



Application for an environmental permit:

Part A – About you

Fill in this part A if you are applying for a new permit, applying to change or surrender an existing permit, or want to transfer an existing permit to yourself.

Please check that this is the latest version of the form available from our website.

Please read through this form and the guidance notes that come with it. All relevant guidance documents can be found on our website.

Where you see the term 'document reference' on the form,

give the document references and send the documents with the application form when you've completed it.

Contents

- 1 About you
- 2 Applications from individuals
- 3 Applications from organisations of individuals
- 4 Applications from public bodies
- 5 Applications from a registered company or other corporate body
- 6 Your address
- 7 Contact details

1 About you

Are you applying as an individual, an organisation of individuals (for example, a partnership), a company (this includes Limited Liability Partnerships) or a public body?

An individual



Go to section 2

An organisation of individuals (for example, a partnership)



Go to section 3

A public body (such as a local council)



Go to section 4

A registered company or other corporate body



Go to section 5

2 Applications from individuals

2a Please give us the following details

Title

Mr

First name

Carl

Last name

Pugh

Go to section 6

3 Applications from organisations of individuals

3a Organisation details

Organisation name

Type of organisation

If 'Other', please specify

3b Main representative's details

Title

First name

Last name

3c Second representative's details:

Title

First name

Last name

3d Other representative's details

If relevant, please provide details of all other representatives on a separate sheet and tick here to show that you have done so.

☐

Go to section 6

4 Applications from public bodies

4a Public body details

Public body name

Type of public body

If 'Other', please specify

4b Executive officer's details

The executive is an officer of the public body authorised to sign on your behalf.

Title

First name

Last name

Position

Go to section 6

5 Applications from a registered company or other corporate body

5a Company details

Company name

Company registration number

Date of registration

If you are applying as a corporate organisation that is now a limited company, please provide evidence of your status and tell us the reference number you have given this document with this evidence.

Document reference

Go to section 6

6 Your address

6a Your main (registered office) address

For companies this *must* be the address on record at Companies House.

Address

Postcode

LD1 6NT

Telephone - mobile

07914 676 226

Telephone - office

Email address

pughs-plastering@mail.com

If you are applying as an organisation of individuals, every partner needs to give us their details, including their title. If necessary, continue on a separate sheet and tell us the reference you have given the sheet.

Document reference

6b UK business address *only* if different from above

Address

Postcode

Telephone - mobile

Telephone - office

Email address

Go to section 7

7 Contact details

7a Who can we talk to about your application?

This can be someone acting as a consultant or 'agent' for you.

Title

First name

Last name

Address

Postcode

Telephone - mobile

Telephone - office

Email address

7b Who can we talk to about your operation?

Same as the application contact in 7a

☐

Title

First name

Last name

Address

Postcode

Telephone - mobile

Telephone - office

Email address

7c Who can we talk to about your billing or invoice?

Same as the application contact in 7a

☐

Same as the operation contact in 7b

☐

Title

First name

Last name

Address

Postcode

Telephone - mobile

Telephone - office

Email address

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Application for an environmental permit: Part F2 – Charging for discharges (C for D) charges and declarations

Fill in this part for applications for water discharge and point source groundwater discharge activities only.

Please check that this is the latest version of the form available from our website.

For applications for water discharge and point source groundwater discharge activities you need to fill in part F2 instead.

Please read through this form and the guidance notes that came with it. All relevant guidance documents can be found

on our website.

Contents

- 1 Working out charges
- 2 Water discharge activity and groundwater point source discharges
- 3 Payment
- 4 The Data Protection Act 1998
- 5 Confidentiality and national security
- 6 Application checklist
- 7 Declaration

1 Working out charges (you must fill in this section)

You have to submit an application fee with your application.

You can find out the charge by looking at our current environmental permitting charging scheme. This can be found on our 'How we regulate you' webpages.

Please remember that the charges are revised on 1 April each year and that there is an annual subsistence charge to cover the costs we incur in the ongoing regulation of the permit.

Table 1 – Working out charges

| Type of application | | | | |
|--|----------------------------|--|------------------------------|-----------------|
| Water discharge activity (surface). | | | | |
| Summary of charges | | | | |
| Type of water discharge activity or groundwater activity | Standard or reduced charge | Number of activities at this charge rate | Charge for each facility (£) | Charges due (£) |
| Surface | standard | 1 | £ 885 | £ 885 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Other charges | | | | |
| Ground source heating and cooling system scheme (water resources charge) | | | | |
| Total charges due | | | | £ 885 |

2 Water discharge activity and groundwater activity point source discharges

The application charge is a fixed charge, although two rates exist: standard and reduced. The reduced application charge is applicable where the effluent is:

- sewage effluent where the proposed volume is five cubic metres or less per day;
- sewage effluent which contains trade effluent or other matter where the proposed volume is five cubic metres or less per day;
- trade effluent from cooling or heat exchange where the proposed volume is ten cubic metres or less per day;

- surface water not containing trade effluent;
- site drainage;
- effluent or substance discharged or disposed onto or into land where the proposed volume is five cubic metres or less per day and discharge is on not more than six days per year or any such equivalent disposal.

The standard application charge applies in all other situations.

The charge applies to each discharge you will be making. Therefore two discharges of sewage effluent of five cubic metres a day will attract two reduced rate charges.

Please contact us, for details of current reduced and standard application charges.

3 Payment

3a How do you want to pay?

Tick an option below to show how you will pay.

- | | | |
|---|-------------------------------------|------------------|
| Electronic transfer (for example, BACS) | <input checked="" type="checkbox"/> | Go to section 3b |
| Credit or debit card | <input type="checkbox"/> | Go to section 3c |
| Cheque | <input type="checkbox"/> | Go to section 3d |
| Postal order | <input type="checkbox"/> | Go to section 3d |

3b Paying by electronic transfer

If you choose to pay by electronic transfer use the following information to make your payment.

Company name: Natural Resources Wales

Company address: Income Dept., PO BOX 663, Cardiff, CF24 0TP

Bank: RBS

Address: National Westminster Bank Plc, 2 ½ Devonshire Square, London, EC2M 4BA

Sort code: 60-70-80

Account number: 10014438

Reference number

You can use any reference number but we prefer the number to be 'EPR' followed by the first five letters of your organisation name followed by a four-digit number.

For example, for a company named Joe Bloggs Ltd, the reference number might be EPRJOEBLOGGS0001. (Remember you can use any four-digit number at the end.)

The reference number you will provide will appear on our bank statements so we can check your payment. We may need to contact your bank to make sure the reference number is quoted correctly.

You should also email your payment details and payment reference number to banking.team@naturalresourceswales.gov.uk / banking.team@cyfoethnaturiolcymru.gov.uk or fax it to 0300 065 3001 and enter it in the space provided below.

BACS reference

EPRCPUGH4887

Amount paid

£885-00

Making payments from outside the UK

These details have changed. If you are making your payment from outside the United Kingdom (which must be received in sterling), our IBAN number is GB70 NWBK6070 8010 0144 38 and our SWIFT/BIC number is NWBKGB2L.

If you do not quote your payment reference number, there may be a delay in processing your payment and application.

3c Paying by credit or debit card

If you are paying by credit or debit card, please fill in the separate form CC1.

You can download this from our website or you can ask for one of our customer service providers to send one by post. We will destroy your card details once we have processed your payment. We can accept payments by Visa, MasterCard or Maestro UK card only.

3d Paying by cheque or postal order

You should make cheques or postal orders payable to Natural Resources Wales and they should be marked 'A/c Payee'.

We will not accept post-dated cheques (cheques with a future date written on them).

Cheque/ postal order number

Amount paid

4 The Data Protection Act 1998 and General Data Protection Regulations

We, the Natural Resources Body for Wales (hereafter "Natural Resources Wales"), will process the information you provide so that we can:

- deal with your application;
- make sure you keep to the conditions of the licence, permit or registration;
- process renewals; and
- keep the public registers up to date.

We may also process or release the information to:

- offer you documents or services relating to environmental matters;
- consult the public, public organisations and other organisations (for example, the Health and Safety Executive, local authorities, the emergency services, the Department for Environment, Food and Rural Affairs) on environmental issues;
- carry out research and development work on environmental issues;
- provide information from the public register to anyone who asks;
- prevent anyone from breaking environmental law, investigate cases where environmental law may have been broken, and take any action that is needed;
- assess whether customers are satisfied with our service, and to improve our service; and
- respond to requests for information under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004 (if the Data Protection Act allows). We may pass the information on to our agents or representatives to do these things for us.

5 Confidentiality and national security

We will normally put all the information in your application on a public register of environmental information. However, we may not include certain information in the public register if this is in the interests of national security, or because the information is confidential

Confidentiality

You can ask for information to be made confidential by enclosing a letter with your application giving your reasons. If we agree with your request, we will tell you and not include the information in the public register. If we do not agree with your request, we will let you know how to appeal against our decision, or you can withdraw your application.

Only tick the box below if you wish to claim confidentiality for your application.

Please treat the information in my application as confidential

☐

Tick the box to confirm you have provided evidence to support your confidentiality claim and give us the document reference, below.

☐

Document reference

National security

You can tell the Welsh Ministers that you believe including information on a public register would not be in the interests of national security.

You must enclose a letter with your application telling us that you have told the Welsh Ministers and you must still include the information in your application. We will not include the information in the public register unless the Welsh Ministers decides that it should be included.

You can find guidance on national security in 'Core Environmental Permitting Guidance' published by Defra and available via the Environment Agency website <http://www.environment-agency.gov.uk>.

You cannot apply for national security via this application.

6 Application checklist (you must fill in this section)

Tell us about the supporting evidence and information you have sent with this application.

Application fee

You must submit the correct application fee in line with our current charging scheme. Tick the box to say you have included the correct fee. ☐

List all the documents you have included in Table 2. Please see the guidance notes for examples on how to complete the checklist.

If the relevant information for a question forms part of a larger document, please specify the relevant section(s) of the document. This will speed up the process of checking your application and making decisions.

If necessary, continue on a separate sheet and tell us the reference you have given the document below.

Document reference

| Table 2 – application checklist | | |
|---------------------------------|---------------------------|------------------|
| Question reference | Document title/ reference | Document section |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

7 Declaration

You must read this section before making the declaration and sending your form to us.

For transfer applications - Both you and the person receiving the permit must make the declaration.

Section 7d must be completed by the current holder *and* Section 7e must be completed by the proposed new holder.

A relevant person should make the declaration. You must be a relevant person or have the authority of a relevant person to sign this application on their behalf. An agent acting on behalf of an applicant is NOT a relevant person.

Each individual (or individual trustee) who is applying for their name to appear on the permit must complete this declaration. You can send a separate document with the relevant information if there are not enough spaces to sign, below.

Relevant people means each applicant, and in the case of a company, a director, manager, company secretary or any similar officer or employee listed on current appointments in Companies House. In the case of a Limited Liability Partnership (LLP), it includes any partner. If the permit holder is an organisation of individuals, each individual (or individual trustee) must complete the declaration.

To simplify and speed up the application process we recommend that the declaration is filled in by an officer of a company or one of the partners in a Limited Liability Partnership (LLP).

If you wish a manager, employee or consultant etc. to sign the declaration on behalf of a relevant person, we will need written confirmation from a relevant person; that is, an officer of the company, a partner in the LLP or the individual, confirming that the person has the authority to fill in the declaration.

If you are joint permit holders you should each fill in your own declaration. We have provided extra spaces for this below. Please send in a separate sheet with your application if you need more room for signatories.

Where the operator is the subject of any insolvency procedure, the declaration must be filled in by the official receiver/appointed insolvency practitioner.

7a Are you signing the form on behalf of a relevant person?

If you are *not* a relevant person, but want to sign the application on their behalf, you must include confirmation that you can do this.

I have included written confirmation from a relevant person to confirm I can sign on their behalf. ☐

7b Does your application include a standard facility?

If your application includes a standard facility, you also need to confirm that you are able to meet all relevant criteria of the standard rule set/sets for which you are applying.

I confirm that my standard facility will fully meet the rules that I have applied for. ☐

7c Does your application include ecological survey information?

If your application includes ecological survey information, please see the guidance notes on part F1 and tick the box below to confirm that you have no issue with us using information from any ecological survey you have supplied with your application.

I confirm I am happy for the ecological survey information I have supplied to be used as set out in the guidance. ☐

7d Declaration

If you're transferring the permit, the current holder or holders should sign this section of the declaration, and the proposed new holder or holders of the permit, should sign the declaration in section 7e.

If you knowingly or recklessly make a statement which is false or misleading to help you get an environmental permit (for yourself or another person), you are committing an offence under the Environmental Permitting (England and Wales) Regulations 2016.

I declare that the information in this application is true to the best of my knowledge and belief. I understand that this application may be refused or approval withdrawn if I give false or incomplete information.

I understand that if I knowingly or recklessly make a false or misleading statement:

- I may be prosecuted; and
- if convicted, I may have to pay a fine and/or go to prison.

By signing below, you are confirming that you understand and agree with the declaration above.

Title

Mr

First name

Carl Richard

Last name

Pugh

On behalf of (if relevant)

Today's date

26-10-2020

If you knowingly or recklessly make a statement which is false or misleading to help you get an environmental permit (for yourself or another person), you are committing an offence under the Environmental Permitting (England and Wales) Regulations 2016.

I declare that the information in this application is true to the best of my knowledge and belief. I understand that this application may be refused or approval withdrawn if I give false or incomplete information.

I understand that if I knowingly or recklessly make a false or misleading statement:

- I may be prosecuted; and
- if convicted, I may have to pay a fine and/or go to prison.

By signing below, you are confirming that you understand and agree with the declaration above.

| | | |
|----------------------------|----------------------|----------------------|
| Title | <input type="text"/> | <input type="text"/> |
| First name | <input type="text"/> | |
| Last name | <input type="text"/> | |
| On behalf of (if relevant) | <input type="text"/> | |
| Today's date | <input type="text"/> | |

7e Declaration for the person or persons *receiving* the permit (transfers only)

The persons 'receiving the permit' is the proposed new permit holder.

Note: If you cannot trace a person or persons holding the permit you may be able to transfer the permit without their declaration (in section 7d above). Please contact us to discuss this and supply evidence in your application to confirm you are unable to trace one or all of the permit holders.

If you knowingly or recklessly make a statement which is false or misleading to help you get an environmental permit (for yourself or another person), you are committing an offence under the Environmental Permitting (England and Wales) Regulations 2016.

I declare that the information in this application is true to the best of my knowledge and belief. I understand that this application may be refused or approval withdrawn if I give false or incomplete information.

I understand that if I knowingly or recklessly make a false or misleading statement:

- I may be prosecuted; and
- if convicted, I may have to pay a fine and/or go to prison.

By signing below, you are confirming that you understand and agree with the declaration above.

| | | |
|----------------------------|----------------------|----------------------|
| Title | <input type="text"/> | <input type="text"/> |
| First name | <input type="text"/> | |
| Last name | <input type="text"/> | |
| On behalf of (if relevant) | <input type="text"/> | |
| Today's date | <input type="text"/> | |

If you knowingly or recklessly make a statement which is false or misleading to help you get an environmental permit (for yourself or another person), you are committing an offence under the Environmental Permitting (England and Wales) Regulations 2016.

I declare that the information in this application is true to the best of my knowledge and belief. I understand that this application may be refused or approval withdrawn if I give false or incomplete information.

I understand that if I knowingly or recklessly make a false or misleading statement:

- **I may be prosecuted; and**
- **if convicted, I may have to pay a fine and/or go to prison.**

By signing below, you are confirming that you understand and agree with the declaration above.

Title

| | |
|--|--|
| | |
|--|--|

First name

| |
|--|
| |
|--|

Last name

| |
|--|
| |
|--|

On behalf of (if relevant)

| |
|--|
| |
|--|

Today's date

| |
|--|
| |
|--|

Application for an environmental permit:

Part B6 – New bespoke water discharge activity and groundwater (point source) activity

Fill in this part of the form, together with parts A, B2 and F2, if you are applying for a new bespoke permit for a water discharge activity or a point source discharge groundwater activity.

Please check that this is the latest version of the form available from our website.

Please read through this form and the guidance notes that came with it. All relevant guidance documents can be found on our website.

If you want to apply for a standalone discharge of treated domestic sewage effluent of up to fifteen cubic metres (15m³) a day to ground or up to twenty cubic metres (20m³) a day to surface water, please fill in form B6.5.

Contents

- 1 About the effluent
- 2 How long will you need to discharge?
- 3 Discharging to a sewer
- 4 How much do you want to discharge?
- 5 Intermittent sewage discharges
- 6 How will the effluent be treated?
- 7 What will be in the effluent?
- 8 Monitoring arrangements
- 9 Emissions of substances not controlled by emission limits management plan
- 10 Design criteria
- 11 Where will the effluent discharge to?
- 12 More information from you
- Appendix 1 – Discharges to a borehole or well
- Appendix 2 – Discharges into land
- Appendix 3 – Discharges onto land
- Appendix 4 – Discharges to tidal river, tidal stream, estuary or coastal waters
- Appendix 5 – Discharges to non-tidal river, stream or canal
- Appendix 6 – Discharges to a lake or pond

1 About the effluent

1a Give a brief description of the effluent discharge you want a permit for, for example, treated domestic sewage effluent.

Treated domestic Sewage effluent.
*E12 clear water sewage treatment plant.

1b Give this effluent a unique name

You must use this name to identify this effluent throughout this application and all associated documents.

Effluent name

Package Sewage treatment plant effluent

1c Is this a release from a dam, weir or sluice ('reservoir release') under Schedule 21 of the EPR meaning of water discharge activity?

Yes ☐

No ☒

1d Tell us the effluent type.

Choose which type of effluent you are applying for, from the options in Table 1 below.

You must answer the relevant questions, as set out in Table 1, depending on the type of effluent you want to discharge.

Fill in a separate copy of this form and the appropriate appendix or appendices for each type of effluent you plan to discharge.

Table 1 – About the effluent

| Type of effluent | Please tick box | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 |
|---|--------------------------|-----|------------|------|----------------------|------------------------|-----|-----------------------------|---|-----|---------------|-----|
| Domestic sewage – up to 20 m3 a day discharged to surface water or – up to 15m3 a day discharged to groundwater | <input type="checkbox"/> | All | a, b, c, d | a, b | b, f | - | All | - | b, f*, g | - | - | All |
| Domestic sewage – 20m3 a day or more discharged to surface water or – 15m3 a day or more discharged to groundwater | <input type="checkbox"/> | All | a, b, c, d | a, b | b, f | - | All | b, d, e | b, d*, e*, f*, g* | All | b, c, d, e | All |
| Intermittent settled storm sewage | <input type="checkbox"/> | All | a, b | - | - | a, b, e, f, g, h, i, m | All | a, d, e | b, g | All | a, b, c, d, e | All |
| Intermittent combined sewer overflow | <input type="checkbox"/> | All | a, b | - | - | c, d, e, f, g, h, i, m | All | a, d, e | b, g | All | a, b, c, d, e | All |
| Intermittent emergency overflow | <input type="checkbox"/> | All | a, b | - | - | j, k, l | All | a, d, e | b, g | All | a, b, c, d, e | All |
| Sewage – water company WwTW final effluent | <input type="checkbox"/> | All | a, b | - | a, f (b is optional) | - | All | a, b, c, d, e | a, b, c, d*, e*, f*, g (see note below) | All | a, b, c, d, e | All |
| Trade – known volume | <input type="checkbox"/> | All | a, b, c, d | a, b | b, c, f | - | All | b, c, d, e, f | b, d*, e*, f*, g (see note below) | All | b, c, d, e | All |
| Trade – rainfall dependent | <input type="checkbox"/> | All | a, b | - | b, c, f | - | All | b, c, d, e | b, d*, e*, f*, g | All | b, c, d, e | All |
| Trade – returned abstracted water (including ground source heating and cooling schemes) | <input type="checkbox"/> | All | a, b, c, d | - | b, c, f | - | All | b, c, d, e, f | a, b, d*, e*, f*, g | All | b, c, d, e | All |
| Mixed effluent – all effluent volumes | <input type="checkbox"/> | All | a, b, c, d | a, b | b, c, f | - | All | b*, d*, e* (see note below) | b, d*, e*, f*, g (see note below) | All | b, c, d, e | All |
| Mixed effluent – containing any rainfall dependent effluent | <input type="checkbox"/> | All | a, b, c, d | a, b | b, c, d, e, f | - | All | b, c, d, e, f | b, d*, e*, f*, g (see note below) | All | b, c, d, e | All |

*Check the relevant question and our guidance notes on part B6 to see if you need to give an answer.

2 How long will you need to discharge?

2a What date do you want the permit for this effluent to start?

January 2021

Please note that this is the date that your annual subsistence charges will start, even if you have not started to discharge, unless you contact us to change (delay) the start date.

2b Is the discharge time limited?

No

☒

Yes

☐

Please give the date you expect the discharge to end but

Please note that your permit will not end on that date and you will still need to notify us to surrender the permit.

2c Will the discharge take place all year?

Yes

☒

No

☐

Please give details below, of the months when you will make the discharge

2d Will the discharge take place on more than six days in any year?

Yes

☒

No

☐

3 Discharges to sewer

3a How far away is the nearest sewer (in metres)?

N/A

1299

2300 Meters

You will need to check this with your sewerage undertaker (usually your local water company) and you may also need to check if it is possible to connect to a private sewer.

3b Tell us why you think you cannot discharge your effluent into a sewer.

You must explain why you cannot discharge your effluent into a sewer.

Your justification must:

- show the extra cost of connecting to a sewer compared to the treatment you propose
- provide details of any physical obstacles; for example, roads, railways, rivers or canals.

Where you are proposing a discharge from a private sewage treatment system in an area where it appears reasonable to discharge your effluent into a sewer, you must, as a minimum:

- send us evidence that you have approached the sewerage undertaker, and
- send us their formal response regarding connection.

The guidance notes on part B6 will help you understand what information you need to provide in answer to this question. If you fail to send this information with your application, it may be returned to you without processing.

Tell us the reference you've given the ~~document~~ detailing your justification.

Document reference

A - see map attached.

Map?
Screenshot.

4 How much do you want to discharge?

4a What is the daily dry weather flow (in cubic metres)? ?

4b What is the maximum volume of effluent you will discharge in a day (in cubic metres)?

4c What is the maximum rate of discharge (in litres a second)?

4d What is the maximum volume of non-rainfall dependent effluent you will discharge in a day (in cubic metres)?

4e What is the maximum rate of rainfall dependent discharge (in litres per second)?

4f For each answer in question 4, show how you worked out the figure on a separate sheet

Document reference

5 Intermittent sewage discharges

5a For each answer to b to j below, show how you worked out the figure on a separate sheet.

Document reference

5b What is the total volume of the storm tank storage (in cubic metres)?

5c What is the pass forward flow at the settled storm overflow setting (in litres per second)?

5d What is the pass forward flow at the storm overflow setting (in litres per second)?

5e What is the total volume of storage (in cubic metres)?

5f Is the discharge screened?

No ☐ Go to section 5k

Yes ☐

5g What is the mesh screen spacing (in millimetres)?

5h What is the minimum flow through the mesh screen (in litres per second)?

5i What is the bar screen spacing (in millimetres)?

5j What is the minimum flow through the bar screen (in litres per second)?

5k Explain how this asset is built to good engineering design – tell us the document reference for this supporting evidence.

5i What is the emergency storage capacity of the sewer and wet well (in cubic metres)?

5m What is the storage time within the sewer and the wet well above the top water level at dry weather flow (in hours and minutes)?

5n What is the pass forward flow at the pumping station (in litres per second)?

6 How will the effluent be treated?

6a Do you treat your effluent?

Yes ☒ Go to section 6b

No ☐ You must explain why the effluent will not be treated. Tell us the reference you have given the document setting out your justification.

Document reference

6b Tell us about the treatments.

Fill in Table 2 for each stage of the treatments carried out on your effluent in the order in which they are carried out.

Fill in a separate copy of this form for each type of effluent you plan to discharge.

| Table 2 <i>clean water E12. (EN12566).</i> | | |
|--|-------------|---------------------------------------|
| Effluent name | | |
| Order of treatment | Code number | Description |
| First | | <i>Primary screening + settlement</i> |
| Second | | <i>Biological treatment</i> |
| Third | | <i>Final settlement</i> |
| Fourth | | |

Continue on a separate sheet if you need more rows. If you prefer, you can also send us an overall design for the whole treatment process. Tell us the reference you've given the separate sheet or design.

Document reference

6c Final effluent discharge quality.

You must provide details on a separate sheet of the final effluent discharge quality that the overall treatment system is designed to achieve. Tell us the reference for this document.

Document reference

*EN12566
print out.*

X What will be in the effluent?

Note: You do not need to fill in this section if you are applying for a discharge of treated domestic sewage effluent of up to fifteen cubic metres (15m³) a day to ground, or up to twenty cubic metres (20m³) a day to surface water.

For all applications, whether to surface water, or onto or into ground you should still check to see if your discharge is likely to contain any of the substances listed in Horizontal Guidance H1 Environmental Risk Assessment Annex D, Appendix A and answer the relevant questions for your discharge below.

7a Are any of the substances listed in Horizontal Guidance H1 Environmental Risk Assessment Annex D, Appendix A likely to enter the sewerage system upstream of the discharge through any authorised or known inputs?

Yes ☐

No ☐

7b Are any of the substances listed in Horizontal Guidance H1 Environmental Risk Assessment Annex D, Appendix A added to or present in the effluent as a result of the activities on the site?

Yes ☐

No ☐

7c Have any of the substances listed in Horizontal Guidance H1 Environmental Risk Assessment Annex D, Appendix A been detected in samples of the effluent or in the sewerage catchment upstream of the discharge?

Yes ☐

No ☐

7d Are there any other harmful or hazardous substances in your effluent not mentioned in Horizontal Guidance H1 Environmental Risk Assessment Annex D, Appendix A?

Yes ☐

No ☐

7e Have you answered yes to any of the above?

No ☐ *Go to section 7f*

Yes ☐ You must give relevant details in Table 3 below.

| Table 3 | | | | | | |
|-----------|------|-----------------------|-----------------------|-----------------------|-------------------|--------------------|
| Substance | Unit | Maximum concentration | Minimum concentration | Average concentration | Number of samples | Total or dissolved |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

You must also send us any information on samples that you may have. Tell us the reference for the sample information, below.

Document reference

7f Give the maximum temperature of your discharge in degrees Celsius

7g The maximum expected temperature change compared to the incoming water supply

Increase in degrees Celsius

Decrease in degrees Celsius

8 Monitoring arrangements

8a What is the national grid reference of the inlet sampling point?

8b What is the national grid reference of the effluent sample point?

8c Do you have an Urban Waste Water Treatment Directive final effluent sampling point?

Yes ☐ Provide the 12 digit national grid reference (for example, SJ 12345 67890)

No ☒

Note: If your effluent has a maximum volume of no more than 50 cubic metres a day you do not need to complete question 8d or 8e and you can move direct to 8f.

8d What is the national grid reference of the flow monitoring point?

8e Does the flow monitor have an MCERTS certificate?

Yes ☐ Please give the certificate number

No ☐

8f Do you have a UV disinfection efficacy monitoring point?

Yes ☐ Provide the 12 digit national grid reference (for example, SJ 12345 67890)

No ☒

8g You should clearly mark on the plan the locations of any of the above that apply to this effluent

Document reference

9 Emissions of substances not controlled by emission limits management plan

Note: You do not need to fill in this section if you are applying for a discharge of treated domestic sewage effluent of up to fifteen cubic metres (15m³) a day to ground, or up to twenty cubic metres (20m³) a day to surface water.

9a Does your H1 - Environmental Risk Assessment show that emissions of substances not likely to be controlled by emission limits in your permit are an important issue?

No ☐ Go to section 10

Yes ☐

9b Have you got an emissions management plan which meets the requirements set out in guidance document 'How to comply'?

No ☐

Yes ☐ Please send us your emissions management plan

Document reference

10 Design criteria

Note: You do not need to fill in this section if you are applying for a discharge of treated domestic sewage effluent of up to fifteen cubic metres (15m³) a day to ground, or up to twenty cubic metres (20m³) a day to surface water.

10a Sewer modelling report (for discharges of final effluent from a water company WwTW or intermittent sewage discharges)

You must carry out sewer modelling following the guidance in 'Horizontal Guidance Note H1 Annex E – Surface Water Discharges (complex)'. Send us details of how the modelling was carried out and the outcome.

Document reference

10b Discharges to lakes, estuaries, coastal waters or bathing waters

You must carry out modelling following the guidance in 'H1 Risk Assessment Horizontal Guidance Note H1 Annex E – Surface Water Discharges (complex)'. Send us details of how the modelling was carried out and the outcome.

Document reference

10c Discharges to non-tidal rivers

You may need to carry out modelling following the guidance in 'H1 Risk Assessment Horizontal Guidance Note H1 Annex E – Surface Water Discharges (complex)'. Have you carried out any river quality modelling?

No ☐

Yes ☐ Send us details of how the modelling was carried out and the outcome.

Document reference

10d Discharges to groundwater

You must carry out a groundwater quantitative risk assessment following the guidance in 'H1 Risk Assessment Horizontal Guidance Note H1 – Groundwater sections'. Send us details of how the modelling was carried out and the outcome.

For groundwater remediation schemes you must send us a site-specific remediation strategy which has been agreed with the local Natural Resources Wales Geoscience Team.

Document reference

10e Environmental impact assessment

Yes ☐ Send us details of how the assessment was carried out and the outcome.

Document reference

No ☐

11 Where will the effluent discharge to?

11a tell us where the effluent discharges to.

Mark in Table 4 where this effluent discharges to and fill in the relevant questions and appendix or appendices.

You must use the name you gave to this effluent in answer to question 1b of this form when filling in your relevant appendix or appendices.

| Table 4 – Where the effluent discharges to | | |
|--|-------------------------------------|-------------------|
| Receiving environment | | Complete appendix |
| Non-tidal river, stream or canal | <input checked="" type="checkbox"/> | 1 |
| Tidal river, tidal stream, estuary or coastal waters | <input type="checkbox"/> | 2 |
| Lake or pond | <input type="checkbox"/> | 3 |
| Into land (for example, through a drainage system) | <input type="checkbox"/> | 4 |
| Onto land | <input type="checkbox"/> | 5 |
| Borehole or well | <input type="checkbox"/> | 6 |

11b Is this effluent discharged through more than one outlet?

No ☒

Yes ☐ You must give details of the circumstances under which each outlet would be used by this effluent, on a separate sheet, and tell us the reference below.

Document reference

You must clearly show each of the discharge points used by this effluent on your discharge point appendix/appendices and site plan.

You must give us all the details we need for each of the discharge points used by this effluent.

Document reference

12 More information from you

Are there any other factors we need to take into account as part of your application?

No ☐

Yes ☒ Please provide details and give us the reference for the document, below.

Document reference

Appendix 1 – Discharges to non-tidal river, stream or canal

Answer all the questions below and enter the answers to questions 1, 2 and 3 in the table provided. Use a separate line for each effluent if more than one effluent discharges using this discharge point.

Remember, when linking your effluent to a discharge point you must use the name you gave to your effluent in answer to question 1b in the effluent form.

1 Give the discharge point a unique name For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)

Outlet 1

2 Give the national grid reference of the discharge point

SN9536663553

3 Give the name of the watercourse, canal or the main watercourse it is a tributary of if you know it

Dulas

4 Is the discharge into a (tick an option)

Non-tidal river ☒

Stream ☐

Canal ☐

5 Does the discharge reach the watercourse or canal by flowing through a surface water sewer?

Yes ☐ Give the national grid reference where the discharge enters the surface water sewer

No ☒

6 Does the watercourse dry up for part of the year?

Yes ☐

No ☒

| Answers table | | | |
|--------------------------------------|---|-------------------|--|
| Discharge point name (question 1) | National grid reference (question 2) | Name (question 3) | Name of effluent discharged through this discharge point (question 1b effluent form) |
| Outlet 1 | SN9536663553 | Dulas | Package Sewage treatment plant effluent. |
| | | | |
| | | | |
| | | | |

Appendix 2 – Discharges to tidal river, tidal stream, estuary or coastal waters

Answer all the questions below and enter the answers to questions 1, 2 and 3 in the table provided. Use a separate line for each effluent if more than one effluent discharges using this discharge point.

Remember, when linking your effluent to a discharge point you must use the name you gave to your effluent in answer to question 1b in the effluent form.

1 Give the discharge point a unique name For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)

2 Give the 12 digit national grid reference of the discharge point

3 Give the name of the tidal river, tidal stream, estuary or area of coastal water if you know it

4 Is the discharge into a (tick an option)

Tidal river ☐

Tidal stream ☐

An estuary ☐

Coastal water ☐

5 Does the discharge reach the watercourse by flowing through a surface water sewer?

Yes ☐ Give the national grid reference where the discharge enters the surface water sewer

No ☐

6 Is the discharge point above the mean low water spring tide mark?

Yes ☐ Please explain, on a separate sheet, why the discharge cannot be made below this point

Document reference

No ☐

7 How is the effluent dispersed? For example, open pipe or diffuser system.

If diffuser system you must answer question 8.

8 Give details, on a separate sheet, of the design of the diffuser system

| Answers table | | | |
|-----------------------------------|--------------------------------------|-------------------|--|
| Discharge point name (question 1) | National grid reference (question 2) | Name (question 3) | Name of effluent discharged through this discharge point (question 1b effluent form) |
| | | | |
| | | | |
| | | | |
| | | | |

Appendix 3 – Discharges to a lake or pond

if more than one effluent discharges using this discharge point.

Remember, when linking your effluent to a discharge point you must use the name you gave to your effluent in answer to question 1b in the effluent form.

1 Give the discharge point a unique name For example 'Outlet 1' (you must use this name to identify the discharge point on the plan)

2 Give the national grid reference of the discharge point

3 Give the name of the lake or pond if you know it

4 Select from the following table the type of lake or pond you will be discharging to and answer the relevant questions

| Type of lake or pond | | Relevant questions |
|---|--------------------------|----------------------|
| Lake or pond which does not discharge into a river or watercourse or another pond which discharges into a river or watercourse | <input type="checkbox"/> | Permit not required* |
| Lake or pond which does not discharge into a river or watercourse or another pond which discharges into a river or watercourse where you have had a notice served under paragraph 5 of Schedule 21 of the Environmental Permitting (England and Wales) Regulations 2016 | <input type="checkbox"/> | 5, 6, 7 |
| Lake or pond which discharges into a river or watercourse | <input type="checkbox"/> | 5, 6, 7 |
| *Unless a Notice has been served under paragraph 5 of Schedule 21 of the Environmental Permitting (England and Wales) Regulations 2016 | | |

5 What is the surface area of the lake or pond (in square metres)?

6 What is the maximum depth of the lake or pond (in metres)?

7 What is the average depth of the lake or pond (in metres)?

Answers table

| Discharge point name (question 1) | National grid reference (question 2) | Name (question 3) | Name of effluent discharged through this discharge point (question 1b effluent form) |
|--------------------------------------|---|-------------------|--|
| | | | |
| | | | |
| | | | |
| | | | |

Appendix 4 – Discharges into land

Answer the questions below and enter the answers to questions 1 and 2 in the table provided. Use a separate line for each effluent if more than one effluent discharges using this discharge point.

Remember, when linking your effluent to a discharge point you must use the name you gave to your effluent in answer to question 1b in the effluent form.

1 Give the discharge point a unique name, For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)

2 Give the national grid reference of the discharge point

3 Is your infiltration system new or existing? (Existing means in place prior to 6/04/2010)

New ☐ Go to section 5

Existing ☐ Answer question 4 and then answer questions 5 to 8 if you are able to.

4a When was it built?

You must answer questions 5–8 if you are able to, if not leave them blank and go to question 9.

5 Is your infiltration system designed and built to British Standard 6297:2007 + A1:2008?

Yes ☐

No ☐ Please provide details, on a separate sheet, of the design criteria used for your infiltration system

Document reference

6 On what date did you carry out a percolation test and dig a trial hole in line with British Standard 6297:2007 + A1:2008?

7 What is your percolation value (Vp) result (seconds per millimetre)?

You must show in the table below how you worked out the percolation value.

| | Trial 1 | Trial 2 | Trial 3 | Average |
|--------|---------|---------|---------|---------|
| Hole 1 | | | | |
| Hole 2 | | | | |
| Hole 3 | | | | |
| Hole 4 | | | | |

8 What is the surface area of your infiltration system (in square metres)?

9 Mark the extent of the infiltration system on the plan you have provided .

10 Is any part of your infiltration system within 50 metres of a well, spring or borehole?

No ☐

Yes ☐ Identify the location of the well spring or borehole on the plan you have provided.

11 Is the well spring or borehole you have identified used to supply water?

No ☐

Yes ☐ You must describe in the box below what the water supplied is used for.

12 Is any part of your infiltration system within 10 metres of a watercourse?

No ☐

Yes ☐ Identify the location of the watercourse on the plan you have provided for section 4 of part B6.

| Answers table | | |
|--------------------------------------|---|---|
| Discharge point name (question 1) | National grid reference (question 2) | Name of effluent discharged through this discharge point (question 1b effluent form) |
| | | |
| | | |
| | | |
| | | |
| | | |

Appendix 5 – Discharges onto land

Answer all the questions below and enter the answers to questions 1 and 2 in the table provided. Use a separate line for each effluent if more than one effluent discharges using this discharge point.

Remember, when linking your effluent to a discharge point you must use the name you gave to your effluent in answer to question 1b in the effluent form.

1 Give the discharge point a unique name For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)

| |
|--|
| |
|--|

2 Give the national grid reference of the discharge point

| |
|--|
| |
|--|

3 In what type of area will the effluent is disposed of? (Tick an option)

Unlined reed bed ☐

Unlined grass plot ☐

Unlined wetland ☐

Other ☐ Please specify in the box below.

| |
|--|
| |
|--|

4 What is the surface area of the land used for your disposal (in square metres)?

| |
|--|
| |
|--|

5 Is any part of your infiltration system within 50 metres of a well, spring or borehole?

No ☐

Yes ☐ Identify the location of the well spring or borehole on the plan you have provided.

6 Is the well spring or borehole you have identified used to supply water?

No ☐

Yes ☐ You must describe in the box below what the water supplied is used for.

| |
|--|
| |
|--|

7 Is any part of your infiltration system within 10 metres of a watercourse?

No ☐

Yes ☐ Identify the location of the watercourse on the plan you have provided.

| Answers table | | |
|--------------------------------------|---|---|
| Discharge point name (question 1) | National grid reference (question 2) | Name of effluent discharged through this discharge point (question 1b effluent form) |
| | | |
| | | |
| | | |
| | | |

Appendix 6 – Discharges to a borehole or well (or other deep structure such as a mineshaft)

Answer all the questions below. Use a separate line for each effluent if more than one effluent discharges using this discharge point.

Remember, when linking your effluent to a discharge point you must use the name you gave to your effluent in answer to question 1b in the effluent form.

1 The discharge point name

Give the discharge point a unique name. For example, 'Outlet 1' (you must use this name to identify the discharge point on the plan)

2 The national grid reference of the discharge point

3 Is the discharge to ground via a (tick an option)

Well ☐

Borehole ☐

Other deep structure ☐ Please give details in the box below.

4 Total depth of the borehole or well

What is/or will be the total depth of the borehole or well (in metres) below ground or other reference level (please specify the reference level you are using)?

5 Is the borehole or well or structure already constructed?

Yes ☐

No ☐

6 To what depth is the borehole or well or structure sealed with unperforated linings or casing (in metres) below your reference level?

7 Is any part of your discharge within 50 metres of another well, spring or borehole?

No ☐ Go to section 9

Yes ☐ You must identify the location of the well, spring or borehole on the plan you have provided.

8 Is the other well, spring or borehole you have identified used to supply water?

No ☐

Yes ☐ You must describe in the box below, what the water supplied is used for.

9 Does the borehole or well or structure into which you are intending to make your discharge intermittently or permanently contain standing water?

No ☐ *Go to section 11*

Yes ☐

10 If your discharge falls into any of the following groups of activities please tick the appropriate box. If not just leave blank.

Injection of water containing substances resulting from the operations for exploration and extraction of hydrocarbons or mining activities ☐

Reinjection of pumped groundwater from mines and quarries or associated with the construction or maintenance of civil engineering works (includes the treatment and reinjection of contaminated groundwater for the purposes of remediation) ☐

Injection of natural gas or liquefied petroleum gas for storage purposes ☐

Construction, civil engineering and building works and similar activities on or in the ground (for example discharge arising from the grouting of old mineshafts) ☐

Discharges of small quantities of substances for scientific purposes for characterisation, protection (including use of substances as tracers) or remediation of groundwater, where such activities are not eligible for a registered exemption ☐

The artificial recharge or augmentation of a body of groundwater for the purposes of groundwater management ☐

Reinjection of pumped groundwater used for geothermal purposes (including ground source heat systems) ☐

11 What is the highest level the standing water reaches in the borehole or well or structure (in metres) below your reference level?

Application for an environmental permit: Part B2 – General: new bespoke permit

Fill in this part of the form together with parts A and F1 or F2, if you are applying for a new bespoke permit.

You also need to fill in part B3, B4, B5, B6, or B7 (depending on what activities you are applying for).

Please check that this is the latest version of the form available from our website.

Please read through this form and the guidance notes that came with it. All relevant guidance documents can be

found on our website.

Contents

- 1 About the permit
- 2 About the site (not mobile plant)
- 3 Your ability as an operator
- 4 Consultation
- 5 Supporting information
- 6 Environmental risk assessment
- Appendix 1 – Low impact installation checklist

1 About the permit

1a Discussions before your application

If you have had discussions with us before your application, give us the case reference or details on a separate sheet.

Case or document reference

Have been in communication w/
Rob Harding.

1b Is the permit for a site or for a mobile plant?

Note: The term 'mobile plant' does not include mobile sheep dipping unit.

Site ☒ Go to section 2

Mobile Plant ☐ Go to section 1c

~~X~~ Have we told you during pre-application discussions that we believe that a mobile permit is suitable for your activity?

No ☐

Yes ☐

~~X~~ Have there been any changes to your proposal since this discussion?

No ☐ Go to section 3

Yes ☐ Send us a description of the activity you want to carry out, highlighting the changes made since our pre-application discussions. Give us the reference, below.

Document reference

Go to section 3

2 About the site (not mobile plant)

2a What is the site name, address, postcode and national grid reference?

Site name

Sewage treatment Plant

Address

Land near the Cwm

Postcode

LD1 6NU

National grid reference for the site (12 digit)

2b How many regulated facility types are you applying for?

- One ☒ Go to section 2c
- Two or more ☐ Go to section 2d

2c What type of regulated facility are you applying for? (For one facility type only.)

- Installation ☐ Tick the relevant box in 2c1
- Waste operation ☐ Tick the relevant box in 2c2
- Mining waste operation ☐ Tick the relevant box in 2c3
- Water discharge activity (all) ☒ Go to section 3d
- Medium Combustion Plant Only ☐ Tick the relevant box in 2c4
- Medium Combustion Plant/Specified Generator combined ☐ Tick the relevant box in 2c4
- Specified Generator Only ☐ Tick the relevant box in 2c4

What is the national grid reference for the regulated facility? (See the guidance notes on part B1 and note the different requirement for water discharge activities.)

- As in 2a above ☐
- Different from 2a ☐ Please fill in the national grid reference below

National grid reference for the facility

What is the type of activity?

~~2c1~~ Installation

- Intensive farming installation ☐
- Local authority (Part A (2) and Part B) ☐
- Low impact installation (see question 2e below) ☐
- Opra charged activity ☐
- Directly associated activity ☐
- Paragraph-17 installation ☐

~~2c3~~ Mining waste operation

- Non-Opra charged activity ☐
- Opra charged activity **Go to section 2e**

2c2 Waste Operation

- Landfill gas facility (closed landfill) ☐
- Opra charged activity ☐
- Tier 2 charged bespoke activity (see charging guidance for list) ☐
- Pet cemetery ☐

2c4 Medium Combustion Plant/Specified Generator

- Tier 2 charged complex bespoke activity (see charging guidance) ☐
- Tier 2 charged simple bespoke activity (see charging guidance) ☐

~~2d~~ What types of regulated facilities are you applying for? (For two or more facility types.)

Regulated Facility 1

National grid reference (12 digit)

- | | | |
|---|--------------------------|-------------------------------------|
| Installation | <input type="checkbox"/> | <i>Tick the relevant box in 2d1</i> |
| Waste operation | <input type="checkbox"/> | <i>Tick the relevant box in 2d2</i> |
| Mining waste operation | <input type="checkbox"/> | <i>Tick the relevant box in 2d3</i> |
| Water discharge activity (all) | <input type="checkbox"/> | <i>Go to section 3d</i> |
| Medium Combustion Plant only | <input type="checkbox"/> | <i>Tick the relevant box in 2d4</i> |
| Medium Combustion Plant/ Specified Generator combined | <input type="checkbox"/> | <i>Tick the relevant box in 2d4</i> |
| Specified Generator only | <input type="checkbox"/> | <i>Tick the relevant box in 2d4</i> |

~~2d1~~ Installation

- Intensive farming installation
- Local authority (Part A (2) and Part B)
- Low impact installation (see question 2e below)
- Opra charged activity
- Directly associated activity
- Paragraph-17 installation

2d2 Waste Operation

- | | | |
|--------------------------|--|--------------------------|
| <input type="checkbox"/> | Landfill gas facility (closed landfill) | <input type="checkbox"/> |
| <input type="checkbox"/> | Opra charged activity | <input type="checkbox"/> |
| <input type="checkbox"/> | Tier 2 charged bespoke activity (see charging guidance for list) | <input type="checkbox"/> |
| <input type="checkbox"/> | Pet cemetery | <input type="checkbox"/> |

~~2d3~~ Mining waste operation

- Non-Opra charged activity
- Opra charged activity

2d4 Medium Combustion Plant/Specified Generator

- | | | |
|--------------------------|---|--------------------------|
| <input type="checkbox"/> | Tier 2 charged complex bespoke activity (see charging guidance) | <input type="checkbox"/> |
| <input type="checkbox"/> | Tier 2 charged simple bespoke activity (see charging guidance) | <input type="checkbox"/> |

Regulated Facility 2

National grid reference (12 digit)

- | | | |
|--|--------------------------|-------------------------------------|
| Installation | <input type="checkbox"/> | <i>Tick the relevant box in 2d1</i> |
| Waste operation | <input type="checkbox"/> | <i>Tick the relevant box in 2d2</i> |
| Mining waste operation | <input type="checkbox"/> | <i>Tick the relevant box in 2d3</i> |
| Water discharge activity (all) | <input type="checkbox"/> | <i>Go to section 3d</i> |
| Medium Combustion Plant only | <input type="checkbox"/> | <i>Tick the relevant box in 2d4</i> |
| Medium Combustion Plant/Specified Generator combined | <input type="checkbox"/> | <i>Tick the relevant box in 2d4</i> |
| Specified Generator only | <input type="checkbox"/> | <i>Tick the relevant box in 2d4</i> |

~~2d1~~ Installation

- Intensive farming installation
- Local authority (Part A (2) and Part B)

2d2 Waste Operation

- | | | |
|--------------------------|---|--------------------------|
| <input type="checkbox"/> | Landfill gas facility (closed landfill) | <input type="checkbox"/> |
| <input type="checkbox"/> | Opra charged activity | <input type="checkbox"/> |

Low impact installation (see question 2e below)

☐

Tier 2 charged bespoke activity (see charging guidance for list)

☐

Opra charged activity

☐

Pet cemetery

☐

Directly associated activity

☐

Paragraph-17 installation

☐

2d3 Mining waste operation

2d4

Medium Combustion Plant/Specified Generator

Non-Opra charged activity

☐

Tier 2 charged complex bespoke activity (see charging guidance)

☐

Opra charged activity

☐

Tier 2 charged simple bespoke activity (see charging guidance)

☐

Regulated Facility 3 etc.

Do you want three or more facilities?

No

☐

Go to section 2e

Yes

☐

Use a separate sheet and send it to us with your application form. Tell us below the reference you have given this separate sheet.

Document reference

Go to section 2e

2e Low impact installations (installations only)

Are any of the regulated facilities low impact installations?

No

☐

Go to section 2f

Yes

☐

Please give us a description of your proposed activity telling us how you meet the conditions for a low impact installation and send it to us with your application form.

Document reference

Tick the box to confirm you have filled in the low impact installation checklist in Appendix 1 for each regulated facility.

☐

2f Treating batteries

Are you planning to treat batteries? (See the guidance notes on part B2.)

No

☐

Yes

☐

Tell us how you will do this, send us a copy of your explanation and tell us the reference you have given this explanation.

Document reference

2g Multi-operator installation

If the site is a multi-operator site (that is there is more than one operator of the installation) then fill in the table below the application reference for each of the other permits.

| Table 1 – Other permit application references |
|---|
| |

3 Your ability as an operator

If you are only applying for a water discharge activity, you only have to fill in question 3d.

3a Relevant offences – installations, waste operations, medium combustion plant and specified generators (See the guidance notes on part B2)

Have you, or any other relevant person, been convicted of any relevant offence?

No ☐ Go to section 3b

Yes ☐ Please give details below

Title

First name

Last name

Date of birth (DD/MM/YYYY)

Position held at the time of the offence

Name of the court where the case was dealt with

Date of conviction (DD/MM/YYYY)

Offence and penalty set

Date any appeal against the conviction will be heard (DD/MM/YYYY)

If necessary, use a separate sheet to give us details of other relevant offences, and tell us below the reference number you have given the extra sheet.

Document reference

3b Technical ability - relevant waste operations only (See the guidance notes on part B2)

3b1 Which approved scheme are you using to show you have the suitable technical skills and knowledge to manage your facility?

CIWM / WAMITAB ☐

ESA / EU ☐

3b2 Do you already hold the relevant, formal qualifications to manage your facility?

Yes ☐ Tick to confirm you've included all original and continuing competence evidence. ☐

No ☐ Tick to confirm you've included evidence you've registered with a Scheme. ☐

3c Finances (installations, waste operations, medium combustion plant, specified generators and mining waste operations only)

Do you or any relevant person have current or past bankruptcy or insolvency proceedings against you?

No ☐ Go to section 3d.

Yes ☐ Please give details below of the required set-up costs (including infrastructure), maintenance and clean up costs for the proposed facility against which a credit check may be assessed.

Please note: We may want to contact a credit reference agency for a report about your business's finances.

Landfill, Category A mining waste facilities and mining waste facilities for hazardous waste only

How do you plan to make financial provision (to operate a landfill or a mining waste facility you need to show us that you are financially capable of meeting the obligations of closure and aftercare)?

- Bonds ☐
- Escrow account ☐
- Trust fund ☐
- Lump sum ☐
- Other ☐

Provide a plan of your estimated expenditure on each phase of the landfill or mining waste facility.

Document reference

3d Management systems (all)

You can find guidance on management systems in our 'How to Comply' document. We have also developed environmental management toolkits for some business sectors which you can use to produce your own management system. You can get this by calling 0300 065 3000 or by downloading it from our guidance webpages.

3d1 Does your management system meet the conditions set out in our guidance?

Yes ☒

No ☐

3d2 What management system will you provide for your regulated facility?

EC Eco-Management and Audit Scheme (EMAS) ☐

2 ISO 14001 ☐

BS 8555 (Phases 1-5) ☐

Green Dragon ☐

Own management system ☒

*In line with
manufacturer
recommendations.*

3d3 Make sure you included a summary of your environment management system with the application. Tick the box to confirm you've done this and tell us the document reference, below. ☐

Document reference

*print
out*

Water discharge activities: Go to section 5.

4 Consultation (fill in 4a to 4c for installations and waste operations and 4d for installations only. Fill in 4e for medium combustion plant and specified generators only)

Could the waste operation or installation involve releasing any substance into any of the following?

4a A sewer managed by a sewerage undertaker

No ☐

Yes ☐ Please name the sewerage undertaker

4b A harbour managed by a harbour authority

No ☐

Yes ☐ Please name the harbour authority

4c Direct into relevant territorial waters or coastal waters within the sea fisheries district of a local fisheries

No ☐

Yes ☐ Please name the fisheries committee

4d Is the installation on a site for which:

4d1 a nuclear site licence is needed under section 1 of the Nuclear Installations Act 1965?

No ☐

Yes ☐

4d2 a policy document for preventing major accidents is needed under regulation 5 of the Control of Major Accident Hazards?

No ☐

Yes ☐

4e Is the medium combustion plant or specified generator located within an Air Quality Management Area (AQMA)?

No ☐

Yes ☐ What is the name of the AQMA?

What is the name of the Local Authority?

5 Supporting information

5a Provide a plan or plans for the site (but not mobile plant)

Mark the site boundary in green (See guidance notes on part B2 for more information on what should be included)

Document reference

Information already provided to
Rob Harding.

5b Provide the relevant sections of a site condition/baseline report, if this applies

Document reference

If you are applying for an installation, tick the box to confirm that you have sent in a baseline report.

☐

5c Provide a non-technical summary of your application (see the guidance notes on part B2)

Document reference

6 Environmental risk assessment

Provide an assessment of the risks each of your proposed regulated facilities poses to the environment. The risk assessment must use H1 or an equivalent method.

Document reference

Appendix 1 – Low impact installation checklist (see guidance notes on part B2)

| Installation reference | | | | | |
|---|--|-----------------|-------------------------------------|-------------------|-------------------------------------|
| Condition | Response | | | Do you meet this? | |
| A – Management techniques | Provide references to show how your application meets A. | | | Yes | <input type="checkbox"/> |
| | References | | | No | <input type="checkbox"/> |
| B – Aqueous waste | Effluent created | m3/day | | Yes | <input type="checkbox"/> |
| | | | | No | <input type="checkbox"/> |
| C – Abatement systems | Provide references to show how your application meets C. | | | Yes | <input type="checkbox"/> |
| | References | | | No | <input type="checkbox"/> |
| D - Groundwater | Do you plan to release any hazardous substances or non-hazardous pollutants into the ground? | Yes | <input type="checkbox"/> | Yes | <input checked="" type="checkbox"/> |
| | | No | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| E – Producing waste | Hazardous waste | Tonnes per year | | Yes | <input type="checkbox"/> |
| | Non-hazardous waste | Tonnes per year | | No | <input type="checkbox"/> |
| F – Using energy | Peak energy consumption | MW | | Yes | <input type="checkbox"/> |
| | | | | No | <input type="checkbox"/> |
| G – Preventing accidents | Do you have appropriate measures to prevent spills and major releases of liquids? (See 'How to comply'.) | Yes | <input type="checkbox"/> | Yes | <input type="checkbox"/> |
| | | No | <input type="checkbox"/> | No | <input type="checkbox"/> |
| | Provide references to show how your application meets G. | | | | |
| H - Noise | Reference | | | | |
| | Provide references to show how your application meets H. | | | Yes | <input type="checkbox"/> |
| I - Emissions of polluting substances | Reference | | | No | <input type="checkbox"/> |
| | Provide references to show how your application meets I. | | | Yes | <input type="checkbox"/> |
| J – Odours | Reference | | | No | <input type="checkbox"/> |
| | Provide references to show how your application meets J. | | | Yes | <input type="checkbox"/> |
| K – History of keeping to the regulations | Reference | | | No | <input type="checkbox"/> |
| | Say here whether you have been involved in any enforcement action as described in Compliance History Appendix 1 explanatory notes. | | | Yes | <input type="checkbox"/> |
| | | | | No | <input checked="" type="checkbox"/> |

012601
E6 - E18 Treatment Plants
Installation & Operation Guidelines



Kingspan Environmental Service Contact Numbers:

UK: 0844 846 0500

NI: 028 3025 4077

IRL: 048 3025 4077

| |
|---------------------------|
| Enclosed Documents |
|---------------------------|

| | |
|---------|--|
| DS0968P | E6 - 12 Gravity Treatment Plant |
| DS0969P | E6 - 12 IPS Treatment Plant |
| DS1120P | E18 Gravity Treatment Plant |
| DS1121P | E18 IPS Treatment Plant |
| DS0977P | E6 - E18 Gravity Isolator Wiring Diagram |
| DS0978P | E6 - E18 IPS Isolator Wiring Diagram |

| Issue | Description | Date |
|-------|-------------|---------------|
| 03 | CC1165 | November 2013 |
| | | |

HEALTH AND SAFETY

These warnings are provided in the interest of safety. You must read them carefully before installing or using the equipment.

It is important that this document is retained with the equipment for future reference. Should the equipment be transferred to a new owner, always ensure that all relevant documents are supplied in order that the new owner can become acquainted with the functioning of the equipment and the relevant warnings.

Installation should only be carried out by a suitably experienced contractor, following the guidelines supplied with the equipment.

We recommend the use of a dust mask and gloves when cutting GRP components.

A qualified electrician should carry out electrical work.

Sewage and sewage effluent can carry micro-organisms harmful to human health. Any person carrying out maintenance on the equipment should wear suitable protective clothing, including gloves. Good hygiene practice should also be observed.

Covers must be kept locked.

Observe all hazard labels and take appropriate action to avoid exposure to the risks indicated.

The correct ongoing maintenance is essential for the proper operation of the equipment. Service contracts are available and recommended. Please contact our Sales department for details of your local service provider.

Should you wish to inspect the operation of the equipment, please observe all necessary precautions, including those listed below, which apply to maintenance procedures.

Ensure that you are familiar with the safe working areas and accesses.

Ensure that the working area is adequately lit.

The power supply to the equipment should be isolated at the main RCD before lifting the blower cover.

Take care to maintain correct posture, particularly when lifting. Use appropriate lifting equipment when necessary. Keep proper footing and balance at all times. Avoid any sharp edges.

Desludging should be carried out by a licensed waste disposal contractor holding the relevant permits to transport and dispose of sewage sludge. The contractor must refer to the desludge instructions contained in these guidelines.



**Kingspan
Unit 1a, off Derryboy Road
Carnbane Business Park
Newry.
BT35 6QH**

07

EN 12566-3

E6

| | |
|-------------------------------------|--------------------------------------|
| Hydraulic daily load: | 1.2 m³/day |
| Material: | GRP Glass Reinforced Plastic |
| Watertightness (water test): | Pass |
| Structural Calculation: | Pass |
| Treatment efficiency: | COD: 81% |
| | BOD₅: 90% |
| | TSS: 90% |
| | P: 43% |
| | NH₄: 49% |
| Electrical consumption: | 1.2 kWh/d |
| Sludge production: | 0.2 litres per person per day |

| | | |
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1 Introduction

1.1 Engineering & Process

- 1.1.1 Our Packaged Sewage Treatment Plants are designed to treat domestic sewage to an average final effluent of less than 20mg/l Biochemical Oxygen Demand (BOD), 30 mg/l Suspended Solids, and 20mg/l Ammonia when the incoming flow and biological loads are within the limits for the plant as specified by us.
- 1.1.2 These units are exclusively for the treatment of sewage from domestic properties. Contact our sales team for other non-domestic applications.
- 1.1.3 As a general guide the E6 is suitable for a 3 or more bedroomed property, the E12 for a pair of 3 – 4 bedroom properties, or a single house with 5 or more bedrooms and the E18 is designed to treat 12 bedrooms.
- 1.1.4 The Treatment Plant is based on an improved form of biological filtration, which is continuously recycled by airlift with a humus rich mixed sewage liquor. Process takes place in 3 distinct stages.
- 1.1.5 **Primary Screening & Settlement**
- 1.1.6 Sewage enters the primary section where the solids separate from the liquid forming a scum or a sludge. The liquid is then passed on through a dividing baffle.
- 1.1.7 **Biological Treatment**
- 1.1.8 The screened sewage liquid is mixed with treated sewage coming from the biological filter together with any humus from the final settlement tank. The liquor is recycled by an airlift pump over the filter media. This method of operation permits the unique feature of no moving parts within the treatment plant.
- 1.1.9 The biological filter bale consists of a composite plastic media of high specific surface area. The design is such that it promotes internal distribution of sewage liquid through the filter. This provides an evenly wetted surface on which the biomass grows. The biomass consumes the major part of the incoming biological load.

- 1.1.10 The air lift pump is driven by a blower mounted within a weatherproof housing which should be located in a shaded position above possible flood levels. The supply of air from the blower provides adequate ventilation to the plant. Exhaust air from the plant can be vented by either the soil vent pipe or by a separate vent.
- 1.1.11 **Final Settlement**
- 1.1.12 The treated sewage transferred from the biological filter bale to the third stage is settled, allowing humus solids to separate as the clarified liquor passes through the final up-flow zone. It is then discharged to a watercourse or soakaway.

1.2 Applications

| | E6 | E12 | E18 |
|---|-------------------------|-------------------------|-------------------------|
| Typical Dwelling | 3 bedrooms | 6 bedrooms | 12 bedrooms |
| Domestic Population Equivalent | Up to 6 | Up to 12 | Up to 18 |
| Total BOD Loading | 0.36kg/day | 0.72 kg./day | 1.08 kg./day |
| Maximum Flow | 1.2m ³ /day | 2.4m ³ /day | 3.6m ³ /day |
| Peak Flow Rate (For ½ hour in any 2 hour period) | 0.15 m ³ /hr | 0.30 m ³ /hr | 0.45 m ³ /hr |

2 Installation Guidelines

2.1 Siting

- 2.1.1 It is essential that all surface water be segregated and excluded from entering the treatment plant.
- 2.1.2 We do not recommend a pumped feed to a Treatment plant without special reference to our Sales team.
- 2.1.3 Sink waste disposal units should **not** be used in conjunction with a Treatment plant. Please contact us for further guidance.
- 2.1.4 We do not recommend the use of air admittance valves with W.C systems connected to the plant. Tile vents should not be used as the sole drainage ventilation facility but if this cannot be avoided the Unit should be independently ventilated. All inspection points within the drain system should be sealed so as to enable ventilation at high level.
- 2.1.5 If the plant is remote from buildings, ventilation of the inlet drain will be required.
- 2.1.6 In hard water areas a softener may be required, where one is fitted, the spent regenerant must be routed to a separate small soakaway.
- 2.1.7 Under the Water Resources Act 1991, amended by the Environment Act of 1995, the Environment Agency has the right to review the conditions of discharge consented every 2 years. It is therefore, possible that an installation may require upgrading after several years of use. We are happy to advise and offer the means to comply on a case by case basis.

2.2 Population Equivalent

- 2.2.1 Refers to normal family residents, some of whom have daytime occupations or schooling away from the house and includes overnight guests who may stay for periods of more than one night. Contact us for advice regarding non-standard situations.

2.3 Flow Balancing

- 2.3.1 Our package plant can deal with influent surges. The plant holds a large volume of treated effluent, which provides a significant dilution of influent surges, thereby minimizing any shock to treatment. It also has a surge control outlet arrangement.

2.4 Installation

- 2.4.1 These guideline instructions apply to the E6 & E18 Range of plant and should be read in conjunction with the section on Electrical Guidelines.
- 2.4.2 Before beginning the installation, the whole of these instructions must be read and complied with.
- 2.4.3 Adherence to good Working Practices and the Health & Safety at Work act on site should be observed.
- 2.4.4 Prior to installation, check the tank for damage and always handle with care, avoiding heavy impact or contact with sharp objects.
- 2.4.5 On no account should the specified maximum drain invert depth be exceeded.
- 2.4.6 Never fill a freestanding tank with water or back fill an empty tank. Always fill the tank with water at the same time as the back fill material is placed. The water level inside the tank is to be maintained within 200mm of the concrete level during backfilling. This avoids the risk of flotation and minimizes the applied loads to the tank.
- 2.4.7 These instructions assume no more than pedestrian duty loadings will be applied to the final installation. Traffic or other heavy superimposed loads must not be transferred through the walls of the tank.
- 2.4.8 Select the unit location in accordance with building regulations, required distances from buildings, water supplies and irrigation systems.

2.5 Site Planning

- 2.5.1 The following points should be considered before installation of the equipment:
- 2.5.2 The discharge from a treatment plant may require the permission of the relevant Environmental Regulator and the complete installation, including the specified irrigation system should have Planning and Building Control approval.
- 2.5.3 In many cases, the effluent discharge is to an irrigation system. A soil porosity test should be carried out, please refer to current guidelines in place at plant's location eg. PPG4, or Building Regulations pt H2. EN12566 part 2, BS6297:1983 (or latest) or EPA Single house manual (Ireland).
- 2.5.4 There must be at least 1 metre of clear, level ground all around the unit to allow for routine servicing.
- 2.5.5 Wherever practicable, the unit should be installed as far as possible from any habitable building. Many Local Authorities will insist on a minimum distance of 15 metres from any building (7 metres Eire) and 10 metres (same distance for Eire) from any watercourse. Further information can be obtained through your Local Authority and in the Building Regulations in the UK and through the EPA in Eire.
- 2.5.6 Care should be taken not to place the unit in close proximity to any openings from the building.
- 2.5.7 Adequate access must be provided for routine de-sludging and maintenance. Usually the unit should be sited within 30 metres of a hard standing area suitable for a vacuum tanker. Vehicles should not be permitted within a distance equal to the depth of the unit, unless suitable structural protection is provided to the installation.
- 2.5.8 Treatment units must be installed at a level, which will allow connection to the incoming drain and a free discharge at the system outlet (excepting units with an integral discharge pump). Effluent pumping stations are available to lift the discharge to a higher level and/or pump to remote discharge points. The location should not be subject to flooding.
- 2.5.9 If the unit has to be recessed, measures must be taken to ensure that it cannot be flooded by surface water run-off.
- 2.5.10 Where necessary the treatment unit should be fenced off or otherwise protected. Maintenance access must be maintained as above.
- 2.5.11 The drainage system connecting to the treatment unit must be adequately vented in accordance with the Building Regulations. The head of the drainage system should be connected to a stack pipe, open at high level, so as to draw foul air from the system and sited with consideration to prevailing wind direction. Tile vents & air admittance valves should not be used as the sole drainage ventilation facility, but if this cannot be avoided, the treatment unit should be independently ventilated. All inspection points within the drain system should be sealed so as to enable ventilation at high level.
- 2.5.12 Acceptable tolerance for installation of the Treatment Plant is +/- 10mm.

2.5.13 The Concrete Specification given below is not a site specific installation design.

| GENERAL CONCRETE SPECIFICATION IN ACCORDANCE WITH BS EN 206-1 (BS 8500-1) | | | |
|--|------------|---|--|
| TYPE OF MIX | | (DC) DESIGN | |
| PERMITTED TYPE OF CEMENT | | BS 12 (OPC): BS 12 (RHPC): BS 4027 (SRPC) | |
| PERMITTED TYPE OF AGGREGATE (coarse & fine) | | BS 882 | |
| NOMINAL MAXIMUM SIZE OF AGGREGATE | | 20 mm | |
| GRADES: C25 /30 C25 /30 C16 /20 | | REINFORCED & ABOVE GROUND WITH HOLDING DOWN BOLTS REINFORCED (EG. FOR HIGH WATER TABLE) UNREINFORCED (NORMAL CONDITIONS) | |
| MINIMUM CEMENT CONTENT | C30 C20 | 270 - 280 Kg/M ³ 220 - 230 Kg/M ³ | |
| SLUMP CLASS | | S1 (25mm) | |
| RATE OF SAMPLING | | READY MIX CONCRETE SHOULD BE SUPPLIED COMPLETE WITH APPROPRIATE DELIVERY TICKET IN ACCORDANCE WITH BS EN 12350-1 | |
| NOTE: STANDARD MIXES SHOULD NOT BE USED WHERE SULPHATES OR OTHER AGGRESSIVE CHEMICALS EXIST IN GROUND WATER | | | |

- 2.5.14 Having excavated, if the base is excessively wet or unstable, lay 200mm of hard-core and line with polythene, prior to laying the 200mm level base of concrete. If necessary, make a sump hole to one corner of the excavation to accommodate a suction hose from a site pump, thereby keeping the excavation as dry as possible.
- 2.5.15 Lower the tank on to the levelled concrete, ensuring the top of the tank is completely level and that all connections line up. With the tank in position commence filling with water and at the same time back fill with concrete to just below the inlet/outlet levels. The water level inside the tank is to be maintained within 200mm of the concrete level during backfilling. It is important that these two operations are carried out simultaneously to avoid the risk of flotation. When back filling with concrete it is essential that the underside of the tank is evenly supported without voids.
- 2.5.16 Concrete backfill must be manually compacted - we do not recommend the use of vibrating lances. Make the inlet/outlet and air duct connection. Continue back filling with concrete to 50mm below the cover flange, completing the installation to ground level with free flowing soil.
- 2.5.17 When concrete back filling, care should be taken not to concrete in cover fixings. A small amount of soil can be placed on the green curved top, but not on the access panel.

2.6 Options

- 2.6.1 Where installations involve deep inverts on wet sites, concrete back fill in excess of that required for standard depth, should be applied in gentle pours with the tank fully ballasted. This operation should only be completed when the main backfill has set.
- 2.6.2 These treatment plants are available with a gravity outlet including sample point or integral pump set (IPS). The installation procedure for the gravity version is the same, but the pumped outlet is suitable for MDPE pipe work at a shallower invert.

2.7 Blower Housing

- 2.7.1 In the course of making the air duct connection, it will be necessary to run 110mm diameter ducting from the connection at the outlet end of the plant. This ducting must connect up through an independent concrete base for blower housing location. The duct must be laid with long radius bends to enable the hose to be threaded through.
- 2.7.2 The blower housing base slab should be located 3 to 13 metres from the outlet end of the plant such that the 15 metres of air hose provided is sufficient. The concrete base should be 150mm thick and must be large enough to accommodate the blower enclosure.
- 2.7.3 Preferably the location for siting the blower should be shaded. Once the air hose is connected to the blower the duct through which it has entered should be sealed with spray foam.
- 2.7.4 Where pumped outlets are included, electric cable is provided with the pump. The cable may need to be extended using a junction box to reach the blower housing, via the airline duct (depending on the distance the blower housing is from the treatment plant).

- 2.7.5 Electrical installation from the supply should be made by a competent electrician in accordance with the appropriate regulations.
- 2.7.6 It is essential that this treatment plants installation & set up is inspected correctly. This may be completed by the installer, however, it is recommended that the Pre-service Agreement Inspection be completed by us or an approved Service Engineers. This may be undertaken for a modest fee.

2.8 Dimensions

| Model No. | Diameter mm | Depth mm |
|-----------|-------------|----------|
| E6 | 1900 | 2200* |
| E12 | 1900 | 2700* |
| E18 | 2700 | 2600* |

- 2.8.1 * Depths shown are for standard 1 metre invert unit. Additional 500mm to be added for units with 1.5 metre inverts.

2.9 Self Help

- 2.9.1 In order to minimize the need for dealing with emergency situations we recommend that Treatment Plants have a Pre-service Agreement Inspection, then is regularly serviced by us or an approved Service Engineers.
- 2.9.2 Provided that your plant is installed, operated correctly and serviced, you should not need to get into much – if any – self help.
- 2.9.3 However, some of the most likely question and answer situations are listed below. Firstly, any sewage treatment plant, if abused, can become a health hazard. If in any doubt ask us or an approved Service Engineer.
- 2.9.4 Blower Stopped:
- 2.9.4.a Check the unit is switched on, the incoming power supply circuit and fuse.
- 2.9.5 Blower works but no water distribution inside the plant: Check hose connections.
- 2.9.5.a Check distributor heads.
- 2.9.5.b If the air lift pipes are suspected to be blocked, call for service.
- 2.9.5.c Check regulating valve is not closed.
- 2.9.6 Plant Odour:
- 2.9.6.a Check blower working.
- 2.9.6.b If blower working, plant probably needs desludging.
- 2.9.6.c Check vent circuit is clear.
- 2.9.6.d Check that the air duct entering the blower housing has been sealed with foam.
- 2.9.7 Plant Flooding.
- 2.9.7.a Check for blocked outlet system.
- 2.9.7.b If pumped outlet, check for pump operation, check floats and pump power supply.
- 2.9.8 Power Failure.
- 2.9.8.a Light on Isolator Off – No power to Treatment Plant. Check Supply.
- ## 2.10 Do's and Don'ts
- 2.10.1 Do take out a service agreement and let the experts look after your plant.
- 2.10.2 Do contact us for advice if you have any cause for concern.
- 2.10.3 Don't pump feed the plant without reference to us.
- 2.10.4 Don't use a waste disposal unit as you will be adding to the biological load, and your system may not be large enough to cope with the waste. If you are unsure please refer to our sales team for guidance.
- 2.10.5 Don't throw any medicines down the toilet.
- 2.10.6 Don't empty large quantities of bleach or similar cleaning reagents into the system.

- 2.10.7 Don't empty cooking oil or similar down the sink.
- 2.10.8 Don't cover the plant with soil material or prevent access for service and desludging.
- 2.10.9 Don't apply a hose or jet wash to the biological filter unless specifically advised to.
- 2.10.10 Don't try to enter the plant
- 2.10.11 Don't put sanitary towels, incontinence pads, nappies, tampons or other non biodegradable items' down the toilet.

2.11 **Blocked air lifts**

- 2.11.1 Occasionally air lifts block. Usually this is as a result of non biodegradable products entering the unit, such as sanitary items, rags, J clothes, plastic bags, etc. These items should not be allowed to enter the unit, as they will adversely affect the liquid distribution, the build up of biomass, overall performance and effectiveness of the unit.
- 2.11.2 Sometimes blockages occur as a result of formation of calcium carbonate solids within the air lift pipe.
- 2.11.3 Calcium carbonate is a gritty white to brown solid. The solid that forms within the pipe varies in colour and consistency depending on the nature of the sewage.
- 2.11.4 This type of blockage usually occurs because there is too much calcium present within the unit, the solid forms when the water chemistry is altered by the air bubbled through the pipe. This is a very unusual occurrence.
- 2.11.5 To prevent reoccurrence, you should
 - 2.11.5.a Ensure that no ground or surface water is allowed to enter the unit.
 - 2.11.5.b Check that where a softener is connected to the water supply of the property, that the regenerate chemicals, (which are high in calcium and magnesium salts) are not being fed into the unit.
 - 2.11.5.c Consider a softener to reduce the background level of calcium in the main feed supply.
- 2.11.6 When these blockages occur, the calcium carbonate formed is insoluble, and heavy. Within the pipe it is also sticky with other sewage solids. When wet the solids are not easily cleared from the pipe.
- 2.11.7 Should you have a recurring problem, please contact us and we will provide a spare air lift pipe.

2.12 **Pre-service Agreement Inspection**

- 2.12.1 We recommend that our Engineers or approved service provider should inspect the equipment. However, in situations where expediency is required for owner/installer to inspect, the following basic instructions may prove useful.
- 2.12.2 Check blower housing has been securely positioned and has been correctly wired to a suitable electrical supply, protected by an earth leakage circuit breaker, ensuring the equipment is correctly earthed. (refer to Installation Instructions). The electrical equipment must be inspected by a qualified Electrician and installed to the local Electricity Authority regulations.
- 2.12.3 Ensure the air hose has been securely connected to the hose adapter in the blower housing and the other end is connected to the manifold within the plant, ensuring that there are no sharp bends or kinks causing airflow restrictions.
- 2.12.4 Make sure construction debris is removed from within the plant.
- 2.12.5 It is essential that the Tank is filled with clean water to the outlet level. Before switching on the unit, ensure the air filter is correctly fitted and that the air intake is completely free of any obstructions. Switch on the unit. The airflow will activate the air lift pumps distributing the water over the biological filter. Check the centralisation of the distribution cones and adjust if necessary to provide an even covering of the biological filters. Adjust the spray of distribution using the individual valves on airlines inside the unit.
- 2.12.6 Allow sewage to enter the plant as necessary and ensure that the blower is left running continuously. Biomass will build-up naturally over 4 -8 weeks and the plant should then treat sewage naturally.
- 2.12.7 To ensure the plant is functioning correctly and the final discharge is to the required standard, contact your service provider to arrange a Pre-service Agreement Inspection stating the original start-up date.
- 2.12.8 In order to get the best from your plant, we recommend that you contact us or one of our approved service providers to both carry out a Pre-service Agreement Inspection and service the plant. **This reduces the risk of non-compliance.** It also avoids unnecessary desludging, and minimizes the cost of emergency call out visits.

Taken from 'Kingspan's Terms & Conditions of Sale'

2.13 Warranty

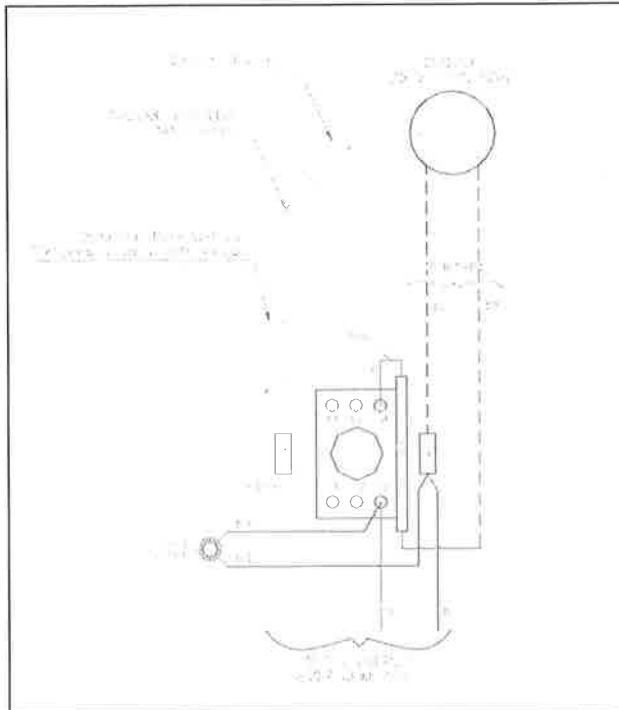
- 2.13.1 The company will replace or, at its option, properly repair without charge any goods which are found to be defective and which cause failure in normal circumstances of use **within a period of twelve months from the date of delivery.**
- 2.13.2 This warranty is conditional upon:
 - 2.13.3 (a) the Buyer notifying the Company of any claim within Seven days of the failure becoming discernible.
 - (b) the Company being allowed a reasonable opportunity to inspect the goods so as to confirm that they are defective.
 - (c) the goods not having been modified, mishandled or misused and being used strictly in accordance with any relevant instructions issued by the Company.
- 2.13.4 The Company's liability under this Clause is limited to the repair or replacement of the defective goods, and does not cover costs of transport, installation or associated site costs, if applicable.
- 2.13.5 The Company's liability to replace or repair the goods is in lieu of and excludes all other warranties and conditions, and in particular (but without limitation) the Company shall have no liability of any kind for consequential loss or damage.
- 2.13.6 For any further advice, please contact our Service & Warranty department.
- 2.13.7 A warranty form is included in this package, to register your unit for warranty. Please complete ALL sections of the form, and return it at your earliest convenience.
- 2.13.8 Also within this manual is a **Notice**, describing the necessary maintenance for the plant. This should be fixed within the building.

3 ELECTRICAL INSTALLATION

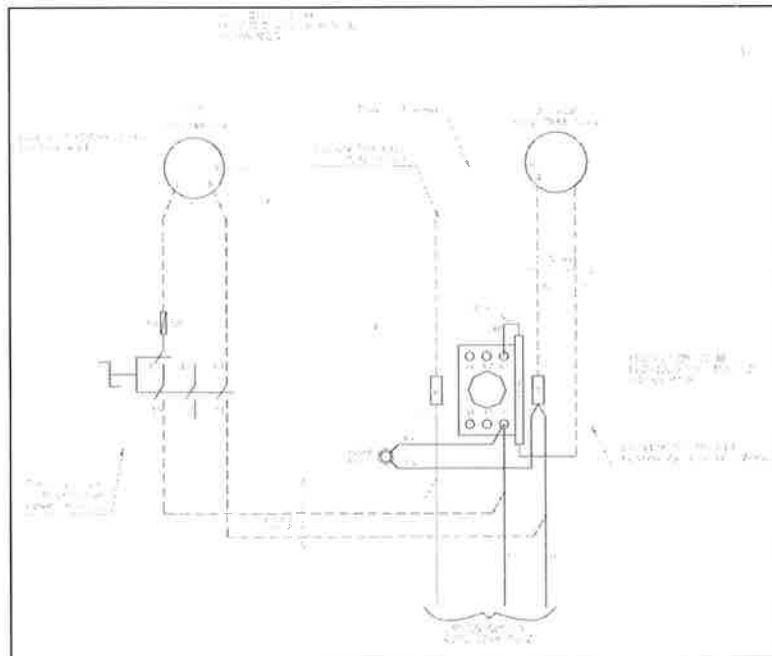
- 3.1.1 It is imperative that the electrical installation of this equipment is entrusted to a competent qualified electrician working to the latest IEE regulations.
- 3.1.2 It is not possible to state a specific installation configuration that would suit all sites. The selection of current protection devices must remain the responsibility of the installer who should select a suitable cable and current overload protection, taking into account the distance from the power source to the unit and any other relevant factors. (In many cases steel wire armoured (SWA) cable, minimum 1.5 sq mm will be suitable).
- 3.1.3 When installing the electrical supply to the unit, the following points should be considered:
 - 3.1.3.a The electric power supply to the tank should be by means of a dedicated circuit with isolation and protection devices consistent with the requirements for fixed equipment and in accordance with the latest regulations of the Institute of Electrical Engineers.
 - 3.1.3.b This power supply should be independent of all other household protection devices other than the supply authority's main fuse and that provided specifically for the power supply. In particular, earth leakage devices provided for normal domestic protection must not form part of the supply circuit to the tank.
 - 3.1.3.c An earth leakage circuit breaker should be incorporated in the supply to the unit. A device with 30mA minimum trip current is recommended.
 - 3.1.3.d Locate the Isolator with power light (in the blower box) and mount externally at a point where it is easily visible from the property.
 - 3.1.3.e The power supply cable should connect to the IP65 rated isolator socket mounted externally. Any terminal shrouds removed during the connection of cable cores must be replaced afterwards. A separate duct or conduit should be provided by others.

3.1.4 Isolator Wiring Diagram.

Gravity System:



IPS System:



4 Operations

4.1 Standard Rate Treatment Plants

| Model No. | Litres | Gallons |
|-----------|------------------|------------------|
| E6 | 3,200 | 700 |
| E12 | 3,200 | 700 |
| E18 | 5,200 | 5,250 |

4.2 General Maintenance

- 4.2.1 Sewage Treatment installations will only perform as well as they are maintained. The best way to achieve this is to arrange a service agreement with us or an approved Service Engineer (see below). There will always be situations when a little self-help may be sufficient to avoid call out and we describe here some basic checks, which may prove useful.
- 4.2.1.a Firstly, keep children and pets away from the plant and always wear rubber gloves when inspecting the unit. Never try to climb into the plant.
 - 4.2.1.b If in doubt ask us or an approved Service Engineer for advice. One of the things that will come from routine maintenance is evaluation of the desludging interval.
- 4.2.2 Having confirmed that the sludge situation is under control, the following basic checks can be made.
- 4.2.3 Ensure that the protective mesh layer (Enkamat) on the top of the media bale is not blocked. If it is, then it can be removed, shaken, hosed off and repositioned. Alternatively, the Enkamat can be renewed and the old material disposed of safely.
- 4.2.4 Check that the spray is covering the rectangular bale. This can be adjusted by the plastic valve attached to the air hose inside the plant.
- 4.2.5 Ensure that the airlift in the centre of the bale is not blocked, as this will also affect the spray pattern.
- 4.2.6 Where pumped outlets are included, check the pump operation, check floats and check pump power supply to the plant.

4.3 Emptying and Desludging

- 4.3.1 All biological treatment plants produce a surplus of sludge's, which from time to time have to be removed as sludge in order to maintain process efficiency. Applications on purely domestic feed may only require desludging 6-12 months, whereas more heavily loaded installations may require desludging at least 6-9 months.
- 4.3.2 Desludging must be carried out by a reputable company who may be located by reference to Yellow Pages, your District Council or from your local Water Authority. We may be able to help you with suggesting an emptying contractor. When ordering a tanker for any desludging you will have to state the capacity of the unit to enable the correct size tanker to be scheduled (see 4.1).

4.4 Emptying and Desludging Procedure

- 4.4.1 Turn off the unit. First ensure that the hose is placed on the inlet side of the unit, always empty the tank ensuring equilibrium in water levels.
- 4.4.2 Reduce the water level by about 300mm then place the hose in the outlet side of the tank, also reducing the water level by 300mm. Continue with this process until the tank is completely empty.
- 4.4.3 Make sure that the hose and end fitting are, as far as practical, kept away from the baffles whilst raising and lowering.
- 4.4.4 The hose and end fitting must be positioned to draw from the very bottom to collect accumulated settled sledges. Make sure construction debris is removed from within the plant.
- 4.4.5 Take care not to blow back the wastewater into the treatment plant when lifting the hose from one compartment to another one, or removing it from the plant.
- 4.4.6 Whilst pumping out, check the other compartments to make sure that the water level drops at the same rate. At no time should the difference in water level either side of the screen exceed 300mm. As far as is practical, remove traces of sludge accumulation on the walls and bottom of the chamber.
- 4.4.7 Check for the presence of any residual solids in the bottom of the final settlement zone, i.e. the last tank compartment, and if there are any present, remove them.
- 4.4.8 If a clean water hose is available, hose down any residual solids from the interior of the tank. Do not hose off the biomass from the media unless it is blocked.
- 4.4.9 The tank should be refilled as speedily as is practical using mains supply water. Refill the tank evenly from both sides of the screen, therefore establishing a constant equilibrium. It is advisable to leave the air blowers off until normal water level has been achieved.



E6 & E18

The foul drainage from this property discharges into a package treatment works.

Maintenance is required, the frequency of which depends upon the model installed, its use and application. Please consult your Operation & Maintenance Manual.

- * When operating at the normal daily load, emptying should take place every 6-12 months, whereas more heavily loaded installations may require desludging at least 6-9 months.

Maintenance and Desludging should be carried out by the owner in accordance with the Manufactures instructions.

THE OWNER OF THE PROPERTY IS LEGALLY RESPONSIBLE FOR ENSURING THAT THE SYSTEM DOES NOT CAUSE POLLUTION, A HEALTH HAZARD OR A NUISANCE.

We recommend that a separate log is kept of all maintenance and service visits, the log should detail the date and any action taken, e.g. Regular maintenance service, breakdown visit, desludge volume removed, parts replaced.

This notice should be fixed by the owner within the building alerting current and future owners to the maintenance requirement.
(Building regulation H2 (1.57))

Please contact Service on +44 (0) 844 846 0500 to arrange a maintenance service or to request replacement operating instructions. It would be helpful if you provide your equipment serial number.

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