



KNAPP HICKS & PARTNERS LTD

CONSULTING STRUCTURAL, CIVIL & GEOTECHNICAL ENGINEERS



Prospect House
1 Highpoint Business Village
Henwood Ashford Kent
TN24 8DH
Tel: (01233) 502255
Fax: (01233) 643250

Also at:

Head Office:

Suite 1 Laval House
Great West Quarter
Great West Road
Brentford
Middx TW8 0GL
Tel: 020 8232 1888

Prospect House
24 Prospect Road Ossett
West Yorkshire WF5 8AE
Tel: (01924) 269785

Suite 2 Swan Park Business
Centre 1 Swan Park
Kettlebrooke Road Tamworth
Staffordshire B77 1AG
Tel: (01827) 307691

Web site:

www.knapphicks.co.uk

Directors:

Geoff Davies (*Managing*)
IEng, MICE

Paul Nicholls
IEng, AMIStructE, MICE

Pamela Armstrong (*Finance*)
CGMA, ACMA, MAAT, MCMI

Principal Technical Directors:

Darren Cook
BEng (Hons), CEng, MIStructE
Steve Hazell
IEng, AMIStructE, MICE
John Moss
IEng, AMIStructE

Technical Directors:

Darryl Bedwell
ACIOB
Daniel Kent
FdEng EngTech MICE
Richard Moore
BSc, MSc, FGS, CGeol
Nick Sparrowhawk
BSc (Hons), CEng, MICE, ACILA
Phillip Taylor-Wright
BSc (Hons) Surveying; Grad BEng;
Dip CII; ICIOB

Technical Consultant:

David Cherrett
CEng, MIStructE

Associates:

GJ Jenkins ICIOB

Knapp Hicks & Partners Ltd

Incorporated in England
No. 2886020

Registered office:

Laval House, Great West Quarter
Great West Road
Brentford TW8 0GL

36810/L/003A/C/DK/dk

15th September 2021

RE: DRAINAGE STATEMENT - OLD MILL EQUESTRIAN CENTRE

This note has been prepared in support of planning condition discharge related to the development at Old Mill Equestrian Centre, Clement Street, Swanley and should be read in conjunction with drainage drawing 36810/C/001.

Site Details

The proposed development is located off Clement Street, Swanley and is centred on national grid reference: TQ537705.

The development proposal is to convert an existing barn building, which forms part of the Old Mill Equestrian Centre, into a 3-bedroom residential property.

Clement Street, which provides the site access, lies to the north of the site. Greenfield land lies to the south and existing properties are immediately adjacent to the property to the East and West.

This note has been prepared to detail the proposed drainage solution for the site.

Surface Water Design

The existing building is being converted into a residential property. The existing surface water drainage serving the property will be maintained. There will be no increase in impermeable area as a result of the development and as such there will be no increase in discharge rates when compared to the pre-development scenario.

Foul Water Design

As detailed above, the development involves changing an existing barn to residential use. The existing barn did not provide any foul water facilities. Due to the absence of public sewers within the site vicinity, it is intended that foul water disposal will be via infiltration into the ground. A treatment plant is also proposed to ensure foul flows receive two stages of treatment prior to discharge into the ground.

Drainage disposal will be via a conventional piped system which will convey flows to the package treatment plant. From here, flows are then piped towards the drainage field which has been located 15m away from the dwelling (as per requirements of Building Regulations Part H).

Soakage testing has been carried out on site and the treatment plant has been sized based on this and the usage requirements. Refer to drawing 36810/C/001 which details routes and sizes further.

As detailed by the Environment Agency, the operator of a small sewage treatment plant will not need a permit so long as all of the 'General Binding Rules' that apply are met. The next section of this note will demonstrate that these have all been considered and met.

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General Binding Rules

The following detail the rules that should be met as taken from EA requirements. As the proposal is to discharge into the ground, only some of these rules are relevant as per those highlighted below:

The following general binding rules apply to all small sewage discharges

Rule number	Discharges to surface water	Discharges to ground	General binding rule
1	No	Yes	The discharge must be 2 cubic metres or less per day in volume.
2	Yes	No	The discharge must be 5 cubic metres or less per day in volume.
3	Yes	Yes	The sewage must only be domestic.
4	Yes	Yes	The discharge must not cause pollution of surface water or groundwater.
5	No	Yes	The sewage must receive treatment from a septic tank and infiltration system (drainage field) or sewage treatment plant and infiltration system.
6	Yes	No	The sewage must receive treatment from a sewage treatment plant.
7	No	Yes	The discharge must not be within a groundwater Source Protection Zone 1 or within 50 metres from any well, spring or borehole that is used to supply water for domestic or food production purposes.
8	Yes	No	For discharges in tidal waters, the discharges outlet must be below the mean spring low water mark.
9	Yes	Yes	All works and equipment used for the treatment of sewage effluent and its discharge must comply with the relevant design and manufacturing standards, i.e. the British Standard that was in force at the time of the installation, and guidance issued by the appropriate authority on the capacity and installation of the equipment.
10	Yes	Yes	The system must be installed and operated in accordance with the manufacturer's specification.
11	Yes	Yes	Maintenance must be undertaken by someone who is competent.
12	Yes	Yes	Waste sludge from the system must be safely disposed of by an authorised person.
13	Yes	Yes	If a property is sold, the operator must give the new operator a written notice stating that a small sewage discharge is being carried out, and giving a description of the waste water system and its maintenance requirements.
14	Yes	Yes	The operator must ensure the system is appropriately decommissioned where it ceases to be in operation so that there is no risk of pollutants or polluting matter entering groundwater, inland fresh waters or coastal waters.

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For a new discharge, which is one that was started on or after 1 January 2015, the following general binding rules also apply

Rule number	Discharges to surface water	Discharges to ground	General binding rule
15	Yes	Yes	New discharges must not be within 30 metres of a public foul sewer.
16	Yes	Yes	For new discharges, the operator must ensure that the necessary planning and building control approvals for the treatment system are in place.
17	Yes	No	New discharges must not be in or within: 500 metres of a Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site, biological Site of Special Scientific Interest (SSSI), freshwater pearl mussel population, designated bathing water, or protected shellfish water; 200 metres of an aquatic local nature reserve; 50 metres of a chalk river or aquatic local wildlife site.
18	No	Yes	New discharges must not be in, or within 50 metres of, a Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site, or biological Site of Special Scientific Interest (SSSI), and must not be in an Ancient Woodland.
19	Yes	No	New discharges must be made to a watercourse that normally has flow throughout the year.
20	Yes	No	For new discharges, any partial drainage field must be installed within 10 metres of the bank side of the watercourse.
21	Yes	No	New discharges must not be made to an enclosed lake or pond.

Compliance with General Binding Rules

The following section describes how the proposed drainage strategy meets each of the applicable General Binding Rules.

Rule 1: The discharge must be less than 2 cubic metres or less per day

- This is met as the development will generate 0.75 cubic metres per day as per calculation below:

Daily discharge calculator for domestic properties				V2.0 July 2019
Use this calculator to work out how much effluent your septic tank or small sewage treatment plant will discharge a day when it's being used to treat the sewage from one or more houses or flats.				
Number of properties	1	→	Enter the number of properties which are connected to the plant	
Number of bedrooms	3	→	Enter the total number of bedrooms for all of the properties and press return	
Cubic metres a day	0.75	→	This is how much treated sewage your plant will discharge a day	
For example, if you have 2 houses sharing a septic tank, one with 3 bedrooms and the other with 4, enter 2 for the number of properties, 7 for the number of bedrooms, and this will give you a result of 1.65 cubic metres a day.				

Rule 3: The discharge must only be domestic

- This is met as the development only includes residential uses

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Rule 4: The discharge must not cause pollution of surface water or groundwater

- This is met as the development includes the use of a treatment plant and drainage field as required under Building Regulations Part H.

Rule 5: The sewage must receive treatment from a septic tank and infiltration system or sewage treatment plant and infiltration system.

- This is met as the development includes the use of a treatment plant and drainage field, this is evidenced on the drainage design drawing.

Rule 7: The discharge must not be within a groundwater Source Protection Zone 1 or within 50 metres from any well, spring or borehole that is used to supply water for domestic or food production purposes

- As detailed on Magic Map, the site does not fall within Source Protection Zone 1:



Rule 9: All works and equipment used for the treatment of sewage effluent and its discharge must comply with the relevant design and manufacturing standards, i.e. the British Standard that was in force at the time of the installation, and guidance issued by the appropriate authority on the capacity and installation of the equipment.

- The proposed treatment plant is a Klargestar Biodisc BA which is compliant with UK Building Regulations

Rule 10: The system must be installed and operated in accordance with the manufacturer's specification.

- Agreed and houseowners will be provided operation and maintenance requirements as received from the treatment plant manufacturer

Rule 11: Maintenance must be undertaken by someone who is competent.

- Agreed and houseowners will be provided operation and maintenance requirements as received from the treatment plant manufacturer. Maintenance to only be carried out by competent persons.

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Rule 12: Waste sludge from the system must be safely disposed of by an authorised person.

- Agreed, maintenance (including sludge removal) will be carried out by competent persons in accordance with manufacturers requirements.

Rule 13: If a property is sold, the operator must give the new operator a written notice stating that a small sewage discharge is being carried out, and giving a description of the waste water system and its maintenance requirements

- Agreed, this is to be actioned if the property is sold

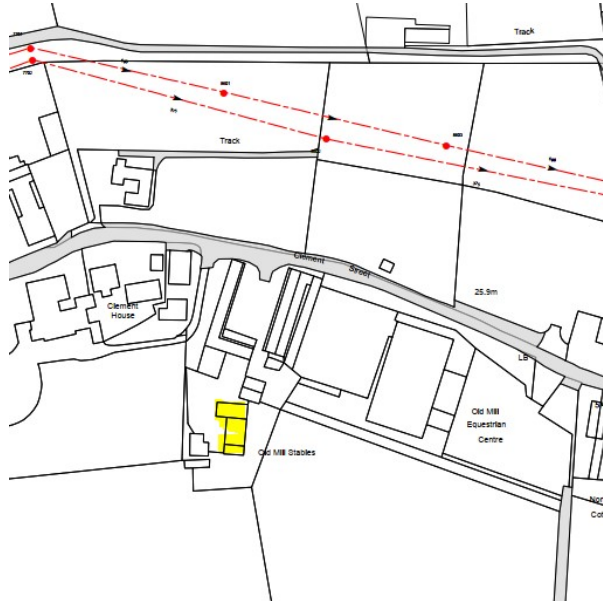
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Rule 14: The operator must ensure the system is appropriately decommissioned where it ceases to be in operation so that there is no risk of pollutants or polluting matter entering groundwater, inland fresh waters or coastal waters

- Agreed, this is to be actioned if the system is to be decommissioned

Rule 15: New discharges must not be within 30 metres of a public foul sewer.

- As detailed below, the dwelling (highlighted) is not within 30m of the public foul sewer to the North:

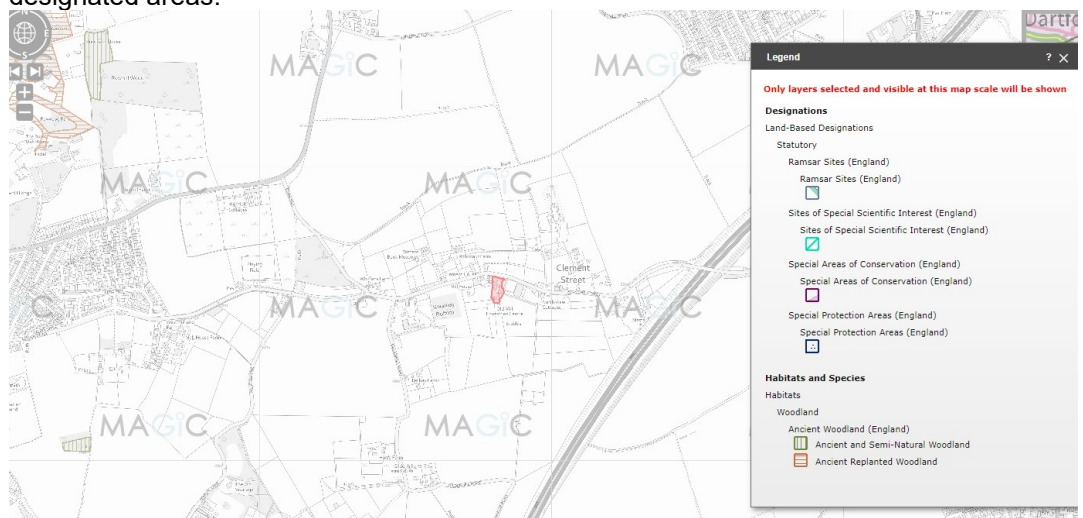


Rule 16: For new discharges, the operator must ensure that the necessary planning and building control approvals for the treatment system are in place

- Appropriate planning condition discharge will be sought prior to construction

Rule 18: New discharges must not be in, or within 50 metres of, a Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site, or biological Site of Special Scientific Interest (SSSI), and must not be in an Ancient Woodland.

- As detailed on Magic Map, the site does not fall within 50m of any of the above designated areas:



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Conclusion

The site does not increase surface water discharge rates compared to the pre-development scenario.

Foul water is disposed of via treatment plant and infiltration into the ground.

The foul water disposal meets all of the applicable General Binding Rules for Small Sewage Discharge to the Ground as set out by the Environment Agency.