# WATER NEUTRALITY STATEMENT FOR A PROPOSED DEVELOPMENT AT EASTRIDGE LODGE, WINEHAM LANE, BOLNEY, WEST SUSSEX, RH17 5SD.

Planning Reference: TBD
H2Ogeo Reference: 20230714P1
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H2Ogeo
Hydrogeology & Environmental Consultancy
Tel: 07787 231455
Email: info@h2ogeo.co.uk
www: www.h2ogeo.co.uk

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# Executive Summary

H2Ogeo provided this Water Neutrality Statement to accompany a planning application for the proposed development of a two-bedroom Cottage in the grounds of Eastridge Lodge, Wineham Lane, Bolney, West Sussex, RH17 5SD.

With the mitigation and recommendations in place the Water Neutrality Statement demonstrates that the proposed development would not increase the rate of water abstraction for drinking water supplies above existing levels in the Arun Valley.

Fixtures and fittings will need to comply with at least Performance Level 3 of BREEAM in the Main House.

The proposed development will not contribute to an existing adverse effect upon the integrity of the internationally designated Arun Valley Special Area of Conservation, Special Protection Area and Ramsar sites by way of increased water abstraction.

# 1 Introduction

Natural England cannot, with certainty, conclude that the Sussex North Water Supply Zone, that includes water supply from a groundwater abstraction, is not having an adverse effect on the integrity of:

- Arun Valley Special Area Conservation (SAC);
- Arun Valley Special Protection Area (SPA); and
- Arun Valley Ramsar Site.

Natural England have advised that developments within this zone must not add to this impact.

The Local Planning Authority (LPA) have requested a Water Neutrality Statement is provided to accompany planning applications to demonstrate that the proposed development does not increase the rate of water abstraction for drinking water supplies above existing levels.

## 1.1 Scope of Work

H2Ogeo was contacted by the Client and requested to provide a proposal for a Water Neutrality Statement to support a planning application to be submitted to Horsham District Council (HDC) Local Planning Authority (LPA).

The Water Neutrality Statement aims to demonstrate that the proposed development will not *contribute to an existing adverse effect upon the integrity of the internationally designated Arun Valley Special Area of Conservation, Special Protection Area and Ramsar sites by way of increased water abstraction.*

The proposal was accepted and the Water Neutrality Statement is presented in this report.

A Statement of Limitations is presented at the start of this report.

## 1.2 Background

This Water Neutrality Statement (WNS) has been provided in support of a proposed planning application for the erection of a one two-bedroom cottage in the curtilage of Eastridge Lodge.

The planning drawings are presented in Annex A showing the proposed development.

## 1.3 Sussex North Water Resource Zone (WRZ)

Southern Water supplies water to Crawley Borough, Horsham District, the northern part of Chichester District, southern Waverley and the South Downs National Park from its Sussex North Water Resource Zone (WRZ).

Within the WRZ there are a number of water sources, one of which is the groundwater abstraction from the Hardham source, one of a number of groundwater and surface water abstractions around Pulborough[1] presented in Figure 1 along with the proposed site and boundary of the Sussex North WRZ.

The Hardham Groundwater abstraction is located approximately 21km west of the proposed site that lies in the Eastern boundary of the WRZ.

[1] https://www.horsham.gov.uk/__data/assets/pdf_file/0019/104482/EYP-JBAU-XX-XX-RP-EN-0001-A1-C03-Water_Neutrality_Assessment_Part_A.pdf

# 2 Site Location and Setting

The site address is Eastridge Lodge, Wineham Lane, Bolney, West Sussex, RH17 5SD.

The proposed development is centred on National Grid Reference: TQ 24090 21829 (Easting: 524090, Northing: 121829) and presented in Figure 2.

## 2.1 Existing Site

The existing site consists of lawn west of the Eastridge Lodge main house.

Eastridge Lodge is a six-bedroom property with a games room, stables, studio and double garage. The Lodge is made up of the main four-bed house and two one-bedroom apartments.

The apartments have had sporadic use over the past few years with more consistent use in recent months.

The Client has a swimming pool on site (20m$^3$ capacity) and operates a hair salon from the studio.

The existing building layout is presented in Annex A.

## 2.2 Proposed Development

The proposed development is for the construction on one two-bed residential cottage in the garden area of Eastridge Lodge.

The planning drawings are presented in Annex A.

### 2.2.1 Proposed Fixtures & Fittings

The proposed development will consist of a kitchen, utility room with WC, living room with snug, a family bathroom and two bedrooms, one with an ensuite bathroom.

The mains water consuming fixtures and fittings are summarised below:

*Table 1 Proposed Mains Water Fixtures & Fittings*

| ***Fixture*** | ***Number*** |
|---|---|
| WC | 3 |
| Taps (excluding kitchen/utility room taps) | 6 |
| Shower | 2 |
| Bath | 1 |
| Kitchen/Utility room sink taps | 1 |
| Washing Machine | 1 |
| Dishwasher | 1 |
| Outside Taps | 1 |

# 3 Baseline Water Consumption

This section outlines the existing baseline water consumption for the site.

## 3.1 Existing Demand

Since the first issue of this Water Neutrality Statement (November 2023) Water Bills have been obtained for the main house.

These show the baseline consumption and are presented in Annex C and summarised in the table below:

*Table 2 Summary of Water Bills - Eastridge Lodge*

| ***From*** | ***To*** | ***m3*** | ***Days*** | ***Litres/Day*** |
|---|---|---|---|---|
| 09/09/2020 | 18/03/2021 | 101 | 190 | 532 |
| 18/03/2021 | 08/09/2021 | 71 | 174 | 408 |
| 08/09/2021 | 09/03/2022 | 70 | 182 | 385 |
| 09/03/2022 | 24/08/2022 | 67 | 168 | 399 |
| 24/08/2022 | 29/03/2023 | 85 | 217 | 392 |
| 29/03/2023 | 12/09/2023 | 71 | 167 | 425 |
| | | | Max | 532 |
| | | | Min | 385 |
| | | | Average | 423 |

Whilst these bills represent consumption for the main house and the two apartments, swimming pool and hair dressing studio it should be noted that the apartments have only been sporadically occupied during this period[2].

The Part G Calculator has been used to calculate the domestic use for the site including the actual occupancy of the two apartments using the Base performance Level (BREEAM) for fixtures and fittings.

A summary of the fixtures and fittings is presented in the table below:

*Table 3 Existing Fixtures and Fittings*

| ***Fixtures/Fittings*** | ***Main House*** | ***Apartment 1*** | ***Apartment 2*** |
|---|---|---|---|
| WC | 3 | 1 | 2 |
| Taps | 6 | 2 | 4 |
| Bath | 2 | 1 | 0 |
| Shower | 3 | 1 | 1 |
| Kitchen Tap | 1 | 1 | 1 |
| Washing Machine | 1 | 1 | 1 |
| Dishwasher | 1 | 1 | 1 |

The calculator is presented in Annex B along with Table 8.3 of BREEAM NC Version 6.1 Performance Levels and results summarised below. Following consultation with the Local Authority (Email 3 January 2024), actual population numbers have been used to calculate the baseline as these are deemed more conservative than the census data.

[2] Reported by the Client 26/03/2024

The Client reports, at the time of writing, that the Main House is occupied by two people, Apartment 1 hosts one person and Apartment 2 two people:

*Table 4 Part G Calculator Results*

| ***Building*** | ***Bedrooms*** | ***Extrapolated Census Population[3]*** | ***Current On-site Population[4]*** | ***Part G Calculated Litres/Person/Day*** | ***Litres/Day*** |
|---|---|---|---|---|---|
| Main House | 4 | **2.86** | 2.00 | 151.9 | 303.8 Modelled *(423 L/Day Actual Billed Average)* |
| Apartment 1 | 1 | **1.32** | 1.00 | 151.9 | 151.9 |
| Apartment 2 | 1 | **1.32** | 2.00 | 145.3 | 290.6 |
| Total | 6 | **5.50** | 5.00 | NA | 746.3 *(941.50 Litres/Day)* |

The swimming pool on site is 5m diameter and 1m deep, it has a capacity of approximately 20m$^3$. The pool is filled once a year, during the Summer months, equating to 55 litres/day when pro-rated over a year.

The hair salon operates in the studio and reportedly consumes 50 litres/day. For conservatism it has been assumed the salon operates three days a week, therefore the salon's consumption equals 21 Litres/Day pro-rated over a year.

*Table 5 Salon Water Consumption*

| ***Litres/Day*** | ***3 days a week*** | ***Litres/Year*** | ***Pro-Rated Litres/Day*** |
|---|---|---|---|
| 50 | 150 | 7800 | 21 |

The total mains water consumption is presented in the Table below:

*Table 6 Baseline Eastridge Lodge Water Consumption*

| ***Water Use*** | ***Litres/Day*** |
|---|---|
| Main House | 423.0 |
| Apartment 1 | 151.9 |
| Apartment 2 | 290.6 |
| Swimming Pool | 55 |
| Hair Salon | 21 |
| Total Daily Consumption | 941.5 |

**The mains water consumption baseline for the site is 941.5 Litres/Day.**

## 3.2 Proposed Demand

The proposed mains water demand for a new t-bed cottage has been calculated using the Part G Calculator and Performance Level 3 (BREEAM) fixtures and fittings.

The calculated mains water consumption is 91 Litres/Person/Day.

The Part G Calculator is presented in Annex B and summarised below:

Population x Litres/Person/Day = 1.88 people x 91 Litres/Person/Day = 171.08 Litres/Day.

[3] Population numbers are based on extrapolated 2011 census data.
[4] At the time of writing.

*Table 7 Summary of Proposed 2-Bedroom Mains Water Consumption*

| ***Part G Calculated (Litres/Person/Day)*** | ***Population 2-Bedroom Cottage*** | ***Mains Water Consumption (Litres/Day)*** |
|---|---|---|
| 91 | 1.88 | 171.08 |

## 3.3 Baseline Summary

The existing property on site consumes a baseline total of 941.5 Litres/Day, with the proposed development it would consume 1112.58 Litres/Day.

Without mitigation the proposed development would not be water neutral, the following section outlines the mitigation measures required to achieve water neutrality.

# 4 Mitigation Measures

The proposed development, without mitigation would not be water neutral therefore the following mitigation measures are proposed:

- Removal and decommissioning of the swimming pool;
- Termination of the hair salon operations; and
- Upgrade fixtures and fittings within the main house to Performance Level 3 under BREEAM Water Consumption Levels.

### 4.1.1 Swimming Pool

By decommissioning the existing swimming pool 50 Litres/Day will be saved.

### 4.1.2 Termination of Hair Salon

The hair salon currently (pro-rated) uses 21 Litres/Day. The business will cease as a result of the proposed two-bedroom development and therefore saving 7,665 Litres/Year.

### 4.1.3 Upgrading Fixtures and Fittings

It is proposed to upgrade all mains water fixtures and fittings in the main house to Performance Level 3 under the BREEAM standards.

A Part G calculator has been completed to assess the volume of water that could be mitigated in the Main House.

The calculator is presented in Annex B and summarised below:

*Table 8 Summary Performance Levels and Main House Consumption*

| ***Existing Base Performance Level (Litres/Person/Day)*** | ***Existing Base Performance Level (Litres/Day)*** | ***Proposed Performance Level 3 (Litres/Person/Day)*** | ***Proposed Performance Level 3 (Litres/Day)*** | ***Litres/Day Mitigation*** |
|---|---|---|---|---|
| 151.9 | 303.8 | 91.00 | 182 | 121.8 |

121.8 Litres/Day will be saved through upgrading the fixtures and fittings in the mains house to Performance level 3 using a population of 2.

## 4.2 Mitigation Summary

The total mitigation achievable on site through decommissioning the swimming pool, terminating the hair salon and upgrading fixtures and fittings in the Main House are summarised below:

*Table 9 Mitigation Summary*

| ***Existing Base Performance Level (Litres/Day)*** | ***Mitigation Measure*** | ***Water Saving (Litres/Day)*** |
|---|---|---|
| 822.3 | Decommission Swimming Pool | -50 |
| | Terminating Hair Salon | -21 |
| | Upgrading Main House Fixtures and Fittings to Performance Level 3 | -121.8 |
| Total | | -192.8 |

# 5 Conclusion

The existing mains consumption on site for the main house, two apartments, swimming pool and hair salon is 822.3 Litres/Day.

The proposed development would consume 171.08 Litres/Day. With the three mitigation measures implemented the total site's mains water consumption would be 629.5 Litres/Day and therefore achieve water neutrality, the results are summarised below:

*Table 10 Water Neutrality Summary*

| ***Existing Baseline Consumption (L/Day)*** | ***Proposed Development Mains Consumption (Litres/Day)*** | ***Total Mains Consumption Without Mitigation (Litres/Day)*** | ***Total Mains Consumption With Mitigation (Litres/Day)*** | ***Water Neutrality Achieved*** |
|---|---|---|---|---|
| 941.50 | 171.08 | 1112.58 | 919.78 | **YES** |

This Water Neutrality Statement demonstrates that, with the suggested mitigation, the proposed development will reduce the overall mains water consumption and therefore will not contribute to an existing adverse effect upon the integrity of the internationally designated Arun Valley Special Area of Conservation, Special Protection Area and Ramsar sites by way of increased water abstraction.

This development would be water neutral.

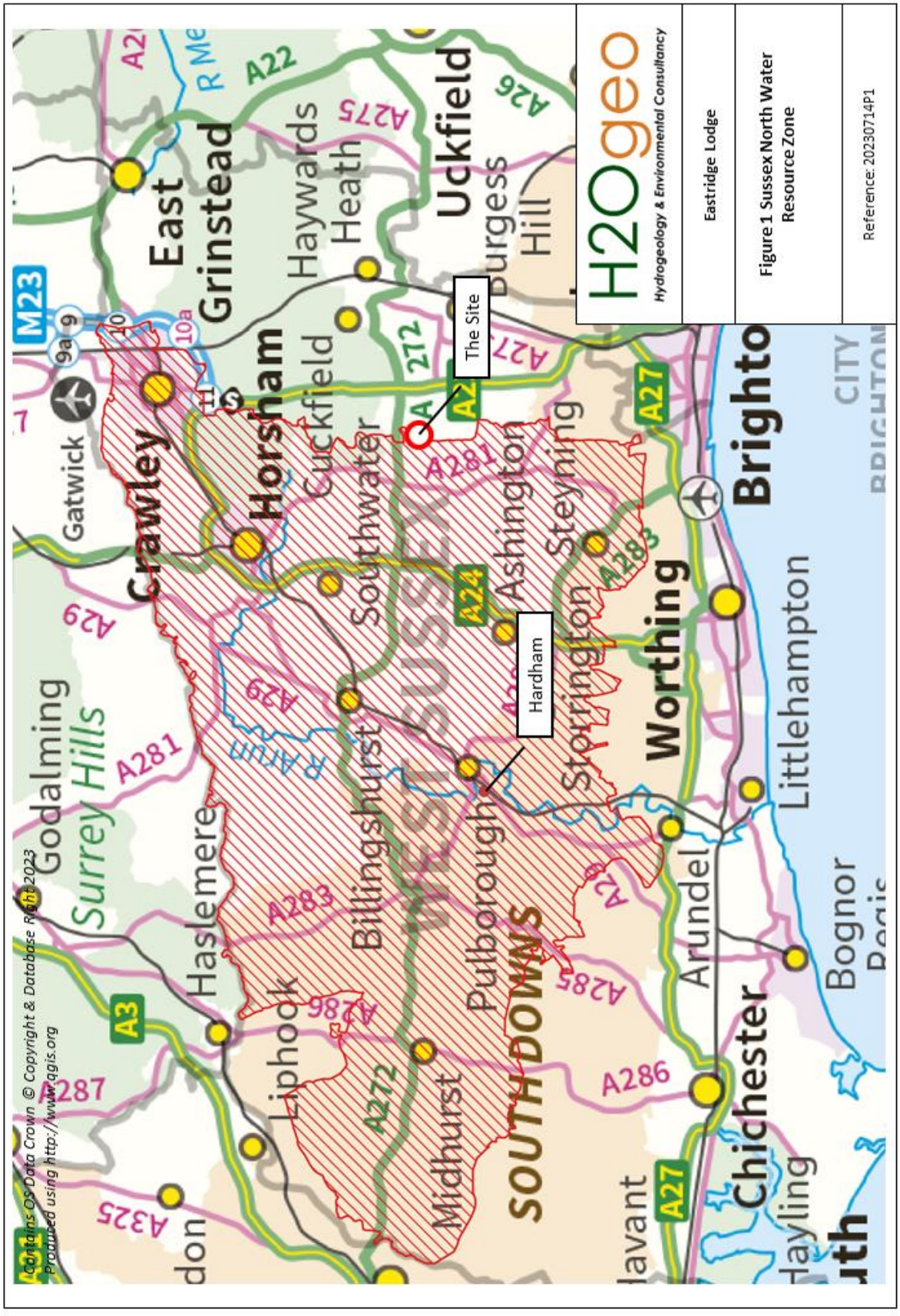
# 6 Figures

Figure 1 Sussex North WRZ

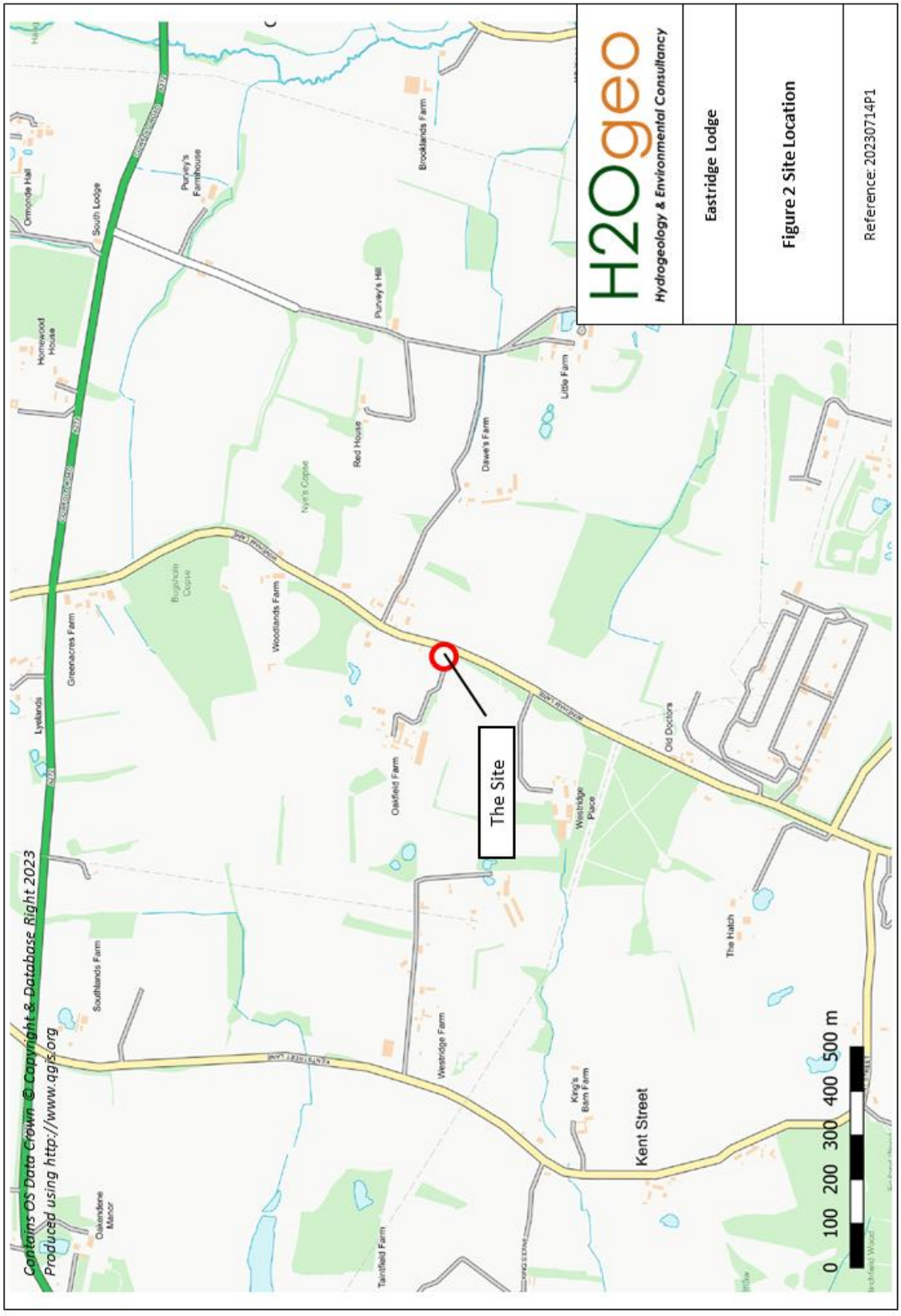
Figure 2 Site Location

Figure 3 Photos of Fixtures and Fittings

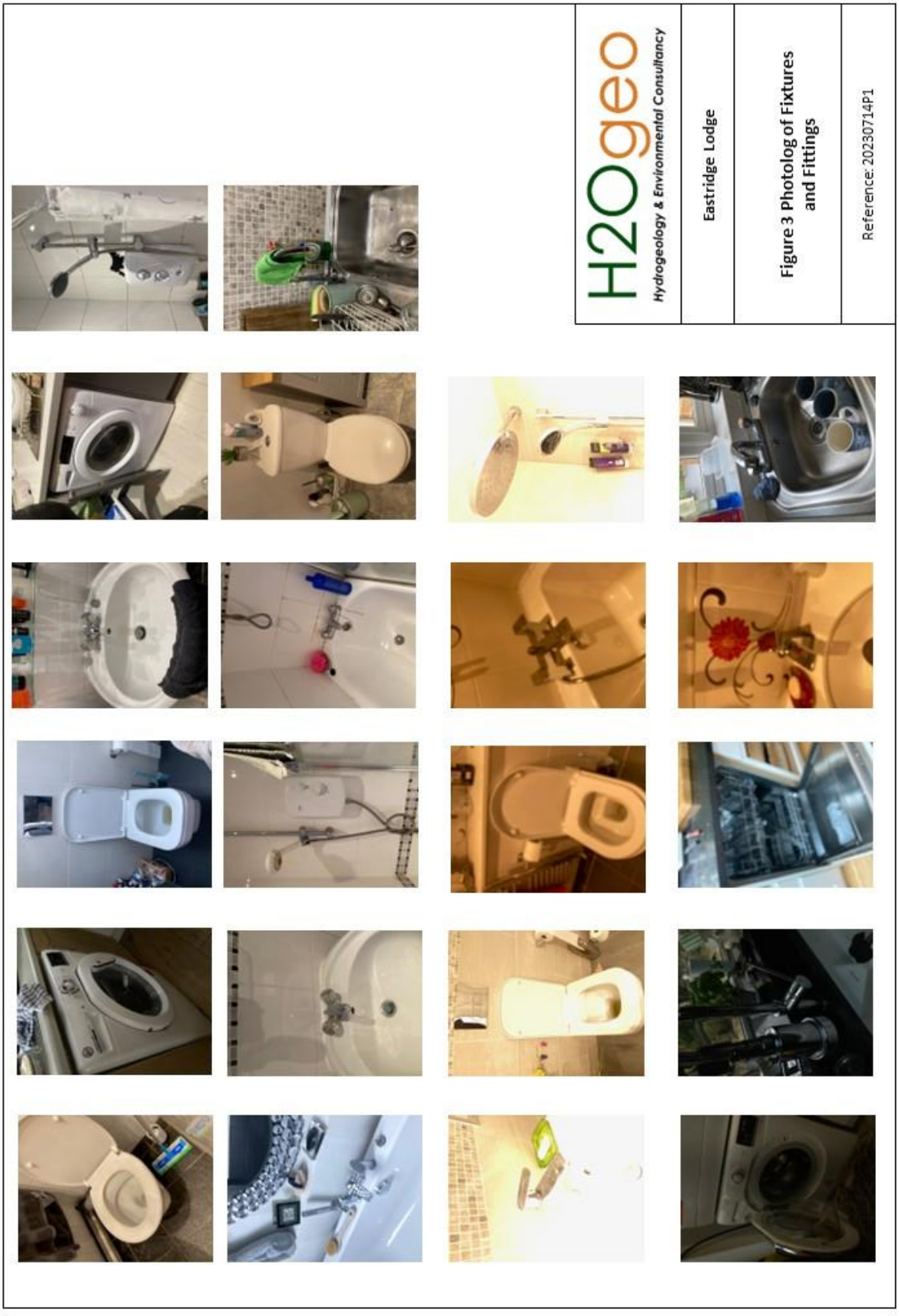
Figure 1 Sussex North WRZ



## Figure 2 Site Location



## Figure 3 Photos of Fixtures and Fittings



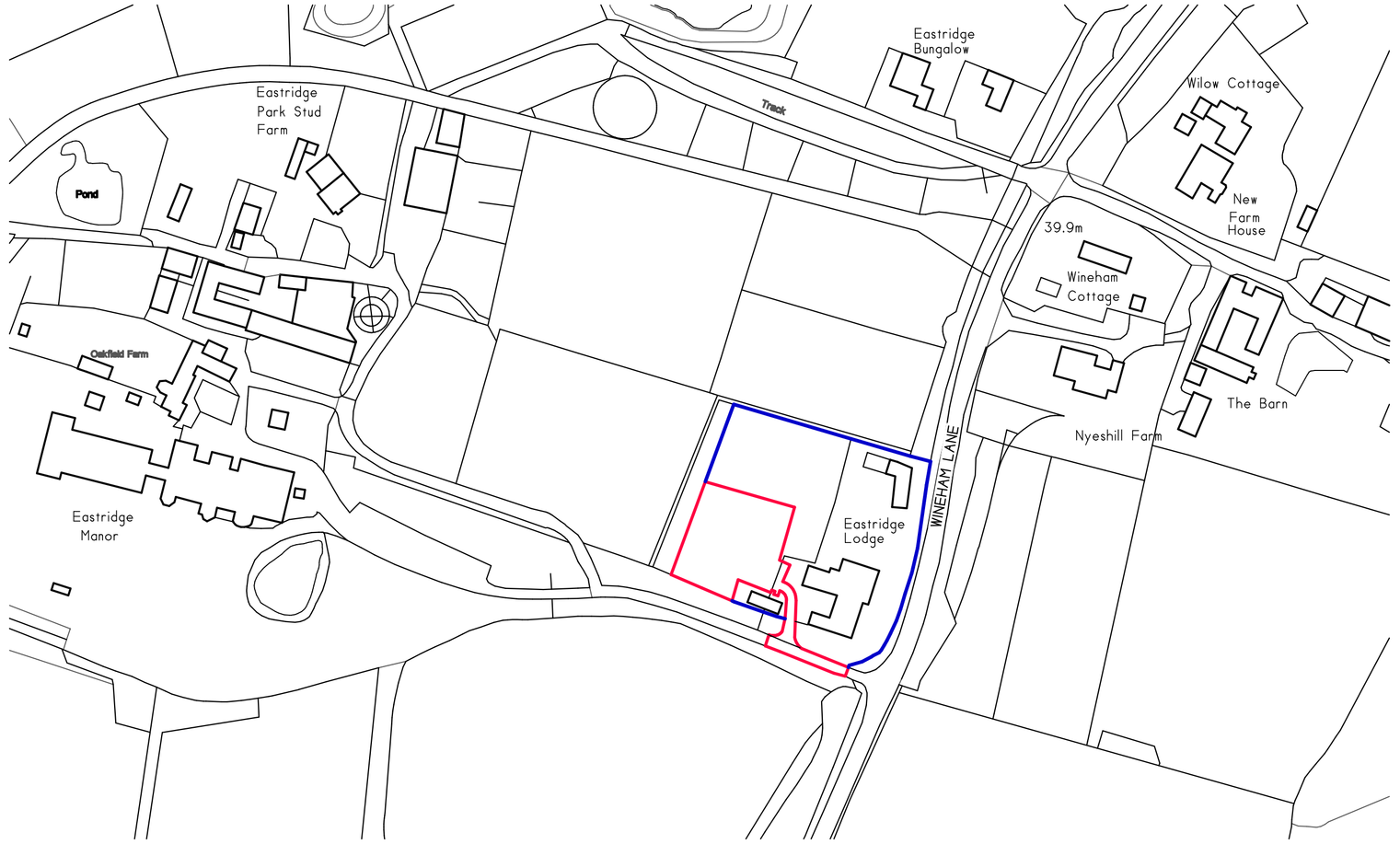
# 7 Annexes

Annex A - Planning Drawings

Annex B – Part G Calculations

Annex C – Water Bills

# Annex A - Planning Drawings




Location Plan 1:1250

0 20 40 60 80 100
(1:1250) metres

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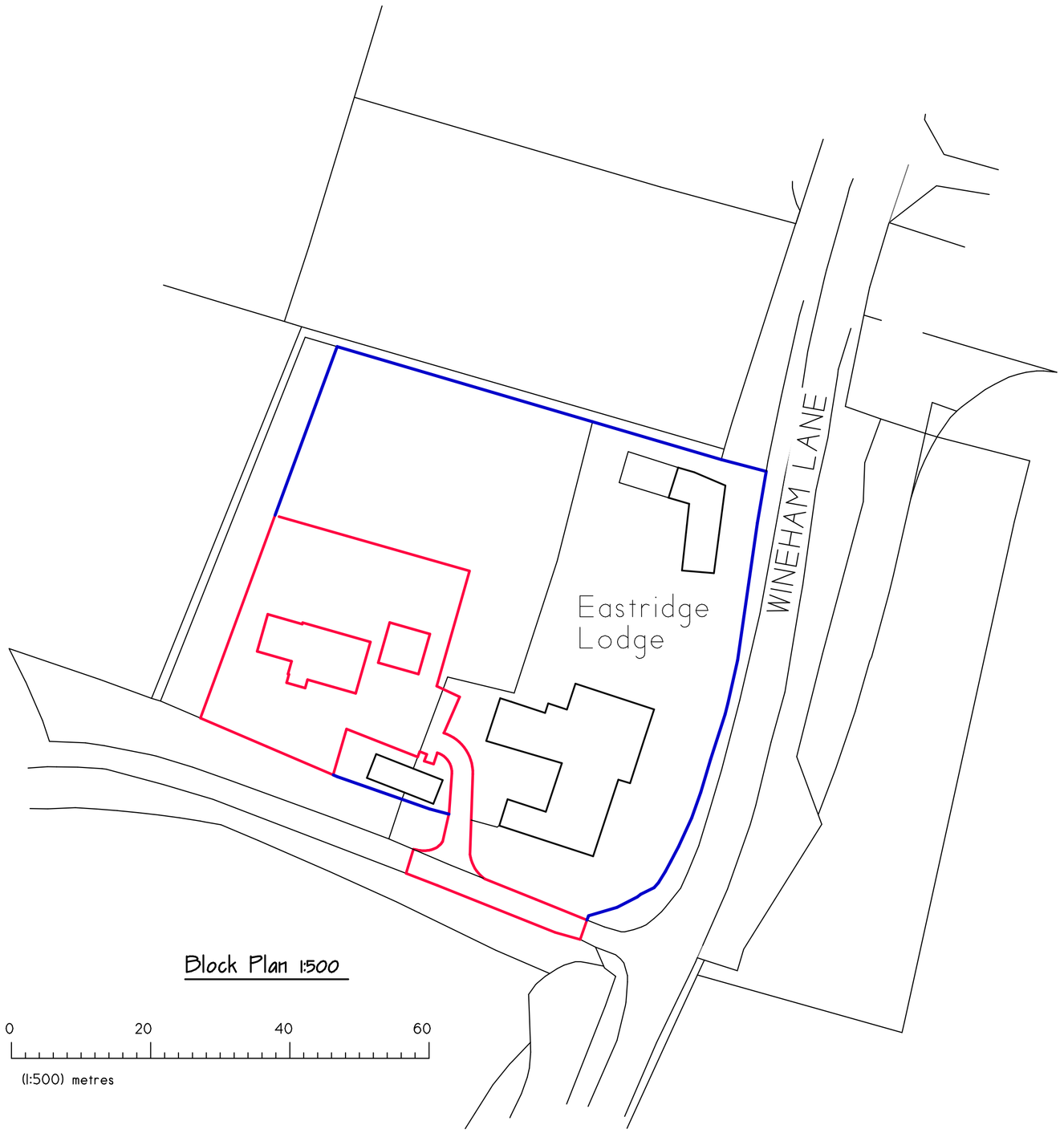



Block Plan 1:500

0 20 40 60
(1:500) metres

N

A1
1:1250

| REV | DATE | DESCRIPTION |
|---|---|---|
| A | Sept 23 | Outline of proposed dwelling replaced with 2 bed cottage |

CLIENT:
Mr. + Mrs. R Tarrant

Proposed new 2 bed
Cottage (Outline)

Eastridge Lodge
Wineham Lane
Bolney
Haywards Heath
RH17 5SD

DRAWING TITLE:
Location Plan. Block Plan

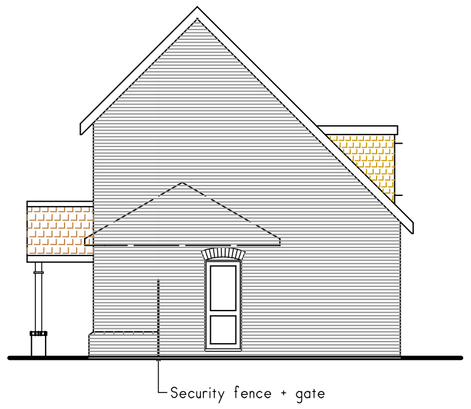
DSEQUINE
www.dsequine.com
07831 758231

| REVISION | | |
|---|---|---|
| A | SCALE | As shown |
| | DATE | June 23 |
| | DRAWN BY | |
| | CHECKED BY | |

DRAWING No.
23/2189-1



South Elevation 1:100



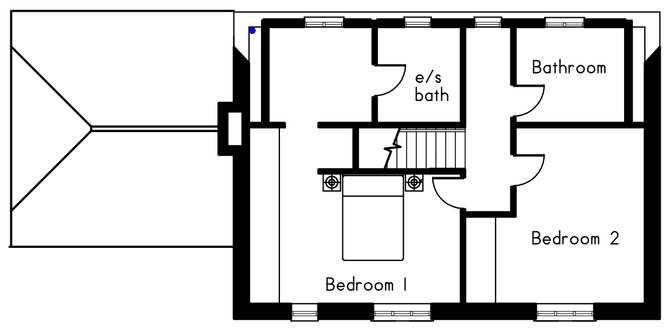

East Elevation 1:100



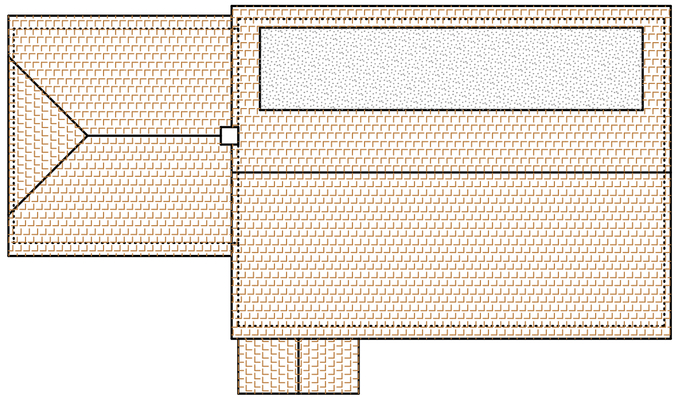
North Elevation 1:100



West Elevation 1:100

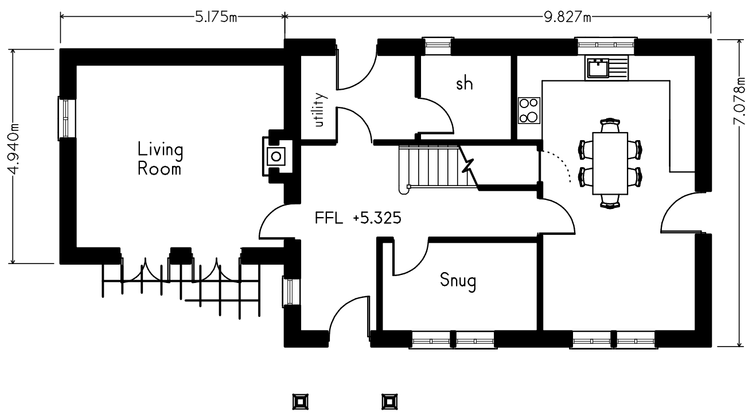



First Floor Plan 1:100



Root Layout 1:100

0m SCALE BAR (1:100) 10m




Ground Floor Plan 1:100

| REV | DATE | DESCRIPTION |
|---|---|---|

CLIENT:
Mr. + Mrs. R Tarrant

Proposed new 2 bed
Cottage (Outline)

Eastridge Lodge
Wineham Lane
Bolney
Haywards Heath
RH17 5SD

DRAWING TITLE:
Proposed Dwelling:
Plans.elevations etc

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07831 758231

| REVISION | SCALE | As shown |
|---|---|---|
| | DATE | September 23 |
| | DRAWN BY | |
| | CHECKED BY | |

DRAWING No.
23/2189-10

A1
1:100

## Annex B – Part G Calculations

Main House – BASE Performance Levels

Apartment 1 – BASE Performance Levels

Apartment 2 – BASE Performance Levels

Proposed 2-Bed Cottage – Performance Level 3

Main House Performance Level 3

## Main House – BASE Performance Levels

Water Calculator | WC | Taps (Other) | Taps (Kitchen/Utility) | Baths | Dishwashers | Washing Machines | Showers | H2O softeners | Greywater | Rainwater

| Installation Type | Unit of Measure | Capacity/Flow rate (1) | Use Factor (2) | Fixed use (litres/person/day) (3) | Litres/person/day = [(1)x(2)] + (3) (4) |
|---|---|---|---|---|---|
| **WC** (single flush) | Flush Volume (litres) | 6.00 | 4.42 | 0.00 | 26.52 |
| **WC** (dual flush) | Full flush Volume (litres) | | 1.46 | 0.00 | 0 |
| | Part flush Volume (litres) | | 2.96 | 0.00 | 0 |
| **WC** (multiple fittings) | Average effective flushing Volume (litres) | | 4.42 | 0.00 | 0 |
| **Taps** (excluding kitchen/utility room taps) | Flow rate (litres/min) | 10.00 | 1.58 | 1.58 | 17.38 |
| **Bath** (where shower also present) | Capacity to overflow(litres) | 200.00 | 0.11 | 0.00 | 22.00 |
| **Shower** (where bath also present) | Flow Rate(litres / minute) | 12.00 | 4.37 | 0.00 | 52.44 |
| **Bath Only** | Capacity to overflow(litres) | | 0.50 | 0.00 | 0 |
| **Shower Only** | Flow Rate (litres/minute) | | 5.60 | 0.00 | 0 |
| **Kitchen/Utility room sink taps** | Flow rate (litres/minute) | 10.00 | 0.44 | 10.36 | 14.76 |
| **Washing Machine** | (Litres/kg dry load) | 11.25 | 2.1 | 0.00 | 23.63 |
| **Dishwasher** | (Litres/place setting) | 1.31 | 3.6 | 0.00 | 4.72 |
| **Waste disposal unit** | (Litres/use) | ☐ Present | 3.08 | 0.00 | 0 |
| **Water Softener** | (Litres/person/day) | | 1.00 | 0.00 | 0 |
| | (5) | Total Calculated use (litres/person/day) =SUM(column 4) | | | 161.45 |
| | (6) | Contribution from greywater (litres/person/day) | | | 0 |
| | (7) | Contribution from rainwater (litres/person/day) | | | 0 |
| | (8) | Normalisation factor | | | 0.91 |
| | (9) | Total internal water consumption = [(5)-(6)-(7)]x(8) (litres/person/day) | | | 146.92 |
| | (10) | External water use | | | 5.0 |
| | (11) | Total water consumption (Building Regulation 17.K) =(9)+(10)(litres/person/day) | | | 151.9 |

Click here to fill in details before printing:

## Apartment 1 – BASE Performance Levels

Water Calculator | WC | Taps (Other) | Taps (Kitchen/Utility) | Baths | Dishwashers | Washing Machines | Showers | H2O softeners | Greywater | Rainwater

| Installation Type | Unit of Measure | Capacity/Flow rate (1) | Use Factor (2) | Fixed use (litres/person/day) (3) | Litres/person/day = [(1)x(2)] + (3) (4) |
|---|---|---|---|---|---|
| **WC** (single flush) | Flush Volume (litres) | 6.00 | 4.42 | 0.00 | 26.52 |
| **WC** (dual flush) | Full flush Volume (litres) | | 1.46 | 0.00 | 0 |
| | Part flush Volume (litres) | | 2.96 | 0.00 | 0 |
| **WC** (multiple fittings) | Average effective flushing Volume (litres) | | 4.42 | 0.00 | 0 |
| **Taps** (excluding kitchen/utility room taps) | Flow rate (litres/min) | 10.00 | 1.58 | 1.58 | 17.38 |
| **Bath** (where shower also present) | Capacity to overflow(litres) | 200.00 | 0.11 | 0.00 | 22.00 |
| **Shower** (where bath also present) | Flow Rate(litres / minute) | 12.00 | 4.37 | 0.00 | 52.44 |
| **Bath Only** | Capacity to overflow(litres) | | 0.50 | 0.00 | 0 |
| **Shower Only** | Flow Rate (litres/minute) | | 5.60 | 0.00 | 0 |
| **Kitchen/Utility room sink taps** | Flow rate (litres/minute) | 10.00 | 0.44 | 10.36 | 14.76 |
| **Washing Machine** | (Litres/kg dry load) | 11.25 | 2.1 | 0.00 | 23.63 |
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| **Waste disposal unit** | (Litres/use) | ☐ Present | 3.08 | 0.00 | 0 |
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| | (5) | Total Calculated use (litres/person/day) =SUM(column 4) | | | 161.45 |
| | (6) | Contribution from greywater (litres/person/day) | | | 0 |
| | (7) | Contribution from rainwater (litres/person/day) | | | 0 |
| | (8) | Normalisation factor | | | 0.91 |
| | (9) | Total internal water consumption = [(5)-(6)-(7)]x(8) (litres/person/day) | | | 146.92 |
| | (10) | External water use | | | 5.0 |
| | (11) | Total water consumption (Building Regulation 17.K) =(9)+(10)(litres/person/day) | | | 151.9 |

Click here to fill in details before printing:

## Apartment 2 – BASE Performance Levels

Water Calculator | WC | Taps (Other) | Taps (Kitchen/Utility) | Baths | Dishwashers | Washing Machines | Showers | H2O softeners | Greywater | Rainwater

| Installation Type | Unit of Measure | Capacity/Flow rate (1) | Use Factor (2) | Fixed use (litres/person/day) (3) | Litres/person/day = [(1)x(2)] + (3) (4) |
|---|---|---|---|---|---|
| **WC** (single flush) | Flush Volume (litres) | 6.00 | 4.42 | 0.00 | 26.52 |
| **WC** (dual flush) | Full flush Volume (litres) | | 1.46 | 0.00 | 0 |
| | Part flush Volume (litres) | | 2.96 | 0.00 | 0 |
| **WC** (multiple fittings) | Average effective flushing Volume (litres) | | 4.42 | 0.00 | 0 |
| **Taps** (excluding kitchen/utility room taps) | Flow rate (litres/min) | 10.00 | 1.58 | 1.58 | 17.38 |
| **Bath** (where shower also present) | Capacity to overflow(litres) | | 0.11 | 0.00 | 0 |
| **Shower** (where bath also present) | Flow Rate(litres / minute) | | 4.37 | 0.00 | 0 |
| **Bath Only** | Capacity to overflow(litres) | | 0.50 | 0.00 | 0 |
| **Shower Only** | Flow Rate (litres/minute) | 12.00 | 5.60 | 0.00 | 67.20 |
| **Kitchen/Utility room sink taps** | Flow rate (litres/minute) | 10.00 | 0.44 | 10.36 | 14.76 |
| **Washing Machine** | (Litres/kg dry load) | 11.25 | 2.1 | 0.00 | 23.63 |
| **Dishwasher** | (Litres/place setting) | 1.31 | 3.6 | 0.00 | 4.72 |
| **Waste disposal unit** | (Litres/use) | ☐ Present | 3.08 | 0.00 | 0 |
| **Water Softener** | (Litres/person/day) | | 1.00 | 0.00 | 0 |
| | (5) | Total Calculated use (litres/person/day) =SUM(column 4) | | | 154.21 |
| | (6) | Contribution from greywater (litres/person/day) | | | 0 |
| | (7) | Contribution from rainwater (litres/person/day) | | | 0 |
| | (8) | Normalisation factor | | | 0.91 |
| | (9) | Total internal water consumption = [(5)-(6)-(7)]x(8) (litres/person/day) | | | 140.33 |
| | (10) | External water use | | | 5.0 |
| | (11) | Total water consumption (Building Regulation 17.K) =(9)+(10)(litres/person/day) | | | 145.3 |

Click here to fill in details before printing:

## Proposed 2-Bed Cottage – Performance Level 3

Water Calculator | WC | Taps (Other) | Taps (Kitchen/Utility) | Baths | Dishwashers | Washing Machines | Showers | H2O softeners | Greywater | Rainwater

| Installation Type | Unit of Measure | Capacity/Flow rate (1) | Use Factor (2) | Fixed use (litres/person/day) (3) | Litres/person/day = [(1)x(2)] + (3) (4) |
|---|---|---|---|---|---|
| **WC** (single flush) | Flush Volume (litres) | 3.75 | 4.42 | 0.00 | 16.58 |
| **WC** (dual flush) | Full flush Volume (litres) | | 1.46 | 0.00 | 0 |
| | Part flush Volume (litres) | | 2.96 | 0.00 | 0 |
| **WC** (multiple fittings) | Average effective flushing Volume (litres) | | 4.42 | 0.00 | 0 |
| **Taps** (excluding kitchen/utility room taps) | Flow rate (litres/min) | 5.00 | 1.58 | 1.58 | 9.48 |
| **Bath** (where shower also present) | Capacity to overflow(litres) | 140.00 | 0.11 | 0.00 | 15.40 |
| **Shower** (where bath also present) | Flow Rate(litres / minute) | 6.00 | 4.37 | 0.00 | 26.22 |
| **Bath Only** | Capacity to overflow(litres) | | 0.50 | 0.00 | 0 |
| **Shower Only** | Flow Rate (litres/minute) | | 5.60 | 0.00 | 0 |
| **Kitchen/Utility room sink taps** | Flow rate (litres/minute) | 6.00 | 0.44 | 10.36 | 13.00 |
| **Washing Machine** | (Litres/kg dry load) | 5.00 | 2.1 | 0.00 | 10.50 |
| **Dishwasher** | (Litres/place setting) | 0.92 | 3.6 | 0.00 | 3.31 |
| **Waste disposal unit** | (Litres/use) | ☐ Present | 3.08 | 0.00 | 0 |
| **Water Softener** | (Litres/person/day) | | 1.00 | 0.00 | 0 |
| | (5) | Total Calculated use (litres/person/day) =SUM(column 4) | | | 94.49 |
| | (6) | Contribution from greywater (litres/person/day) | | | 0 |
| | (7) | Contribution from rainwater (litres/person/day) | | | 0 |
| | (8) | Normalisation factor | | | 0.91 |
| | (9) | Total internal water consumption = [(5)-(6)-(7)]x(8) (litres/person/day) | | | 85.99 |
| | (10) | External water use | | | 5.0 |
| | (11) | Total water consumption (Building Regulation 17.K) =(9)+(10)(litres/person/day) | | | 91.0 |

Click here to fill in details before printing:

## Main House Performance Level 3

Water Calculator | WC | Taps (Other) | Taps (Kitchen/Utility) | Baths | Dishwashers | Washing Machines | Showers | H2O softeners | Greywater | Rainwater

| Installation Type | Unit of Measure | Capacity/Flow rate (1) | Use Factor (2) | Fixed use (litres/person/day) (3) | Litres/person/day = [(1)x(2)] + (3) (4) |
|---|---|---|---|---|---|
| **WC** (single flush) | Flush Volume (litres) | 3.75 | 4.42 | 0.00 | 16.58 |
| **WC** (dual flush) | Full flush Volume (litres) | | 1.46 | 0.00 | 0 |
| | Part flush Volume (litres) | | 2.96 | 0.00 | 0 |
| **WC** (multiple fittings) | Average effective flushing Volume (litres) | | 4.42 | 0.00 | 0 |
| **Taps** (excluding kitchen/utility room taps) | Flow rate (litres/min) | 5.00 | 1.58 | 1.58 | 9.48 |
| **Bath** (where shower also present) | Capacity to overflow(litres) | 140.00 | 0.11 | 0.00 | 15.40 |
| **Shower** (where bath also present) | Flow Rate(litres / minute) | 6.00 | 4.37 | 0.00 | 26.22 |
| **Bath Only** | Capacity to overflow(litres) | | 0.50 | 0.00 | 0 |
| **Shower Only** | Flow Rate (litres/minute) | | 5.60 | 0.00 | 0 |
| **Kitchen/Utility room sink taps** | Flow rate (litres/minute) | 6.00 | 0.44 | 10.36 | 13.00 |
| **Washing Machine** | (Litres/kg dry load) | 5.00 | 2.1 | 0.00 | 10.50 |
| **Dishwasher** | (Litres/place setting) | 0.92 | 3.6 | 0.00 | 3.31 |
| **Waste disposal unit** | (Litres/use) | ☐ Present | 3.08 | 0.00 | 0 |
| **Water Softener** | (Litres/person/day) | | 1.00 | 0.00 | 0 |
| | (5) | Total Calculated use (litres/person/day) =SUM(column 4) | | | 94.49 |
| | (6) | Contribution from greywater (litres/person/day) | | | 0 |
| | (7) | Contribution from rainwater (litres/person/day) | | | 0 |
| | (8) | Normalisation factor | | | 0.91 |
| | (9) | Total internal water consumption = [(5)-(6)-(7)]x(8) (litres/person/day) | | | 85.99 |
| | (10) | External water use | | | 5.0 |
| | (11) | Total water consumption (Building Regulation 17.K) =(9)+(10)(litres/person/day) | | | 91.0 |

Click here to fill in details before printing:

Table 8.3 Water efficient consumption levels by component type

| Component | Performance levels (quoted numbers are minimum performance required to achieve the level) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Base | 1 | 2 | 3 | 4 | 5 | Unit |
| WC | 6 | 4.5 | 4 | 3.75 | 3.5 | 3 | Effective flush volume (litres) (see Definitions on page 216) |
| Wash-hand basin taps | 10 | 8 | 6 | 5 | 4 | 3 | litres/min |
| Showers | 12 | 10 | 8 | 6 | 5 | 3.50 | litres/min |
| Baths | 200 | 180 | 160 | 140 | 120 | 100 | litres |
| Urinal (2 or more urinals) | 7.50 | 6 | 3 | 1.50 | 0.75 | 0 | litres/bowl/ hour |
| Urinal (1 urinal only) | 10 | 8 | 4 | 2 | 1 | 0 | litres/bowl/ hour |
| Greywater and rainwater system | 0% | 0% | 0% | 25% | 50% | 75% | % of WC or urinal flushing demand met using recycled non-potable water |
| Kitchen tap: kitchenette | 10 | 8 | 7 | 6 | 5 | 5 | litres/min |
| Kitchen taps: restaurant (pre-rinse nozzles only) | 10.30 | 9 | 8.30 | 7.30 | 6.30 | 6 | litres/min |
| Domestic sized dishwashers | 17 | 13 | 13 | 12 | 11 | 10 | litres/cycle |
| Domestic sized washing machines | 90 | 60 | 50 | 40 | 35 | 30 | litres/use |
| Waste disposal unit | 17 | 17 | 0 | 0 | 0 | 0 | litres/min |
| Commercial sized | 8 | 7 | 6 | 5 | 4 | 3 | litres/rack |

| Component | Performance levels (quoted numbers are minimum performance required to achieve the level) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Base | 1 | 2 | 3 | 4 | 5 | Unit |
| dishwashers | | | | | | | |
| Commercial or industrial sized washing machines | 14 | 12 | 10 | 7.50 | 5 | 4.50 | litres/kg |

Ref: BREEAM NC Version 6.1

## Annex C Water Bills



Page 1 of 4

WATER for LIFE

from Southern Water

PAID 22/9/23

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0330 303 0277
Weekdays - 8am to 6pm

MR RODNEY TARRATT
EASTRIDGE LODGE
WINEHAM LANE
BOLNEY
HAYWARDS HEATH
RH17 5SD

Your customer number
12986494

Your payment reference
0004 0373 12368

Dear Mr RODNEY TARRATT,

Here's your latest bill based on the meter reading we took on 12 September 2023. You currently pay by cash – see page two for your payment options.

**Meter reading**

Water used in cubic metres

**71 m³**

One cubic metre = 1,000 litres
This is equivalent to: 71 baths, 71 (4 min) showers or 166 toilet flushes

Meter number: 6M075866

Latest reading: 12 Sep 2023
3 0 5 0 0 0

Previous reading: 29 Mar 2023
2 9 7 9 0 0

Your next meter reading is scheduled to take place by 28 Mar 2024

Previous bill's usage
85.00 m³

**Charges**

**£131.25**

Bill date
14 Sep 2023

Billing period
From: 30 March 2023
To: 12 September 2023

Bill type
Metered - Cash

Previous bill's charges
£142.93

**Future payments**

Total payment of
**£131.25**

Due by
30 September 2023

To pay your bill
See how to pay on p. 2

Struggling to pay? See p. 3

**Water**

Period: 30 March 2023 to 31 March 2023

| | | | |
|---|---|---|---|
| Variable Rate | £1.550 x | 0.80m³ = | £1.24 |
| Standing Charge | | = | £0.10 |

Period: 01 April 2023 to 12 September 2023

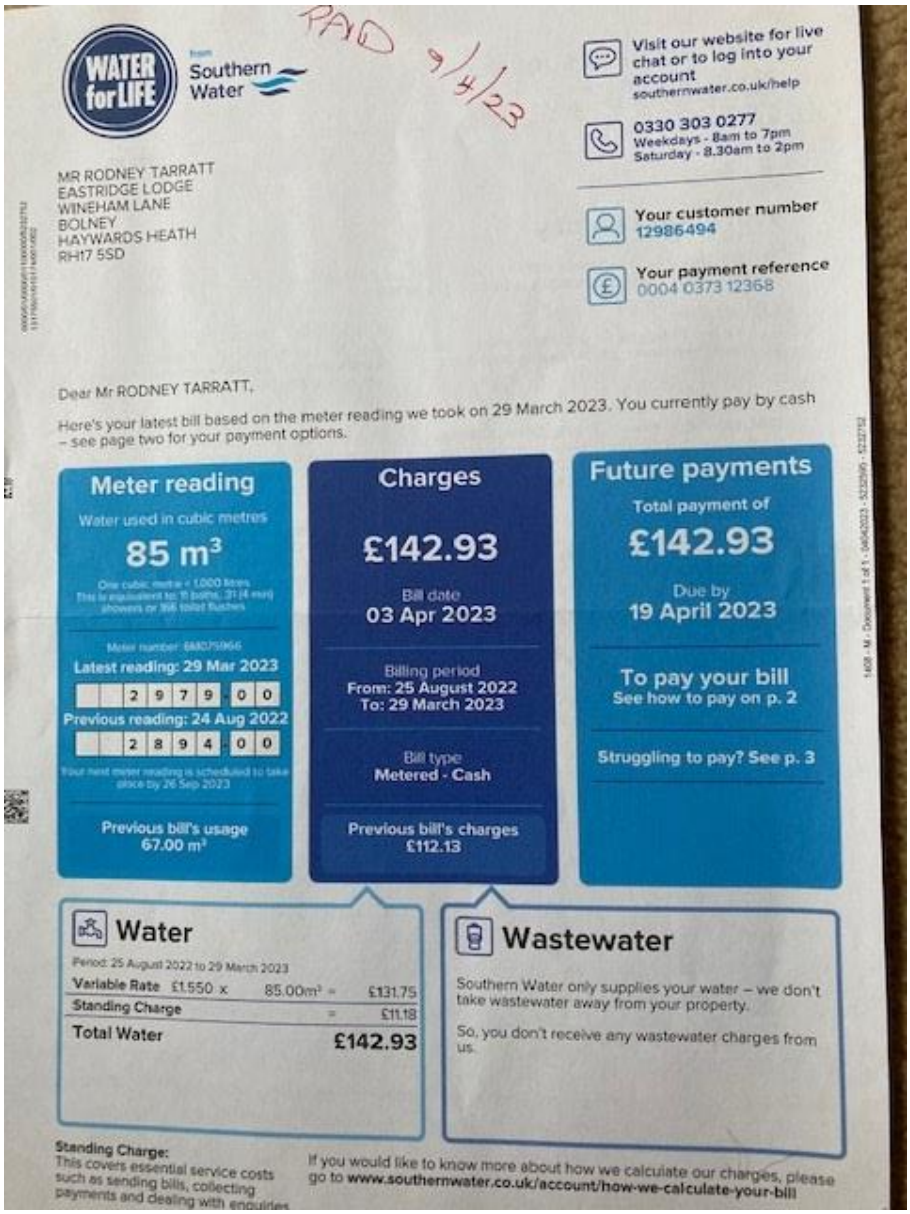
| | | | |
|---|---|---|---|
| Variable Rate | £1.716 x | 70.20m³ = | £120.46 |
| Standing Charge | | = | £9.45 |
| Total Water | | | £131.25 |

Standing Charge:

**Wastewater**

Southern Water only supplies your water – we don't take wastewater away from your property.

So, you don't receive any wastewater charges from us.



PAID 9/4/23

WATER for LIFE from Southern Water

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0330 303 0277
Weekdays - 8am to 7pm
Saturday - 8.30am to 2pm

Your customer number
12986494

Your payment reference
0004 0373 12368

MR RODNEY TARRATT
EASTRIDGE LODGE
WINEHAM LANE
BOLNEY
HAYWARDS HEATH
RH17 5SD

Dear Mr RODNEY TARRATT,

Here's your latest bill based on the meter reading we took on 29 March 2023. You currently pay by cash – see page two for your payment options.

## Meter reading

Water used in cubic metres

**85 m³**

One cubic metre = 1,000 litres
This is equivalent to 15 baths, 31 (4 min) showers or 166 toilet flushes

Meter number: 6M075966

**Latest reading: 29 Mar 2023**

2 9 7 9 . 0 0

**Previous reading: 24 Aug 2022**

2 8 9 4 . 0 0

Your next meter reading is scheduled to take place by 26 Sep 2023

**Previous bill's usage**
**67.00 m³**

## Charges

**£142.93**

Bill date
**03 Apr 2023**

Billing period
**From: 25 August 2022**
**To: 29 March 2023**

Bill type
**Metered - Cash**

**Previous bill's charges**
**£112.13**

## Future payments

Total payment of
**£142.93**

Due by
**19 April 2023**

**To pay your bill**
See how to pay on p. 2

**Struggling to pay? See p. 3**

## Water

Period: 25 August 2022 to 29 March 2023

| | | | |
|---|---|---|---|
| Variable Rate | £1.550 x | 85.00m³ = | £131.75 |
| Standing Charge | | = | £11.18 |
| **Total Water** | | | **£142.93** |

## Wastewater

Southern Water only supplies your water – we don't take wastewater away from your property.

So, you don't receive any wastewater charges from us.

**Standing Charge:**
This covers essential service costs such as sending bills, collecting payments and dealing with enquiries

If you would like to know more about how we calculate our charges, please go to **www.southernwater.co.uk/account/how-we-calculate-your-bill**



Page 1 of 4

WATER for LIFE

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PAID 4/9/22

MR RODNEY TARRATT
EASTRIDGE LODGE
WINEHAM LANE
BOLNEY
HAYWARDS HEATH
RH17 5SD

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southernwater.co.uk/help

0330 303 0277
Weekdays - 8am to 7pm
Saturday - 8.30am to 2pm

Your customer number
12986494

Your payment reference
0004 0373 1236B

Dear Mr RODNEY TARRATT,

Here's your latest bill based on the meter reading we took on 24 August 2022. You currently pay by cash – see page two for your payment options.

**Meter reading**

Water used in cubic metres

**67 m³**

Latest reading: 24 Aug 2022
2 8 9 4 0 0

Previous reading: 9 Mar 2022
2 8 2 7 0 0

Previous bill's usage
70.00 m³

**Charges**

**£112.13**

Bill date
25 Aug 2022

Billing period
From: 10 March 2022
To: 24 August 2022

Bill type
Metered - Cash

Previous bill's charges
£114.81

**Future payments**

Total payment of
**£112.13**

Due by
08 September 2022

To pay your bill
See how to pay on p. 2

Struggling to pay? See p. 3

**Water**

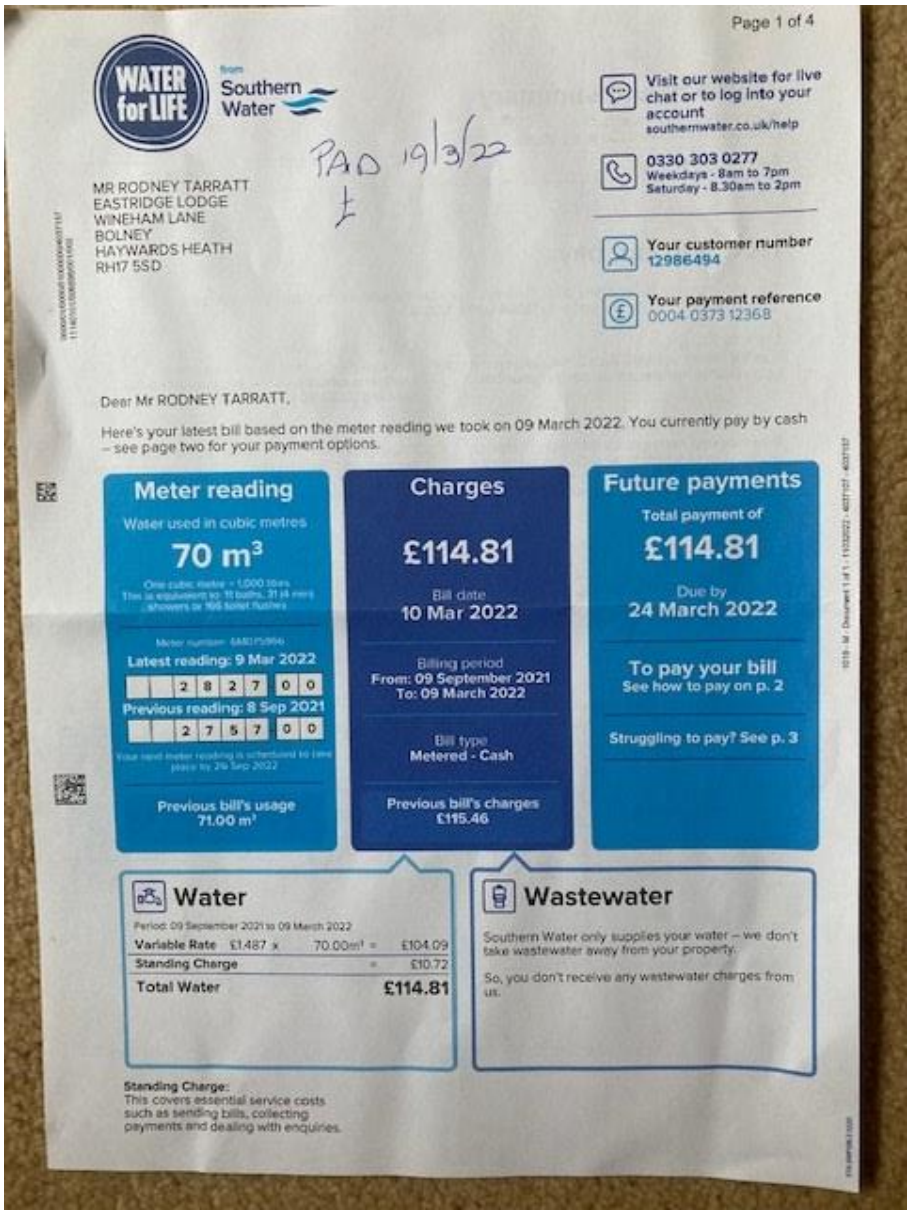
| | | | |
|---|---|---|---|
| Period: 10 March 2022 to 31 March 2022 | | | |
| Variable Rate | £1.487 x | 8.70m³ = | £12.94 |
| Standing Charge | | = | £1.30 |
| Period: 01 April 2022 to 24 August 2022 | | | |
| Variable Rate | £1.550 x | 58.30m³ = | £90.37 |
| Standing Charge | | = | £7.52 |
| Total Water | | | £112.13 |

**Wastewater**

Southern Water only supplies your water – we don't take wastewater away from your property.

So, you don't receive any wastewater charges from us.

**Standing Charge:**
This covers essential service costs such as sending bills, collecting payments and dealing with enquiries.





WATER for LIFE from Southern Water

PAD 19/3/22
£

MR RODNEY TARRATT
EASTRIDGE LODGE
WINEHAM LANE
BOLNEY
HAYWARDS HEATH
RH17 5SD

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southernwater.co.uk/help

0330 303 0277
Weekdays - 8am to 7pm
Saturday - 8.30am to 2pm

Your customer number
12986494

Your payment reference
0004 0373 12368

Dear Mr RODNEY TARRATT,

Here's your latest bill based on the meter reading we took on 09 March 2022. You currently pay by cash – see page two for your payment options.

## Meter reading

Water used in cubic metres

**70 m³**

One cubic metre = 1,000 litres
This is equivalent to 11 baths, 31.14 mins showers or 105 toilet flushes

Meter number: 6M0175994

Latest reading: 9 Mar 2022

2 8 2 7 0 0

Previous reading: 8 Sep 2021

2 7 5 7 0 0

Your next meter reading is scheduled to take place by 24 Sep 2022

Previous bill's usage
71.00 m³

## Charges

**£114.81**

Bill date
10 Mar 2022

Billing period
From: 09 September 2021
To: 09 March 2022

Bill type
Metered - Cash

Previous bill's charges
£115.46

## Future payments

Total payment of
**£114.81**

Due by
24 March 2022

To pay your bill
See how to pay on p. 2

Struggling to pay? See p. 3

## Water

Period: 09 September 2021 to 09 March 2022

| | | | |
|---|---|---|---|
| Variable Rate | £1.487 x | 70.00m³ = | £104.09 |
| Standing Charge | | = | £10.72 |
| Total Water | | | £114.81 |

## Wastewater

Southern Water only supplies your water – we don't take wastewater away from your property.

So, you don't receive any wastewater charges from us.

**Standing Charge:**
This covers essential service costs such as sending bills, collecting payments and dealing with enquiries.



Southern Water

chat or to log into your account
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Saturday - 8.30am to 2pm

MR RODNEY TARRATT
EASTRIDGE LODGE
WINEHAM LANE
BOLNEY
HAYWARDS HEATH
RH17 5SD

PAID 16/9/21

Your customer number
12986494

Your payment reference
0004 0373 12368

Dear Mr RODNEY TARRATT,

Here's your latest bill based on the meter reading we took on 08 September 2021. You currently pay by cash – see page two for your payment options.

**Meter reading**

Water used in cubic metres

**71 m³**

One cubic metre = 1,000 litres
This is equivalent to: 11 baths, 31.64 mins showers or 166 toilet flushes

Meter number: 6M075866

Latest reading: 8 Sep 2021
2 7 5 7 0 0

Previous reading: 18 Mar 2021
2 6 8 6 0 0

Your next meter reading is scheduled to take place by 28 Mar 2022

Previous bill's usage
101.00 m³

**Charges**

**£115.46**

Bill date
09 Sep 2021

Billing period
From: 19 March 2021
To: 08 September 2021

Bill type
Metered - Cash

Previous bill's charges
£154.62

**Future payments**

Total payment of
**£115.46**

Due by
26 September 2021

To pay your bill
See how to pay on p. 2

Struggling to pay? See p. 3

**Water**

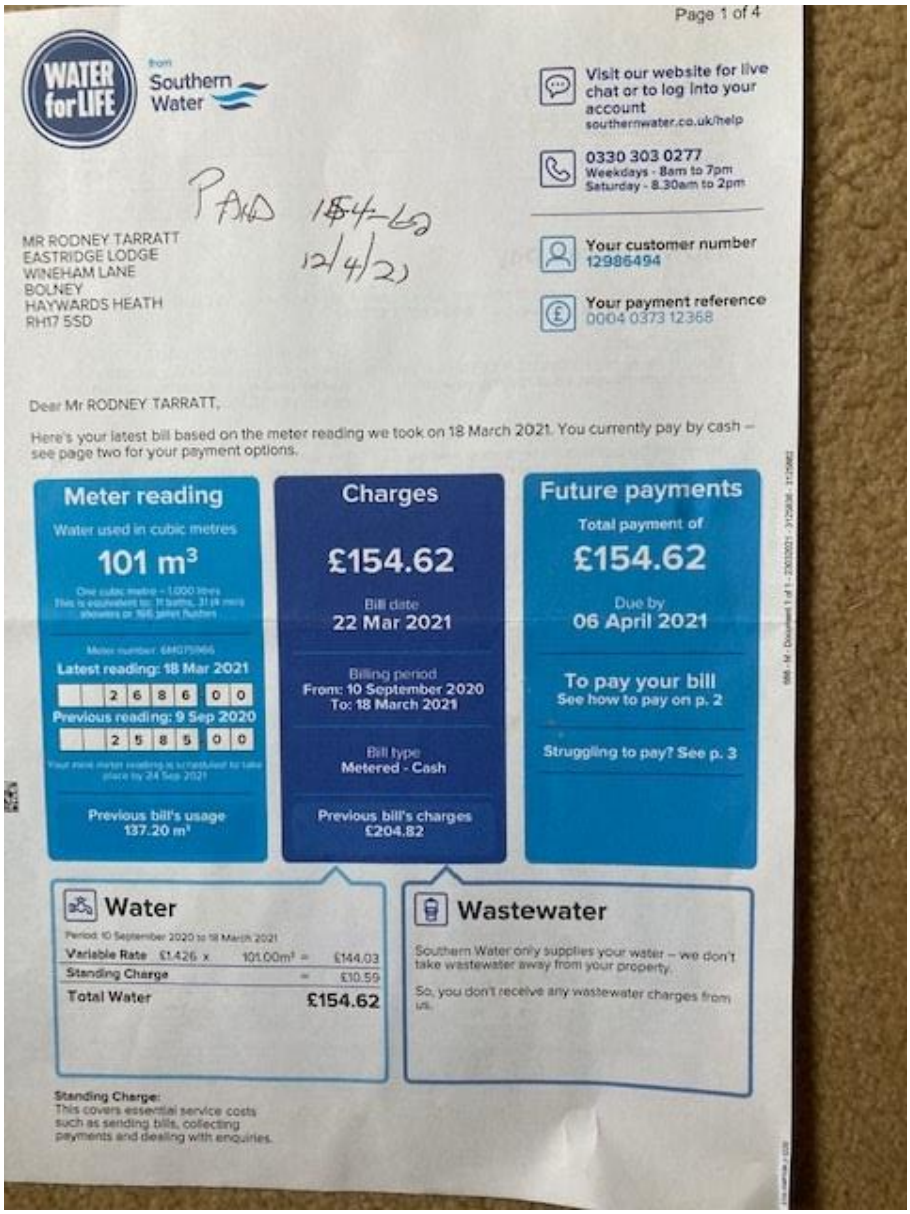
| | | | |
|---|---|---|---|
| Period: 19 March 2021 to 31 March 2021 | | | |
| Variable Rate | £1.426 x | 5.30m³ = | £7.56 |
| Standing Charge | | = | £0.72 |
| Period: 01 April 2021 to 08 September 2021 | | | |
| Variable Rate | £1.487 x | 65.70m³ = | £97.70 |
| Standing Charge | | = | £9.48 |
| Total Water | | | £115.46 |

**Standing Charge:**
This covers essential service costs such as sending bills, collecting payments and dealing with enquiries.

**Wastewater**

Southern Water only supplies your water – we don't take wastewater away from your property.

So, you don't receive any wastewater charges from us.



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0330 303 0277
Weekdays - 8am to 7pm
Saturday - 8.30am to 2pm

PAID 154-62
12/4/21

MR RODNEY TARRATT
EASTRIDGE LODGE
WINEHAM LANE
BOLNEY
HAYWARDS HEATH
RH17 5SD

Your customer number
12986494

Your payment reference
0004 0373 12368

Dear Mr RODNEY TARRATT,

Here's your latest bill based on the meter reading we took on 18 March 2021. You currently pay by cash – see page two for your payment options.

**Meter reading**
Water used in cubic metres
**101 m³**
One cubic metre = 1,000 litres
This is equivalent to: 11 baths, 31 (4 min) showers or 166 toilet flushes
Meter number: 6MG75965
Latest reading: 18 Mar 2021
2 6 8 6 0 0
Previous reading: 9 Sep 2020
2 5 8 5 0 0
Your next meter reading is scheduled to take place by 24 Sep 2021
Previous bill's usage
137.20 m³

**Charges**
**£154.62**
Bill date
22 Mar 2021
Billing period
From: 10 September 2020
To: 18 March 2021
Bill type
Metered - Cash
Previous bill's charges
£204.82

**Future payments**
Total payment of
**£154.62**
Due by
06 April 2021
To pay your bill
See how to pay on p. 2
Struggling to pay? See p. 3

**Water**
Period: 10 September 2020 to 18 March 2021

| | | | |
|---|---|---|---|
| Variable Rate | £1.426 x | 101.00m³ = | £144.03 |
| Standing Charge | | = | £10.59 |
| Total Water | | | £154.62 |

**Wastewater**
Southern Water only supplies your water – we don't take wastewater away from your property.
So, you don't receive any wastewater charges from us.

**Standing Charge:**
This covers essential service costs such as sending bills, collecting payments and dealing with enquiries.