

Environmental Management Plan

Site Name	Cotton Valley STW
Site Address	Anglian Water, Cotton Valley STW, Pineham, Milton Keynes, Buckinghamshire, MK15 9PA
Short Code / Ref No.	COTVST
Catchment	RSTM

This is a controlled template and should not be altered unless authorised.

The content of this document should be reviewed and signed off by the relevant managers on an annual basis and audited on a biennial basis by the business unit auditors. [C] [A]

Name	Signature	Position	Created / Reviewed	Date
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Dominik Kozminski		Site Manager	Created	26/4/2013
Dominik Kozminski		Site Manager	Reviewed	29/4/2013
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Tim Hilsdon		Site Manager	Reviewed	6/11/2014
Tim Hilsdon		Site Manager	Reviewed	23/2/2015
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T.Moutrie		Bioresources Treatment Manager	Reviewed/Updated	07/03/23
P Seamons		Bioresources Treatment Manager	Reviewed after management change	19/12/2023

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Introduction

This document has been designed to cover the Plan, Do, Check, Act methodology used in all Management Systems.

PDCA is the founding principle of this document and therefore the references throughout are in relation to these definitions:

P – Plan – what is the situation, what do we need to achieve and how are we to achieve it?

D – Do – what are the controls in place to ensure that we do our everyday actions without impacting the environment in this area?

C – Check – how do we check that these controls are working and how do we report when they are not?

A – Act – what is the escalation process/review process when things are checked and seen to be not performing?

The key focus of this document is to identify existing processes and controls that cover environmental risk and identifying and addressing those areas that are not adequately covered. Therefore all processes and controls referred to in this document should be adhered to and this document's controls regarded in the same vein for site specific controls.

1 Site Information

1.1 Site Description [P]

Cotton Valley serves the Milton Keynes catchment with much of the load coming from domestic sources and a few industries around the periphery of Milton Keynes. Site serves a population equivalent of 330,000 which spans the catchment of Milton Keynes and surrounding villages. Trade effluent is accepted at this site. Treated effluent discharges via an outlet at the neck of the pit lagoon to the river Great Ouse or Great Ouzel.

The site comprises of:

- Preliminary treatment - screening & grit removal;
- Primary treatment - horizontal flow primary sedimentation tanks;
- Secondary biological treatment - activated sludge, simultaneous chemical P removal, and conventional final settlement.
- Sludge Treatment Plant (STP) treating the indigenous sludge and imported sludge from the general South Ruthamford area and other Anglian Water WwTWs, via a Cambi Thermal Hydrolysis Plant (THP) and digesters
- Combined Heat and Power plant is used to utilise biogas to produce renewable energy.
- Gas Holder of 2000m³ capacity.
- A cake reception plant receives imported cake at approximately 22% w/w dry solids.
- Alpheus Environmental Waste Treatment Centre, which receives tankered trade wastes and is an independent organisation and is responsible for its own environmental management.
- Large office space, which is used by water and wastewater teams.

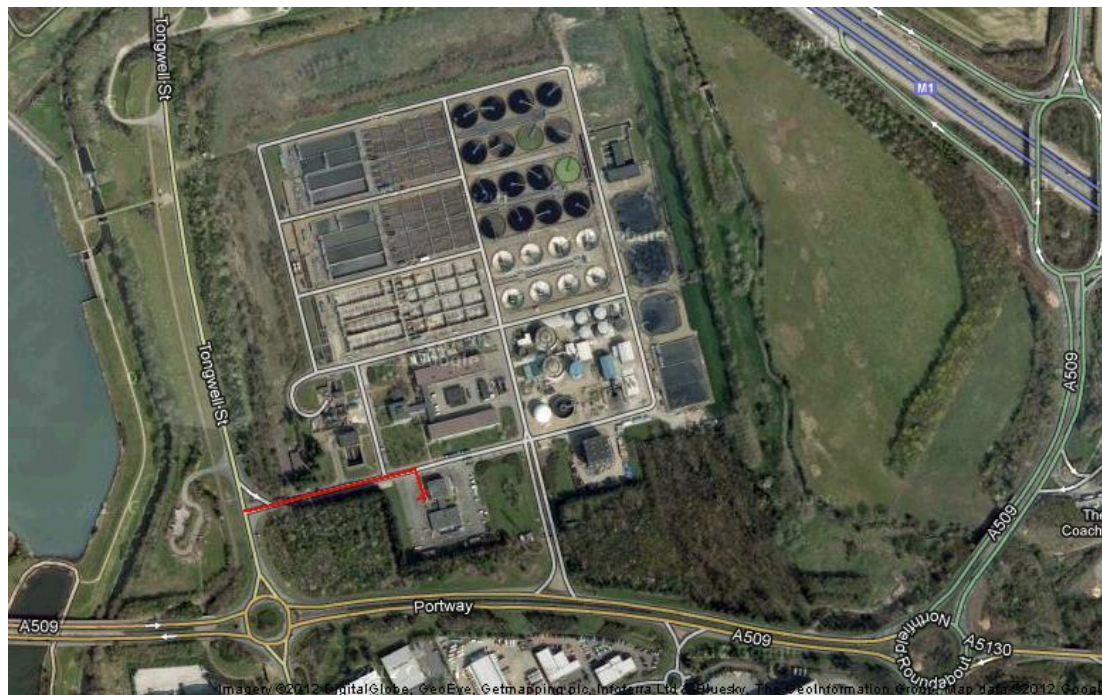
Site Schematic:



1.2 Site location [P]

Cotton Valley Wastewater Treatment Works (WwTW) is situated approximately 4.5km south west of Milton Keynes with the M1 motorway beyond. There are no SSSIs within 2km and no Natura 2000 sites within 10km of the site.

Local neighbours include Milton Keynes town, Newport Pagnell town, Willen Lake, Milton Keynes Motorcross Track, Northfield Industrial Estate, River Great Ouse and M1 motorway.



1.3 Permits / Permissions / Licences [D]

This table highlights the permits, exemptions and licences that relate to the sites operation and its impact on the environment:

Ref No.	Description	Regulation	Location held
EPR/KP3092EK	Sludge Treatment permit	EPR – Waste	central folders and hard copy in site office
EP/RP3331XK	Combined Heating Power permit	EPR – Waste	lighthouse and hard copy in site office
AWCNF217/10296C	Discharge permit	EPR – Water	lighthouse
101791	Cess and Septic	EPR – Waste	Light House – RES
OAR978	Hazardous Waste	EPR - Waste	Light House

The conditions relating to these permits are held within the permits and summarised in section 3.3



2 Contact information

2.1 Operational Contacts [P] [D]

Catchment Manager – Peter Joyce - 07841958572
Tactical Support – Steve Boulton – 07885135281

Treatment Manager – Philip Seamons 07740072156
Optimiser – Richard Goulding – 07764164948
CHP – Matthew Green – 07710599212
OMC – Duty Manager – 03450703446
Maintenance Manager – Matthew Reeves - 07921069885
Alpheus – Joanne Fensome – 07584318268

2.2 Emergency Contacts [P] [D]

OMC – Duty Manager – 08450 703446
CHP – Matthew Green Duty Manager –
EA NIRS – 08450 8503518
Alpheus – 01234 686100

2.3 Third Party Contacts [P] [D]

Alpheus – Joanne Fensome – 07584318268
EA Brampton Office – 01480 483884

3 Risks and mitigations

3.1 Risk Identification [P]

Sludge Treatment Centre Operational and Contingency Plan

To be reviewed no less than 12 months

3.2 Risk Mitigation [P] [D]

3.2.1 Noise and Vibration

Assets were built to WIMES which is the water industry standard. There is no documented issue with regards to noise at the site as the current operations have not caused any noise related complaints.

During normal operations equipment is routinely checked for any increase in noise or vibration, and maintenance jobs raised and carried out where this is the case using the POSMAINT system and recorded on app for pumps and mechanic plants. Since there have been no noise related complaints and noise and vibration impacts are considered to be appropriately mitigated, a separate Noise Impact Assessment and Noise Management Plan are also not considered to be required.

If a complaint is made with respect to noise or vibration the Treatment Manager will assess the cause of the complaint and will report the findings. If the noise or vibration leading to the complaint has been caused by a continuing operation, additional noise or vibration surveys may be required to confirm the degree of impact upon the receptor. The Treatment Manager will make any recommendations for further noise or vibration control to the Management Team and shall inform the Environment Agency of the complaint as soon as it is practicable to do so.

3.2.2 Spill control

Reference WWS – PRO – 8.13

All Fuel/chemical tanks on site are either double skinned and bunded or protected by sealed drainage and impermeable areas. Spill control equipment includes chemical spill kit stations located in the waste hub area and steam boiler room; absorbent pads absorbent granules and booms which are located in the emergency stores.

Site Manager to ensure site drainage systems are checked and maintained to ensure as far as is reasonably practicable that they do not block and if necessary jetted or otherwise cleaned to prevent overflows.

3.2.2 Reporting an incident

Reference Policy WWS – PA - 008



All identified odours on site through operational activity will be reported to the OMC who will then report to the EA NIRS database. This will then be recorded in the on site log book.

Any external odour complaints will be dealt with immediately with feed back to the OMC and EA and logged in the on site odour diary.

Any failure of the CHP will be monitored by the OMC and standby personnel called out. Depending on the fault/failure will be reported via the OMC to the EA NIRS database.

Any site consent failures are reported to the OMC who then report to the EA NIRS.

3.2.3 Odour event

Reference

All identified odours on site through operational activity will be reported to the OMC who will then report to the EA NIRS database. This will then be recorded in the on site log book.

Any external odour complaints will be dealt with immediately with feed back to the OMC and EA and logged in the on site log book.

3.2.4 Damage to a habitat

No reason to be off road on site. A Plan of mitigation will be produced by the Biodiversity Team.

Standard Rule – All sites - no tree or hedge works during the bird breeding season from 1st March to 31st July. Some birds, such as wood pigeon, will nest outside of this period. It is an offence to destroy the nest of any wild bird so this needs to be a consideration at all times of the year.

There have been found great crested newts, some nice areas of wildflower grassland on site including bee orchids. Areas are highlighted and not cut by maintenance.

Further information and guidance can be found on <http://www.natureonthemap.naturalengland.org.uk/>

3.2.4 Other risks identified

Extensive cold weather protection was installed no stoppages occurred over winter due to freezing, defrosting equipment along with portable heating and insulation material are stored in the CAMBI building along with salt supplies for roadways leading to site, a road gritting contract is in place with 'Ground Control' who attend site during cold weather.

If fuel deliveries are interrupted due to extreme cold weather, the CHP can be turned off and the main boiler run on methane to produce the process steam requirements.

We have access to a 4 x 4 vehicle which can be used by standby personnel to access site in extensive cold weather and can also be used to collect other personnel and bring to site.

FIRE

Fire detection systems are located in the main offices – these raise an alarm to OMC. There are Fire Marshals on site during normal working hours.

CHP and Steam Boiler house also have fire detection systems – if there is a fire an alarm is sent to OMC and the fire detection system will shut off the fuel supply and shut either the CHP or the Steam Boiler down to prevent them from running.

In both cases as part of their Site Induction site personnel are advised to evacuate to the nominated safe area in the event of being aware of a fire.

3.3 Permit conditions

Quarterly Waste Returns	Treatment Manager	Tonnage waste Streams
Yearly CHP report	Treatment Manager	Units
CHP Emissions	Treatment Manager	Units

The CHP permit does not state emissions limits but the site operates and compares to limits set in other permits. If this situation changes then this report will be updated.

3.4 Specific Plans

Each site has a comprehensive library of documents that support the efficient and successful operation of the site. This plan is not going to detail those plans but direct the reader to the locations of the plans.

3.4.1 Odour

Review period of no less than 12 months

3.4.2 Gas

HAWK

Review period of no less than 12 months

3.4.3 Contingency Plan

Sludge Treatment Centre Operational and Contingency Plan

To be reviewed no less than 12 months

3.4.4 Catchment Management

Catchment Management Plan

To be reviewed no less than 12 months



3.4.5 Ammonia

Ammonia Action Plan

To be reviewed no less than 12 months

3.4.6 HACCP

HACCP Plan

To be reviewed no less than 12 months

4 Site Management [D]

This section looks at the management of site to minimise impact to the environment.

4.1 Waste Management

Waste management is a highly regulated activity and as a site we have regulatory obligations with regards importing and treating waste as well as the standard Duty of Care obligations. This section looks at those obligations.

4.1.1 Identification of wastes [P]

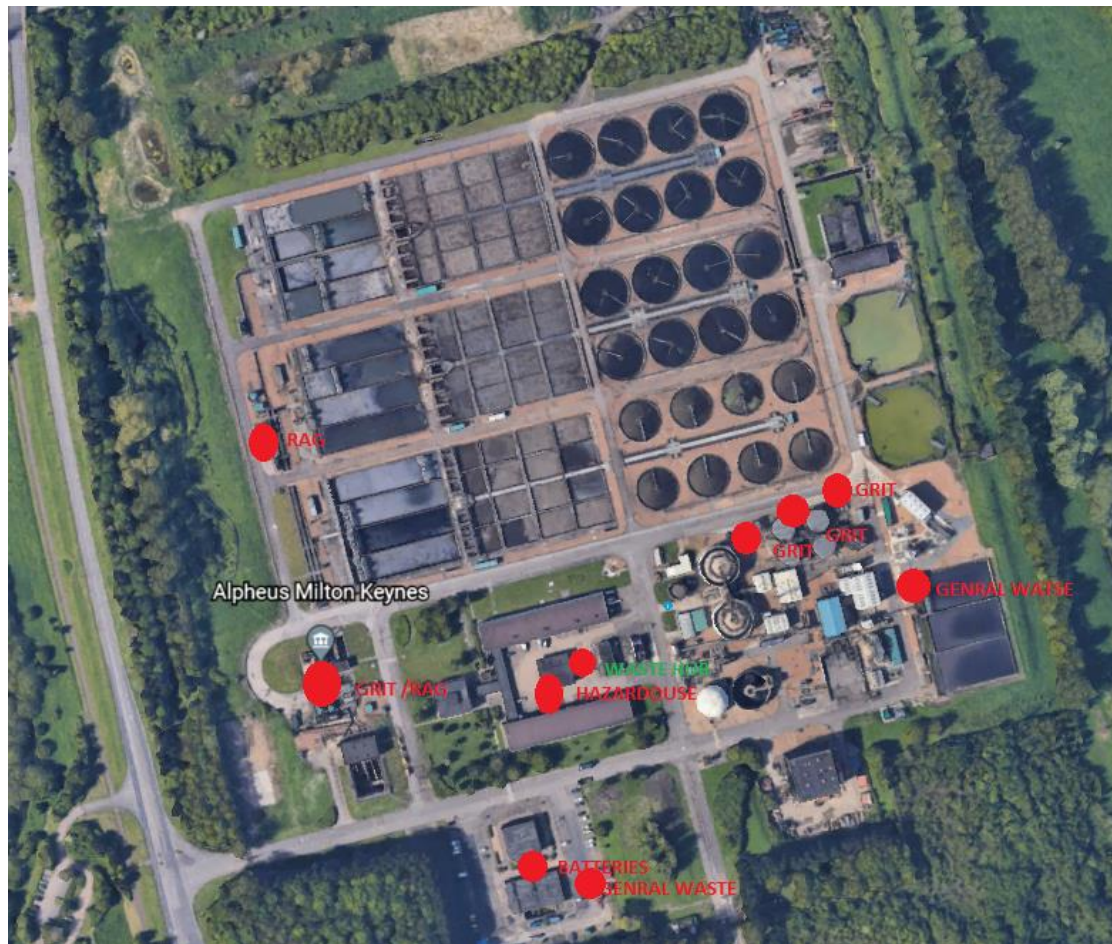
The activities on this site generate a wide range of wastes. Primarily though we generate:

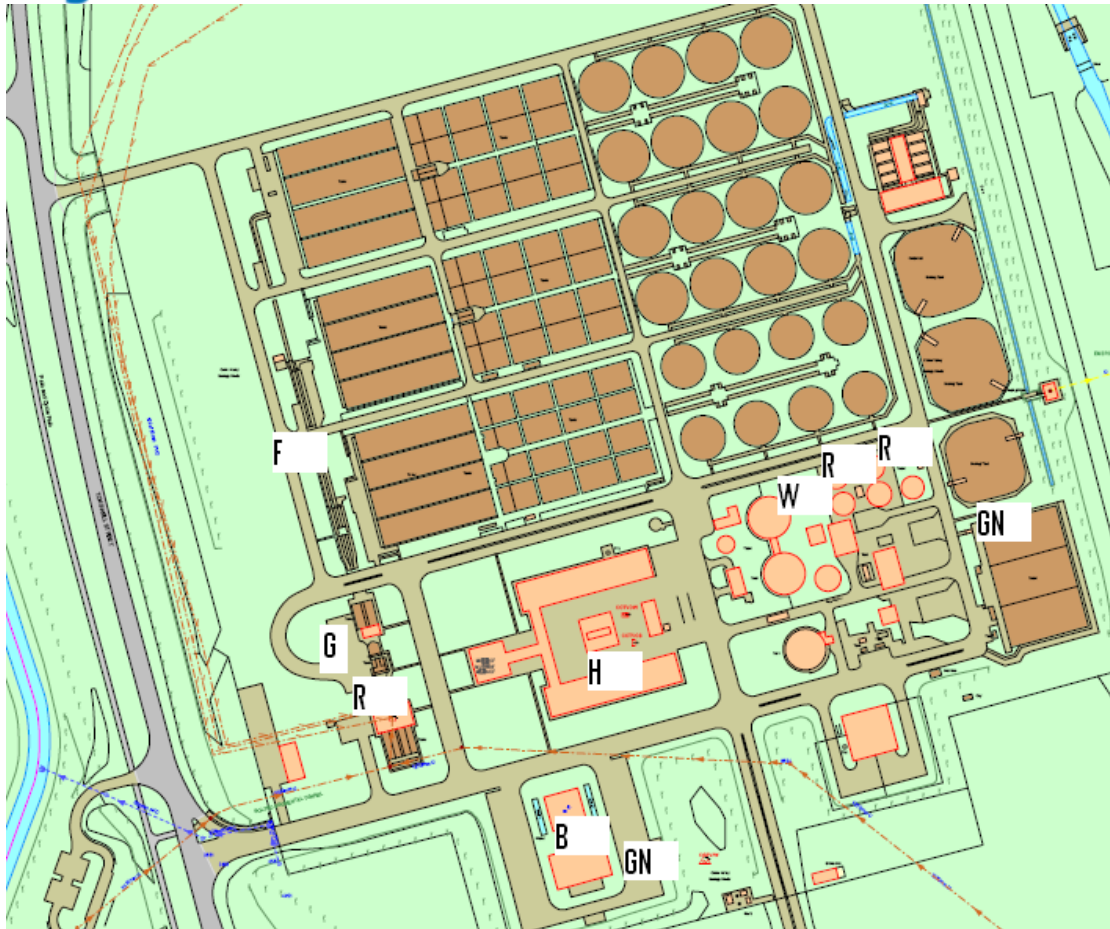
EWC code	EWC Description	AW Description
19 08 05	Sludge from treatment Urban Wastewater	Cake/sludge
19 08 09	Grease and oil mixture from oil/water separation containing only edible oil and fats	Fat Oils Greases (FOG)
20 03 01	Mixed municipal waste	General waste
20 01 01	Paper and cardboard	Paper and Cardboard
20 03 06	Screenings	Grit and screenings
20 01 38	Wood other than that in 20 01 37	Wood
20 01 40	Metals	Metal
20 01 21	Fluorescent tubes and other mercury containing waste	Fluorescent lights
16 01 07	Oil filters from vehicles	Oil filters
15 02 02	Absorbent filter materials (including oil filters not otherwise specified) wiping cloths protective clothing contaminated by dangerous substances	Oily rags
13 02 08	Other engine gear and lubricant oils	Waste oil
16 06 01	Batteries Lead	Batteries Lead
16 06 02	Batteries Ni-cd	Batteries Ni-cd

4.1.2 Location of wastes

Waste storage on this site is part of our normal operations the diagram below highlights areas where wastes are stored in skips and other waste containers. The processes that treat waste are labelled.

Waste hub is located in the central part of the site with skips allocated to ,General, dry recyclable's ,wood ,metal ,batteries, electricals Florence tubes, oil rags ,container, waste oil, aerosols





G – Grit **R** – Rag **F** – FOG **B** – Batteries **GN** – General Waste
H – Hazardous Waste Hub **W** - Wood

4.1.3 Management of contractors exporting waste [D]

Anglian Water has waste streams removed from this site.

These are managed and controlled in the following manner:

EWC Code	EWC Description	Carrier	Disposal Route
19 08 05	Sludges from treatment urban waste water	Biosolids	Recycled to Land
19 08 01	screenings	Biffa	landfill
19 08 02	Waste from de sanding	Biosolids	Recycled off site
19 08 09	Grease and oil mixture from oil/water separation containing only edible oil and fats	Biffa/Argent Energy (trial)	Landfill/recycled off site (trial)
20 03 01	Mixed municipal waste	Biffa	Landfill
20 01 01	Paper and cardboard	Biffa	Recycled off site
20 03 06	Waste from sewage cleaning	Biffa	Landfill
20 01 38	Wood other than that in 20 01 37	Biffa	Recycled off site
20 01 40	Metals	Biffa	Recycled off site
20 01 21	Fluorescent tubes and other mercury containing waste	Biffa	Recycled off site
16 01 07	Oil filters from vehicles	Biffa	Landfill
15 02 02	Absorbent filter materials (including oil filters not otherwise specified) wiping cloths protective clothing contaminated by dangerous substances	Biffa	landfill
13 02 08	Other engine gear and lubricant oils	Biffa	
16 06 01	Batteries Lead	Biffa	Recycled off site
16 06 02	Batteries Ni-cd	Biffa	Recycled off site
19 02 06	Raw cake	WROL	Export for treatment
19 06 06	Digested cake	WROL	Export to land (or storage prior to land application)

Copies of the Waste Transfer Notes and Consignment Notes for these waste movements (skips and the like) can be found in WROL. Wastes that are disposed of to land by WROL (Water Recycling Operating Logistics) and Biosolids have comprehensive records held by WROL and Biosolids and can be obtained from The Biosolids office in Cambridge.

4.1.4 Management of importing waste

Waste is imported to this site as part of the waste operations.

All cess and septic waste imported to this site is not part of any permit as it is outside the permitted area for this waste. We do have licensed carriers



bringing septic and cess waste in under the control of WROL (Water Recycling Operating Logistics)

This site does accept transfers of AW waste falling under the classifications:

19 08 01	19 09 02	20 03 06
19 08 02	19 09 03	20 03 09
19 08 05	19 09 06	
19 08 09	20 03 04	

Copies of the Waste Transfer Notes for the import of Cess and Septic are covered by the signing in process and with a sampling regime to ensure that the waste is the correct classification. These are held in the WW Treatment office and sent monthly to WROL.

Wastes that are imported by WROL and Biosolids have comprehensive records held by WROL and Biosolids and can be obtained from the Biosolids office in Cambridge.

4.2 Biodiversity

Anglian Water has a 'duty' to have regard for the conservation of biodiversity in exercising its functions under the Natural Environment and Rural communities (NERC) Act 2006, in addition to maintaining compliance with various other pieces of environmental legislation. AW has identified priority species and habitats on its landholdings through the AW Biodiversity Action Plan (BAP) which brings us in line with Government strategy

4.2.1 This Site [P]

Findings from the biodiversity surveys are held on the biodiversity database and will eventually be mapped on to overlays of each site.

Guidance for day-to-day operations can be found in the Biodiversity: Guidance for Operations booklet which is currently in production. A management plan specific to site considerations will be produced.

Great crested newts are present on site and are a protected species under the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2010. The day to day operations on site should have no impact on the great crested newts, however any works that may affect the grassland, rubble/wood piles or created hibernacula on site will first be discussed with the biodiversity team.

The areas of rank grassland across the site exhibit a reasonably diverse mixture of plant species which provide a habitat and forage resource to amphibians, reptiles and invertebrates. Grassland areas identified as supporting bee orchid have been fenced off to allow them to flower and set seed.



No tree or hedge works during the bird breeding season from 1st March to 31st July. Some birds, such as wood pigeon, will nest outside of this period. It is an offence to destroy the nest of any wild bird so this needs to be a consideration at all times of the year.

4.2.2 Active biodiversity

All AW personnel are encouraged to act as the “eyes and ears” of the company and report any species that they see that has not previously been identified on the site. Here the surveys will be looked at and used to inform company decisions and so that the biodiversity team can provide support to the site.

4.2.3 Rules for biodiversity

There are some general rules which have been developed for operation on sites:

- Do not drive on the grassed areas unless specifically authorised to do so.
- Report all damage to trees and habitats caused on site.
- No tree/hedge/scrub removal during bird nesting period from 1st march to 31st July.
- Prior to tree works check with local Authority to check whether any Tree Preservation Orders have been enforced.