

## FOUL AND SURFACE WATER DRAINAGE STRATEGY

Orchard Farm Barn Conversion  
Nash Lane, Scaynes Hill, Haywards Heath

|               |                               |
|---------------|-------------------------------|
| CLIENT        | Fairfax Properties            |
| PROJECT       | Orchard Farm Barn Conversion  |
| JOB REFERENCE | WG1657                        |
| DATE          | 25 <sup>th</sup> October 2024 |



## **1. OVERVIEW**

- 1.1 This is a drainage statement assessing the foul and surface water strategy for the proposed barn conversion at Orchard Farm, to support the Planning application.
- 1.2 The site is currently an existing barn with no foul drainage. The existing surface water arrangement is water is collected from the roof via gutters and downpipes, with the downpipes discharging water directly onto the ground.
- 1.3 The GOV.UK mapping based on Environment Agency data indicated the site as being located within Flood Zone 1 and has a 'LOW' risk of flooding from all sources, and as such the proposals would accord with the NPPF guidance from Flood Risk.

## **2. FOUL WATER STRATEGY**

- 2.1 From review of Southern Water records there are no foul sewers within close proximity to the site, Sewer Records attached within Appendix.
- 2.2 It is proposed the building is drained via gravity to a Packaged Sewage Treatment plant like a Klargester Biodisc (details attached within Appendix).
- 2.3 The outfall from the packaged sewage treatment plant would be connected to the watercourse to the South of the site.
- 2.4 The buildings foul discharge would be less than 5m<sup>3</sup> per day, therefore the discharge from the building to the watercourse would not require any additional approval from the Environment Agency as it would comply with their General Binding Rules.

## **3. SURFACE WATER STRATEGY**

- 3.1 It is proposed the building is drained under gravity to a soakaway located to the South of the existing barn.
- 3.2 The soakaway is to be positioned a minimum of 5m away from any buildings or structures, in line with Building regulation requirements.
- 3.3 The proposed driveway / parking area would be drained via infiltration techniques either at source via a porous road construction or drained positively via gullies / drainage channels and discharging to the soakaway.
- 3.4 Confirmation of soakaway size and type would be subject to the detailed design, and results of onsite infiltration testing to BRE365 requirements. The proposed soakaway will be designed to comply with local Planning Policy guidance and requirements for up to and including 1 in 100yr + 45% climate change allowances.





#### **4. APPENDICES**

**Southern Water Sewer Records**

**Klargester Product Information**



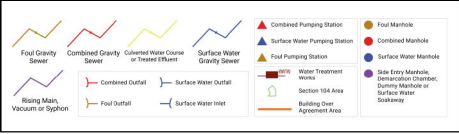


(c) Crown copyright and database rights 2024 Ordnance Survey AC000008122 Date: 25/10/24 Scale: 1:1250 Map Centre: 537890,123583 Data updated: 24/09/24 Our Ref: 1805032 - 1 Wastewater Plan A3 Powered by digdat

The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. This plan is produced by Southern Water Services Ltd (c) Crown copyright and database rights 2024. Ordnance Survey AC000008122. This map is to be used for the purposes of viewing the location of Southern Water plant only. Any other uses of the map data or further copies is not permitted.

WARNING: BAC pipes are constructed of Bonded Asbestos Cement.

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



lloyc@wallergrey.co.uk

WG1657





Water Management Solutions

7 YEAR  
WARRANTY

**Klargester**

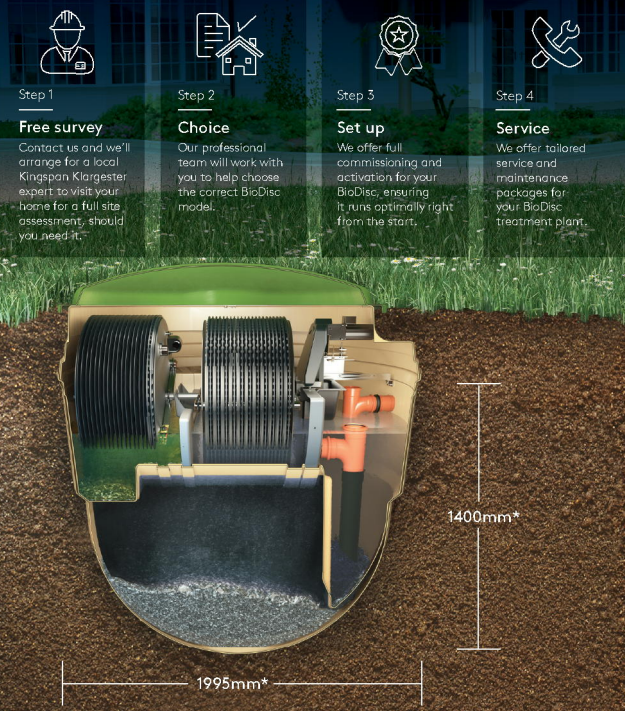
# BioDisc® BA-BC Domestic Sewage Treatment Plant Range



[kingspan.co.uk/klargester](http://kingspan.co.uk/klargester)

## Klargester BioDisc® Domestic Sewage Treatment Plant

### Support from start to finish from our expert team



\* Dimensions illustrated here are applicable to the BA and BB models only.

### Choosing the right sewage treatment plant for your home with Klargester

Klargester provides relevant advice and support throughout the wastewater treatment purchasing process based on our in-depth local knowledge and expertise. We offer comprehensive free site visits, professional installation options (optional extra) and expert after-sales care through our national network of accredited installers and engineers.

BioDisc is 100% compliant with European standard EN12566-3

#### I'm a homeowner - what do I need to consider before choosing my treatment plant?

The Klargester BioDisc sewage treatment system is available to suit all types of domestic applications, catering for single and multi-house properties. BioDisc is engineered to treat wastewater to a very high standard and offers affordable lifetime costs compared to other treatment processes.

Our team will guide you through:

- Size of treatment plant required
- Ground conditions around the plant
- Wastewater discharge options
- Invert level options

### Why BioDisc®?

With strict Environment Agency standards, it's more important than ever to choose a sewage treatment plant that delivers peace of mind with reliable treatment of wastewater.

The Klargester BioDisc is built on the back of 70 years' experience and offers the following benefits:

### Product benefits

- Affordable lifetime running costs**
- Odour free**
- Trusted and reliable performance**
- Silent Operation**

**7 YEAR WARRANTY\*\***

BioDisc is one of the few systems in the UK which doesn't make use of an air pump (and in fact, instead, pumps) which means minimal odour being released. This is verified by an independent odour sampling report (available on request).

As a recent 2016 survey report noted that the domestic BioDisc has the same level of noise as the average a home background noise outside (between 40-55 decibels).

Domestic BioDisc Decibel equivalent to a modern refrigerator.

\* This is a representative figure based on a connected BioDisc plant.

Typical installed system Decibel equivalent to a coffee grinder machine.

Register your guarantee online at [kingspan.co.uk/klargesterguarantee](https://www.kingspan.co.uk/klargesterguarantee) to arrange your service and enjoy an extended seven year guarantee period.\*\*

\*\* For BA and BB BioDisc models only, when registered online - terms and conditions apply.

Visit: <https://www.kingspan.com/gb/en-gb/products/wastewater-management/warranty-terms>

How it works



Control panel and beacon featuring alarm\* and digital display to signal that your system is working optimally (beacon and alarm optional extras).

SmartServ Pro

Ask us about our SmartServ Pro remote monitoring solution (optional extra). With early fault detection, SmartServ Pro lets you know when your system needs serviced, giving you peace of mind. Find out more at [helpingyou@kingspan.com](mailto:helpingyou@kingspan.com)



**Integrated Pump System** also available (for pumped systems only). Our technical team will guide you through the best options for your site.

Book your free site visit from our expert Klargestar team at [klargestarinfo@kingspan.com](mailto:klargestarinfo@kingspan.com) or visit [kingspan.ie/klargestar](http://kingspan.ie/klargestar)

Silent operation

Odour Free

Trusted and reliable performance

Technical Specification

| Unit Reference                    | BA             | BAx            | BB             | BC        |
|-----------------------------------|----------------|----------------|----------------|-----------|
| Population Equivalent (Std Flow)  | 8              | 9              | 12             | 18        |
| Maximum Daily BOD (kg)            | 0.54           | 0.54           | 0.72           | 1.08      |
| Maximum Daily Flow (m3)           | 1.2            | 1.8            | 2.4            | 3.6       |
| Ø/Width (mm)                      | 1995           | 1995           | 1995           | 2450      |
| Length (mm)                       | -              | -              | -              | -         |
| Inlet Invert depth (mm)           | 450/750/1250   | 450/750/1251   | 450/750/1250   | 600/1100  |
| Depth Below Inlet Invert (mm)     | 1400           | 1400           | 1400           | 1820      |
| Outlet Invert Depth (mm)          | 1315           | 1315           | 1315           | 1735      |
| Overall Height (mm)               | 2160/2460/2960 | 2160/2460/2960 | 2160/2460/2960 | 2825/3325 |
| Height to Rim of Cover (mm)       | 1945/2245/2745 | 1945/2245/2745 | 1945/2245/2745 | 2485/2985 |
| Empty Weight (kg)                 | 310/325/380    | 310/325/380    | 335/350/405    | 650/750   |
| Standard Power Supply             | 1 phase        | 1 phase        | 1 phase        | 1 phase   |
| Motor Rating - 1 Phase (Watts)    | 50             | 50             | 50             | 75        |
| Full Load Current 1 Phase (amps)  | 0.51           | 0.51           | 0.51           | 1.1       |
| Optional Power Supply             | 3 phase        | 3 phase        | 3 phase        | 3 phase   |
| Motor Rating - 3 Phase (Watts)    | N/A            | N/A            | N/A            | 90        |
| Full Load Current 3 Phase (amps)  | N/A            | N/A            | N/A            | 0.38      |
| Sludge Return Pump Rating (watts) | 250            | 250            | 250            | 250       |

**Invert level options**  
Three standard drain invert level options are available from stock to match the site topography and where applicable, minimise the excavation depth. The BA, BB and BA-X models are available with an integral pump to move the effluent from the point of treatment, if site level demands.

Environment Agency regulations

As an off-mains homeowner, you must comply with the General Binding Rules by ensuring your treatment system is maintained properly and does not cause pollution. These rules state that you must arrange regular maintenance for your system, via a trusted service provider. Kingspan Service can help with expert servicing and alarm packages – email [helpingyou@kingspan.com](mailto:helpingyou@kingspan.com).

Protect your investment with our Service and Maintenance Plans

We recommend that you service your BioDisc sewage treatment plant **once a year**. Under Environment Agency regulations, it's now your responsibility to ensure smooth running of your plant. Our in-house Service department offer a range of service packages including Gold, Silver and Bronze to cater for all homeowners' needs. To find out more about how you could benefit from a tailored service package from Kingspan, call us on **+44 (0)28 3026 6799 (NI)** or **0818 544 500 (ROI)** or email [helpingyou@kingspan.com](mailto:helpingyou@kingspan.com)

For further technical information & videos on the BioDisc treatment plant visit our website at [kingspan.co.uk/klargestar](http://kingspan.co.uk/klargestar)

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# Contact Details

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## UK

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To ensure you are viewing the most recent and accurate product information, please visit this link:

<https://www.kingspan.com/gb/en-gb/products/water-management/domestic-sewage-treatment-plants/klargester-biodisc-domestic-sewage-treatment-plant>

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## **BIODISC BA to BF - DECLARATION OF PERFORMANCE**

kingspan-klargester-biodisc-ba-to-bf-dop-en-oct2021-v2

1. Unique identification code of the product-type:

**Wastewater Treatment Plant for up to 50 Population Equivalents  
BA, BB, BC, BD & BE BioDisc**

2. Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11(4) of the CPR:

**BioDisc Prefabricated Domestic Wastewater Treatment Plant: See CE marking affixed to product  
BA to BE**

3. Intended use/es of the product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

**To be used for Collection & Treatment of Wastewater from Domestic applications up to 50 Population Equivalent**

4. Manufacturer name, registered trade name or registered trade mark and contact address as required under Article 11(5):

**Kingspan Water & Energy Ltd  
College Rd North  
Aston Clinton, Aylesbury, Buckinghamshire  
HP22 5EW**

5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):

**N/A**

6. System/s of assessment and verification of constancy of performance (AVCP) of the product as set out in CPR, Annex V:

**3**

7. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

**EN:12566-3:2005+A2:2013**

Notified body/ bodies:

**Notified Body No: 1739 + PIA Prüfinstitut für Abwassertechnik GmbH**

|                |                      |         |
|----------------|----------------------|---------|
| Document date: | Document version no: | ECN no: |
| 12/10/2021     | V1.                  | 1587    |

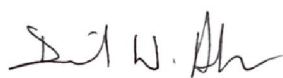


8. Declared performance/s:

| Essential characteristics                             |                    | Performance                                                                                                                                             |          | Harmonised technical specification |
|-------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------|
| Structural Behaviour                                  |                    | Confirmed by Pit Test under the following Conditions:<br>- Maximum installation Depth 0m over cover level<br>- Wet conditions maximum water level 2.49m |          | EN:12566-3:2005+A2:2013            |
| Reaction to fire                                      |                    | Class E                                                                                                                                                 |          |                                    |
| Water Tightness (water test)                          |                    | Water Tight (water test)                                                                                                                                |          |                                    |
| Material Durability                                   |                    | Creep Factor $\alpha_{material}$ = 0,48 (average value)                                                                                                 |          |                                    |
|                                                       |                    | Ageing Factor ( $\beta$ ) = 0,46 (average value)                                                                                                        |          |                                    |
| Treatment Efficiency                                  | COD                | 89.4%                                                                                                                                                   | 59 mg/l  |                                    |
|                                                       | BOD <sub>5</sub>   | 95.7%                                                                                                                                                   | 10 mg/l  |                                    |
|                                                       | NH <sub>4</sub> -N | 88.6%                                                                                                                                                   | 3.8 mg/l |                                    |
|                                                       | SS                 | 94.8%                                                                                                                                                   | 15 mg/l  |                                    |
|                                                       | P                  | NPD                                                                                                                                                     | NPD      |                                    |
|                                                       | KN                 | NPD                                                                                                                                                     | NPD      |                                    |
| Electrical Consumption (measured during 38-week test) |                    | 1.3kWh/d                                                                                                                                                |          |                                    |
| Emission of Dangerous Substances                      |                    | NPD                                                                                                                                                     |          |                                    |

9. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:



David Anderson – Water Business Unit Director

At Portadown on 22 September 2021

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