



**DRAINAGE RECOMMENDATION REPORT**  
**PROPOSED EXTENSION & ALTERATIONS TO**  
**3 HATTON COTTAGES**  
**ARNISH**  
**LAURENCEKIRK**  
**ABERDEENSHIRE**  
**AB30 1PR**

***Client/Applicant:*** Ms L. Kaczmarek and Mr G Stewart

***Agent:*** Louise Rae Architect

***Contract No.*** 2650/20

***Report Issued:*** 7<sup>th</sup> December 2020

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**DRAINAGE RECOMMENDATION REPORT**  
**PROPOSED EXTENSION & ALTERATIONS**  
**3 HATTON COTTAGES**  
**ARNISH**  
**MARYKIRK**  
**LAURENCEKIRK**  
**ABERDEENSHIRE**  
**AB30 1PR**

**INTRODUCTION**

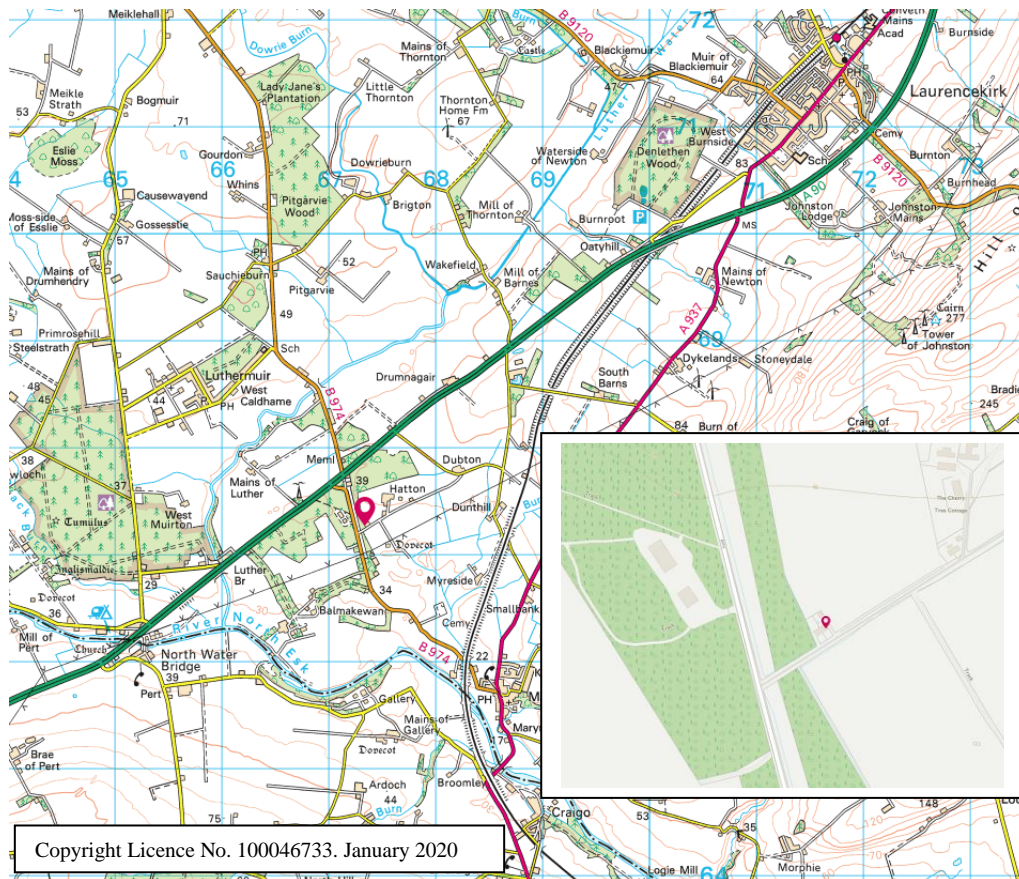
At the request of Louise Rae on the behalf of Ms L. Kaczmarek and Mr G Stewart, a site and ground assessment were undertaken at 3 Hatton Cottages, Arnish, Marykirk, Laurencekirk.

It is proposed to alter and extend the existing dwellinghouse.

The purpose of the visit was to assess the existing drainage systems serving the site and to make recommendations for the proposed development.

**SITE LOCATION**

The site is located at 3 Hatton Cottages to the south-west of Laurencekirk with access off the A90, OS NGR N0 67343 67265 (approx. centre of site), see general and site location plans below: -



## **WALKOVER SURVEY**

On the 9<sup>th</sup> October 2020, a walkover survey was undertaken to assess: -

- the existing drainage serving the property
- locate, measure, and inspect the existing septic tank
- the foul water discharge
- the surface water disposal

### ***Existing Septic Tank***

The existing dwellinghouse is served by 3,800-litre capacity modern moulded septic tank with a concrete cover. The septic tank is shared with No. 4 Hatton Cottages (next door) located under their driveway.

### ***Foul Water Discharge***

The septic tank discharges to a drain under the public road (unclassified) along the road edge and then into an overgrown area where the foul water soakaway is located.

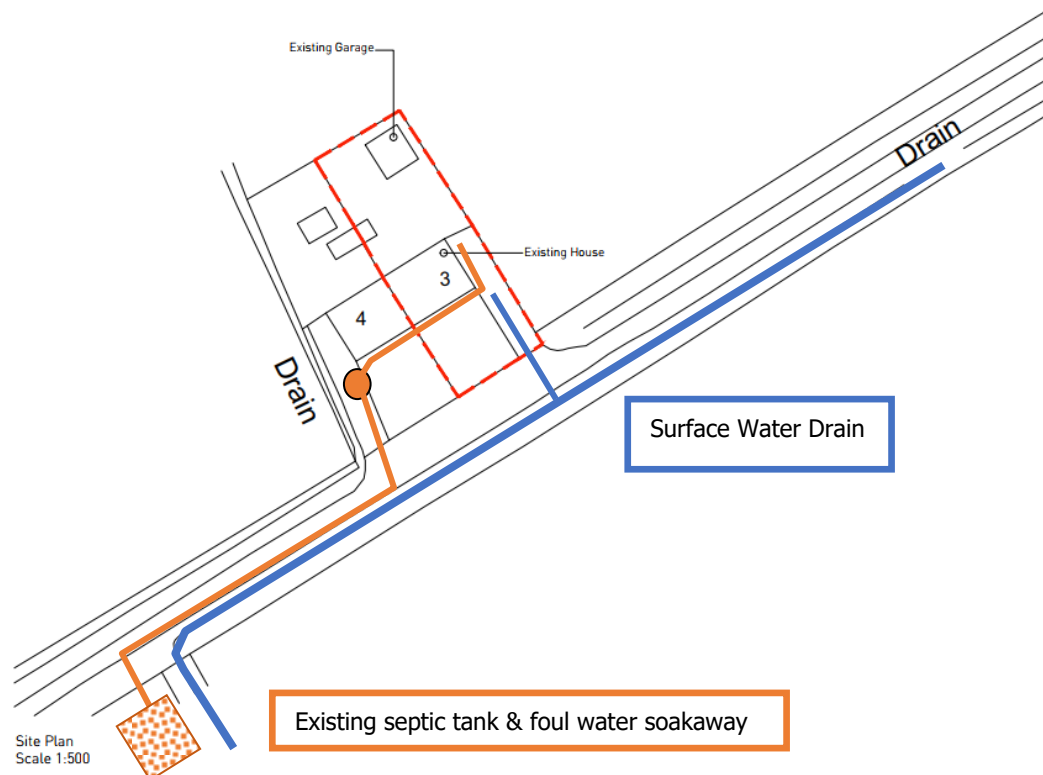
### ***SEPA***

The foul water discharge is registered with SEPA under CAR, Registration Ref. CAR/R/1045419, 2 September 2009, a copy of the registration certificate is at the end of this report.

### ***Surface Water Disposal***

All the surface waters from the existing dwellinghouse are directed to a drain under the road and into the roadside surface water drain.

The existing drainage layout is shown on the site sketch below: -



Both the septic tank and foul water discharge appear to be working effectively and efficiently with no known failures or incidents.

## **DISCUSSION**

### ***Sewage Treatment***

The existing septic tank serves: -

- No. 3 currently has three/four bedrooms increasing to four/five bedrooms
- No. 4 has two bedrooms

The updated/new PE=12 therefore the required capacity is 12 x 150 + 2,000 + 3,800-litres.

### ***Foul Water Discharge***

The existing foul water discharge is registered for PE=10.

- No. 3 currently has three/four bedrooms increasing to four/five bedrooms (PE=7)
- No. 4 has two bedrooms (PE=5)

The updated/new PE=12, an increase of 20%.

## **RECOMMENDATIONS**

### ***Sewage Treatment***

The existing septic tank has sufficient capacity for the proposed development at No. 3, no further action is required.

### ***Foul Water Discharge***

It is considered that the additional loading on the foul water soakaway will not be detrimental to its effectiveness however it is recommended that the infiltration area is checked regularly (at least annually) and that if any vegetation discoloration or ground level saturation becomes visible remedial action should be undertaken.

### ***SuDS***

The disposal of surface waters from the dwellinghouse needs to be assessed in terms of both the quantity and the quality of the discharge for Building Regulations and SEPA. Using the SIA tool, the land use run-off quality has been determined as 'Very Low', see summary below: -

Land Use Type	<b>Residential Roofing</b> ( & permeable gravel hardstanding)
Pollution Hazard Level	<b>Very Low</b>
Pollution Hazard Indices	TSS 0.2 Metals 0.2 Hydrocarbons 0.05
SuDS Component Proposed Component 1	<b>Filter Drain</b> <b>discharging to surface waterbody)</b>
SuDS Pollution Mitigation Indices	TSS 0.4 Metals 0.4 Hydrocarbons 0.4
Groundwater Protection Type	<b>None</b>
Combined Pollution Mitigation Indices	TSS 0.4 Metals 0.4 Hydrocarbons 0.4
Acceptability of Pollution Mitigation	TSS <b>Sufficient</b> Metals <b>Sufficient</b> Hydrocarbons <b>Sufficient</b>

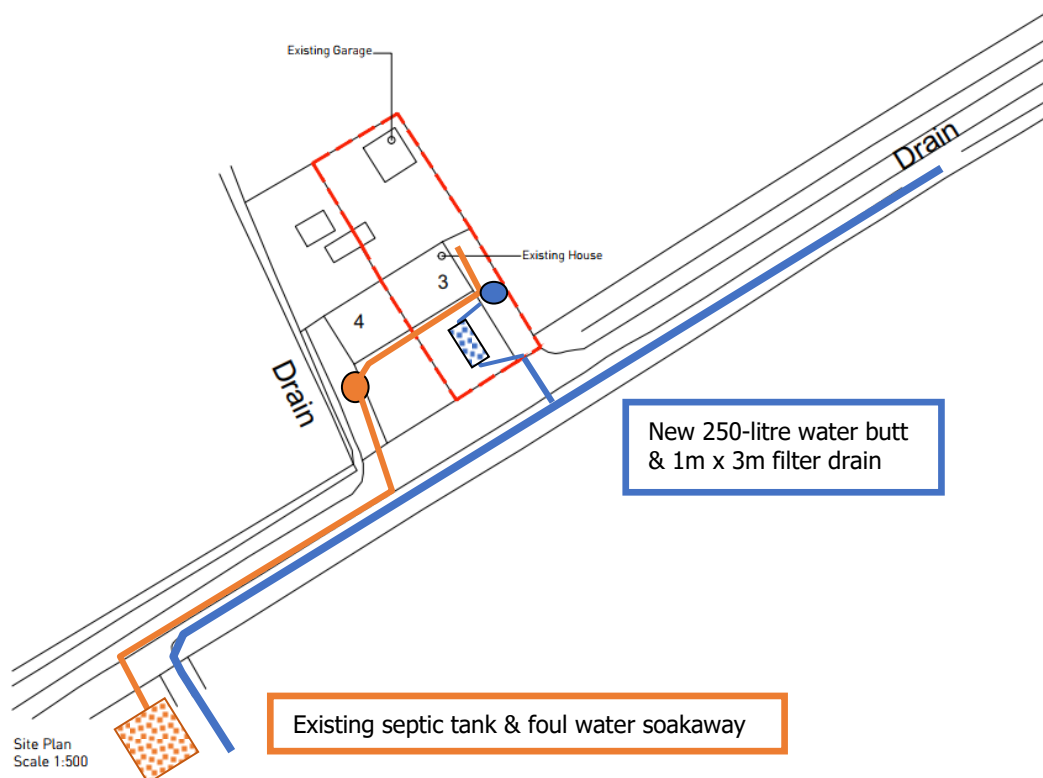
**Surface Water Disposal**

The above assessment concludes that the proposed development is suitable for the installation of a filter drain which will provide the one component of treatment for the surface waters from the roof areas of the proposed extension prior to disposal to the existing surface water drain.

The quantity of the discharge must also be controlled to ensure that the proposed development does not increase the pre-development flow of the watercourse. The size of the proposed filter drain prior to discharge to the watercourse is based on the impermeable surface area of the development i.e. the roof area of the new house, see table below: -

Impermeable Area (m <sup>2</sup> )	Filter Drain L x W x Depth	Discharge
New House Extension Roof Areas Up to <b>40m<sup>2</sup></b>	1 x 250-litre water butt + 1m x 3m x 1m	100mm diameter outlet drain to the existing surface water drain

All the above dimensions are based on a 1 in 200-year storm event +30% allowance for climate change. Calculations have been carried out in accordance with BRE Digest 365



Our Ref: CAR/R/1045419  
Your Ref:

The Occupier  
Arnish  
Laurencekirk  
AB30 1PR

2 September 2009

**WATER ENVIRONMENT (CONTROLLED ACTIVITIES) (SCOTLAND) REGULATIONS 2005  
("THE 2005 REGULATIONS")  
NOTIFICATION OF REGISTRATION: DISCHARGE (SEWAGE)  
Registration Reference: CAR/R/1045419**

Further to your application received on 19 May 2009 for authorisation under regulation 8 of the 2005 Regulations, the Scottish Environment Protection Agency ("SEPA") hereby notifies you that it has granted your application and has authorised the carrying on of the controlled activity specified below at the site specified below ("the Authorised Activity"), subject to the conditions specified below, from the date specified below, by registering the following particulars in the register maintained by it under regulation 33 of the 2005 Regulations.

Site Details	
Site	4 Hatton Cottages Arnish
Address or Location	Laurencekirk
Postcode	AB30 1PR

**Authorised Activity**

The discharge of sewage effluent from a treatment system serving the above properties to land via a soakaway at national grid reference NO 6733 6725.

**Conditions of authorisation**

1. The discharge of sewage effluent shall be from a population equivalent not exceeding 10.
2. Prior to discharge, the effluent shall be treated by septic tank.
3. Other than as specifically permitted or limited by any condition of this authorisation, the controlled activity authorised shall not have a significant adverse impact on, or cause pollution of, the water environment.

Scottish Environment Protection Agency

4. The treatment system specified in Condition 2 above shall be operated and maintained in accordance with the manufacturer's or designer's recommendations, and in any event, shall be maintained in good working order.

**Date of Authorisation**

12 June 2009.

Should you have any queries regarding this authorisation, please contact the Registry Department at the Perth office on 01738 627 989.

**NOTES**

1. It is an offence under regulation 40(1)(c) of the 2005 Regulations to fail to comply with or contravene a registration (including any condition imposed).
2. If you are aggrieved by any of the terms and conditions attached to your registration you have a right of appeal to the Scottish Ministers under regulation 46(c) of the 2005 Regulations. The bringing of an appeal against a condition will not have the effect of suspending the operation of the condition. You may also appeal if you have been granted a form of authorisation which is different from the form of authorisation which you believe ought to have been granted, under regulation 46(b) of the 2005 Regulations. Any such appeal should be made in writing to the Scottish Ministers within 3 months of the date of this notification. The detailed provisions for appeals are set out in Schedule 9 of the 2005 Regulations. Appeals should be sent to:

**The Scottish Ministers**  
Scottish Executive  
Air Climate & Engineering Unit  
Determinations Team  
Area 1-G (North)  
Victoria Quay  
Edinburgh, EH6 6QQ

Scottish Environment Protection Agency