



RIBBLE VALLEY
BOROUGH COUNCIL

320130154P

For office use only

Application No.

Date received

Fee paid £

Receipt No:

Council Offices, Church Walk, Clitheroe, Lancashire. BB7 2RA Tel: 01200 425111 www.ribblevalley.gov.uk

Application for Planning Permission and listed building consent for alterations,
extension or demolition of a listed building.

Town and Country Planning Act 1990

Planning (Listed Buildings and Conservation Areas) Act 1990

Publication of applications on planning authority websites.

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

1. Applicant Name, Address and Contact Details

Title:	Mr	First name:	John & Graham	Surname:	Holt
Company name:					
Street address:	C/O Woodhall Planning and Conservation				
	56 Woodhall Lane				Telephone number:
	Calverley				Mobile number:
Town/City:	Leeds				Fax number:
County:					Email address:
Country:					
Postcode:	LS28 5NY				
Are you an agent acting on behalf of the applicant? <input checked="" type="radio"/> Yes <input type="radio"/> No					

2. Agent Name, Address and Contact Details

Title:		First Name:	Marc	Surname:	Pearson
Company name:	Woodhall Planning & Conservation				
Street address:	56 Woodhall Lane				
	Calverley				Telephone number:
					Mobile number:
Town/City:	Leeds				Fax number:
County:	West Yorkshire				Email address:
Country:	United Kingdom				
Postcode:	LS28 5NY				

3. Description of Proposed Works

Please describe details of the proposed development or works including details of proposals to alter,
extend or demolish the listed building(s):

Conversion of existing barn and outbuildings into two dwellings incorporating package treatment plant.

Has the development or
work(s) already started?

☐

Yes

☒

No

4. Site Address Details

Full postal address of the site (including full postcode where available)

House: Suffix:

House name:

Street address:

Bailey Hall Barn

Hurst Green

Town/City:

County:

Lancashire

Postcode:

Description of location or a grid reference
(must be completed if postcode is not known):

Easting:

367784

Northing:

437335

Description:

Existing Barn and Outbuildings

5. Pre-application Advice

Has assistance or prior advice been sought from the local authority about this application? ☐ Yes ☒ No

6. Pedestrian and Vehicle Access, Roads and Rights of Way

Is a new or altered vehicle access proposed to or from the public highway? ☐ Yes ☒ No

Is a new or altered pedestrian access proposed to or from the public highway? ☐ Yes ☒ No

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

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

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

7. Waste Storage and Collection

Do the plans incorporate areas to store and aid the collection of waste? ☒ Yes ☐ No

If Yes, please provide details:

Collection arrangement as existing for neighbouring properties

Have arrangements been made for the separate storage and collection of recyclable waste? ☒ Yes ☐ No

If Yes, please provide details:

Collection arrangement as existing for neighbouring properties

8. Authority Employee/Member

With respect to the Authority, I am:
(a) a member of staff
(b) an elected member
(c) related to a member of staff
(d) related to an elected member

Do any of these statements apply to you? ☐ Yes ☒ No

9. Demolition

Does the proposal include total or partial demolition of a listed building? ☐ Yes ☒ No

10. Listed building alterations

Do the proposed works include alterations to a listed building?

☒ Yes☐ No

If Yes, will there be works to the interior of the building?

☒ Yes☐ No

Will there be works to the exterior of the building?

☒ Yes☐ No

Will there be works to any structure or object fixed to the property (or buildings within its curtilage) internally or externally?

☒ Yes☐ No

Will there be stripping out of any internal wall, ceiling or floor finishes (e.g. plaster, floorboards)?

☒ Yes☐ No

If the answer to any of these questions is Yes, please provide plans, drawings and photographs sufficient to identify the location, extent and character of the items to be removed, and the proposal for their replacement, including any new means of structural support, and state references for the plan(s)/drawing(s).

State references for these plan(s)/drawing(s):

2647-01-100C - As Existing Floor Plans
2647-01-101A - As Existing Elevations and Sections
2647-01-001D - As Proposed Floor Plans
2647-01-003B - As Proposed Elevations
2647-01-006 - As Proposed Sections
2647-01-005A - As Proposed Block Plan
2647-01-200 A- As Proposed Repair and Alterations
2647-01-210 - As existing Window Detail
2647-01-211 - As proposed Window Detail
Design and Access Statement incorporating heritage statement
Structural ReportConversion Assessment and Method Statement

11. Listed Building Grading

If known, what is the grading of the listed building (as stated in the list of Buildings of Special Architectural or Historical Interest)?

☐ Don't know☐ Grade I☐ Grade II*☒ Grade II

Is it an ecclesiastical building?

☐ Don't know☐ Yes☒ No

12. Immunity from Listing

Has a Certificate of Immunity from listing been sought in respect of this building?

☐ Yes☒ No

13. Vehicle Parking

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

Type of vehicle	Existing number of spaces	Total proposed (including spaces retained)	Difference in spaces
Cars	0	4	4
Light goods vehicles/public carrier vehicles	0	0	0
Motorcycles	0	0	0
Disability spaces	0	0	0
Cycle spaces	0	0	0
Other (e.g. Bus)	0	0	0
Short description of Other			

14. Materials

Please provide a description of existing and proposed materials and finishes to be used in the build (demolition excluded):

External walls - add description
Description of *existing* materials and finishes:

Stone Walls

Description of *proposed* materials and finishes:

As existing re-pointed using lime mortar

Roof covering- add description
Description of *existing* materials and finishes:

Stone and natural slate

Description of *proposed* materials and finishes:

As existing with any replacement slates / stones to match existing

Chimney - add description
Description of *existing* materials and finishes:

N/A

Description of *proposed* materials and finishes:

N/A

14. Materials (continued)

Windows - add description

Description of existing materials and finishes:

Painted timber

Description of proposed materials and finishes:

Painted timber

External doors - add description

Description of existing materials and finishes:

Variety of stain, paint and natural timber finish

Description of proposed materials and finishes:

Painted timber

Ceilings - add description

Description of existing materials and finishes:

N/A

Description of proposed materials and finishes:

Plasterboard with skim finish

Internal walls - add description

Description of existing materials and finishes:

Stone

Description of proposed materials and finishes:

Exposed stone pointed with lime mortar; lightweight partitions with plasterboard and plaster skim finish; plastered blockwork & drylined stone walls

Floors - add description

Description of existing materials and finishes:

Concrete and stone setts

Description of proposed materials and finishes:

Limecrete & concrete

Internal doors - add description

Description of existing materials and finishes:

Timber

Description of proposed materials and finishes:

Timber

Rainwater goods - add description

Description of existing materials and finishes:

Cast iron and timber

Description of proposed materials and finishes:

Cast iron

Boundary treatments - add description

Description of existing materials and finishes:

Stone walls & timber fences

Description of proposed materials and finishes:

As existing

Vehicle access and hard standing - add description

Description of existing materials and finishes:

Stone walls & timber fences

Description of proposed materials and finishes:

Stone setts, concrete & permeable paving

Are you supplying additional information on submitted drawings or plans?

☒ Yes ☐ No

If Yes, please state plan(s)/drawing(s) references:

2647-01-100C - As Existing Floor Plans
2647-01-101A - As Existing Elevations and Sections
2647-01-001D - As Proposed Floor Plans
2647-01-003B - As Proposed Elevations
2647-01-006 - As Proposed Sections
2647-01-005A - As Proposed Block Plan
2647-01-200 A- As Proposed Repair and Alterations
2647-01-210 - As existing Window Detail
2647-01-211 - As proposed Window Detail
Design and Access Statement incorporating Heritage Statement
Structural Report
Conversion Assessment and Method Statement

15. Foul Sewage

Please state how foul sewage is to be disposed of:

Mains sewer	<input type="checkbox"/>	Package treatment plant	<input checked="" type="checkbox"/>	Unknown	<input type="checkbox"/>
Septic tank	<input type="checkbox"/>	Cess pit	<input type="checkbox"/>		

Other

Are you proposing to connect to the existing drainage system? ☐ Yes ☒ No ☐ Unknown

16. Assessment of Flood Risk

Is the site within an area at risk of flooding? (Refer to the Environment Agency's Flood Map showing flood zones 2 and 3 and consult Environment Agency standing advice and your local planning authority requirements for information as necessary.) ☐ Yes ☒ No

If Yes, you will need to submit an appropriate flood risk assessment to consider the risk to the proposed site.

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

Will the proposal increase the flood risk elsewhere? ☐ Yes ☒ No

How will surface water be disposed of?

<input type="checkbox"/> Sustainable drainage system	<input type="checkbox"/> Main sewer	<input type="checkbox"/> Pond/lake
<input checked="" type="checkbox"/> Soakaway	<input type="checkbox"/> Existing watercourse	

17. Biodiversity and Geological Conservation

To assist in answering the following questions refer to the guidance notes for further information on when there is a reasonable likelihood that any important biodiversity or geological conservation features may be present or nearby and whether they are likely to be affected by your proposals.

Having referred to the guidance notes, is there a reasonable likelihood of the following being affected adversely or conserved and enhanced within the application site, OR on land adjacent to or near the application site:

a) Protected and priority species

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

b) Designated sites, important habitats or other biodiversity features

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

c) Features of geological conservation importance

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

18. Existing Use

Please describe the current use of the site:

Vacant

Is the site currently vacant? ☒ Yes ☐ No

If Yes, please describe the last use of the site:

Agricultural Storage

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

25/06/1997

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

Land which is known to be contaminated? ☐ Yes ☒ No

Land where contamination is suspected for all or part of the site? ☐ Yes ☒ No

A proposed use that would be particularly vulnerable to the presence of contamination? ☐ Yes ☒ No

19. Trees and Hedges

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

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

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

20. Trade Effluent

Does the proposal involve the need to dispose of trade effluents or waste? ☐ Yes ☒ No

21. Residential Units

Does your proposal include the gain or loss of residential units? ☒ Yes ☐ No

Market Housing - Proposed

	Number of bedrooms				
	1	2	3	4+	Unknown
Houses				2	
Flats/Maisonettes					
Live-Work units					
Cluster flats					
Sheltered housing					
Bedsit/Studios					
Unknown					

Proposed Market Housing Total

2

Market Housing - Existing

	Number of bedrooms				
	1	2	3	4+	Unknown
Houses					
Flats/Maisonettes					
Live-Work units					
Cluster flats					
Sheltered housing					
Bedsit/Studios					
Unknown					

Existing Market Housing Total

0

Overall Residential Unit Totals

Total proposed residential units	2
Total existing residential units	0

22. All Types of Development: Non-residential Floorspace

Does your proposal involve the loss, gain or change of use of non-residential floorspace? ☒ Yes ☐ No

Use class/type of use		Existing gross internal floorspace (square metres)	Gross internal floorspace to be lost by change of use or demolition (square metres)	Total gross new internal floorspace proposed (including changes of use) (square metres)	Net additional gross internal floorspace following development (square metres)
A1	Shops Net Tradable Area	0.0	0.0	0.0	0.0
A2	Financial and professional services	0.0	0.0	0.0	0.0
A3	Restaurants and cafes	0.0	0.0	0.0	0.0
A4	Drinking establishments	0.0	0.0	0.0	0.0
A5	Hot food takeaways	0.0	0.0	0.0	0.0
B1 (a)	Office (other than A2)	0.0	0.0	0.0	0.0
B1 (b)	Research and development	0.0	0.0	0.0	0.0
B1 (c)	Light industrial	0.0	0.0	0.0	0.0
B2	General industrial	0.0	0.0	0.0	0.0
B8	Storage or distribution	0.0	0.0	0.0	0.0
C1	Hotels and halls of residence	0.0	0.0	0.0	0.0
C2	Residential institutions	0.0	0.0	0.0	0.0
D1	Non-residential institutions	0.0	0.0	0.0	0.0
D2	Assembly and leisure	0.0	0.0	0.0	0.0
Other	Please Specify	548.4	548.4	548.4	0.0
Total		548.4	548.4	548.4	0.0

For hotels, residential institutions and hostels, please additionally indicate the loss or gain of rooms:

Use Class	Types of use	Existing rooms to be lost by change of use or demolition	Total rooms proposed (including changes of use)	Net additional rooms
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23. Employment

If known, please complete the following information regarding employees:

	Full-time	Part-time	Equivalent number of full-time
Existing employees	0	0	0
Proposed employees	0	0	0

24. Hours of Opening

If known, please state the hours of opening for each non-residential use proposed:

24. Hours of Opening (continued)

Use	Monday to Friday		Saturday		Sunday and Bank Holidays		Not Known
	Start Time	End Time	Start Time	End Time	Start Time	End Time	

25. Site Area

What is the site area?

2,062.4

sq.metres

26. Industrial or Commercial Processes and Machinery

Please describe the activities and processes which would be carried out on the site and the end products including plant, ventilation or air conditioning. Please include the type of machinery which may be installed on site:

N/A

Is the proposal for a waste management development?



Yes



No

27. Hazardous Substances

Is any hazardous waste involved in the proposal?



Yes



No

28. Site Visit

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



Yes



No

If the planning authority needs to make an appointment to carry out a site visit, whom should they contact? (Please select only one)



The agent



The applicant



Other person

29. Certificates (Certificate A)**Certificate Of Ownership - Certificate A**

Certificate under Article 12 - Town and Country Planning (Development Management Procedure) (England) Order 2010 & Regulation 6 - Planning (Listed Buildings and Conservation Areas) Regulations 1990

I certify/The applicant certifies that on the day 21 days before the date of this application nobody except myself/the applicant was the owner (owner is a person with a freehold interest or leasehold interest with at least 7 years left to run) of any part of the land or building to which the application relates.

Title: Mr First name: Marc Surname: Pearson

Person role: Agent

Declaration date:

28/01/2013



Declaration made

30. Certificates (Agricultural Land Declaration)**Agricultural Land Declaration**

Town and Country Planning (Development Management Procedure) (England) Order 2010 Certificate under Article 12

Agricultural Land Declaration - You Must Complete Either A or B

A) None of the land to which the application relates is, or is part of an agricultural holding.



B) I have/The applicant has given the requisite notice to every person other than myself/the applicant who, on the day 21 days before the date of this application, was a tenant of an agricultural holding on all or part of the land to which this application relates, as listed below:



If any part of the land is an agricultural holding, of which the applicant is the sole tenant, the applicant should complete part (B) of the form by writing 'sole tenant - not applicable' in the first column of the table below

Title: Mr First Name: Marc Surname: Pearson

Person role: Agent

Declaration date:

28/01/2013



Declaration Made

31. Declaration

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



Date

28/01/2013

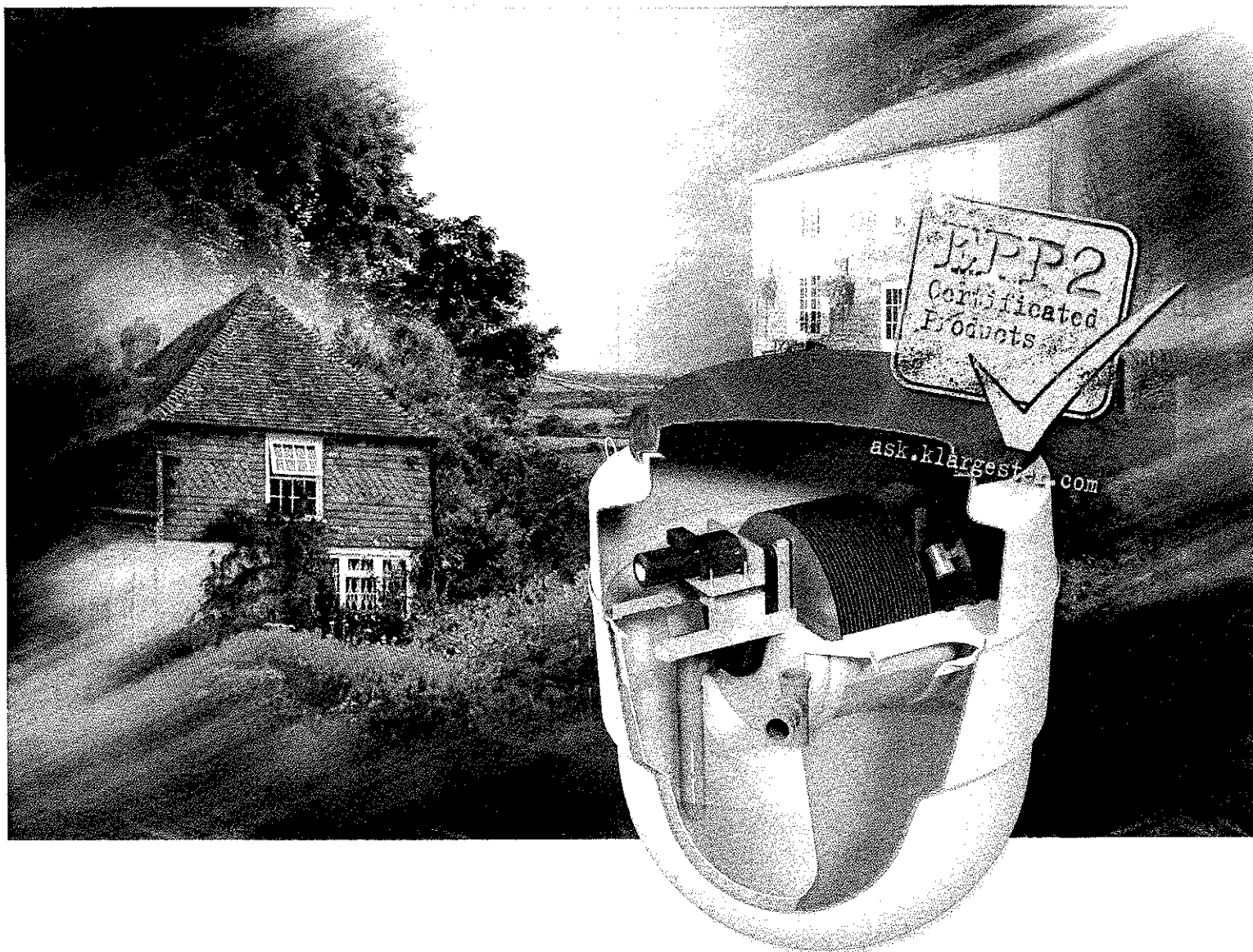
Environmental

320130154P

Certified up to 95%
efficient to European
Performance Standards

Klargester BioDisc® BA-BD

High Performance Package Sewage Treatment Plants
for Residential Applications



Sustainable, Reliable, Affordable


Kingspan®

Klargester BioDisc® BA-BD

For domestic dwellings without access to mains drainage, the Klargester BioDisc® provides a reliable, efficient and environmentally safe solution to your sewage disposal needs.

It is ideal for locations where discharge is to sub-surface irrigation, or to a suitable watercourse where approved by the Regulator, and where a septic tank will not meet the required standards.

Certificated to European Standard EN-12566

In 2005, the Klargester BioDisc® underwent 40 weeks of stringent testing to assess its treatment efficiency to comply with the European Standard for small treatment plants.

After delivering exceptionally high levels of pollution removal (95%) under varying loads and conditions, the Klargester BioDisc® was awarded its Performance Certificate.

Only products that hold an EN-12566 certificate are approved for an exemption from a permit to discharge under the new EPP2 environmental legislation.

The test report also highlighted:

- Klargester BioDisc® operates without noise or odour
- Maintenance requirements are low with good access
- No technical or mechanical faults
- Low power consumption at 1.3kw/d - approx 10-14 pence per day*
- Low sludge build up and large storage capacity

Designed for Quality, Reliability and Peace of Mind

Klargester has pioneered the development of packaged treatment plant with many thousands of successful installations worldwide. The Klargester BioDisc® is robustly constructed from corrosion free materials, manufactured and performance tested in accordance with BS EN-12566 and has been awarded Irish Board of Agrément Certification (for BA, BA-X and BB sizes only). Klargester is an accredited company under ISO 9001:2000 quality management systems. Klargester offer a range of alarm systems to alert the end user to mechanical failure. The installation of such, will be required under BS EN-12566.



Unique Design

The Klargester BioDisc® is the only packaged sewage treatment plant utilising Rotating Biological Contactor technology for small domestic applications.

This process offers inherent cost and performance benefits with a low carbon footprint.

Assured Performance

Klargester BioDisc® is a high performance package treatment plant which, in normal domestic situations, will produce effluent qualities of better than 15mg/l BOD, 25mg/l SS and 15mg/l ammonia.



Low Running Costs

Klargester BioDisc® has the lowest running and maintenance costs of any packaged treatment plant in its class.

The single home unit requires an annual de-sludge only, the motor rating is 50 watts and routine mechanical maintenance is minimal.

Low Lifetime Costs

Lowest running costs combined with the quality and durability of the equipment - particularly the drive motor which has a considerably longer service life than the pumps and blowers fitted to competitive units - all add up to a significantly lower lifetime cost for the Klargester BioDisc®.



Process Stability

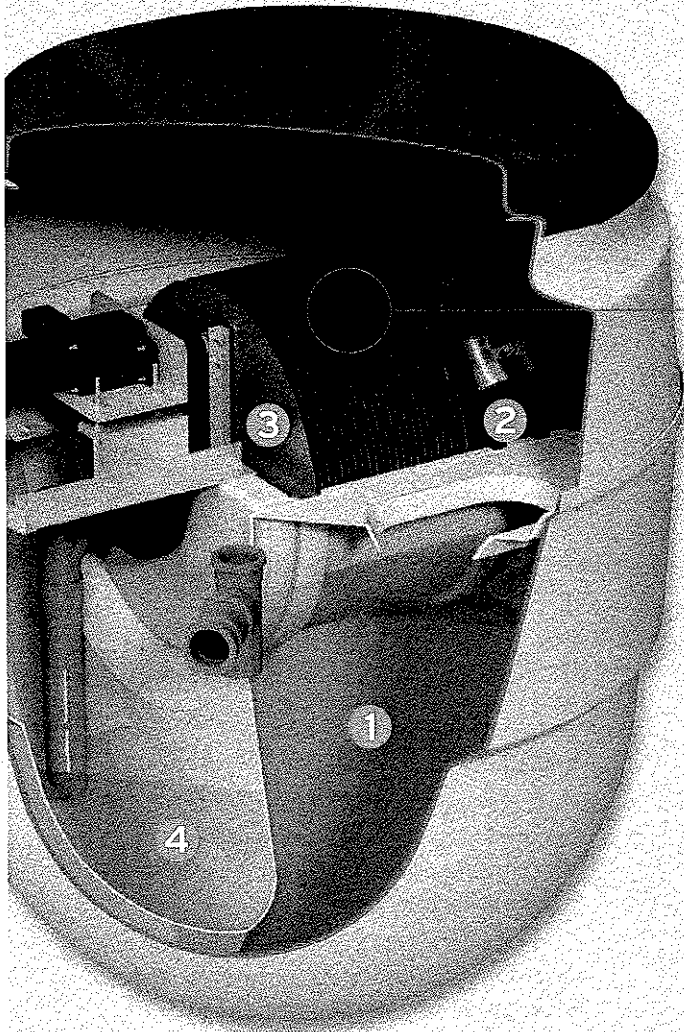
The Klargester BioDisc® is recognised for its process performance. This is further enhanced by its unique Managed Flow System, which ensures optimum performance by smoothing peak flows and buffering biological loads over the whole working day.



Low Profile Covers

Access for service and maintenance is provided via a durable, unobtrusive cover at ground level.

* BA model BioDisc® - prices subject to local supplier.



Dispersal

Subject to relevant authorities consent and site conditions, the plant discharge can be a watercourse or to a drainage field.

Standard Invert Options

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

Nationwide Availability

Klargester products can be sourced from your local builders merchant or through local pollution control specialists.

How the Klargester BioDisc® Works

Central to the operation of each Klargester BioDisc® is the Rotating Biological Contactor (RBC), which supports a biologically active film or biomass on to which aerobic micro-organisms, naturally found in sewage, become established. Natural breakdown of sewage can then occur as described below.

The Breakdown Process

Wastewater and sewage flows into the primary settlement zone ① where solids are settled out and retained. This accumulated sludge should be drawn out periodically.

Partially clarified liquor containing fine suspended solids flows upwards into the first stage Biozone ② for breaking down by micro-organisms on the RBC. Suspended solids return to the primary settlement zone and the liquor is transferred to the second stage Biozone ③ for further treatment.

Any solids remaining are settled out in the final settlement tank ④. The very high effluent quality is discharged to a watercourse.

Rotating Biological Contactor (RBC)

The RBC comprises banks of vacuum formed polypropylene media supported by a steel shaft. This is slowly rotated by a low energy consumption electric motor and drive assembly.

Note: The Klargester BioDisc® is designed to deal with normal domestic sewage. If the sewage is likely to contain unusual substances, please consult Klargester.

Klargester BioDisc® BA-BD

Specification

Unit Size	Single House		Multiple Houses		
	BA	BA-X	BB	BC	BD
Population Equivalent	1 house, up to 4 bedrooms	1 house up to 7 bedrooms	2 houses up to 8 bedrooms	3 houses up to 12 bedrooms	4-5 houses 15-16 bedrooms
Overall Diameter / Width (A) mm	1995	1995	1995	2450	2450
Overall Length (B) mm	-	-	-	-	3340
Standard Drain Invert Inlet (C) mm	750*	750*	750*	600†	600†
Standard Outlet (D) mm	835	835	835	685	685
Depth from Invert to Base (E) mm	1400	1400	1400	1820	1820
Pipework Diameter (mm)	110	110	110	110	110
Sludge Storage Period (approx)	12 months	9 months	6 months	7 months	6 months
Standard Power Supply	Single phase	Single phase	Single phase	Single phase	Single phase
Motor Rating	50W	50W	50W	75W	75W
Weight (tonnes) standard units	0.388	0.418	0.418	0.650	1.100

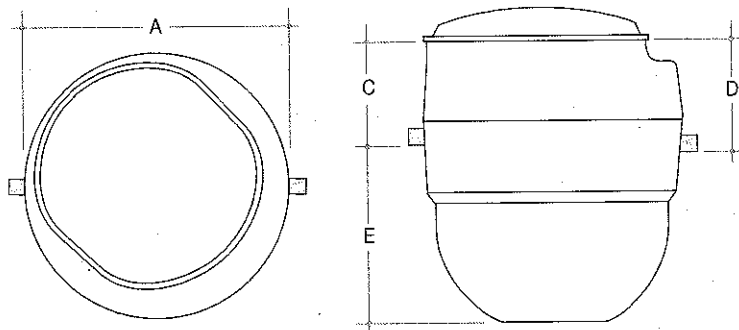
Applications which include waste disposal units will require special sizing. Please consult Klargester.

* Optional invert depths of 450mm and 1250mm are available.

† Optional invert depth of 1100mm is available.

** Optional integral pump available in BA, BA-X and BB models

BioDisc® BA, BA-X, BB and BC



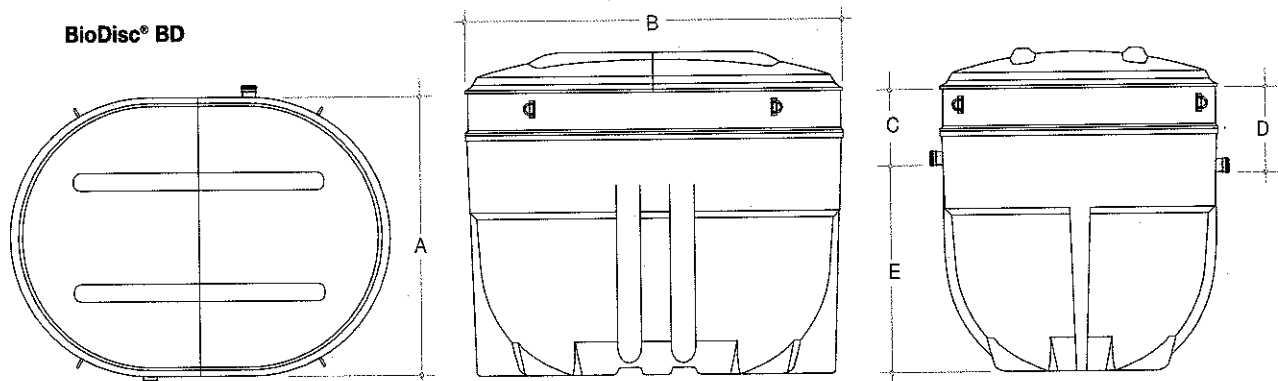
Sizing Your Treatment Plant

The above table is a general guide to selecting the correct Klargester BioDisc® for your property but, with many variables to consider, it is essential to obtain an accurate assessment.

We are pleased to offer professional advice by adhering to British Water's sizing criteria published in their guidance booklet 'Flows and Loads'.

By following this best-practice, Klargester will ensure you are installing the most suitable BioDisc® model to serve your needs.

BioDisc® BD



Quick and Easy to Install

Supplied as a complete palletised unit with lifting and lowering fixings, the Klargester BioDisc® is ready for installation on a suitably prepared site. The unit should be stabilised in concrete and the back fill completed with concrete.

We can provide an installation service through our network of Accredited Installers and full details are provided in our comprehensive installation instructions covering all site conditions. Additional technical information sheets are available on the Klargester BioDisc® process, siting, installation, effluent disposal and other specific topics. Please contact Klargester for further information.

Hiab Off-loading

Klargester can provide on-site mechanical off-loading if required (subject to location), please enquire.

Complete Monitoring and Control

Klargester's high-tech control panel features an alarm and digital read-out display, providing the homeowner with an immediate alert should any problem occur.

The control panel ① is able to communicate the nature of any fault, including loss of disc rotation*, pump failure*, or power failure. The display will inform the householder, or maintenance representative on site via a digital display and fault code.

The system also features a highly visible external beacon ② (optional) as a primary warning.

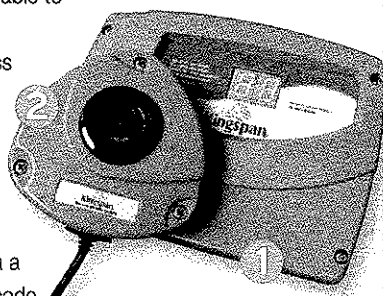
The control panel has a facility for telemetry to be fitted (supplied by others) to enable remote fault diagnosis by service engineer.

Alarms are now required for sewage treatment plants in the event of a power failure.

EN 12566-3 Section 6.0 para 6.1.1 states:

"Plants shall be provided with an alarm to indicate operational failure (for example electrical, mechanical or hydraulic failure). The manufacturer shall indicate which kind of failure is detected with the alarm."

* Optional sensor fittings.



The new control and alarm panels offer a range of features and benefits including:

- Digital display with fault code to speed up fault diagnosis
- Rapid wiring installation
- Facility for optional telemetry to be fitted
- Flasher beacon available if required (optional).

Sample Chambers

When a treatment plant discharges into a watercourse, it is a regulatory requirement to have a sampling point so that the effluent quality can be periodically checked by regulatory bodies.

Available to suit all outlet depths of our standard ranges, a Kingspan Environmental sample chamber provides the solution, enabling both quick installation and easy access for accurate and convenient effluent testing.



Solutions for All Your Off-mains Needs

Klargester has a sewage treatment solution to meet a wide range of requirements, from single house treatment plants to larger industrial/commercial and community developments:

- Individual houses (of all sizes)
- Off-mains developments of various sizes (housing, commercial, industrial)
- Offices and commercial properties
- Upgrading existing septic tank systems

If you already have a septic tank and would like to upgrade to a sewage treatment plant, we can meet your requests.

The company has the expertise and experience in upgrading to biological treatment plants and has a network of Certified Installers that can carry out the work effectively and efficiently.

If you must pump sewage to the mains, we can supply you with a pump station to meet your requirements. Please contact Klargester for further details.

Klargester Reed Beds

What is a Reed Bed?

A reed bed is a filtration process used in conjunction with a Klargester BioDisc® treatment plant to further enhance the quality of the effluent migrating into a drainage field or surrounding watercourse.

Benefits

- Tertiary treatment for new applications with tight discharge consents
- Satisfies new building regulations
- Improved effluent quality for existing works
- Very low maintenance
- Aesthetically pleasing and environmentally friendly
- Easy to install and maintain
- Significantly improves discharge after a treatment plant

Design

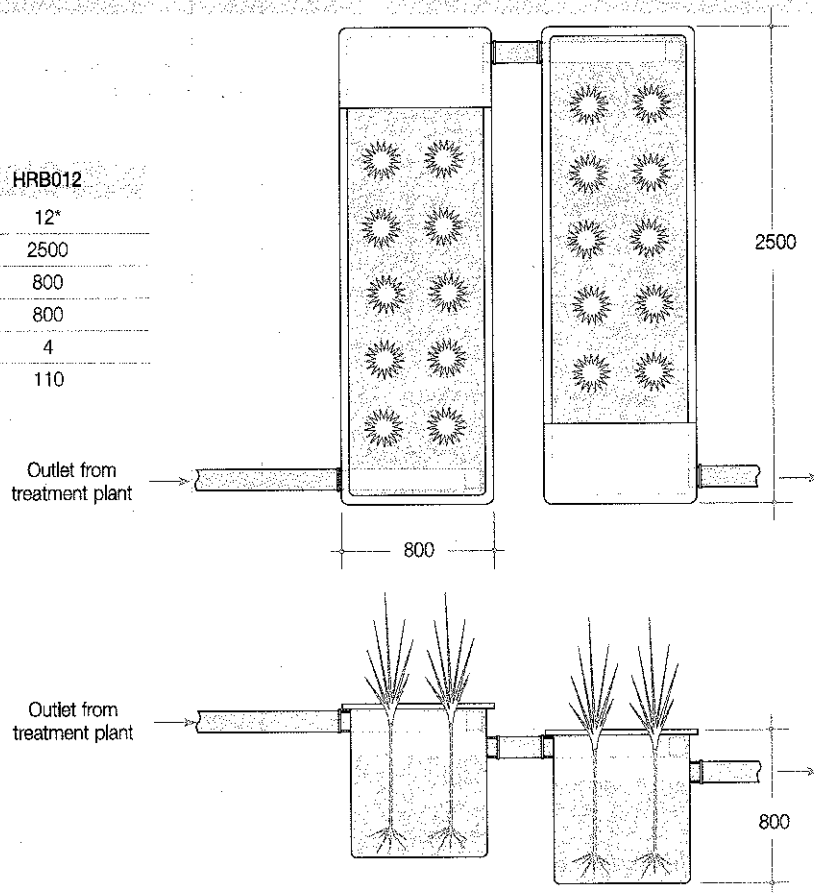
- Advanced Patented design delivers superior performance
- Pre-fabricated to ensure correct sizing
- Modules designed with a hydraulic gradient across the length of the units
- Performance tested in Germany to EN12566-3 in combination with a Part 3 plant
- Adjustable outlet weir allows water level control
- Modular system comprising of:
 - 2 individual reed beds = Single house application**
 - 4 individual reed beds = Two house application**
- One piece GRP moulding installed flush to the ground
- Reeds and GRP beds supplied. Washed pea gravel, 'growing' media by others (not included)
- Effluent discharge is typically improved by at least 50%, providing reduced BOD and suspended solids
- Provides rooting zone depth of 600mm (required by Phragmites Australis)



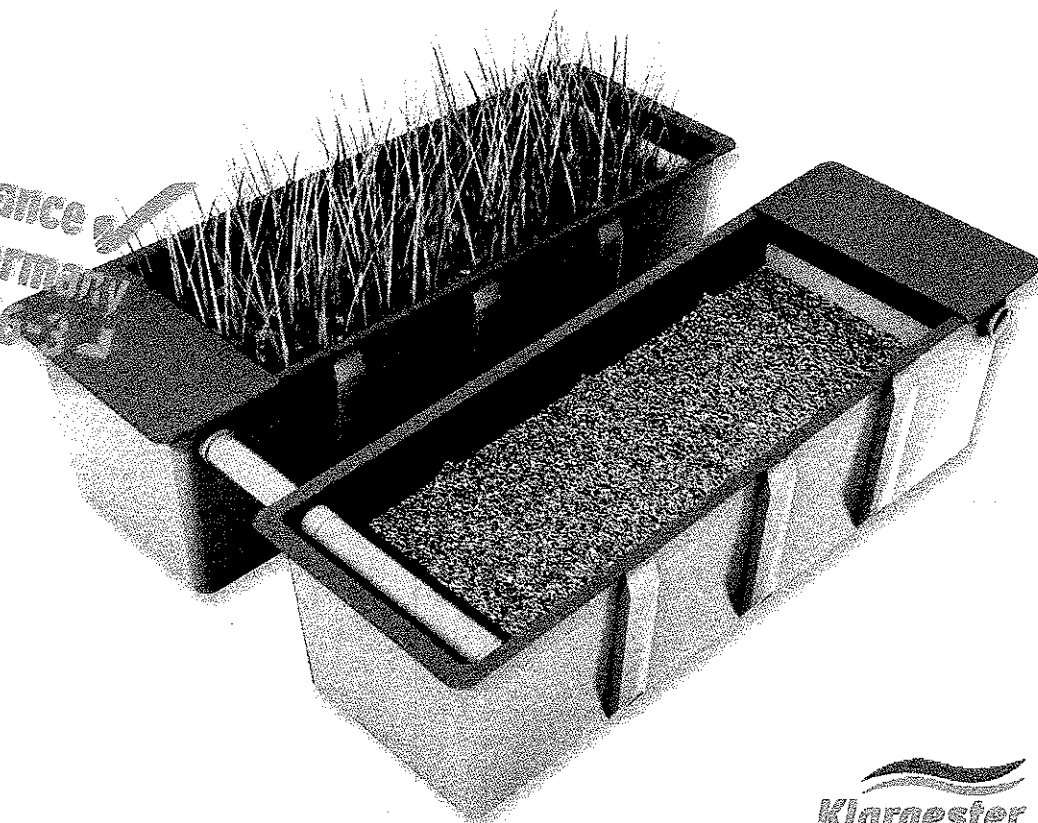
Specification

Reed Bed	HRB006	HRB012
Population Equivalent	6	12*
Length (mm)	2500	2500
Width (mm)	800	800
Depth (mm)	800	800
No. Required	2	4
Outlet Size (mm)	110	110

*12 population equivalent maximum



Performance
Tested in Germany
to EN12566-3



The Market Leading Range of Klargest Sewage Treatment, Pumping and Drainage Solutions from Kingspan Environmental



Commercial Sewage Treatment Plants



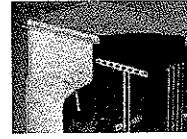
Large Capacity Pumping Stations



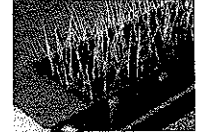
Stormwater Attenuation Systems



Domestic Sewage Treatment Plants



Packaged Pump Systems



Reed Beds



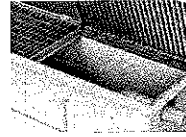
Oil/Water Separators



Septic Tanks



Below Ground Storage Tanks



Grease & Silt Traps



Packaged Drainage Systems

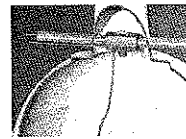
KingspanWater Rainwater Harvesting Solutions



Residential & Commercial Rainwater Harvesting



Domestic Rainwater Harvesting



Garden Watering Systems

Kingspan Environmental Accredited Installers

Strategically located throughout the UK and Ireland, Kingspan Environmental Accredited Installers are appointed following a selection process which assesses their installation expertise, reputation and financial status.

These performance criteria, together with their design skills and knowledge of Kingspan Environmental products are also reviewed to ensure that the highest levels of professionalism are maintained.



Larger Applications

Klargester also manufactures BioDisc® plant to cater for larger applications such as residential developments, caravan sites and hotels.

As specialists in wastewater treatment we are able to provide solutions for many different applications. Please contact us for further information.

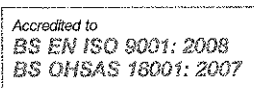
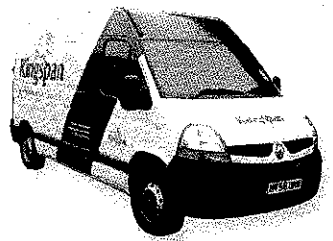
Kingspan Environmental Service

Who better to look after your treatment plant than the people who designed and built it?

Kingspan Environmental have a dedicated service division providing maintenance for wastewater treatment products.

Factory trained engineers are available for site visits as part of a planned maintenance contract or on a one-off call out basis.

To find out more about protecting your investment and ensuring peace of mind, contact us on **0845 355 0555** or visit us online at **www.kingspanenvservice.com**



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In keeping with Company policy of continuing research and development and in order to offer our clients the most advanced products, Kingspan Environmental reserves the right to alter specifications and drawings without prior notice.

