D&M PLANNING Ltd
Chartered Town Planners

1A High Street, Godalming Surrey GU7 1AZ | 01483425705 | info@dm-planning.co.uk
WWW.DM-PLANNING.CO.UK

WATER NEUTRALITY STATEMENT

For

APPLICATION UNDER REGULATION 77 OF THE CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2017 TO INSTALL A SWIMMING POOL.

at

JACARANDA WHITEHALL DRIVE IFIELD CRAWLEY WEST SUSSEX RH11 0LP

D&M REF: 023/25/MS
February 2025
Updated March 2025

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1.0 EXECUTIVE SUMMARY

1.1 This statement accompanies an application made under Regulation 77 of the Conservation of Habitats and Species Regulations 2017 to install a swimming pool. The installation of the swimming pool itself being granted permission by virtue of the General Permitted Development Order (GPDO).

1.2 This report is required due to Natural England raising concerns regarding water extraction within the Sussex North Water Supply Zone. This was set out in the position statement in September 2021 prior to any decision being issued to the reserved matters being issues. Ultimately, any development which will use water it is now required to demonstrate water neutrality before it can proceed.

1.3 This statement will set out what the baseline demand for water is and how the swimming pool can be installed and maintained without increasing the amount of tap water required.

1.4 To mitigate this use it is proposed that the swimming pool be filled by tanker from water abstracted outside of the Water Supply Zone; this is normal practice for swimming pools. The water used in the maintenance of the pool will then be offset through rain water harvesting to be deployed in the maintenance of the garden.

1.5 This statement will clearly set out the relevant water need and how this will be mitigated.

1.6 **This statement has been amended following feedback from officer's of the Council. Amendments are clearly highlighted for clarity.**

2.0 INTRODUCTION

2.1 This report is submitted in support of the application made under Regulation 77 of the Conservation of Habitats and Species Regulations 2017 to install a swimming pool. The installation of the swimming pool itself being granted permission by virtue of the General Permitted Development Order (GPDO).

2.2 In September 2021 Natural England published a Position Statement regarding water extraction within the North Water Supply Zone. This stated that it cannot be concluded that the existing abstraction within Sussex North Water Supply Zone is not having an impact on the protected species within Arun Valley. Accordingly, new developments within this area must not add to this impact. The approach to dealing with such is referred to as achieving water neutrality.

2.3 As per the Habitats Regulation Assessment the position statement applies to all projects including those under the auspices GPDO.

2.4 In response to Natural England's Position Statement, this statement seeks to demonstrate that the proposed development will not have an impact upon the relevant SPA and can thus be implemented in accordance with relevant regulations.

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3.0 CALCULATION OF PROJECTED WATER USAGE

3.1 The application does not propose any new housing or extension to the property that would likely result in an increase in the number of persons living on site. Accordingly, any water demand for the development will come solely from the proposed swimming pool and its maintenance.

3.2 Whilst this is the case, previous water bills are provided. These are provided as six months periods and show an average consumption of 48.25 m^3 over the six month period or 96.5m^3on an annual basis. This is equivalent to 965,00 litres per annum

3.3 The swimming pool would increase the demand for water on site. This is set out in the table below to accommodate the swimming pool and the ongoing maintenance. The submitted information demonstrates how this has been calculated. The calculations are given as a six month period which is the industry normal given the weather conditions.

Item	**Use (litres) per six month period**	**Rolling Total of Use**
Fill of Swimming Pool	25,700	25,700
Maintenance (filtration)	1,500	27,200
Water Loss (evaporation)	7,320	34,520
Water Loss (bather loss)	137.25	34,657.25

3.4 It is therefore clear that biggest water use is in the initial fill of the at 25,700 litres. Swimming pools are typically filled in one of two ways either through mains or from a water tanker. It is proposed that the water be provided by way of a water tanker[1] with this water sourced from a source outside of the Water Resource Zone. This therefore omits this fill of 25,700 leaving 8,957.25litres remaining that would need to be offset.

3.5 The tanker, as per the footnote below, will be provided by Greens H20

3.6 In order to reduce the water lost by way of evaporation the proposed pool cover will be a slated heat retention cover. This will eliminate water loss from evaporation completely when the pool is not in use. The proposed cover will also be permeable to allow for rain

[1] Green H20 www.greensh2o.co.uk

water to effectively refill the pool when it rains. The South East on average has 794.7mm3 of rainfall per year. This equates to 794.7L per m2, so the proposed pool of 9m x 3m equates to 21,456L or average of 58.78L per day. To factorise this over the six month period (183 days) this equates to 10,756.74 litres. This would be more than adequate to off set the water loss from evaporation and for the water loss from bodies. Additionally, grated surrounds would be installed around the pool to capture as much of this water loss as possible. It should be noted that rainwater can be reasonably treated by the filtration system without further interventions.

3.7 For the avoidance of doubt, as detailed in the submitted technical documents, the pool cover is not a refill mechanism. Instead it is specifically designed to allow for water to pass through it topping the pool up when it rains. This recapture would be sufficient to mitigate any water loss from bodies or evaporation. Once in the swimming pool the water would be treated in the same manner as that from the tanker utilising the proposed filtration system. This latter point is the same for all open air swimming pools, namely that the systems treat rainwater.

3.7 Given the above the only remaining water usage is for the maintenance of the pool calculated at 1,500 litres. For the avoidance of doubt this calculation is based on the use of the Desjoyaux Unique Filtration which uses significantly less water than normal filtration systems which require backwashing.[2]

3.8 Based on the above the water offsetting requires is equivalent to 1,500 litres for the six month period of use or 4.109 litres per day over the calendar year.

[2] Product brochure attached appendix g.

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4.0 WATER OFFSETTING

4.1 As set out the required offsetting for the remaining water use is 1,500 litres or 4.109 litres per day.

4.2 To offset this use the applicant proposes the installation of water butts to collect rainwater from the gutters of the property which can be used within the site for gardening purposes reducing the need for said water to be taken from the mains tap.

4.3 Data shows that for the Southeast the likely rainfall is equivalent to 794.7 mm per year. The square metres for harvesting water at Jacaranda are approximately 215 Square Metres. Therefore, the capacity of RWH at Jacaranda is 215 sqm x .794 mm = 170.71 m^3 or 170,709 litres per year or 467 litres per day.

4.4 It is proposed to install 2 x 350L water butts which would have a combined capacity of 700 litres.

4.5 Even with anticipated loss from the water collection the collection of rainwater within these water butts would be more than sufficient to offset the 1,500 litres of water usage. It is further highlighted that the Approved Document G of the Building Regulations assumes the use of 5 litres of water per person per day for outdoor use. The required offsetting of 4.109 litres per day is less than the anticipated need of one person and therefore a realistic amount to be 'off set'.

4.6 The proposed water butts would provide ample water to mitigate the 4.109 litres per day required to be offset, indeed, it is contended that the water butts would create a net negative use of water than otherwise required.

4.7 No part G calculations are directly provided for proposed offsetting as this is deemed an excessive requirement given the degree of headroom in the strategy set out above. We would direct officers attention to A7 of the Approved Document Part G as shown below. A7 details how the water calculator is completed and clearly states that an additional allowance of 5 litres per person per day is added for external use. Given the size of Jacaranda (4 bed property) the census data indicates an average occupancy of 2.86 persons equal to 14.3 litres of water to be used

externally per day (2.86 x 5). Given the need to offset 4.109 litres per day there would be ample room within the Part G assumptions to accommodate such.

> **A7** To calculate the total water consumption, an additional allowance for external water use is added on to the total water consumption. This figure is set at 5 litres/person/day.

4.8 The proposed installation of water butts and the required mechanisms of the pool could be controlled by way of a suitably worded legal condition should the Council be minded to consider such to be required.

5.0 CONCLUSION

5.1 In light of the above it is considered that the proposal can be carried out in a water neutral manner, that is to say that it will not result in additional pressure for water usage sourced from the Water Resource Zone.

5.2 The summary of the water usage is set out above with the following as key points:

- The swimming pool will be filled by tanker with water sourced from outside the Resource Zone
- The cover will be a permeable slated design allowing for water loss to the pool to be compensated by rainwater collection
- The installation of Desjoyaux Unique Filtration minimises water usage for maintenance and filtration to 1,500 litres
- Installations of 2 x 350litres water buttes for deployment for gardening to offset water usage.

5.3 With the above in mind it is contended that the proposal will be water neutral as per the statement issued by Natural England.

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southernwater.co.uk/help

0330 303 0277
Weekdays - 8am to 6pm

DR REINHARDT DACHSEL
JACARANDA
WHITEHALL DRIVE
IFIELD
RH11 0LP

Your customer number
22317069

Your payment reference
0004 5179 80798

Dear Dr REINHARDT DACHSEL,

Here's your latest bill based on the meter reading we took on 15 November 2024. You currently pay by Direct Debit, so you don't need to do anything – your payments will be taken automatically.

Meter reading

Water used in cubic metres

48 m³

One cubic metre = 1,000 litres
This is equivalent to: 11 baths, 31 (4 min) showers or 166 toilet flushes

Meter number: 8498937

Latest reading: 15 Nov 2024

8 6 6 . 0 0

Previous reading: 24 May 2024

8 1 8 . 0 0

Your next meter reading is scheduled to take place by 29 May 2025

Previous bill's usage
54.00 m³

Charges

£105.47

Bill date
19 Nov 2024

Billing period
From: 25 May 2024
To: 15 November 2024

Bill type
Metered - Direct Debit

Previous bill's charges
£107.53

Future payments

Your Direct Debit payment

£105.47

To be taken on
01 Jan 2025

Struggling to pay? See p. 3

Water

Period: 25 May 2024 to 15 November 2024

Variable Rate	£1.958	x	48.00m³ =	£93.98
Standing Charge			=	£11.49
Total Water				**£105.47**

Wastewater

Thames Water takes away your wastewater. Its customer service number is **0800 980 8800**. You'll receive a separate bill from Thames Water for your wastewater.

Southern Water supplies your water.

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**

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STA-SWF138-2-1220

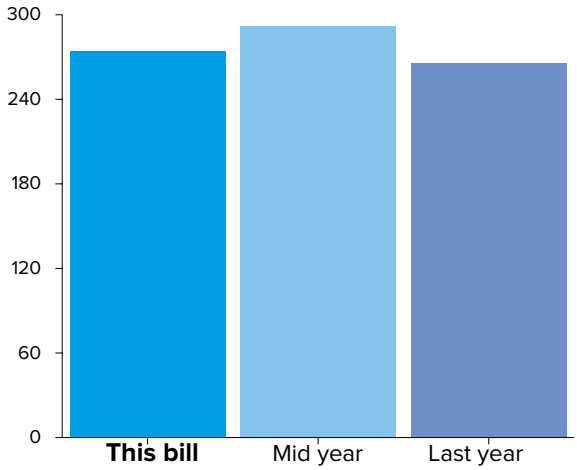
Your account summary

Balance brought forward from your last bill	£107.53
What you've paid since your last bill	£107.53 Credit
What you've been charged for From 25 May 2024 to 15 November 2024	£105.47
Outstanding Balance	**£105.47**

Your water use

Over the last six months your household used an average of **274** litres a day

You're using £0.61 of water a day on average.



Your water meter is read twice a year. We can read most meters from the street – so you may not have noticed when we read yours.



More information

Struggling to pay?

If you're struggling to pay your bill, we're here to help. Please contact us as soon as possible to talk about the support we can offer you.

0800 027 0363

Payless@southernwater.co.uk

southernwater.co.uk/account/help-paying-your-bill

Moving home?

Please give us at least two days' notice before you move, so we can read your meter.

Alternatively, you can check your meter on the day you leave the property and submit your reading here:

0330 303 0277
Weekdays – 8am to 6pm

southernwater.co.uk/account/moving-home

Contact us

Visit our website
You can access your online account and live chat at:
southernwater.co.uk

Call us
0330 303 0277
Weekdays – 8am to 6pm

Write to us
Southern Water Services
PO Box 564, Darlington
DL1 9ZG

Automated payment line
0330 303 1263
24 hours 7 days a week

We're here to help

Minicom text phone for Deaf people
0330 303 1265
Weekdays – 8am to 7pm
Saturday – 8.30am to 2pm

For a water problem or in an emergency - call anytime
0330 303 0368
24 hours 7 days a week

Extra care services, braille or talking bills
0800 027 0800
Weekdays – 8am to 7pm

Spotted a leak?
0800 820 999
Freephone lines open
24 hours 7 days a week

We value your privacy

We're committed to safeguarding your information too, which we use:
- to offer water and wastewater goods and services
- to track trends and create customer profiles
- with credit references agencies for credit management purposes
- with neighbouring water companies to complete the billing process.

For more about what we do visit southernwater.co.uk/privacy

If we get something wrong

Our Code of Practice sets out our standards of service and what we'll do if we fail to meet them, including the amount of compensation we'll pay you. For more information visit southernwater.co.uk/cop

Need more help?

We aim to get things right first time, but if things do go wrong, we'll fix them quickly for you.

Step 1 – Just call a member of our team on **0330 303 0223** or visit **southernwater.co.uk/contact-us**

Step 2 – If you are not happy with the resolution or need further help then call **0330 303 0223** or email **customerservices@southernwater.co.uk** and request to be escalated to a manager.

Step 3 – If:

- You are not happy with the final resolution, or
- Your issue is over eight weeks old, or
- You just want some free, trusted, independent advice

You can call the **Consumer Council for Water (CCW)** the independent voice for water consumers in England and Wales by calling **0300 034 2222** or use its online form at **www.ccwater.org.uk/contact-us**

If Southern Water has registered a default on your Consumer Credit File, the charges from this bill will be added to the total amount outstanding. We will have sent you previous correspondence to advise you of our default process.

Southern Water Services Ltd,
Registered office, Southern House,
Yeoman Road, Worthing, BN13 3NX.
Registered in England No: 2366670
VAT Reg No: 813 0378 56

WATER for LIFE from Southern Water

DR REINHARDT DACHSEL
JACARANDA
WHITEHALL DRIVE
IFIELD
RH11 0LP

Visit our website for live chat or to log into your account
southernwater.co.uk/help

0330 303 0277
Weekdays - 8am to 6pm

Your customer number
22317069

Your payment reference
0004 5179 80798

Dear Dr REINHARDT DACHSEL,

Here's your latest bill based on the meter reading we took on 24 May 2024. You currently pay by Direct Debit, so you don't need to do anything – your payments will be taken automatically.

Meter reading

Water used in cubic metres

54 m³

One cubic metre = 1,000 litres
This is equivalent to: 11 baths, 31 (4 min) showers or 166 toilet flushes

Meter number: 8498937

Latest reading: 24 May 2024

			8	1	8	.	0	0

Previous reading: 21 Nov 2023

			7	6	4	.	0	0

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

Previous bill's usage
50.00 m³

Charges

£107.53

Bill date
28 May 2024

Billing period
From: 22 November 2023
To: 24 May 2024

Bill type
Metered - Direct Debit

Previous bill's charges
£96.57

Future payments

Your Direct Debit payment

£107.53

To be taken on
01 Jul 2024

Struggling to pay? See p. 3

Water

Period: 22 November 2023 to 31 March 2024

Variable Rate	£1.716	x 38.20m³	=	£65.55
Standing Charge			=	£7.50

Period: 01 April 2024 to 24 May 2024

Variable Rate	£1.958	x 15.80m³	=	£30.94
Standing Charge			=	£3.54
Total Water				**£107.53**

Wastewater

Thames Water takes away your wastewater. Its customer service number is **0800 980 8800**. You'll receive a separate bill from Thames Water for your wastewater.

Southern Water supplies your water.

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**

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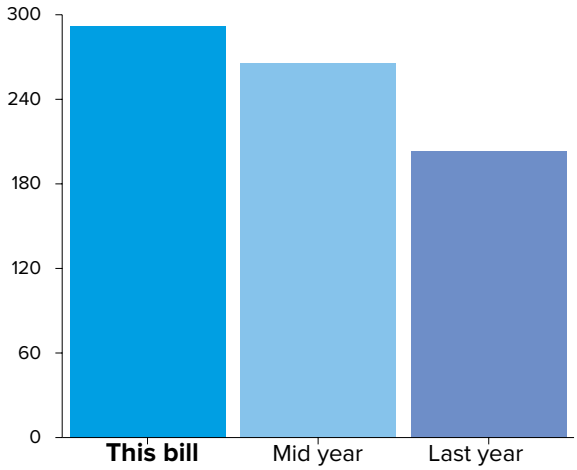
Your account summary

Balance brought forward from your last bill	£96.57
What you've paid since your last bill	£96.57 Credit
What you've been charged for From 22 November 2023 to 24 May 2024	£107.53
Outstanding Balance	**£107.53**

Your water use

Over the last six months your household used an average of **292** litres a day

You're using £0.58 of water a day on average.



We noticed your water use has increased by 26 litres of water a day on average.

If you use less water, you'll save money on your bill. Find out how you could reduce your usage here:

southernwater.co.uk/save-water

Your water meter is read twice a year. We can read most meters from the street – so you may not have noticed when we read yours.

More information

Struggling to pay?

If you're struggling to pay your bill, we're here to help. Please contact us as soon as possible to talk about the support we can offer you.

0800 027 0363

Payless@southernwater.co.uk

southernwater.co.uk/account/help-paying-your-bill

Moving home?

Please give us at least two days' notice before you move, so we can read your meter.

Alternatively, you can check your meter on the day you leave the property and submit your reading here:

0330 303 0277
Weekdays – 8am to 6pm

southernwater.co.uk/account/moving-home

Contact us

Visit our website
You can access your online account and live chat at:
southernwater.co.uk

Call us
0330 303 0277
Weekdays – 8am to 6pm

Write to us
Southern Water Services
PO Box 564, Darlington
DL1 9ZG

Automated payment line
0330 303 1263
24 hours 7 days a week

We're here to help

Minicom text phone for Deaf people
0330 303 1265
Weekdays – 8am to 7pm
Saturday – 8.30am to 2pm

For a water problem or in an emergency - call anytime
0330 303 0368
24 hours 7 days a week

Extra care services, braille or talking bills
0800 027 0800
Weekdays – 8am to 7pm

Spotted a leak?
0800 820 999
Freephone lines open
24 hours 7 days a week

We value your privacy

We're committed to safeguarding your information too, which we use:
- to offer water and wastewater goods and services
- to track trends and create customer profiles
- with credit references agencies for credit management purposes
- with neighbouring water companies to complete the billing process.

For more about what we do visit southernwater.co.uk/privacy

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DR REINHARDT DACHSEL
JACARANDA
WHITEHALL DRIVE
IFIELD
RH11 0LP

Your customer number
22317069

Your payment reference
0004 5179 80798

Dear Dr REINHARDT DACHSEL,

Here's your latest bill based on the meter reading we took on 21 November 2023. You currently pay by Direct Debit, so you don't need to do anything – your payments will be taken automatically.

Meter reading

Water used in cubic metres

50 m³

One cubic metre = 1,000 litres
This is equivalent to: 11 baths, 31 (4 min) showers or 166 toilet flushes

Meter number: 8498937

Latest reading: 21 Nov 2023

764.00

Previous reading: 17 May 2023

714.00

Your next meter reading is scheduled to take place by 29 May 2024

Previous bill's usage
41.00 m³

Charges

£96.57

Bill date
22 Nov 2023

Billing period
From: 18 May 2023
To: 21 November 2023

Bill type
Metered - Direct Debit

Previous bill's charges
£75.82

Future payments

Your Direct Debit payment

£96.57

To be taken on
01 Jan 2024

Struggling to pay? See p. 3

Water

Period: 18 May 2023 to 21 November 2023

Variable Rate	£1.716	x 50.00m³	=	£85.80
Standing Charge			=	£10.77
Total Water				**£96.57**

Wastewater

Thames Water takes away your wastewater. Its customer service number is **0800 980 8800**. You'll receive a separate bill from Thames Water for your wastewater.

Southern Water supplies your water.

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**

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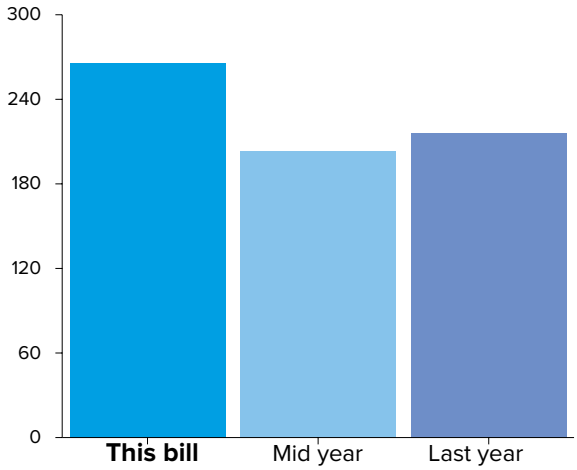
Your account summary

Balance brought forward from your last bill	£75.82
What you've paid since your last bill	£75.82 Credit
What you've been charged for From 18 May 2023 to 21 November 2023	£96.57
Outstanding Balance	**£96.57**

Your water use

Over the last six months your household used an average of **266** litres a day

You're using £0.52 of water a day on average.



Why is my bill higher than usual?

Your water use may have gone up for a number of reasons, for example:

- Are more people living in your home?
- Have you been spending more time at home than usual?
- Have you had problems such as a dripping tap or leaking washing machine?
- Have you carried out building work, repairs or home improvements?
- Have you used your washing machine more than usual?
- Have you regularly used a hosepipe or sprinkler?
- Have you regularly filled up a paddling pool?
- Have you installed appliances or equipment that uses a lot of water?

If none of the above explains why your water use has gone up, call us on **0330 303 0277**. We'll try to help you work out why your bill is higher than usual.

More information

Struggling to pay?

If you're struggling to pay your bill, we're here to help. Please contact us as soon as possible to talk about the support we can offer you.

0800 027 0363

Payless@southernwater.co.uk

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Moving home?

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VAT Reg No: 813 0378 56

WATER for LIFE from Southern Water

DR REINHARDT DACHSEL
JACARANDA
WHITEHALL DRIVE
IFIELD
RH11 0LP

Visit our website for live chat or to log into your account
southernwater.co.uk/help

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

Your customer number
22317069

Your payment reference
0004 5179 80798

Dear Dr REINHARDT DACHSEL,

Here's your latest bill based on the meter reading we took on 17 May 2023. You currently pay by Direct Debit, so you don't need to do anything – your payments will be taken automatically.

Meter reading

Water used in cubic metres

41 m³

One cubic metre = 1,000 litres
This is equivalent to: 11 baths, 31 (4 min) showers or 166 toilet flushes

Meter number: 8498937

Latest reading: 17 May 2023

7 1 4 . 0 0

Previous reading: 27 Oct 2022

6 7 3 . 0 0

Your next meter reading is scheduled to take place by 28 Nov 2023

Previous bill's usage
38.00 m³

Charges

£75.82

Bill date
18 May 2023

Billing period
From: 28 October 2022
To: 17 May 2023

Bill type
Metered - Direct Debit

Previous bill's charges
£67.97

Future payments

Your Direct Debit payment

£75.82

To be taken on
01 Jun 2023

Struggling to pay? See p. 3

Water

Period: 28 October 2022 to 31 March 2023

Variable Rate	£1.550	x 31.40m³	=	£48.67
Standing Charge			=	£7.99

Period: 01 April 2023 to 17 May 2023

Variable Rate	£1.716	x 9.60m³	=	£16.47
Standing Charge			=	£2.69
Total Water				**£75.82**

Wastewater

Thames Water takes away your wastewater. Its customer service number is **0800 980 8800**. You'll receive a separate bill from Thames Water for your wastewater.

Southern Water supplies your water.

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**

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STA-SWF138-2-1220

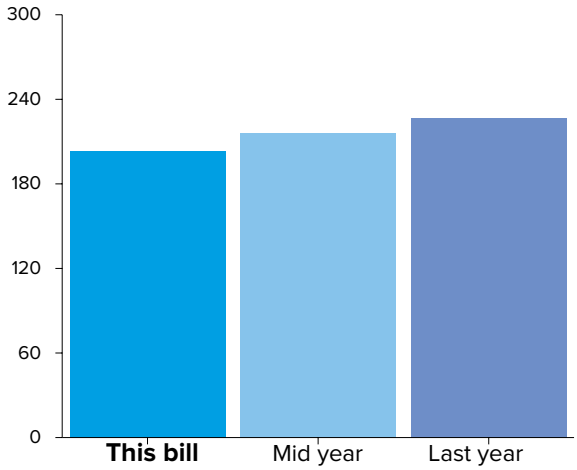
Your account summary

Balance brought forward from your last bill	£67.97
What you've paid since your last bill	£67.97 Credit
What you've been charged for From 28 October 2022 to 17 May 2023	£75.82
Outstanding Balance	**£75.82**

Your water use

Over the last seven months your household used an average of **203** litres a day

You're using £0.38 of water a day on average.



Your water meter is read twice a year. We can read most meters from the street – so you may not have noticed when we read yours.



More information

Struggling to pay?

If you're struggling to pay your bill, we're here to help. Please contact us as soon as possible to talk about the support we can offer you.

0800 027 0363

Payless@southernwater.co.uk

southernwater.co.uk/account/help-paying-your-bill

Moving home?

Please give us at least two days' notice before you move, so we can read your meter.

Alternatively, you can check your meter on the day you leave the property and submit your reading here:

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

southernwater.co.uk/account/moving-home

Contact us

Visit our website
You can access your online account and live chat at:
southernwater.co.uk

Call us
0330 303 0277
Weekdays – 8am to 7pm
Saturday – 8.30am to 2pm

Write to us
Southern Water Services
PO Box 564, Darlington
DL1 9ZG

Automated payment line
0330 303 1263
24 hours 7 days a week

We're here to help

Minicom text phone for Deaf people
0330 303 1265
Weekdays – 8am to 7pm
Saturday – 8.30am to 2pm

For a water problem or in an emergency - call anytime
0330 303 0368
24 hours 7 days a week

Extra care services, braille or talking bills
0800 027 0800
Weekdays – 8am to 7pm

Spotted a leak?
0800 820 999
Freephone lines open
24 hours 7 days a week

We value your privacy

We're committed to safeguarding your information too, which we use:
- to offer water and wastewater goods and services
- to track trends and create customer profiles
- with credit references agencies for credit management purposes
- with neighbouring water companies to complete the billing process.

For more about what we do visit southernwater.co.uk/privacy

If we get something wrong

Our Code of Practice sets out our standards of service and what we'll do if we fail to meet them, including the amount of compensation we'll pay you. For more information visit southernwater.co.uk/cop

Need more help?

We aim to get things right first time, but if things do go wrong, we'll fix them quickly for you.

Step 1 – Just call a member of our team on **0330 303 0223** or visit **southernwater.co.uk/contact-us**

Step 2 – If you are not happy with the resolution or need further help then call **0330 303 0223** or email **customerservices@southernwater.co.uk** and request to be escalated to a manager.

Step 3 – If:

- You are not happy with the final resolution, or
- Your issue is over eight weeks old, or
- You just want some free, trusted, independent advice

You can call the **Consumer Council for Water (CCW)** the independent voice for water consumers in England and Wales by calling **0300 034 2222** or use its online form at **www.ccwater.org.uk/contact-us**

If Southern Water has registered a default on your Consumer Credit File, the charges from this bill will be added to the total amount outstanding. We will have sent you previous correspondence to advise you of our default process.

Southern Water Services Ltd,
Registered office, Southern House,
Yeoman Road, Worthing, BN13 3NX.
Registered in England No: 2366670
VAT Reg No: 813 0378 56

CalcTool

3 Easy Steps:

Get Fast!

1. Click "Download"
2. Start Download
3. Install the app

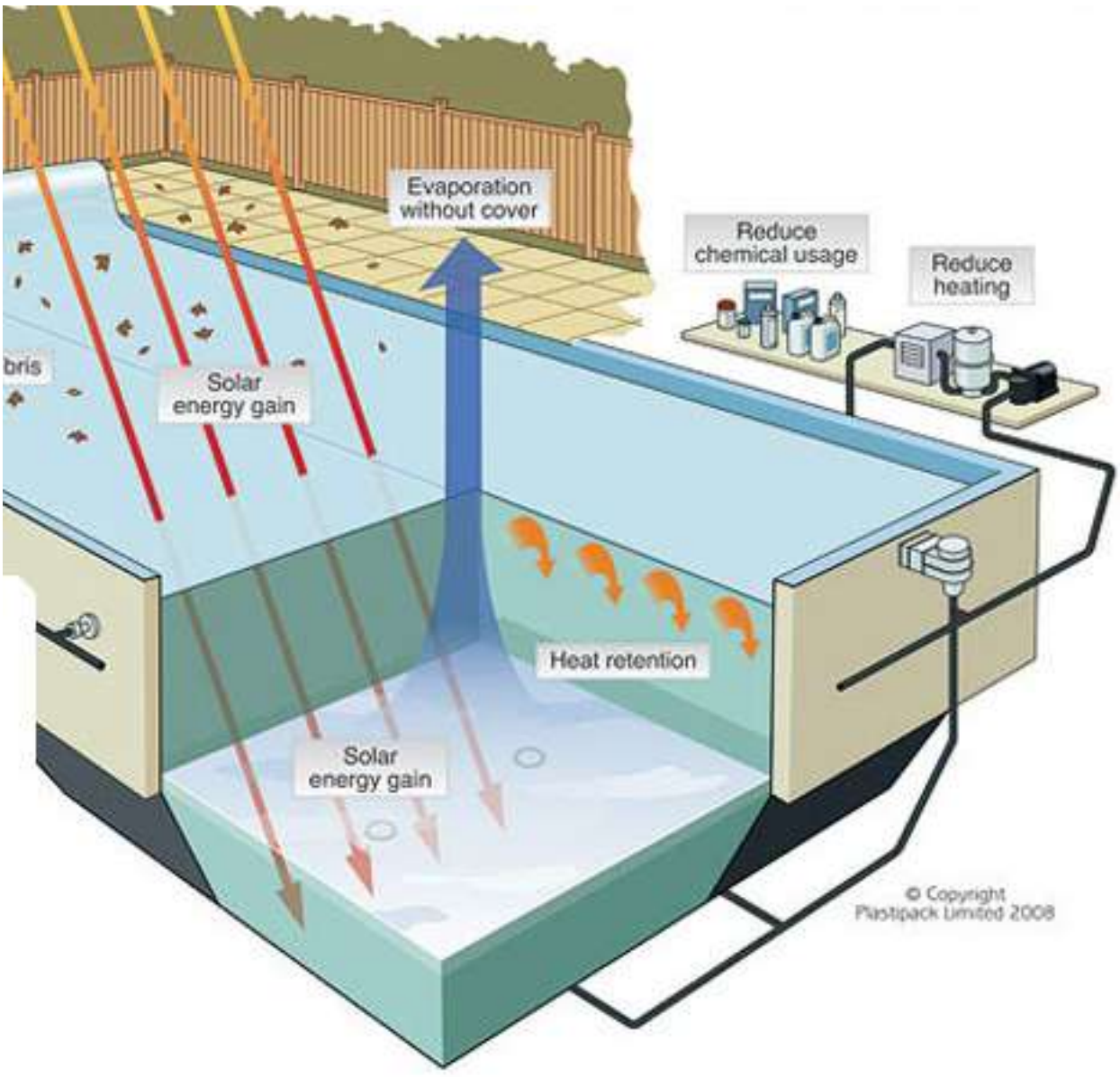
Catchment area	215	m^2
Rainfall depth	794	mm
Water volume	170.7	m^3

Advanced mode | Reset defaults | Send this result

Evaporation Water Loss

Evaporation water loss is affected by several factors, air temperature, wind speed, water level and water temperature. A typical uncovered pool in the UK can lose up to 0.5cm per day. On an average 11x4m family pool this relates to 50L per day.

Every Compass pool is equipped with an automatic pool cover. By covering the water this eliminates water loss from evaporation completely when the pool is not in use



The Swimming Pool and Allied Trades Association

Water Losses

[factsheet C22]

Click Here to download the factsheet (PDF)

As water can be lost from a swimming pool for several perfectly normal reasons, such as splashing and evaporation, it is important to identify if this is the case or whether the pool tank is leaking.

Firstly, when the pool water surface is exposed to the



atmosphere and the temperature of that water is above the air temperature, the water will evaporate, and what is left will be cooled.

The rate of evaporation is increased by the wind speed across the surface of the water, and so consequently, the temperature is reduced further. The amount of evaporation is difficult to calculate due to the constantly varying factors, but an average of 3mm in 24 hours (when an indoor pool is uncovered) is a guide, and it can be significantly higher for outdoor pools. Covering the

Owner's Testimonials



Commercial Pools & Spas Hub



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Thirdly, water losses can occur by water being dragged out of the pool when swimmers exit the pool, which can amount to 0.75 a litre per person each time they exit.

Fourthly, water is lost from the pool when the pool filter is cleaned. Most domestic pool water is filtered through a sand filter, and in order to clean the sand, the water flow is reversed, discharging the dirt from the filter and water into the drain. This is perhaps the most significant natural water loss from a pool. Keeping a written record of this and other maintenance tasks will ensure that it is not performed more often than necessary to keep the filtration running at its optimum.

These three areas can account for a reduction of water level of 25 to 30mm per week in an outdoor pool. If you think that this figure is being exceeded, then contact your SPATA Member.

Pool leak

It goes without saying that any leaks visible in the plant room will cause water loss and should be stemmed by you or your SPATA Member. Water can also be lost in other, more serious ways:

Firstly, when the rotary or backwash valve, which controls the filter cleaning process, is worn or broken, it allows water to go to the drain as well as back to the pool. This is a fairly simple task for a pool engineer to repair.

Media Partner

Member of:

POOL WATER TREATMENT ADVISORY GROUP

EUSA EUROPEAN UNION OF SWIMMINGPOOL AND SPA ASSOCIATIONS

Members Hub

Secondly, water can be lost from a broken or misaligned hydrostatic valve. These valves are fitted in concrete pools to prevent the pool shell from being lifted out of the ground by groundwater pressure, especially when the pool is empty. The valve is located in one of the floor outlets and is held in place by the weight of the water above it. If the groundwater pressure gets greater than that exerted by the pool water, the valve opens and allows groundwater into the pool until the pressures equalise. Dirt coming in with the groundwater can block the closure of the valve, and water loss can occur. This, again, is easily fixed by an experienced pool engineer.

Thirdly, water can be lost through a crack between the floor and wall fittings of the pool. In the case of a concrete pool, this is where the pipes and other fittings puncture the shell and with liner pools, where the flange on the pipes and fittings seals the liner material. This type of loss is normally detected by a dye test, perhaps using a pool diver, and generally requires a simple repair.

Lastly, water can be lost when a pipe in the circulation and filtration systems has been cracked or broken. When this occurs in the plant room, the repair is usually easy, but no so when underground. In that case, the pipes will have to be hydraulically pressure tested for soundness to identify in which area the fault lies. Once this has been established and confirmed, the location of the loss has to be found underground, which can be difficult.

If there is suspicion that the pool is losing more water than it should naturally, there is only one way to proceed, and that is slowly! The first thing to do is to establish the magnitude of the leak, and this is reported in millimetre loss per week.

The pool should be covered to prevent evaporation, and swimming should be discouraged to avoid other types of water loss. The auto top-up, if fitted, should be turned off. All valves in the plant room should be closed, and obviously, no filter cleaning should take place. At this point, the water level should be measured down from the top of the wall or a mark of the water level made on the front of the skimmer. The pool should be left in this static condition for up to a week, and the level marked again so that the mm drop can be calculated, or the pool tank can be tested for leaks using the evaporation measurement container.

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Once this has been done, it will be necessary to discuss the problem with your SPATA Maintenance Company. It is important to stress that each check of the potential areas of loss should be accompanied by a check. For example, if the cleaning valve (backwash) is faulty, it can be repaired or replaced and then a further check for water loss must be made to see that the fault has been cured. If a skimmer line is found to be faulty, it should be plugged off and the water loss test repeated without it to show that that is the only area of loss.

Always take the determination of the cause of a suspected unnatural water loss slowly and logically.

More information

- Pool Hub
- Find your local SPATA Member
- SPATA Blog
- Contact SPATA

Back to the factsheets menu page

#everydaycation

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BSPF | BISHTA | EUSA
Website Designed by CBS Agency, Websites & E-Commerce. | Theme: radiate by ThemeGrill.

Members Hub

Met Office

Charlwood (Surrey) Location-specific long-term averages

Location-specific long-term averages
or, find a climate station on the map

Station: Charlwood

Climate period:

1991-2020

Month	Maximum temperature (°C)	Minimum temperature (°C)	Days of air frost (days)	Sunshine (hours)	Rainfall (mm)	Days of rainfall ≥1 mm (days)	Monthly mean wind speed at 10 m (knots)
January	7.83	1.52	10.89	53.42	90.34	13.10	6.56
February	8.49	1.44	10.47	75.42	64.46	10.86	6.56
March	11.20	2.79	7.35	119.36	53.65	9.44	6.60
April	14.50	4.24	3.87	171.48	52.49	9.73	5.80
May	17.74	7.11	0.60	206.31	54.83	8.90	5.44
June	20.80	9.92	0.03	209.70	50.67	8.79	5.12
July	23.14	11.99	0.00	215.95	54.73	8.45	4.82
August	22.70	11.86	0.00	199.09	60.42	9.29	4.64
September	19.55	9.51	0.07	156.01	64.71	9.15	4.68
October	15.35	7.10	1.66	110.62	94.33	12.51	5.18
November	11.11	3.91	6.09	65.21	97.11	13.17	5.20
December	8.25	1.74	11.89	45.87	95.95	12.82	5.94
Annual	15.09	6.12	52.92	1628.44	833.69	126.21	5.54

District: England SE & Central S

Climate period:

1991-2020

Month	Maximum temperature (°C)	Minimum temperature (°C)	Days of air frost (days)	Sunshine (hours)	Rainfall (mm)	Days of rainfall ≥1 mm (days)	Monthly mean wind speed at 10 m (knots)
January	7.83	1.94	9.67	60.00	84.37	12.69	8.95
February	8.30	1.79	9.17	79.80	60.89	10.48	8.69
March	10.86	3.14	5.66	123.66	51.67	9.36	8.48
April	13.92	4.66	2.78	177.16	53.22	9.38	7.82
May	17.15	7.51	0.34	209.82	52.42	8.87	7.66
June	20.03	10.30	0.00	208.72	53.68	8.49	7.18
July	22.28	12.38	0.00	218.55	53.66	8.51	7.04
August	22.03	12.35	0.00	201.36	63.06	9.28	6.87
September	19.20	10.14	0.01	154.77	60.63	8.92	6.90
October	15.11	7.62	1.10	113.12	89.73	12.00	7.70
November	10.97	4.50	4.47	69.66	93.53	12.86	7.79
December	8.31	2.30	9.75	54.16	89.11	12.70	8.37
Annual	14.70	6.58	42.97	1670.78	805.99	123.55	7.78

Region

- ◯ England S
- ◯ England
- ◯ England & Wales

Region: England S

Climate period:

1991-2020

Month	Maximum temperature (°C)	Minimum temperature (°C)	Days of air frost (days)	Sunshine (hours)	Rainfall (mm)	Days of rainfall ≥1 mm (days)	Monthly mean wind speed at 10 m (knots)
January	7.63	1.86	9.53	57.70	78.56	12.69	9.24
February	8.17	1.75	9.06	78.91	59.86	10.70	9.15
March	10.60	2.99	5.68	119.55	53.38	9.86	8.90
April	13.59	4.51	2.71	169.12	53.40	9.74	8.16
May	16.75	7.27	0.38	202.37	55.19	9.23	7.83
June	19.61	10.10	0.00	196.68	59.07	9.30	7.27
July	21.84	12.12	0.00	205.20	60.09	9.48	7.10
August	21.55	12.10	0.00	188.89	67.88	10.11	7.06
September	18.79	10.01	0.01	147.29	61.93	9.48	7.19
October	14.69	7.46	1.01	107.49	85.99	12.06	8.02
November	10.66	4.38	4.17	67.48	87.10	13.14	8.18
December	8.04	2.21	9.35	52.93	85.54	12.97	8.74
Annual	14.36	6.42	41.89	1593.61	807.99	128.78	8.07

Climate averages notes i

This webpage provides long-term climate averages for specific locations across the UK. It is designed to display locations that provide even geographical coverage of the UK, but is not reflective of every weather station that has existed or the current Met Office observation network. More detailed information on the data available at these locations is below, and data is available for a number of climate variables, including temperature, frost, sunshine and rainfall.

For long-term data on the UK's climate as a whole or by region, you can download this directly on the UK and regional series webpage.

Find out more about the Met Office's current observation network.

By searching for a location or selecting a climate station on the map above, you can view climate averages for the 30-year period 1991-2020. Climate averages are also available for earlier periods 1981-2010, 1971-2000 and 1961-1990. The averages are available across a range of climate variables and in the following formats:

Averages table

The averages table shows 30-year averages for the nearest / most similar climate station to your chosen location. Tables below show averages for districts, regions and the UK. Some stations may not have all climate variables available.

Averages graphs

The graph provides an alternative representation of the average data for your chosen location. By moving your mouse cursor over the graph you can see the average figures for your chosen climate variable for each month. The graph also includes 20th and 80th percentile values. We would expect, on average, one year in every five to be below the 20th percentile value, and one year in every five to be above the 80th percentile value.

Location comparison

The comparison graphs enable you to compare the averages for two chosen locations. For example, you can see if one location is, on average, significantly warmer, drier, or sunnier than the other.

Averages maps

These maps enable you to view maps of monthly, seasonal and annual averages for the UK. The maps are based on the 1km resolution HadUK-Grid dataset derived from station data.

Where stations are currently closed in this dataset, well-correlated observations from other nearby stations are used to help inform latest long-term average figures in order to preserve the long-term usability of the data. Similar peer-reviewed scientific methods are used by meteorological organisations around the world to maintain the continuity of long-term datasets.



350 Litre Magnum
Solid Tank Water Butt

WHAT SETS DESJOYAUX APART: THE DOUBLE CONCEPT

In 1978, Desjoyaux filed its first patent for **permanent active casing.**
But it didn't stop there!
In 1983, Desjoyaux broke new ground with its **pipeless filtration system.**

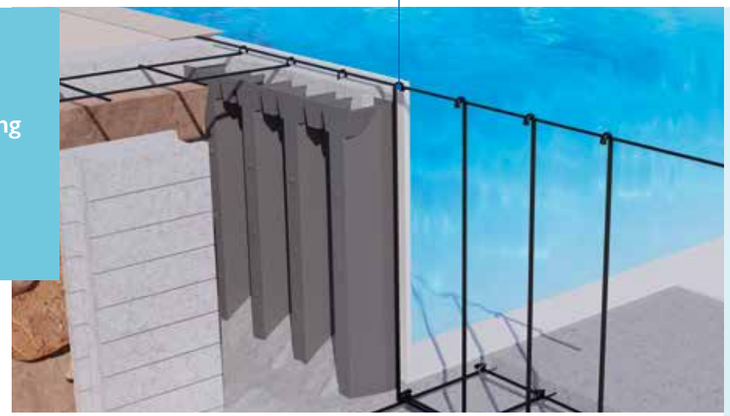
▶ **The double concept was born.**

1. CHOOSE THE SHAPE OF YOUR POOL WITHOUT COMPROMISING

Permanent active casing is **a Desjoyaux concept patented in 1978,** which achieved the technical feat of solving the equation of rapid installation, longevity, and freedom of form and dimensions.
The principle: **recycled polypropylene** panels are pre-assembled at the factory, and once installed onsite, are cast in concrete in a single operation. This exclusive procedure **ensures the solidity of your pool.**



Your Desjoyaux pool therefore has the double advantage of being a single-piece, free-standing structure, which enables us to offer you a 10-YEAR guarantee that is unique on the market.







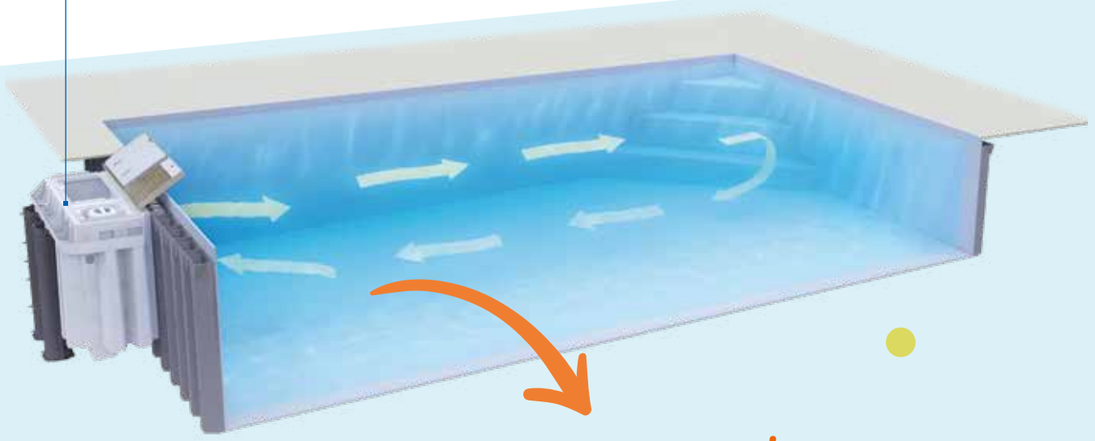
Built-in filtration system
PF.I 181

2. SIMPLICITY GUARANTEEING EFFECTIVENESS: PIPELESS FILTRATION

Inspired by outboard motors on boats, **Desjoyaux's exclusive system patented in 1983** is designed to be **pipeless.** This avoids long and costly works to lay pipes and the need for a plant room. **No underground pipes** removes any stress and means there is **less risk of leakage!**

Whether built into the structure, straddling the wall of the pool or in the form of steps, our compact system includes all the elements of a traditional filtration unit: pump, piping, filter, spotlight.

Efficient! This system can filter all of your pool's water in ONLY TWO HOURS for an 8 x 4 m pool, but also provides great quality of filtration thanks to a filter medium of up to 6 microns.



1. STRUCTURE

"The Desjoyaux casing
is a real technological breakthrough!
It is the invention of a unique,
high-quality concept that is highly
resistant, particularly to ice
and ground movements."



2. FILTRATION

"The Desjoyaux filtration unit
is very quick to install and also
has the advantage of being
upgradable to adapt to your needs."



**Patrice, bricklayer
with Desjoyaux
for 20 years**

3. LINER

"The liner is fixed very simply
to the pool structure with a
fixation profile. As well as ensuring
the watertightness of your pool,
the range of liners allows you
to choose the colour of your water."

4. COPING

"Choose from different shapes, sizes,
depths or shades to give the desired
style to your new living space."

ENVIRONMENTALLY CONSCIOUS YET COST-EFFECTIVE

RECYCLE…

In the 1990s Desjoyaux introduced the **first 100% recycled swimming pool structure.**
We have now gone even further and added a plastics processing chain to the production site. This has allowed us to offer casing panels in recycled polypropylene.



SAVE MONEY!

The **Desjoyaux filtration system** helps you **save money**. Filtered, heated and disinfected water is not discharged into the wastewater system when the filter medium is cleaned. A further advantage is that there is **reduced electricity consumption** with less pipes and the pumps require less power. With a Desjoyaux pool, you consume **half as much electricity on average.** Who can top that?

LOW CONSUMPTION

Desjoyaux has always sought to protect the environment and it has chosen to make environmentalism a key feature of its approach.

ELECTRICITY	Pump 18 m^3/hr 450 W/hr
WATER	On average: 1.5 m^3/year for washing the filter medium
SUPPLIES	1 filter medium per 3 years



And most importantly, you save on a plant room!



IMM'AX CLASSIC OR SÉRÉNITÉ

ABRIBLUE SUBMERGED COVER



The reference in submerged slatted safety covers.

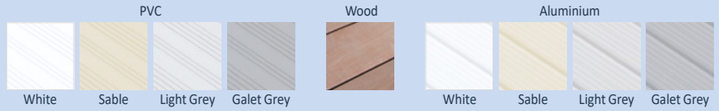
IMM'Ax Classic is a motorised, submerged slatted cover, providing the ideal balance between safety, functionalities, discretion and aesthetics.

PRESENTATION VIDEO:



FOR A POOL LIKE YOU

Customise the duckboard over the pit using a choice of 9 colours and materials:



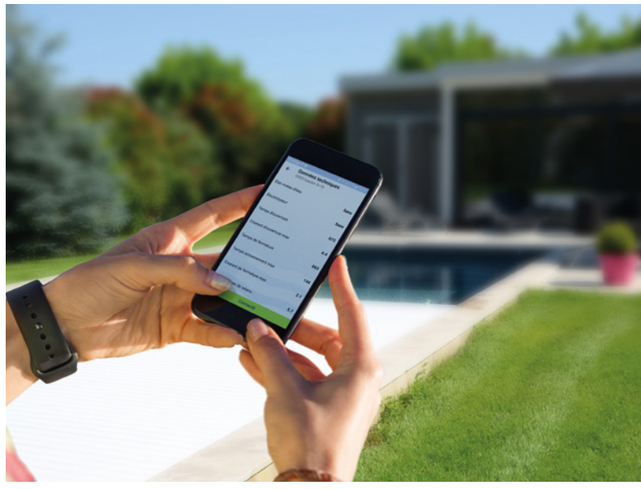


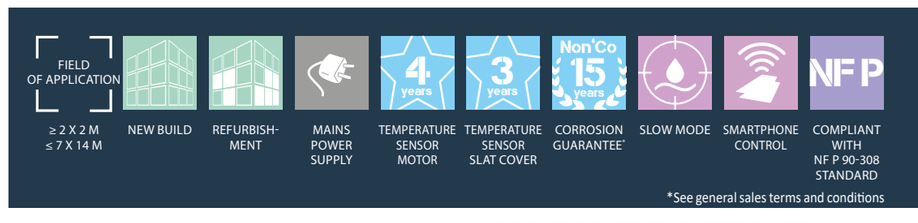
FAVOURITE ♡

IMM'AX SÉRÉNITÉ: THE SOLUTION THAT TAKES CARE OF EVERYONE!

This version proposes the settings, control and exchange of data with the cover using a smartphone. An innovating application providing total comfort, making it possible to simply manage and configure the cover features.

- ✔ Slatted cover position open/closed information with progress view.
- ✔ Water level safety: Informs users if the pool water level is too high or too low and thereby prevents the slatted cover from jamming and unrolling in the pit (option).
- ✔ Motorisation safety: saves the slatted cover specific operating data and notifies of drifts over time for preventive maintenance.





*See general sales terms and conditions

Slat cover

Benchmarks

Our slat cover pluses

Efficiency
- Excellent buoyancy thanks to its high volume of air.
- Easy to maintain and clean due to the limited number of cracks between the slats.
- Ultrasound welding watertightness.
- UV Treatment.

Finish
- Guide wheels.
- Brush wings.
- Shaped finish to perfectly fit into the pool shape. Each wing is connected to the previous slat for more support and robustness.

Integration
- Very aesthetic slat profile.
- Slat covers available in many colours, so that your slatted cover blends perfectly with its environment.

PVC Version

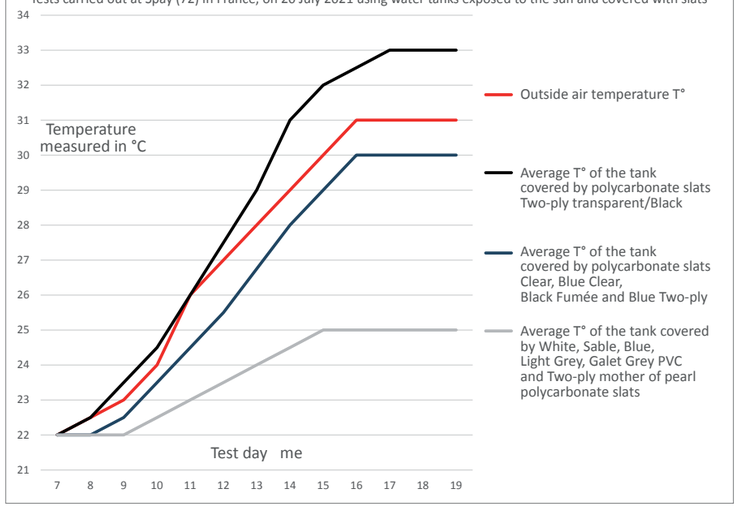
5 colours available
Compatible with WING System®
Our patented system to cover side surfaces such as stairs, beaches and paddling pools...
Available colours for the WING System®:

Polycarbonate version

6 colours available
High strength and heating power
Polycarbonate slats are suitable for all climates, from the coldest to the hottest. Excellent resistance to extreme temperatures and impacts (mainly to hail). Except for the mother of pearl slat, they act as genuine solar devices that can heat the pool water.

SLAT HEATING POWER COMPARISON DEPENDING ON SLAT MODELS

Tests carried out at Spay (72) in France, on 20 July 2021 using water tanks exposed to the sun and covered with slats



Similarly to the structure and motorisation, the slat cover is an important element that must be chosen with care. Here too, Abriblue has chosen quality at all levels:

Material quality
The Abriblue slat cover is made using heat insulated slats with 3 compartments for optimum buoyancy. Made from standardised, stain prevention treated U-PVC, composed of anti-UV calcium/zinc, or polycarbonate, they provide excellent heat resistance.
Abriblue slats are designed to withstand a total weight of at least 100 kg (an adult carrying a child) moving along the pool length or width. Well in excess of the standard's requirements, the raw materials we rigorously select bring you valuable benefits in terms of mechanical quality, surface appearance, fastness of the colours and durability.

Design and manufacture quality
The slats can be cut square (standard finish) or shaped (depending on the slat type).
Abriblue slats are assembled by clipping them together (easier, quick and strong).

Finish quality
Our slat covers are factory tested at each stage of their production.
Each slat cover is delivered with its lift-proof safety system to be selected from the range of systems designed by Abriblue.

Choice
- PVC 76 mm slats
- PVC ABRIBLUE 83 mm slats
- Polycarbonate ABRIBLUE 83 mm slats

Product

Industrial mastery guaranteeing the best finish on the market.
- **Choice of materials.**
- **Choice of colours.**
- **Choice of widths and finishes.**
- **Simple and adjustable roller shaft/slat cover connection that avoids drilling the shaft.**
- **Exclusive WING System®.**

Good for the environment

Energy and water savings.
Installing a pool cover has such significant energy and water saving benefits that its positive impact considerably improves the pool's environmental efficiency.

LIMITED EVAPORATION | HEATING POWER** | WATER QUALITY | INSULATING POWER | RECYCLABLE | LESS CHEMICALS | WATER PROTECTION

As well as making swimming pools safer, this equipment has two other main functions:
- Maintaining the heat stored by the water
- Protecting the volume of water in the pool by limiting evaporation

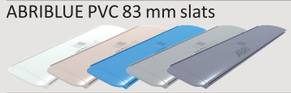
The water is better protected both in terms of quantity and quality. Furthermore, the natural rise in temperature of the water when using solar slats significantly reduces the energy consumption of any heating systems.

According to the NF EN 17645 standard, Abriblue covers are rated "A" or "B" depending on the selected model and compliance with the recommended installation and use conditions. Some Abriblue so-called "solar" covers meet the criteria for an A rating.
The calculations show that they have very good resistance to heat loss and limit evaporation by almost covering the entire water surface.
With a thermal resistance of 0.60 m². K/W, the 83 mm slat is at the top of the ranking for thermal insulation pool covers.

Slat heating power
The presence of a thermal cover composed of Abriblue slats has a significant effect on the pool water temperature. It quickly increases the water temperature at the start of the season and then keeps it high thanks to several phenomena:
- Water heating by transmission of the sun's heat.
- Transfer of heat to the water by contact (conduction) and radiation of the hot materials.
- Stored heat kept thanks to the insulation provided by the air blade trapped inside the slats.
- Evaporation limited by the cover.

Slats can therefore be classified using several criteria:
- **Thickness:** the 83 mm slat which is 17 mm thick is one of the most insulating slats on the market and contributes to quicker water temperature rises by reducing night time cooling.
- **Colour:** the injection material pigments have different heat capture capacities. The darker the colour, the more it absorbs light and light energy which is converted into heat. "Grey" for example, absorbs more heat than "white" which reflects more light.
- **Clearness:** clear slats will allow the sun's rays to pass through them and heat the water directly or indirectly by heating the slat lower part in contact with the water, while keeping in the stored energy thanks to its air mattress.

Energy and environmental savings depending on the type of slat

	Heating power	Insulating power	Limitation of heat loss by evaporation	Limitation of the loss of water volume by evaporation	NF EN 17645 standard	PRO (prevent, reduce, offset) coefficient
ABRIBLUE PVC 83 mm slats 	●○○	●●●	●●●	●●●	B	74% ≤ PRO < 100%
ABRIBLUE 83 mm clear polycarbonate slats (clear - Blue-tinted - Black Fumée) and two-ply slats (Black - Blue-tinted) 	●●●	●●●	●●●	●●●	A	100% ≤ PRO ≤ 150%
ABRIBLUE 83 mm two-ply mother of pearl polycarbonate slats 	●○○	●●●	●●●	●●●	B	74% ≤ PRO < 100%
PVC 76 mm slats 	●○○	●●○	●●●	●●●	B	74% ≤ PRO < 100%