0	0
16H,6-22	3686	29.8	26	7	283	2868	525	2	0	0	1	0	0	0	0
18H,6-24	3768	29.8	26.1	7	284	2923	548	3	1	0	2	0	0	0	0
24H,0-24	3855	30	26.1	7	285	2967	588	5	1	0	2	0	0	0	0

Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Tue 15-Jun-21</b>															
00:00	8	-	27.9	0	0	5	3	0	0	0	0	0	0	0	0
01:00	4	-	33.7	0	0	0	4	0	0	0	0	0	0	0	0
02:00	6	-	30.9	0	0	4	2	0	0	0	0	0	0	0	0
03:00	6	-	23.6	0	2	3	1	0	0	0	0	0	0	0	0
04:00	7	-	28.1	0	0	4	3	0	0	0	0	0	0	0	0
05:00	61	33.1	28.5	0	5	34	22	0	0	0	0	0	0	0	0
06:00	149	33.1	29.2	0	5	85	57	2	0	0	0	0	0	0	0
07:00	289	30.4	28.2	1	7	215	60	2	4	0	0	0	0	0	0
08:00	357	29.5	26.1	1	26	283	46	1	0	0	0	0	0	0	0
09:00	226	30	26.8	0	10	181	35	0	0	0	0	0	0	0	0
10:00	175	29.5	26.5	0	7	145	23	0	0	0	0	0	0	0	0
11:00	198	29.5	25	1	26	149	22	0	0	0	0	0	0	0	0
12:00	242	29.1	25.3	0	26	191	24	1	0	0	0	0	0	0	0
13:00	216	29.5	26.3	0	11	176	29	0	0	0	0	0	0	0	0
14:00	276	28.6	25.4	0	20	231	25	0	0	0	0	0	0	0	0
15:00	399	28.2	24.9	0	25	345	29	0	0	0	0	0	0	0	0
16:00	331	29.1	25.2	0	26	267	38	0	0	0	0	0	0	0	0
17:00	346	28	24.6	0	37	294	15	0	0	0	0	0	0	0	0
18:00	218	29.8	25.2	0	24	163	30	1	0	0	0	0	0	0	0
19:00	199	29.5	25.5	0	21	153	24	1	0	0	0	0	0	0	0
20:00	149	29.8	25.5	0	16	111	22	0	0	0	0	0	0	0	0
21:00	103	31.5	28	0	3	72	28	0	0	0	0	0	0	0	0
22:00	48	29.1	26	0	1	43	4	0	0	0	0	0	0	0	0
23:00	30	35.3	28.9	0	1	21	7	0	0	1	0	0	0	0	0
12H,7-19	3273	29.3	25.7	3	245	2640	376	5	4	0	0	0	0	0	0
16H,6-22	3873	29.5	25.9	3	290	3061	507	8	4	0	0	0	0	0	0
18H,6-24	3951	29.5	25.9	3	292	3125	518	8	4	1	0	0	0	0	0
24H,0-24	4043	29.8	26	3	299	3175	553	8	4	1	0	0	0	0	0

Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
<b>Wed 16-Jun-21</b>															
00:00	14	31.3	28.5	0	0	11	2	1	0	0	0	0	0	0	0
01:00	8	-	27.5	0	1	4	3	0	0	0	0	0	0	0	0
02:00	8	-	31	0	0	5	2	1	0	0	0	0	0	0	0
03:00	7	-	26.9	0	0	5	2	0	0	0	0	0	0	0	0
04:00	11	31.3	26.4	0	1	6	4	0	0	0	0	0	0	0	0
05:00	60	33.3	29	0	3	34	23	0	0	0	0	0	0	0	0
06:00	155	33.8	30.1	0	4	71	78	1	1	0	0	0	0	0	0
07:00	303	29.8	25.8	4	28	228	43	0	0	0	0	0	0	0	0
<b>08:00</b>	<b>340</b>	<b>30.2</b>	<b>26</b>	<b>1</b>	<b>33</b>	<b>244</b>	<b>60</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
09:00	250	30	27	1	11	192	46	0	0	0	0	0	0	0	0
10:00	194	29.5	25.7	4	17	151	21	1	0	0	0	0	0	0	0
11:00	212	29.8	26.7	0	7	174	30	1	0	0	0	0	0	0	0
12:00	238	28.4	24.6	0	32	186	20	0	0	0	0	0	0	0	0
13:00	243	29.8	26.7	0	10	197	36	0	0	0	0	0	0	0	0
14:00	273	28.9	26.1	0	6	243	24	0	0	0	0	0	0	0	0
<b>15:00</b>	<b>345</b>	<b>28.9</b>	<b>25.4</b>	<b>1</b>	<b>28</b>	<b>286</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
16:00	332	28.6	24.8	0	44	262	26	0	0	0	0	0	0	0	0
17:00	336	29.5	25.6	0	31	260	45	0	0	0	0	0	0	0	0
18:00	252	29.5	26.2	0	14	209	29	0	0	0	0	0	0	0	0
19:00	196	29.8	26.3	0	17	153	26	0	0	0	0	0	0	0	0
20:00	159	30.2	27	0	8	119	31	1	0	0	0	0	0	0	0
21:00	97	29.5	26.3	0	9	76	12	0	0	0	0	0	0	0	0
22:00	66	30.9	27.9	1	2	43	19	1	0	0	0	0	0	0	0
23:00	35	32.9	28	0	0	21	14	0	0	0	0	0	0	0	0
<b>12H,7-19</b>	<b>3318</b>	<b>29.5</b>	<b>25.8</b>	<b>11</b>	<b>261</b>	<b>2632</b>	<b>410</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>16H,6-22</b>	<b>3925</b>	<b>29.8</b>	<b>26.1</b>	<b>11</b>	<b>299</b>	<b>3051</b>	<b>557</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>18H,6-24</b>	<b>4026</b>	<b>29.8</b>	<b>26.1</b>	<b>12</b>	<b>301</b>	<b>3115</b>	<b>590</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>24H,0-24</b>	<b>4134</b>	<b>30</b>	<b>26.2</b>	<b>12</b>	<b>306</b>	<b>3180</b>	<b>626</b>	<b>7</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



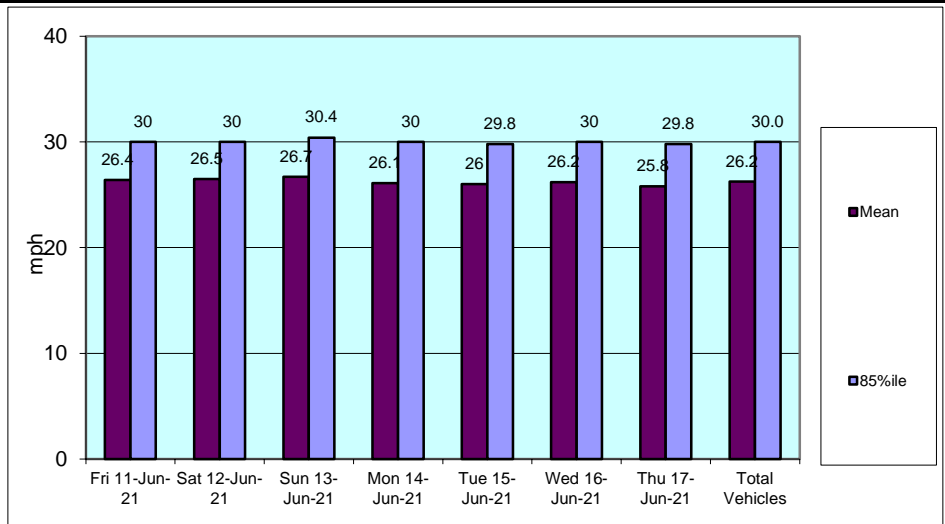
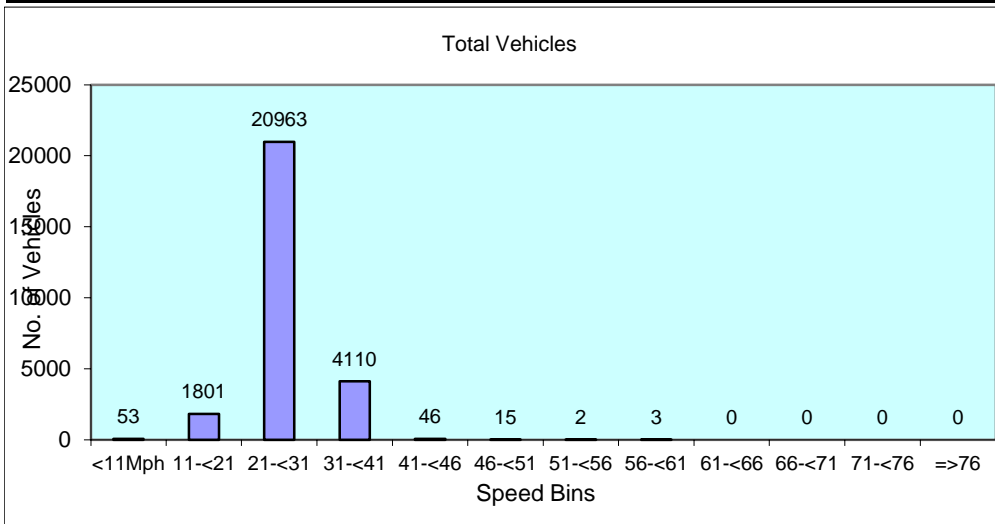
Time Period	Total Vehicles	85%ile Speed	Mean Speed	<11Mph	11-<21	21-<31	31-<41	41-<46	46-<51	51-<56	56-<61	61-<66	66-<71	71-<76	=>76
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**Daily Totals**

Fri 11-Jun-21	4193	30	26.4	10	237	3278	658	7	2	0	1	0	0	0	0
Sat 12-Jun-21	3438	30	26.5	6	183	2683	556	7	2	1	0	0	0	0	0
Sun 13-Jun-21	3203	30.4	26.7	8	172	2446	569	7	1	0	0	0	0	0	0
Mon 14-Jun-21	3855	30	26.1	7	285	2967	588	5	1	0	2	0	0	0	0
Tue 15-Jun-21	4043	29.8	26	3	299	3175	553	8	4	1	0	0	0	0	0
Wed 16-Jun-21	4134	30	26.2	12	306	3180	626	7	3	0	0	0	0	0	0
Thu 17-Jun-21	4127	29.8	25.8	7	319	3234	560	5	2	0	0	0	0	0	0

**Total Vehicles**

[--]	26993	30.0	26.2	53	1801	20963	4110	46	15	2	3	0	0	0	0
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27062	GLOUCESTER			Site No: 27062001	Location	Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)			
	Channel: Westbound								
TIME PERIOD	Fri 11/06/21	Sat 12/06/21	Sun 13/06/21	Mon 14/06/21	Tue 15/06/21	Wed 16/06/21	Thu 17/06/21	5-Day Av	7-Day Av
<b>Week Begin: 11-Jun-21</b>									
00:00	6	31	31	6	8	14	10	9	15
01:00	8	12	14	5	4	8	8	7	8
02:00	5	9	13	2	6	8	5	5	7
03:00	3	7	7	5	6	7	3	5	5
04:00	9	3	7	9	7	11	12	10	8
05:00	60	26	19	60	61	60	63	61	50
06:00	151	56	31	154	149	155	152	152	121
07:00	274	99	55	292	289	303	294	290	229
08:00	351	180	89	323	357	340	343	343	283
09:00	218	239	169	250	226	250	235	236	227
10:00	211	304	239	199	175	194	210	198	219
11:00	229	275	262	196	198	212	253	218	232
12:00	242	334	299	223	242	238	208	231	255
13:00	236	266	303	206	216	243	229	226	243
14:00	341	239	278	251	276	273	245	277	272
15:00	380	228	210	317	399	345	402	369	326
16:00	307	232	256	319	331	332	338	325	302
17:00	330	200	236	326	346	336	328	333	300
18:00	259	188	201	236	218	252	238	241	227
19:00	202	165	174	192	199	196	204	199	190
20:00	147	118	129	117	149	159	175	149	142
21:00	102	93	103	85	103	97	91	96	96
22:00	68	87	62	48	48	66	50	56	61
23:00	54	47	16	34	30	35	31	37	35
<b>12H,7-19</b>	<b>3378</b>	<b>2784</b>	<b>2597</b>	<b>3138</b>	<b>3273</b>	<b>3318</b>	<b>3323</b>	<b>3286</b>	<b>3116</b>
<b>16H,6-22</b>	<b>3980</b>	<b>3216</b>	<b>3034</b>	<b>3686</b>	<b>3873</b>	<b>3925</b>	<b>3945</b>	<b>3882</b>	<b>3666</b>
<b>18H,6-24</b>	<b>4102</b>	<b>3350</b>	<b>3112</b>	<b>3768</b>	<b>3951</b>	<b>4026</b>	<b>4026</b>	<b>3975</b>	<b>3762</b>
<b>24H,0-24</b>	<b>4193</b>	<b>3438</b>	<b>3203</b>	<b>3855</b>	<b>4043</b>	<b>4134</b>	<b>4127</b>	<b>4070</b>	<b>3856</b>
<b>Am</b>	<b>08:00</b>	<b>10:00</b>	<b>11:00</b>	<b>08:00</b>	<b>08:00</b>	<b>08:00</b>	<b>08:00</b>		
<b>Peak</b>	<b>351</b>	<b>304</b>	<b>262</b>	<b>323</b>	<b>357</b>	<b>340</b>	<b>343</b>		
<b>Pm</b>	<b>15:00</b>	<b>12:00</b>	<b>13:00</b>	<b>17:00</b>	<b>15:00</b>	<b>15:00</b>	<b>15:00</b>		
<b>Peak</b>	<b>380</b>	<b>334</b>	<b>303</b>	<b>326</b>	<b>399</b>	<b>345</b>	<b>402</b>		

27062

GLOUCESTER

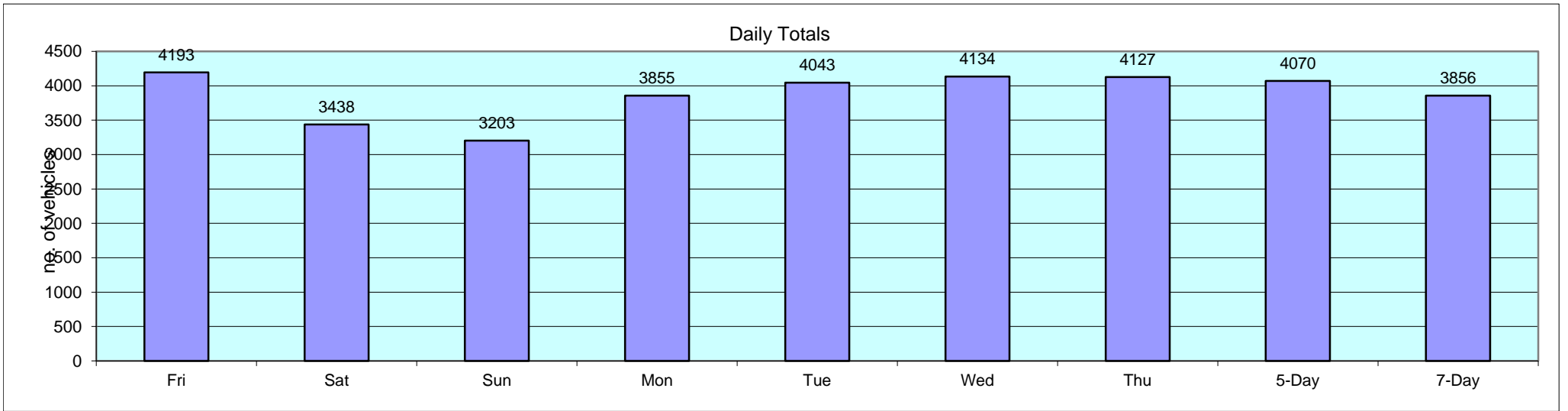
Site No: 27062001

Location

Site 1 - Reservoir Road, between Ashmore Road and Darwin Road (att to L/P)

Channel: Westbound

TIME PERIOD	Fri 11/06/21	Sat 12/06/21	Sun 13/06/21	Mon 14/06/21	Tue 15/06/21	Wed 16/06/21	Thu 17/06/21	5-Day Av	7-Day Av
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# Classification Schemes

## Scheme F Classification Scheme (Non-metric)

Scheme F is an attempt to implement the FWHA's visual classification scheme as an axle-based classification scheme. This is one of several interpretations.

Class	Vehicle Type	No. of Axles	Axle spacing in feet				
			Axle 1 to 2	Axle 2 to 3	Axle 3 to 4	Axle 4 to 5	Axle 5 to 6
1	motorcycle	2	<6.0				
2	passenger car	2	6.0 - 10.0				
	car + 1 axle trailer	3	<10.0	10.0 - 18.0			
	car + 2 axle trailer	4	<10.0		<3.5		
3	pickup	2	10.0 - 15.0				
	pickup + 1 axle trailer	3	10.0 - 15.0	10.0 - 18.0			
	pickup + 2 axle trailer	4	10.0 - 15.0		<3.5		
	pickup + 3 axle trailer	5	9.9 - 15.0			<3.5	
4	Traditional bus/coach	2	>20.0				
	Traditional bus/coach	3	>19.0				
5	single unit truck/bus - dual rear axle	2	14.9 - 20.0			<3.5	
6	3 axle truck	3		<18.0			
7	4 axle truck	4					
8	2S1	3		>18.0			
	2S2	4		>5.0	>3.5		
	3S1	4		<5.0	>10.0		
9	3S2	5		<6.1		3.5 - 8.0	
	5 axle combination	5					
10	6 axle combination	6			3.5 - 5.0		
	3S3	6					
11	2S1-2	5		>6.0			
12	3S1-2	6					>10.0
13	truck	7 or more					





Land to the rear of 101 Reservoir Road, Gloucester

**Planning Statement**

On behalf of [REDACTED]

Our Reference: 1171

October 2021

# Contents

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1	Introduction	1
2	Site and Surrounding Area	2
3	Proposed Development	4
4	Planning Policy Assessment	5
5	Conclusions	15

Appendix 1 Site Location Plan

Appendix 2 Micro Drainage Calculations

Appendix 3 Severn Trent Water Letter

# 1 Introduction

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1.1 This Planning Statement has been prepared on behalf of Mr and Mrs Wall (the Applicants). It is intended to assist Gloucester City Council (GCC) in its consideration of a planning application to construct 5 dwellings and associated infrastructure, including access, parking, and ancillary works on land to the rear of 101 Reservoir Road, Gloucester (the Site).

1.2 In addition to this Planning Statement, the planning application submission is accompanied by:

- Drawings: site layout, proposed floor plans, elevations and access plan;
- Percolation Testing Report and proposed drainage strategy;
- Drainage Maintenance and Management Plan;
- SuDs Implementation Plan;
- Phase 1 Environmental Desk Study; and
- Results of a speed survey.

## **Scope of the Planning Statement**

1.3 This Statement is structured as follows:

- Section 2 describes the application site and surrounding area, including current land use designations and relevant planning history;
- Section 3 describes the proposed development;
- Section 4 assesses the proposed development against the development plan and other material considerations; and
- Section 5 draws overall conclusions on the acceptability of the proposals.

## 2 Site and Surrounding Area

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### The Site

- 2.1 The Site is located approximately 3km south of Gloucester city centre. It lies to the south of Reservoir Road and includes land to the rear of Nos. 99 and 101 Reservoir Road. It is approximately 79m west of Darwin Road and 113m east of Ashmore Road. A site location plan is attached at **Appendix 1**.
- 2.2 The Site is accessed from Reservoir Road between Nos. 99 and 101 which are also within the ownership of the Applicants. It extends to the rear of both properties, although it is separate to both of their residential curtilages. It covers an area of 1,710m<sup>2</sup> and rises in height from north to south by approximately 5.6m over a distance of approximately 109m. The Site is currently vacant and has been cleared.
- 2.3 The Site is enclosed by timber fencing that forms the garden boundaries of adjoining dwellings in Ashmore Road to the south and west and Reservoir Road to the north east and north west. The eastern boundary is marked with a post and wire fence adjoining a footpath that provides access to rear gardens and garages in Robinswood Gardens.
- 2.4 This is a predominantly suburban residential area. Nos. 99, 101 and 103 to the north are red brick, Victorian detached and semi-detached dwellings respectively, in an area otherwise characterised by 20<sup>th</sup> century post war semi-detached and terraced housing, with more recent infill development.
- 2.5 The Site is not located within a conservation area and there are no nearby listed buildings. It falls within Flood Zone 1 and has a low probability of flooding.

### Planning History

- 2.6 There are two relevant planning applications relating to this site:
- i. 10/00574/OUT – outline planning application for two detached dwellings. Refused 04.08.2010;
  - ii. 10/01283/OUT - outline planning application for erection of two detached dwellings with parking, car port or garage space together with provision of parking, car port or garage space associated with exiting dwelling and improvement to vehicular and

pedestrian access. All matters except means of access reserved for future consideration. Approved 02.02.2011.

### 3 Proposed Development

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3.1 Planning permission is sought to develop the site for market housing. The proposals, as shown on the submitted plans, comprise:

- The construction of 5 x 3 bedroom dwellings;
- On plot parking for 2 cars, together with appropriate cycle parking and bin storage;
- The materials and architectural style of the proposed dwellings have been informed by those found locally;
- Each dwelling has been designed to comply with the national Residential Space Standards;
- There is opportunity for new landscaping and planting on site. The details can be secured by a planning condition;
- Access is proposed from Reservoir Road through the forecourt of No. 101. The front boundary wall of No. 101 would be retained and modified to accommodate the access. A new boundary fence will separate the forecourts of Nos. 99 and 101.

#### **Sustainability Strategy**

3.2 The proposed development will incorporate measures to improve energy efficiency and reduce energy demand, thereby reducing the long-term carbon emissions. These measures will be in accordance with the Council's requirements. As the development will not be constructed by the Applicants however, the details of the energy strategy can be secured by a planning condition.

## 4 Planning Policy Assessment

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- 4.1 Section 38(6) of the Town and Country Planning Act 1990 requires local planning authorities to determine applications in accordance with the provisions of the development plan unless material considerations indicate otherwise. This requirement is repeated in the 2021 National Planning Policy Framework (NPPF) at paragraphs 2 and 47. This section of the Planning Statement addresses the degree of compliance of the proposed development with relevant development plan policies and takes account of relevant material considerations, including national policy and guidance.

### **The Development Plan**

- 4.2 The development plan for these purposes comprises:
- The Gloucester, Cheltenham and Tewkesbury Joint Core Strategy (JCS), adopted 11<sup>th</sup> December 2017; and
  - Saved polices within the City of Gloucester Local Plan, adopted 14<sup>th</sup> September 1983.
- 4.3 With regards to the 1983 saved policies, paragraph 219 of the NPPF states that due weight should be given to relevant policies in existing plans according to their degree of consistency with the Framework (the closer the policies in the plan to the policies in the Framework, the greater the weight that may be given). The majority of the policies in the 1983 Local Plan are out-of-date and superseded by later planning policy including the NPPF and the Joint Core Strategy. None of the saved policies are relevant to the consideration of this application and they are not considered further
- 4.4 A new Gloucester City Plan (GCP) is being prepared which will deliver the JCS at the local level. The Pre-Submission version was consulted on in early 2020 and submitted for examination on 18<sup>th</sup> November 2020. Hearings were completed in June 2021. Relevant policies have been referred to as necessary.

### Other Material Considerations

- 4.5 Relevant National Planning Policies and Guidance includes:
- National Planning Policy Framework (NPPF). This was first published in 2012. It was replaced in July 2018 and further amended in February 2019 and July 2021; and
  - National Planning Practice Guidance.

- 4.6 Relevant Supplementary Planning Guidance (SPD) includes:
- SUDs Design Guide, adopted 2013.
- 4.7 The approach taken in this section is to deal with policies on a topic by topic basis under the following headings:
- Principle of development, including the Council’s five year housing land supply; and
  - Other matters:
    - Housing density, mix and affordable housing;
    - Design, layout and landscaping;
    - Residential amenity;
    - Traffic and transport;
    - Flood risk and drainage;
    - Ecology;
    - Land Contamination; and
  - National Planning Policy and Guidance.

### **Principle of Development**

- 4.8 The JCS considers housing supply and demand under Policies SP1 (The Need for New Development and SP2 (Distribution of New Development). It identifies the need to make provision for 14,359 new homes over the plan period with the vast majority to be accommodated within the City’s administrative boundary.
- 4.9 JCS Policy SD10 refers to residential development and allows for “infilling” (defined as the development of an under-developed plot well related to existing built development) within the existing built up area of the City Gloucester.
- 4.10 The application site lies within the built up area of the City and is surrounded by residential development. The Site is an appropriate and sustainable location for residential use. The proposed development would make efficient use of an undeveloped site that is well related to existing built development and services in accordance with these JCS policies. The principle of developing this site has already been accepted by virtue of the 2011 outline consent for two dwellings, albeit this has now lapsed.
- 4.11 Furthermore, the recently revised NPPF (July 2021) still seeks to significantly boost the supply of homes (paragraph 60) and continues to require local planning authorities to maintain a minimum of a five years supply of land for housing (paragraph 74). GCC is currently unable to demonstrate a five year housing land supply. Whilst this proposal is

modest in scale, it would still make a positive contribution to the City's housing supply. In this case, the acknowledged absence of such a supply weighs in favour of the proposed development.

## **Other Matters**

### Housing Density, Mix and Affordable Housing

- 4.12 In terms of density, the NPPF states that planning decisions should promote an effective use of land (paragraph 119) and supports the development of under-utilised land, especially where this would help to meet identified needs for housing (paragraph 120(d)). JCS Policy SD10 is clear that residential development should seek to achieve the maximum density compatible with good design and other planning considerations. In the emerging GCP, Policy A1 requires development to make effective and efficient use of land and buildings.
- 4.13 In this case 5 dwellings are proposed on this 0.171ha site equating to a density of 29.2 dwellings per hectare. This is considered to be an effective use of the site. The impact of other planning considerations are considered in turn below.
- 4.14 JCS Policy SD11 refers to housing mix and standards and requires an appropriate mix of dwelling sizes, and tenures. This development proposes 5 x 3 bedroom dwellings which is considered to be appropriate.
- 4.15 JCS Policy SD12 states that on sites of 10 dwellings or less, which have a combined floorspace of no more than 1,000m<sup>2</sup> no affordable housing contribution will be sought. This is reflected in Policy A2 of the emerging GCP. This proposal falls below these thresholds and as such no affordable dwellings are proposed.

### Design, Layout and Landscaping

- 4.16 The NPPF promotes the creation of high quality, beautiful and sustainable buildings and places (paragraph 126) and paragraph 130 states that developments should add to the overall quality of the area (a), be visually attractive (b), be sympathetic to local character, the surrounding built environment and landscape setting (c).
- 4.17 JCS Policy SD3 requires all developments to demonstrate how they contribute to the principles of sustainability, Policy SD4 sets out requirements for high quality design and Policy SD6 requires development to protect or enhance landscape character.

- 4.18 In the emerging GCP, Policy A1 requires development to result in overall improvements to the built and natural environment and be of a suitable scale for the site. Policy E5 states that development must contribute towards the provision, protection and enhancement of Gloucester's Green Infrastructure Network. Policy F1 states the development proposals should achieve high quality architectural detailing, external materials and finishes that are locally distinctive. Developments should make a positive contribution to the character and appearance of the locality and respect the wider landscape. Policy F3 requires community safety to be a fundamental design principle. Policy G7 requires development to demonstrate that the estimated consumption of wholesome water per dwelling does not exceed 110 litres per person per day.
- 4.19 The Site is located within a residential area characterised by a mix of two storey semi-detached dwellings to the west and south in Ashmore Road, larger semi-detached and detached dwellings to the north on Reservoir Road and terraced dwellings to the east in Robinswood Gardens.
- 4.20 The proposed development has been designed to respect the traditional architectural form, height and scale of the adjoining dwellings to the east, south and west and will be two storeys in height, with a pitched roof. A mix of 3 detached (Plots 1, 2 and 5) and one pair of semi-detached dwellings (Plots 3 and 4) is proposed.
- 4.21 The adjoining Victorian properties to the north on Reservoir Road are larger in scale, form and height. Whilst there is a rise in ground levels towards the southern site boundary, the proposed dwellings would be sufficiently inset from Reservoir Road such that they would not adversely affect the street scene. They would in any event be seen in the context of Ashmore Road and Robinswood Gardens. The scale of proposed development is considered to be appropriate for its context.
- 4.22 It is proposed to use traditional materials comprising red brick and plain roof tile to reflect the local character of the area.
- 4.23 Each dwelling would benefit from a private rear garden. Plots 2, 3 and 4 would also have a front garden. The details of the new landscaping can be secured by planning condition.
- 4.24 The layout of the development has been designed to create secure and private rear gardens by orientating the new dwellings so that they each back on to adjacent rear gardens. They will all face into the Site, creating an active frontage and natural surveillance over the publicly accessible areas and access. On plot parking to the front of each dwelling is

proposed, together with 4 visitor parking space which will be overlooked by Plots 1-4 for security.

- 4.25 Overall, it is considered that the proposal is a high quality, sustainable development that would make a positive contribution to the character and appearance of the locality.

#### Residential Amenity

- 4.26 Paragraph 130(f) of the NPPF states that planning decisions should ensure that developments create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users.
- 4.27 JCS Policy SD4 sets out design requirements and clause (iii) refers to amenity and space and states new development should enhance comfort, convenience and enjoyment through assessment of the opportunities for light, privacy and external space, and the avoidance or mitigation of potential disturbances, including visual intrusion, noise, smell and pollution. Policy SD14 (clause 2i) states that new development must cause no harm to local amenity including the amenity of neighbouring occupants.
- 4.28 Part 2 of JCS Policy SD11 refers to housing standards and requires new housing to meet and where possible exceed appropriate minimum space standards. Paragraph 4.12.12 of the JCS refers to the Government's national space standards. Compliance with these standards is required by the emerging GCP Policy F6.
- 4.29 GCP Policy A1(6) also requires the provision of outdoors amenity space and a garden space at a level that reflects the character of the area and the scale of the development.

#### *Impact on Existing Residential Amenity*

- 4.30 The proposed layout comprises four dwellings located to the south of the site (Plots 1-4) and one dwelling (Plot 5) to the north of the site primarily backing on to No. 101 Reservoir Road.
- 4.31 Plots 1-4 are staggered to take account of the adjoining development to the east and west respectively.
- 4.32 The nearest dwellings to the east are Nos. 30A and 32 Robinswood Gardens. No. 30A is an end terrace, broadly orientated north-south, with its flank elevation facing the Site. No. 32 has a west facing garden and its rear elevation faces the Site. Plot 1 would be closest to these dwellings. The proposed dwelling is located to the north east of No. 32, within the widest part of Plot 1 and is inset 1.1m from the boundary at this point. The outlook from No.

32 will be over Plot 1's garden. Given the distance from Plot 1 to both Nos. 30A and 32 and its orientation at an oblique angle, it is considered that it would not have an overbearing impact on their respective outlook or light. No windows are proposed in the eastern (side) elevation to safeguard their privacy.

- 4.33 The nearest dwellings to the west are Nos. 7-10 Ashmore Road. The rear elevations of these dwellings face the Site and their respective gardens adjoin it. Plot 4 would be the closest. The proposed dwelling is inset from the boundary by 1.1m and positioned to the south east of No.8 and north east of No. 9, again at an oblique angle. There would be no windows in the western (side) elevation. It is considered that there would be no adverse impact on residential amenity in terms of overshadowing, overbearing impact or loss of light or privacy from Plot 4.
- 4.34 Plots 1-4 would all have rear, south facing gardens, that range in depth from 9.5m to 21.5m respectively. These are considered to be an appropriate depth to safeguard adjoining residential amenity.
- 4.35 The rear gardens of No.7 Ashmore Road and Nos. 101 and 103 Reservoir Road adjoin Plot 5 to the west and north. Plot 5 is the widest at 8.1m and the proposed dwelling would be inset from the western boundary by 1.2m and 23.4m from the rear of No.103. Its rear garden would be 9.6m deep. No windows are proposed in either side elevation. It is considered that there would be no adverse impact on residential amenity arising from Plot 5.
- 4.36 Whilst it is acknowledged that this proposal will introduce new dwellings that back onto the rear boundaries of existing dwellings, it is considered that the levels of activity associated with the new development would not result in undue noise and disturbance for neighbours.

*Impact on The Amenity of Future Occupiers*

- 4.37 The Gross Internal Areas proposed for the new dwellings is 95m<sup>2</sup> which exceeds the national space standard requirement of 93m<sup>2</sup> for a two storey, three bedroom, five persons dwelling.
- 4.38 Each dwelling would have 2 double bedrooms and a single. The doubles would exceed the minimum requirement of 11.5m<sup>2</sup>, extending to 12.m<sup>2</sup> and 12.9m<sup>2</sup> respectively. Bedroom 1 would also be 2.77m wide and Bedroom 2 would be 2.57m; both exceed the required dimensions of 2.75m and 2.55m. The single room (Bedroom 3) would have a floor area of 7.7m<sup>2</sup> and extend to a width of 2.21m. The dimensions and size of all the bedrooms would therefore comply with the national space standards, JCS Policy SD11 and GCP Policy F6.

- 4.39 Each dwelling would have its own rear private garden, ranging in size from 62m<sup>2</sup> (Plot 4) to 123m<sup>2</sup> (Plot 1). In addition, Plots 2, 3 and 4 will have reasonable front gardens of extending to 48m<sup>2</sup>, 40.5m<sup>2</sup> and 54m<sup>2</sup> respectively. The amount of external amenity space for each dwelling is considered to be appropriate relative to the scale of the proposed development and its context.
- 4.40 The proposed development would not be unacceptably overlooked or overshadowed by existing dwellings.
- 4.41 Overall, it is considered that that there would be no adverse impact to neighbouring residential amenity from the proposed development or to the amenity of prospective occupiers.

#### Traffic and Transport

- 4.42 JCS Policy INF1 requires safe and accessible connections to the transport network.
- 4.43 GCP Policy A1(4) and (7) requires the provision of adequate off-street parking, access, covered and secure cycle storage and bin storage. Policy G1 refers to sustainable travel and requires car and cycle parking in accordance with Manual for Streets. Policy G2 requires an electric vehicle charge point/socket for every new residential property which has a garage or dedicated car parking space within its curtilage.
- 4.44 Section 9 of NPPF refers to 'Promoting Sustainable Transport' and is relevant. Paragraph 104 highlights the importance of considering transport issues from the earliest stages of development proposals. Paragraph 111 is clear that development should only be refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe. Paragraph 112 goes on to say that applications for developments should give priority first to pedestrians and cyclists and facilitate access to high quality public transport so far as is possible; address the needs of people with disabilities, create safe, secure and attractive places; allow for the efficient delivery of goods and access for service/emergency vehicles; and enable electric vehicle charging.
- 4.45 Given the small-scale nature of the proposed development, a Transport Statement has not been submitted with the planning application, although the existing highway conditions and access to pedestrian and public transport, are set out below.

- 4.46 Reservoir Road, from which the Site is accessed, is subject to a 30mph speed limit. There are footways on both sides of the road which are lit and provide access to key local services.
- 4.47 The nearest bus stops to the Site are to the east approximately 320m (eastbound service) and 480m (westbound service) providing alternative means of travel to the City centre.
- 4.48 A total of 14 car parking spaces are proposed; 2 for each dwelling and 4 visitor parking spaces. Each dwelling will have an electric vehicle charge point within its curtilage. Secure cycle parking will be provided to the rear of each property.
- 4.49 Access will be direct from Reservoir Road, a speed survey has been undertaken and the results have been submitted with this application. They confirm that the proposed visibility splays are appropriate and the access is safe. The access has been designed to accommodate service and emergency vehicles.
- 4.50 Refuse storage is also proposed to the rear of each dwelling and there will be a collection point close to the access from Reservoir Road.
- 4.51 Overall, the proposed development complies with JCS, emerging GCP and national planning policy.

#### Flood Risk and Drainage

- 4.52 Paragraphs 159-169 of the NPPF refers to planning and flood risk and seeks to direct development away from areas of highest risk of flooding and ensure that flood risk is not increased elsewhere. Footnote 55 sets out when a site specific flood risk assessment is required.
- 4.53 In accordance with the NPPF, JCS Policy INF2 applies a risk based sequential approach and requires new development to contribute to a reduction in flood risk, as well as the use of sustainable drainage systems where appropriate. This is reflected in GCP Policy E6.
- 4.54 In this case the application site is less than 1 ha and located within Flood Zone 1, with a low probability of flooding. A site specific flood risk assessment is not necessary to accompany this planning application.
- 4.55 The Site was subject to percolation testing in September 2021 and the report from Wilson Associates has been submitted with the planning application. Based on their findings, it is understood that infiltration is possible at shallow depths and soakaways at shallow depths are therefore suitable. Details of the drainage strategy are outlined on drawing no. P21-599-

SK100 and the Micro Drainage Calculations and pre-application response received from Severn Trent Water are attached at **Appendix 2** and **3** respectively.

- 4.56 The surface water strategy will comprise a mix of permeable surfacing, soakaways and the use of a geocellular tank below the proposed turning head, whilst the foul water drainage will connect into the mains network on Reservoir Road.
- 4.57 Overall, it is considered that the proposed development accords with both policies within the JCS and GCP, as well as the NPPF.

#### Ecology

- 4.58 JCS Policy SD9 seeks to protect and enhance biodiversity. GCP Policy E2 requires the conservation of biodiversity and provision of net gains. The NPPF also requires development to minimise impacts on and provide net gains for biodiversity (paragraph 174(d)).
- 4.59 There are no trees within the application site and it has little existing vegetation. Overall, it is considered to have a low ecological value. The new development provides opportunities for new landscaping and biodiversity enhancement and the details can be secured by planning condition.

#### Land Contamination

- 4.60 JCS Policy SD14 refers to health and environmental quality. It requires that new development must not result in exposure to unacceptable risk from existing or potential sources of pollution and to incorporate the investigation and remediation of any land contamination within the site.
- 4.61 Paragraph 183 of the NPPF seeks to ensure that a site is suitable for the proposed use taking account of ground conditions and any contamination risks.
- 4.62 A Phase 1 Environmental Desk Study has been submitted with the planning application. It assesses the presence of any potential contaminant linkages, which may either be active at the Site in its current condition or could become active in future and if any further risk assessment, investigation or remedial action is required.
- 4.63 The Study notes that the Site is undeveloped and has no history of former industrial use or areas of above or below ground fuel storage. It is considered to have a relatively low environmental sensitivity, given the absence of any on-site watercourses and the presence of underlying mudstone geology, which is considered to have limited resource material.

- 4.64 Plausible contaminant linkages do have the potential to become active as a result of the proposed development. These are associated with the quality of the shallow soil across the site (noted to comprise made ground) and the potential for on-site migration of ground gas from the nearby reservoirs in-filled during the mid twentieth century.
- 4.65 Some further intrusive investigation is recommended, to include the collection of shallow soil samples across the site, installation of gas monitoring wells and completion of ground gas monitoring, followed by a risk assessment. This can be secured by a planning condition.
- 4.66 The proposed development therefore accords with JCS Policy SD14.

**National Planning Policy and Guidance**

- 4.67 As previously stated, NPPF reaffirms the importance of the development plan in decision making, at paragraph 2 and again at paragraph 47. This section has shown that the proposed development complies with the development plan in all relevant respects.
- 4.68 Paragraph 11 and the three over-arching objectives for sustainable development, are addressed in the conclusion.

## 5 Conclusions

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- 5.1 This Planning Statement has been prepared to assist GCC in its consideration of this planning application to construct 5 dwellings and associated infrastructure including access, parking and ancillary works on land to the rear of 101 Reservoir Road, Gloucester.
- 5.2 It has been demonstrated that the proposed development complies with the JCS and emerging GCP and that there would be no significant harm arising. Notwithstanding, given the current shortfall in the City's five year housing land supply it is concluded that paragraph 11 (d) is engaged.
- 5.3 The proposal is considered to be sustainable development, in terms of the three overarching objectives of sustainable development set out in paragraph 8 of the NPPF:
- In economic terms, it would provide modest but useful levels of employment in the construction stage and the occupiers of the new homes would increase spending and general activity within the local area, supporting existing local services and businesses;
  - In social terms, it would provide new houses on an under used and accessible site within the City boundary and make a positive contribution to housing land supply which is a significant benefit; and
  - In environmental terms, the proposed development would make a more efficient use of this Site, without detriment to residential amenity, drainage, highway safety or the environment and with opportunities to enhance biodiversity.
- 5.4 The development plan is out of date by virtue of the shortfall in housing land supply. The test set out in paragraph 11(d) of the NPPF is whether any adverse impacts would significantly and demonstrably outweigh the benefits of the proposal. It is considered that adverse impacts do not outweigh the benefits and that this is a development to which the presumption in favour of sustainable development should apply.

# Appendix 1

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## Site Location Plan

GENERAL NOTES

1. Do not scale from this print or use as a template.
2. All dimensions must be verified on site before any work is put in hand and any discrepancies must be reported to the Architect. Where any variations occur between small scale and detailed drawings, detail drawings should be worked from.
3. Copyright of this drawing is reserved by Osbornes and is issued on condition that it is not copied or disclosed to any third party either wholly or in part without the consent of Osbornes in writing.



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**OSBORNES** CHARTERED ARCHITECTS  
 The Balconies • Hanley Swan • Malvern • Worcestershire • WR8 0DN

CLIENT MR IAIN WALL  
 PROJECT 101 RESERVOIR ROAD  
 TITLE LOCATION PLAN  
 SCALE 1:1250 @ A3  
 DATE AUG 2021  
 DRAWN TL DRAWING NUMBER 21-111-LOC1B

## Appendix 2

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### Micro Drainage Calculations

Simpson Associates		Page 1
Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 1	
Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR	

Innovyze Source Control 2020.1.3

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 40 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	44.465	0.215	3.2	9.0	O K
30 min Summer	44.500	0.250	3.7	12.1	Flood Risk
60 min Summer	44.523	0.273	4.0	14.4	Flood Risk
120 min Summer	44.534	0.284	4.2	15.5	Flood Risk
180 min Summer	44.530	0.280	4.1	15.1	Flood Risk
240 min Summer	44.522	0.272	4.0	14.2	Flood Risk
360 min Summer	44.503	0.253	3.7	12.3	Flood Risk
480 min Summer	44.485	0.235	3.5	10.7	O K
600 min Summer	44.470	0.220	3.3	9.4	O K
720 min Summer	44.456	0.206	3.1	8.2	O K
960 min Summer	44.434	0.184	2.7	6.5	O K
1440 min Summer	44.401	0.151	2.2	4.4	O K
2160 min Summer	44.369	0.119	1.8	2.7	O K
2880 min Summer	44.349	0.099	1.5	1.9	O K
4320 min Summer	44.323	0.073	1.1	1.0	O K
5760 min Summer	44.309	0.059	0.9	0.7	O K
7200 min Summer	44.300	0.050	0.7	0.5	O K
8640 min Summer	44.296	0.046	0.6	0.4	O K
10080 min Summer	44.293	0.043	0.6	0.4	O K
15 min Winter	44.484	0.234	3.5	10.6	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	117.448	0.0	17
30 min Summer	79.010	0.0	30
60 min Summer	50.812	0.0	46
120 min Summer	31.621	0.0	80
180 min Summer	23.637	0.0	114
240 min Summer	19.105	0.0	148
360 min Summer	14.037	0.0	212
480 min Summer	11.286	0.0	274
600 min Summer	9.522	0.0	336
720 min Summer	8.282	0.0	398
960 min Summer	6.640	0.0	518
1440 min Summer	4.854	0.0	752
2160 min Summer	3.541	0.0	1108
2880 min Summer	2.828	0.0	1472
4320 min Summer	2.055	0.0	2204
5760 min Summer	1.637	0.0	2928
7200 min Summer	1.371	0.0	3592
8640 min Summer	1.186	0.0	4400
10080 min Summer	1.049	0.0	4984
15 min Winter	117.448	0.0	17

Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 1
Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR




Innovyze Source Control 2020.1.3

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
30 min Winter	44.522	0.272	4.0	14.2	Flood Risk
60 min Winter	44.544	0.294	4.4	16.5	Flood Risk
120 min Winter	44.550	0.300	4.4	17.1	Flood Risk
180 min Winter	44.540	0.290	4.3	16.1	Flood Risk
240 min Winter	44.527	0.277	4.1	14.7	Flood Risk
360 min Winter	44.499	0.249	3.7	12.0	O K
480 min Winter	44.475	0.225	3.3	9.8	O K
600 min Winter	44.454	0.204	3.0	8.1	O K
720 min Winter	44.437	0.187	2.8	6.8	O K
960 min Winter	44.409	0.159	2.4	4.9	O K
1440 min Winter	44.373	0.123	1.8	2.9	O K
2160 min Winter	44.341	0.091	1.4	1.6	O K
2880 min Winter	44.323	0.073	1.1	1.0	O K
4320 min Winter	44.303	0.053	0.8	0.5	O K
5760 min Winter	44.296	0.046	0.6	0.4	O K
7200 min Winter	44.292	0.042	0.5	0.3	O K
8640 min Winter	44.289	0.039	0.4	0.3	O K
10080 min Winter	44.286	0.036	0.4	0.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
30 min Winter	79.010	0.0	30
60 min Winter	50.812	0.0	48
120 min Winter	31.621	0.0	86
180 min Winter	23.637	0.0	122
240 min Winter	19.105	0.0	158
360 min Winter	14.037	0.0	222
480 min Winter	11.286	0.0	286
600 min Winter	9.522	0.0	348
720 min Winter	8.282	0.0	408
960 min Winter	6.640	0.0	530
1440 min Winter	4.854	0.0	764
2160 min Winter	3.541	0.0	1120
2880 min Winter	2.828	0.0	1468
4320 min Winter	2.055	0.0	2204
5760 min Winter	1.637	0.0	2880
7200 min Winter	1.371	0.0	3624
8640 min Winter	1.186	0.0	4256
10080 min Winter	1.049	0.0	4968

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.067

<b>Time (mins)</b>	<b>Area</b>
<b>From: To:</b>	<b>(ha)</b>
0	4 0.067

Simpson Associates		Page 4
Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 1	
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Innovyze Source Control 2020.1.3

Model Details

Storage is Online Cover Level (m) 44.800

Complex Structure

Porous Car Park


Infiltration Coefficient Base (m/hr)	0.39600	Width (m)	11.7
Membrane Percolation (mm/hr)	1000	Length (m)	23.0
Max Percolation (l/s)	74.8	Slope (1:X)	23.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.95	Evaporation (mm/day)	3
Invert Level (m)	44.250	Cap Volume Depth (m)	0.250

Porous Car Park

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	23.0
Max Percolation (l/s)	38.3	Slope (1:X)	23.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.95	Evaporation (mm/day)	3
Invert Level (m)	44.250	Cap Volume Depth (m)	0.250

Porous Car Park

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	18.5
Membrane Percolation (mm/hr)	1000	Length (m)	23.0
Max Percolation (l/s)	118.2	Slope (1:X)	23.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	44.500	Membrane Depth (m)	0

Simpson Associates		Page 1
Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 2	
Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR	


Innovyze Source Control 2020.1.3

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 10 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	43.497	0.297	0.8	0.7	Flood Risk
30 min Summer	43.527	0.327	0.9	0.8	Flood Risk
60 min Summer	43.529	0.329	0.9	0.8	Flood Risk
120 min Summer	43.499	0.299	0.9	0.7	Flood Risk
180 min Summer	43.467	0.267	0.8	0.6	O K
240 min Summer	43.441	0.241	0.7	0.5	O K
360 min Summer	43.400	0.200	0.6	0.3	O K
480 min Summer	43.372	0.172	0.5	0.2	O K
600 min Summer	43.351	0.151	0.4	0.2	O K
720 min Summer	43.334	0.134	0.4	0.1	O K
960 min Summer	43.311	0.111	0.3	0.1	O K
1440 min Summer	43.282	0.082	0.2	0.1	O K
2160 min Summer	43.260	0.060	0.2	0.0	O K
2880 min Summer	43.249	0.049	0.1	0.0	O K
4320 min Summer	43.242	0.042	0.1	0.0	O K
5760 min Summer	43.237	0.037	0.1	0.0	O K
7200 min Summer	43.234	0.034	0.1	0.0	O K
8640 min Summer	43.232	0.032	0.1	0.0	O K
10080 min Summer	43.230	0.030	0.1	0.0	O K
15 min Winter	43.520	0.320	0.9	0.8	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	117.448	0.0	14
30 min Summer	79.010	0.0	22
60 min Summer	50.812	0.0	38
120 min Summer	31.621	0.0	70
180 min Summer	23.637	0.0	102
240 min Summer	19.105	0.0	132
360 min Summer	14.037	0.0	192
480 min Summer	11.286	0.0	250
600 min Summer	9.522	0.0	310
720 min Summer	8.282	0.0	370
960 min Summer	6.640	0.0	490
1440 min Summer	4.854	0.0	734
2160 min Summer	3.541	0.0	1096
2880 min Summer	2.828	0.0	1460
4320 min Summer	2.055	0.0	2204
5760 min Summer	1.637	0.0	2848
7200 min Summer	1.371	0.0	3624
8640 min Summer	1.186	0.0	4256
10080 min Summer	1.049	0.0	4960
15 min Winter	117.448	0.0	14


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Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 2	
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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
30 min Winter	43.545	0.345	1.0	0.9	Flood Risk
60 min Winter	43.536	0.336	1.0	0.9	Flood Risk
120 min Winter	43.488	0.288	0.8	0.6	Flood Risk
180 min Winter	43.445	0.245	0.7	0.5	O K
240 min Winter	43.412	0.212	0.6	0.3	O K
360 min Winter	43.365	0.165	0.5	0.2	O K
480 min Winter	43.336	0.136	0.4	0.1	O K
600 min Winter	43.316	0.116	0.3	0.1	O K
720 min Winter	43.301	0.101	0.3	0.1	O K
960 min Winter	43.281	0.081	0.2	0.1	O K
1440 min Winter	43.260	0.060	0.2	0.0	O K
2160 min Winter	43.247	0.047	0.1	0.0	O K
2880 min Winter	43.242	0.042	0.1	0.0	O K
4320 min Winter	43.235	0.035	0.1	0.0	O K
5760 min Winter	43.232	0.032	0.1	0.0	O K
7200 min Winter	43.229	0.029	0.0	0.0	O K
8640 min Winter	43.227	0.027	0.0	0.0	O K
10080 min Winter	43.225	0.025	0.0	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
30 min Winter	79.010	0.0	23
60 min Winter	50.812	0.0	40
120 min Winter	31.621	0.0	74
180 min Winter	23.637	0.0	104
240 min Winter	19.105	0.0	134
360 min Winter	14.037	0.0	194
480 min Winter	11.286	0.0	252
600 min Winter	9.522	0.0	310
720 min Winter	8.282	0.0	370
960 min Winter	6.640	0.0	490
1440 min Winter	4.854	0.0	726
2160 min Winter	3.541	0.0	1080
2880 min Winter	2.828	0.0	1452
4320 min Winter	2.055	0.0	2152
5760 min Winter	1.637	0.0	2848
7200 min Winter	1.371	0.0	3656
8640 min Winter	1.186	0.0	4240
10080 min Winter	1.049	0.0	5184

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.006

<b>Time (mins)</b>	<b>Area</b>
<b>From: To:</b>	<b>(ha)</b>
0	4 0.006

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Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 2	
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Innovyze Source Control 2020.1.3

Model Details

Storage is Online Cover Level (m) 43.780

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.39600	Width (m)	4.0
Membrane Percolation (mm/hr)	1000	Length (m)	13.0
Max Percolation (l/s)	14.4	Slope (1:X)	13.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	43.200	Membrane Depth (m)	0

Simpson Associates		Page 1
Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 3	
Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR	

Innovyze Source Control 2020.1.3

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 10 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	42.467	0.297	0.8	0.7	Flood Risk
30 min Summer	42.497	0.327	0.9	0.8	Flood Risk
60 min Summer	42.499	0.329	0.9	0.8	Flood Risk
120 min Summer	42.469	0.299	0.9	0.7	Flood Risk
180 min Summer	42.437	0.267	0.8	0.6	O K
240 min Summer	42.411	0.241	0.7	0.5	O K
360 min Summer	42.370	0.200	0.6	0.3	O K
480 min Summer	42.342	0.172	0.5	0.2	O K
600 min Summer	42.321	0.151	0.4	0.2	O K
720 min Summer	42.304	0.134	0.4	0.1	O K
960 min Summer	42.281	0.111	0.3	0.1	O K
1440 min Summer	42.252	0.082	0.2	0.1	O K
2160 min Summer	42.230	0.060	0.2	0.0	O K
2880 min Summer	42.219	0.049	0.1	0.0	O K
4320 min Summer	42.212	0.042	0.1	0.0	O K
5760 min Summer	42.207	0.037	0.1	0.0	O K
7200 min Summer	42.204	0.034	0.1	0.0	O K
8640 min Summer	42.202	0.032	0.1	0.0	O K
10080 min Summer	42.200	0.030	0.1	0.0	O K
15 min Winter	42.490	0.320	0.9	0.8	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	117.448	0.0	14
30 min Summer	79.010	0.0	22
60 min Summer	50.812	0.0	38
120 min Summer	31.621	0.0	70
180 min Summer	23.637	0.0	102
240 min Summer	19.105	0.0	132
360 min Summer	14.037	0.0	192
480 min Summer	11.286	0.0	250
600 min Summer	9.522	0.0	310
720 min Summer	8.282	0.0	370
960 min Summer	6.640	0.0	490
1440 min Summer	4.854	0.0	734
2160 min Summer	3.541	0.0	1096
2880 min Summer	2.828	0.0	1460
4320 min Summer	2.055	0.0	2204
5760 min Summer	1.637	0.0	2848
7200 min Summer	1.371	0.0	3624
8640 min Summer	1.186	0.0	4256
10080 min Summer	1.049	0.0	4960
15 min Winter	117.448	0.0	14

Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 3
Date 25/10/2021 File P21-599 - INFILTRATION	Designed by AU Checked by AR




Innovyze Source Control 2020.1.3

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	42.515	0.345	1.0	0.9	Flood Risk
60 min Winter	42.506	0.336	1.0	0.9	Flood Risk
120 min Winter	42.458	0.288	0.8	0.6	Flood Risk
180 min Winter	42.415	0.245	0.7	0.5	O K
240 min Winter	42.382	0.212	0.6	0.3	O K
360 min Winter	42.335	0.165	0.5	0.2	O K
480 min Winter	42.306	0.136	0.4	0.1	O K
600 min Winter	42.286	0.116	0.3	0.1	O K
720 min Winter	42.271	0.101	0.3	0.1	O K
960 min Winter	42.251	0.081	0.2	0.1	O K
1440 min Winter	42.230	0.060	0.2	0.0	O K
2160 min Winter	42.217	0.047	0.1	0.0	O K
2880 min Winter	42.212	0.042	0.1	0.0	O K
4320 min Winter	42.205	0.035	0.1	0.0	O K
5760 min Winter	42.202	0.032	0.1	0.0	O K
7200 min Winter	42.199	0.029	0.0	0.0	O K
8640 min Winter	42.197	0.027	0.0	0.0	O K
10080 min Winter	42.195	0.025	0.0	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	79.010	0.0	23
60 min Winter	50.812	0.0	40
120 min Winter	31.621	0.0	74
180 min Winter	23.637	0.0	104
240 min Winter	19.105	0.0	134
360 min Winter	14.037	0.0	194
480 min Winter	11.286	0.0	252
600 min Winter	9.522	0.0	310
720 min Winter	8.282	0.0	370
960 min Winter	6.640	0.0	490
1440 min Winter	4.854	0.0	726
2160 min Winter	3.541	0.0	1080
2880 min Winter	2.828	0.0	1452
4320 min Winter	2.055	0.0	2152
5760 min Winter	1.637	0.0	2848
7200 min Winter	1.371	0.0	3656
8640 min Winter	1.186	0.0	4240
10080 min Winter	1.049	0.0	5184

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Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 3	
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Innovyze Source Control 2020.1.3


Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.006

Time (mins)		Area
From:	To:	(ha)
0	4	0.006

Simpson Associates		Page 4
Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 3	
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Innovyze Source Control 2020.1.3

Model Details

Storage is Online Cover Level (m) 42.750

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.39600	Width (m)	4.0
Membrane Percolation (mm/hr)	1000	Length (m)	13.0
Max Percolation (l/s)	14.4	Slope (1:X)	13.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	42.170	Membrane Depth (m)	0

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Innovyze Source Control 2020.1.3

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 4 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	42.201	0.101	1.7	0.5	O K
30 min Summer	42.206	0.106	1.8	0.5	O K
60 min Summer	42.196	0.096	1.6	0.4	O K
120 min Summer	42.176	0.076	1.3	0.3	O K
180 min Summer	42.162	0.062	1.0	0.2	O K
240 min Summer	42.153	0.053	0.9	0.1	O K
360 min Summer	42.145	0.045	0.7	0.1	O K
480 min Summer	42.141	0.041	0.5	0.1	O K
600 min Summer	42.138	0.038	0.5	0.1	O K
720 min Summer	42.135	0.035	0.4	0.1	O K
960 min Summer	42.131	0.031	0.3	0.0	O K
1440 min Summer	42.127	0.027	0.2	0.0	O K
2160 min Summer	42.123	0.023	0.2	0.0	O K
2880 min Summer	42.121	0.021	0.1	0.0	O K
4320 min Summer	42.118	0.018	0.1	0.0	O K
5760 min Summer	42.116	0.016	0.1	0.0	O K
7200 min Summer	42.114	0.014	0.1	0.0	O K
8640 min Summer	42.113	0.013	0.1	0.0	O K
10080 min Summer	42.113	0.013	0.1	0.0	O K
15 min Winter	42.206	0.106	1.8	0.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	117.448	0.0	12
30 min Summer	79.010	0.0	20
60 min Summer	50.812	0.0	36
120 min Summer	31.621	0.0	66
180 min Summer	23.637	0.0	96
240 min Summer	19.105	0.0	124
360 min Summer	14.037	0.0	184
480 min Summer	11.286	0.0	244
600 min Summer	9.522	0.0	306
720 min Summer	8.282	0.0	364
960 min Summer	6.640	0.0	488
1440 min Summer	4.854	0.0	712
2160 min Summer	3.541	0.0	1100
2880 min Summer	2.828	0.0	1460
4320 min Summer	2.055	0.0	2172
5760 min Summer	1.637	0.0	2848
7200 min Summer	1.371	0.0	3616
8640 min Summer	1.186	0.0	4288
10080 min Summer	1.049	0.0	4968
15 min Winter	117.448	0.0	13


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Innovyze Source Control 2020.1.3

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
30 min Winter	42.206	0.106	1.8	0.5	O K
60 min Winter	42.189	0.089	1.5	0.4	O K
120 min Winter	42.164	0.064	1.1	0.2	O K
180 min Winter	42.150	0.050	0.8	0.1	O K
240 min Winter	42.145	0.045	0.7	0.1	O K
360 min Winter	42.139	0.039	0.5	0.1	O K
480 min Winter	42.135	0.035	0.4	0.1	O K
600 min Winter	42.132	0.032	0.3	0.0	O K
720 min Winter	42.130	0.030	0.3	0.0	O K
960 min Winter	42.127	0.027	0.2	0.0	O K
1440 min Winter	42.123	0.023	0.2	0.0	O K
2160 min Winter	42.120	0.020	0.1	0.0	O K
2880 min Winter	42.117	0.017	0.1	0.0	O K
4320 min Winter	42.115	0.015	0.1	0.0	O K
5760 min Winter	42.113	0.013	0.1	0.0	O K
7200 min Winter	42.112	0.012	0.0	0.0	O K
8640 min Winter	42.111	0.011	0.0	0.0	O K
10080 min Winter	42.111	0.011	0.0	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
30 min Winter	79.010	0.0	21
60 min Winter	50.812	0.0	36
120 min Winter	31.621	0.0	66
180 min Winter	23.637	0.0	94
240 min Winter	19.105	0.0	124
360 min Winter	14.037	0.0	186
480 min Winter	11.286	0.0	240
600 min Winter	9.522	0.0	306
720 min Winter	8.282	0.0	360
960 min Winter	6.640	0.0	478
1440 min Winter	4.854	0.0	734
2160 min Winter	3.541	0.0	1076
2880 min Winter	2.828	0.0	1432
4320 min Winter	2.055	0.0	2144
5760 min Winter	1.637	0.0	2968
7200 min Winter	1.371	0.0	3768
8640 min Winter	1.186	0.0	4200
10080 min Winter	1.049	0.0	5008

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Innovyze	Source Control 2020.1.3
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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.006

<b>Time (mins)</b>	<b>Area</b>
<b>From: To:</b>	<b>(ha)</b>
0	4 0.006

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Innovyze Source Control 2020.1.3

Model Details

Storage is Online Cover Level (m) 42.550

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.39600	Width (m)	4.0
Membrane Percolation (mm/hr)	1000	Length (m)	15.0
Max Percolation (l/s)	16.7	Slope (1:X)	75.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	42.100	Membrane Depth (m)	0

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Innovyze Source Control 2020.1.3

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 10 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	41.297	0.297	0.8	0.7	Flood Risk
30 min Summer	41.327	0.327	0.9	0.8	Flood Risk
60 min Summer	41.329	0.329	0.9	0.8	Flood Risk
120 min Summer	41.299	0.299	0.9	0.7	Flood Risk
180 min Summer	41.267	0.267	0.8	0.6	O K
240 min Summer	41.241	0.241	0.7	0.5	O K
360 min Summer	41.200	0.200	0.6	0.3	O K
480 min Summer	41.172	0.172	0.5	0.2	O K
600 min Summer	41.151	0.151	0.4	0.2	O K
720 min Summer	41.134	0.134	0.4	0.1	O K
960 min Summer	41.111	0.111	0.3	0.1	O K
1440 min Summer	41.082	0.082	0.2	0.1	O K
2160 min Summer	41.060	0.060	0.2	0.0	O K
2880 min Summer	41.049	0.049	0.1	0.0	O K
4320 min Summer	41.042	0.042	0.1	0.0	O K
5760 min Summer	41.037	0.037	0.1	0.0	O K
7200 min Summer	41.034	0.034	0.1	0.0	O K
8640 min Summer	41.032	0.032	0.1	0.0	O K
10080 min Summer	41.030	0.030	0.1	0.0	O K
15 min Winter	41.320	0.320	0.9	0.8	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	117.448	0.0	14
30 min Summer	79.010	0.0	22
60 min Summer	50.812	0.0	38
120 min Summer	31.621	0.0	70
180 min Summer	23.637	0.0	102
240 min Summer	19.105	0.0	132
360 min Summer	14.037	0.0	192
480 min Summer	11.286	0.0	250
600 min Summer	9.522	0.0	310
720 min Summer	8.282	0.0	370
960 min Summer	6.640	0.0	490
1440 min Summer	4.854	0.0	734
2160 min Summer	3.541	0.0	1096
2880 min Summer	2.828	0.0	1460
4320 min Summer	2.055	0.0	2204
5760 min Summer	1.637	0.0	2848
7200 min Summer	1.371	0.0	3624
8640 min Summer	1.186	0.0	4256
10080 min Summer	1.049	0.0	4960
15 min Winter	117.448	0.0	14

Unit B10, Elmbridge Court Gloucester GL3 1JZ	P21-599 Reservoir Road Infiltration Structure 5
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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	41.345	0.345	1.0	0.9	Flood Risk
60 min Winter	41.336	0.336	1.0	0.9	Flood Risk
120 min Winter	41.288	0.288	0.8	0.6	Flood Risk
180 min Winter	41.245	0.245	0.7	0.5	O K
240 min Winter	41.212	0.212	0.6	0.3	O K
360 min Winter	41.165	0.165	0.5	0.2	O K
480 min Winter	41.136	0.136	0.4	0.1	O K
600 min Winter	41.116	0.116	0.3	0.1	O K
720 min Winter	41.101	0.101	0.3	0.1	O K
960 min Winter	41.081	0.081	0.2	0.1	O K
1440 min Winter	41.060	0.060	0.2	0.0	O K
2160 min Winter	41.047	0.047	0.1	0.0	O K
2880 min Winter	41.042	0.042	0.1	0.0	O K
4320 min Winter	41.035	0.035	0.1	0.0	O K
5760 min Winter	41.032	0.032	0.1	0.0	O K
7200 min Winter	41.029	0.029	0.0	0.0	O K
8640 min Winter	41.027	0.027	0.0	0.0	O K
10080 min Winter	41.025	0.025	0.0	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	79.010	0.0	23
60 min Winter	50.812	0.0	40
120 min Winter	31.621	0.0	74
180 min Winter	23.637	0.0	104
240 min Winter	19.105	0.0	134
360 min Winter	14.037	0.0	194
480 min Winter	11.286	0.0	252
600 min Winter	9.522	0.0	310
720 min Winter	8.282	0.0	370
960 min Winter	6.640	0.0	490
1440 min Winter	4.854	0.0	726
2160 min Winter	3.541	0.0	1080
2880 min Winter	2.828	0.0	1452
4320 min Winter	2.055	0.0	2152
5760 min Winter	1.637	0.0	2848
7200 min Winter	1.371	0.0	3656
8640 min Winter	1.186	0.0	4240
10080 min Winter	1.049	0.0	5184

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Innovyze	Source Control 2020.1.3
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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.006

<b>Time (mins)</b>	<b>Area</b>
<b>From: To:</b>	<b>(ha)</b>
0	4 0.006

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Model Details

Storage is Online Cover Level (m) 41.580

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.39600	Width (m)	4.0
Membrane Percolation (mm/hr)	1000	Length (m)	13.0
Max Percolation (l/s)	14.4	Slope (1:X)	13.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	41.000	Membrane Depth (m)	0

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Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 18 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	44.309	0.309	0.7	1.1	Flood Risk
30 min Summer	44.351	0.351	0.7	1.2	Flood Risk
60 min Summer	44.352	0.352	0.7	1.2	Flood Risk
120 min Summer	44.305	0.305	0.7	1.1	Flood Risk
180 min Summer	44.250	0.250	0.7	0.9	Flood Risk
240 min Summer	44.200	0.200	0.6	0.7	Flood Risk
360 min Summer	44.123	0.123	0.6	0.4	O K
480 min Summer	44.075	0.075	0.5	0.3	O K
600 min Summer	44.051	0.051	0.5	0.2	O K
720 min Summer	44.044	0.044	0.5	0.2	O K
960 min Summer	44.036	0.036	0.4	0.1	O K
1440 min Summer	44.026	0.026	0.3	0.1	O K
2160 min Summer	44.019	0.019	0.2	0.1	O K
2880 min Summer	44.016	0.016	0.2	0.1	O K
4320 min Summer	44.011	0.011	0.1	0.0	O K
5760 min Summer	44.009	0.009	0.1	0.0	O K
7200 min Summer	44.008	0.008	0.1	0.0	O K
8640 min Summer	44.007	0.007	0.1	0.0	O K
10080 min Summer	44.006	0.006	0.1	0.0	O K
15 min Winter	44.355	0.355	0.7	1.2	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	117.448	0.0	15
30 min Summer	79.010	0.0	24
60 min Summer	50.812	0.0	42
120 min Summer	31.621	0.0	74
180 min Summer	23.637	0.0	108
240 min Summer	19.105	0.0	138
360 min Summer	14.037	0.0	198
480 min Summer	11.286	0.0	254
600 min Summer	9.522	0.0	308
720 min Summer	8.282	0.0	368
960 min Summer	6.640	0.0	490
1440 min Summer	4.854	0.0	734
2160 min Summer	3.541	0.0	1080
2880 min Summer	2.828	0.0	1456
4320 min Summer	2.055	0.0	2188
5760 min Summer	1.637	0.0	2920
7200 min Summer	1.371	0.0	3616
8640 min Summer	1.186	0.0	4392
10080 min Summer	1.049	0.0	5072
15 min Winter	117.448	0.0	15


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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
30 min Winter	44.402	0.402	0.8	1.4	Flood Risk
60 min Winter	44.393	0.393	0.8	1.4	Flood Risk
120 min Winter	44.311	0.311	0.7	1.1	Flood Risk
180 min Winter	44.229	0.229	0.6	0.8	Flood Risk
240 min Winter	44.159	0.159	0.6	0.6	O K
360 min Winter	44.065	0.065	0.5	0.2	O K
480 min Winter	44.044	0.044	0.5	0.2	O K
600 min Winter	44.037	0.037	0.4	0.1	O K
720 min Winter	44.032	0.032	0.3	0.1	O K
960 min Winter	44.026	0.026	0.3	0.1	O K
1440 min Winter	44.019	0.019	0.2	0.1	O K
2160 min Winter	44.014	0.014	0.2	0.0	O K
2880 min Winter	44.011	0.011	0.1	0.0	O K
4320 min Winter	44.008	0.008	0.1	0.0	O K
5760 min Winter	44.007	0.007	0.1	0.0	O K
7200 min Winter	44.006	0.006	0.1	0.0	O K
8640 min Winter	44.005	0.005	0.1	0.0	O K
10080 min Winter	44.004	0.004	0.0	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
30 min Winter	79.010	0.0	25
60 min Winter	50.812	0.0	44
120 min Winter	31.621	0.0	80
180 min Winter	23.637	0.0	112
240 min Winter	19.105	0.0	144
360 min Winter	14.037	0.0	196
480 min Winter	11.286	0.0	248
600 min Winter	9.522	0.0	304
720 min Winter	8.282	0.0	368
960 min Winter	6.640	0.0	492
1440 min Winter	4.854	0.0	728
2160 min Winter	3.541	0.0	1088
2880 min Winter	2.828	0.0	1428
4320 min Winter	2.055	0.0	2200
5760 min Winter	1.637	0.0	2856
7200 min Winter	1.371	0.0	3640
8640 min Winter	1.186	0.0	4296
10080 min Winter	1.049	0.0	5120

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.007

Time (mins)		Area
From:	To:	(ha)
0	4	0.007

Unit B10, Elmbridge Court  
Gloucester  
GL3 1JZ

P21-599  
Reservoir Road  
Infiltration Structure 6



Date 25/10/2021  
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Designed by AU  
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Innovyze Source Control 2020.1.3

Model Details

Storage is Online Cover Level (m) 44.500

Lined Soakaway Structure

Infiltration Coefficient Base (m/hr)	0.39600	Ring Diameter (m)	1.20
Infiltration Coefficient Side (m/hr)	0.39600	Pit Multiplier	2.5
Safety Factor	2.0	Number Required	1
Porosity	0.30	Cap Volume Depth (m)	0.000
Invert Level (m)	44.000	Cap Infiltration Depth (m)	0.000

## **Appendix 3**

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### **Severn Trent Water Letter**

# WONDERFUL ON TAP

SEVERN

TRENT

Severn Trent Water Ltd

Regis Road  
Wolverhampton  
WV6 8RU

www.stwater.co.uk

Contact: Michael Taylor

Your ref:

Our ref: 1014281

24<sup>th</sup> August 2021

Dear Sir

## **Proposed Redevelopment at Reservoir Road Gloucester**

I refer to your 'Development Enquiry Request' in respect of the above site for the 5 property development. Please find enclosed the sewer records that are included in the fee together with the Supplementary Guidance Notes which refer to surface water disposal from development sites.

### **Public Sewers in Site – Required Protection**

Due to a change in legislation on 1 October 2011, there may be former private sewers on the site which have transferred to the responsibility of Severn Trent Water Ltd, which are not shown on the statutory sewer records, but are located in your client's land. These sewers would also have protective strips that we will not allow to be built over. If such sewers are identified to be present on the site, please contact us for further guidance.

### **Foul Water Drainage**

Foul flows to the 300mm combined water sewer in Reservoir Road to the North, is available and can accommodate approx. flows of 0.07l/s 2xdwf. The development should not therefore have an adverse hydraulic impact on our network. A connection is acceptable to the Company at any convenient location subject to formal S106 approval (see later).

### **Surface Water Drainage**

# WONDERFUL ON TAP



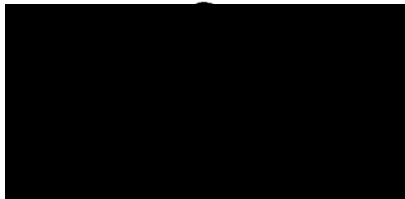
Our primary surface water disposal would be via soakways. If soak ways are not possible then 5l/s into the 225mm surface water sewer to the east adjacent to the site, or flow rates agreed with the LLFA would be acceptable with no adverse effect on the existing network. The Lead Local Flood Authority should also be consulted as statutory consultee in the planning process.

## New Connections

For any new connections (including the re-use of existing connections) to the public sewerage system, the developer will need to submit Section 106 application forms. Our New Connections department are responsible for handling all such enquiries and applications. To contact them for an application form and associated guidance notes please call [REDACTED] or download from [www.stwater.co.uk](http://www.stwater.co.uk).

Please quote 1014281 in any future correspondence (including e-mails) with STW Limited. Please note that 'Development Enquiry' responses are only valid for 6 months from the date of this letter.

Yours sincerely



Asset Protection (Waste Water) West  
Wholesale Production

**DRAINAGE MAINTENANCE & MANAGEMENT PLAN**  
**RESERVOIR ROAD,**  
**GLOUCESTER**  
**GL4 6SZ**

- 1.1 The Drainage Management and Maintenance Plan provides details of the plan proposed for maintenance and management of the drainage scheme associated with the proposed development at Reservoir Road, Gloucester, GL4 6SZ.
- 1.2 On occupation of the development, the maintenance and management plan should be incorporated into the sites Operation and Maintenance Manual with the as-built drainage system operated and maintained in accordance with the regime set out in the tables below.

*Table 1: Below Ground Drainage System - Operation and Maintenance Requirements*

Maintenance schedule	Required action	Frequency
Regular maintenance	Remove all litter and debris from external hard landscaped areas and adjacent landscaping, which may pose a risk to the performance of the system.	Monthly.
	Remove build-up of sediment / silt in catch-pits and dispose of oils / petrol residues using safe standard practices.	As required.
	Stabilise and mow adjacent landscaped areas and remove weeds.	
Remedial actions	Repair or rehabilitate inlet and outlets to ensure they are in good condition and operating as designed.	As required.
	Remediate any landscaping, which has raised to within 50mm of the level of adjacent hard landscaping.	
Monitoring	Check of all inlets / outlets for blockages or evidence of physical damage with any necessary remedial action or clearance carried out if required.	On a monthly basis for the first 3 months of operation, thereafter every 6 months & following severe rainfall events.
	Inspect all surfaces for ponding, or silt accumulation. Record areas where water is ponding for more than 48 hours and carry out any remedial work deemed necessary.	After severe storms.

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Table 2: Permeable Paving - Operation and Maintenance Requirements

Maintenance schedule	Required action	Frequency
Regular maintenance	Remove all litter and debris from drained surfaces areas and adjacent hard / soft landscaping, which may pose a risk to the performance of the system.	Monthly.
	Stabilise and mow adjacent landscaped areas and remove weeds.	Three times a year at end of winter, mid-summer, after autumn leaf fall, or as required based on site-specific observations of clogging.
Remedial actions	Remediate any landscaping, which has raised to within 50mm of the level of adjacent hard landscaping.	
	Carry out repair / rehabilitation works to inlets, outlets, overflows and vents.	
Monitoring	Inspect silt accumulation rates within the permeable paved areas and establish appropriate brushing frequencies.	Annually.
	Check of all inlets, outlets, overflows and vents for blockages or evidence of physical damage with any necessary remedial action or clearance carried out if required.	On a monthly basis for the first 3 months of operation, thereafter every 6 months & following severe rainfall events.
	Inspect and identify any areas that are not operating correctly	On a monthly basis for the first 3 months of operation, thereafter every 6 months & following severe rainfall events.

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Table 3: Gravel Filter Drain/ - Operation and Maintenance Requirements

Maintenance schedule	Required action	Frequency
Regular maintenance	Litter and debris removal from trench surface, access chambers and pre-treatment devices.	Monthly (or as required).
	Removal and washing of exposed stones on the trench surface.	Annual (bi-annual the first year) or when silt is evident on the surface.
	Trimming of any roots that may be causing blockages.	Annually (semi-annual the first year).
	Remove weeds on the trench surface.	Monthly (at start, then as required)
Occasional Maintenance	Removal of sediment from pre-treatment devices.	Every 6 months.
	Remove tree roots or trees that grow close to the trench.	As required.
	At locations with high pollution loads, remove surface geotextile and replace, and wash or replace filter media.	Every 5 years.
Remedial actions	Clear perforated pipework of blockages.	As required.
	Rehabilitate infiltration or filtration surfaces.	
	Excavate trench walls to expose clean soils if infiltration performance reduces to unacceptable levels.	
	Replace geotextiles and clean and replace filter media, if clogging occurs.	
	Inspect inlets, outlets and inspection points for blockages, clogging, standing water and structural damage.	Monthly
Monitoring	Inspect pre-treatment systems, inlets, trench surfaces and perforated pipework for silt accumulation. Establish appropriate silt removal frequencies.	Every 6 months.

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*Table 4: Geocellular Storage Tanks / Soakaways - Operation and Maintenance Requirements*

<b>Maintenance schedule</b>	<b>Required action</b>	<b>Frequency</b>
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for first 3 months of operation, then every 6 months.
	Debris removal from catchment surface (where may cause risks to performance).	Monthly.
	Where rainfall infiltrates into blocks from above, check surface of filter for blockage by silt, algae or other matter. Remove and replace surface infiltration medium as necessary.	Monthly / after severe storms.
	Remove sediment from pre-treatment structures.	Annually, or as required.
Remedial actions	Repair/rehabilitation of inlets, outlet, overflows and vents.	As required.
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed.	Annually and after large storms.

*Table 5: Concrete Ring Soakaways - Operation and Maintenance Requirements*

<b>Maintenance schedule</b>	<b>Required action</b>	<b>Frequency</b>
Regular maintenance	Remove sediment and debris from pre-treatment devices and floor of inspection tube or chamber.	Annually.
	Cleaning of gutters and any filters on downpipes.	
	Trimming any roots that may be causing blockages.	Annually or as required.
Remedial actions	Reconstruct soakaway and/or replace or clean void fill, if performance deteriorates or failure occurs.	As required.
	Replacement of clogged geotextile.	
Monitoring	Inspect catch pits / silt traps and note rate of sediment accumulation.	Monthly in the first year and then annually.
	Check soakaway to ensure emptying is occurring.	Annually.

1.3 The Site Manager should ensure that the Maintenance Contractor tasked with carrying out any maintenance works provides a risk assessment and method statement that adopts best practice health and safety policies for maintenance personnel throughout the duration of any maintenance works. Measures may include:

- Ensure the use of safe systems of work and procedures are followed.
- Certificated operatives only to be used for all confined space entry.
- Ensure appropriate ppe is worn at all times including the use of safety goggles, ear defenders and other relevant equipment when using high pressure jetting.
- Do not work in weather conditions where flooding or surging is likely.
- Erect barriers where appropriate and provide adequate lighting.
- No operations to be carried out by operatives working alone.
- Time maintenance to not conflict with other on-site activities.
- Method statement to be prepared and approved prior to entry into confined space.

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**SUDS IMPLEMENTATION PLAN**  
*RESERVOIR ROAD,*  
*GLOUCESTER*

1.1 This SUDS Implementation Plan sets out measures to be implemented during construction of the surface water drainage system for the scheme to ensure the site and areas downstream are protected from runoff during construction of the development. It is recommended that the plan is incorporated into the Contractors Construction Health and Safety Plan with the development carried out in accordance with the measures proposed.

1.2 It may not always be possible to ensure that new impermeable areas are immediately connected to the drainage system. Therefore, the following additional measures should be implemented to ensure construction runoff is appropriately managed

- Protective coverings should be used to help prevent runoff stripping material stockpiles.
- Plant and wheel washing should take place in a designated location. The area will be discharge into a suitable silt trap and petrol interceptor.
- Surfaces used as access roads and storage areas during construction should be swept regularly to prevent the accumulation of dust and mud.
- Should groundwater be encountered in excavations such water should not be discharged to the drainage system until the amount of suspended solids has been reduced though the controlled use of skips or tanks, which will act as stilling basins.
- To prevent contamination associated with the use of oils and hydrocarbons during construction, the Contractor should ensure that the following precautionary measures are employed during construction:
  - Regular maintenance of machinery and plant.
  - Use of drip trays.
  - Regular checking of machinery and plant for oil leaks.
  - Use of correct storage facilities.
  - Regular checks for signs of wear and tear on tanks.
  - Specific procedures are followed when refuelling.
  - Use of a designated area for refuelling.
  - Emergency spill kit to be located near refuelling area.
  - Regular emptying of bunds.
  - Tanks should be located in secure areas to stop vandalism.

1.3 The above measures would help to ensure that untreated construction runoff would not be discharged to the surface water drainage system.

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- 1.4 During construction all components of the drainage system should be constructed in accordance with relevant drawings, specifications, and manufacturer's guidelines. Further to this Building Control should visit site on a regular basis to inspect completed works and ensure that the drainage system is installed correctly.

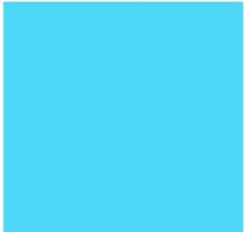
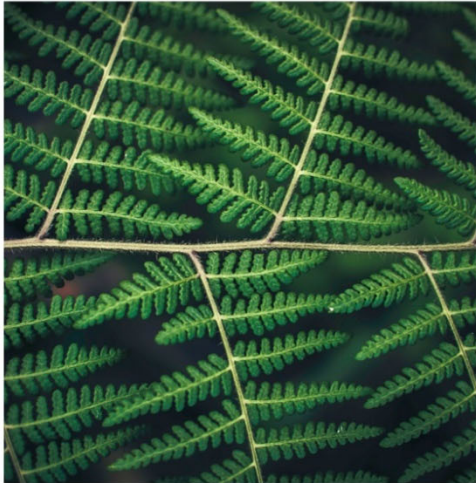
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20 October  
2021



# PHASE I ENVIRONMENTAL DESK STUDY



Land rear of 99-101  
Reservoir Road  
Gloucester  
Gloucestershire  
GL4 6SZ



Prepared For:



## LAND R/O 99-101 RESERVOIR ROAD, GLOUCESTER

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### *EXECUTIVE SUMMARY*

The site currently includes an area of hardstanding at the northern end with an undeveloped, vegetated area to the rear.

Following a review of historic maps of the area, the site appears to have been originally used as an orchard, prior to construction of the existing properties along Reservoir Road. Two reservoirs were formerly located in the area to the west of the site, which were filled during the mid-twentieth century.

The area is considered to have a relatively low environmental sensitivity, given the absence of any on-site watercourses and the presence of the underlying mudstone geology, which is considered to have limited resource potential.

However, risks to future site users have been identified associated with the quality of the shallow soil across the site (noted to comprise made ground) and the potential for on-site migration of ground gas from the nearby in-filled reservoirs.

### *ACTION REQUIRED*

Some intrusive site investigation has therefore been recommended in order to determine the level of risk posed to future residents. This should include collection of shallow soil samples from across the site, installation of gas monitoring wells, and completion of a period of ground gas monitoring. A risk assessment should be produced based on the findings of this work.

It may be appropriate to combine this work with geotechnical investigation, should this be required to support the proposed development.

It is recommended that a copy of this report is forwarded to Gloucester City Council in support of the planning application. Prior to commencement of any Phase II Site Investigation, a scope of works should be agreed in writing with the Contaminated Land Officer.

Phase I Environmental Desk Study  
Land rear of 99-101 Reservoir Road, Gloucester  
Ref: SE-2021-183



<b>Report Reference</b>	SE-2021-183
<b>Status</b>	Final
<b>Date</b>	October 2021
<b>Client</b>	[REDACTED]
<b>Site Address</b>	Land rear of 99-101 Reservoir Road, Gloucester, Gloucestershire, GL4 6SZ
<b>Author</b>	[REDACTED]
<b>Authorised</b>	[REDACTED]
<b>Contact Details</b>	[REDACTED]

This report has been prepared following instruction from the client listed above for their sole use and is confidential to them. Sequoia Environmental Ltd. accepts no liability or responsibility for use of, or reliance upon information contained within this report by third parties.



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## 1 INTRODUCTION

---

In June 2021 Sequoia Environmental Ltd. (Sequoia Environmental) was commissioned by Eclipse Planning Services Ltd. on behalf of Mr. Iain Wall ('the client') to undertake a Phase I Environmental Desk Study at the land rear of 99-101 Reservoir Road, Gloucester, Gloucestershire, GL4 6SZ ('the site').

The work was carried out to support a forthcoming planning application for construction of five residential properties with domestic garden areas. An indicative proposed development plan is included as Appendix A.

### 1.1 Regulatory Context

This report has been carried out in accordance with relevant sections of the following publications and guidance:

- CIRIA C552 *Contaminated Land Risk Assessment - A Guide to Good Practice*, 2001.
- SC050021/SR3 - *Updated Technical Background to the CLEA Model*, 2009.
- BS10175 - *Investigation of Potentially Contaminated Sites: Code of Practice*, 2017.
- *National Planning Policy Framework (NPPF)*, 2019.
- BS5930 - *Code of Practice for Ground Investigations*, 2015.
- *Land Contamination: Risk Management -Environment Agency*, 2020

### 1.2 Managing Risks from Land Contamination

The work presented in the following sections comprises a 'Preliminary Risk Assessment' which should be the first tier in the process of managing the risks from land contamination, as set out within the Environment Agency's Land Contamination Risk Management (LCRM) guidance. There are three essential elements to the concept of 'risk' in the context of land contamination, which combine to form a 'contaminant linkage'. In order for a contaminant linkage to be active, all three of the following elements must be present:



#### Source

The location from which a contaminative substance (i.e. that which has the potential to cause harm to human health or pollution to controlled waters) is derived.



#### Pathway

A route or means by which a receptor can be exposed to, or affected by, a source of contamination.



#### Receptor

Something that could be adversely affected by a contaminant, e.g. a person, an organism, an ecosystem, property, or controlled waters.

Each of these elements can exist independently. However, if all three elements are identified, there is the potential for a contaminant linkage to be active, which could result in significant harm being caused to human health or the surrounding environment.

### 1.3 Objective

The principal objective of this assessment is to assess the presence of any potential contaminant linkages, which may either be active at the site in its current condition, or could become active in future. This exercise will determine if the site is suitable for its proposed end-use, or if any further risk assessment, investigation or remedial action is required.

### 1.4 Scope of Works

The following tasks were undertaken to achieve the objective detailed above:

- Completion of a site walkover.
- Interview with site personnel, where available/appropriate.
- Characterisation of the site's environmental sensitivity through examination of geological, hydrogeological and topographic maps, borehole logs, records held by the Local Authority, and the Environment Agency.
- Examination of the site history from the late nineteenth century up to the present day, by review of historic maps and aerial photographs.
- Consideration of available existing and proposed development plans for the site.
- Development of a Conceptual Site Model (CSM) and Preliminary Risk Assessment (PRA).

### 1.5 Project Limitations and Constraints

Where information has been provided by third parties (Landmark, the Environment Agency, British Geological Survey, or other regulatory authorities), the validity of this information has been assessed as far as possible by Sequoia Environmental. However, the validity of this information cannot be guaranteed. Conclusions drawn on the basis of information obtained from third parties are made in good faith and on the assumption that this information is accurate.

This report is subject to amendment in light of additional information becoming available or statutory consultee review (including, but not limited to the Environment Agency, Local Authority or National House Building Council).

It is possible that the site conditions observed following completion of the site walkover may change. This may result in changes to the Conceptual Site Model which were unforeseen and beyond the control of Sequoia Environmental.

The copyright in the written materials herein shall remain the property of Sequoia Environmental, but with a royalty-free perpetual license to the Client deemed to be granted upon payment in full. No part of this report may be included in published documents of any kind without approval from Sequoia Environmental.

This report does not comprise a survey to identify the presence (or absence) of asbestos in buildings, infrastructure, or shallow soils. A suitably qualified specialist contractor should be commissioned to undertake a detailed assessment if Potentially Asbestos Containing Material (PACM) is suspected.

This report does not comprise a survey to identify the presence (or absence) of invasive plant species (including Japanese Knotweed). Sequoia Environmental takes no responsibility for failing to identify, or the incorrect identification of, any tree or plant species on site. Where invasive species are suspected, a suitably qualified arboricultural contractor should be commissioned.

This report does not comprise an Unexploded Ordnance (UXO) Assessment. However a Preliminary UXO Assessment may be required under Construction (Design and Management) Regulations, should the site be redeveloped.

This report represents the professional opinion of experienced environmental professionals. However, Sequoia Environmental does not provide legal advice. If legal advice is required, the services of a suitably qualified legal professional should be sought.

These terms apply in addition to Sequoia Environmental's "Standard Terms & Conditions" (or in addition to another written contract which may be in place instead thereof) unless specifically agreed in writing.

## 2 SITE CONTEXT

The following section provides information collected in relation to the site location and site walkover.

### 2.1 Site Location

A plan showing the site location is provided as Figure 1, the current site layout is detailed as Figure 2.

Detail	Description
Location	The site is located in White City, approximately 2.5km south of Gloucester city centre.
National Grid Reference	383986 215995
Area	Approximately 900m <sup>2</sup>
Local Authority	Gloucester City Council
Topographic Elevation	Approximately 45m Above Ordnance Datum (AOD).

### 2.2 Site Walkover

A site walkover was completed by a Sequoia Environmental representative on 4<sup>th</sup> July 2021. Selected site photographs are included as Appendix B and a copy of the checklist completed during the walkover is included as Appendix C.

Detail	Description
Site Description	The site comprised an area of hardstanding at the northern end, which was used as a driveway to an adjacent care home building (101 Reservoir Road). The southern area of the site was undeveloped and overgrown.
Ownership and Occupation	The site is within the ownership of the client. No buildings are present within the planning boundary.
Interview with Site Personnel	No personnel were interviewed during the site walkover.
Topographic Gradient	The site falls in topographic elevation gently from south to north.
Fuel Storage	No areas of above or below ground fuel storage were identified on-site during the site walkover.
Surfacing	The driveway at the northern end of the site was surfaced with a combination of asphalt and concrete hardstanding.
Vegetation	The site was overgrown with a mixture of trees and bushes. Some vegetation had recently been cut and remained on-site.
Surface Watercourses	No surface watercourses were noted either within or adjacent to the site.
Physical	The shallow soil across the site appeared to comprise made-ground,

Detail	Description
Evidence of Contamination	including pieces of brick, metal, ceramic, ash and wood. Some areas of fly-tipped waste were reported, including a mixture of clay soil and waste material in the south-eastern corner of the site. Two areas of burnt material were noted around the northern and eastern boundaries.
Services & Drainage	The adjacent building is anticipated to benefit from connection to services located within Reservoir Road to the north.
Surrounding Land Use	The site is surrounded by residential properties on all sides and the properties to the north 99 and 101 Reservoir Road are currently used as care homes. Some lock-up garages are present adjacent to the east, associated with residential properties on Robinswood Gardens.

### 3 ENVIRONMENTAL SETTING

The following section provides information collected in relation to the environmental setting of the site and surrounding area.

#### 3.1 Geology

The anticipated ground conditions at the site are detailed within the following table:

Geology	Strata	Description
Drift Geology	n/a	n/a
Solid Geology	Blue Lias Formation & Charnmouth Mudstone	Mudstone
n/a	none reported	

No historic borehole records were available from the British Geological Survey (BGS) within a 500m search radius of the site. Geological maps of the area are included as Appendix D.

#### 3.2 Geological Hazards

Geological hazards associated with the underlying strata are detailed within the following table:

Hazard	On-Site Risk
Mining	No Hazard
Collapsible Ground	Very Low
Compressible Ground	No Hazard
Ground Dissolution	No Hazard
Running Sand	No Hazard
Landslide	Very Low (Low 37m south and moderate 196m south)
Shrinking / Swelling Clay	Low

Two areas of mineral extraction were reported by the BGS within 1km of the site. The nearest of these was for opencast sand and gravel extraction at Yewtree Cottage Sand Pit, approximately 800m to the northeast. Operations at this site have now ceased.

#### 3.3 Radon

Information reported by the British Geological Survey, National Geoscience Information Service, indicates that the site lies within a lower probability radon area, where less than 1% of homes are estimated to be at or above the action level.

On this basis, no radon protective measures are considered necessary in the construction of new dwellings or extensions.

#### 3.4 Hydrogeology

The Environment Agency provides aquifer designation based on geological mapping produced by BGS (see section 3.1). The aquifer designation for the underlying strata is detailed within the following table:

Strata	Aquifer Classification	Description
Mudstone	Secondary (undifferentiated)	Variable by rock type.

The site does not lie within a Source Protection Zone (SPZ) for local groundwater abstraction and the Landmark Envirocheck (Envirocheck) report does not list any private groundwater abstractions within a 1km search radius. Groundwater vulnerability maps are included as Appendix E.

### 3.5 Hydrology & Flooding

The nearest surface water feature to the site is a small pond, located approximately 390m to the southwest. The nearest watercourse is an unnamed drain, which is located approximately 750m to the northeast and flows in a generally northerly direction.

A single discharge consent is reported within 1km of the site and this relates to a sewer overflow to Sud Brook, 880m north. No surface water abstractions are reported within a 1km search radius.

Information relating to the risk of flooding posed to the site and surrounding area is detailed within the following table:

Detail	Description
Flood Zone	Flood zone 1 – Low probability (land having a less than 1 in 1,000 annual probability of flooding from rivers or the sea).
Flood Defences	Not within an area which benefits from flood defences.
Groundwater Flooding	Not located within an area where there is potential for groundwater flooding to occur.
Surface Water flooding	Very low risk of surface water flooding.

### 3.6 Sensitive Land Use

Land Use	Distance (Direction)	Details
Ancient woodland	958m (southeast)	Ancient and semi-natural.
	966m (southeast)	Ancient and semi-natural.
Nitrate Vulnerable Zone	On-site	Where surface water and groundwater are identified as being at risk from nitrates leaching from agricultural land.

## 4 LANDFILL, WASTE & INDUSTRY

The following section provides information collected in relation to the anthropological use of the surrounding area. Relevant extracts of the Envirocheck Report detailing the uses closest to the site are included as Appendix F.

### 4.1 Landfill

Details of landfill sites recorded by the Environment Agency and local authority, within a 1km search radius are presented within the following table:

Landfill	Distance (Direction)	Details
EA Landfill	n/a	n/a
EA Historic Landfill	138m (southwest)	The Deanery, near Tuffley – waste type and operational period unknown
Local Authority Landfill	75m (southwest)	Reservoir Road – waste type and operational period unknown (closed)

n/a None present within a 1km search radius.

The Envirocheck report lists five areas of potentially infilled ground within 500m of the site. The nearest of these comprises an area of water filled ground (pond, marsh, river etc.) approximately 140m to the west.

### 4.2 Waste

Details of any waste management facilities, waste transfer sites and waste treatment/disposal sites, within a 1km search radius are presented within the following table:

Site	Distance (Direction)	Details
Waste management facilities	n/a	n/a
Waste transfer sites	n/a	n/a
Waste treatment/disposal sites	n/a	n/a

n/a None present within a 1km search radius.

### 4.3 Licenses, Authorisations & Incidents

Details of licenses, authorisations, and incidents, along with any other pollution incidents and recorded contaminated land within 1km are presented within the following table:

Site	Distance (Direction)	Details
Contaminated Land Register Entries/Notices	n/a	n/a
Authorised Industrial Processes (PPC/IPPC/LAPPC*)	934m (northeast)	Petrol filling station
Enforcements, prohibitions or prosecutions	n/a	n/a
Pollution incidents to controlled waters	649m (southeast)	Minor incident – sewage
	655m (northeast)	Minor incident – diesel

Site	Distance (Direction)	Details
	786m (northeast)	Minor incident - petrol
	790m (northeast)	Minor incident - petrol
	842m (northeast)	Minor incident – diesel
	886m (northeast)	Minor incident – miscellaneous
	928m (east)	Minor incident – miscellaneous
	960m (north)	Minor incident – oils
Registered radioactive substances	n/a	n/a

n/a None present within a 1km search radius.

\* Pollution Prevention & Control/Integrated Pollution Prevention & Control/Local Authority Pollution Prevention & Control

#### 4.4 Industrial Land Use

Details of industrial land use/points of interest at the site and in the nearby surrounding area are presented within the following table:

Land Use	Distance (Direction)	Status
Precision engineers	124m (south)	Inactive
Carpet, curtain, upholstery cleaners	169m (north)	Active
Kitchen furniture manufacturers	189m (north)	Inactive
Copying services	211m (northeast)	Inactive
Breakdown and recovery services	259m (north)	Inactive
Vehicle cleaning services	301m (northeast)	n/a
Damp and dry rot control	386m (northeast)	Inactive
Cladding suppliers	408m (west)	Inactive
Breakdown and recovery services	446m (southeast)	Inactive
Commercial cleaning services	471m (southwest)	Active
Vehicle repair, testing, servicing	473m (west)	n/a

n/a Point of interest, no status available.

## 5 SITE HISTORY

The following section provides information relating to the history of the site, derived from historic map, planning and local authority records.

### 5.1 Historical Map Review

Analysis of historic mapping from 1884 to the present day is presented within the following tables: Relevant historic maps (i.e. where changes are reported) are included as Appendix G.

#### 5.1.1 Historical Site Use

Date	Scale	Changes
1884	1:2,500	The site comprises an orchard.
1884	1:10,560	No significant changes.
1902	1:2,500	No significant changes.
1903	1:10,560	No significant changes.
1923	1:2,500	The orchard occupies the southern half of the site only.
1924	1:10,560	No significant changes.
1938	1:2,500	A small square building has been constructed on the eastern boundary.
1938	1:10,560	No significant changes.
1954-1955	1:10,000	No significant changes.
1956	1:2,500	No significant changes.
1960-1968	1:10,000	No significant changes.
1965-1972	1:1,250	The small square building has been removed.
1971-1974	1:10,000	No significant changes.
1972-1983	1:1,250	No significant changes.
1975	1:10,000	No significant changes.
1990	1:10,000	No significant changes.
1994	1:1,250	No significant changes.
1994	1:10,000	No significant changes.
2000	1:10,000	No significant changes.
2006	1:10,000	No significant changes.
2021	1:10,000	No significant changes.

#### 5.1.2 Historical Surrounding Land Use

Date	Scale	Changes
1884	1:2,500	Orchard adjacent to west and south. Reservoirs (x2) from 130m west.
1884	1:10,560	Cemetery 750m north. Railway 500m west. Sand pit 800m northeast.
1902	1:2,500	Allotment gardens 150m west. Residential properties have been constructed adjacent to the northern site boundary.
1903	1:10,560	No significant changes.

Date	Scale	Changes
1923	1:2,500	No significant changes.
1924	1:10,560	No significant changes.
1938	1:2,500	Residential development adjacent north. Allotment gardens adjacent east.
1938	1:10,560	No significant changes.
1954-1955	1:10,000	No significant changes.
1956	1:2,500	Tank 160m southeast.
1960-1968	1:10,000	No significant changes.
1965-1972	1:1,250	Reservoirs to the west are no longer marked. Residential development adjacent east. Electricity substation 80m west.
1971-1974	1:10,000	No significant changes.
1972-1983	1:1,250	No significant changes.
1975	1:10,000	No significant changes.
1990	1:10,000	No significant changes.
1994	1:1,250	No significant changes.
1994	1:10,000	No significant changes.
2000	1:10,000	No significant changes.
2006	1:10,000	No significant changes.
2021	1:10,000	No significant changes.

## 5.2 Aerial Photography

Aerial photography is available for the years 1946, 1947, and 1999. Whilst the resolution on the earlier images is low, the northern part of the site appears to be occupied by a dwelling, with woodland to the south. By 1999 the dwelling remains in place but many of the trees have been removed. Copies of these aerial photographs are included as Appendix H.

## 5.3 Planning History

Planning records for the site and nearby surrounding area were obtained from Gloucester City Council's online planning system. Relevant applications are summarised within the following table, along with any pertinent information.

Location	Application	Description	Decision
Adjacent	13/00314/FUL	Side and rear extensions	Granted
Adjacent	11/00687/FUL	Conservatory	Granted
Site	10/01283/OUT	Construction of two dwellings	Granted
50m east	10/00090/FUL	Front extension	Granted
80m west	07/00980/FUL	Garage and side extension	Granted
70m west	03/01447/FUL	Rear extension	Granted
Adjacent east	01/00153/COU	Change of use to care home	Granted

Planning permissions granted for the surrounding area appear to be limited to minor development and extensions. The permission granted at the site for two dwellings does not appear to have been implemented.

## 6 CONCEPTUAL SITE MODEL AND PRELIMINARY RISK ASSESSMENT

The following section characterises the potential sources of contamination, identifies human/environmental receptors which may be present at the site and determines the pathways by which interaction between these sources and receptors may occur. Both the historic and existing use of the site and surrounding area have been considered.

### 6.1 Sources of Contamination

The following potential contaminant sources have been identified at the site and surrounding area:

Source	Origin of Information	Description	Isolated/Diffuse?	Associated Contaminants
Current Site Use	Site walkover	Made ground beneath existing hardstanding	Diffuse	PAH, Metals, ACM
	Site walkover	Made ground visible at surface and evidence of burnt material	Diffuse	PAH, Metals, ACM
	Site walkover	Fly-tipped waste	Isolated	PAH, Metals, ACM
Current Surrounding Land Use	Envirocheck report	Engineers within 150m of the site	Isolated	TPH (including PAH), Metals, ACM
	Historic mapping	Electricity substation to west	Isolated	TPH (including PAH), PCB
Historic Surrounding Land Use	Envirocheck report	Historic landfill within 100m	Diffuse	Landfill Gas (CO <sub>2</sub> , CH <sub>4</sub> )

Notes: PAH Polycyclic Aromatic Hydrocarbons ACM Asbestos Containing Materials  
 TPH Total Petroleum Hydrocarbons PCB Polychlorinated Biphenyls  
 CO<sub>2</sub> Carbon Dioxide CH<sub>4</sub> Methane

### 6.2 Potential Pathways

#### 6.2.1 Pathways to Human Receptors

There are a number of pathways through which human receptors can come into contact with contaminants in soil. The most direct of these pathways (as detailed within Environment Agency Science Report SC050021/SR3) are summarised within the following table:

Receptor	Exposure	Pathway
Humans	Ingestion via the mouth	Ingestion of airborne dust
		Ingestion of soil
Ingestion of soil attached to vegetables		
Ingestion of home-grown vegetables		
	Inhalation via the nose and mouth	Inhalation of airborne dust

Receptor	Exposure	Pathway
		Inhalation of vapour or gas
	Absorption through the skin	Dermal contact with dust Dermal contact with soil

However, not all of these potential pathways will apply to every end-use and many will be ‘broken’ as a result of the proposed end-use. For example, home grown vegetables will clearly not be produced within a commercial setting and therefore human receptors will not be exposed to contaminants via this pathway.

### 6.2.2 Pathways to Controlled Waters

There are a number of transport mechanisms through which contaminants in soil can enter controlled waters such as surface watercourses or groundwater. These are summarised within the following table:

Receptor	Pathway
Groundwater	Vertical migration of contaminants in unsaturated soil
Surface waters	Lateral migration of contaminants dissolved in groundwater Direct seepage of contaminants in soil Saturation of contaminated soil by flood water

Once impacted, contaminated groundwater may also pose a risk to future users via the vapour inhalation pathway as detailed within section 6.2.1 above.

### 6.2.3 Pathways to Vegetation

Plants themselves may also be exposed to contaminants in soils via the following pathways:

Receptor	Pathway
Plants	Root uptake Leaf Uptake

Where a source and receptor have been identified, an examination of the site’s environmental setting must be made in order to determine if any of the pathways described above are active, or could have the potential to become active as a result of the proposed development.

Where a source, pathway and receptor are all deemed to be present, a contaminant linkage has the potential to exist and should be included within the final Conceptual Site Model.

## 6.3 Potential Receptors

Science Report SC050021/SR3’ also sets out a series of standard land-uses, which form a basis for the development of a Conceptual Site Model. The proposed development plan for the site includes construction of five dwellings. The site’s most sensitive end-use is therefore considered to be **residential**.

On the basis of the site’s environmental setting and the current and proposed land use, a summary of the potential receptors is given within the table below:

Receptor Class	Site Specific Description	Sensitivity
Human	Future residents and their visitors	High
	Construction workers involved in the site redevelopment	High
	People living and working in the surrounding area	High
Groundwater	Any shallow groundwater perched above underlying mudstone	Low
Surface Water	Surface watercourse 750m northeast	Low (given distance)
Flora and Fauna	The proposed development will include domestic garden areas	Moderate
Buildings	Concrete used in building foundations	Low
Buried Services	Buried potable water supply pipes and other underground utilities.	Moderate
Adjacent Land	Nearby residential and commercial buildings	Moderate

#### 6.4 Summary of Contaminant Linkages & Preliminary Risk Assessment

Following consideration of the above sources, pathways and receptors, contaminant linkages that have been considered plausible are summarised in the following table:

Each contaminant linkage has been assigned a Risk Rating. The preliminary risk assessment process is based on guidance provided in CIRIA C552 *Contaminated Land Risk Assessment – A Guide to Good Practice*. The overall contamination risk is a function of the probability and the consequence of an event occurring. Further details on this process are included within Appendix I.

Source	Pathway	Receptor	Risk Rating
Contaminated soil	Dermal contact and ingestion	Site users and construction workers	High
	Inhalation of airborne soil and soil dust	Site users and construction workers	High
	On-site migration of landfill gas	Site users	Moderate
	Uptake and adherence of contaminated soil to vegetation and ingestion	Site users	Moderate
	Ingress/diffusion into potable water supply pipework	Site users	Moderate/Low
	Root and leaf uptake	Plants	Moderate/Low

A number of contaminant linkages have been identified which, whilst theoretically possible, are not considered to be 'plausible', given the context of the site and surrounding area. Justification for exclusion of these linkages from the Conceptual Site Model is made within the table below:

Source & Receptor	Risk Rating	Justification
Risks to controlled waters from made ground.	No plausible linkage	Contaminants associated with any made ground are relatively immobile in the environment by virtue of their very low solubility and volatility.
On site migration and volatilisation of organic contaminants in groundwater	No plausible linkage	Although several commercial sites are present within the surrounding area, including an engineers to the south, these all lie at a significant distance from the site. Furthermore, the underlying geology is considered to have limited permeability.
On-site migration of PCBs	No plausible linkage	An electricity substation is located to the west of the site. However, this is located off-site and within a pre-fabricated building. Most modern transformer insulation oils do not contain PCBs. This source is therefore not considered to pose a risk to future site users.

## 7 CONCLUSIONS & RECOMMENDATIONS

### 7.1 Conclusions

This assessment has demonstrated that the site has been predominately undeveloped, throughout its history. The site has not comprised any former industrial use and no areas of above or below ground fuel storage are reported. On this basis, the risks to future users are considered to be relatively low.

However, several plausible contaminant linkages do have the potential to become active as a result of the proposed development. These are associated with the quality of the shallow soil across the site, given the visible presence of made ground and also the potential for ground gas to migrate on-site from the nearby area of landfill. The contaminant linkages identified as being of greatest concern are therefore as follows:

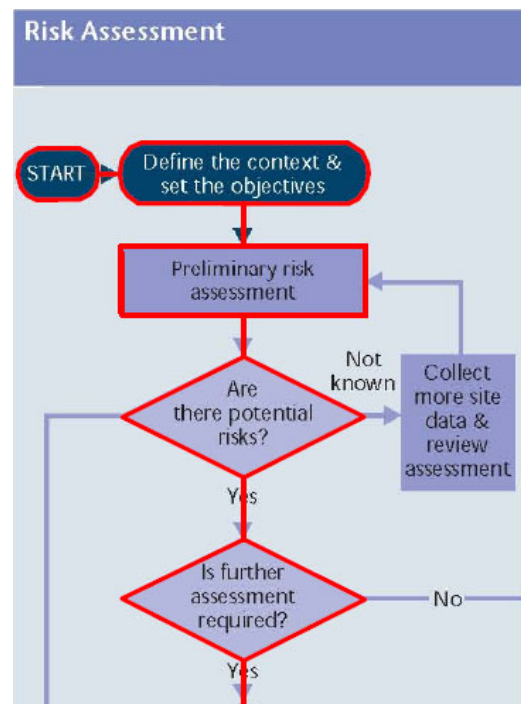
- Human health risks associated with direct interaction between future residents and potentially contaminated soils within proposed domestic garden areas.
- Exposure of potentially contaminated soils to construction workers during any groundworks.
- On-site migration of ground gas from an area of land-filling located to the southwest.

### 7.2 Recommendations

The flow diagram presented on the right (reproduced from the withdrawn publication *Model Procedures for Management of Land Contamination, CLR11<sup>1</sup>*) indicates that the risks identified by this work will require further assessment.

This work should include collection of a number of shallow soil samples from across the site. Boreholes should be completed to facilitate the installation of ground gas monitoring wells and a brief period of ground gas monitoring should be carried out in accordance with BS8576 (2013) and CIRIA C665 (2007).

All soil samples should be submitted to an appropriately accredited laboratory and a generic quantitative risk assessment produced in order to determine the site's suitability for use under the planning regime.



Assessment pathway for the site

<sup>1</sup> Model Procedures for Management of Land Contamination, Contaminated Land Report 11 was withdrawn on 8<sup>th</sup> October 2020 and replaced by Land Contamination Risk Management guidance. However, the flow charts included in CLR11 are still considered a useful tool in detailing a phased approach to assessment of contaminated land.

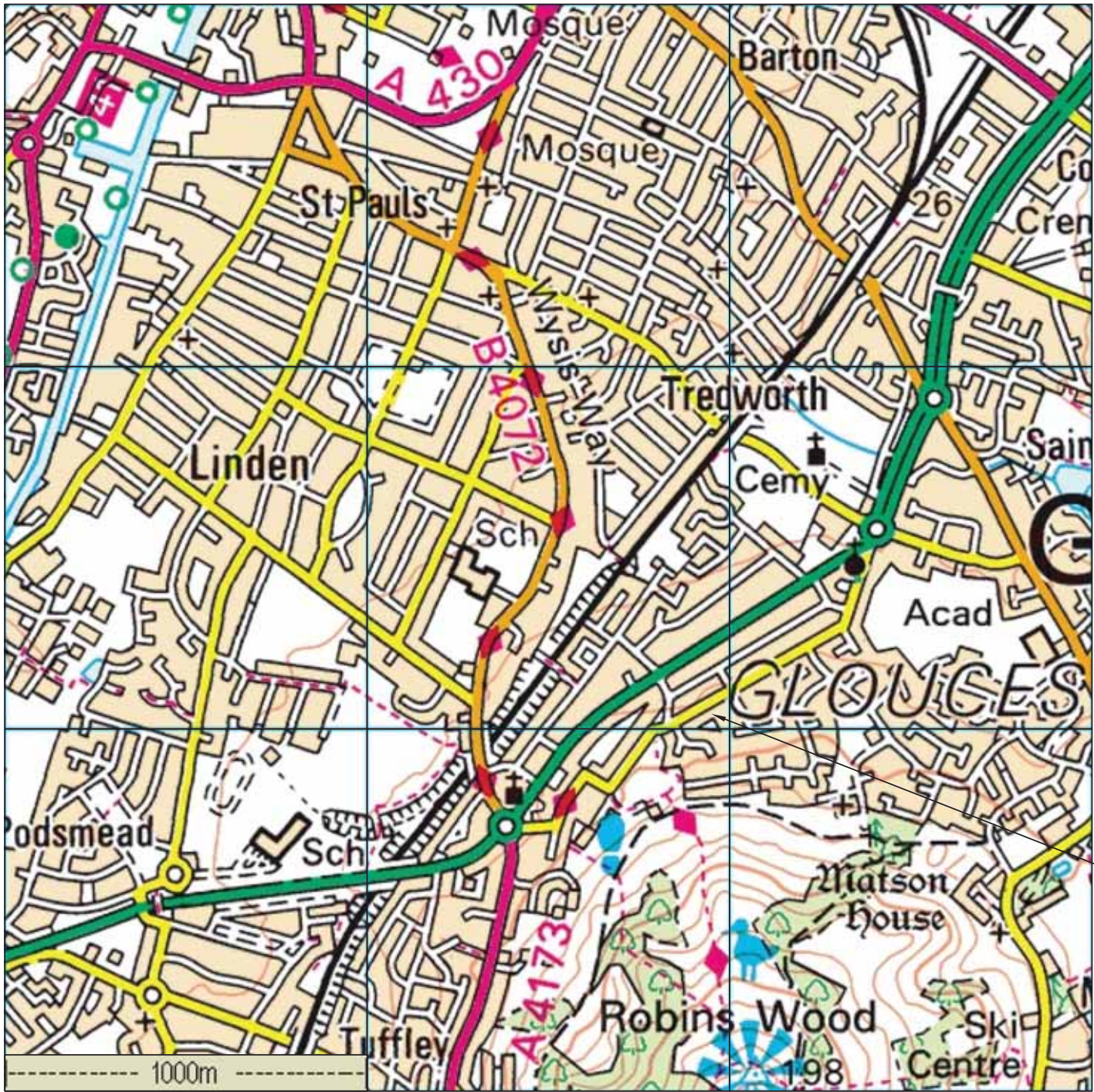
A copy of this report should be submitted to Gloucester City Council in support of the planning application and a scope of work for site investigation should be agreed prior to commencement.

If any ground investigation work is required to support the proposed development, then the required site investigation would be most effectively undertaken at this stage.



# FIGURES

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Title: Figure 1 - Site Location on  
 Site: Land r/o 99-101 Reservoir Road





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Title: Figure 2 - Site Layout  
Site: Land r/o 99-101 Reservoir Road

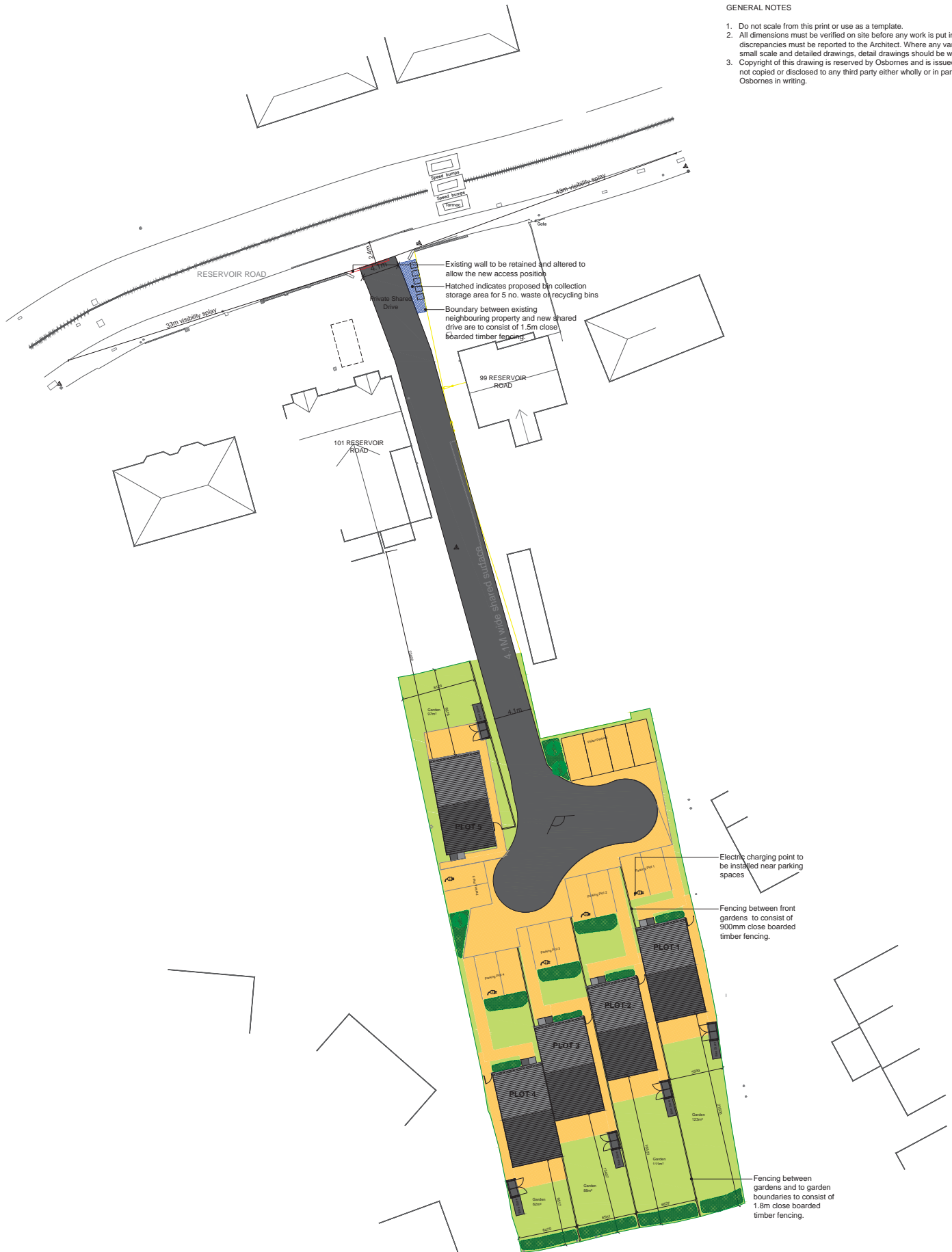


# APPENDIX A – PROPOSED DEVELOPMENT PLAN

---

GENERAL NOTES

1. Do not scale from this print or use as a template.
2. All dimensions must be verified on site before any work is put in hand and any discrepancies must be reported to the Architect. Where any variations occur between small scale and detailed drawings, detail drawings should be worked from.
3. Copyright of this drawing is reserved by Osbornes and is issued on condition that it is not copied or disclosed to any third party either wholly or in part without the consent of Osbornes in writing.



SCHEDULE OF UNITS

UNIT	NUMBER OF BEDROOMS	NUMBER OF STOREYS	GROSS INTERNAL FLOOR AREA	ALLOCATED PARKING SPACES	SIZE OF REAR GARDEN
PLOT 1	3	2	95m <sup>2</sup>	2	123m <sup>2</sup>
PLOT 2	3	2	95m <sup>2</sup>	2	111m <sup>2</sup>
PLOT 3	3	2	95m <sup>2</sup>	2	88m <sup>2</sup>
PLOT 4	3	2	95m <sup>2</sup>	2	62m <sup>2</sup>
PLOT 5	3	2	95m <sup>2</sup>	2	97m <sup>2</sup>

4 No. additional Visitor parking spaces provided on site.

REV A: 20/09/2021 Drive way altered

**OSBORNES** CHARTERED ARCHITECTS  
The Balconies • Hanley Swan • Malvern • Worcestershire • WR8 0DN

CLIENT MR IAIN WALL  
PROJECT 101 RESERVOIR ROAD  
TITLE PROPOSED SITE PLAN  
SCALE 1:200 @ A1  
DATE AUG 2021  
DRAWN TL DRAWING NUMBER 21-11-SP1A

## APPENDIX B – SITE PHOTOGRAPHS

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Photo 1. View looking south at 101 Reservoir Road.



Photo 2: View looking south to the rear of the building.



Photo 3: View looking south from the northern part of the site.



Photo 4: View looking north from the southern site boundary.



Photo 5: View looking south along the eastern site boundary.



Photo 6: View looking northeast from the southern site boundary.



## APPENDIX C – WALKOVER CHECKLIST

---

Site Walkover Checklist

	Street names	Access is gained off Reservoir Road.
	Site boundary	<ul style="list-style-type: none"> <li>- wooden gated access via the northern bound</li> <li>- wood panel fencing around north, west &amp; south.</li> <li>- East is wood posts with PVC chainlink fence wh In poor condition &amp; broken in many places, w lined with bushes &amp; dead trees.</li> </ul>
	Topography	<ul style="list-style-type: none"> <li>- Generally level with slight undulations.</li> <li>- Very slight gradient from north rising to south</li> </ul>
	Neighbouring land use	<ul style="list-style-type: none"> <li>- Predominantly residential buildings.</li> <li>- 99 Reservoir Road used as care home</li> <li>- Residential garages on Robinswood gardens east of</li> </ul>
	Vegetation & trees	<ul style="list-style-type: none"> <li>- Generally overgrown with grass &amp; weeds with some</li> <li>- Many dead trees along eastern boundary (cut at base)</li> <li>- Frequent spots of vegetative stress (likely due to clay)</li> </ul>
	Surfacing	<ul style="list-style-type: none"> <li>- Concrete &amp; tarmac hardstanding at northern access point</li> <li>- Predominantly clayey made ground (lots of brick/gener building through</li> </ul>
	On-site or adjacent watercourses & outfalls	N/A
	Nature and use of buildings	<ul style="list-style-type: none"> <li>- Care home to north</li> <li>- Residential garages on Robinswood gardens to east</li> <li>- Rest mainly residential homes</li> </ul>
	Processes	N/A
	Raw material storage	Postcrete bags (2)
	Evidence of debris or fly-tipped waste	<ul style="list-style-type: none"> <li>- General made ground ubiquitous across site</li> <li>- Partially buried waste in southeast corner (brick/cement/wood)</li> </ul>
	Evidence of surface staining or odour	<ul style="list-style-type: none"> <li>- Evidence of ash/burning on eastern boundary</li> <li>- Metal bins used for burning waste on hardstanding in</li> <li>- No evidence of fuels/oils.</li> </ul>
	Above or below ground fuel storage	None identified.

Site Walkover Checklist



Evidence of previous site investigations None, however amount of brick/cement in soil suggests previous site use or waste tipping



Potential asbestos containing material None specific, however may be present in made ground.



Anecdotal evidence N/A

Sequoia Representative  
Date  
Project Ref



4/7/21

## APPENDIX D – GEOLOGICAL MAPS





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## Geology 1:50,000 Maps Legends








### Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	SLIP	Landslide Deposit	Unknown/Unclassified Entry	Not Supplied - Quaternary

### Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	TFD	Tidal Flat Deposits	Clay, Silt and Sand	Not Supplied - Holocene
	CHSG	Cheltenham Sand and Gravel	Sand and Gravel	Not Supplied - Quaternary
	RTD1	River Terrace Deposits, 1	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary

### Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WHM	Whitby Mudstone Formation	Mudstone	Not Supplied - Toarcian
	BDS	Bridport Sand Formation	Sandstone	Not Supplied - Toarcian
	DYS	Dyrham Formation	Siltstone and Mudstone, Interbedded	Not Supplied - Pliensbachian
	MRB	Marlstone Rock Formation	Limestone, Ferruginous	Not Supplied - Pliensbachian
	CHAM	Charmouth Mudstone Formation	Mudstone	Not Supplied - Sinemurian
	BLCR	Blue Lias Formation and Charmouth Mudstone Formation (Undifferentiated)	Mudstone	Not Supplied - Rhaetian
	LIIO	Lias Group and Inferior Oolite Group (Undifferentiated)	Limestone, Argillaceous Rocks and Subordinate Sandstone, Interbedded	Not Supplied - Rhaetian



### Geology 1:50,000 Maps

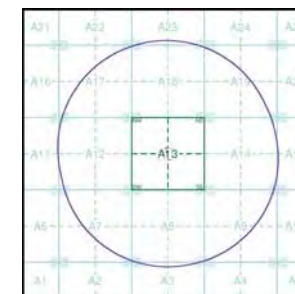
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

### Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	234
Map Name:	Gloucester
Map Date:	1972
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

### Geology 1:50,000 Maps - Slice A

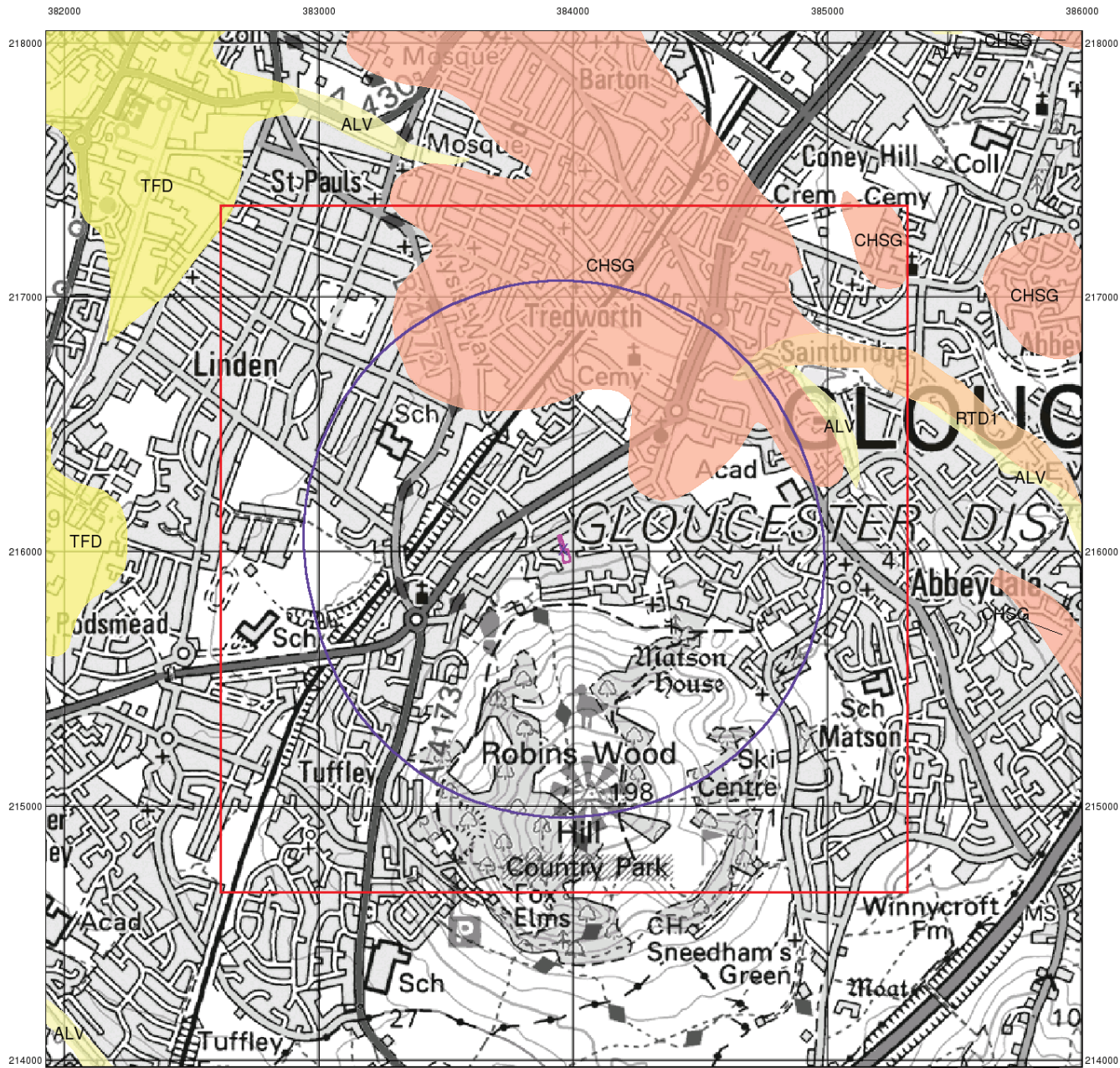


### Order Details:

Order Number:	281999455_1_1
Customer Reference:	SE-2021-183
National Grid Reference:	383960, 216010
Site Area (Ha):	0.2
Search Buffer (m):	1000

### Site Details:

101, Reservoir Road, GLOUCESTER, GL4 6SZ



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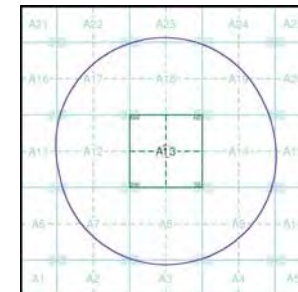
### Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

### Superficial Geology Map - Slice A



#### Order Details:

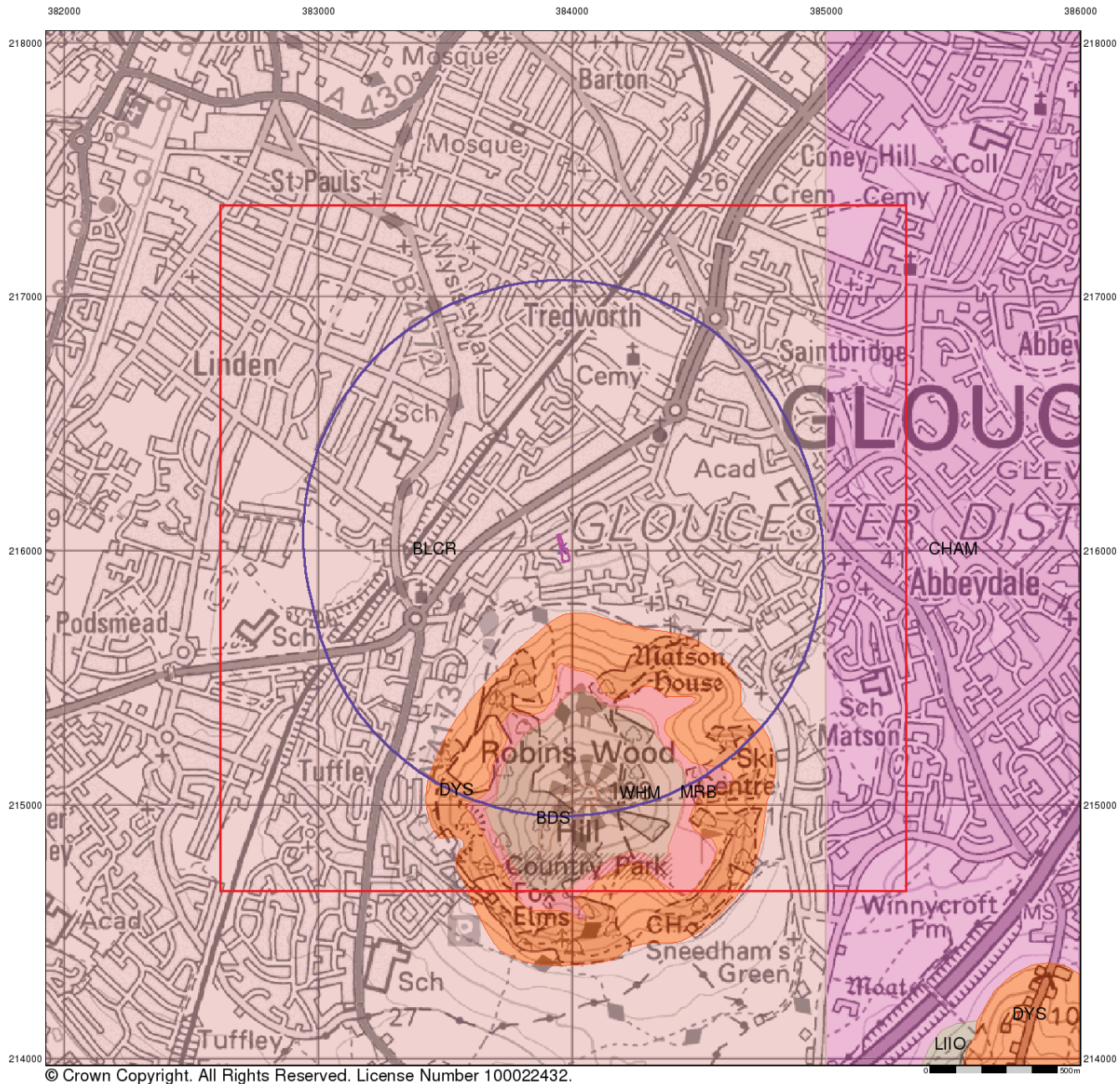
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 Customer Reference: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

#### Site Details:

101, Reservoir Road, GLOUCESTER, GL4 6SZ



Web: [www.enwirocheck.co.uk](http://www.enwirocheck.co.uk)



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### Bedrock and Faults

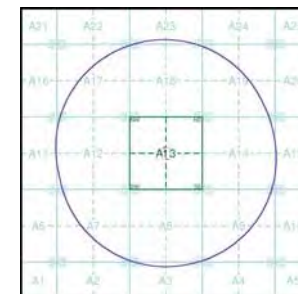
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

### Bedrock and Faults Map - Slice A



### Order Details:

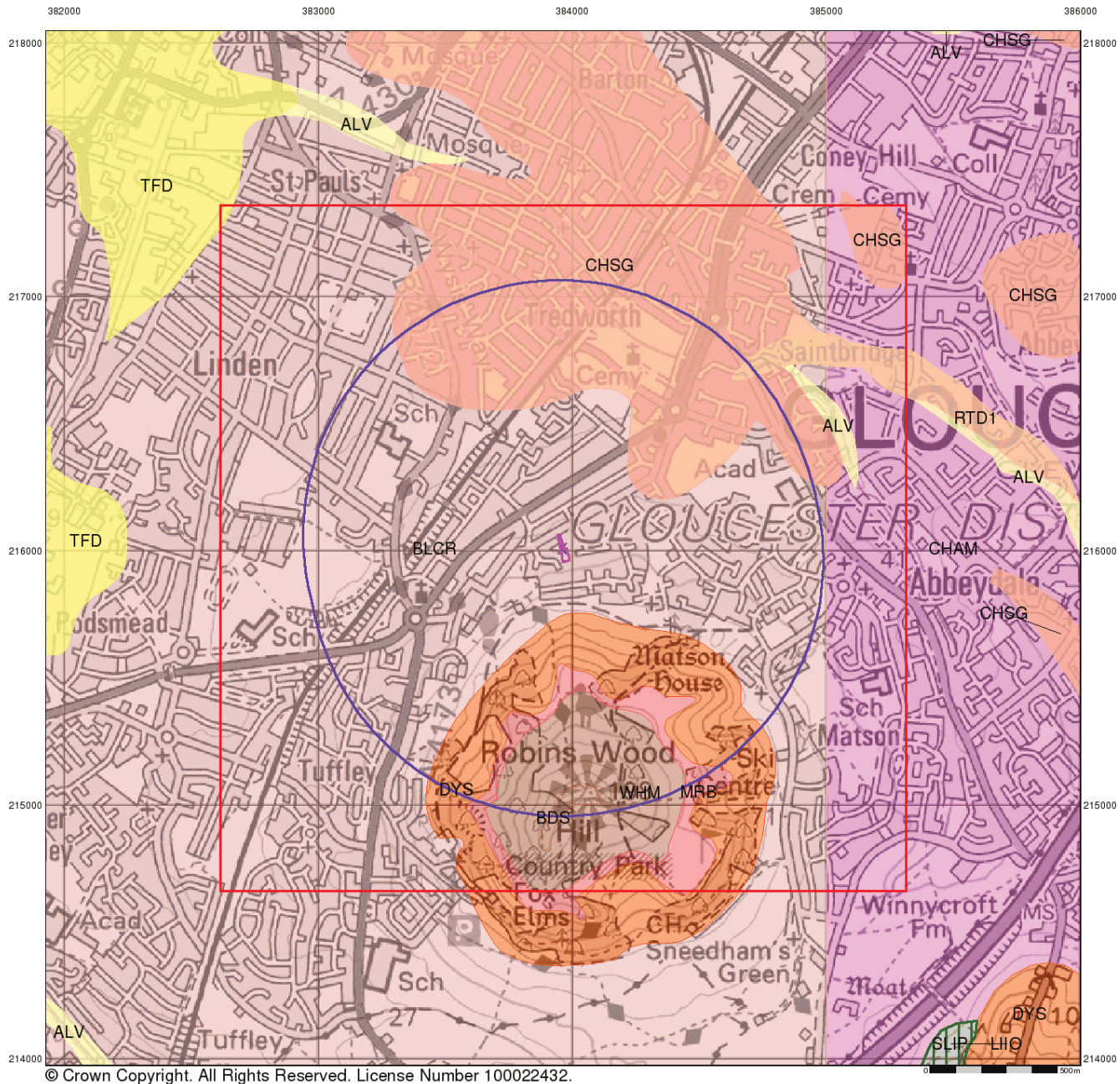
Order Number: 281999455\_1\_1  
 Customer Reference: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

### Site Details:

101, Reservoir Road, GLOUCESTER, GL4 6SZ



Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



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### Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

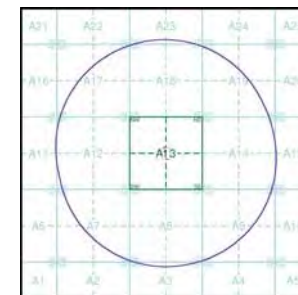
### Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

### Contact

British Geological Survey  
 Kingsley Dunham Centre  
 Keyworth  
 Nottingham  
 NG12 5GG  
 Telephone: 0115 936 3143  
 Fax: 0115 936 3276  
 email: enquiries@bgs.ac.uk  
 website: www.bgs.ac.uk

### Combined Geology Map - Slice A



### Order Details:

Order Number: 281999455\_1\_1  
 Customer Reference: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

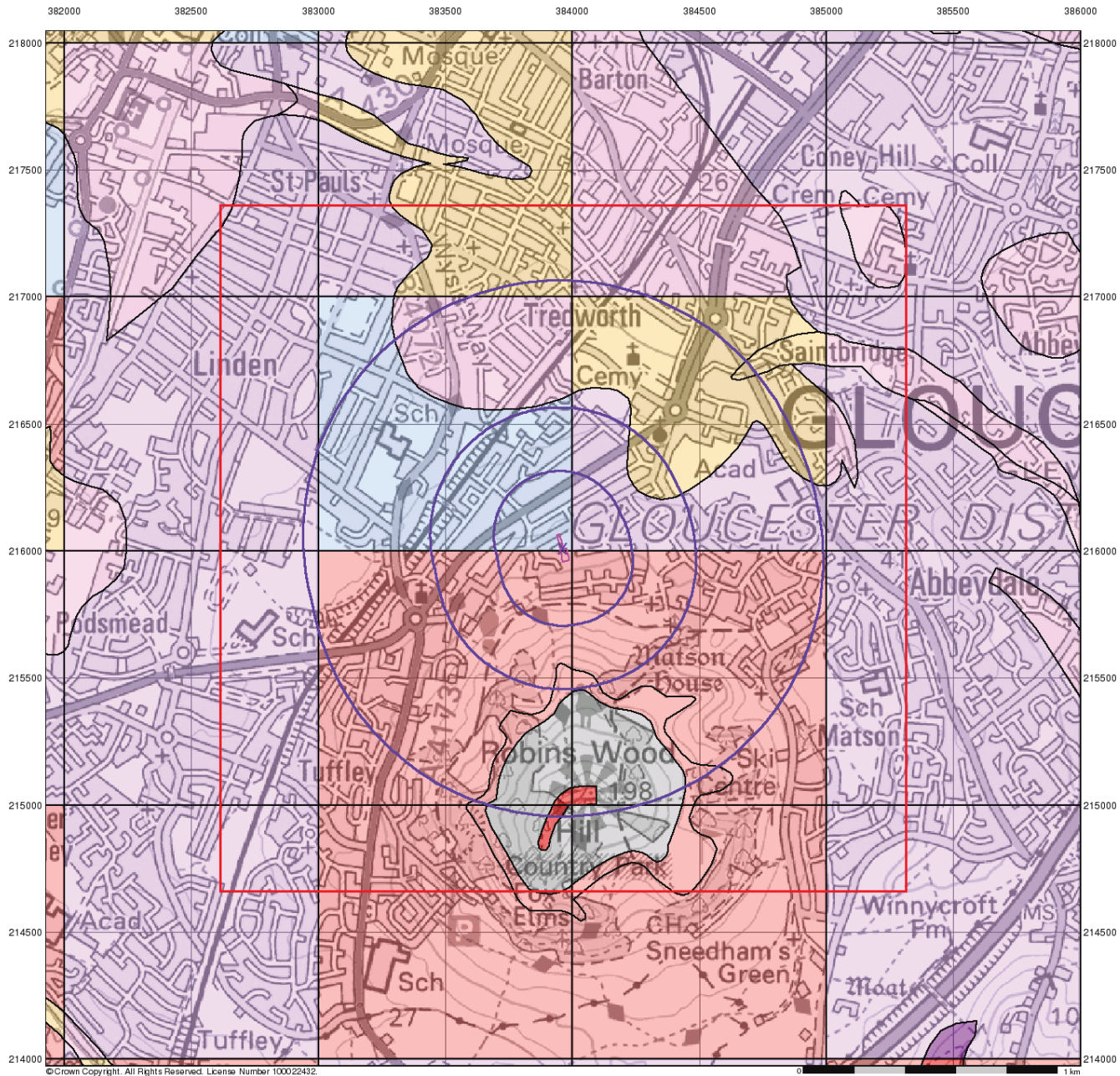
### Site Details:

101, Reservoir Road, GLOUCESTER, GL4 6SZ



# APPENDIX E – GROUNDWATER VULNERABILITY MAPS

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0 1 km

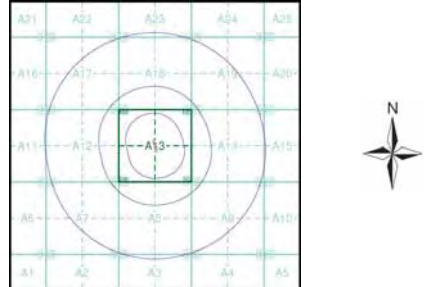


## Groundwater Vulnerability

- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Slice
  - Map ID

- Agency and Hydrological**
- | Bedrock Aquifers                        |   | Superficial Aquifers                    |   |
|---|---|---|---|
| High Vulnerability, Principal Aquifer   | High Vulnerability, Principal Aquifer   | High Vulnerability, Principal Aquifer   | High Vulnerability, Principal Aquifer   |
| High Vulnerability, Secondary Aquifer   | High Vulnerability, Secondary Aquifer   | High Vulnerability, Secondary Aquifer   | High Vulnerability, Secondary Aquifer   |
| Medium Vulnerability, Principal Aquifer | Medium Vulnerability, Principal Aquifer | Medium Vulnerability, Principal Aquifer | Medium Vulnerability, Principal Aquifer |
| Medium Vulnerability, Secondary Aquifer | Medium Vulnerability, Secondary Aquifer | Medium Vulnerability, Secondary Aquifer | Medium Vulnerability, Secondary Aquifer |
| Low Vulnerability, Principal Aquifer    | Low Vulnerability, Principal Aquifer    | Low Vulnerability, Principal Aquifer    | Low Vulnerability, Principal Aquifer    |
| Low Vulnerability, Secondary Aquifer    | Low Vulnerability, Secondary Aquifer    | Low Vulnerability, Secondary Aquifer    | Low Vulnerability, Secondary Aquifer    |
- Unproductive Aquifer  
 Soluble Rock

### Site Sensitivity Context Map - Slice A

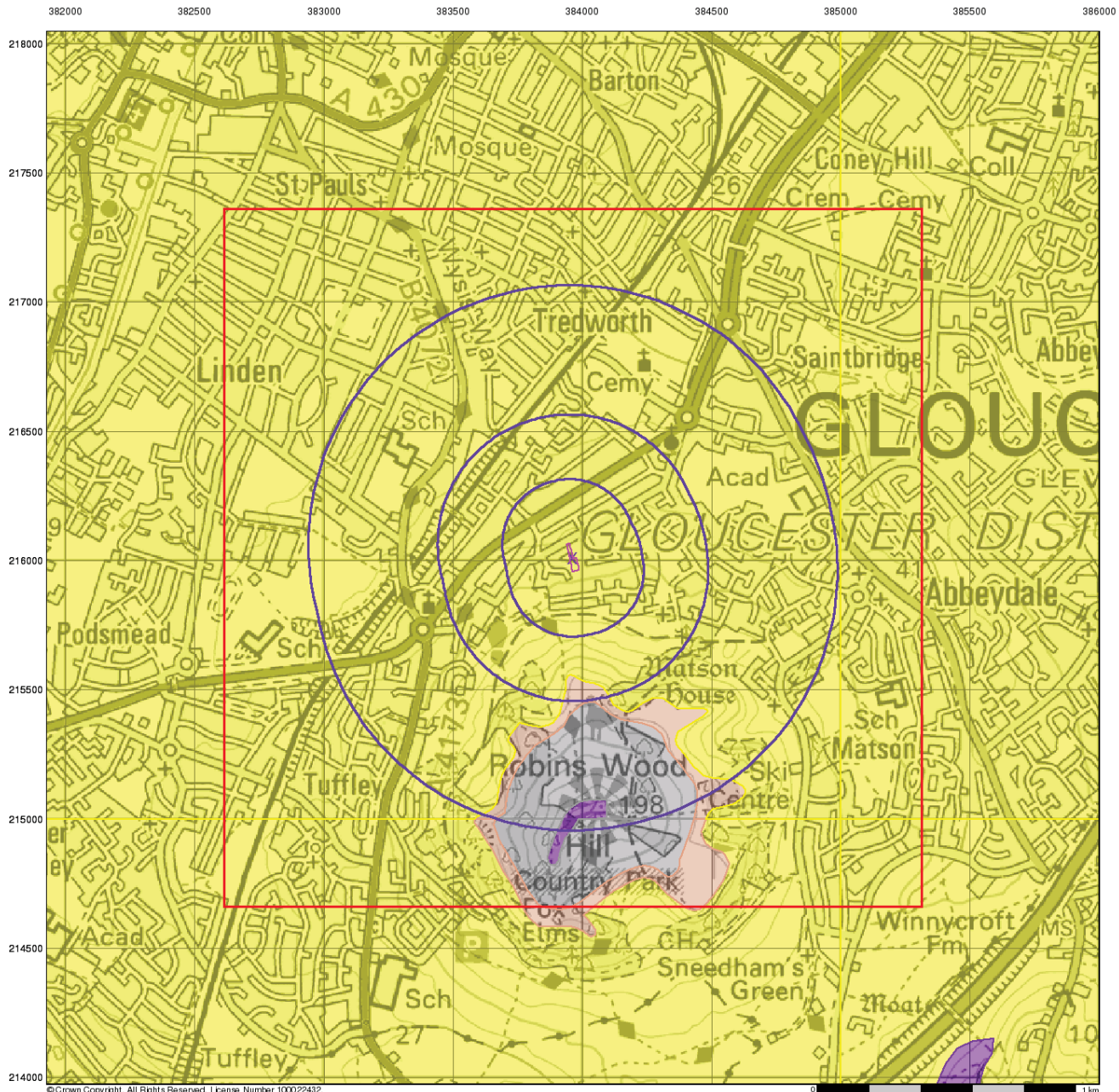


**Order Details**

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

**Site Details**  
 101, Reservoir Road, GLOUCESTER, GL4 6SZ





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0 1 km



## Bedrock Aquifer Designation

### General

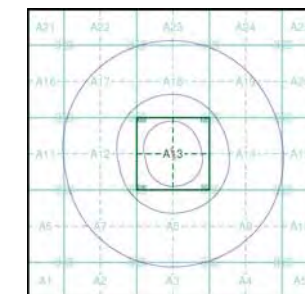
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice A



### Order Details

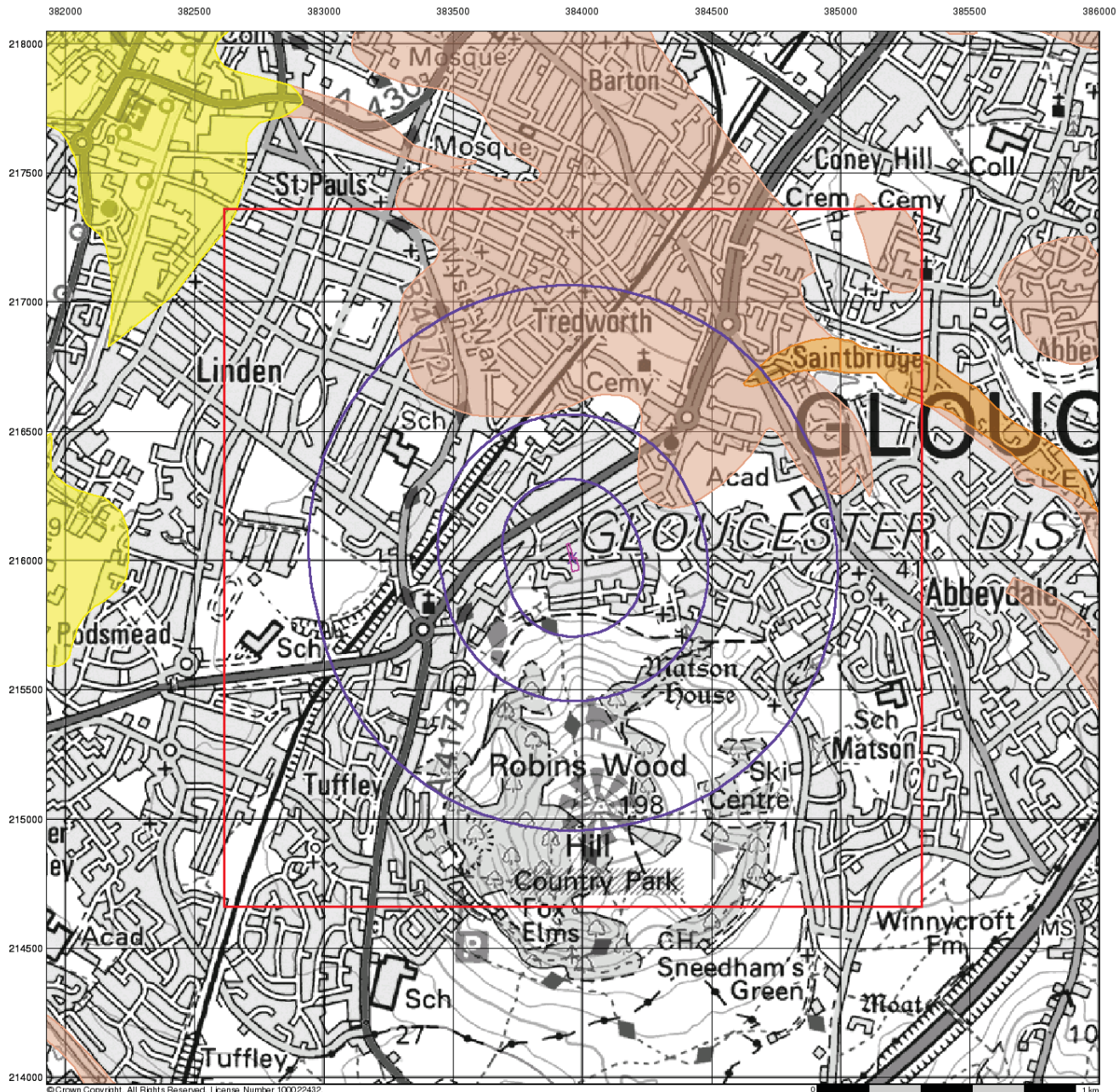
Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



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## Superficial Aquifer Designation

### General

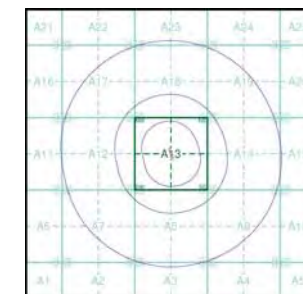
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ

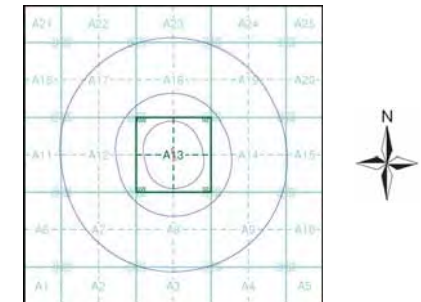


# APPENDIX F – ENVIROCHECK EXTRACTS

---

- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Map ID
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
  - Contaminated Land Register Entry or Notice
  - Discharge Consent
  - Enforcement or Prohibition Notice
  - Integrated Pollution Control
  - Integrated Pollution Prevention and Control
  - Local Authority Integrated Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control Enforcement
  - Pollution Incident to Controlled Waters
  - Prosecution Relating to Authorised Processes
  - Prosecution Relating to Controlled Waters
  - Registered Radioactive Substance
  - River Network or Water Feature
  - River Quality Sampling Point
  - Substantiated Pollution Incident Register
  - Water Abstraction
  - Water Industry Act Referral
- Hazardous Substances**
- COMAH Site
  - Explosive Site
  - NIHHS Site
  - Planning Hazardous Substance Consent
  - Registered Hazardous Substance Enforcement
- Geological**
- BGS Recorded Mineral Site
- Waste**
- BGS Recorded Landfill Site (Location)
  - BGS Recorded Landfill Site
  - EA Historic Landfill (Buffered Point)
  - EA Historic Landfill (Polygon)
  - Integrated Pollution Control Registered Waste Site
  - Licensed Waste Management Facility (Landfill Boundary)
  - Licensed Waste Management Facility (Location)
  - Local Authority Recorded Landfill Site (Location)
  - Local Authority Recorded Landfill Site
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Registered Landfill Site
  - Registered Landfill Site (Location)
  - Registered Landfill Site (Point Buffered to 100m)
  - Registered Landfill Site (Point Buffered to 250m)
  - Registered Waste Transfer Site (Location)
  - Registered Waste Transfer Site
  - Registered Waste Treatment or Disposal Site (Location)
  - Registered Waste Treatment or Disposal Site

### Site Sensitivity Map - Slice A

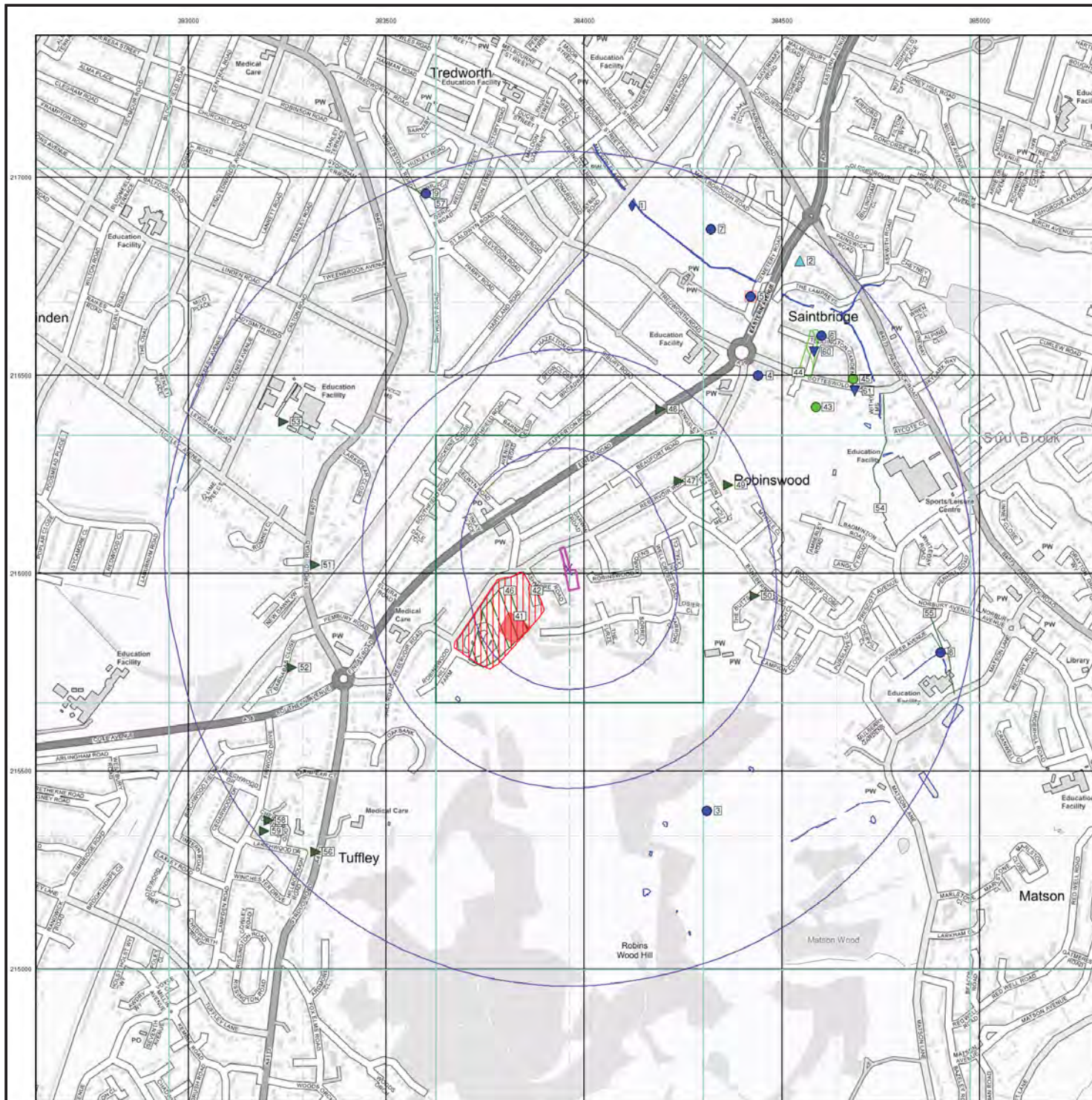


### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



## APPENDIX G – HISTORIC MAPPING

---

Note: the red line detailed on Figure 2 represents the most up-to-date planning boundary for the site.

# Historical Mapping Legends

## Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

**Quarry** (circular with radial lines), **Gravel Pit** (circular with concentric lines), **Sand Pit** (circular with concentric lines), **Clay Pit** (circular with concentric lines), **Shingle** (circular with concentric lines), **Refuse Heap** (circular with concentric lines), **Sloping Masonry** (hatched pattern), **Flat Rock** (hatched pattern), **Marsh** (wavy lines), **Reeds** (wavy lines), **Osiers** (wavy lines), **Rough Pasture** (dotted pattern), **Furze** (dotted pattern), **Wood** (dotted pattern), **Mixed Wood** (dotted pattern), **Brushwood** (dotted pattern), **Orchard** (dotted pattern), **Fir** (dotted pattern), **Ford** (dotted pattern), **Stepping Stones** (dotted pattern), **Ferry** (dotted pattern), **Waterfall** (dotted pattern), **Lock** (dotted pattern), **Trig. Station** (triangle with '507'), **Altitude at Trig. Station** (triangle with '507'), **B.M. 325.9** (upward arrow), **Bench Mark** (upward arrow), **Surface Level** (upward arrow), **Arrow denotes flow of water** (arrow), **Antiquities (site of)** (circle with cross), **Cutting** (hatched pattern), **Embankment** (hatched pattern), **Railway crossing Road** (crossing lines), **Level Crossing** (crossing lines), **Road crossing Railway** (crossing lines), **Railway crossing River or Canal** (crossing lines), **Road over single stream** (crossing lines), **Road over River or Canal** (crossing lines), **County Boundary (Geographical)** (dashed line), **County & Civil Parish Boundary** (dashed line), **Administrative County & Civil Parish Boundary** (dashed line), **County Borough Boundary (England)** (dashed line), **County Borough Boundary (Scotland)** (dashed line), **B.P. B.S. Boundary Post or Stone** (circle with cross), **P.C.B. Police Call Box** (circle with cross), **B.R. Bridle Road** (circle with cross), **P. Pump** (circle with cross), **E.P. Electricity Pylon** (circle with cross), **S.P. Signal Post** (circle with cross), **F.B. Foot Bridge** (circle with cross), **SL. Sluice** (circle with cross), **F.P. Foot Path** (circle with cross), **Sp. Spring** (circle with cross), **G.P. Guide Post or Board** (circle with cross), **T.C.B. Telephone Call Box** (circle with cross), **M.S. Mile Stone** (circle with cross), **Tr. Trough** (circle with cross), **M.P. M.R. Mooring Post or Ring** (circle with cross), **W. Well** (circle with cross)

## Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

**Inactive Quarry, Chalk Pit or Clay Pit** (circular with radial lines), **Active Quarry, Chalk Pit or Clay Pit** (circular with radial lines), **Rock** (circular with radial lines), **Boulders** (circular with radial lines), **Cliff** (hatched pattern), **Slopes** (hatched pattern), **Roofed Building** (hatched pattern), **Glazed Roof Building** (hatched pattern), **Sloping Masonry** (hatched pattern), **Archway** (hatched pattern), **Non-Coniferous Tree (surveyed)** (circle with cross), **Coniferous Tree (surveyed)** (circle with cross), **Non-Coniferous Trees (not surveyed)** (circle with cross), **Coniferous Trees (not surveyed)** (circle with cross), **Orchard Tree** (circle with cross), **Scrub** (circle with cross), **Bracken** (circle with cross), **Coppice, Osier** (circle with cross), **Reeds** (circle with cross), **Marsh, Saltings** (circle with cross), **Rough Grassland** (circle with cross), **Heath** (circle with cross), **Culvert** (circle with cross), **Direction of water flow** (arrow), **Bench Mark** (upward arrow), **Antiquity (site of)** (circle with cross), **Cave Entrance** (circle with cross), **Triangulation Station** (triangle), **Electricity Pylon** (square with cross), **Electricity Transmission Line** (line with cross), **County Boundary (Geographical)** (dashed line), **County & Civil Parish Boundary** (dashed line), **Civil Parish Boundary** (dashed line), **Admin. County or County Bor. Boundary** (dashed line), **London Borough Boundary** (dashed line), **Symbol marking point where boundary mereing changes** (circle with cross), **BH Beer House** (circle with cross), **P. Pillar, Pole or Post** (circle with cross), **BP, BS Boundary Post or Stone** (circle with cross), **PO Post Office** (circle with cross), **Cn, C Capstan, Crane** (circle with cross), **PC Public Convenience** (circle with cross), **Chy Chimney** (circle with cross), **PH Public House** (circle with cross), **D Fn Drinking Fountain** (circle with cross), **Pp Pump** (circle with cross), **Ei P Electricity Pillar or Post** (circle with cross), **SB, S Br Signal Box or Bridge** (circle with cross), **FAP Fire Alarm Pillar** (circle with cross), **SP, SL Signal Post or Light** (circle with cross), **FB Foot Bridge** (circle with cross), **Spr Spring** (circle with cross), **GP Guide Post** (circle with cross), **Tk Tank or Track** (circle with cross), **H Hydrant or Hydraulic** (circle with cross), **TCB Telephone Call Box** (circle with cross), **LC Level Crossing** (circle with cross), **TCP Telephone Call Post** (circle with cross), **MH Manhole** (circle with cross), **Tr Trough** (circle with cross), **MP Mile Post or Mooring Post** (circle with cross), **Wt Pt, Wt Water Point, Water Tap** (circle with cross), **MS Mile Stone** (circle with cross), **W Well** (circle with cross), **NTL Normal Tidal Limit** (circle with cross), **Wd Pp Wind Pump** (circle with cross)

## Large-Scale National Grid Data 1:2,500 and 1:1,250

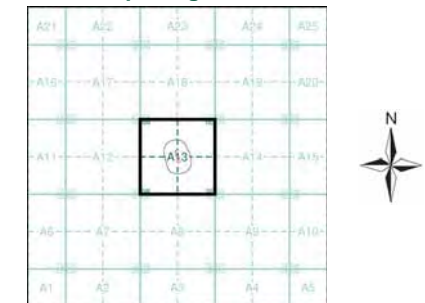
**Cliff** (hatched pattern), **Slopes** (hatched pattern), **Rock** (circular with radial lines), **Rock (scattered)** (circular with radial lines), **Boulders** (circular with radial lines), **Boulders (scattered)** (circular with radial lines), **Positioned Boulder** (circle with cross), **Scree** (circle with cross), **Non-Coniferous Tree (surveyed)** (circle with cross), **Coniferous Tree (surveyed)** (circle with cross), **Non-Coniferous Trees (not surveyed)** (circle with cross), **Coniferous Trees (not surveyed)** (circle with cross), **Orchard Tree** (circle with cross), **Scrub** (circle with cross), **Bracken** (circle with cross), **Coppice, Osier** (circle with cross), **Reeds** (circle with cross), **Marsh, Saltings** (circle with cross), **Rough Grassland** (circle with cross), **Heath** (circle with cross), **Culvert** (circle with cross), **Direction of water flow** (arrow), **Triangulation Station** (triangle), **Antiquity (site of)** (circle with cross), **Electricity Transmission Line** (line with cross), **Electricity Pylon** (square with cross), **B.M. 231.60n Bench Mark** (upward arrow), **Buildings with Building Seed** (circle with cross), **Roofed Building** (hatched pattern), **Glazed Roof Building** (hatched pattern), **Civil parish/community boundary** (dashed line), **District boundary** (dashed line), **County boundary** (dashed line), **Boundary post/stone** (circle with cross), **Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)** (circle with cross), **Bks Barracks** (circle with cross), **P. Pillar, Pole or Post** (circle with cross), **Bty Battery** (circle with cross), **PO Post Office** (circle with cross), **Cemy Cemetery** (circle with cross), **PC Public Convenience** (circle with cross), **Chy Chimney** (circle with cross), **Pp Pump** (circle with cross), **Cis Cistern** (circle with cross), **Ppg Sta Pumping Station** (circle with cross), **Dismtd Rly Dismantled Railway** (circle with cross), **PW Place of Worship** (circle with cross), **Ei Gen Sta Electricity Generating Station** (circle with cross), **Sewage Ppg Sta Sewage Pumping Station** (circle with cross), **Ei P Electricity Pole, Pillar** (circle with cross), **SB, S Br Signal Box or Bridge** (circle with cross), **Ei Sub Sta Electricity Sub Station** (circle with cross), **SP, SL Signal Post or Light** (circle with cross), **FB Filter Bed** (circle with cross), **Spr Spring** (circle with cross), **Fn / D Fn Fountain / Drinking Ftn.** (circle with cross), **Tk Tank or Track** (circle with cross), **Gas Gov Gas Valve Compound** (circle with cross), **Tr Trough** (circle with cross), **GVC Gas Governor** (circle with cross), **Wd Pp Wind Pump** (circle with cross), **GP Guide Post** (circle with cross), **Wt Pt, Wt Water Point, Water Tap** (circle with cross), **MH Manhole** (circle with cross), **Wks Works (building or area)** (circle with cross), **MP, MS Mile Post or Mile Stone** (circle with cross), **W Well** (circle with cross)



## Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Gloucestershire	1:2,500	1884	2
Gloucestershire	1:2,500	1902	3
Gloucestershire	1:2,500	1923	4
Gloucestershire	1:2,500	1938	5
Historical Aerial Photography	1:1,250	1946	6
Ordnance Survey Plan	1:2,500	1956	7
Ordnance Survey Plan	1:1,250	1956	8
Ordnance Survey Plan	1:1,250	1965 - 1972	9
Ordnance Survey Plan	1:2,500	1971	10
Additional SIMs	1:1,250	1972 - 1983	11
Supply of Unpublished Survey Information	1:1,250	1973	12
Additional SIMs	1:1,250	1979 - 1984	13
Additional SIMs	1:1,250	1984 - 1992	14
Large-Scale National Grid Data	1:1,250	1994	15
Historical Aerial Photography	1:2,500	1999	16

## Historical Map - Segment A13



## Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

## Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



# Historical Mapping Legends

## Ordnance Survey County Series 1:10,560

**Other Pits**  
Gravel Pit, Sand Pit, Other Pits

**Quarry**  
Quarry, Shingle, Orchard

**Osiers**  
Osiers, Reeds, Marsh

**Mixed Wood**  
Mixed Wood, Deciduous, Brushwood

**Fir**  
Fir, Furze, Rough Pasture

**Water Features**  
Arrow denotes flow of water, Trigonometrical Station, Site of Antiquities, Bench Mark, Pump, Guide Post, Signal Post, Well, Spring, Boundary Post

**Surface Level**  
• 285 Surface Level

**Contours**  
Sketched Contour, Instrumental Contour

**Roads**  
Main Roads (Fenced, Un-Fenced), Minor Roads (Fenced, Un-Fenced), Sunken Road, Raised Road, Road over Railway, Railway over River, Railway over Road, Level Crossing, Road over River or Canal, Road over Stream, Road over Stream

**Boundaries**  
County Boundary (Geographical), County & Civil Parish Boundary, Administrative County & Civil Parish Boundary, County Borough Boundary (England), Co. Boro. Bdy., County Borough Boundary (Scotland), Co. Burgh Bdy., Rural District Boundary, RD. Bdy., Civil Parish Boundary

## Ordnance Survey Plan 1:10,000

**Pits**  
Chalk Pit, Clay Pit or Quarry, Gravel Pit, Sand Pit, Disused Pit or Quarry

**Vegetation**  
Refuse or Slag Heap, Lake, Loch or Pond, Dunes, Boulders, Coniferous Trees, Non-Coniferous Trees, Orchard, Scrub, Coppice, Bracken, Heath, Rough Grassland, Marsh, Reeds, Saltings

**Buildings**  
Building, Glasshouse, Sloping Masonry, Pylon, Electricity Transmission Line, Pole

**Railways**  
Cutting, Embankment, Standard Gauge Multiple Track, Standard Gauge Single Track, Siding, Tramway or Mineral Line, Narrow Gauge

**Boundaries**  
Geographical County, Administrative County, County Borough or County of City, Municipal Borough, Urban or Rural District, Burgh or District Council, Borough, Burgh or County Constituency (Shown only when not coincident with other boundaries), Civil Parish (Shown alternately when coincidence of boundaries occurs)

**Points of Interest**  
BP, BS Boundary Post or Stone, Pol Sta Police Station, Ch Church, PO Post Office, CH Club House, PC Public Convenience, F E Sta Fire Engine Station, PH Public House, FB Foot Bridge, SB Signal Box, Fn Fountain, Spr Spring, GP Guide Post, TCB Telephone Call Box, MP Mile Post, TCP Telephone Call Post, MS Mile Stone, W Well

## 1:10,000 Raster Mapping

**Pits**  
Gravel Pit, Refuse tip or slag heap, Rock (scattered), Boulders (scattered), Shingle, Sand, Sand Pit

**Vegetation**  
Slopes, Top of cliff, Area of wooded vegetation, Non-coniferous trees, Coniferous trees, Positioned tree, Coppice or Osiers, Heath, Marsh, Salt Marsh or Reeds, Flow arrows

**Boundaries**  
General detail, Overhead detail, Multi-track railway, Single track railway, County boundary (England only), District, Unitary, Metropolitan, London Borough boundary, Civil, parish or community boundary, Constituency boundary

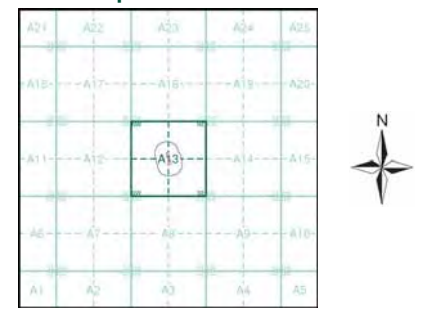
**Water Features**  
Mean high water (springs), Mean low water (springs), Telephone line (where shown), Electricity transmission line (with poles), Bench mark (where shown), Triangulation station, Point feature (e.g. Guide Post or Mile Stone), Pylon, flare stack or lighting tower, Site of (antiquity), Glasshouse, General Building, Important Building



## Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Gloucestershire	1:10,560	1884	3
Gloucestershire	1:10,560	1903	4
Gloucestershire	1:10,560	1924	5
Gloucestershire	1:10,560	1938	6
Historical Aerial Photography	1:10,560	1947 - 1949	7
Historical Aerial Photography	1:10,560	1947	8
Ordnance Survey Plan	1:10,000	1954 - 1955	9
Ordnance Survey Plan	1:10,000	1954	10
Ordnance Survey Plan	1:10,000	1960 - 1968	11
Ordnance Survey Plan	1:10,000	1971 - 1974	12
Ordnance Survey Plan	1:10,000	1975	13
Ordnance Survey Plan	1:10,000	1988	14
Gloucester	1:10,000	1989	15
Ordnance Survey Plan	1:10,000	1990	16
Ordnance Survey Plan	1:10,000	1994	17
10K Raster Mapping	1:10,000	2000	18
10K Raster Mapping	1:10,000	2006	19
VectorMap Local	1:10,000	2021	20

## Historical Map - Slice A



## Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

## Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



## Gloucestershire

Published 1884

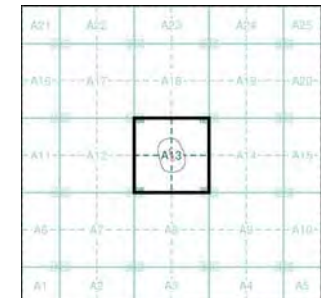
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)



### Historical Map - Segment A13

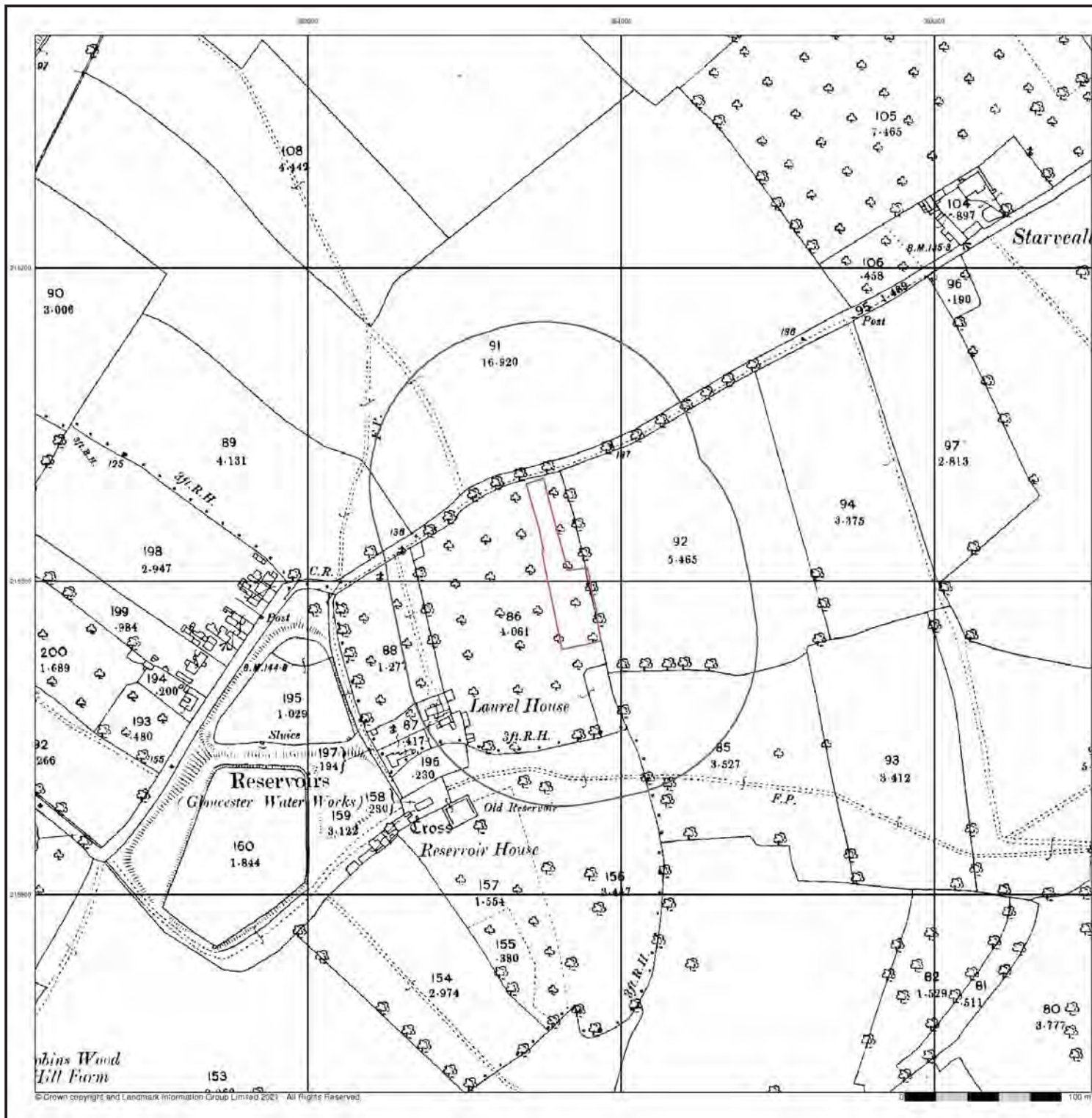


### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ





### Gloucestershire

Published 1884

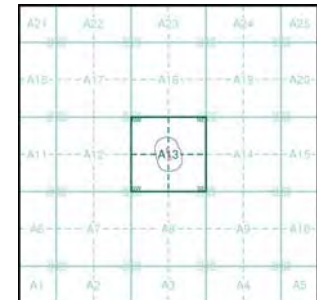
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)

033NW 1884 1:10,560	033NE 1884 1:10,560
033SW 1884 1:10,560	033SE 1884 1:10,560

### Historical Map - Slice A



### Order Details

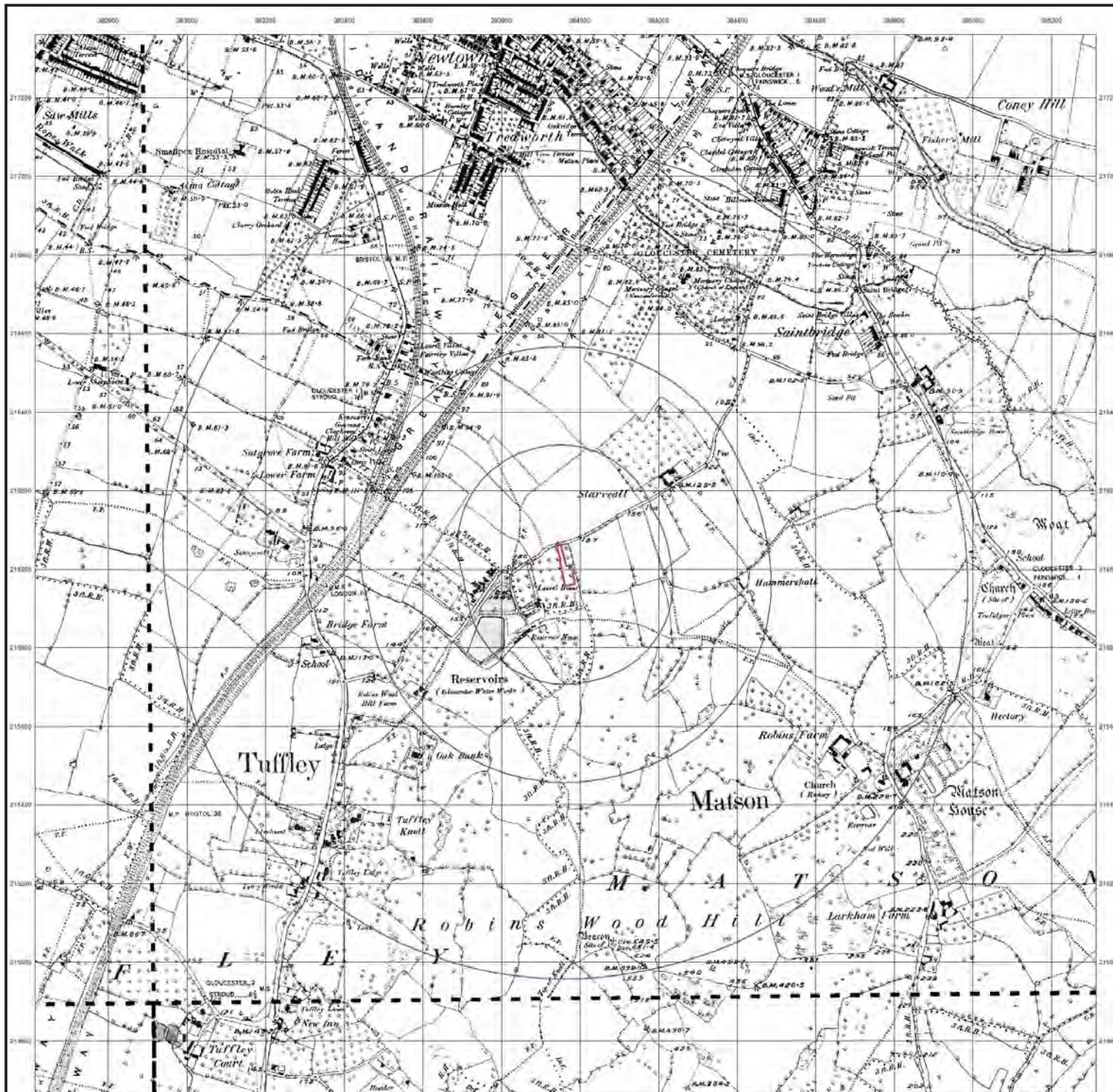
Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216100  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



web: www.environmental.co.uk

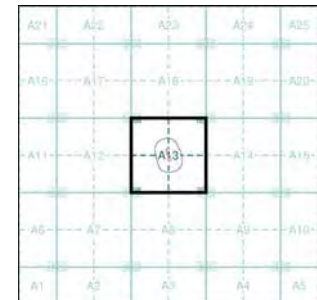


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

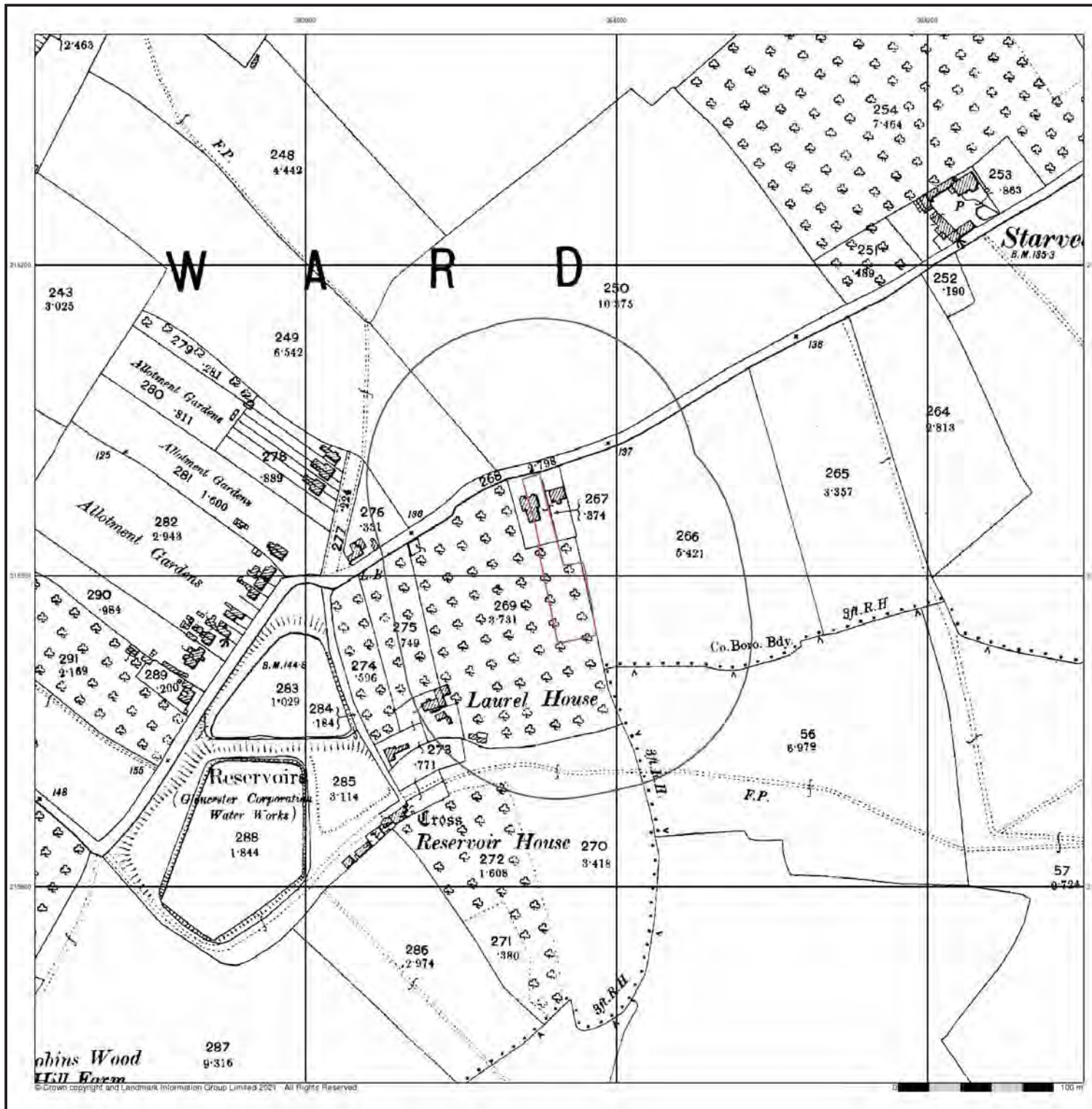


Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



## Gloucestershire

Published 1923

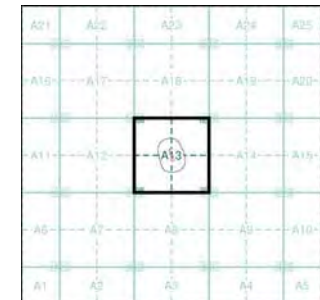
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)



### Historical Map - Segment A13

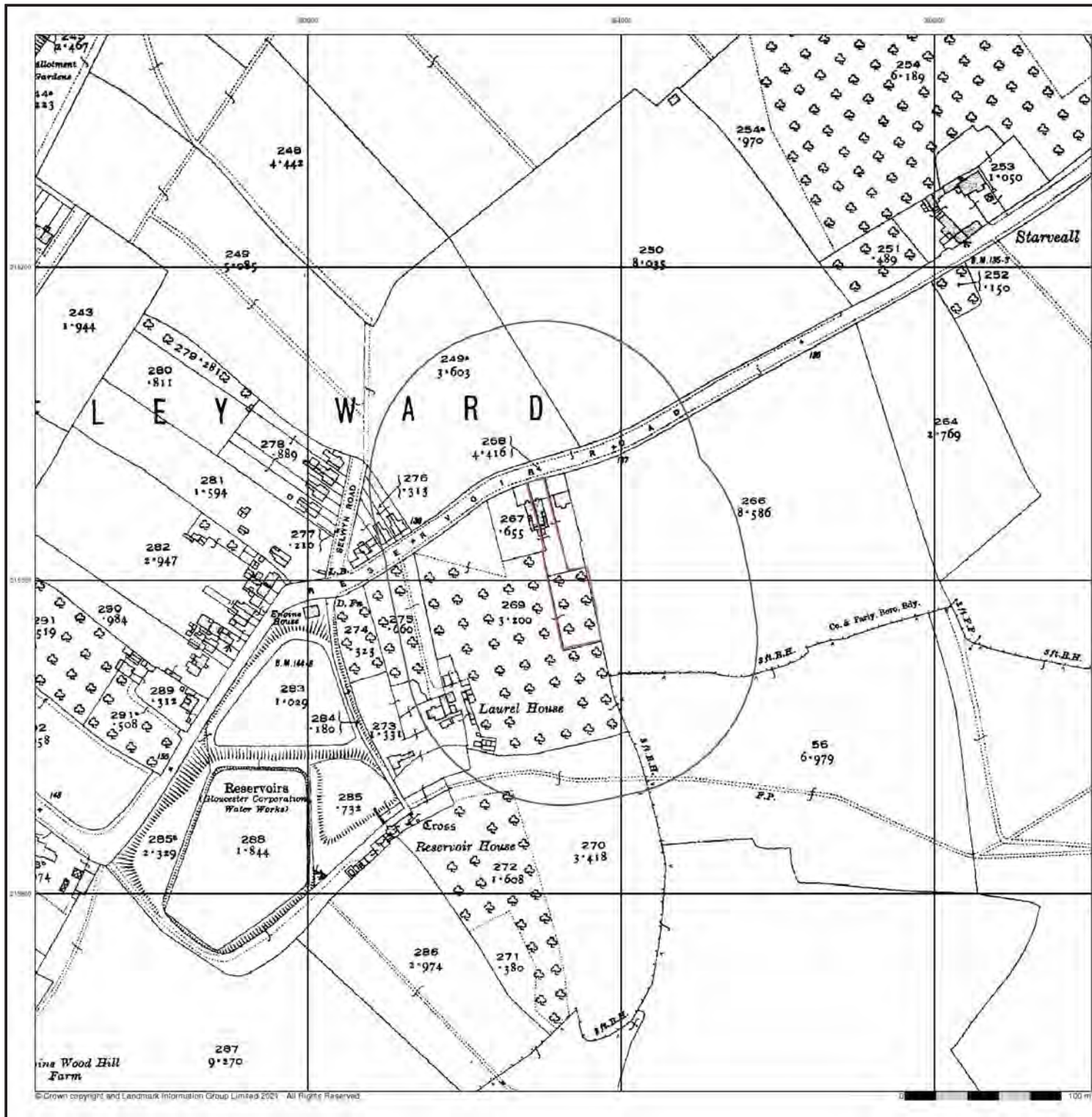


### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



## Gloucestershire

Published 1938

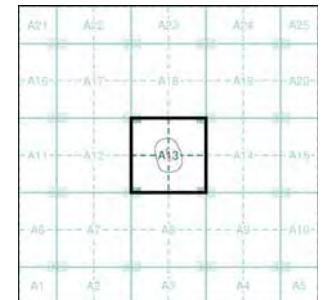
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)



### Historical Map - Segment A13

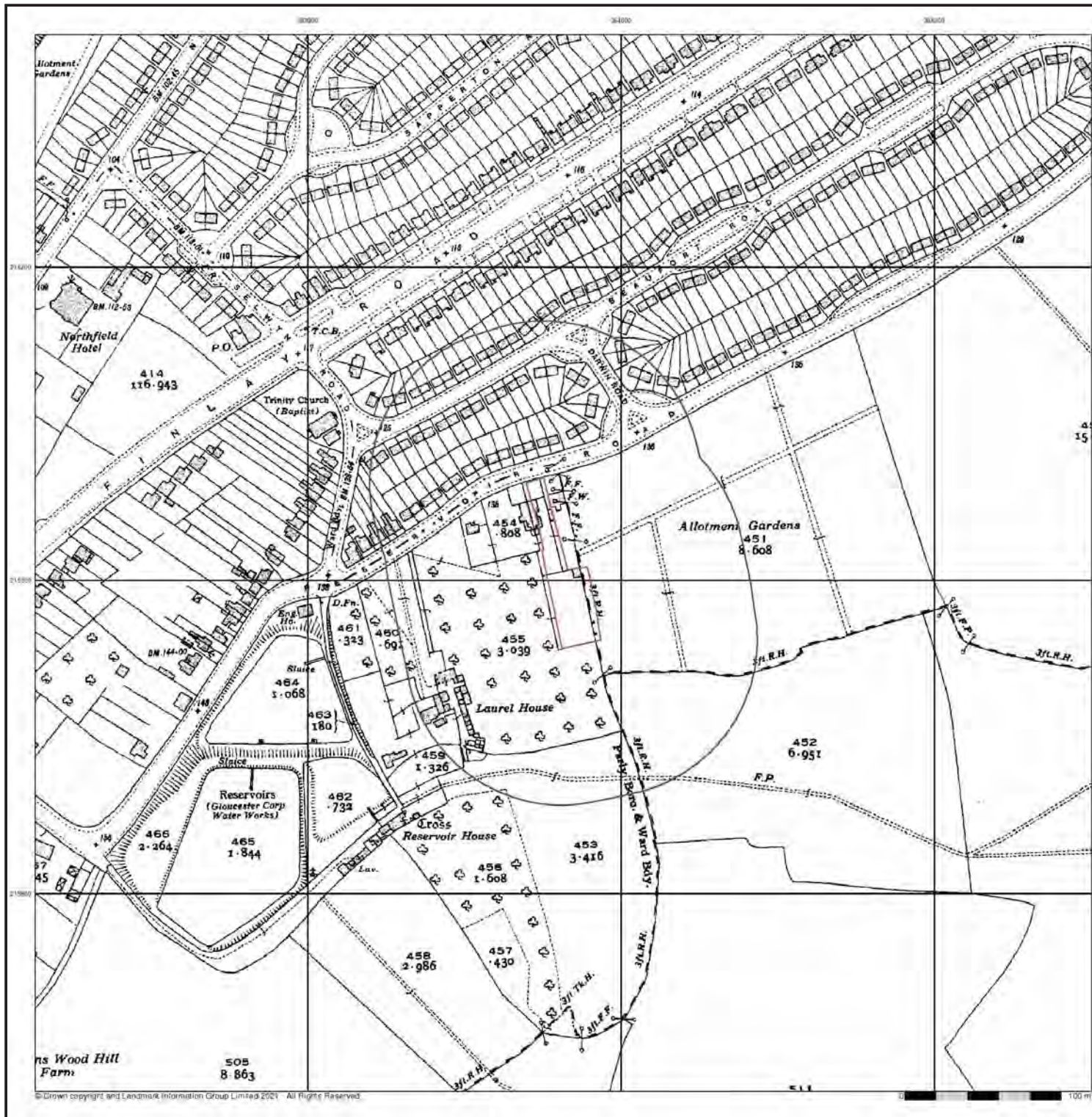


### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



## Ordnance Survey Plan

Published 1956

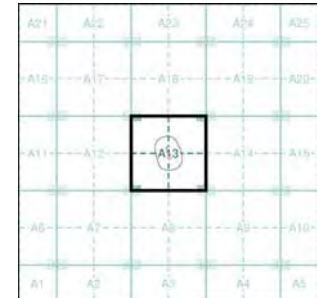
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)

SO816SE	SO816SW
1956	1956
1:1,250	1:1,250
SO816NE	SO815NW
1956	1956
1:1,250	1:1,250

### Historical Map - Segment A13

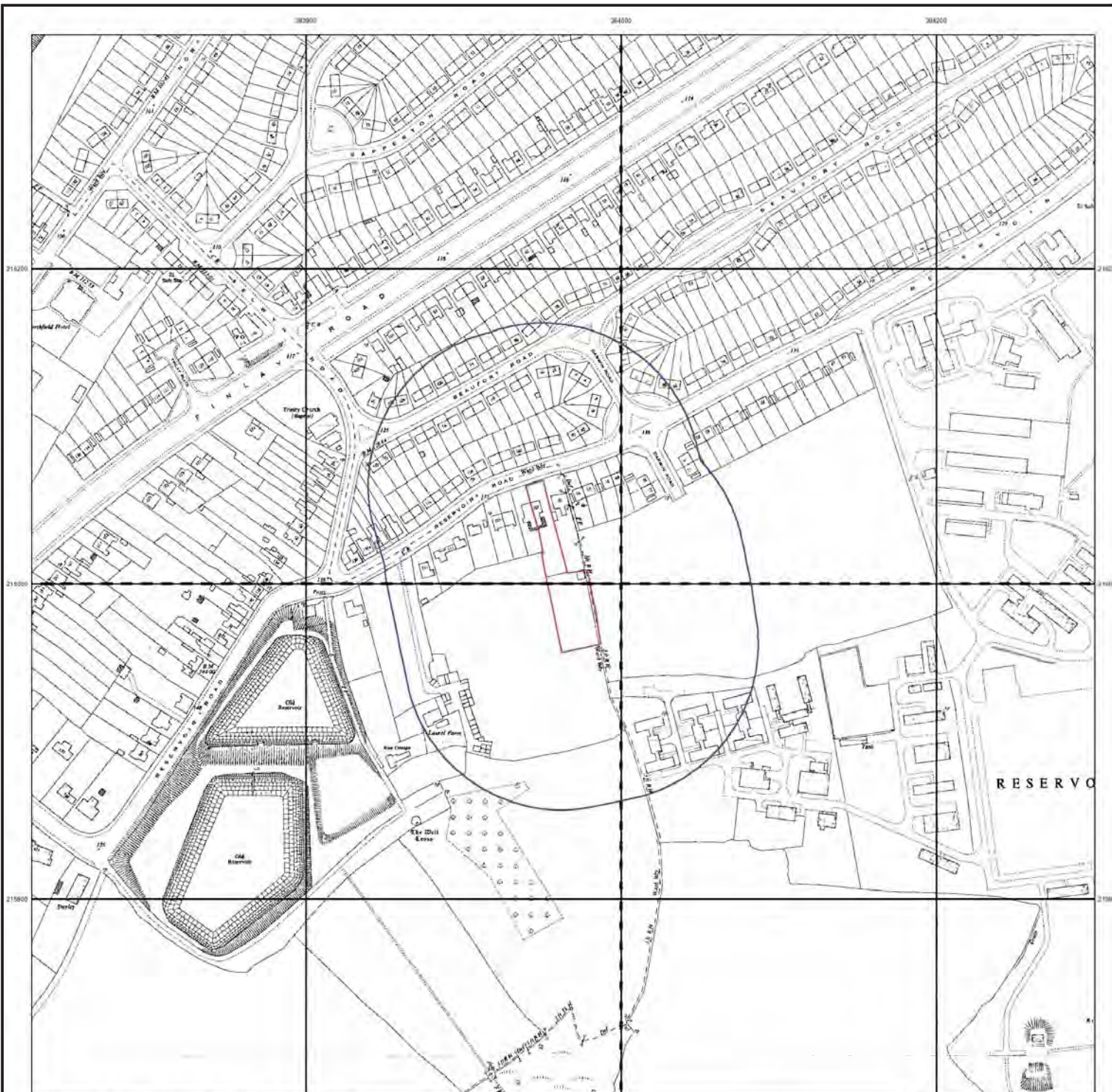


### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ





## Ordnance Survey Plan

Published 1965 - 1972

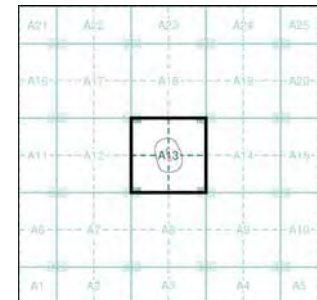
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)

SO8316SE	SO8416SW
1972	1966
1:1,250	1:1,250
SO8316NE	SO8415NW
1965	1971
1:1,250	1:1,250

### Historical Map - Segment A13



### Order Details

Order Number: 281999455\_1\_1  
Customer Ref: SE-2021-183  
National Grid Reference: 383960, 216010  
Slice: A  
Site Area (Ha): 0.2  
Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ





## Large-Scale National Grid Data Published 1994

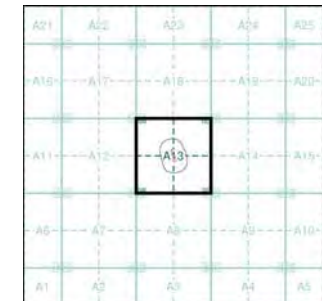
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

### Map Name(s) and Date(s)

SO8316SE	SO8416SW
1994	1994
1:1,250	1:1,250
SO8316NE	SO8416NW
1994	1994
1:1,250	1:1,250

### Historical Map - Segment A13



### Order Details

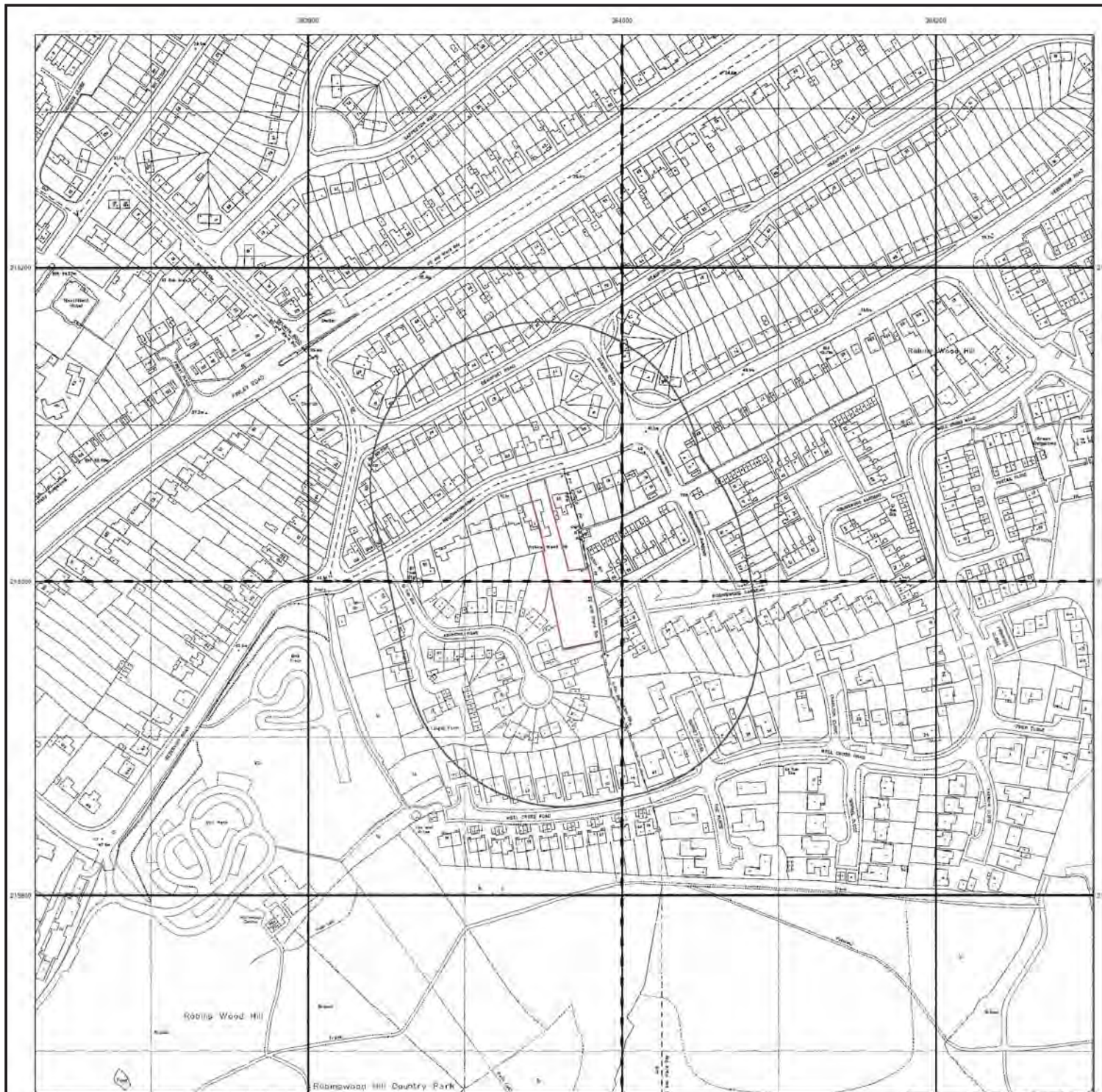
Order Number: 281999455\_1\_1  
Customer Ref: SE-2021-183  
National Grid Reference: 383960, 216010  
Slice: A  
Site Area (Ha): 0.2  
Search Buffer (m): 100

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)





### VectorMap Local

Published 2021

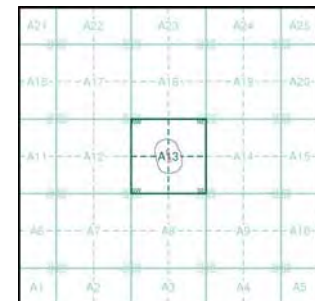
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

### Map Name(s) and Date(s)

SO81NW 2021 Variable	SO81NE 2021 Variable
SO81SW 2021 Variable	SO81SE 2021 Variable

### Historical Map - Slice A

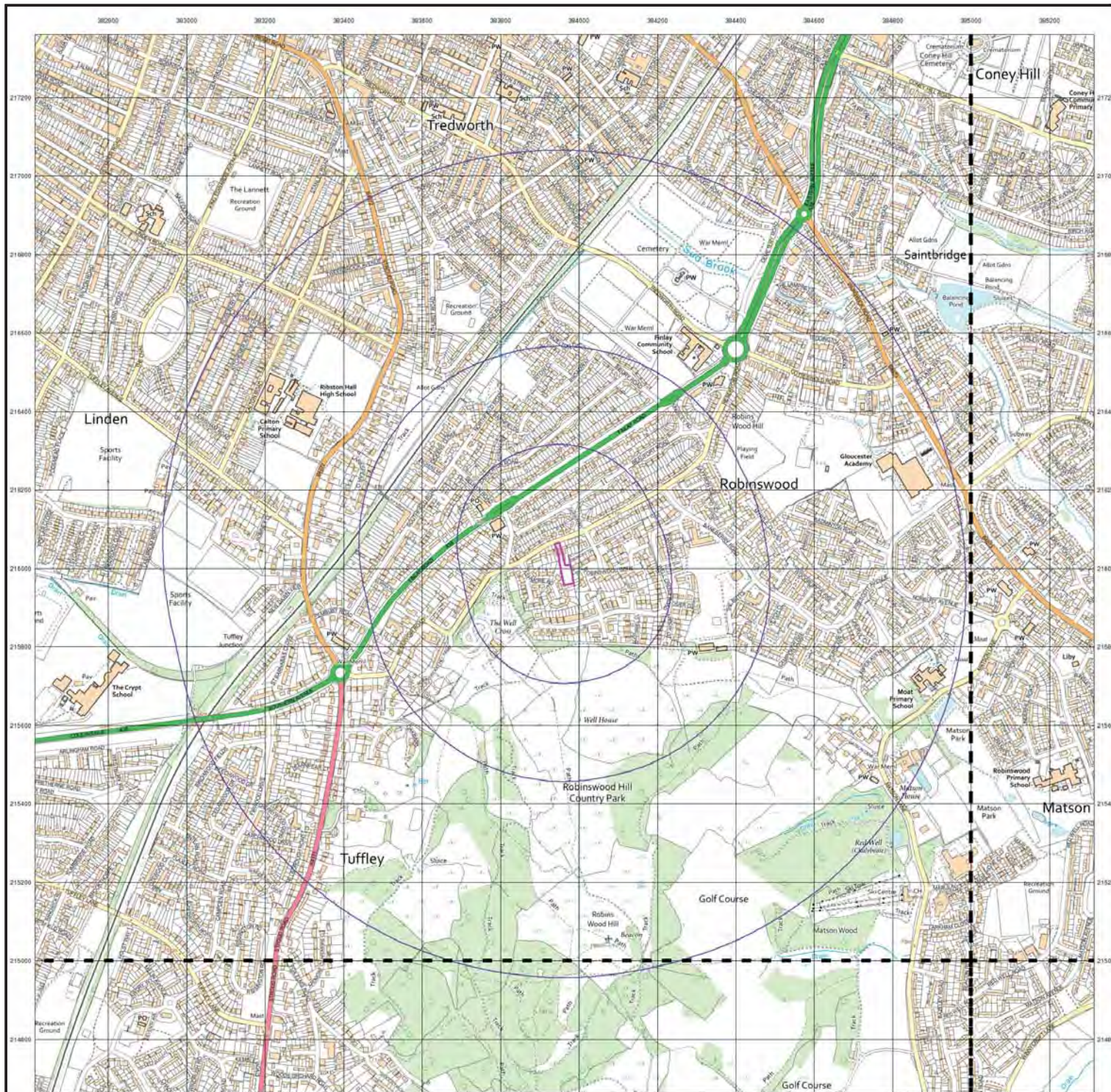


### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 1000

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



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## APPENDIX H – AERIAL PHOTOGRAPHS

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Note: the red line detailed on Figure 2 represents the most up-to-date planning boundary for the site.



## Historical Aerial Photography Published 1946

Source map scale - 1:1,250

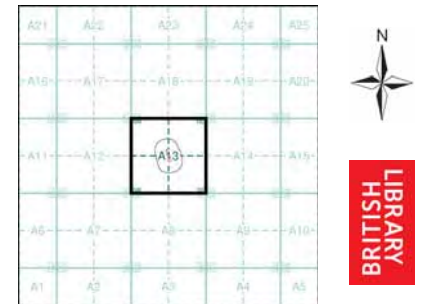
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

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### Map Name(s) and Date(s)

SC0816SE 1946 1:1,250	SC0816SW 1946 1:1,250
SC0815NE 1946 1:1,250	SC0815NW 1946 1:1,250

### Historical Aerial Photography - Segment A13



### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

### Site Details

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Web: www.envirocheck.co.uk

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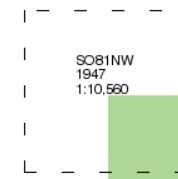
## Historical Aerial Photography Published 1947

### Source map scale - 1:10,560

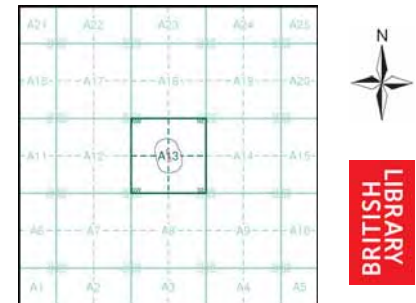
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

© Landmark Information Group and/or Data Suppliers 2010.

### Map Name(s) and Date(s)



### Historical Aerial Photography - Slice A

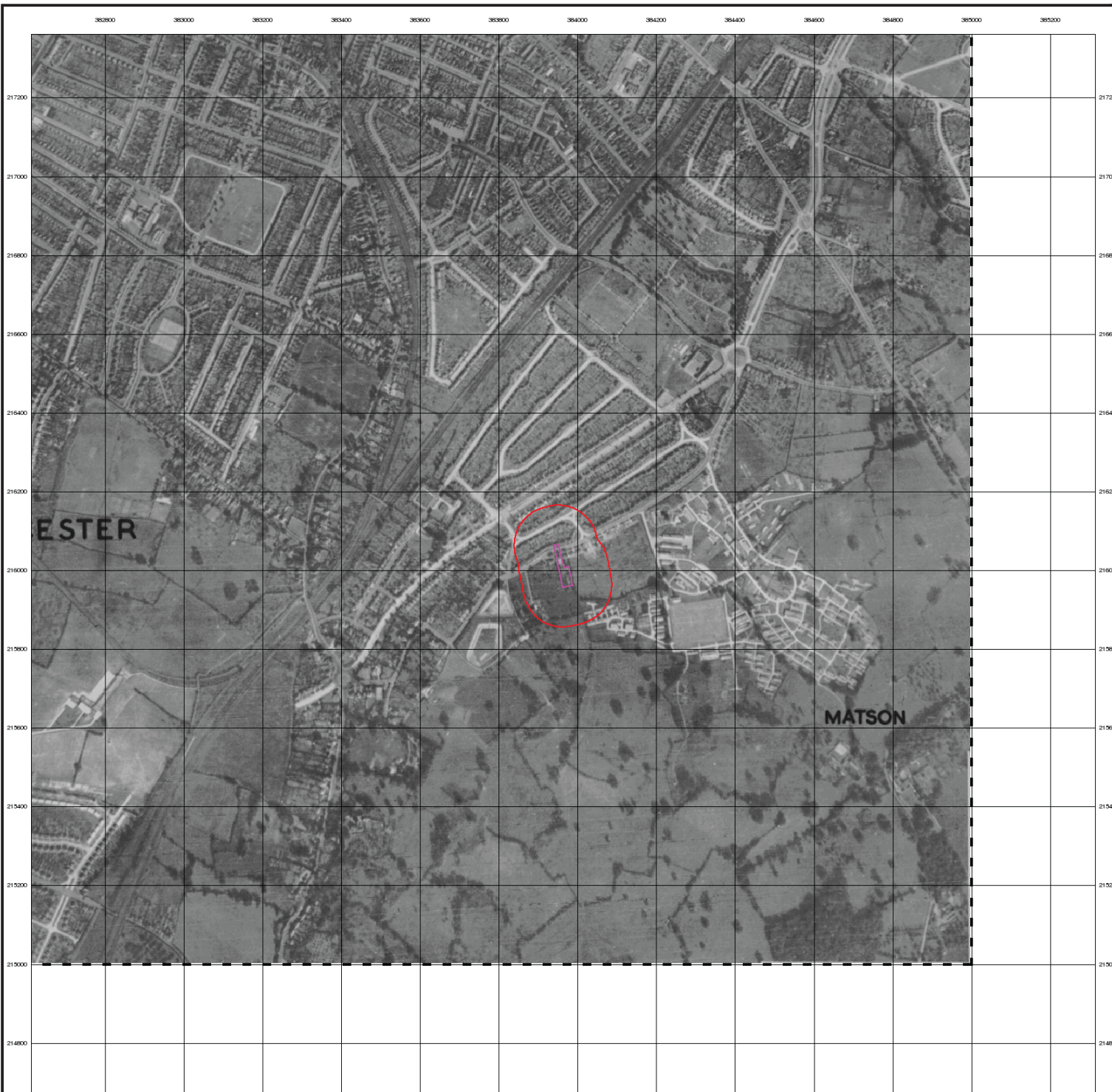


### Order Details

Order Number: 281999455\_1\_1  
Customer Ref: SE-2021-183  
National Grid Reference: 383960, 216010  
Slice: A  
Site Area (Ha): 0.2  
Search Buffer (m): 1000

### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ

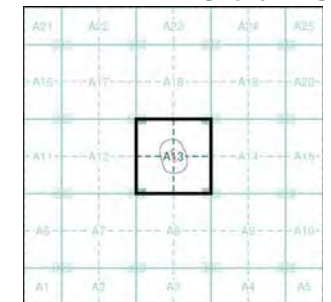


## Historical Aerial Photography Published 1999

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain



### Historical Aerial Photography - Segment A13



#### Order Details

Order Number: 281999455\_1\_1  
 Customer Ref: SE-2021-183  
 National Grid Reference: 383960, 216010  
 Slice: A  
 Site Area (Ha): 0.2  
 Search Buffer (m): 100

#### Site Details

101, Reservoir Road, GLOUCESTER, GL4 6SZ



# APPENDIX I – RISK ASSESSMENT PROCESS

The risk assessment process undertaken in this report has been completed in general accordance with CIRIA report C552 *Contaminated land risk assessment – A guide to good practice*.

## Classification of Risk Consequence

Category	Definition
Severe	Short-term (acute) risk to human health likely to result in ‘significant harm’ as defined within Part IIA of the Environment Protection Act (1990). Short-term risk of pollution of a sensitive water resource. Catastrophic damage to buildings or property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem.
Medium	Chronic damage to human health (significant harm). Pollution of sensitive water resources. A significant change in a particular ecosystem, or organism forming part of such ecosystem.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings, structures, services, or the environment
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health. Easily repairable effects of damage to buildings, structures and services.

## Classification of Risk Probability

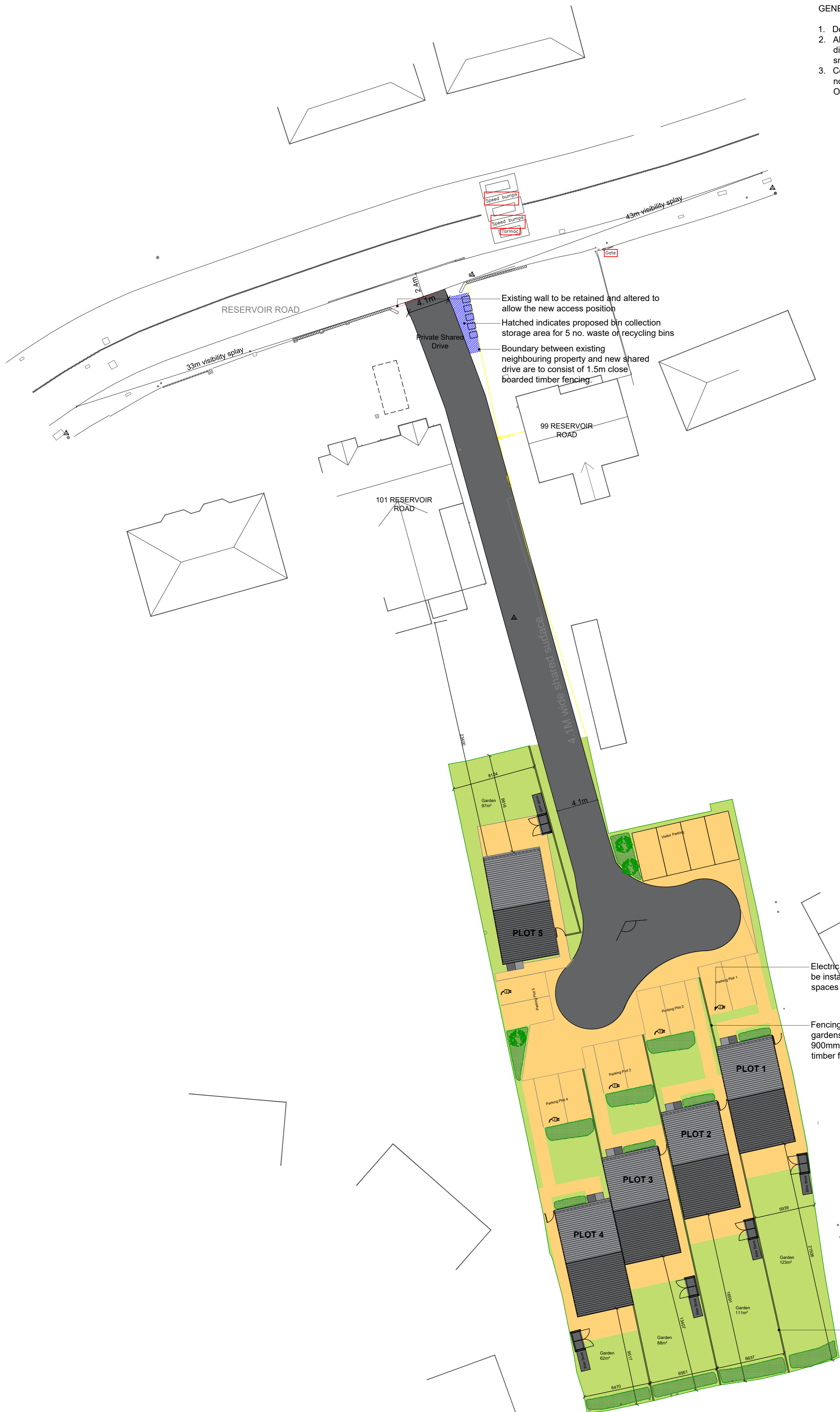
Category	Definition
High Likelihood	There is a contaminant linkage and an event, which would either appear, very likely in the short term and almost inevitable over the long term, or, there is evidence at the receptor of harm or pollution.
Likely	There is a contaminant linkage and all the elements are present and in the right place, which means that, it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a contaminant linkage and circumstances are possible under which and event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely	There is a contaminant linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

## Risk as a Function of Consequence and Probability

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low risk
	Low	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low risk	Very Low Risk	Very Low Risk

GENERAL NOTES

1. Do not scale from this print or use as a template.
2. All dimensions must be verified on site before any work is put in hand and any discrepancies must be reported to the Architect. Where any variations occur between small scale and detailed drawings, detail drawings should be worked from.
3. Copyright of this drawing is reserved by Osbornes and is issued on condition that it is not copied or disclosed to any third party either wholly or in part without the consent of Osbornes in writing.



SCHEDULE OF UNITS

UNIT	NUMBER OF BEDROOMS	NUMBER OF STOREYS	GROSS INTERNAL FLOOR AREA	ALLOCATED PARKING SPACES	SIZE OF REAR GARDEN
PLOT 1	3	2	95m <sup>2</sup>	2	123m <sup>2</sup>
PLOT 2	3	2	95m <sup>2</sup>	2	111m <sup>2</sup>
PLOT 3	3	2	95m <sup>2</sup>	2	88m <sup>2</sup>
PLOT 4	3	2	95m <sup>2</sup>	2	62m <sup>2</sup>
PLOT 5	3	2	95m <sup>2</sup>	2	97m <sup>2</sup>

4 No. additional Visitor parking spaces provided on site.

REV A: 20/09/2021 Drive way altered

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CLIENT MR IAIN WALL  
PROJECT 101 RESERVOIR ROAD  
TITLE PROPOSED SITE PLAN

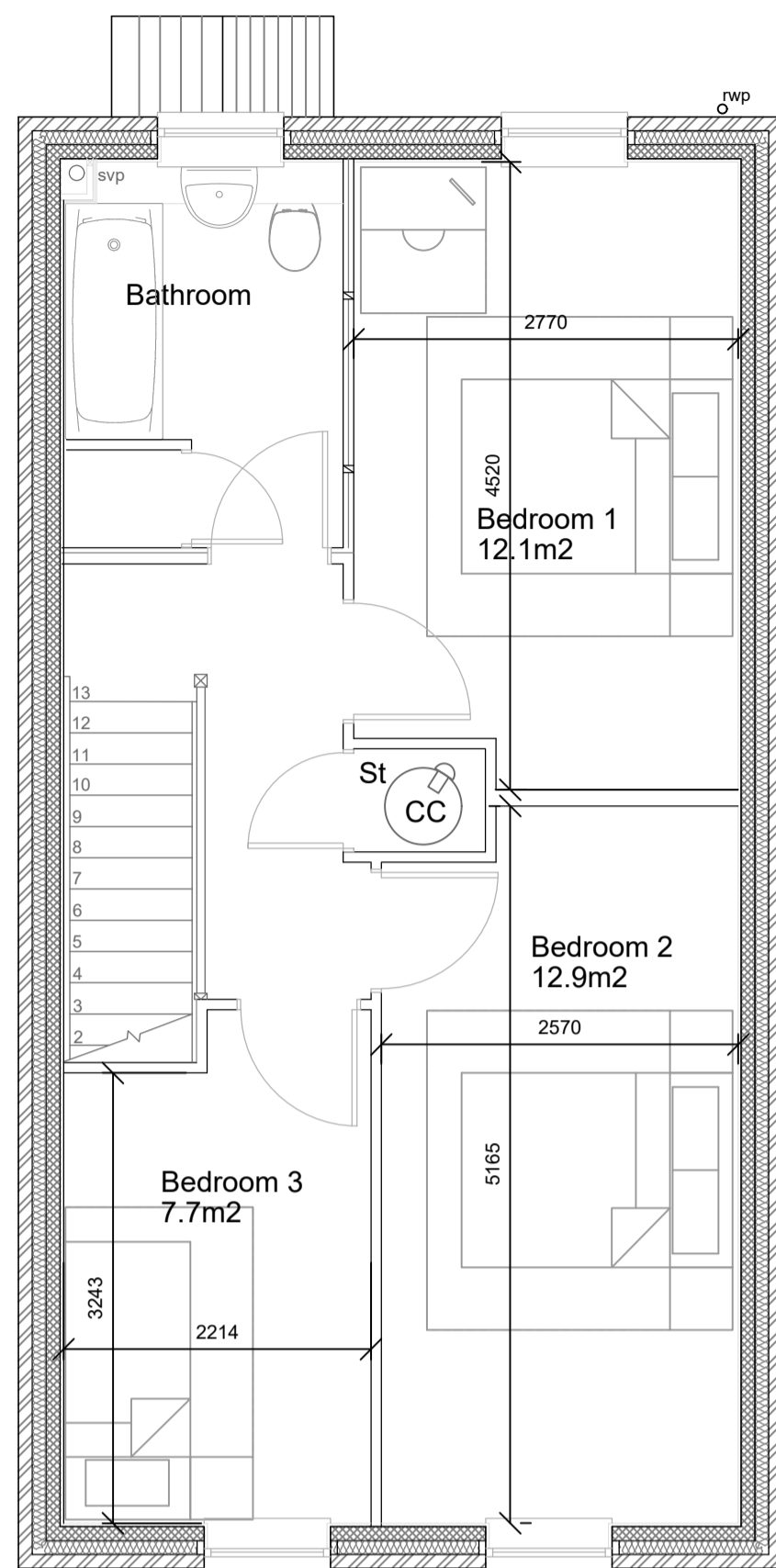
SCALE 1:200 @ A1  
DATE AUG 2021

DRAWN TL

DRAWING NUMBER 21-11-SP1A

GENERAL NOTES

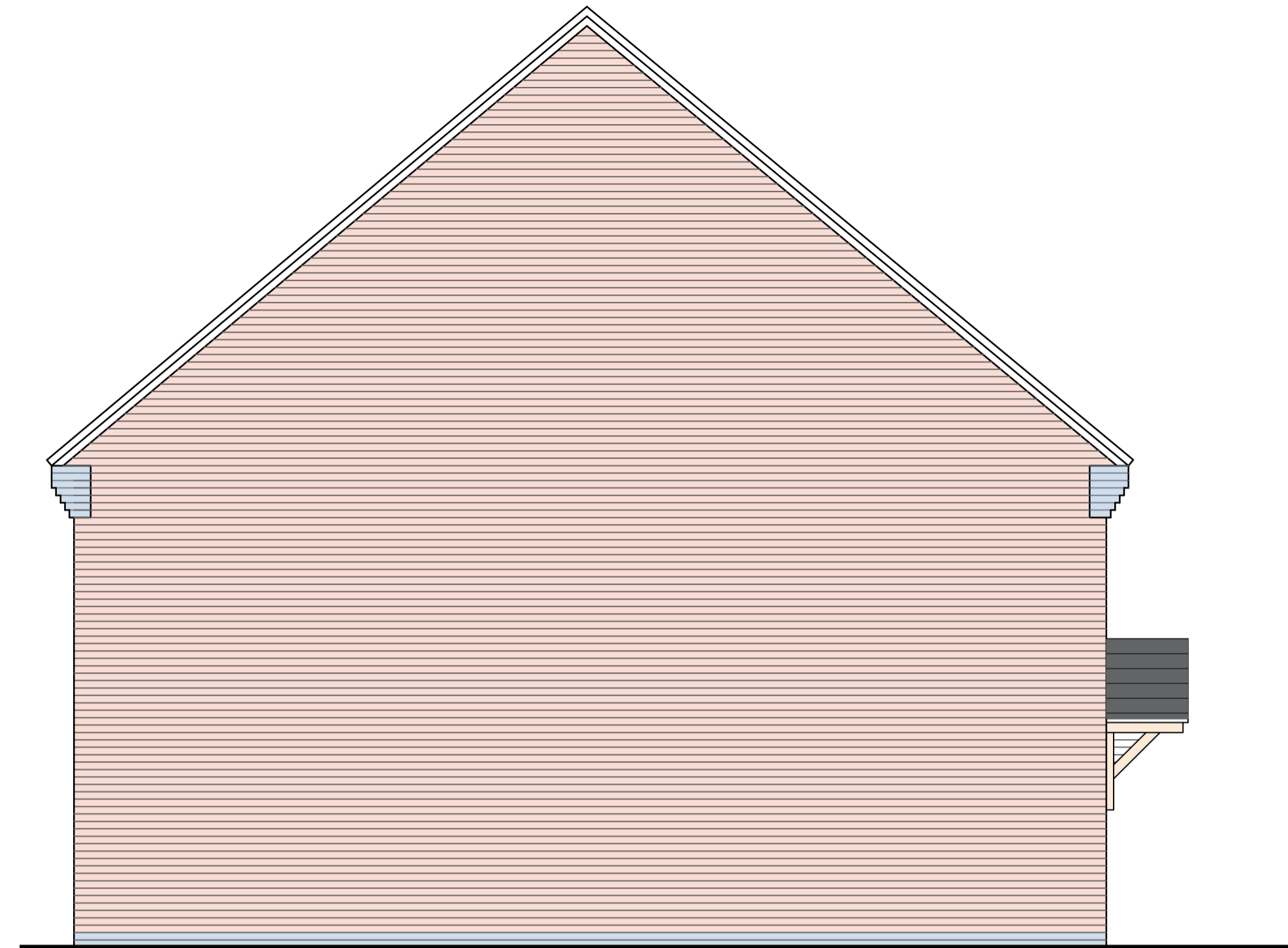
1. Do not scale from this print or use as a template.
2. All dimensions must be verified on site before any work is put in hand and any discrepancies must be reported to the Architect. Where any variations occur between small scale and detailed drawings, detail drawings should be worked from.
3. Copyright of this drawing is reserved by Osbornes and is issued on condition that it is not copied or disclosed to any third party either wholly or in part without the consent of Osbornes in writing.



PROPOSED FIRST FLOOR PLAN



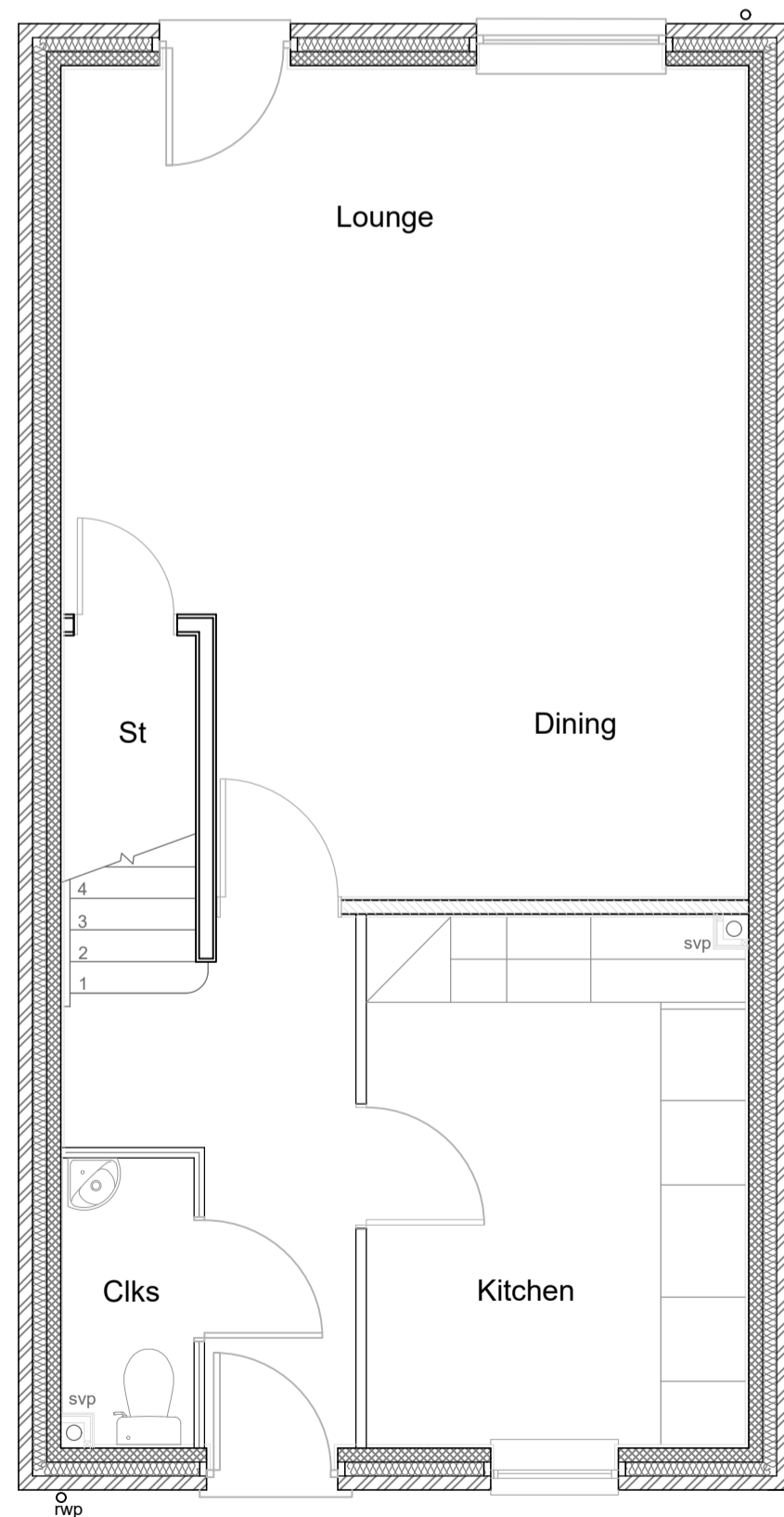
PROPOSED FRONT ELEVATION (NORTH)



PROPOSED SIDE ELEVATION (EAST)



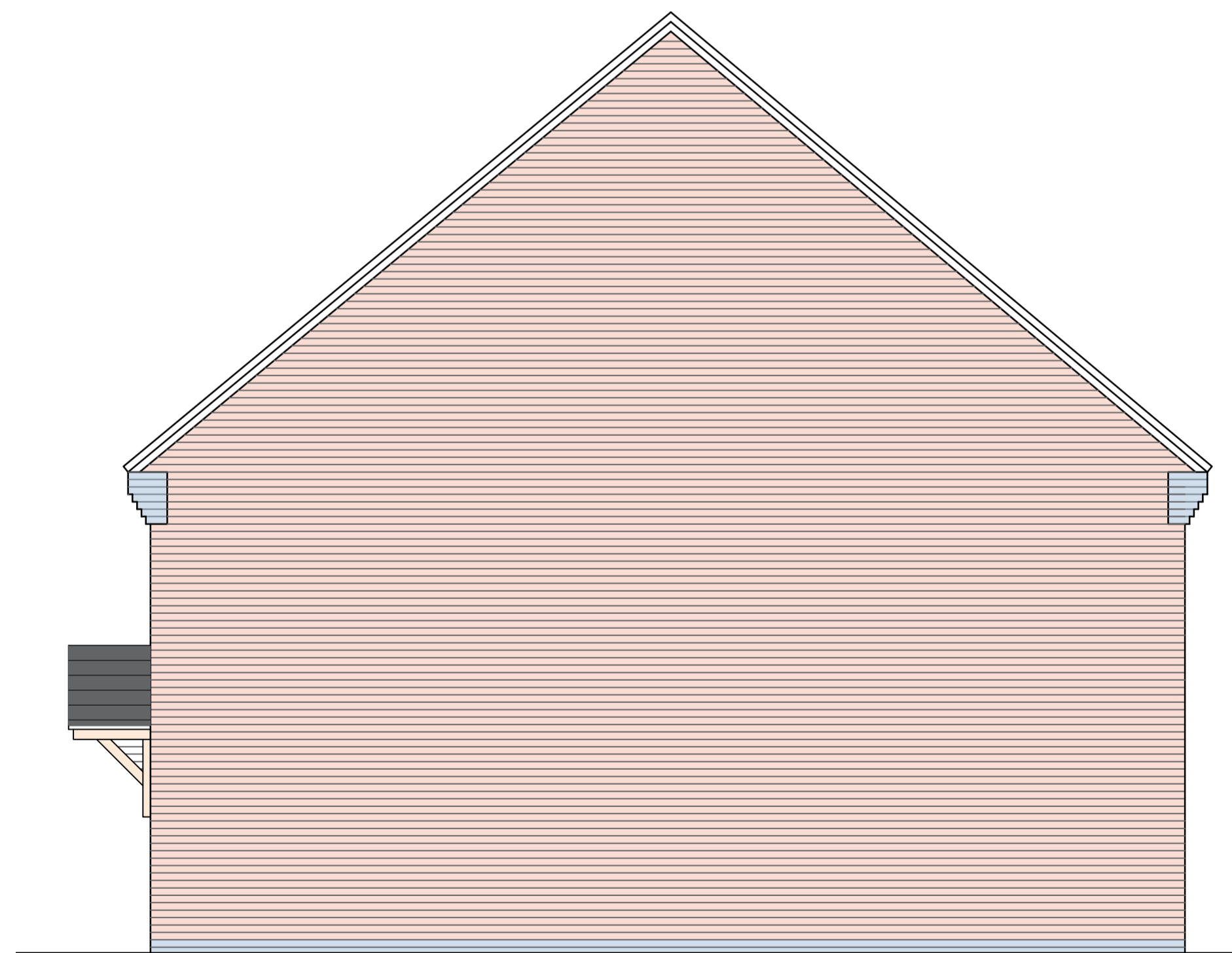
Materials	
External Walls - Wienerberger Abbeydale Red Multi 65mm, staffordshire blue brindle smooth 65mm.	
Roof - Marley Duo Plain Tile, smooth grey.	
Windows - UPVC in white	
Fascia - black upvc	



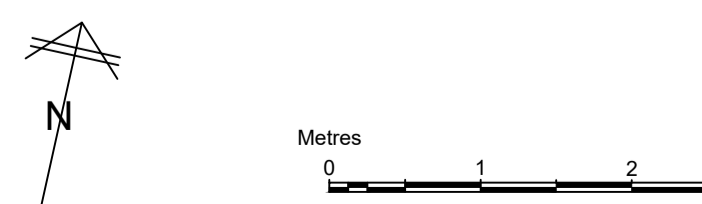
PROPOSED GROUND FLOOR PLAN



PROPOSED REAR ELEVATION (SOUTH)

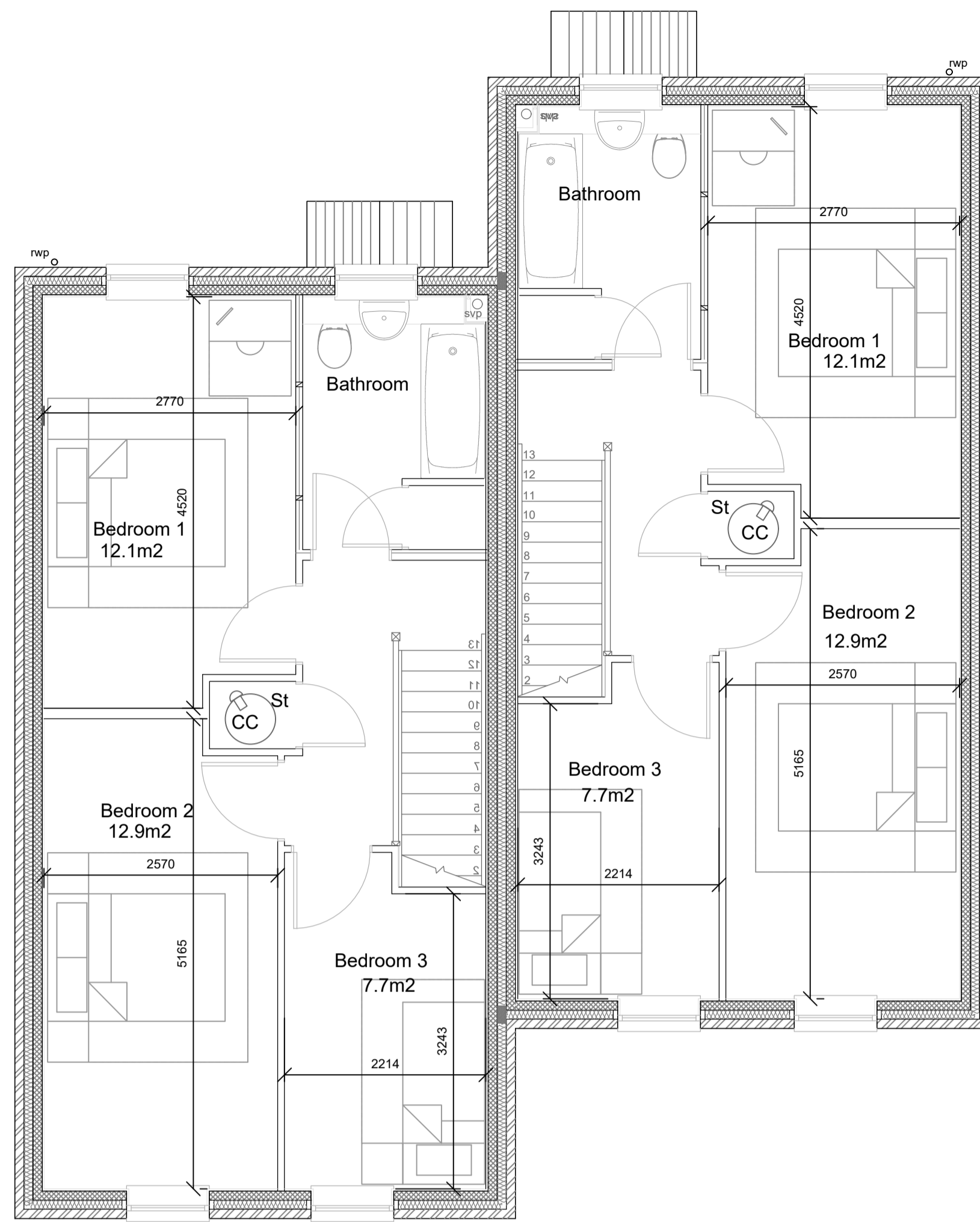


PROPOSED SIDE ELEVATION (WEST)



GENERAL NOTES

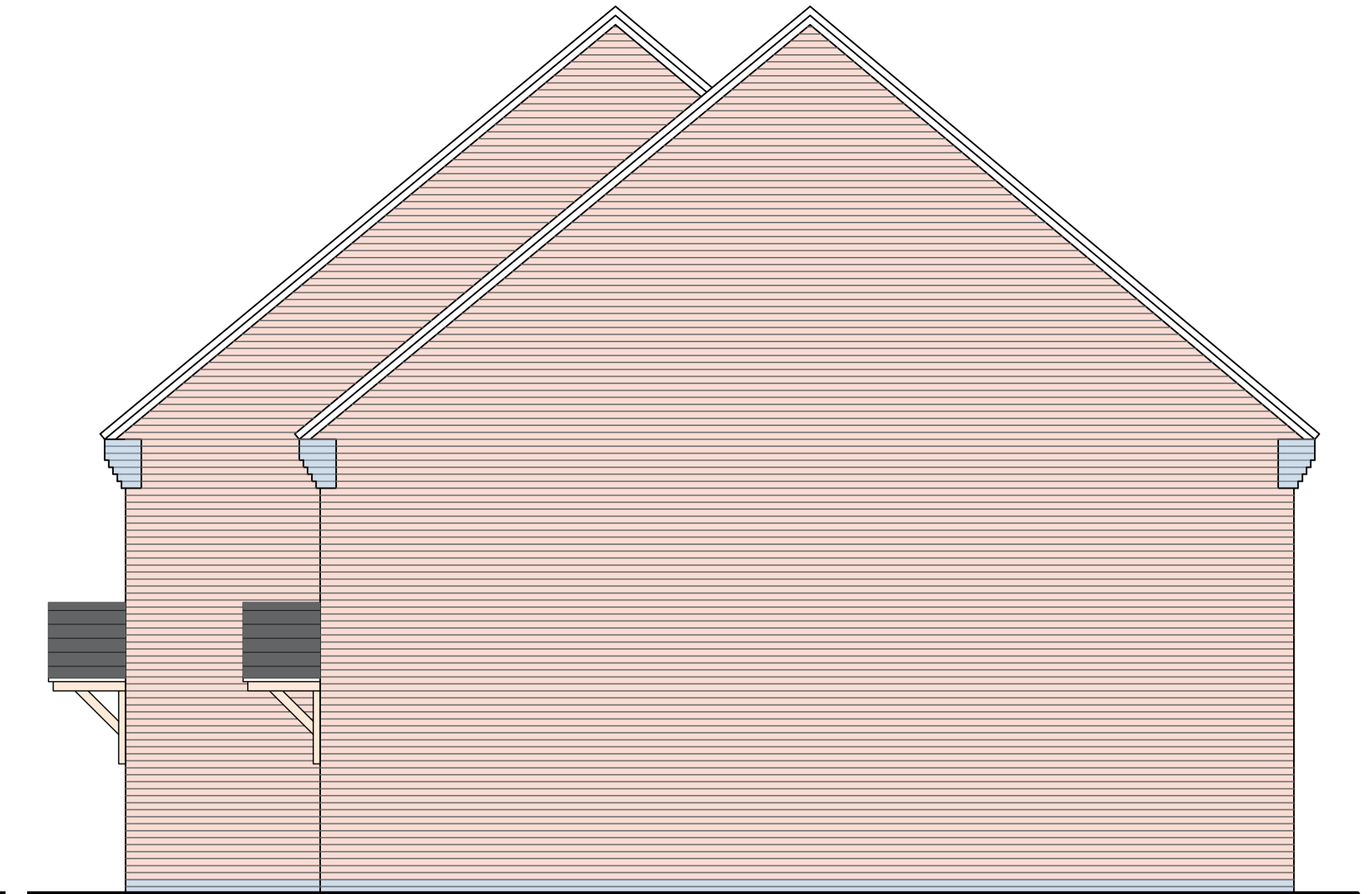
1. Do not scale from this print or use as a template.
2. All dimensions must be verified on site before any work is put in hand and any discrepancies must be reported to the Architect. Where any variations occur between small scale and detailed drawings, detail drawings should be worked from.
3. Copyright of this drawing is reserved by Osbornes and is issued on condition that it is not copied or disclosed to any third party either wholly or in part without the consent of Osbornes in writing.



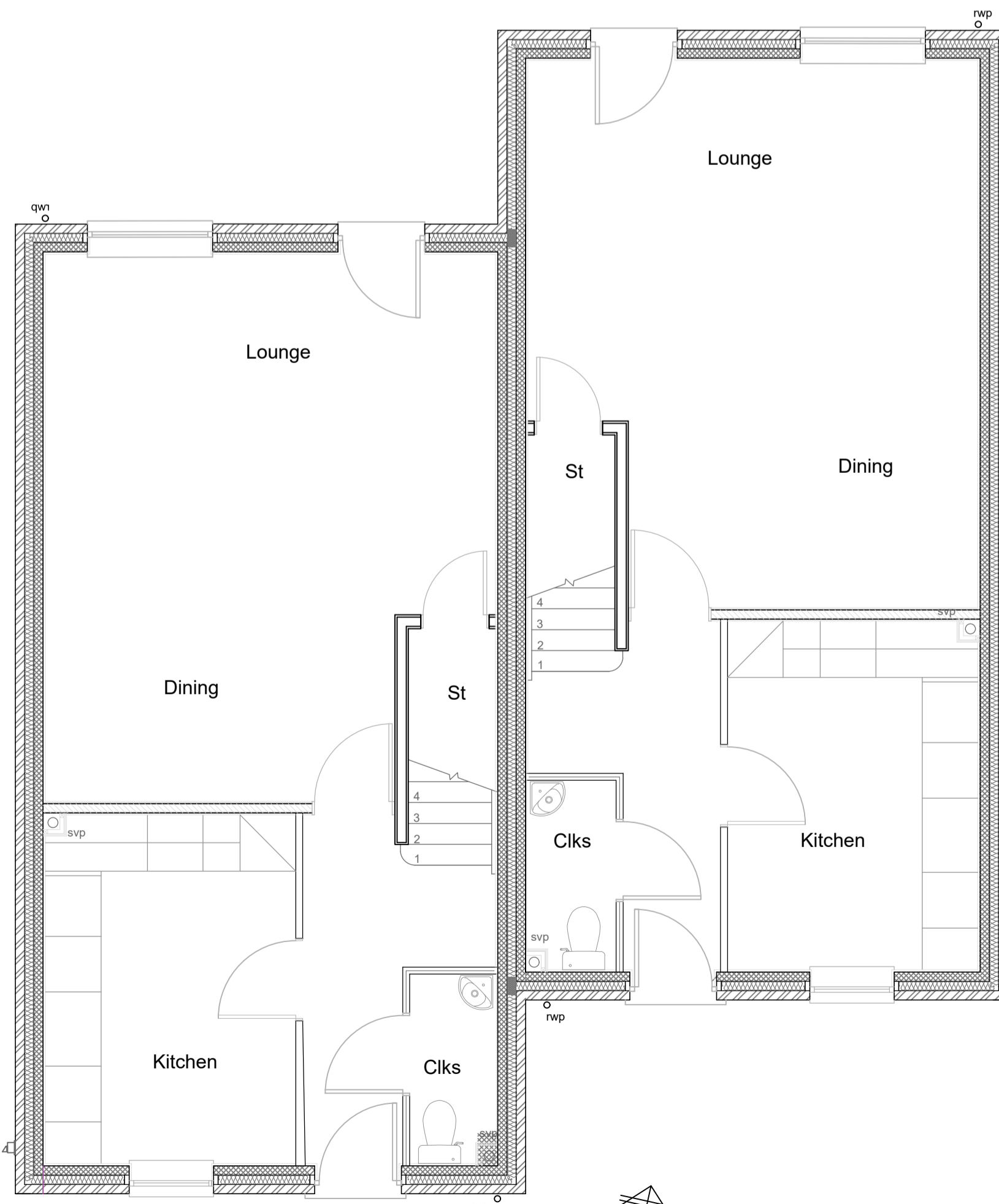
PROPOSED FIRST FLOOR PLAN



PROPOSED FRONT ELEVATION (NORTH)



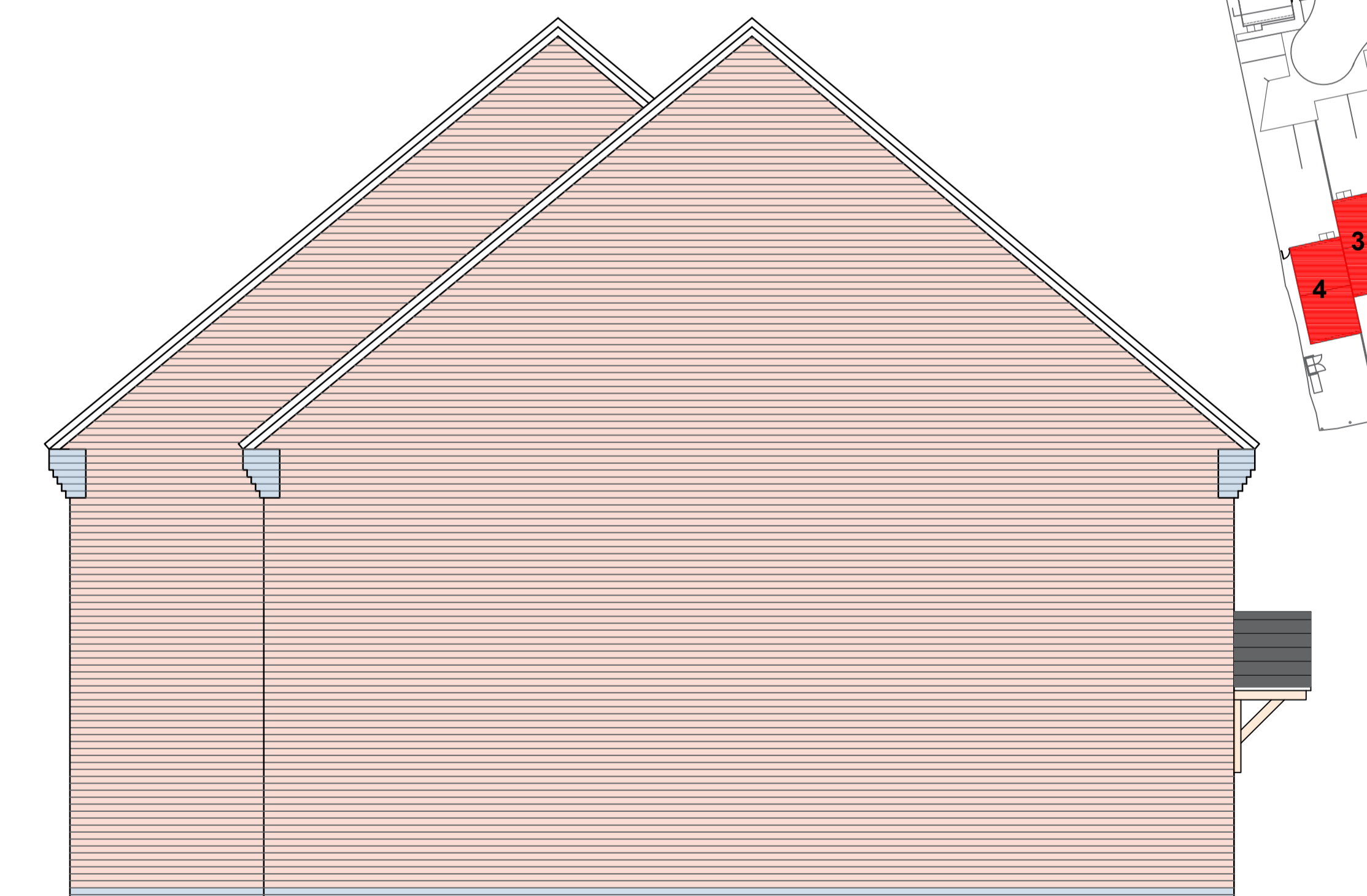
PROPOSED SIDE ELEVATION (EAST)



PROPOSED GROUND FLOOR PLAN

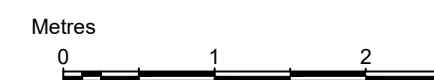
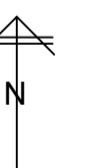
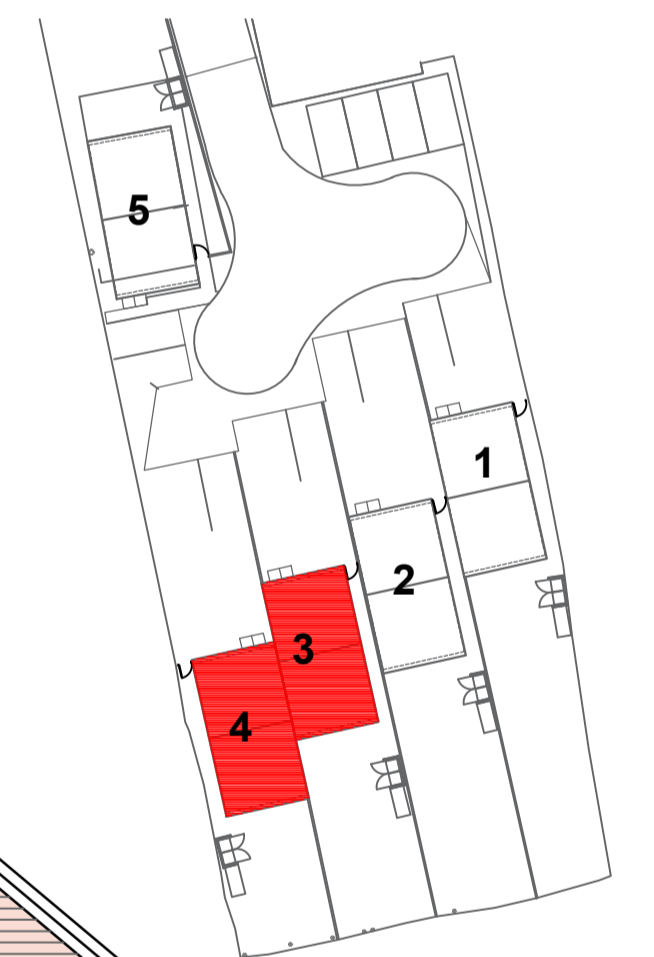


PROPOSED REAR ELEVATION (SOUTH)



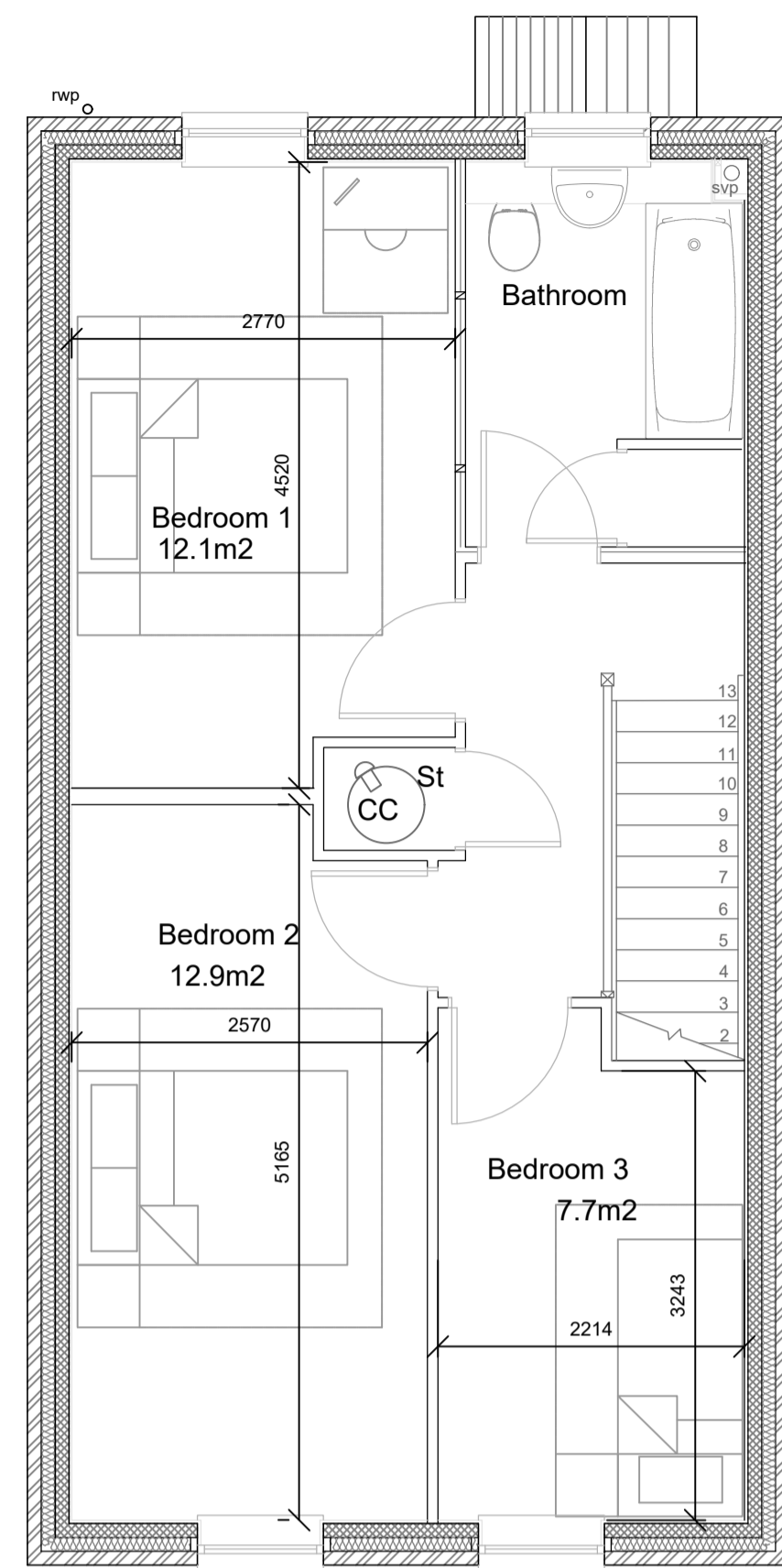
PROPOSED SIDE ELEVATION (WEST)

Materials	
External Walls -	Wienerberger Abbeydale Red Multi 65mm, staffordshire blue brindle smooth 65mm.
Roof -	Marley Duo Plain Tile, smooth grey.
Windows -	UPVC in white
Fascia -	black upvc



GENERAL NOTES

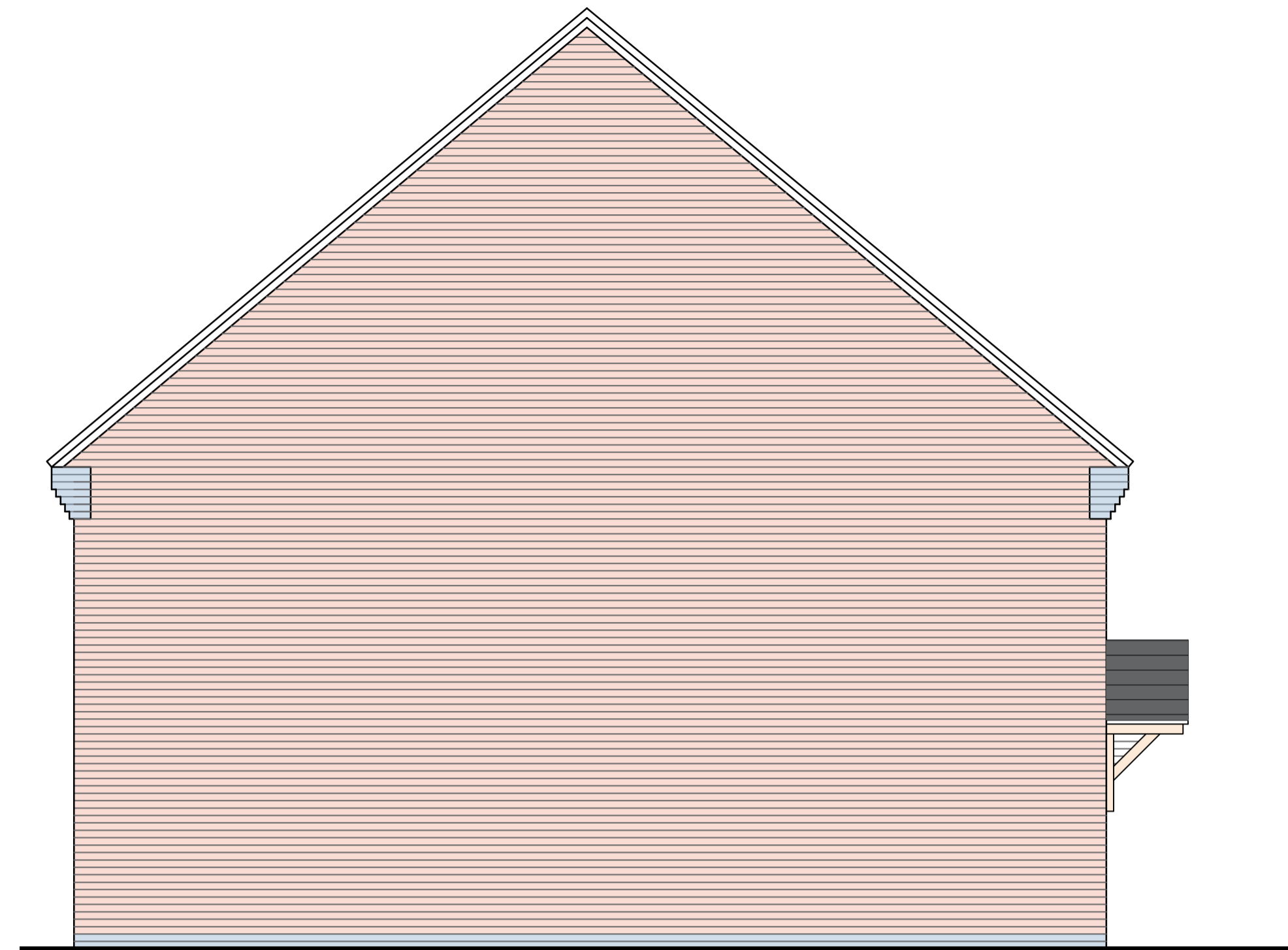
1. Do not scale from this print or use as a template.
2. All dimensions must be verified on site before any work is put in hand and any discrepancies must be reported to the Architect. Where any variations occur between small scale and detailed drawings, detail drawings should be worked from.
3. Copyright of this drawing is reserved by Osbornes and is issued on condition that it is not copied or disclosed to any third party either wholly or in part without the consent of Osbornes in writing.



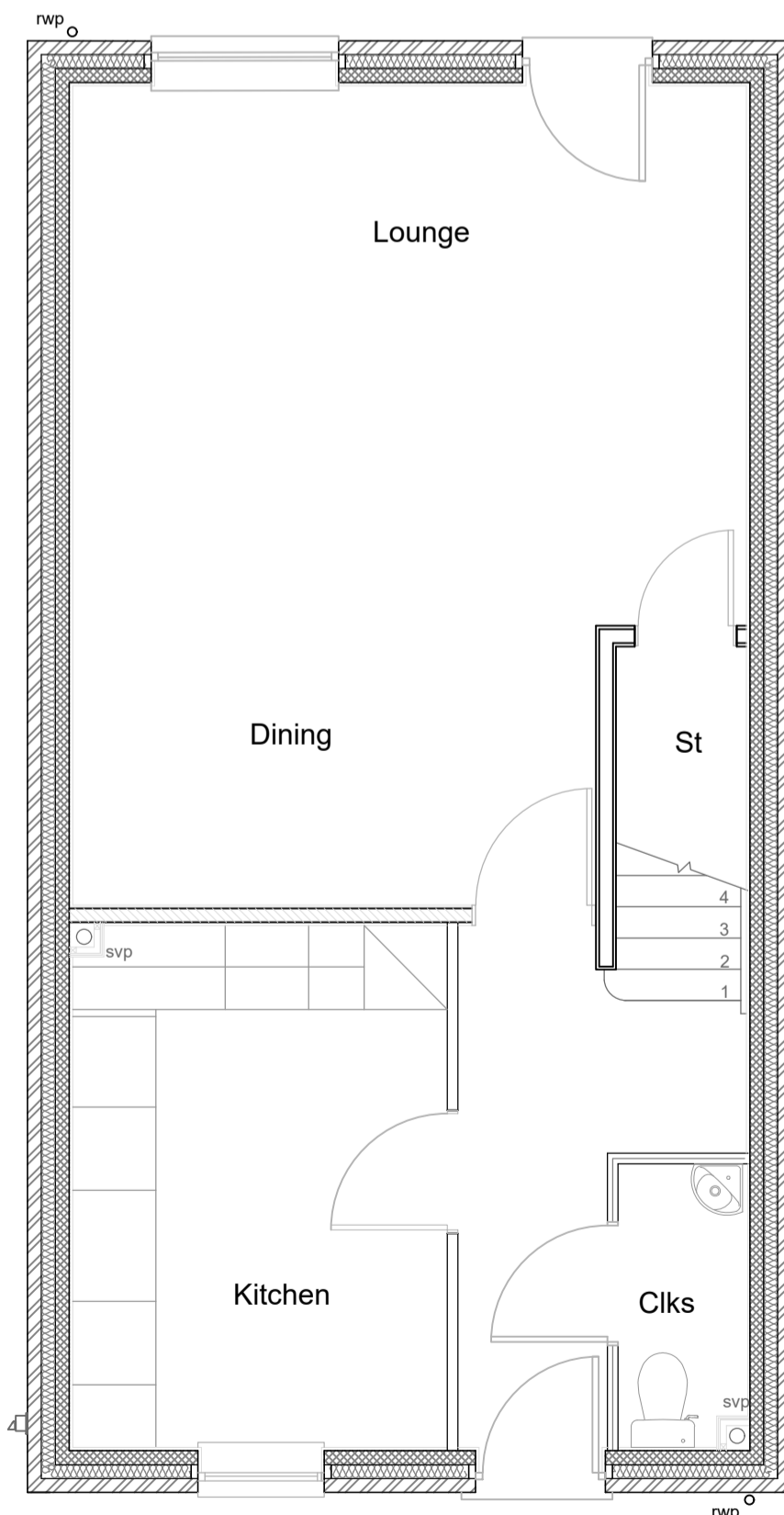
PROPOSED FIRST FLOOR PLAN



PROPOSED FRONT ELEVATION (SOUTH)



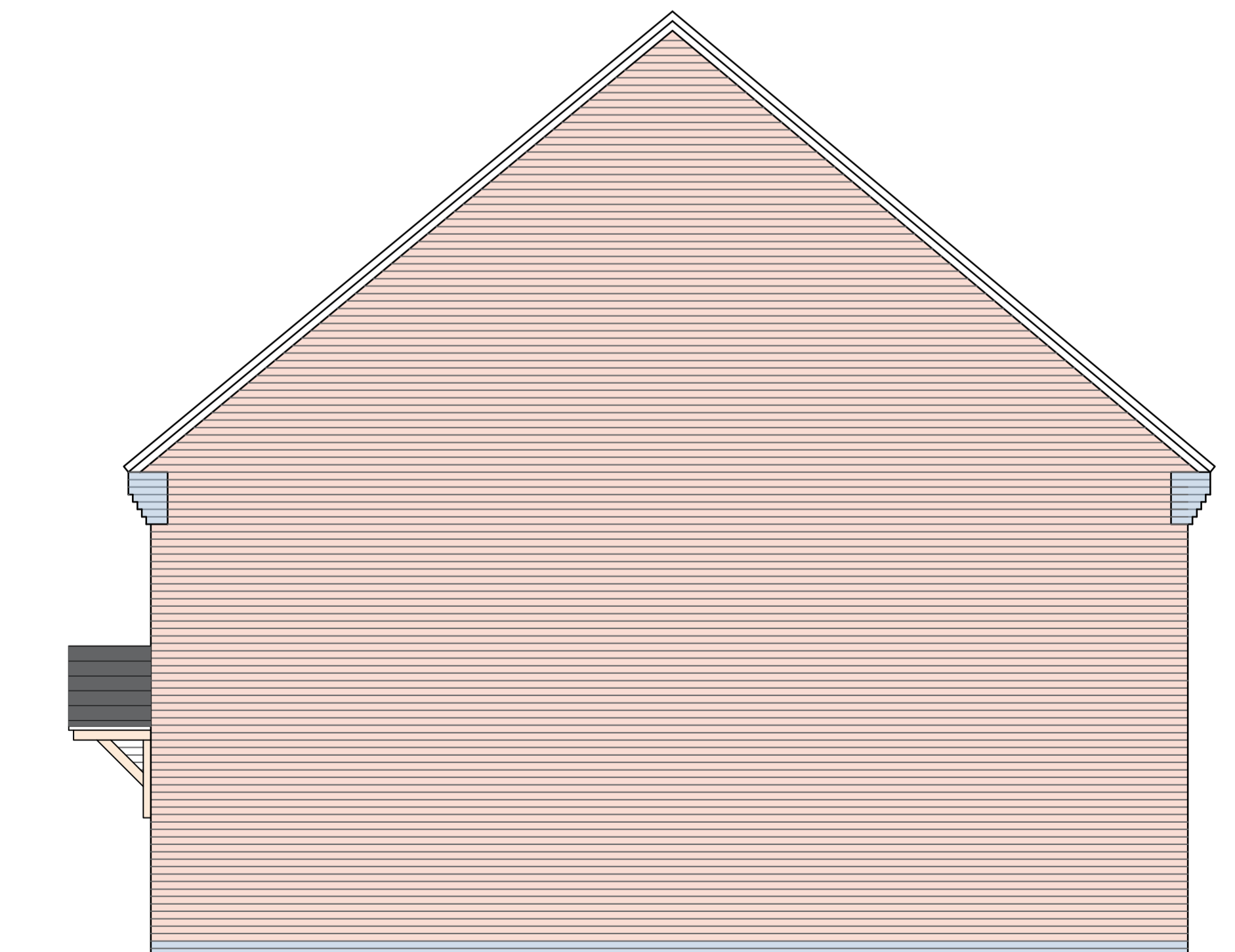
PROPOSED SIDE ELEVATION (WEST)



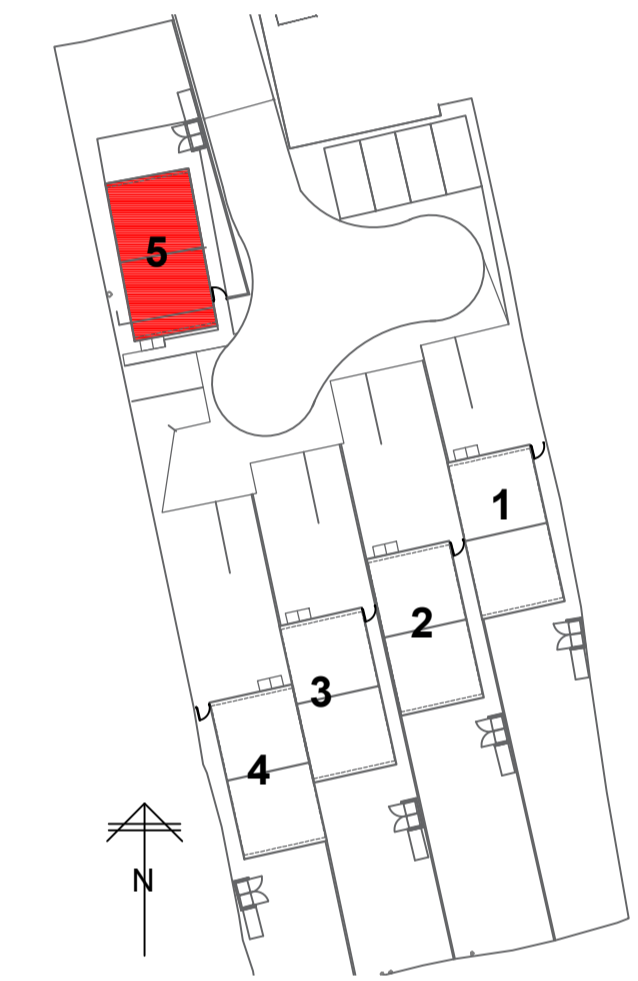
PROPOSED GROUND FLOOR PLAN



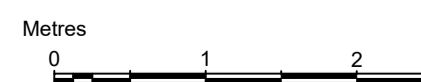
PROPOSED REAR ELEVATION (NORTH)



PROPOSED SIDE ELEVATION (EAST)



Materials	
External Walls - Wienerberger Abbeydale Red Multi 65mm, staffordshire blue brindle smooth 65mm.	
Roof - Marley Duo Plain Tile, smooth grey.	
Windows - UPVC in white	
Fascia - black upvc	



GENERAL NOTES

1. Do not scale from this print or use as a template.
2. All dimensions must be verified on site before any work is put in hand and any discrepancies must be reported to the Architect. Where any variations occur between small scale and detailed drawings, detail drawings should be worked from.
3. Copyright of this drawing is reserved by Osbornes and is issued on condition that it is not copied or disclosed to any third party either wholly or in part without the consent of Osbornes in writing.



PROPOSED FRONT ELEVATION (NORTH)

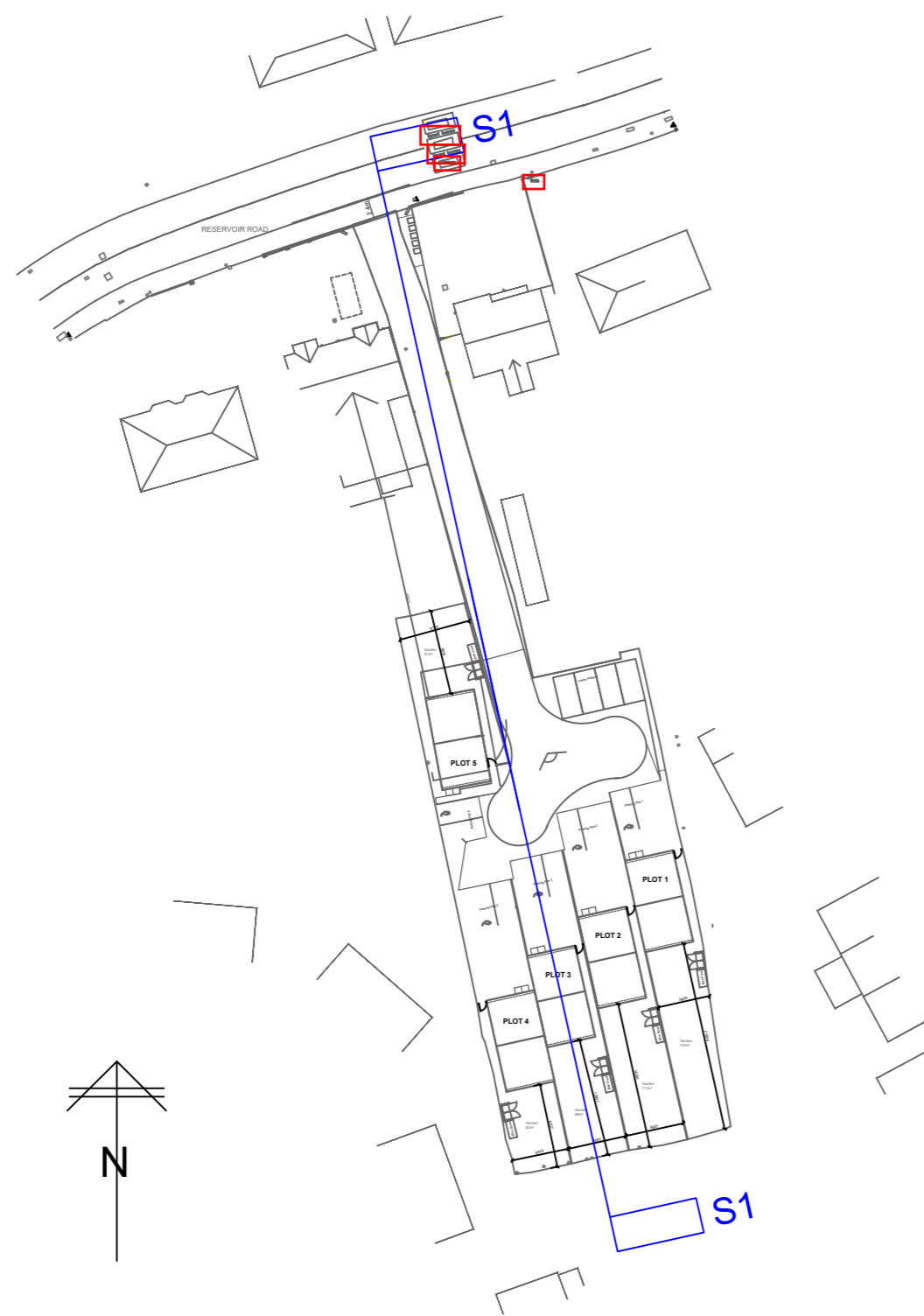
**OSBORNES** CHARTERED ARCHITECTS  
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CLIENT MR IAIN WALL  
PROJECT 101 RESERVOIR ROAD  
TITLE PROPOSED FRONT ELEVATIONS  
SCALE 1:50 @ A2  
DATE AUG 2021

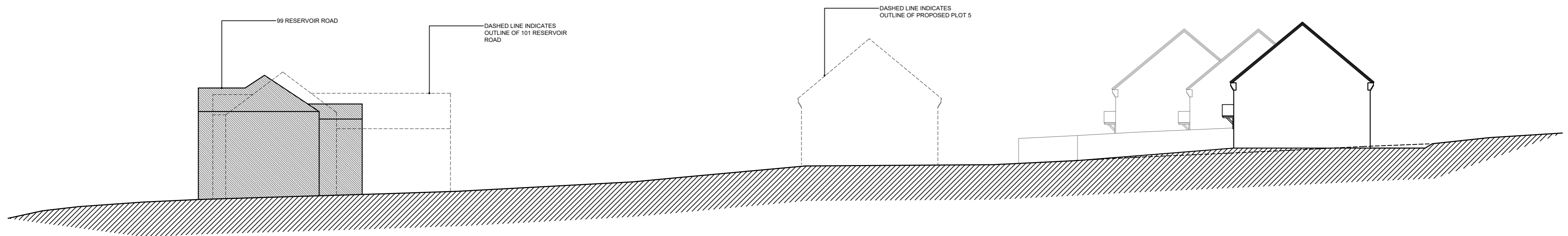
DRAWN TL DRAWING NUMBER 21-111-E1

GENERAL NOTES

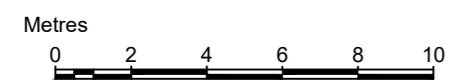
1. Do not scale from this print or use as a template.
2. All dimensions must be verified on site before any work is put in hand and any discrepancies must be reported to the Architect. Where any variations occur between small scale and detailed drawings, detail drawings should be worked from.
3. Copyright of this drawing is reserved by Osbornes and is issued on condition that it is not copied or disclosed to any third party either wholly or in part without the consent of Osbornes in writing.



PLAN



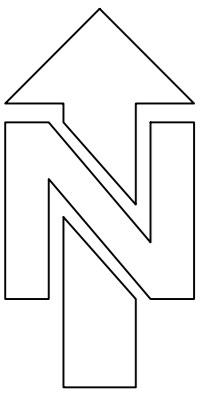
SITE SECTION S1 - S1  
1:200



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CLIENT MR IAIN WALL  
PROJECT 101 RESERVOIR ROAD  
TITLE SITE SECTION  
SCALE 1:200 @ A2  
DATE AUG 2021  
DRAWN TL

DRAWING NUMBER 21-111 - S1A



LEGEND

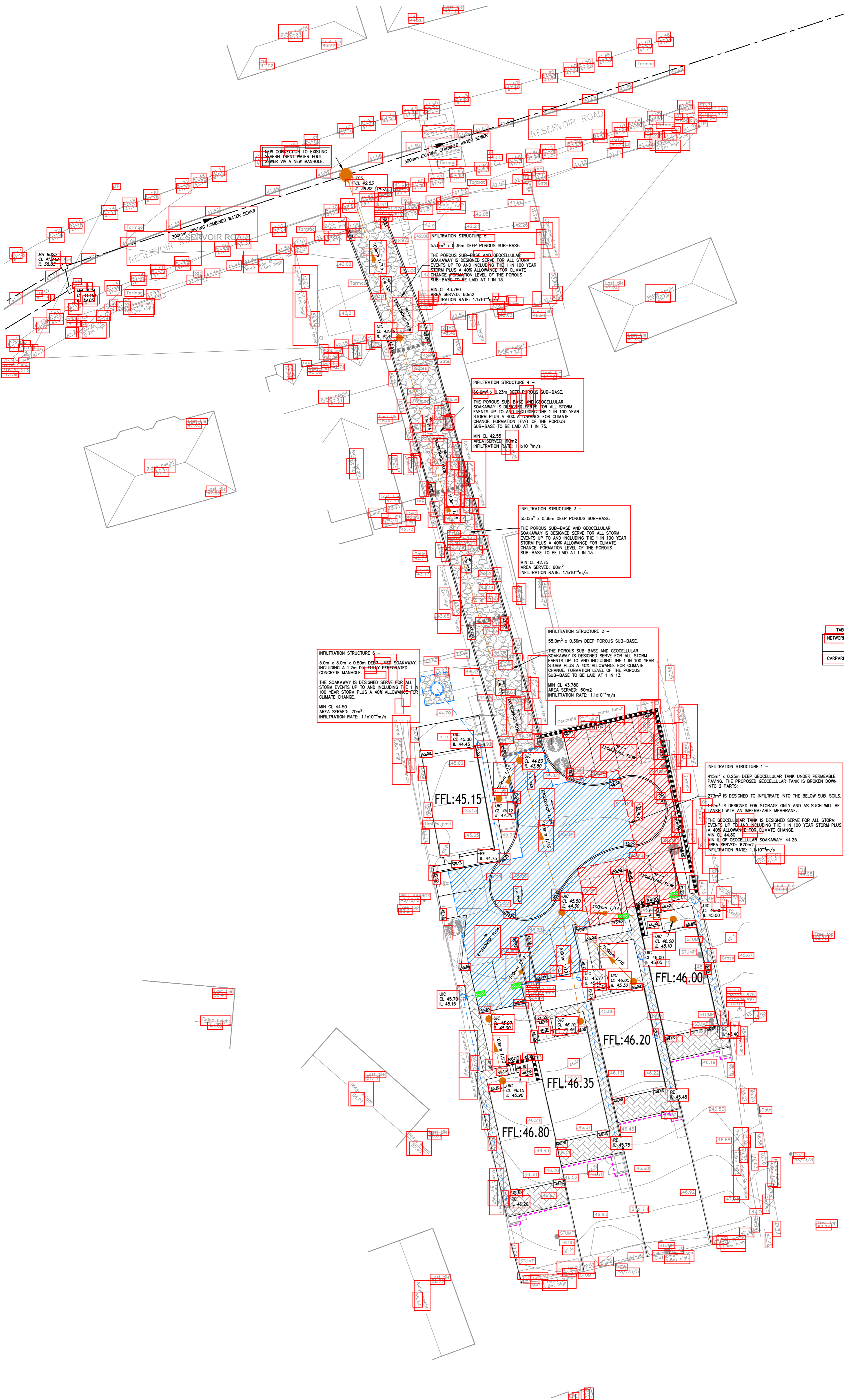
- FFL:45.65 Proposed finished floor level
- 45.31 Proposed level
- 1:2.14 Proposed gradient
- R600 Denotes approximate extent of retaining wall with max. retaining height shown.
- G Trapped yard gully
- RE Surface water rodding eye
- 100mm 1/700 Gravel filter strip
- 100mm 1/700 Foul water drain
- 100mm 1/700 Surface water drain
- SI Existing foul water pipe
- SI Surface water inspection chamber
- FI Foul water inspection chamber
- FI Foul water manhole
- Concrete baffle separating permeable sub-base.
- [Pattern] Denotes extent of permeable block paving driveway with a porous sub-base.
- [Pattern] Denotes extent of permeable paved patios
- [Pattern] Denotes extent of proposed geocellular soakaway beneath proposed permeable paving
- [Pattern] Denotes extent of proposed geocellular tank lined with an impermeable membrane beneath proposed permeable paving.
- [Pattern] Geocellular distributor box
- [Pattern] Flood exceedance route

DRAINAGE STRATEGY NOTES

1. Based on site investigation report 488/RS by Wilson Associates it is understood that infiltration is possible at shallow depths. A such it is considered suitable to use soakaways at shallow depths.
2. The surface water runoff from the proposed access road will be collected by the proposed permeable surfacing which will drain into the proposed porous sub-base beneath where it will infiltrate in the ground. The proposed porous sub-base has been designed to serve all storm events up to and including the 1 in 100 year storm event plus a 40% allowance for climate change.
3. The surface water runoff from the 4 plots to the south and the proposed turning head and parking areas will drain to a geocellular tank at shallow depths below the proposed turning head. Part of the proposed geocellular tank is to be lined with an impermeable membrane whilst the rest is to be unlined to allow infiltration. The geocellular tank has been designed to serve all storm events up to and including a 1 in 100 year event plus a 40% allowance for climate change.
4. The surface water runoff for the plot to the north of the proposed turning head will be collected via a traditional below ground drainage network and conveyed to a proposed lined soakaway within the rear garden of the plot. The soakaway is designed to serve all storm events up to and including the 1 in 100 year storm event plus a 40% allowance for climate change.
5. Water quality improvements are provided by the proposed porous sub-base. Table A shows the required and achieved pollution mitigation indices.
6. The foul water drainage generated from the proposed development will be conveyed to the north of the site via a traditional network of below ground drainage, and connected to a new manhole to be installed on the line of the existing Severn Trent Water sewer on Reservoir Road.

TABLE A: POLLUTION MITIGATION INDICES

NETWORK	USE	POLLUTION HAZARD INDEX			SUBS COMPONENT	POLLUTION MITIGATION INDEX		
		TSS	METALS	TPH		TSS	METALS	TPH
CARPARK	ROAD/PARKING	0.5	0.4	0.4	PERMEABLE SURFACING	0.7	0.6	0.7



MK	REVISION	BY	DATE

DRAWING STATUS  
**PRELIMINARY**

DRAWING TITLE  
**DRAINAGE STRATEGY**

PROJECT  
**99-101 RESERVOIR ROAD  
GLOUCESTER  
GL4 6SZ**



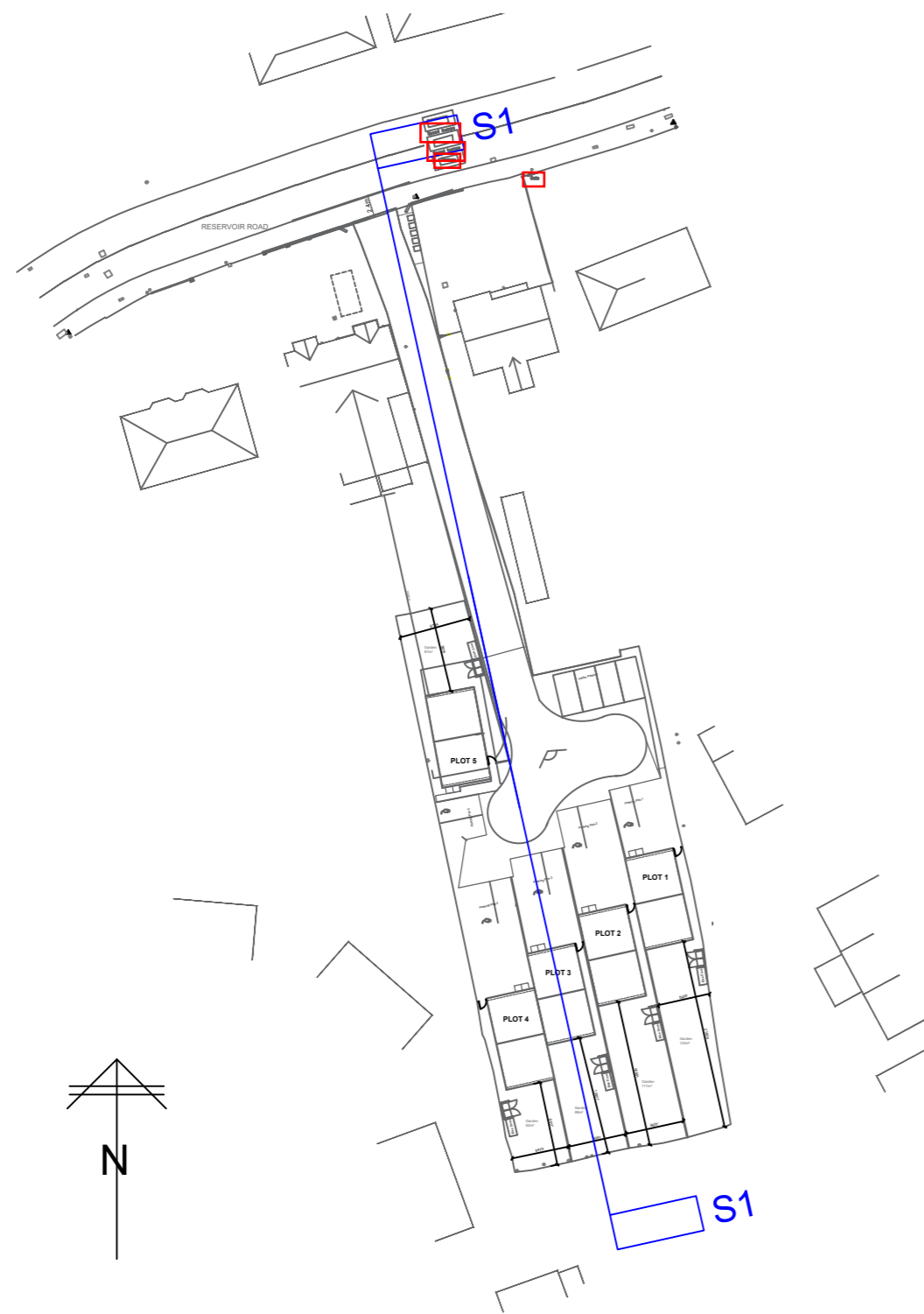
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Drawn: EL, Chkd: ADC, Scales: 1:200 @ A1, Date: OCT 2021

Purpose of Issue  
**PRELIMINARY**

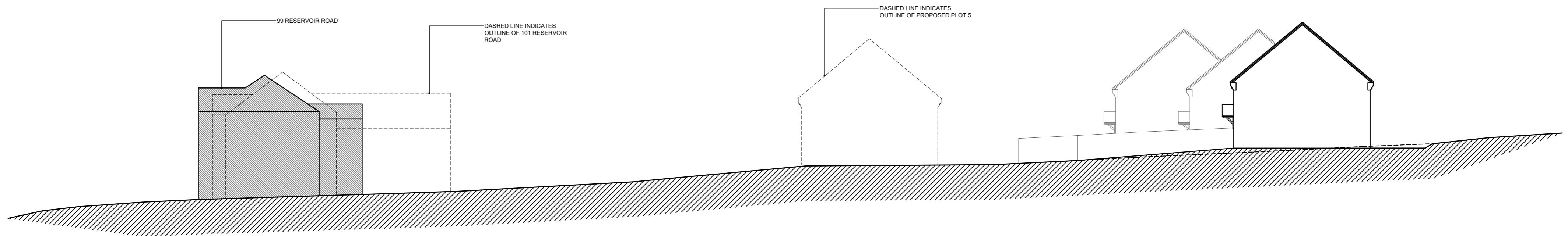
Project Number <b>P21-599</b>	Drawing Number <b>SK100</b>	Revision <b>-</b>
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GENERAL NOTES

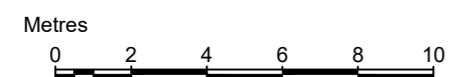
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PLAN



SITE SECTION S1 - S1  
1:200



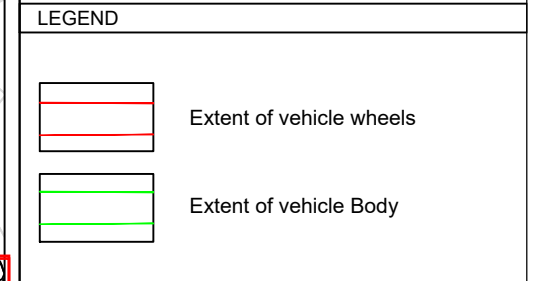
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CLIENT MR IAIN WALL  
PROJECT 101 RESERVOIR ROAD  
TITLE SITE SECTION  
SCALE 1:200 @ A2  
DATE AUG 2021  
DRAWN TL

DRAWING NUMBER 21-111 - S1A



**NOTES**  
 Drawing based on data supplied by Osbornes  
 Chartered Architects, drawing no 21-11-SPA1A, Dated  
 August 2021.



**VEHICLE DETAILS**

Dennis Sabre Fire Tender (LWB)	7.700m
Overall Length	2.430m
Overall Width	3.512m
Overall Body Height	0.397m
Min Body Ground Clearance	2.380m
Track Width	5.00s
Lock to lock time	7.400m
Kerb to Kerb Turning Radius	

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402.12095.00001.14.001.2.dwg