Huntingdonshire
DISTRICT COUNCIL

PERMIT

Pollution Prevention and Control Act 1999

Environmental Permitting (England and Wales) Regulations 2007

Permit Reference No: A09/09

Huntingdonshire District Council (the regulator) hereby permits Wedge Group Galvanizing Ltd Stafford Street Willenhall West Midlands WV13 1RZ to operate a hot dip galvanizing process as defined in Part 2 of Schedule 1 to the EP Regulations Section 2.3 Part A(2) (a), and as described below in accordance with the following conditions which shall apply forthwith.

Address of permitted activity: East Anglian Galvanizing Ltd
Old Great North Road
Sawtry
Huntingdon
PE28 5XN

Description of Activity

The galvanizing process located at A09/09 (a) location plan involves pre-treating steelwork components and fabricated items in various solutions for 'cleaning' prior to dipping into a bath of molten zinc. The galvanized work is then left to cool by air or is quenched in a further process tank.

The pre-treatment lines incorporate the following tanks:
Degreasing: Work is immersed in a hot alkaline degrease solution (40-70°C) in order to remove any oil or grease that may be present.

Pickling: Work is immersed in a tank containing dilute hydrochloric acid where any oxidation of the steel (surface rust) and mill scale is removed.

Acid Stripping: The 'weakest' acid tank is nominated to be the stripping tank and is used for stripping zinc from reject/ modified work and jigs, hooks and baskets.

Rinsing: After work has been pickled correctly it is immersed in a static water rinse tank in order to wash away the acid from the surface.

Fluxing: After the work has been rinsed it is immersed in a hot pre-flux tank (55-80°C) in order to prevent any oxidation taking place prior to the work being dipped in the molten zinc.

Drier: After the work has been pre-fluxed it is placed in a drier where the temperature of the work is elevated to over 100°C.

Galvanizing: After the work has been pre-fluxed it is taken to the galvanizing bath and then lowered into molten zinc at a temperature that is normally between 440-452°C. As the work is lowered into the zinc the temperature is brought up to the same temperature as the molten zinc and a metallurgical reaction takes place which creates a zinc/iron alloy layers at the surface. As the work is being lowered into the zinc a fume is given off from the dried pre-flux film on the work and is contained within a steel enclosure above the galvanizing bath. The fume is extracted from the enclosure and ducted to an external stack where it is released to the atmosphere.

Post treatment: After the work has been galvanized it is immersed in a passivation tank which contains a very dilute proprietary passivate solution.

A process flow diagram can be found at A09/09 (b) Process flow diagram

Conditions

	Pollutant	Source	Emission limit	Type of monitoring	Frequency of monitoring
1	Particulate matter	Main stack	15mg/m^3 (1)	Manual extractive test	Annual
2	Particulate matter	Whole site	No persistent visible emissions	Operator observations	Daily
3	Zinc (total)	Final water discharge point	No significant deterioration of environmental water quality standards	Manual test (2)	Annual
4	Ammonia (total)	Final water discharge point	No significant deterioration of environmental water quality standards	Manual test (2)	Annual
5	pH	Final water discharge point	No significant deterioration of environmental water quality standards	Manual test (2)	Annual
6	Pickle liquor parameters	Pickling tanks	Optimum pickling rate (3)	Standard Titration	Weekly

(1) Monitoring to determine compliance with emission limit values shall be corrected to the following standard reference conditions: temperature 273.15K (0°C), pressure 101.3 kPa (1 atmosphere) and measured wet, no correction for water vapour.
(2) Monitoring locations shown in A09/09 (c) water monitoring location
(3) As described in Sector Guidance Note SG5 (06) appendix 3

7. In the case of abnormal emissions, including accidents, incidents, breakdowns and exceedences of emission limits the operator shall:
   (a) Investigate and undertake remedial action immediately
   (b) Promptly record the events and actions taken
   (c) Ensure the regulator is made aware without delay
   (d) Where there is immediate danger to human health, operation of the activity shall be suspended.

8. The operator shall notify the regulator at least 7 days before any periodic monitoring exercise.

9. The results of non-continuous emission testing, described in conditions 1, 3, 4 & 5 shall be forwarded to the regulator within 8 weeks of the completion of the sampling. All results submitted shall include details of process conditions at the time of monitoring, monitoring uncertainty, as well as any deviations from the procedural requirements of standard reference methods and the error invoked from such deviations.

10. Where available, operators shall use monitoring equipment and instruments certified to MCERTS and use a stack testing organisation accredited to MCERTS standards or such alternative requirements as approved by the regulator.

11. Operations shall be controlled to minimise fugitive emissions.

12. All stack heights shall be a minimum of 3 metres above roof ridge height within a distance of 5 times the uncorrected stack height and in no circumstances shall be less than 8 metres above the ground level. The only exception to this is will be when emissions monitoring is being undertaken as the exhaust has been modified to comply with emission monitoring standards.

13. The introduction of dilution air to achieve emission concentration limits shall not be permitted.

14. Dispersion levels shall be sufficient to provide adequate dispersion.

15. Stacks shall not be fitted with any restriction at the final opening such as a plate, cap or cowl, with the exception of a cone which may be necessary to increase the exit velocity of the emissions.

16. The following audits shall be undertaken within the timescale specified and made available to the regulator

(a)	Materials usage	Annual
(b)	Energy consumption and efficiency	Annual
(c)	Waste minimisation	Every 4 years
(d)	Water efficiency	Every 4 years

17. Specific improvements resulting from the recommendations of audits shall be carried out within a timescale approved by the regulator.

18. The operator shall keep records of audits, inspections, tests, monitoring, breakdowns and maintenance.
    (a) Current records shall be kept on site
    (b) Records shall be kept by the operator for at least four years
    (c) Records shall be made available for the regulator to examine

19. All materials including wastes shall be stored, transferred and disposed of in an appropriate manner.

20. The operator shall ensure that all operations, including deliveries, are carried out using the highest degree of control to minimise spillages, carryover of agents, noise, leaks and dust emissions.

21. All spillages shall be cleared up as soon as possible; solids by vacuum cleaning, wet methods or other appropriate techniques. Dry sweeping of dusty spillages shall not be permitted in circumstances where it may result in the generation of airborne dust outside any building. Liquid spillage shall be cleaned by addition of absorbent or by run-off to contained drainage systems.

22. The operator shall ensure that all appropriate containment methods are employed and maintained to minimise energy loss, evaporation and energy efficiency from all heated tanks.

23. Stripping shall be carried out in separate baths to pickling.

24. Water from rinse tanks shall be used to make up fresh pickling baths or as top up to replace any evaporative losses from pickling tanks.

25. The operator shall control the iron content of the flux solution in order to minimise dross production at the dipping stage, which shall be recorded annually.

26. Dry fluxing shall be used including the use of a special low fume flux.

27. Emissions from the galvanizing process shall be adequately contained by enclosure doors and extracted to prevent fugitive emissions from the building.

28. The enclosure doors mentioned in condition 27 shall remain closed whilst work is lowered into the bath and until any fumes produced have subsided. The only exception to this is for work which requires “double-dipping”.

29. The application of an aqueous solution, specifically zinc ammonium chloride, shall be used only in order to maintain quality of work. Good operation practice shall be used to ensure emissions to atmosphere are kept to a minimum.

30. Ash shall be removed off the galvanizing bath to avoid excessive fumes being created. Sufficient containment measures shall be provided to adequately collect any fumes. All zinc ash shall be subject to zinc recovery.

31. A rainwater harvesting unit shall be used to re-use rainwater that falls on the installation building.

32. All rainwater that falls onto the yard area of the installation shall be ducted to an underground attenuation system. In the event of any pollution incident occurring the water storage shall be tested to avoid a breach of any water quality standards. Any water that does exceed any water quality standards shall be disposed of in an appropriate manner.

33. Oil and solid interceptors shall be used for the drainage of open storage areas.

34. All interceptors and sumps shall be:
    (a) Impermeable & resistant to stored materials
    (b) Subject to regular visual inspection and, where necessary to ensure continuous function, contamination removed
    (c) Have an annual maintenance inspection; prior to inspection all contents shall be removed

35. There shall be no point source emissions of List I and List II substances to groundwater.

36. The operator shall ensure that all operational and storage areas are equipped with an impervious surface, spill containment kerbs, sealed construction joints and connected to a sealed drainage system or such alternative requirements as approved by the regulator.

37. All baths and liquid storage tanks shall be located within bunds that are designed, constructed and located to appropriate standards and ensuring that the bund volume is more than 110% of the largest tank.

38. Storage tanks shall be fitted with high-level alarms or volume indicators to warn of over filling and where practicable the filling system shall be interlocked to the alarm system to prevent overfilling, the activation of any alarms shall be recorded. Delivery connections shall be located within a bunded area, fixed and locked when not in use. Delivery connections shall be clearly labelled.

39. An Environmental Management System shall either be adopted or devised which includes policies and procedures for environmental compliance and improvements.

40. A Preventative Maintenance Schedule shall be developed on all aspects of the installation. This shall include bulk liquid and galvanizing baths, bunds, tanks and transfers, sumps, interceptors and flues and ductwork.

41. Essential spares and consumables shall be held on site or be available at short notice from suppliers, so that plant breakdowns can be rectified rapidly.

42. The operator shall develop and maintain an Accident Management Plan. This shall include written procedures for investigating accidents, incidents and near misses, including identifying suitable corrective action and follow up. The results of these investigations shall be made available to the regulator.

43. A list of process equipment and their procedures for environmentally safe working use shall be developed and made available to the regulator.

44. Personnel at all levels, including contractors, shall be given training and instruction sufficient to fulfil their designated duties. Details of such training and instruction shall be entered into the employees' record and be made available for inspection by the regulator. Each operation post shall have its necessary training requirements readily available for inspection by the regulator.

45. The operator shall identify key plant and equipment with the potential to give rise to significant noise and take such measures as are necessary by way of mitigation and maintenance of existing plant and equipment in order to minimise noise.

46. In the event of any complaints a competent person shall be appointed to liaise with the regulator and the public with regards to complaints. The regulator shall be informed of the designated individual(s).

47. A high standard of housekeeping shall be maintained.

48. If the operator proposes to make a change in operation of the installation, he must, at least 14 days before making the change, notify the regulator in writing. The notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. In this condition 'change in operation' means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment

49. The best available techniques shall be used to prevent or, where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation of the installation which is not regulated by any other condition of this permit.

Signed: .....

Head of Environmental and Community Health Services

Date: 28 July 2009

GENERAL NOTES

1 Variation

The regulator will ensure that the permit remains up to date in line with the requirements set out in Regulation 20(1) This may involve issuing a Variation Notice following amendment to the Secretary of State's Guidance Notes or following receipt of any direction from the Secretary of State.

2 Review of Conditions

The regulator may at any time undertake a review of the conditions in this permit under Regulation 34(1). Where significant pollution is encountered or where there are changes in BAT or where the operational safety of the activity requires other techniques to be used an immediate review shall be undertaken.

3 Appeal

The permitted operator can appeal in writing to the Secretary of State against the items listed in Regulation 31.

Appeals shall be addressed to:

The Planning Inspectorate
Environment Team, Major & Specialist Casework
Room 4/04 Kite Wing
Temple Quay House
2 The Square
Temple Quay
Bristol
BS1 6PN

4 Transfer of Permit

The permitted operator who wishes to transfer the whole or part of the permit to a person who proposes to carry out the activity in the holder's place may do so in accordance with Regulation 21. Both the operator and the proposed transferee shall jointly make an application to the regulator to effect the transfer. An application shall include the permit and any fee prescribed in respect of the transfer under Regulation 19 and shall contain the operator's and the proposed transferee's contact details.

5 Notification of Proposed Change of Operation

If the operator proposes to make a change in operation of the installation, they must, at least 14 days before making the change notify the regulator in writing. The notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. Change of operation means a change in the nature of functioning, or an extension, of the installation, which may have consequences for the environment.

6 Variation of Conditions of Permits

Under Regulation 20, the operator may apply to the regulator to vary the conditions contained within the permit. Such application shall be made in accordance with Part 1 of Schedule 5 and shall be accompanied by any fee prescribed in respect of the application under Regulation 19; and paragraphs 8 of Part 1 of Schedule 5 and paragraphs 5(3) and (4) of schedule 5 shall have effect with respect to such applications.

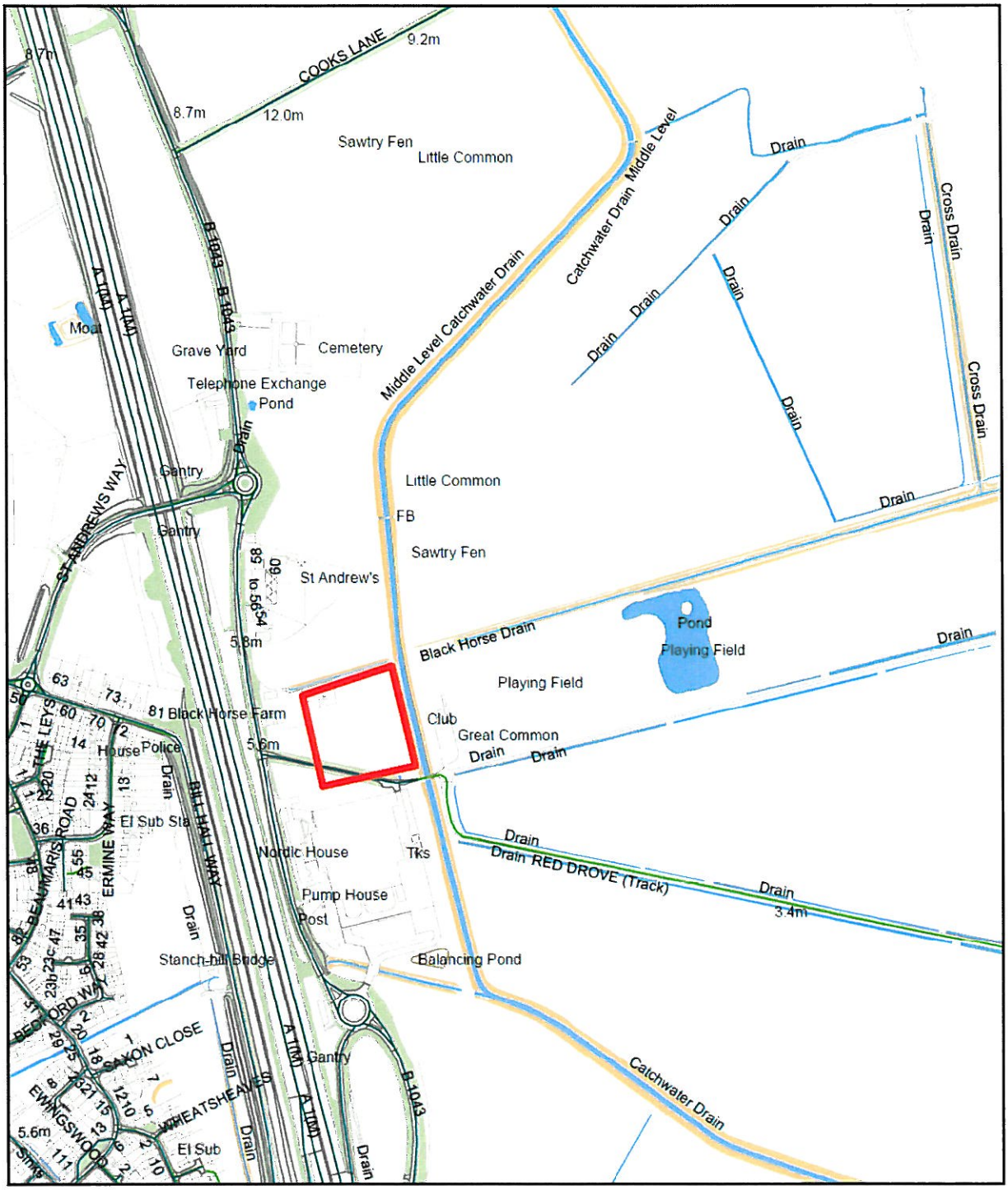
7 Other Legal Requirements

This permit is issued solely for the purpose of the Pollution Prevention and Control Act and its associated Regulations and the operator must ensure that he complies with all other statutory requirements.

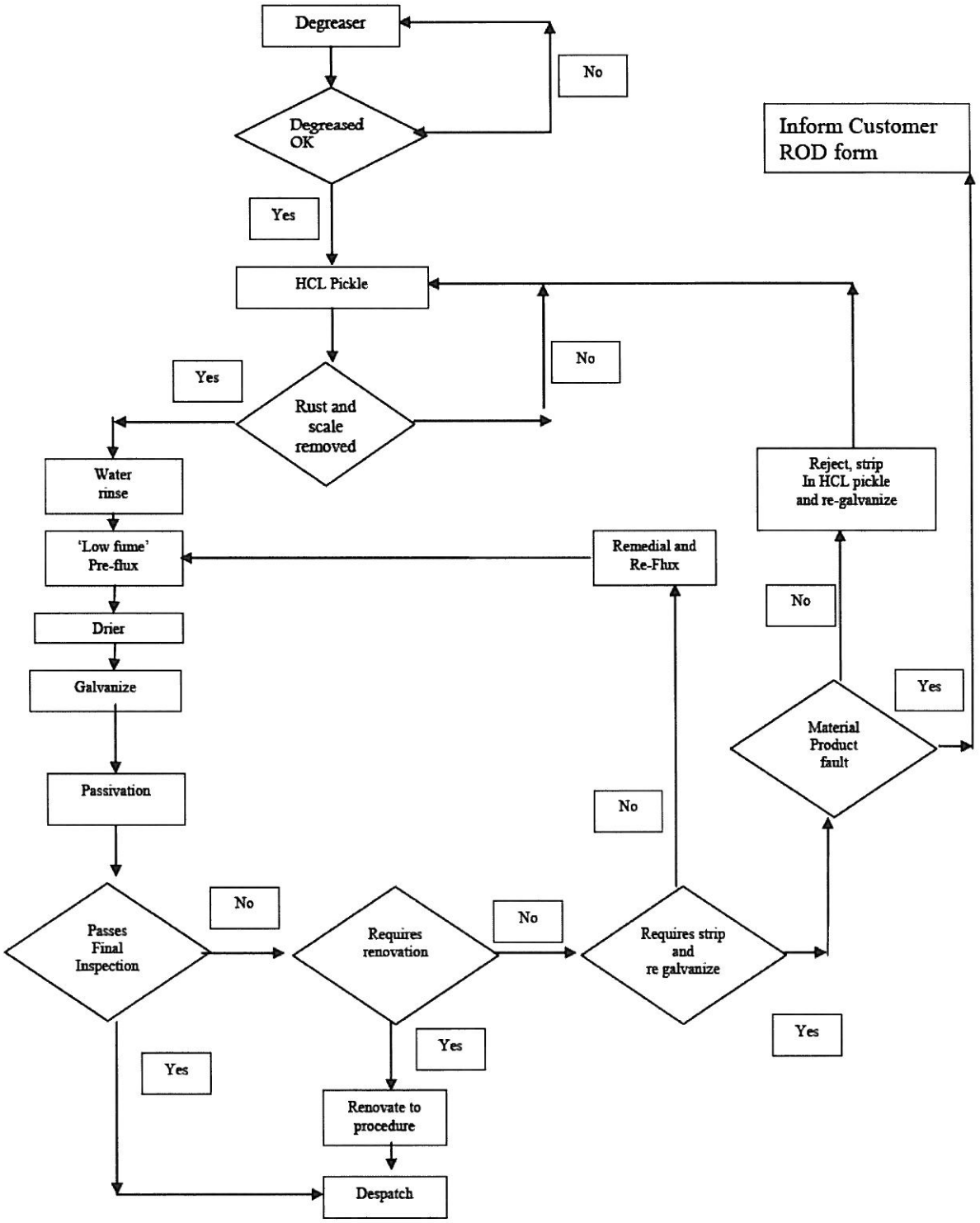
8 Annual Subsistence Charge

The Secretary of State has drawn up a charging scheme under Regulation 19. Under this scheme Local Authorities are required to levy an annual subsistence charge related to the permit. The Local Authority will invoice for the amount due which is subject to annual review by the Department of the Environment Food and Rural Affairs.

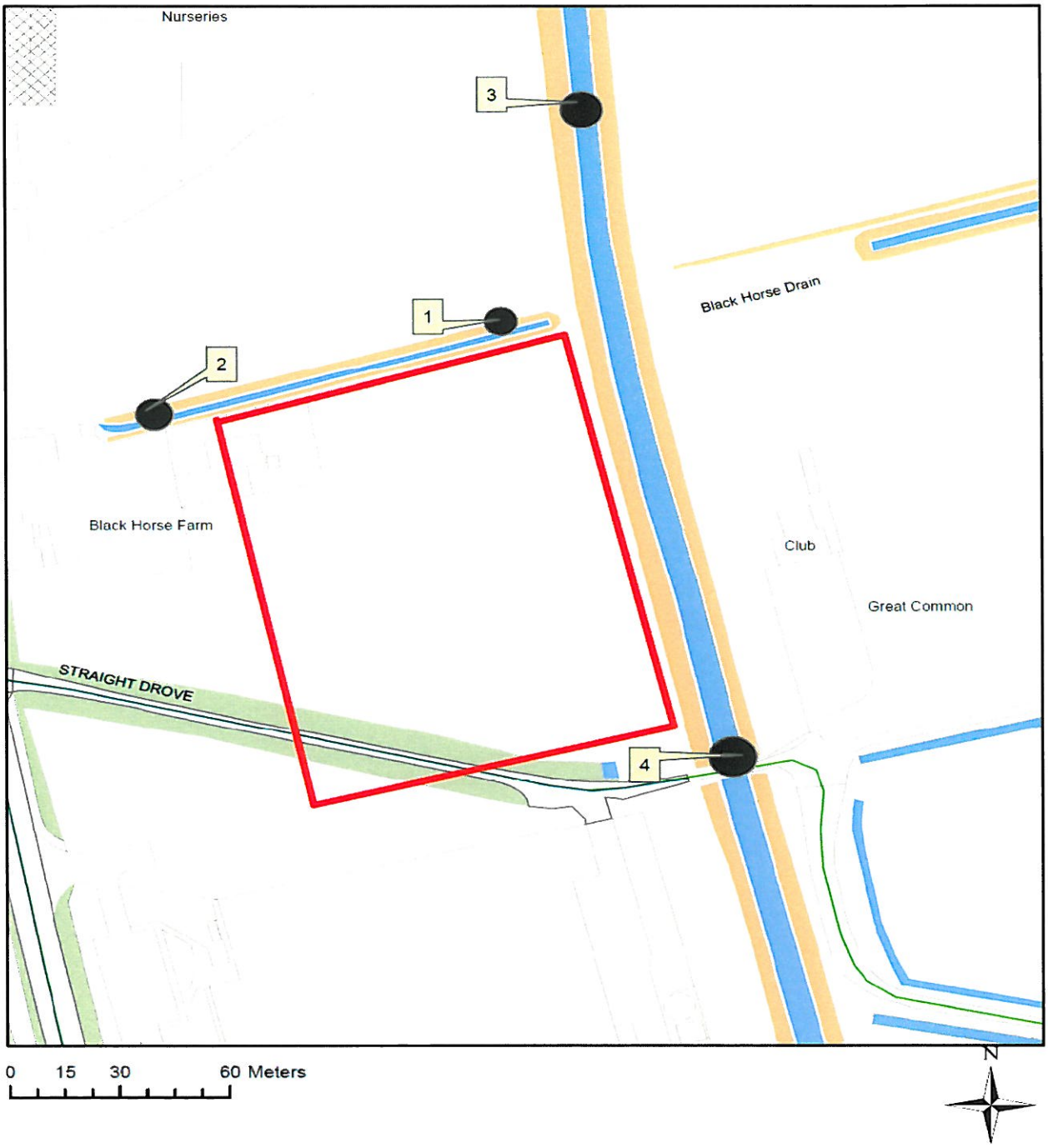
A09/09 (a) Location Plan



A09/09 (b) Process flow diagram



A09/09 (c) Water sampling locations



Key:

1	Final discharge from site
2	Upstream side of factory
3	Upstream of factory
4	Downstream of factory