

25 July 2019

Permitting Receipt Centre
Natural Resources Wales
Ty Cambria
29 Newport Road
Cardiff
CF24 0EY

Dear Sir/Madam,

THE WATER RESOURCES (TRANSITIONAL PROVISIONS) REGULATIONS 2017

LUDCHURCH FARMS LIMITED

APPLICATION FOR A NEW GROUNDWATER ABSTRACTION LICENCE FOR BOREHOLES AT LUDCHURCH FARM, LUDCHURCH, NARBERTH, PEMBROKESHIRE, UNDER THE 'TRANSITIONAL REGULATIONS'

Please find enclosed a formal abstraction licence application on behalf of Ludchurch Farms Ltd, to cover their historic abstraction of groundwater from three boreholes located at Ludchurch Farm, Ludchurch, Narberth, Pembrokeshire.

Enclosed are:

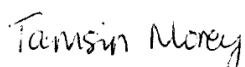
- Application form WRH along with associated Figures and a Continuation Sheet for further information.
- A letter of authorisation from Ludchurch Farms Ltd allowing Envireau Water to sign forms relating to the abstraction licence application and liaise with Natural Resources Wales on their behalf.
- Supporting evidence of historic abstraction.

Please contact us on 01332 871882 to arrange payment of the £135 application fee by credit card.

We look forward to receiving notification of a "valid application" in due course but in the meantime if you would like to discuss any aspect of the application then please do not hesitate to contact us.

Please ensure that all correspondence regarding the application is directed to myself (the Agent) so we are able to respond promptly.

Yours faithfully,



Tamsin Morey MSc CEnv
Principal Water Resources Specialist

19 July 2019

Permitting Receipt Centre
Natural Resources Wales
Ty Cambria
29 Newport Road
Cardiff
CF24 0EY

Dear Sir/Madam,

THE WATER RESOURCES (TRANSITIONAL PROVISIONS) REGULATIONS 2017

LUDCHURCH FARMS LIMITED

**APPLICATION FOR A NEW GROUNDWATER ABSTRACTION LICENCE FOR BOREHOLES AT
LUDCHURCH FARM, NARBERTH, PEMBROKESHIRE, UNDER THE 'TRANSITIONAL
REGULATIONS'**

We hereby authorise Envireau Water of Cedars Farm Barn, Market Street, Draycott, Derbyshire, DE72 3NB to represent and sign on our behalf, forms relating to the submission of an application under the 'Transitional Regulations' for a new groundwater abstraction licence at Ludchurch Farm, Ludchurch, Narberth, Pembrokeshire.

Yours faithfully,

A handwritten signature in blue ink that reads "P. I. Davies". The signature is written in a cursive style with a large 'P' and 'D'.

Philip Davies

Director



Fill in this form if you are applying for a transitional water resources licence to continue a previously exempt abstraction.

This form is available in both English and Welsh. Please check that this is the latest version of the form available from our website before submitting your application.

Please ensure you use Guidance Note WRH to help you.

All relevant guidance documents can be found on our website.

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1. Application type and fee

1.1 Please select your application type from the list below.

- A new transitional water resources full abstraction licence for a previously exempt abstraction ☒
- A new transitional water resources transfer licence for a previously exempt abstraction ☐
- A variation to an existing full abstraction licence to add a previously exempt abstraction ☐
- A variation to an existing transfer licence to add a previously exempt abstraction ☐

1.2 Please indicate the amount and how you wish to pay your application

Amount paid	<input type="text" value="£135"/>		
Cheque	<input type="checkbox"/>		
Credit or debit card	<input checked="" type="checkbox"/>		
BACS transfer	<input type="checkbox"/>	BACS reference number	<input type="text" value="PRC"/>

2 Applicant and agent details

This is the individual or organisation any resulting licence will be issued to, and must be a legal entity. If you are an agent acting on behalf of an applicant, provide their details here and yours in section 2.2.

2.1 Applicant details

Individual	<input type="checkbox"/>	Public body	<input type="checkbox"/>
Registered company	<input checked="" type="checkbox"/>	Organisation or group of individuals	<input type="checkbox"/>
Other	<input type="checkbox"/>	If 'Other', please specify	<input type="text"/>
Title	<input type="text"/>		

First name	
Last name	
Company, charity, body, or trading name (if relevant)	LUDCHURCH FARMS LIMITED
Registered company or charity number (if relevant)	04374329
Address	Williamston House
	C/O Ashmole &, Co
	7 Goat Street, Haverfordwest
	Pembrokeshire
Postcode	SA61 1PX
Telephone - mobile	07825 727608
Telephone - office	01834 831255
Email address	Phil.davies@farming.co.uk

We will contact you by email unless you tick here. ☐

2.2 Agent details

This is who we will correspond with unless otherwise informed. If you are an agent applying on behalf of an applicant, please include a letter of authorisation from the applicant allowing you to act as signatory, and provide a reference for this document in the box below.

Document reference	
Title	Ms
First name	TAMSIN
Last name	MOREY
Company or trading name	ENVIREAU WATER
Position in company	PRINCIPAL WATER RESOURCES SPECIALIST
Address	CEDARS FARM BARN
	MARKET STREET

	DRAYCOTT
	DERBYSHIRE
Postcode	DE72 3NB
Telephone - mobile	07976 168997
Telephone - office	01332 871882
Email address	tamsin@envireauwater.co.uk

We will contact you by email unless you tick here. ☐

2.3 Site operation contact

Please specify who we should contact with regard to your site operation.

Applicant	<input checked="" type="checkbox"/>	
Agent	<input type="checkbox"/>	
Other	<input type="checkbox"/>	Please provide contact details for the operational contact on a separate referenced document, and tell us this reference below.
Document reference		

2.4 Abstraction invoices and records contact

Please specify who we should contact for invoices and abstraction records (returns). Please note that these may not be not required for transfer licences.

Invoice address

Applicant	<input checked="" type="checkbox"/>	
Agent	<input type="checkbox"/>	
Other	<input type="checkbox"/>	Please provide contact details for the operational contact on a separate referenced document, and tell us this reference below.
Document reference		

Abstraction records

Applicant	<input checked="" type="checkbox"/>	
Agent	<input type="checkbox"/>	
Other	<input type="checkbox"/>	Please provide contact details for the operational contact on a separate referenced document, and tell us this reference below.
Document reference		

3. Site name

3.1 Please provide the site name below:

Site name	LUDCHURCH FARM
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4. Entitlement to apply

4.1 Have you abstracted water between 01 January 2011 and 31 December 2017 for the activity which you are applying to be licensed?

Yes ☒

No ☐ Please see our water abstraction and impounding webpage for further information on the correct application forms.

4.2 What is your connection to the land where the abstraction takes place?

Please provide a map outlining your land ownership/occupation and include all abstractions and discharges where relevant.

Owner ☐

Occupier ☒

Document reference

4.3 Do you have a legal right of access to the land where the abstraction takes place?

No ☐

Yes ☒ Please provide further detail in the box below. If necessary continue on a separate referenced document, and tell us this reference.

Document reference

COMPANY RENTS LAND FROM LANDOWNERS WHO ARE THE DIRECTORS OF THE COMPANY

5. Existing licence number(s)

If you are applying to change an existing licence please provide the licence number below.

Licence number(s)

6. Cross border applications

As part of your site operation do you also abstract for a previously exempt activity in England?

No ☒

Yes ☐ Please provide detail of this cross border application in the box below. If possible, provide a reference or application number, or name of an Environment Agency contact with whom the application has been discussed.

Continue on a separate referenced sheet if necessary and tell us the reference for this document.

Document reference

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7. Abstraction details

7.1 Site map

Please provide a map with details of the location(s) you abstract water from (points reaches, or areas). Tell us the reference for this map, below.

Site map reference

Figure 1

7.2 Please tell us details about the location(s) you abstract water from (points reaches, or areas) in the tables below.

The abstraction location, name, or reference must be the same as those used on the site map, in question 7.1. If you need more space, please continue on a separate referenced sheet if necessary and tell us the reference for this document

Document reference

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Table 7. 1 - Surface water abstractions						
Abstraction location name or reference (As labelled on the site map)	Type of location (single point, reach, area)	Source of Supply	First National Grid Reference (12 digits)	Second National Grid Reference (12 digits)	Third National Grid Reference (12 digits)	Fourth National Grid Reference (12 digits)

If necessary, continue on a separate sheet and tell us the reference for this document.

Document reference(s)

Table 7. 2 Ground water abstractions										
Abstraction location name or reference (as labelled on map)	Source of Supply	National Grid Reference (12 digit)	Overall depth (metres)	Maximum diameter (millimetres) or area of excavation (square metres)	Screened section (metres below ground level)	Drift geology	Solid geology	Rest pump water level	Pumped water level	Pump Depth
A	Borehole	SN 14264 11185	70mbgl	200mm	Solid casing to 10mbgl; open hole below	No superficial deposits present	Lower Old Red Sandstone	5mbgl	Unknown	52mbgl
B	Borehole	SN 14201 11267	70mbgl	200mm	Solid casing to 10mbgl; open hole below	No superficial deposits present	Lower Old Red Sandstone	5mbgl	Unknown	52mbgl
C	Borehole	SN 14265 11202	70mbgl	200mm	Solid casing to 10mbgl; open hole below	No superficial deposits present	Lower Old Red Sandstone	5mbgl	Unknown	52mbgl

If necessary, continue on a separate sheet and tell us the reference for this document.

Document reference(s)

8. Abstraction history and evidence

8.1 Please complete table 8.1 to document that the abstraction(s) and transfer(s) has or have been taking place during the qualifying period.

If necessary, continue on a separate sheet and tell us the reference for this document.

Document reference(s)

PD Historical Water Usage.xlsx

Table 8.1											
Year	Abstraction location name or reference (as labelled on map)	Purpose(s) water used for	Period of abstraction	Maximum quantities abstracted						Means of measurement, or assessment of abstracted quantities	Are these the maximum quantities of water you wish to have licensed? (Yes or No)
			All year, or months, or days (provide specific dates)	Year (cubic metres)	Day (cubic metres)	Hour (cubic metres)	Peak instantaneous flow rate (litres per second)	Maximum number of hours of abstraction per day	Please indicate whether volume is actual (A) or estimated (E)		
01 January 2011 to 31 December 2011	A & B	Parlour washdown,	All Year	25662	118	8.4	2.4	14	E	See 'PD Historical Water Usage.xlsx' for all	
		Domestic, Crop spraying,									
		Vehicle washdown									
	C	Cattle Drinking	All Year	29547	81	11.4	3.2	7	E		
01 January 2012 to 31 December 2012	A & B	Parlour washdown,	All Year	30409	131	8.4	2.4	16	E		
		Domestic, Crop Spraying,									
		Vehicle Washdown									
	C	Cattle drinking	All Year	34759	95	11.4	3.2	8	E		
01 January 2013 to 31 December 2013	A & B	Parlour washdown,	All Year	37504	151	8.4	2.4	18	E		
		Domestic, Crop Spraying,									
		Vehicle Washdown									
	C	Cattle Drinking	All Year	44035	121	11.4	3.2	11	E		
01 January 2014 to 31 December 2014	A & B	Parlour Washdown,	All Year	42859	165	8.4	2.4	20	E		
		Domestic, Crop Spraying,									
		Vehicle Washdown									
	C	Cattle Drinking	All Year	50706	139	11.4	3.2	12	E		Yes (annual)
01 January 2015 to 31 December 2015	A & B	Parlour Washdown,	All Year	45569	173	8.4	2.4	21	E		Yes (daily)
		Domestic, Crop Spraying,									
		Vehicle Washdown									
	C	Cattle Drinking	All Year	51107	140	11.4	3.2	12	E		
01 January 2016 to 31 December 2016	A & B	Parlour Washdown,	All Year	39804	157	8.4	2.4	19	E		
		Domestic, Crop Spaying,									
		Vehicle Washdown									
	C	Cattle Drinking	All Year	45897	126	11.4	3.2	11	E		
01 January 2017 to 31 December 2017	A & B	Parlour Washdown,	All Year	40871	160	8.4	2.4	19	E		
		Domestic, Crop Spraying,									
		Vehicle Washdown									
	C	Cattle Drinking	All Year	47191	129	11.4	3.2	11Y	E		

8.2 Please complete the table below if you wish a lesser quantity of water to be licensed than that detailed in table 8.1.

If necessary, continue on a separate sheet and provide a reference for this document.

Document reference

Table 8.2							
Abstraction location name or reference (as labelled on map)	Purpose water is used for	Abstraction period	Maximum annual abstraction volume (cubic metres)	Maximum daily abstraction volume (cubic metres)	Maximum hourly abstraction volume (cubic metres)	Maximum number of hours of abstraction per day	Peak abstraction rate (litres per second)

8.3 Do you wish your abstracted quantities to be aggregated?

You can aggregate:

- i) across some or all of the abstraction points, or reaches, or areas listed above.
- ii) with other abstractions you wish to have licensed through the transitional process.
- iii) abstractions you need to have licensed through the standard licensing process.
- iv) with existing licences you hold.

No ☒

Yes ☐ Provide details of any proposed aggregation in the box below. If necessary, continue on a separate sheet and provide a reference for this document.

Document reference

8.4 Please provide a detailed description of how the abstraction(s) has/have taken place

Use the box below to tell us about your abstraction(s). The description should include the following:

- A diagram or schematic of how the activity has been undertaken, using your abstraction point references and including any discharge points
- Details of the structure and equipment involved in the abstraction. This should include dimensions.
- Details of your means of measurement or assessment of abstraction quantities method

If necessary, continue on a separate sheet and tell us the reference for this document.

Document reference

Figure 2 and PD CONT SHEET

8.5 Please list the evidence you are providing to support your application

Use the box below. The evidence should demonstrate the following:

- That abstraction has taken place at some time during the seven year qualifying period.
- The quantities of water you have abstracted during the qualifying period. For example, records of meter readings, or cropping plans.

If necessary, continue on a separate sheet and provide a reference for this document.

Document reference

SEE 'PD CONT SHEET'

Production of between ~ 11,000,000 – 15,000,000 litres of milk per year for the full qualifying period (2011-2017).

2013 – 12,002,652 litres

2014 – 14,627,728 litres

2015 – 14,035,470 litres

2016 – 11,872,433 litres

2017 – 13,221,267 litres

9. Discharge details

9.1 Please provide details on any discharge of abstracted water in table 9.1 below and on the map used to show abstraction locations.

If necessary, continue a separate sheet and provide a reference for this document.

Document reference

Table 9.1 - Details of any discharge of abstracted water			
Discharge location name or reference (as labelled on map)	National Grid Reference of discharge point (12 digit)	Total volume discharged (cubic metres)	Environmental Permit number for Water Discharge Activity number (if applicable)

9.2 Please provide a description of discharge structures and equipment

If necessary, continue a separate sheet and provide a reference for this document.

Document reference

10. Eel considerations

Does your abstraction include measures to safeguard eels?

No ☒

Yes ☐ Provide details below

11. Trickle Irrigation

If you are applying to licence a trickle irrigation abstraction, do you wish to apply for a Two-Part Tariff agreement with your application?

No ☐

Yes ☐ We will contact you during determination of your application to arrange this agreement.

12. Planned abstractions

12.1 Do you expect to increase the current rate of abstraction for the activity you are applying to have licensed from 01 January 2018 onwards or to carry out further new abstractions (both termed 'planned' abstractions) at this site in the future?

No ☒

Yes ☐

12.2 Have you submitted a licence application (s) for any planned abstraction(s) as a result of the Water Act 2003 changes?

No ☒

Yes ☐ Provide a reference number if you have already submitted an application(s) to cover any planned abstractions.

Document reference

13. Other abstractions

Please provide details of any other abstraction(s) (licensed or exempt) that are associated with this application in table 13.1 below.

Table 13.1 - Details of any other abstraction(s) (licensed or exempt) that are associated with this application					
National Grid Reference (12 digit) of where you abstract water	Source name and type	Purpose of abstraction	Where do you use the water?	When do you abstract the water?	Is this a pending application, or already licensed? Please provide the application or licence number as appropriate

14. Planning permission

Complete table 14.1 below and provide details of any planning permissions or advice associated with the abstraction you are applying to have licensed where relevant. Provide a copy of any permissions or advice, providing a reference for this document below.

Document reference

Table 14.1 – Planning permission

Abstraction location name or reference (as labelled on map)	Is planning permission needed, Yes or No?	Planning permission status (if required)	Have you received any planning advice for the abstraction?

15. Environmental impact assessment(EIA)

Does your application require an EIA under The Water Resources (Environmental Impact Assessment) (England and Wales) Regulations 2003 (as amended)

No ☒

Yes ☐ Please provide a copy of your environmental impact assessment; provide a reference for this assessment below.

Document reference

16. Licence duration

Tell us when you wish your abstraction licence to end

Normally abstraction licences are granted for between 6 and 18 years in line with the catchment licence common end date. If you require a shorter or longer duration licence, please provide details and your justification in the box below.

If necessary, continue a separate sheet and provide a reference for this document.

Document reference

17 Declaration and data protection and commercial confidentiality

Data protection:

Please read the guidance carefully for details on who can sign this section and note the information relating to the Data Protection Act 1998, our Public Register and exclusions.

Commercial confidentiality:

Do you think your application should be confidential, and that information should not be placed on the public register?

No ☒

Yes ☐ You must send us supporting information to tell us why. Use the box below or a separate sheet, and tell us the reference you have given this document.

Document reference

Declaration:

By signing below, you are declaring that as far as you know and believe the information given in this form, on any map and in any supporting or additional information is true.

A printed name in the 'signature' response box will be treated as the equivalent of an electronic signature.

Title

Ms

First name

Tamsin

Last name

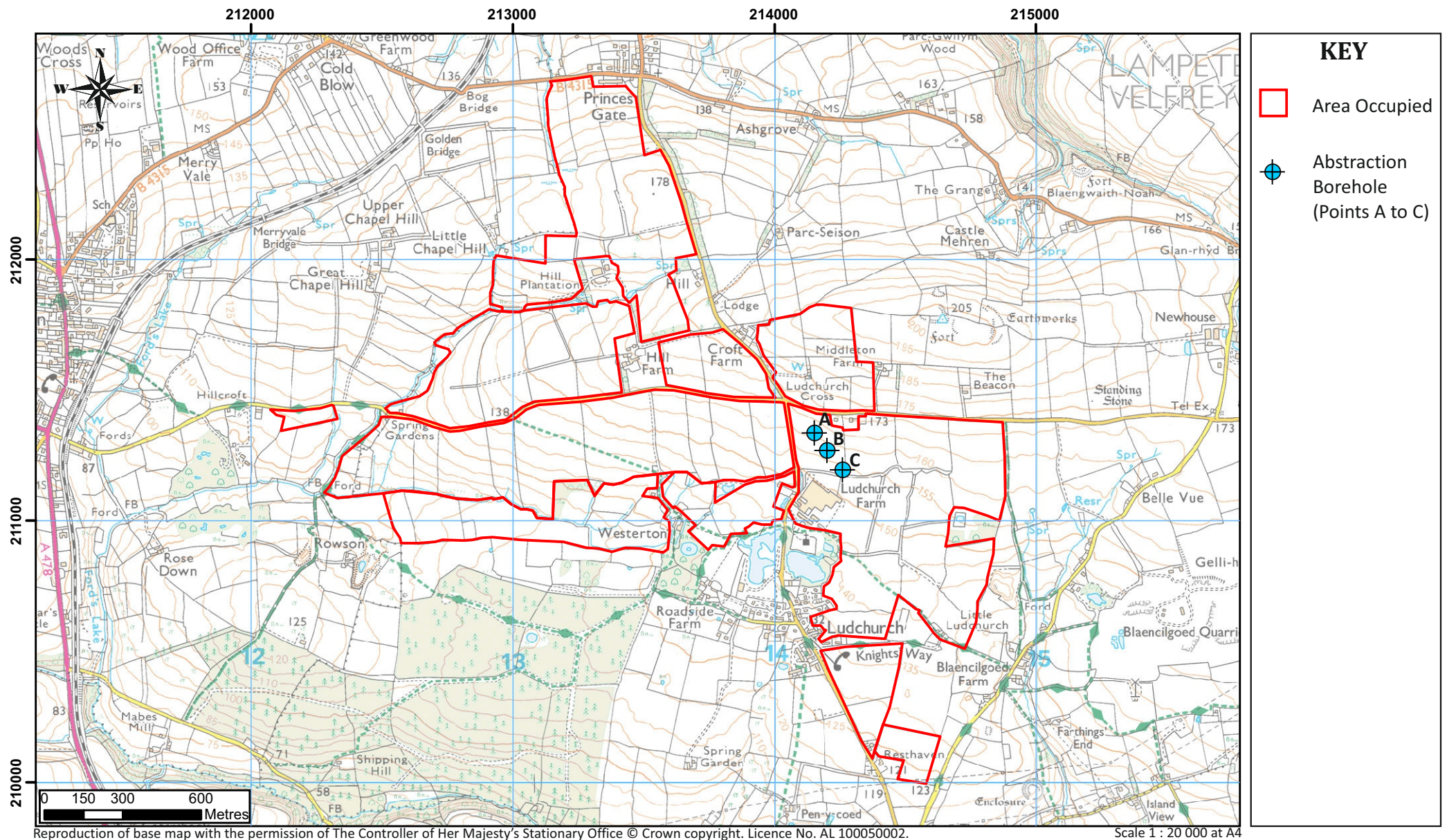
Morey

Position

Principal Water Resources Specialist

Today's date

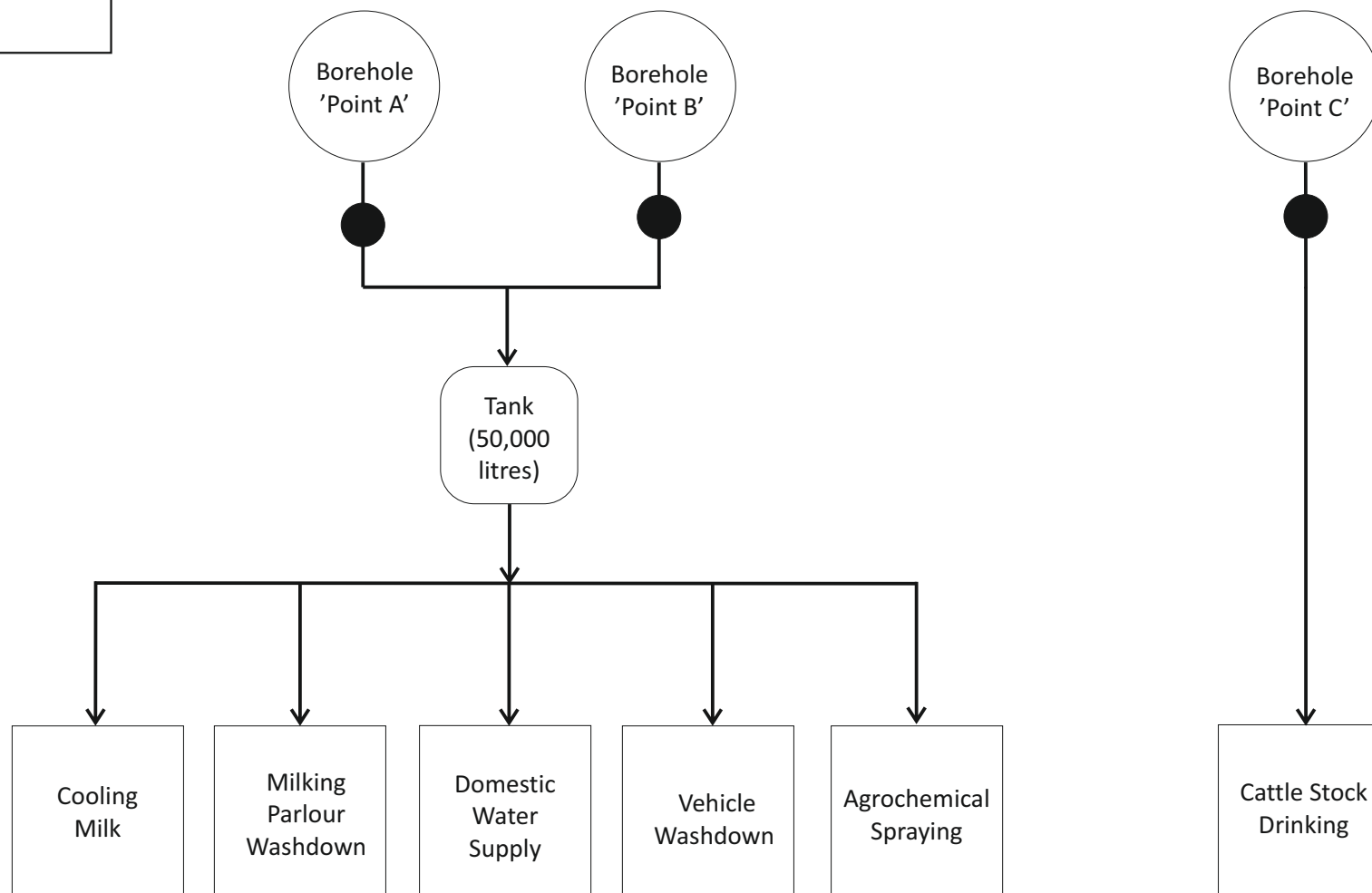
25/07/2019



KEY



Full licence required



THE WATER RESOURCES (TRANSITIONAL PROVISIONS) REGULATIONS 2017

APPLICATION FOR A NEW GROUNDWATER ABSTRACTION LICENCE FROM BOREHOLES AT LUDCHURCH FARM

Continuation Sheet

Overview/Background

Ludchurch Farms Ltd have been abstracting groundwater at Ludchurch Farm, Narberth, Pembrokeshire since 2002.

Ludchurch Farm houses a ~1500 head dairy cattle herd. Abstracted groundwater is used for all water needs at the farm, including stock drinking, milk cooling and washdown of cattle housing / milking parlour, agrochemical spraying, agricultural vehicle washdown, and domestic use for residents / workers at the farm.

Abstraction takes place from three boreholes (Points A to C on Figure 1) and has previously been exempt from licencing through the groundwater geographically exempt areas exemption.

This application covers abstraction from 'Ludchurch Farm' boreholes Points A, B, and C.

Form WRH, Section 2.1 – Applicant Details

Site / daily correspondence address / contact is:

Philip Davies, Ludchurch Farm, Ludchurch, Narberth, Pembrokeshire SA67 8JE

Form WRH, Section 8.4 – Please provide a detailed description of how the abstraction(s) has/have taken place

Water distribution and storage

Water is abstracted from three boreholes (Points A to C) and used within the red line boundary presented on Figure 1.

Points A and B are used for milk cooling and parlour washdown, domestic water supply, agrochemical spraying, and agricultural vehicle washdown.

Point C is used for cattle stock drinking only. A usage schematic is presented on Figure 2.

Water from Points A & B fills a tank (50m³) and abstraction is controlled by a float switch in the tank.



Water for cooling is taken from the bottom of the 50m³ tank and fed through the plate cooler after which it flows back to the top of the tank in a continuous circulation loop.

The tank also feeds water to parlour washdown, domestic water supply, agrochemical spraying, and agricultural vehicle washdown.

Abstraction from Point C is continuous 24 hours a day but at a variable rate controlled by instantaneous demand.

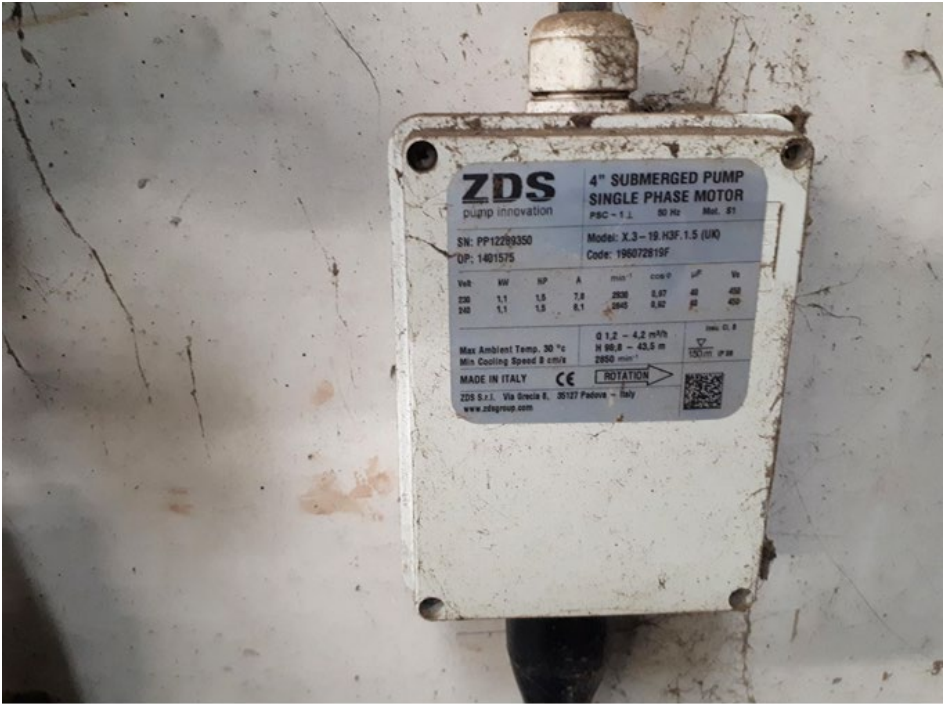
No discharge of abstracted water takes place as all leaves the site as milk or slurry.

Method and measurement of abstraction

The pump installed at Point A is a ZDS QSX.3-19 and has a maximum capacity of 4.2m³/hour.



The pump installed at Point B is a ZDS X.3-19.H3F.1.5 and has a maximum capacity of 4.2m³/hour.



The pump installed at Point C is a DAB S4E 20 and has a maximum capacity of 11.4m³/hour.



There are no flow meters installed on the boreholes.

Assessment of water requirement

Historical usage volumes have been calculated from industry standard usage figures for milking cattle and domestic use and site estimated usage based on operational procedure and equipment specification.

The historical usage volumes are presented in 'PD Historical Water Usage.xlsx' Excel workbook which accompanies this application.

- Milk cooling

Water is routed from Boreholes 1 and 2 (Points A and B) into the storage tank and then through the plate cooler. Warmed water is returned back to the tank to cool again and be used for washdown / domestic / vehicle washing in order to perform a dual function and maximise the efficiency of water use on the farm. All cooling water is reused and so usage has not been calculated separately.

- Cattle drinking and Parlour washdown

Standard usage figures from 'R&D Best Practice Manual W6-056/TR for industry and agriculture' have been used to estimate daily and annual use for cattle drinking per head and parlour washdown using power hoses. Annual cattle numbers are appended to this application.

Water for drinking is sourced from Borehole 3 (Point C).



Washdown of the milking parlour (60 point Dairymaster rotary) takes place after each milking (3 x per day).

Cleaning the milking machinery takes place by reverse flushing the system with hot and cold water rinses.

- Vehicle washdown

Six agricultural vehicles are washed down per day using a mobile power hose with max. flow rate of 18.9l/min (5,000 psi GrippaJET or similar) throughout the year. Flow rate and normal wash duration (10 minutes per vehicle) have been used to estimate annual use.

- Domestic

Ludchurch Farm includes four domestic properties which house a total of 16 residents all year round.

Domestic water volumes provided to the properties have been estimated based on the number of occupants and daily water flow rates as suggested in the British Water - Codes of Practice: Flows and Loads.

- Agrochemical spraying

On average, 400 acres of Spring Wheat is grown on the farm annually and water is used for agrochemical spraying of pesticides, herbicides and fungicides via a Househam Sprint 2000 crop sprayer (2000 litre tank). Grassland is also sprayed.



The average area of crop grown on the farm per year and the application rate of the sprayer (200l/ hectares (Ha)) have been used to estimate annual use.

Envireau Water
25/07/2019

ANNUAL CATTLE SUMMARY 2011-2017

Animal Summary for Valuation
Showing the number of animals on 31/12/2011

Category	Age group	Number of animals
Heifer Calves	All ages	313
Bull Calves	All ages	24
Store/Finishing Heifers	All ages	31
Store/Finishing Steers	All ages	22
Breeding Heifers	All ages	223
Breeding Cows	All ages	858
Breeding Bulls	All ages	1
Total:		1,472

Animal Summary for Valuation
Showing the number of animals on 31/12/2012

Category	Age group	Number of animals
Heifer Calves	All ages	439
Bull Calves	All ages	13
Breeding Heifers	All ages	308
Breeding Cows	All ages	1,001
Total:		1,761

Animal Summary for Valuation
Showing the number of animals on 31/12/2013

Category	Age group	Number of animals
Heifer Calves	All ages	440
Bull Calves	All ages	17
Breeding Heifers	All ages	490
Breeding Cows	All ages	1,244
Breeding Bulls	All ages	2
Total:		2,193

Animal Summary for Valuation
Showing the number of animals on 31/12/2014

Category	Age group	Number of animals
Heifer Calves	All ages	608
Breeding Heifers	All ages	401
Breeding Cows	All ages	1,509
Breeding Bulls	All ages	1
Total:		2,519

Animal Summary for Valuation
Showing the number of animals on 31/12/2015

Category	Age group	Number of animals
Heifer Calves	All ages	532
Bull Calves	All ages	116
Store/Finishing Heifers	All ages	119
Breeding Heifers	All ages	627
Breeding Cows	All ages	1,288
Breeding Bulls	All ages	2
Total:		2,684

Animal Summary for Valuation
Showing the number of animals on 31/12/2016

Category	Age group	Number of animals
Heifer Calves	All ages	547
Store/Finishing Heifers	All ages	2
Breeding Heifers	All ages	510
Breeding Cows	All ages	1,268
Breeding Bulls	All ages	6
Total:		2,333

Animal Summary for Valuation
Showing the number of animals on 31/12/2017

Category	Age group	Number of animals
Heifer Calves	All ages	574
Bull Calves	All ages	27
Breeding Heifers	All ages	459
Breeding Cows	All ages	1,336
Breeding Bulls	All ages	2
Total:		2,398