

# LEONARDSLEE GARDENS

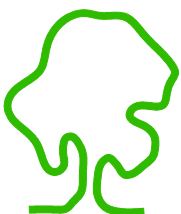


LOWER BEEDING, HORSHAM, RH13 6PP

## **Water Neutrality**

May 2024


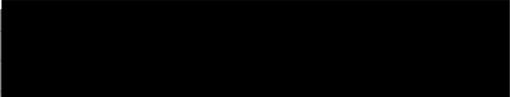
(Revised July 2024, August 2024, October 2024, May 2025)



eas ltd

Environmental Assessment Services Ltd

**REPORT DATA SHEET**

<b>Requirement</b>	<b>Data</b>
Report Reference	688/LeonardsleeGardens/WNA
Date	May 2024
Client	Derren Holden
Report type	Water Neutrality
Purpose	Redevelopment
Revisions	July 2024, August 2024, October 2024, May 2025
Prepared by	Xanthe Lyford BSc (Hons) 
Approved by	Eur Ing Malcolm McKemey BSc (Hons), CEng, CEnv, MICE, MCIWEM, MIEnvSc 

## **LEONARDSLEE GARDENS**

LEONARDSLEE GARDENS, BRIGHTON ROAD, LOWER BEEDING,  
HORSHAM, WEST SUSSEX, RH13 6PP

### **Water Neutrality Assessment**

May 2024

(Revised July 2024, August 2024, October 2024, May 2025)

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## LEONARDSLEE GARDENS

LEONARDSLEE GARDENS, BRIGHTON ROAD, LOWER BEEDING,  
HORSHAM, WEST SUSSEX, RH13 6PP

### Water Neutrality Assessment

May 2024

(Revised July 2024, August 2024, October 2024, May 2025)

#### 1. BACKGROUND

- 1.1 Environmental Assessment Services Ltd has been instructed to prepare a Water Neutrality Assessment for submission to Horsham District Council in relation to the proposed developments of the site at Leonardslee Gardens, as detailed below.
- 1.2 The site is set within the grounds of Leonardslee Gardens, located on Brighton Road, Lower Beeding. The estate area is approximately 240 acres. The Ordnance Survey map reference for the site is TQ 22108 26043, the site elevation is approximately + 99m OD. See Figure 1 in Appendix A for the Site Location Map. The site hydrology is given in Appendix A.
- 1.3 It was originally proposed to redevelop eight areas of the Leonardslee site listed below (now reduced to seven):
  1. Car Park WC Block (no longer included in the development plans).
  2. The Engine House.
  3. The Stable Block – Clocktower Café.
  4. The Stable Block – Potters Cottage.
  5. The Stable Block – Staff Office/Carriage Cottage.
  6. The Stable Block – Honey Cottage.
  7. Former Generator Block (Includes the Function Room/Dolls House Museum/Alpine House Café).
  8. Red House.

1.4 Water neutrality is defined as: *For every new development, total water use in the region after the development must be equal to or less than the total water use in the region before the new development.*

1.5 The site was visited on 2 May 2024. See Figure 4 in Appendix A for photographs taken at the time of visit.

## 2. EXISTING SITE USE

2.1 The existing layout and usage of the areas of Leonardslee Gardens that are to be redeveloped are listed below:

**1. Car Park WC Block:**

An existing WC block (with five female toilets, 3 urinals, two male toilets and associated washbasins) attached to the car park. There were two approximately 3.5 m<sup>3</sup> tanks to the rear of the building at the time of the site visit. These are proposed to be used to store harvested rainwater to be used in the redevelopment.

**2. The Engine House:**

There is a mains water supply to this building. No present water use.

**3. The Stable Block – Clocktower Café:**

An existing café with a kitchen including dishwasher and sinks, staff and public WCs. The existing facilities are to be reconfigured and newer, more water efficient toilets and sinks are to be fitted.

**4. The Stable Block – Potters Cottage:**

An existing self-contained flat with ground floor bathroom and kitchen. Currently used as accommodation for Leonardslee staff.

**5. The Stable Block – Staff Office/Carriage Cottage:**

The staff office with no current water or sewerage provision.

**6. The Stable Block – Honey Cottage:**

An existing self-contained, four-bedroom, historic cottage. Currently used as accommodation for Leonardslee staff to be reconfigured with new appliances.

**7. Former Generator Block (Includes the Function Room/Dolls House Museum/Alpine House Café):**

An existing café with indoor and outdoor dining areas, kitchen with glasswasher, dishwasher, sinks and coffee machines and a bar area attached to the courtyard dining area. The Dolls House Museum to the rear of the building is to remain. The attached mains water irrigated greenhouse adjacent to the museum is to be removed, and the irrigation water will no longer be required.

**8. Red House:**

An existing semi-detached residence to the northwest of the site, near to the evening exit gate from the grounds.

- 2.2 Water meters were installed to measure the existing water use at the abovementioned locations. Unfortunately, the meter covering the majority of the above locations malfunctioned and the data could not be used. It has been necessary to estimate the existing water use. Water bills were also provided by Leonardslee for 2023-2024, however these were for the whole site including the hotel, irrigation for the gardens, animals watering and the vineyard, so were deemed unsuitable for use in the calculations for the eight developments. See Appendix D for the Southern Water Bills.

**3. PROPOSED REDEVELOPMENT**

- 3.1 It is proposed to redevelop the sites as detailed below, including the proposed changes in water use.

**1. Car Park WC Block:**

This proposal has now been removed and the WC block is to remain as existing.

**2. The Engine House:**

Creation of a new accessible WC with wash hand basin, there is a mains water supply to this building. The foul sewage is to be treated in a below ground package sewage treatment plant. Rainwater harvesting for lavatory flushing would be an option.

**3. The Stable Block – Clocktower Café:**

Reordering of existing café with new kitchen spaces, new staff WC, and reconfiguration of the current guest WC provisions. There is to be an increased number of guest toilets (currently 9 changing to 12) and sinks (currently 4 changing to 12) and the removal of 2 urinals. They are to be of a more water efficient (low volume) design, reducing the water usage. The kitchen space is to have a new dishwasher and glasswasher in a water efficient design, and low volume taps in the kitchen sinks replacing the existing, less efficient ones.

**4. The Stable Block – Potters Cottage:**

The existing self-contained flat is to have an additional en-suite fitted with WC/shower/basin. The existing kitchen will be unchanged, the ground floor bathroom and WC are to be reconfigured with no change to the usage of water from this room. The property is to be renovated for use as an Air B & B, reducing the amount of residency from a permanent residence to a holiday let and therefore reducing the water usage. The en-suite bathroom will have low volume, water saving taps, toilet and shower.

- 
5. **The Stable Block – Staff Office/Carriage Cottage:**  
The staff office is to become a new self-contained flat with a new kitchen and bathroom with WC/basin/shower/ (low volume) and possibly a bath if the water constraints allow. This will be for use as an Air B & B.
  6. **The Stable Block – Honey Cottage:**  
Existing self-contained cottage is to be reconfigured with a new kitchen and a new shower room with shower/WC/basin, using water efficient low-volume toilets and low-pressure taps. The property is to be renovated for use as an Air B & B, reducing the amount of residency from a permanent residence to a holiday let and therefore reducing the water usage.
  7. **Former Generator Block (Includes the Function Room/Dolls House Museum/Alpine House Café):**  
Reconfiguration and extension of the spaces, including new WCs (containing 3 WCs and 3 sinks) to rear of Alpine House Café (no WCs here at present). The new visitor toilets are to be of a water-controlled design, using low-volume toilets and low-pressure tap sinks. A new kitchen is to replace the existing kitchen with dishwasher, glasswasher, sinks and coffee machine and the existing bar is to be relocated to serve the new Function Room. A “Costa” style café bar is to be built in the Alpine Cafe. The greenhouse that relies on mains water irrigation to the rear of the building is to be removed and no mains water irrigation will continue at this location. The area is to be used for educational proposes.
  8. **Red House:**  
Reconfiguration of internal spaces to change the number of WCs (from 3 to 2), sinks (to remain at 2) and showers (no showers at present to be increased to 2) and an additional kitchen. The new toilets, taps and showers will be of a low volume, water saving design.
- 3.2 All things being equal, it is apparent that the redevelopment would be anticipated to increase water usage compared with the existing. The increase in water use is to be mitigated by the use of water saving models of appliance and offsetting against the saving made from the removal of the irrigation in the greenhouse.
  - 3.3 The increased water usage for the proposed redevelopment would consist of water associated with the additional accessible toilet and basin at the Engine House, the additional toilet, sink and shower in Potters Cottage, the new toilet, sink and shower (possibly bath), washing machine, dishwasher and kitchen sink for Carriage Cottage, the 3 new toilets and sinks behind the Alpine House Café, the additional showers, dishwashers, kitchen sink and washing machine for Red House. However, savings are being made in the form of the removal of a toilet in the Red House and the removal of the mains irrigation for the greenhouse to the rear of the former Generator Block.
-

- 3.4 Water usage within the proposed redevelopment is to be reduced to below the existing by a combination of new water fittings, which use less water or use water more efficiently, and removal of water use for irrigation of the greenhouse.
- 3.5 This has been discussed with Leonardslee Gardens, exploring potential water saving options within the wider site, specifically the use of harvested rainwater (deemed unsuitable due to the amount of storage required) and more water efficient fittings.
- 3.6 The comparison between existing older style fittings and appliances (*taken from Home Water Works. Org*) and the new low pressure/volume types proposed to be used are taken from *Building Regulations Document G table 2.2* and summarised in Table 3.1 below:

**TABLE 3.1**  
**USE FROM EXISTING APPLIANCES AND LOW PRESSURE/VOLUME**  
**APPLIANCES**

<b>Old Appliance</b>	<b>Water per single use (litres) Old existing types</b>	<b>New Appliance</b>	<b>Water per single use (litres) New Low Volume</b>
Toilet	13	Low volume toilet	4
Sink (30 sec hand wash)	4	Low pressure sink (30 sec hand wash)	2.5
Shower (19 l/min - 6 mins)	144	Low volume shower (8 l/min - 6 mins)	48
Bath	170	Bath	170
Washing up dishes	6	Washing up dishes	6
Washing machine	82	Washing machine (8.17l/kg – 10kg)	82
Dishwasher (1.25l/place setting - 12 settings)	15	Dishwasher (1.25l/place setting - 12 settings)	15
Glass Washer (1.25l/place setting – 8 settings)	10	Glass Washer (1.25l/place setting – 8 settings)	10
		New activity at the WC block (unknown activity taken as worse case)	49

- 3.7 The frequency of use of the appliances and fittings used in the water use calculations are given in Table 3.2 below:



**TABLE 3.2**  
**APPLIANCE USES PER DAY**

<b>Appliance</b>	<b>Uses per day/week</b>
Low volume toilet	5 per person per day / 2 per visitor per day
Low pressure sink (hand wash)	5 per person per day / 2 per visitor per day
Low volume shower (6 mins)	1 per person per day
Bath	1 per week
Washing up dishes	2 per household per day/ 10 per cafe
Washing machine	1 per week
Dishwasher	1 per household per day / 5 per café per day
Glass Washer	5 per café per day
New activity at the WC block	8 per day

(estimated uses from Davidsonmorris.com)

3.8 The areas of the new development where water use is being saved or offset are:

- The new staff and guest WCs and sinks in the Clocktower Café will be fitted with more efficient fixtures than the existing, saving water from the existing consumption.
- The removal of the greenhouse with the mains irrigation system to the rear of the Alpine House Café will save water compared with the existing usage.

3.9 Current and proposed water usage from the development is summarised in Table 3.3 below. The water usage is based on 50 uses per day (*Hunter Water*) of the public toilets and hand washing facilities, at 13 litres per flush and 4 litres per hand wash for an old-style toilet and sink, and 4 litres per flush and 2.5 litres per wash for a water saving toilet and sink. (*Building Regulations Document G table 2.2*).

**TABLE 3.3**  
**DAILY WATER USAGE FROM THE CURRENT & PROPOSED**  
**FACILITIES**

Proposed redevelopment	Water use		Average litres/day		Change
	Current	Proposed	Current	Proposed	
1. No Change	Flushing 9 WCs, 3 urinals and 5 sinks for visitors (50 uses)	No change proposal no longer under consideration	650	650	nil
2. Accessible WC	No water use	wheelchair accessible WC and sink (30 uses)	Nil	120	+120
3. Clocktower Café Renovation	Glasswasher, dishwasher, 2 kitchen sinks, 9 WCs, 2 urinals 4 sinks	Glasswasher, dishwasher, kitchen sink, 12 WCs, 0 urinals, 12 sinks	185 (kitchen use) 750 (toilets)	185 (kitchen use) 325 (toilets)	- 425
4. Potters Cottage additional en-suit only	Washing machine, dishwasher, kitchen sink, shower, 2 x WC, sink	Additional washing machine, dishwasher, kitchen sink, 2 x shower, 2 x WC, 2 x sink	124 (kitchen and bathroom)	204.5 (kitchen, bathroom and new en-suit)	+ 80.5
5. Carriage Cottage redeveloped	No existing water use	Washing machine, dishwasher, kitchen sink, shower, WC, sink	Nil	39 (kitchen use) 80.5 (bathroom use)	+ 119.5
6. Honey Cottage reconfigured	Washing machine, dishwasher, kitchen sink, shower, WC, sink	New washing machine, dishwasher, kitchen sink, shower, WC, sink	39 (kitchen use) 229 (bathroom use)	39 (kitchen use) 80.5 (bathroom use)	- 148.5
7. Alpine Café redeveloped with bar and function room and additional WC block	Glasswasher, dishwasher, 2 kitchen sinks, coffee maker. 0 WCs, 0 sinks, watering greenhouse	New glasswasher, dishwasher, 2 kitchen sinks, 3 WCs and 3 sinks	200 (kitchen use) Nil (toilet use) 800 (greenhouse irrigation)	200 (kitchen use) 325 (toilet use) Nil (greenhouse demolished)	- 475
8. Red House renovation	Washing machine, dishwasher, kitchen sink, 3 WCs, 2 sink, 0 showers	Washing machine, dishwasher, kitchen sink, 3 WCs, 2 sinks, 2 showers, additional dishwasher & washing machine, kitchen sink	39 (kitchen use) 85 (toilet use)	78 (kitchen use) 241.5 (toilet and shower use)	+ 195.5
<b>Total daily water saving (estimated)</b>			<b>3101</b>	<b>2568</b>	<b>- 533</b>

3.10 Leonardslee Gardens has provided water bills for the last year, from which we can see an estimated consumption (some readings taken from the meter, some estimated by the water provider) for the whole site. The differences in daily consumption shown in the bills reflect the differing usage due to varying occupancy and opening times throughout the year. The average daily rate is calculated as 10750 litres per day. The water usage shown in the bill would also include use for the hotel, watering the livestock, (wallabies, chickens etc), water consumption by the vineyard and watering the gardens and propagation houses/greenhouses, so will not be an accurate representation of the consumption by the existing units that have been proposed to be redeveloped. The bills are shown in Appendix D and summarised below.

- 29/06/2023 - 28/09/2023 (92 days) 888 m<sup>3</sup>/9.7 m<sup>3</sup> per day (9700 litres p/d)
- 29/09/2023 - 28/12/2023 (91 days) 1191 m<sup>3</sup>/13.1 m<sup>3</sup> per day (13100 litres p/d)
- 29/12/2023 - 28/03/2024 (77 days) 588 m<sup>3</sup>/7.2 m<sup>3</sup> per day (7200 litres p/d)
- 29/03/2024 – 28/06/2024 (89 days) 1162 m<sup>3</sup>/13 m<sup>3</sup> per day (13000 litres p/d)

3.11 Current water usage at the eight locations on site is estimated at 3101 litres per day. The water usage with the proposed low pressure/flow fittings, removal of the greenhouse irrigation arrangements is estimated to be 2568 litres per day, making a total saving of 533 litres per day. See Table 3.4 below for a summary of the existing water use, proposed water use and offset water savings.

**TABLE 3.4**  
**SUMMARY OF CHANGES IN WATER USE**

	<b>Water use</b>	<b>Average litres/day</b>
Current water usage	Kitchens and bathrooms in the residences and kitchens and public toilets in the cafes.	3101
Proposed water usage	Kitchens and bathrooms in the air B & Bs and kitchens and public toilets in the cafes.	2568
Offset water saving	Loss of greenhouse irrigation with mains water.	-800

3.13 Leonardslee Gardens has shown a commitment to reducing water usage. The existing greenhouse, to the rear of the Alpine Café is to be redeveloped for educational use and the water presently used for irrigation to be offset against the proposals. See Table 3.4 above and Figure 4 for photographs of the existing greenhouse.

3.14 The replacement of the toilets and sinks with low-volume flushing toilets and low-pressure sinks and showers in the developments will result in a decrease in daily water usage (an older style toilet or sink will use approximately 13 litres of water per flush and 4 litres per hand wash, as opposed to approximately 4 litres per flush for a new low volume toilet or 2 litres per hand wash for a low

pressure, aerator sink) as stated in [waterwise.org.uk](http://waterwise.org.uk) as suggested in *Building Regulations Document G table 2.2*. See Appendix F.

- 3.15 Further savings are to be made by redeveloping the existing greenhouse which currently uses mains water for irrigation. It is estimated that the irrigation of a typical greenhouse of comparable size to the current greenhouse uses approximately 800 litres of water per day (as stated in [www.gardencentermag.com](http://www.gardencentermag.com)). See Table 3.4 above for details of the water usage and offsetting.

#### 4. WATER NEUTRALITY ASSESSMENT

- 4.1 The existing water use for the current facilities at the site has been estimated at 3101 litres per day.

- 4.2 The water use for the site developed as proposed (including all the water saving measures described above) has been estimated as an average of 2568 litres per day.

- 4.3 To add headroom and robustness to the water neutrality from the proposed developments the following measures are to be implemented:

- The proposed bathrooms and replacement visitor WCs and sinks will implement water saving design: low volume toilet flushing, low volume taps and reduced pressure showers designed to save water. The appropriate water saving devices as shown in Appendix C.
- Offsetting options have been explored across the wider site. The current greenhouse is irrigated from the mains water system. It is proposed to redevelop this greenhouse for use as an educational building. This will result in a saving of 800 litres per day, which will help to offset the water usage from the other proposed redevelopments.

- 4.4 On the basis of the above, the proposed redevelopment would achieve (better than) water neutrality.

- 4.5 It should be noted that the above is a worst-case scenario based on the highest calculated proposed water usage. It had been calculated that the proposed water usage will be 2568 litres per day. This could provide a headroom of 533 litres per day.

#### 5. CONCLUSIONS

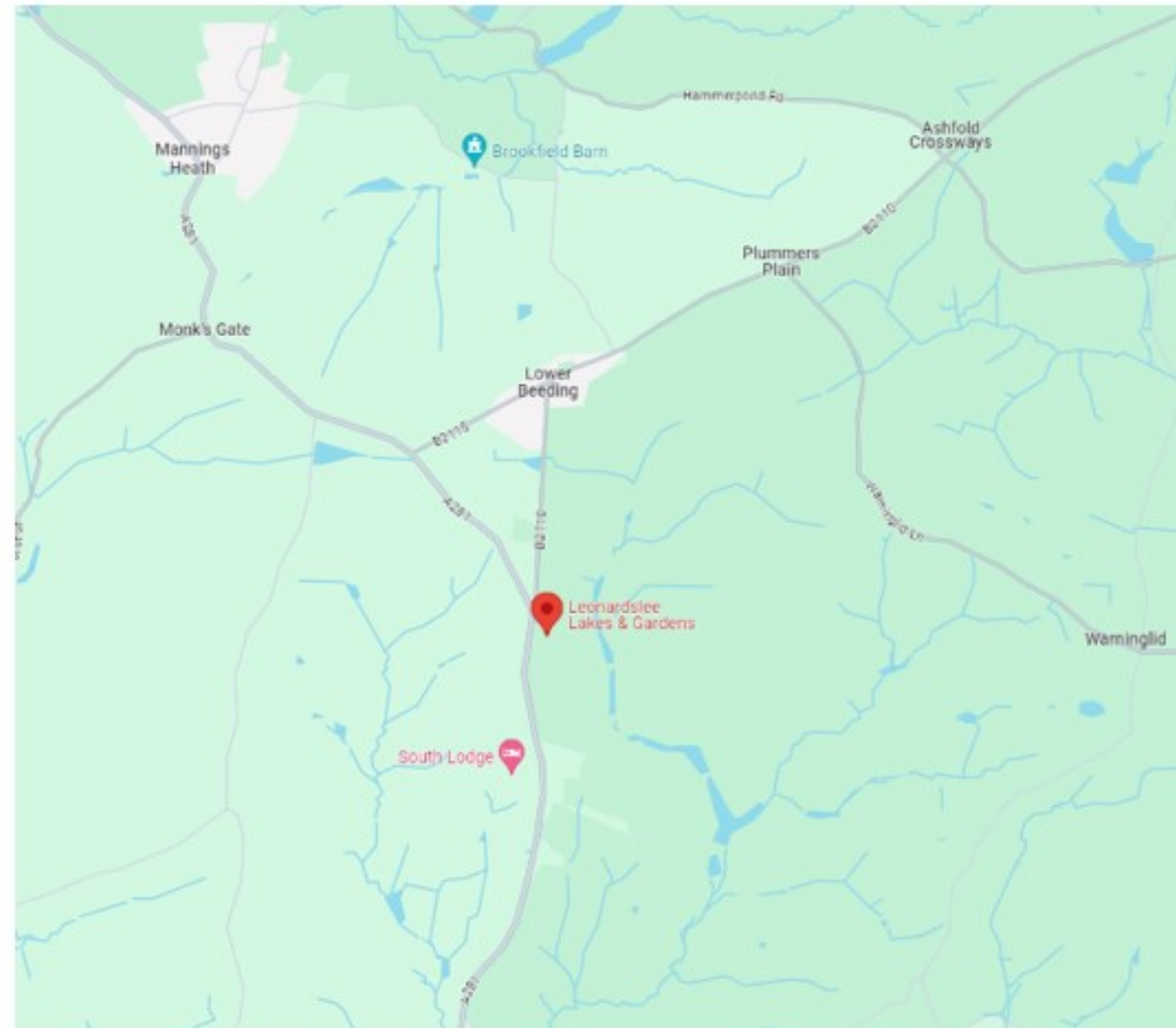
- 5.1 It is proposed to redevelop the site at Leonardslee Gardens, Brighton Road, Lower Beeding as detailed above. To include the renovation and expansion of the Generator building currently housing the courtyard and Alpine Café and the reconfiguration of the Clocktower Café. The cottages: Potters, Honey, Carriage and the Red House are undergoing some redevelopment with reference to bathroom and kitchens as detailed above in Section 1.3.

- 
- 5.2 Existing water consumption is estimated as 3101 litres per day. The water consumption post redevelopment is estimated as 2568 litres per day. The development plans include the redevelopment of the existing greenhouse to the rear of the Alpine House café (into an educational unit), which currently uses an estimated 800 litres of water per day from the mains water supply to irrigate. This is to be offset against the increased usage from the proposed developments resulting in a usage of -533 litres per day when compared with the existing usage. This is better than water neutral, creating a saving of 533 litres per day from the existing.
- 5.3 On this basis water neutrality would be more than achieved
- 5.4 To avoid any increase in water consumption, efficient fixtures and fittings will be used throughout this redevelopment, examples of which can be seen in Appendix D. The upgrading of the appliances to low volume and water saving designs, coupled with the offsetting, will provide a saving of 533 litres per day compared to the existing situation.
- 5.5 The proposed redevelopment should have its own water supply account and water meter. A smart meter would be recommended.

★ ★ ★ ★ ★ ★ ★

## **APPENDIX A**

<b>FIGURE 1:</b>	<b>Site Location Map</b>
<b>FIGURE 2:</b>	<b>Site Map</b>
<b>FIGURE 3:</b>	<b>Proposed Development</b>
<b>FIGURE 4:</b>	<b>Photographs</b>



Leonardslee Gardens  
Lower Beeding, Horsham, RH13 6PP

Figure 1: Site Location

Scale as shown

May 2024





# Leonardslee Gardens Lower Beeding, Horsham, RH13 6PP

Figure 2: Site Map

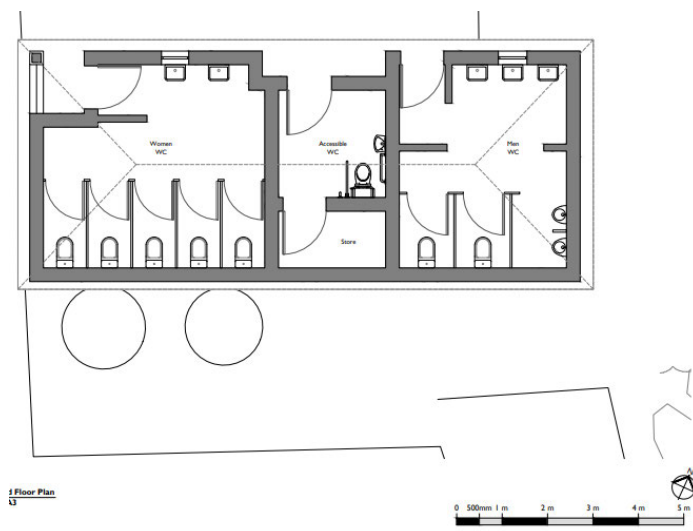
Scale as shown

May 2024

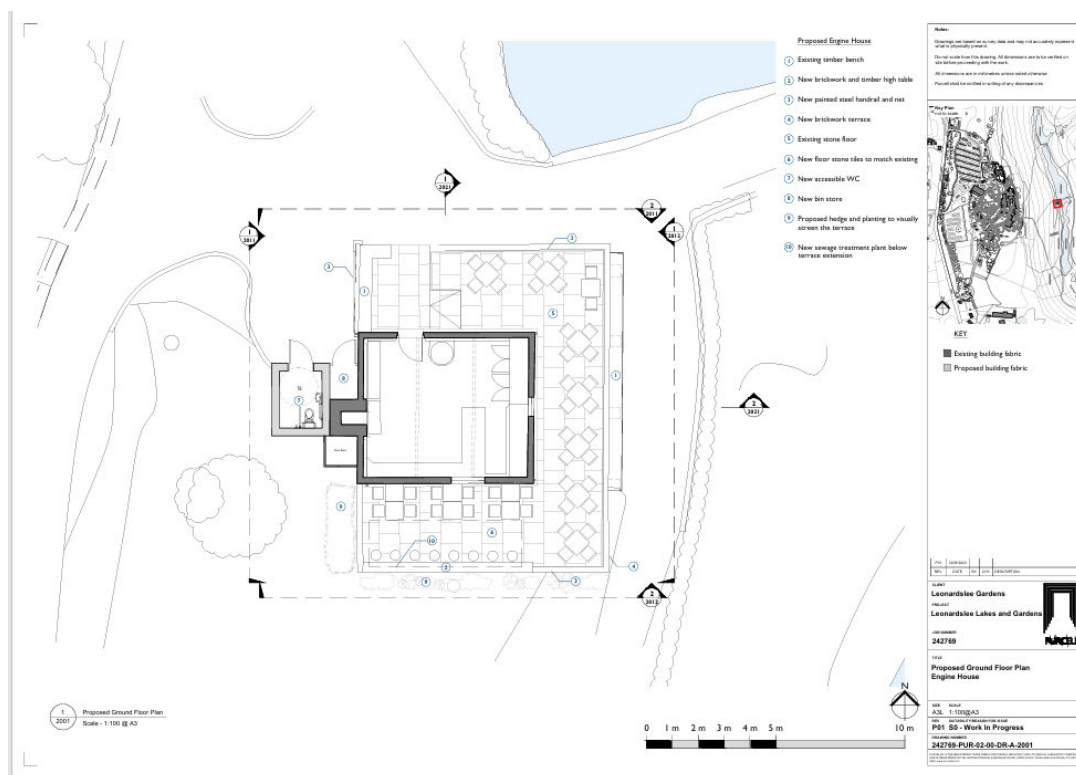


FIGURE 3: Proposed Redevelopment

### 1. Car Park Toilets (as existing, no longer included in the redevelopment)



### 2. The Engine House



### Proposed Stable Block

- 1 New rivetted existing cobbles to form level access to courtyard entrance.
- 2 New extended courtyard/cobble surface using proposed cobbles to match existing.
- 3 New modern surface treatment to entrance into courtyard.
- 4 New modern timber structure with glazed openings to link courtyard.
- 5 New glazed entrance with rivetted timber posts to existing structure.

### Proposed Honey Cottage

- 6 New extended garden with prime grassed entrance and pathways.
- 7 New extended patio to new entrance extension replacing the conservatory and providing level access to interior.
- 8 Lightweight timber frame and clad extension to accommodate new entrance and sun room.

### Proposed Potter's Cottage

- 9 New open plan living space containing a kitchen, dining and seating areas.
- 10 Existing timber stairs up to entrance on first floor.
- 11 Existing timber stairs up to entrance on first floor.

### Proposed Carriage Cottage

- 12 New terrace extension to create outdoor seating overlooking garden.
- 13 New timber deck to create a sheltered, outdoor, mechanical plant and an accessible WC with a baby change.

### Proposed Honey Cottage

- 14 7 x new sunsets WCs and 1 x accessible WC with baby change.
- 15 New helix to screen Bath access from public view.
- 16 New opening formed in existing wall 2.3m x 1 m with oak lintel to both floors.
- 17 New timber doors to create lobby for out of hours WC access. Doors in line with historic timber frame to roof structure.

### Proposed Potter's Cottage

- 18 New modern timber structure with glazed openings to link courtyard.
- 19 New modern timber structure with glazed openings to link courtyard.
- 20 New glazed entrance with rivetted timber posts to existing structure.

### Proposed Honey Cottage

- 21 New terrace extension to create outdoor seating overlooking garden.
- 22 New timber deck to create a sheltered, outdoor, mechanical plant and an accessible WC with a baby change.

**KEY**

- Existing building fabric
- Proposed building fabric

**Notes:**

Thin pile foundations to new proposed terrace posts to avoid existing tree roots. Arborologist Specialist to confirm.

**Client:**  
Leonardson Gardens  
Leonardson Lakes and Gardens

**Job Number:**  
2427/69

**Date:**  
24/02/2019

**Project:**  
Proposed Ground Floor Plan  
Stable Block

**Scale:**  
A3, 1:200

**Client:**  
C01 A2 - For Client Information

**Reference:**  
2427/69-PUR-01-00-DR-A-2001

**Notes:**

Changes are based on survey data and may not accurately represent what is currently shown.

Design of work from this drawing for alterations and to be carried out by the client and not the architect.

All drawings are in accordance with the current standards.

Project shall be carried out in line with any applicable laws.

**Proposed Stable Block**

- New stairwell under structure with glazed roof covering.
- New metal roofing to existing structure with 3 x new conservation roof lights and metal guttering.
- Existing telephone pole retained.
- New roofing over existing conservatory.
- New awnings over service extension.

**Existing date roofing over historic Stable building to be retained.**

**Existing date roofing over historic Clocktower building to be retained.**

**Existing Clocktower to be retained.**

**Proposed Potter's Cottage**

- New entrance lobby with new opening to new WC and storage cupboard in place of existing WC.
- Existing kitchen stays in situ and previous opening to WC is removed.
- Under-stair storage as existing.
- Large living room in place of previous bedroom.

**All bedrooms on second floor stay the same as their existing layout.**

**New ensuite bathroom to Bedroom 1 in place of existing storage.**

**New bathroom layout.**

**Proposed Carriage Cottage**

- New partitions to replace existing modern partitions and create new appropriate layout.
- New entrance lobby leads onto:
- Large bedroom.
- Modern bathroom and
- Open plan living space.

**Proposed Honey Cottage**

- New partitions to replace existing partitions and create new appropriate modern layout.
- New hallway leads into:
- Bedroom 1.
- Bedroom 2 and
- A modern bathroom.
- Skate roof to lightweight extension.

**KEY**

Existing building fabric

Proposed building fabric

**2** Proposed Second Floor Plan  
Scale: 1:200 @ A3

**02** Series

**Proposed First & Second Floor Plan Stable Block**

0 2 m 4 m 6 m 8 m 10 m 20 m

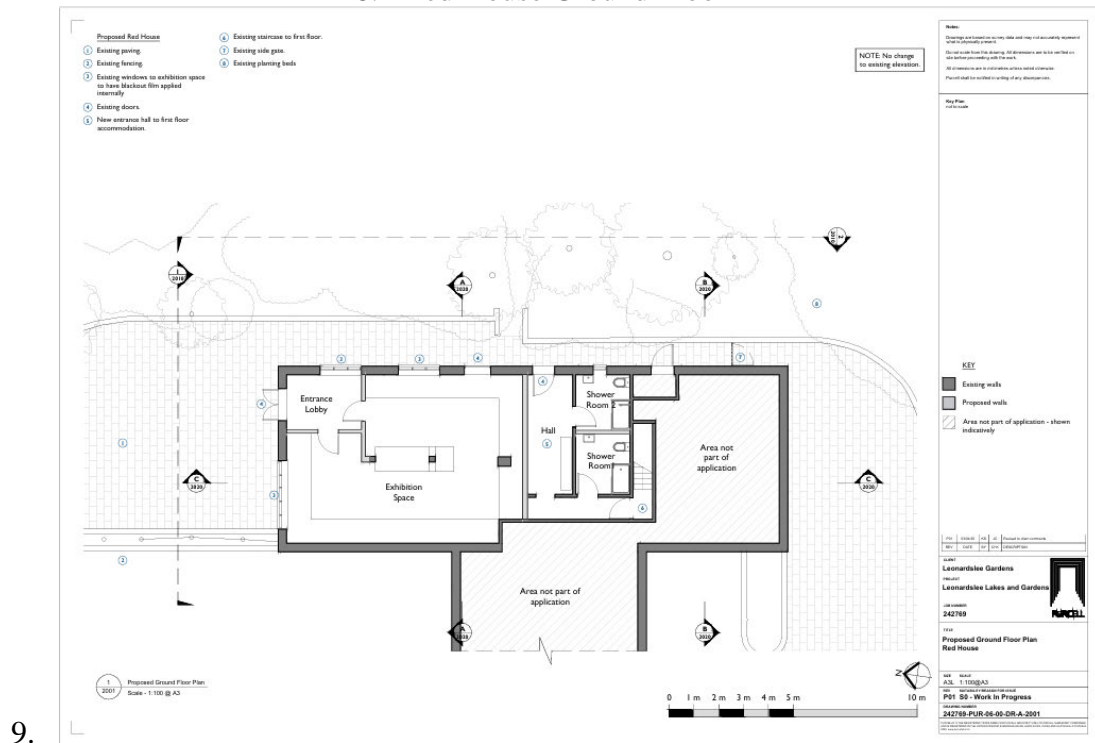
**Leonard's Gardens**  
Leonard's Lakes and Gardens

**02 A2 - For Client Information**

**242789-PUR-01-01-DR-A-2002**

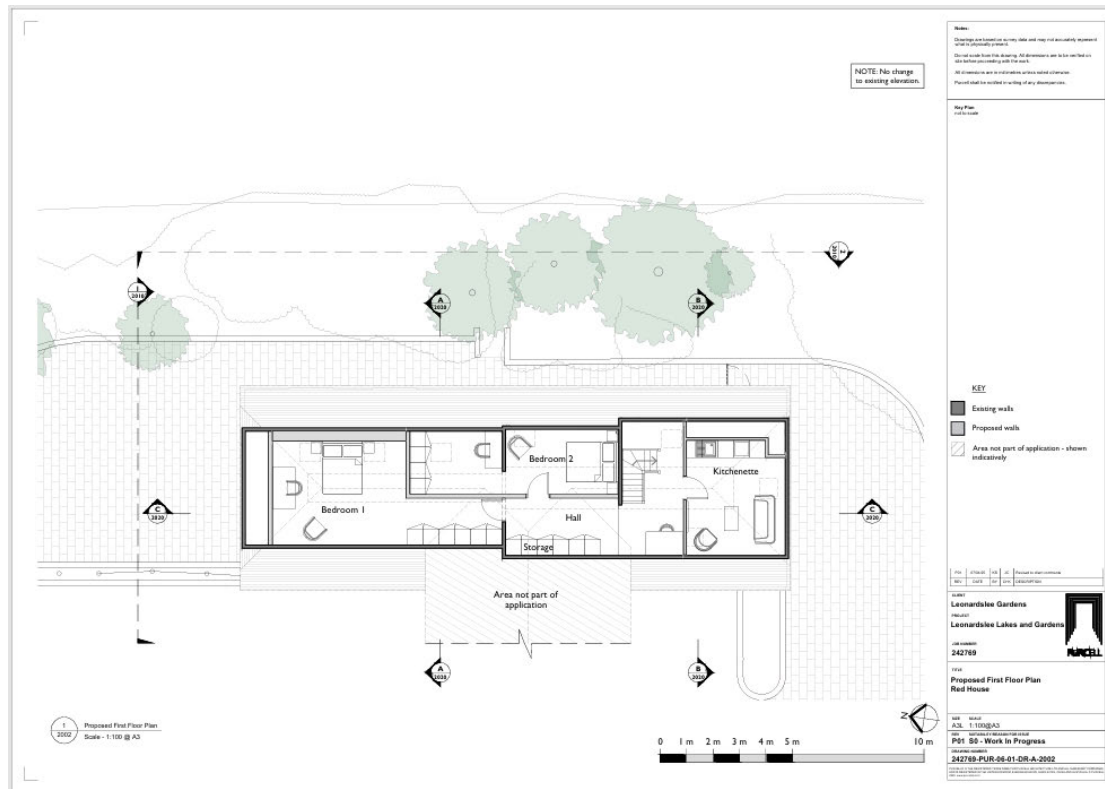
[illegible]

## 8. Red House Ground Floor



9.

## First Floor





## FIGURE 4: Photographs

The Potters Cottage and Carrier Cottage to the left of the photo



Honey Cottage





## Potters Cottage



## Clocktower Café entrance and existing WC







The courtyard to the rear of Alpine House Café





### The courtyard bar (to be extended)



### The Red House





Existing mains water irrigated greenhouse (to be removed)



Gardeners building to the south of the site



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### Attenuation pond near gardeners building



## APPENDIX B

### **Hydrology**



MasterDrain  
HY 11.0

# Environmental Assessment Services Ltd

<http://www.easltd.co.uk>

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Job No.	<b>688</b>		
Sheet no.	<b>1</b>		
Date	<b>08/07/24</b>		
By	XL	Checked	Reviewed

Project **Leonardslee**  
Title **Hydrological data for Horsham**

Data:-

## FSR values

Location	= Horsham	Grid reference	= TQ1328
M5-60 (mm)	= 20.0	SAAR (mm/yr)	= 800
r	= 0.36	Soil	= 0.45
Long reference	= 513128	Area	= England and Wales
Hydrological area	= 7	Hydrological zone	= 1

Soil classification for WRAP type 4

Clayey, or loamy over clayey soils with an impermeable layer at shallow depth.

## FEH values

No FEH data available in this file.



MasterDrain  
HY 11.0

<div>Environmental Assessment Services Ltd</div> <div>http://www.easltd.co.uk</div>		London Rd, Hickstead Haywards Heath, West Sussex, RH17 5LZ Tel: 01444 882552 email: info@easltd.co.uk		Job No. <b>688</b>	
				Sheet no. <b>2</b>	
				Date <b>08/07/24</b>	
Project <b>Leonardslee</b>			By <b>XL</b>	Checked	Reviewed
Title <b>Hydrological data for Horsham</b>					

<- Soil

×

M5-60 ->

×

<- SAAR

×

r x 100 ->

×

Map extracts reproduced by permission of H R Wallingford.

## APPENDIX C

### **Water Use Data**

### Low Volume Taps

1. Flow Rate: 3.5 lpm

2. Spout Height:  
94mm

3. 5 Year Warranty

4. German Quality



### Reduced pressure showers



#### **Product Details**

Height - 705mm

Product Code - A3064

Brand - Hudson Reed

Colour/Finishes - Chrome

Material - Brass & ABS

Product Type - Water saving shower kit - air induction handset for up to 25% water saving.

Water Pressure - MP - 0.5 bar pressure minimum

Requirement - Suitable for all plumbing systems

Hudson Reed multi-function shower heads have three settings for a choice of showering experiences

Soak - The classic shower jet

Champagne - A gentle spray

Massage - A muscle relaxing stimulating jet





**Flowpoint Shower Head**

The details and benefits of this Shower Head:

- ✓ **Saves Water** - With a regulated flow rate of 7 litres per minute, compared to a standard 15 litres per minute flow rate.
- ✓ **Easy To Fit** - Comes with standard ½" thread to fit all shower hoses (hose not supplied).
- ✓ **Self Cleaning** - Self-cleaning rubber nozzles allow easy cleaning to prevent limescale build up.
- ✓ **Flexible** - Will work with any standard ½" hose thread and Combi condensing boilers and gravity showers with a pump fitted\*
- ✓ **Guarantee** - This model comes with a 1-year guarantee.
- ✓ **WRAS Approved** - Meaning the Flowpoint Single Setting Shower Head is approved to be safe, durable, water-efficient, built to a high standard and compliant with UK plumbing regulations as set out by our Water Companies.

\*Not suitable for Electric or Digital showers and requires 0.5 bar water pressure.

product id: 3518

Low flush WCs

**SPECIFICATION**

Brand	Twyford
Button/Handle	Psh Button
Cistern Depth	160mm
Cistern Height	374mm
Cistern Width	366mm
Colour	White
Flush Capacity	4/2.6 Litre
Flush Mechanism?	Included
Flush Type	Dual Flush
Guarantee	1 year
Material(s)	Vitreous China
Range	Alcona
Type	Close Coupled Cistern



Specification				^
Ideal Standard Concept Arc Close Coupled 4/2.6 Litre Dual Flush Cistern - E785501				
EAN	5017830390459	Height (mm)	380	
MPN	E785501	Depth (mm)	160	
Product Code	165245	Weight (Kg)	11.36	
Type	Toilet	WRAS Approved	1	
Sub Type	Close Coupled Toilet	Flow Rate (L/min)	2.6	
Colour	White	Capacity (Litres)	4	
Style	Contemporary	Mounting	Wall	
Finish	Gloss	Material	Vitreous China	
Warranty (Years)	25	Range	Concept Arc	
Width (mm)	320			

## APPENDIX D

### **Water Bills from the Site**

**business stream**  
A SCOTTISH WATER COMPANY



Clarbow Limited  
FAO Accounts  
Leonards Lee Gardens  
Brighton Road  
Horsham TH13 6PP

18/000257  
99900/00084

**business-stream.co.uk**

**0330 123 2000**

For emergencies, please contact your  
Water wholesaler: Southern Water  
Visit [business-stream.co.uk/emergencies](https://business-stream.co.uk/emergencies)

Customer reference / Invoice no

Invoice / tax point date: 29 September 2023

Supply address: LEONARDSLEE ESTATE  
LIMITED LEONARDSLEE HOUSE BRIGHTON  
ROAD, LOWER BEEDING HORSHAM SW, RH13  
6PP

Water supply point ID

Our VAT number: 945 8508 85

Page 1 of 3

## Your water services invoice

29 June - 28 September 2023 (92 days, average £19.28 per day)

### Your account summary

Your previous balance	£2,202.90
Payments received	£2,202.90 CREDIT
Your balance brought forward	£0.00
<b>Your charges this period (see page 2 for details)</b>	
Water services charges	£1,773.84
VAT	£0.00
<b>Total charges this period</b>	<b>£1,773.84</b>



We look forward to receiving your payment of £1,773.84

### Customer support hub

We're here to help and we're committed to making a positive difference to our customers, so you can save water, save time, and save money. Find out more in our Support Hub. Visit [business-stream.co.uk/customer-support](https://business-stream.co.uk/customer-support)

### Carbon consumption

Based on this period your annual carbon consumption is 1396.17kgCO<sub>2</sub>e/yr, based on National Government Statistics.

### Ways to pay

#### Direct Debit

Paying by Direct Debit is the quickest and easiest way to pay your bills. Visit [business-stream.co.uk/direct-debit](https://business-stream.co.uk/direct-debit) or call us on 0330 123 2000.

#### Online

Visit [business-stream.co.uk/pay](https://business-stream.co.uk/pay) online with your debit or credit card details.

#### By phone

Call 0330 123 2000 to pay over the phone using your debit or credit card details.

#### By bank transfer

Sort code: 30-00-02.  
Account number: 03029979.  
Account name: Business Stream Revenue Account.  
Please include this reference number: 2819142 / 3328415

#### Payment slip

Complete the enclosed payment slip and present it, with your invoice, to your bank branch or to a post office, to pay by cash, card or cheque. You may be charged for this service.

Alternatively, you can send a cheque, and the completed payment slip enclosed, to Business Stream, PO Box 3798, Edinburgh EH3 6ET. Cheques should be payable to 'Business Stream' and include your customer reference number on the back. Please don't send cash in the post and allow 10 days for payment to be processed. For more information, visit [business-stream.co.uk/ways-to-pay](https://business-stream.co.uk/ways-to-pay)

7 Lochside View, Edinburgh, EH12 9DH | [business-stream.co.uk](https://business-stream.co.uk)

Naturally different.

Scottish Water Business Stream Limited trading as Business Stream. Registered in Scotland. Company no. SC299219. Registered office address and principal place of business: 7 Lochside View, Edinburgh, EH12 9DH, Oxford, the Water Services Regulation, is the regulator of the water sector in England and Wales. For more information visit [ofwat.gov.uk](https://ofwat.gov.uk). Unless otherwise agreed, Scottish Water Business Stream Ltd provides services to you in accordance with our standard terms and conditions, a copy of which is available at [business-stream.co.uk/yorkshire/useful-info](https://business-stream.co.uk/yorkshire/useful-info). Copies are also available on request. Through your continued receipt and acceptance of our services, you are deemed to have accepted our standard terms and conditions.

Customer reference / Invoice number: 2819142 / 3328415

Invoice / tax point date: 29 September 2023

Page: 2 of 3

## Your charges in detail


Meter number / meter size: 4A022302 / 20mm

Water charges	Units	Rate	VAT	Charge
<b>Fixed water charge</b>				
Yearly fee £85.90	29 Jun 23 - 28 Sep 23	92 days	0.234699	£21.59
<b>Volumetric water charge</b>				
Actual reading	15 Sep 23	4626		
Estimated reading	29 Jun 23	3738		
= volume used this period		888 m <sup>3</sup>		
Estimated reading	29 Sep 23	4761		
Actual reading	15 Sep 23	4626		
= volume used this period		135 m <sup>3</sup>		
Charges	29 Jun 23 - 14 Sep 23	762.317 m <sup>3</sup>	1.7272	£1,316.67
Charges	29 Jun 23 - 14 Sep 23	125.683 m <sup>3</sup>	1.6105	£202.41
Charges	15 Sep 23 - 28 Sep 23	135 m <sup>3</sup>	1.7272	£233.17
<b>Total water charges</b>				<b>£1,773.84</b>
<b>Subtotal</b>				<b>£1,773.84</b>
VAT				£0.00
<b>Total charges this period</b>				<b>£1,773.84</b>

This is a fee for the upkeep of external pipes and pumps that supply water to your premises.

This is a charge for the amount of water you've used, as recorded by your water meter. The rate you are charged can vary based on your location and your water consumption. Find out more at [business-stream.co.uk/yorkshire/useful-info](https://business-stream.co.uk/yorkshire/useful-info)

Most of our services are zero-rated (Z) but some are standard rate (S) or outside scope (O). See [business-stream.co.uk/vat](https://business-stream.co.uk/vat)



business stream  
A SCOTTISH WATER COMPANY

Clarbow Limited  
FAO Accounts  
Leonards Lee Gardens  
Brighton Road  
Horsham TH13 6PP

18007759  
9990000076

business-stream.co.uk

0330 123 2000

For emergencies, please contact your:  
Water wholesaler: Southern Water  
Visit [business-stream.co.uk/emergencies](https://business-stream.co.uk/emergencies)

Customer reference / Invoice no  
[REDACTED]

Invoice / tax point date: 29 December 2023

Supply address: LEONARDSLEE ESTATE  
LIMITED LEONARDSLEE HOUSE BRIGHTON  
ROAD, LOWER BEEDING HORSHAM SW, RH13  
6PP

Water supply point ID: [REDACTED]

Our VAT number: 945 8508 85

Page 1 of 3

## Your water services invoice

29 September - 28 December 2023 (91 days, average £22.68 per day)

### Your account summary

Your previous balance	£1,773.84
Payments received	£1,773.84 CREDIT
Your balance brought forward	£0.00

### Your charges this period (see page 2 for details)

Water services charges	£2,063.94
VAT	£0.00
<b>Total charges this period</b>	<b>£2,063.94</b>

We look forward to receiving your payment of £2,063.94

### Ways to save

With a rise in the cost of living and energy rates higher than ever, we want to help you cut costs wherever we can. View our ways to save tips for help in reducing your water costs. Visit [business-stream.co.uk/ways-to-save](https://business-stream.co.uk/ways-to-save)

### Carbon consumption

Based on this period your annual carbon consumption is 643.3kgCO<sub>2</sub>e/yr, based on National Government statistics.

### Ways to pay

**Direct Debit**

Paying by Direct Debit is the quickest and easiest way to pay your bills. Visit [business-stream.co.uk/direct-debit](https://business-stream.co.uk/direct-debit) or call us on 0330 123 2000.

**Online**

Visit [business-stream.co.uk/pay](https://business-stream.co.uk/pay) online with your debit or credit card details.

**By phone**

Call 0330 123 2000 to pay over the phone using your debit or credit card details.

**By bank transfer**

Sort code: 30-00-02.  
Account number: 03029919.  
Account name: Business Stream Revenue Account.  
Please include this reference number: 2839142 / 3990189.

**Payment slip**

Complete the enclosed payment slip and present it, with your invoice, to your bank branch or to a post office, to pay by cash, card or cheque. You may be charged for this service.

Alternatively, you can send a cheque, and the completed payment slip enclosed, to **Business Stream, PO Box 57381, Edinburgh, EH12 1GT**. Cheques should be payable to 'Business Stream' and include your customer reference number on the back. Please don't send cash in the post and allow 5 days for payment to be processed. For more information, visit [business-stream.co.uk/ways-to-pay](https://business-stream.co.uk/ways-to-pay)

**PO Box 57381, Edinburgh, EH12 1GT | [business-stream.co.uk](https://business-stream.co.uk)**

*Naturally different.*

Scottish Water Business Stream Limited trading as Business Stream. Registered in Scotland. Company no. SC294954. Registered office address and principal place of business: 15 Leithside Crescent, Edinburgh, EH12 9SE. Ofwat, the Water Services Regulation Authority, is the regulator of the water sector in England and Wales. For more information visit [ofwat.gov.uk](https://ofwat.gov.uk). Unless otherwise agreed, Scottish Water Business Stream Ltd provides services to you in accordance with our standard terms and conditions, a copy of which is available at [business-stream.co.uk/terms](https://business-stream.co.uk/terms). Copies are also available on request. Through your continued receipt and acceptance of our services, you are deemed to have accepted our standard terms and conditions.

Customer reference / Invoice number: 2839142 / 3990189 Invoice / tax point date: 29 December 2023 Page: 2 of 3

## Your charges in detail

Meter number / meter size: 4A022302 / 20mm

Water charges		Units	Rate	VAT	Charge
<b>Fixed water charge</b>					
Yearly fee	£85.90	29 Sep 23 - 28 Dec 23	91 days	0.234699	£21.36
<b>Volumetric water charge</b>					
Estimated reading	29 Dec 23	5952			
Estimated reading	29 Sep 23	4761			
= volume used this period		1191 m <sup>3</sup>			
Charges	29 Sep 23 - 28 Dec 23	1066.683 m <sup>3</sup>	1.7272	£	£1,842.37
Charges	29 Sep 23 - 28 Dec 23	124.317 m <sup>3</sup>	1.6105	£	£200.21
<b>Total water charges</b>					<b>£2,063.94</b>
<b>Subtotal</b>					<b>£2,063.94</b>
VAT					£0.00
<b>Total charges this period</b>					<b>£2,063.94</b>

This is a fee for the upkeep of external pipes and pumps that supply water to your premises.

This is a charge for the amount of water you've used, as recorded by your water meter. The rate you are charged can vary based on your location and your water consumption. Find out more at [business-stream.co.uk/yorkshire/watfud-info](https://business-stream.co.uk/yorkshire/watfud-info)

Most of our services are zero-rated (0) but some are standard rate (5) or outside scope (0). See [business-stream.co.uk/vat](https://business-stream.co.uk/vat) for more information.

Customer reference / invoice number: 2819142 / 4669242      Invoice / tax point date: 29 March 2024      Page: 2 of 3

## Meter number / meter size: 4A02392 / 20mm

This is a charge for the amount of water you've used, as recorded by your water meter. The rate you are charged can vary based on your location and your water consumption. Find out more at [business-stream.co.uk/yorkshire/useful-info](http://business-stream.co.uk/yorkshire/useful-info)

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Clarbow Limited  
FAO Accounts  
Leonards Lee Gardens  
Brighton Road  
Horsham TH13 6PP



For emergencies, please contact your:  
Water wholesaler: Southern Water  
Visit [business-stream.co.uk/emergencies](https://business-stream.co.uk/emergencies)

Customer reference / invoice no

Invoice / tax point date: 29 June 2024

Supply address: LEONARDSLEE ESTATE  
LIMITED LEONARDSLEE HOUSE BRIGHTON  
ROAD, LOWER BEEDING HORSHAM SW, RH13  
6PP

Water supply point ID:

Our VAT number: 945 8508 85

Page 1 of 3

Water efficiency toolkit

We're committed to supporting our customers  
to reduce their water usage by up to 20%.  
Download our free water efficiency workplace  
tools at [business-stream.co.uk/water-efficiency](https://business-stream.co.uk/water-efficiency)

Your water consumption  
and carbon emissions

The year to date (YTD) water consumption for  
your site is 1,124,109 m<sup>3</sup>. Based on the billing  
period and using UK Government statistics,  
your annual carbon emissions are  
1,585.87kgCO<sub>2</sub>e/yr.

Your water services invoice

29 March - 28 June 2024 (92 days, average £25.61 per day)

Your account summary

Your previous balance	£1,122.63
Payments received	£1,122.63 CREDIT
Your balance brought forward	£0.00
Your charges this period (see page 2 for details)	
Water services charges	£2,356.12
VAT	£0.00
Total charges this period	£2,356.12



We look forward to receiving your payment of £2,356.12

Ways to pay

Direct Debit

Paying by Direct Debit is the  
quickest and easiest way to pay  
your bills. Visit  
[business-stream.co.uk/direct-debit](https://business-stream.co.uk/direct-debit) or call us on 0330 123  
2000.

Online

Visit [business-stream.co.uk/payonline](https://business-stream.co.uk/payonline) with your debit or credit  
card details.

By phone

Call 0330 123 2000 to pay over the  
phone using your debit or credit  
card details.

By bank transfer

Sort code: 30-00-02.  
Account number: 03029919.  
Account name: Business Stream  
Revenue Account. Please include  
this reference number: 2819142 /  
5372157

You can also find other ways to pay at [business-stream.co.uk/ways-to-pay](https://business-stream.co.uk/ways-to-pay)

PO Box 17381, Edinburgh, EH12 1GT | [business-stream.co.uk](https://business-stream.co.uk)

Scottish Water Business Stream Limited trading as Business Stream. Registered in Scotland. Company no. SC26244. Registered office address and principal place of  
business: 1-3 Lochside Crescent, Edinburgh, EH12 5SE. Ofwat, the Water Services Regulation Authority, is the regulator of the water sector in England and Wales. For more  
information visit [ofwat.gov.uk](https://ofwat.gov.uk). Unless otherwise agreed, Scottish Water Business Stream Ltd provides services to you in accordance with our standard terms and  
conditions, a copy of which is available at [business-stream.co.uk/terms](https://business-stream.co.uk/terms). Copies are also available on request. Through your continued receipt and acceptance of our  
services, you are deemed to have accepted our standard terms and conditions.

Naturally different.

Customer reference / invoice number: 2819142 / 5372157

Invoice / tax point date: 29 June 2024

Page: 2 of 3

Your charges in detail

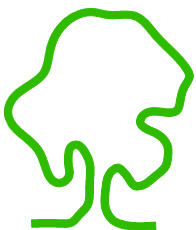
Meter number / meter size: 4A022302 / 20mm

Water charges		Units	Rate	VAT	Charge
Fixed water charge					
Yearly fee £85.90	29 Mar 24 - 31 Mar 24	3 days	0.234609	2	£0.70
Yearly fee £18.30	1 Apr 24 - 28 Jun 24	89 days	0.050137	2	£4.46
Volumetric water charge					
Estimated reading	29 Jun 24	7760			
Estimated reading	29 Mar 24	6598			
= volume used this period		1162 m <sup>3</sup>			
Charges	29 Mar 24 - 31 Mar 24	4,098 m <sup>3</sup>	1.6105	2	£6.60
Charges	29 Mar 24 - 31 Mar 24	33,793 m <sup>3</sup>	1.7272	2	£58.37
Charges	1 Apr 24 - 28 Jun 24	1124,109 m <sup>3</sup>	2.0336	2	£2,385.99
Total water charges					£2,356.12

This is a fee for the upkeep of external  
pipes and pumps that supply water to your  
premises.

This is a charge for the amount of water  
you've used, as recorded by your water  
meter. The rate you are charged can vary  
based on your location and your water  
consumption. Find out more at  
[business-stream.co.uk/performance/useful-info](https://business-stream.co.uk/performance/useful-info)

Subtotal	£2,356.12
Total charges this period	£2,356.12



eas ltd

Environmental Assessment Services Ltd

Unit 4B, The Courtyard, Holmsted Farm, Staplefield Road, Cuckfield,  
West Sussex, RH17 5JT

Phone : +44 (0) 1444 882552

email : [info@easltd.co.uk](mailto:info@easltd.co.uk)

web site : [www.easltd.co.uk](http://www.easltd.co.uk)