 <b>United Utilities</b> Water for the North West	Wholesale	Reference: WP/X/XXX/XX/XX Version: 1
	Wastewater Services	Issue Date: XX/XX/XXXX Expiry Date: XX/XX/XXXX
	<b>Burnley WwTW EPR Odour Management Plan</b>	

## 1. Purpose

- 1.1 This Site Specific Instruction provides the requirements, procedures and actions to be taken in the event of the potential release of odours at Burnley WwTW. This plan will support and align with Burnley WwTW Environmental Risk Assessment and other key documents forming the management system.
- 1.2 It should be noted that the continued operation of all the installed Odour Control Units at the site has not found to be necessary to this point. We intend to conduct a review of the existing odour control assets over the next 12 months with regard to their necessity and performance. Details of proposed operational and monitoring requirements or changes to operation will be issued to the Environment Agency as part of a 12month review of this Odour Management Plan.

## 2. Scope

- 2.1 Provide guidance with regards to practices that will minimise the risk of odour emissions being discharged from the Burnley WwTW which could then impact on Customers and the Environment.

## 3. Responsibility

- 3.1
- Process Controller/Operator will be responsible for completing scheduled routine monitoring of the plant
  - FSE will be responsible for completing scheduled maintenance tasks
  - PC responsible for compliance and update of OMP
  - ERA to review compliance with the OMP
  - PM is responsible for ensuring monitoring and maintenance tasks are complete.

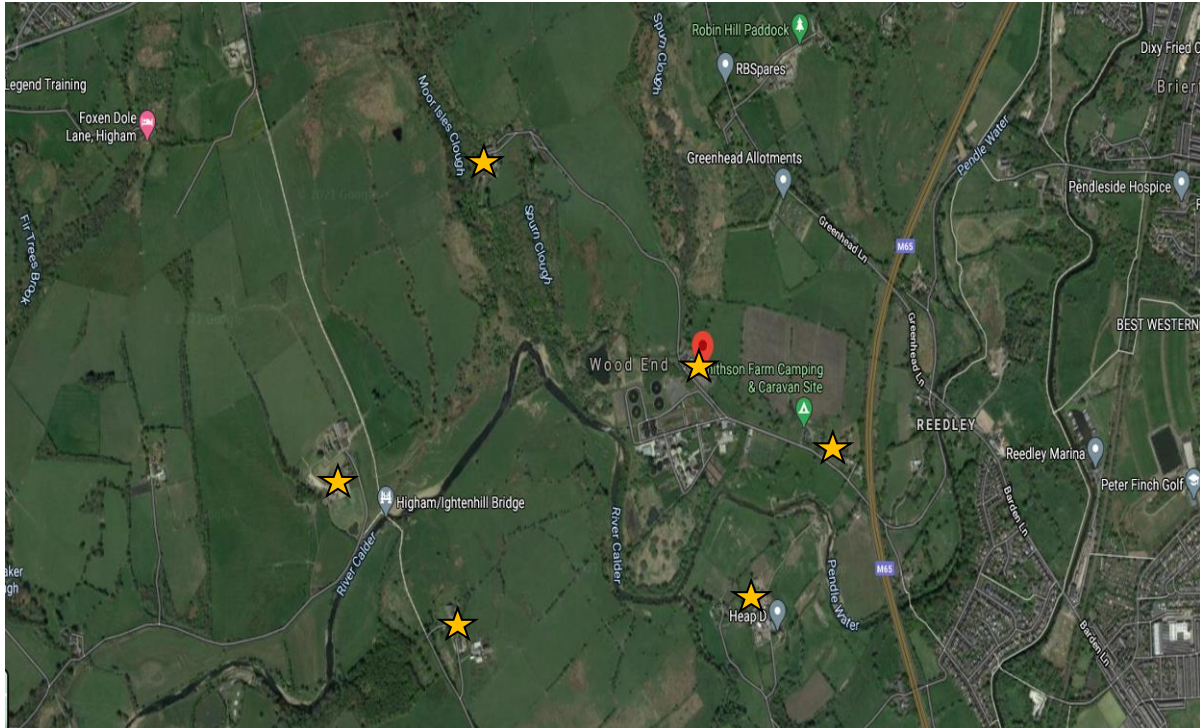
## 4. Location of Site

- 4.1 The Installation is bounded on all sides by rural farmland.

<b>Nearest Site of Scientific Interest (SSSI)</b>	There are no SSSI's in this area.
<b>Nearest Receptor</b>	There is residential housing, a farm and workshops on the site boundary to the north of the site.
<b>Closest natural watercourse.</b>	River Calder, which curves around the site, and the treated final effluent discharges into.
<b>Ground</b>	No significant features

## Burnley WwTW EPR Odour Management Plan

### Receptor map



### Alternative Potential Odour Sources

There are a number of potential sources of odour in the vicinity of the site which customers can sometimes mis-attribute to Burnley WwTW. (Section 7.82)

## 5. Management

- 5.1 UU operates a Quality and Assurance System which is certified against the ISO9001 and ISO14001 standards and which is applicable to the Burnley WwTW. The site also operates to UU Health and Safety procedures. All relevant procedures are made available to employees through the company intranet.

Within our QA system is a Site Specific Instruction (SSI) for each stage of the process. Detailed in each SSI is potential sources of odour and management control required.

Key procedures and documents required for the effective management of odour and their locations are:

## Burnley WwTW EPR Odour Management Plan

Management system	Link
<b>Odour Investigation and Reporting</b> in addition to this Odour Management Plan	<a href="#">UU Odour Contact Form</a>
	<a href="#">Site Odour Complaint and Investigation form</a>
	<a href="#">Operational Incident Management Procedure</a>
	<a href="#">EPR Waste and Installation Incident Notification and Reporting WwP/S/001/01/14</a>
<b>Risk Assessment</b>	Burnley WwTW Environmental Risk Assessment WwP-F-3017-25-19
	UU Odour Risk Assessment
	Category 1 Risk Assessment
	Category 2 Risk Assessment (if applicable)
<b>References</b>	Odour Control Unit Burnley WwTW
	<a href="#">Activated/Dry Media Odour Control Units SOP WwP/S/001/25/40</a>
	<a href="#">Odour Operators Guide</a>
	Site Introduction WwP-I-3017-01-14
	Preliminary Treatment WwP-I-3017-05-03
	Primary Treatment WwP-I-3017-06-02
	Secondary Treatment WwP-I-3017-08-01
	Tertiary Treatment WwP-I-3017-14-03
	Final Settlement WwP-I-3017-13-03
	Primary Digestion WwP-I-3017-15-01
	Sludge Storage
	Storm tanks WwP-I-3017-04-01
<a href="#">Environment Agency H4 Guidance</a>	

### 6. Site Odour Risk Ranking


The following plant areas have been designated as high, medium and low risk based on the nature of the material being processed, the relative level of mitigation and control measures available and the proximity/location of sensitive receptors

## Burnley WwTW EPR Odour Management Plan



Plant Risk potential	High	Medium	Low
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ID	Description		Description	
1	Inlet channel (Open)		10	Primary digesters (Closed)
2	Preliminary – Grit and screenings (Open)		11	Secondary digester (Redundant)
3	Primary – PST's (Open)		12	Storm channels (Open)
4	Secondary - Burnley ASP (Open)		13	Storm tank
5	Final Settlement tanks (Open)		14	Digested sludge holding tank (Closed)
6	Tertiary – Nitrifying Filters (Open)		15	Gas Holder
7	Raw sludge holding tanks (Closed)		16	
8	Centrate tank (Closed)		17	
9	Sludge screening unit & Skip (Enclosed)		18	

 <b>United Utilities</b> Water for the North West	Wholesale	Reference: WP/X/XXX/XX/XX Version: 1
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	<b>Burnley WwTW EPR Odour Management Plan</b>	

## 7. Odour Investigation Process

7.1 Upon the detection of odours from either site tours or external to site the Process Controller shall initiate the investigation process.

7.2 Odour concerns and complaints will be substantiated by 'sniff testing' carried out by an employee. Where it is reasonably practicable, site will assign employees who have not recently been working on site or routinely exposed to the odours to ensure an objective approach

7.3 Monitoring will be conducted at both on-site and off-site monitoring locations taking into account the location of off-site receptors and site processes, their location in relation to the prevailing wind direction and the wind direction occurring during the assessment period.

7.4 If necessary, the employee undertaking the assessment will work from site boundary into the wind to assess sources/direction of and odour to identify if it originates on site.

7.5 The employee will also note any external activities that could be either be the source or contribute to any off site odour exposure.

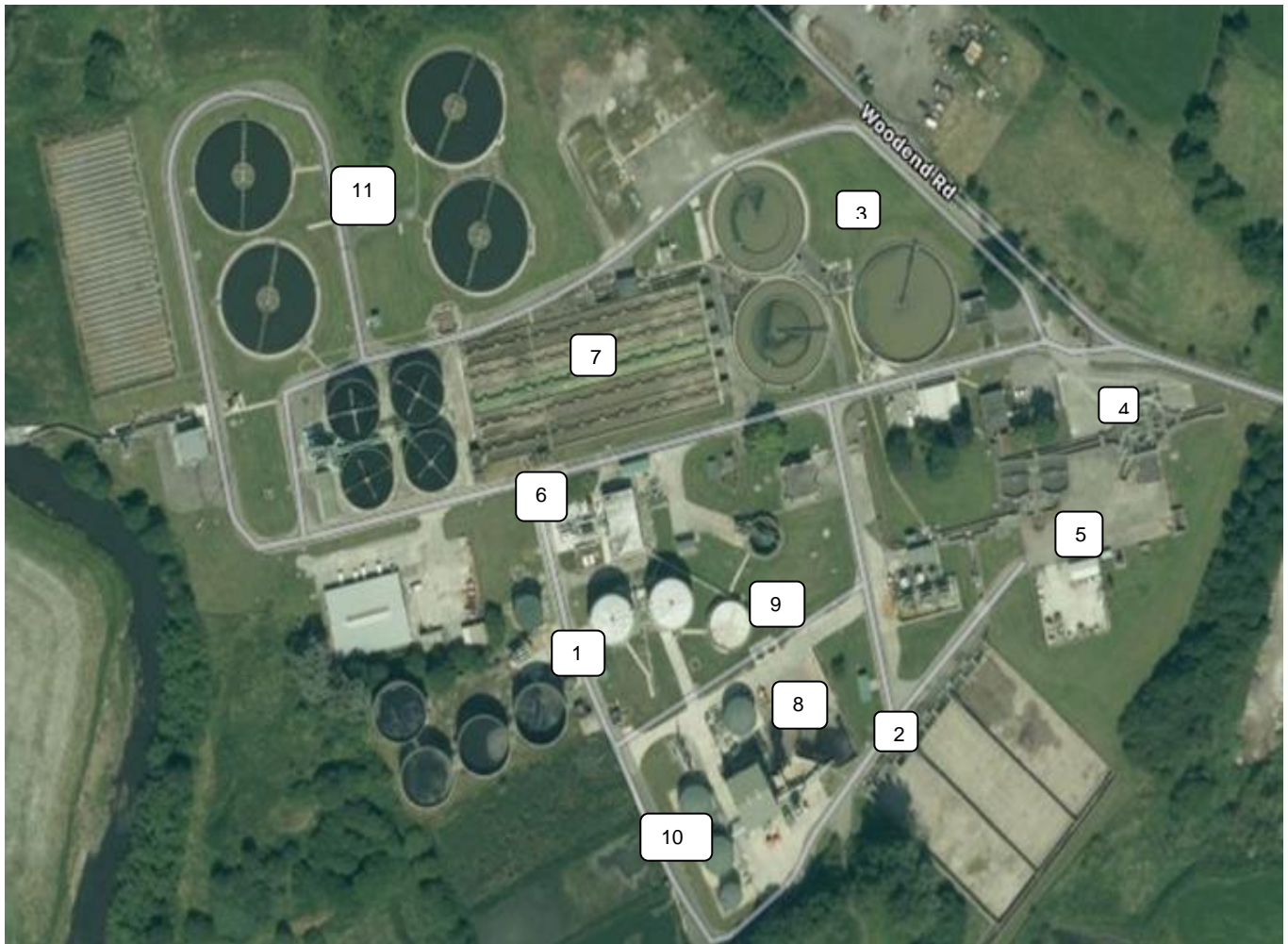
7.6 An Odour complaints Pro forma must be completed to record each investigation and if necessary (agreed with PM/Customer team) reported back to Customer team.

7.7 Completed complaints investigation reports are kept here

**Burnley WwTW EPR Odour Management Plan**

7.8 Monitoring locations

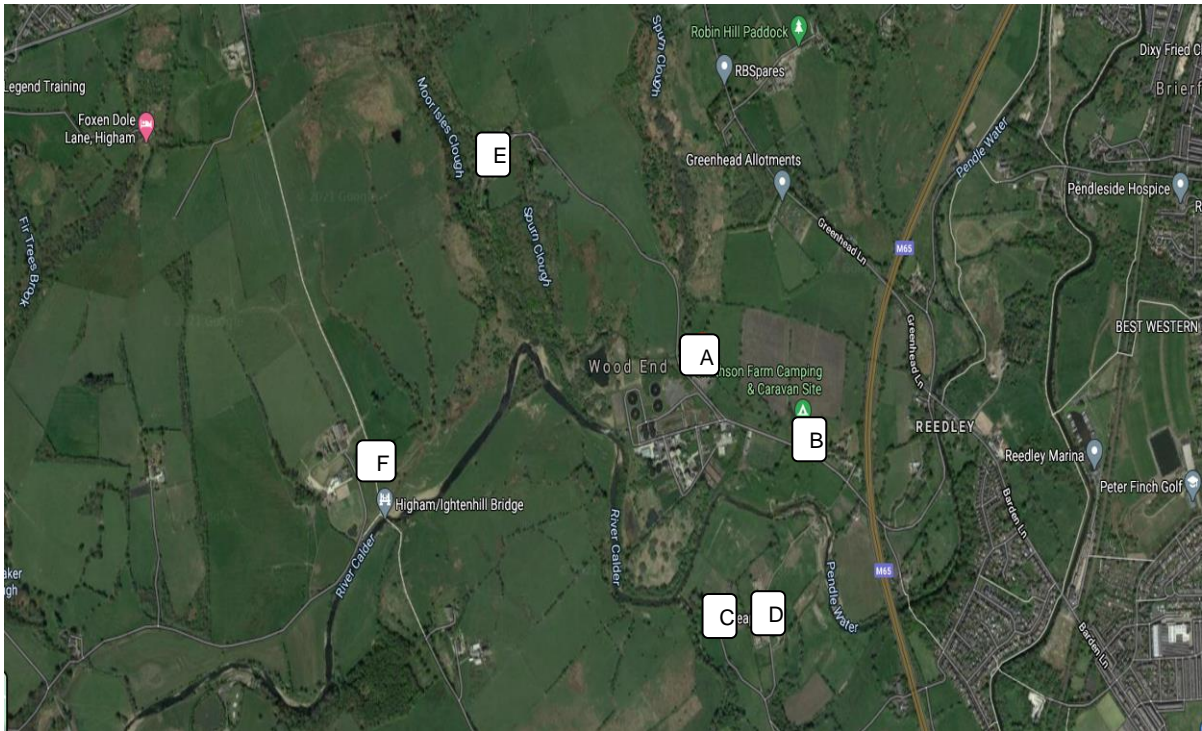
7.81 On site



Number	Description	Number	Description
1	Sludge Holding Tanks & Digester	7	Aeration Lanes
2	Storm Tanks	8	Sludge Cake Bay
3	Primary Tanks	9	Gas Holder
4	Inlet Screens	10	Centrifuge Feed Tanks
5	Detritors	11	Final Tanks
6	Thermal Hydrolysis Plant		

**Burnley WwTW EPR Odour Management Plan**

7.82 Off-site



ID	Description	ID	Description
A	Woodend Barn Farm	D	Adamsons Farm (530m East Southeast)
B	Smithson Farm	E	Moor Isles Farm (950m Northwest)
C	Inghams Farm (500m East Southeast)	F	Hollins Farm (1.3 km West)

**8. Customer Complaints**

**8.1 Receipt of Odour Complaints**

Complaints or customer contacts regarding odour should be directed to the Customer Relations Team to be recorded on the dynamics system and a case manager assigned.

If a verbal complaint is received at site and the Customer is not happy to be directed to the odour hotline, the operator/Site should complete the UU Odour Contact Form with the customer and then submit the completed form to Customer team via the email address detailed below.

If an unwanted telephone contact is received outside of the ICC or an unwanted written contact is sent direct to you, the following procedure needs to be actioned:

**Burnley WwTW EPR Odour Management Plan**

Telephone Contact	Written contact – letter, email, text	Face to face contact – customer attends site
Details of the contact need to be recorded – name, contact information, query. Details sent to the ICC Duty Desk Manager.	Scanned and sent to Customer Liaison Team along with any details to help respond to the contact.	Collect customer details and send to Duty Desk Provide customer with the odour hotline number.
01925 233224 DutyDesk@uuplc.co.uk	<a href="mailto:CustomerRelationsServiceDrafts@uuplc.co.uk">CustomerRelationsServiceDrafts@uuplc.co.uk</a>	0800 781 7134

**Note: if unsure contact the Duty Desk for help and support regarding customer contacts**

**8.2 Internal communication of Odour Complaints**

The Production Manager or Technical officer shall brief the site team on the number and details of any complaints received and the findings of any odour investigation shall also be reported.

**8.3 Records of Odour Contacts & Complaints Investigation Procedure**

A copy of any completed customer contacts odour form completed by site should be held on site. Odour contacts received can be viewed via Tableau.

**9. Escalation**

9.1 Trigger points

	Off-site receptors most likely to be impacted	Escalation Trigger Point	De-escalation Trigger Point
Inlet	<ul style="list-style-type: none"> <li>Residents at Woodend Barn Farm and Smithson’s Farm (Camping and Caravan Site)</li> </ul>	<ul style="list-style-type: none"> <li>PC picks up excessive odour on daily tour</li> </ul>	<ul style="list-style-type: none"> <li>Normal odour levels detected on follow up tour</li> </ul>
Primary Treatment	<ul style="list-style-type: none"> <li>Residents at Woodend Barn Farm</li> </ul>	<ul style="list-style-type: none"> <li>During tank emptying and cleaning</li> </ul>	<ul style="list-style-type: none"> <li>When tank cleaned of sludge</li> <li>Normal odour levels detected</li> </ul>



## Burnley WwTW EPR Odour Management Plan

	<b>Off-site receptors most likely to be impacted</b>	<b>Escalation Trigger Point</b>	<b>De-escalation Trigger Point</b>
Secondary Treatment	<ul style="list-style-type: none"> <li>Residents at Woodend Barn Farm</li> </ul>	<ul style="list-style-type: none"> <li>Aeration lanes malfunction or maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Process returned to regular operation</li> <li>Normal odour levels detected</li> </ul>
Tertiary treatment	N/A	<ul style="list-style-type: none"> <li>Increased odours detected in this location</li> </ul>	<ul style="list-style-type: none"> <li>Normal odour levels detected</li> </ul>
Sludge Screening & Storage	<ul style="list-style-type: none"> <li>Residents at Woodend Barn Farm and Smithson's Farm (Camping and Caravan Site)</li> </ul>	<ul style="list-style-type: none"> <li>Breakdown of OCU with increased odour detected</li> </ul>	<ul style="list-style-type: none"> <li>Repairs completed</li> <li>Normal odour levels detected</li> </ul>
Primary Digestion	<ul style="list-style-type: none"> <li>Residents at Woodend Barn Farm</li> </ul>	<ul style="list-style-type: none"> <li>Digester malfunction or cleaning &amp; emptying</li> </ul>	<ul style="list-style-type: none"> <li>Process completed</li> <li>Normal odour levels detected</li> </ul>
Secondary Digestion	<ul style="list-style-type: none"> <li>Hollins Farm (1.3 km West)</li> </ul>	<ul style="list-style-type: none"> <li>Recommissioning of digestion process</li> </ul>	<ul style="list-style-type: none"> <li>Normal odour levels detected</li> </ul>
Storm treatment	<ul style="list-style-type: none"> <li>Inghams and Adamsons Farms across River Calder</li> </ul>	<ul style="list-style-type: none"> <li>When returning storm effluent to inlet following prolonged period of retention</li> </ul>	<ul style="list-style-type: none"> <li>When tanks are cleaned of sludge and normal odour levels detected</li> </ul>

## 9.2 Escalation levels

### 9.21 Tier 1

The site Process Controller will be responsible for initiating the associated actions and communications. The Technical Officer has the discretion not to proceed initiating a tier 1 response, but the reason for doing so must be documented.

### 9.22 Tier 2

The site Technical Officer will be responsible for initiating the associated actions and communications. The Production Manager can at their own discretion not to proceed initiating a tier 2 response based on on-site/internal trigger levels being generated, but the reason for doing so must be documented.

## Burnley WwTW EPR Odour Management Plan

### 9.23 Escalation table

	Tier 1	Tier 2
<b>Measure</b>	<ul style="list-style-type: none"> <li>• Minor risk of odours generated by maintenance work.</li> <li>• Noticeable odour on site – ideally this would be confirmed via an on-site reading and operator Sniff tests (Jerome)</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of at least 5 no. of telephone odour complaints / contacts received with 24hr period</li> <li>• 10 telephone odour complaints / contacts received with 7 day period</li> </ul>
<b>Example</b>	<ul style="list-style-type: none"> <li>• Prolonged storage of storm water</li> <li>• PST sludge levels in amber</li> <li>• Septic influent or odorous trade effluent discharge</li> <li>• Minor sludge/ centrate spillage</li> </ul>	<ul style="list-style-type: none"> <li>• Complete system failure of odour control equipment i.e. loss of all treatment stages and or extract fans</li> <li>• Moderate risk of odours generated by maintenance work has been identified</li> <li>• Noticeable odour on site – ideally confirmed via an on-site reading (Jerome) and human senses sniff tests</li> <li>• PST Sludge levels in red</li> <li>• Storm Tank difficulties - no top water left on sludge to suppress odours</li> <li>• Moderate sludge/centrate spillage on site</li> </ul>
<b>Internal Contact</b>	<ul style="list-style-type: none"> <li>• East area HUB</li> <li>• Production Manager</li> <li>• ERA</li> </ul>	<ul style="list-style-type: none"> <li>• External Affairs Manager</li> <li>• Area Stakeholder Manager</li> <li>• Area Production Manager</li> <li>• Area Business Manager</li> <li>• Asset Manager</li> <li>• Customer Focal Lead</li> <li>• Area Engineering Manager</li> <li>• Area Deployed Team- Process Engineering or Odour Technical Specialist</li> </ul>
<b>External Contact</b>		<ul style="list-style-type: none"> <li>• The local Councillor and/or MP</li> <li>• Environment Agency</li> <li>• The Local Environmental Health Officer</li> <li>• Key stakeholders of significant places, congregation or local action groups.</li> </ul>