Northumberland National Park Authority

PLANNING SERVICE

NON MAINS DRAINAGE INFORMATION

Town and Country Planning Act 1990
Town and Country Planning (General Development Procedure) Order 1995
Town and Country Planning (Applications) Regulations 1988

Please complete this form if your proposal includes the use of non-mains drainage

In order that Northumberland National Park Authority and the Environment Agency can adequately assess the suitability of proposals for the use of non-mains drainage, we require the completion of this form. All the relevant information requested must be supplied. Failure to do so will result in your planning application being treated as invalid. It should be noted that completion of this form does not in itself amount to compliance with the requirements to undertake a non-mains drainage assessment specified in DETR Circular 03/99.

1. Please indicate distance to nearest mains drainage: 1500m
(If less than 100m, please justify why connection cannot be made)
Mains drainage information is held by Northumbrian Water Ltd
Tel: 0191 383 2222

2. Number of occupiers of proposed development:

Full time: 0

Part time (e.g. non-domestic premises): 2

3. Numbers of previous/existing occupiers:

Full time: 0

Part time (e.g. non-domestic premises): 0

4. What method of foul drainage is proposed? *Please circle as applicable*

Package Treatment Plant Septic Tank Cess Pool Other

5. a) Is this a new or a change to or replacement of an existing system? ……NO…….

b) Is it proposed to utilise an existing system? ……YES…….

6. If discharge to soakaway is proposed, please attach percolation test results (see notes). If discharge is to a watercourse, please give details:
DISCHARGE TO THE WHITEFIELD BURN AS INDICATED ON ATTACHED DRAWING N04.

7. A plan showing the location of the proposed non-mains drainage apparatus in relation to the rest of the site should be supplied at no greater than 1:500 scale, if this has not already been included in the planning application. The plan should indicate the location of any watercourses, springs or boreholes. DRAWING ATTACHED.

8. *Package treatment plant only*
If a Package Treatment Plant is proposed, please supply details of either the plant capacity or plant manufacturer and model
ECS MATRIX CLF5 (30 POPULATION EQUIVALENT) CERTIFIED TO BSEN12566-3.

9. *Septic tanks only*
If a septic tank is proposed, please supply details of either the tank capacity or plant manufacturer and model.

10. *Cess pool only*
If a cess pool is proposed, please indicate why this method has been chosen in preference to alternatives such as a package treatment plant or septic tank. It should be noted the use of cess pools is contrary to Environment Agency policy and will not normally be an acceptable means of foul drainage disposal.

Please advise capacity of cess pool (min capacity 18 cubic metres):
…….

Note: a discharge consent from the Environment Agency may be required for discharge from a treatment plant to watercourse or soakaway.

NOTES:

Percolation Test

Avoid carrying out this test in extreme weather conditions such as drought, frost and heavy rain.

a) Excavate three holes 300mm square to a depth of 250mm below the proposed invert level (bottom of the pipe) of the land drain and space them evenly along the proposed line of the sub surface irrigation system.

b) Fill each hole with water to allow to seep away overnight

Next day, refit each hole with water to a depth of no more than 300mm and observe the time in seconds for the water to seep away completely.

d) Divide each figure by the depth of water in millimetres placed in the hole. This answer gives the time required (in seconds) for the water to drop 1 mm.

*This is the **percolation value** (in seconds)*

e) The average figure for the percolation value (V) is obtained by summing all three values and dividing by three.

f) If the percolation value exceeds 100sec/mm, then ground conditions may be unsuitable for discharge from a septic tank system and an alternative means of disposal will have to be considered to avoid ponding of septic effluent on the surface due to inefficient soakage.

g) For domestic premises, the floor area of soakaway land drains (A - square metres) required may be calculated from:

$A = P \times V \times 0.25$

Where,

P is the number of persons served by the tank
V is the percolation value described above

If in doubt, consult your professional advisor

PACKAGE SEWAGE TREATMENT PLANT LOAD ASSESSMENT

HEPPLE WHITEFIELD

EXISTING SEWAGE TREATMENT PLANT DETAILS

ECS MATRIX CLF5 (30 Population Equivalent - 6.0m3/day)

PROPOSED LOADING

Loading Calculation per British Water Code of Practice – 'Flows and Loads – 3'

1 No. Existing 10 Bedroom Property	= 13 P (Persons)
3 No. Existing 2 Bedroom Properties (3x5P)	= 15 P
1 No. Existing 3 Bedroom Property	= 5 P
Total	= 33 P

For Population of 26 – 50 P Multiply the total by 0.8 to give an adjusted P :-

33 P x 0.8 = 26.4 P rounded up to 27 P

27 P at 180 l/Day/Person = 4,860 litres/day.

2 No. Proposed Part Time Day Staff at Distillery at 45 l/day/person = 90 litres/day

Total Load = 4,860 + 90 = 4,950 litres/day or 4.95m3/day.

4.95 m3/day < 6.0m3/day (CLF5), therefore, Treatment Plant Capacity OK.

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MATRIX
Sewage Treatment Systems

EN 12566-Pt 3.
Certified 96.2% average efficiency

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Efficient, realiable, sewage treatment systems for all residential, commercial and Industrial applications

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MATRIX
Sewage Treatment Systems

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For any application, residential, commercial, industrial, where there is no access to a mains sewer, the **MATRIX** sewage treatment plant provides an extremely efficient, reliable and cost effective solution to sewage disposal. The **MATRIX** system is a single tank unit up to 300 residential population equivalent and a modular system for larger applications.

Performance

With the imminent implementation of mandatory legislation, the **MATRIX** treatment plant has undergone extensive independent testing in accordance with EN12566-3 making it fully compliant with the new European Standard. It is important to note that the new standard relates to ALL units in the range from 6 person (residential equivalent) to 50 person (residential equivalent) and includes for process and structural testing, including installation in groundwater conditions. All **MATRIX** treatment plants in the range to 50pe have been fully tested in all aspects of EN12566-3 with the achievement of market leading results.

The **MATRIX** sewage treatment system is designed to achieve the minimum required effluent quality standard of 20mg/litre Biochemical Oxygen Demand (BOD) : 30mg/litre Suspended Solids (SS) : 20mg/litre Ammoniacal Nitrogen (NH4), which in European Standard performance testing relates to an efficiency of better than 94%, the certified performance of the **MATRIX** system is that it produces an average final effluent quality of 11mg/litre Biochemical Oxygen Demand (BOD) : 16mg/litre Suspended Solids (SS) and 7mg/litre Ammoniacal Nitrogen. This relates to an average efficiency ratio of 96.2%, better than most other manufacturers, with individual test efficiency results being as high as 98.8%. As part of the test procedure the MATRIX system was proven to have one of the lowest operating costs.

Process

The **MATRIX** treatment system is a three stage biological process contained within a single tank structure, based on the principles of a submerged bed reactor and designed in accordance with the requirements of BS6297. Careful configuration of the internal flowpath and the inclusion of non-mechanical recirculation systems ensures optimal process performance as demonstrated by the exceptional results obtained from the independent testing, providing complete peace of mind for the end user. There are NO electrical or mechanical components within the treatment plant thereby eliminating the need for any specialist servicing arrangements ensuring that any maintenance requirements on the MATRIX system are kept to an absolute minimum.

CLF1 - 6pe Fully Installed.

CLF1 - 6pe Treatment Plant ready for delivery.

CLF9 - 70pe Treatment Plant being Loaded.

Servicing & Maintenance

The **MATRIX** system has minimal mechanical components and therefore requires only simple maintenance procedures ensuring that, whether it is a 6 person unit or a 300 person unit, annual maintenance costs remain the least of your worries.

Please contact us for a competitive maintenance quotation.

ENVIRONMENTAL CONSTRUCTION SOLUTIONS LIMITED

MATRIX
Sewage Treatment Systems

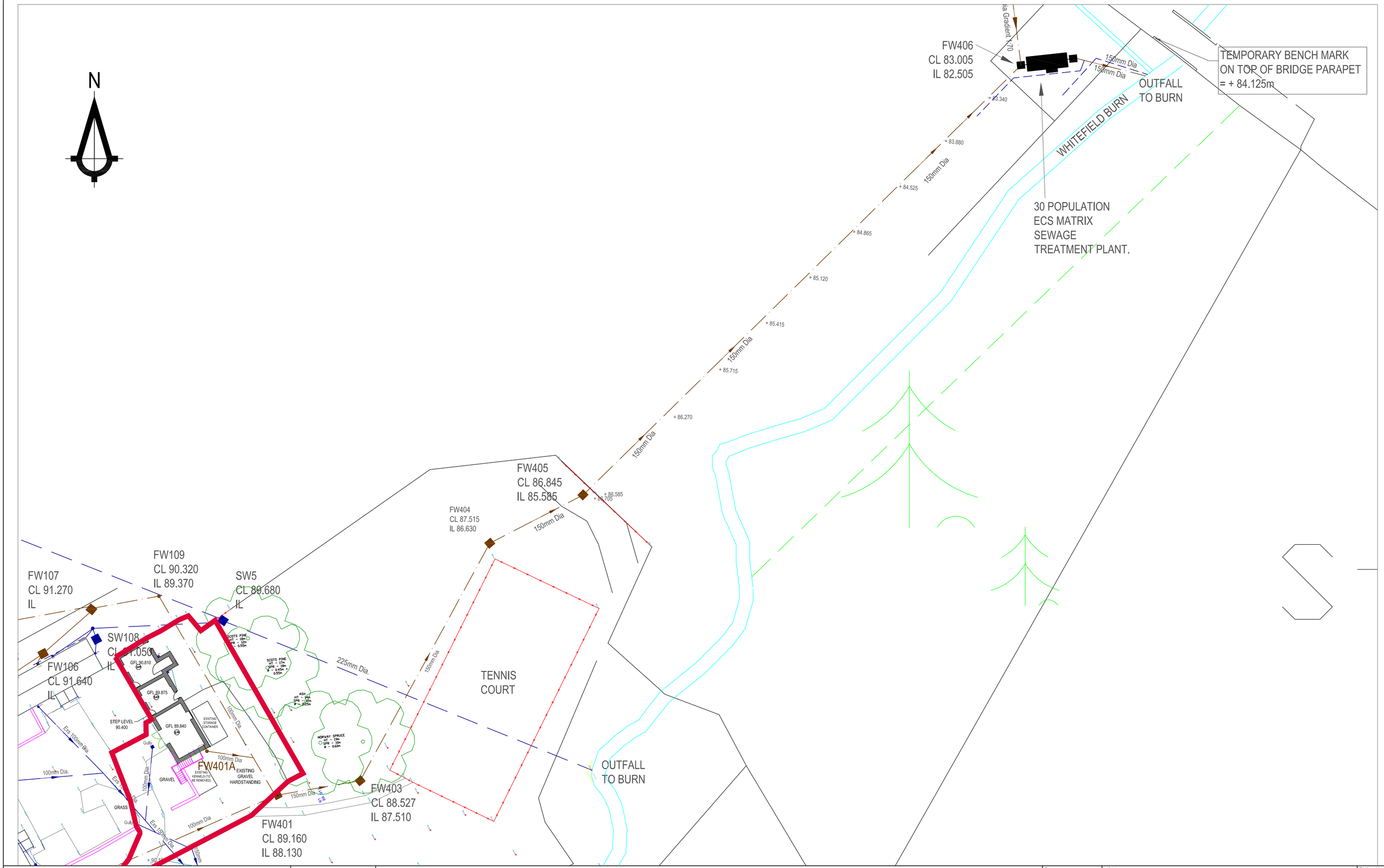
Tel: +44 (0) 8456 123 332
Fax: +44 (0) 8456 123 334

TECHNICAL DATA

Model Ref	PE	BOD/day kg	Flow/day M3	Length mm	Width mm	Depth mm	Std Inlet mm	Weight kg	Blower Rating
CLF 1	6	0.36	1.20	1500 diameter		2100	110	250	60 w
CLF 2	12	0.72	2.40	1900 diameter		2100	110	350	80 w
CLF 3	18	1.08	3.60	2500 diameter		2100	110	600	120 w
CLF 4	25	1.50	5.00	4710	1500	2174	160	1200	120 w
CLF 5	30	1.80	6.00	4010	2124	2174	160	1400	0.55 kw
CLF 6	40	2.40	8.00	5060	2124	2174	160	1700	0.55 kw
CLF 7	50	3.00	10.00	5610	2124	2174	160	1900	0.55 kw
CLF 8	60	3.60	12.00	6010	2124	2174	160	2100	0.75 kw
CLF 9	70	4.20	14.00	6810	2124	2174	160	2200	0.75 kw
CLF 10	80	4.80	16.00	6760	2524	2174	160	2300	0.75 kw
CLF 11	90	5.40	18.00	7360	2524	2174	160	2650	1.10 kw
CLF 12	100	6.00	20.00	7760	2524	2174	160	2900	1.10 kw
CLF 13	125	7.50	25.00	8200	1500	2900	160	3000	1.50 kw
CLF 14	150	9.00	30.00	9200	1500	2900	160	3250	1.50 kw
CLF 15	200	12.00	40.00	10500	1500	2900	160	3400	2.20 kw
CLF 16	250	15.00	50.00	11500	2250	2900	160	3600	2.20 kw
CLF 17	300	18.00	60.00	12000	2400	2900	160	3850	2.20 kw

MATRIX Benefits

- Free nationwide site surveys and technical proposal with no obligation.
- Full technical back up and customer service support.
- Free consent to discharge applications. (statutory fees only).
- Nationwide network of service engineers
- Supply only or full supply and installation through certified installers.
- Single tank installation to minimize costs
- Failure alarm systems as standard, not at additional cost
- GSM telemetry dial out alarm units available at small additional cost
- No mechanical or electrical parts within the unit.
- Robust Polypropylene construction for easy and cost effective installation
- No visual intrusion. Flat, flush ground level covers suitable for 1 tonne load.
- Simple installation in vehicular areas, up to D400 loading.
- Low running and maintenance costs
- Integral discharge pumps where required (all models) no additional tanks.
- Deep inlet inverts available to avoid pumping crude sewage to plant.



Rev	Date	Drawn	Checked	Details
7				
8				
9				
10				
11				
12				

Rev	Date	Drawn	Checked	Details
1	03/02/14	DW		SITE BOUNDARY AT COTTAGES OUTBUILDINGS ADDED.
2	24/2/14	DW		Drawing updated with topographic survey around stable yard.
3				
4				
5				
6				

Drawn
DW

Checked

Scale/s
1:250

Date Drawn
Nov 2011

Client
SIR WALTER RIDDELL

Project Title
DRAINAGE SYSTEM
HEPPLE WHITEFIELD ESTATE

Drawing Title
EXISTING DRAINAGE SYSTEM LAYOUT,
WHITEFIELD COTTAGES TO
PACKAGE SEWAGE TREATMENT PLANT

Project Number
2008/06

Drawing Number
N04

Revision
2

Sheet Size
A1