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APPLICANT DETAILS:
Robinson & Hall LLP,
118 Bromham Road,
Bedford,
MK40 2QN

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WISER ENVIRONMENT

Wiser Environment Ltd
Suite 11 Manor Mews
Bridge Street
St Ives
Cambridgeshire
PE27 5UW

Tel: 01480 462 232
info@wisergroup.co.uk
www.wiserenvironment.co.uk

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1 INTRODUCTION

Robinson & Hall LLP have recently submitted a Call for Sites Representation for two sites in the area between the hamlet of Duloe and the town of St Neots, close to the border between Bedford Borough and Huntingdonshire District. Both housing developments lie within Bedford Borough's administrative area and each development is planned to comprise 400 dwellings.

Whilst plans for the two developments are yet to be defined, Natural England have carried out a rapid initial assessment of the pollution posed by development proposals risks to Sites of Specific Scientific Interest (SSSIs).

The Duloe Brook flows close to the proposed sites, which may have an impact on the catchment. The Duloe Brook flows through St Neots Common Meadow, a Site of Special Scientific Interest (SSSI) under the Wildlife and Countryside Act (1981), as amended.

SSSIs are those most notable for wildlife and natural features, supporting many characteristic, rare and endangered species, habitats and natural features.

Due to their location both sites are within the 1 km buffer for the St. Neots Common SSSI Impact Risk Zone (IRZ), and have been assigned a lower risk allocation, requiring a water impact mitigation plan.

This document is qualitative statement outlining the principles that will be used during the site development to mitigate potential detrimental impact of site activities on the nearby water courses.

1.1 Legislation and guidance

Water pollution mitigation during sites' development will be undertaken in accordance with the following legislations and guidance:

- The Water Environment (England and Wales) regulation 2009
- Land Drainage Act 1991

Methods

- Control of Water Pollution from Construction Sites – Guide to Good Practice (SP156)
- Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors (C532)
- Control of Water Pollution from Linear Construction Projects – Technical Guidance (C648)

- Control of Water Pollution from Linear Construction Projects – Site Guide (C649)
- Environmental Good Practice – Site Guide (C650)
- The SUDS Manual (C753)
- BS 8582:2013 Code of practice for surface water management for development sites
- BS 8582:2013 Code of practice for surface water management for development sites.

1.2 Water Pollution Mitigation Plan

In accordance with the current guidance, the following good practice will be reflected in the water pollution mitigation plan for the site.

1.2.1 Planning and site set-up

In order to prevent pollution and damage to water courses, the planning stage will take into consideration the following:

1. Location of watercourses relative to the sites, path to the watercourses and Sensitive sites (e.g. SSSI) that may be impacted by pollution from site activities.
2. Flood risk in the area: this will take into consideration the time of the year when stages of the development are planned. Project Manager and Works Manager would sign up to the Environmental Agency flood warning system and/or Met Office weather warning system.
3. Identification of potential sources of pollution, which may include:
    i. silt from exposed ground, plant washing and river crossing;
    ii. cement and concrete;
    iii. chemicals, solvents and herbicides;
    iv. waste materials.
4. Training of staff on pollution prevention methods and good practice during construction. Training would include waste management, use of chemical and other dangerous substances, general environmental impact of activities. All staff working on site including site manager, engineers, plant operatives, sub-contractors, tradesmen and labourers will be trained, undertake a site induction and required to have risk assessment and method statements for the work they undertake.
5. Emergency procedures: an emergency response plan will be in place on site with a procedure for dealing with emergencies. The procedure will be communicated to all site staff at site induction.

6. Monitoring needs: if required the impact on the water environment and effectiveness of pollution prevention measures can be verified through monitoring to give an early warning of pollution incidents so that corrective action can be taken.

1.2.2 Pollution Prevention

A series of pollution prevention measure may be used on site to prevent and minimise the impact of site activities to the nearby surface water. These may include the following:

1. Use of cut-off ditches to prevent water from entering excavations or use pumps for dewatering of excavations.
2. Minimise the amount of exposed ground and soil stockpiles by minimising the time of exposure, remove vegetation close to the time when the areas need to be exposed, cover the stockpiles and install silt fence at the toe of slopes to reduce silt transportation.
3. Collection of run-off water in lagoons to allow suspended solids to settle before disposal.
4. Ensure that plant and wheel washing is performed in designated areas and that the run-off is collected in sumps. The run-off is either directed to foul sewer of tankered off.

1.2.3 Treatment and disposal of contained waters

Treatment and disposal of contained waters may include the following:

1. Sustainable Drainage Systems (SuDs): where possible SuDs will be used on site for the construction phase and incorporated in the development. Examples of SuDS that could be used are the following:
    a. Porous surface pavements
    b. Infiltration trenches
    c. Infiltration basins
    d. Filter drains or French drains
    e. Swales
    f. Filter strips
2. Settlement Lagoons: these would be designed to retain the run-off waters long enough to allow the suspended solids to settle.

3. Filtration Section: this may be used if lagoons are not achievable due to space constraints.
4. Discharge to sewer: this would require permission from the local sewerage provider.
5. Tanker off site: to be used for disposal of wash water from polluting sources such as concrete and cement, oils and chemicals contaminated waters, which cannot be discharged to the environment in any conditions. if not other disposal options are available.

1.3 Developments' surface water management

Planning, design, construction and maintenance of any future housing development will include appropriate sustainable drainage solutions.

These will ensure that the following three main benefits are achieved:

- control of the quantity of runoff to support the management of flood risk, maintain and protect the natural water cycle;
- manage the quality of runoff to prevent pollution; and
- create and sustain amenity for people and biodiversity for nature.

Examples of sustainable drainage solutions that may be adopted are the following:

- rainwater harvesting systems to collect rainwater from roofs and other paved surfaces for use on site;
- green roofs, to reduce surface runoff;
- pervious pavements to provide a hard surface that can be used for pedestrians or vehicles, while allowing rainwater to pass through to the soil or underground storage;
- bioretention systems to collect runoff, allowing it to pond temporarily on the surface before filtering through vegetation and underlying soils;
- Planting of trees to capture rainwater and provide evapotranspiration, biodiversity and shade;
- swales, detention basins, ponds and wetlands to slow the fow of water, store and treat runoff while draining it through the site and encouraging biodiversity; and
- Soakaways and infiltration basins to promote infiltration as an effective means of controlling runoff and supporting groundwater recharge.

2 Summary

Robinson & Hall LLP have recently submitted a Call for Sites Representation for two sites situated near hamlet of Duloe in Bedfordshire. Both housing developments lie within Bedford Borough's administrative area and each development is planned to comprise 400 dwellings.

Due to their location both sites are within the 1 km buffer for the St. Neots Common SSSI impact Risk Zone (IRZ), and have been assigned a lower risk allocation, requiring a water impact mitigation plan.

The principles that would be used in order to prevent pollution to nearby watercourses from site activities have been outlined in this statement.

By following the principles recommended by current legislation and guidance, the risk of pollution to water from site activities will be prevented, and impact of any accidental discharge reduced to preserve the surrounding environment and the sensitive receptors on the vicinity of the sites.