



Gatwick Airport Northern Runway Project

Environmental Statement
Water Environment Figures

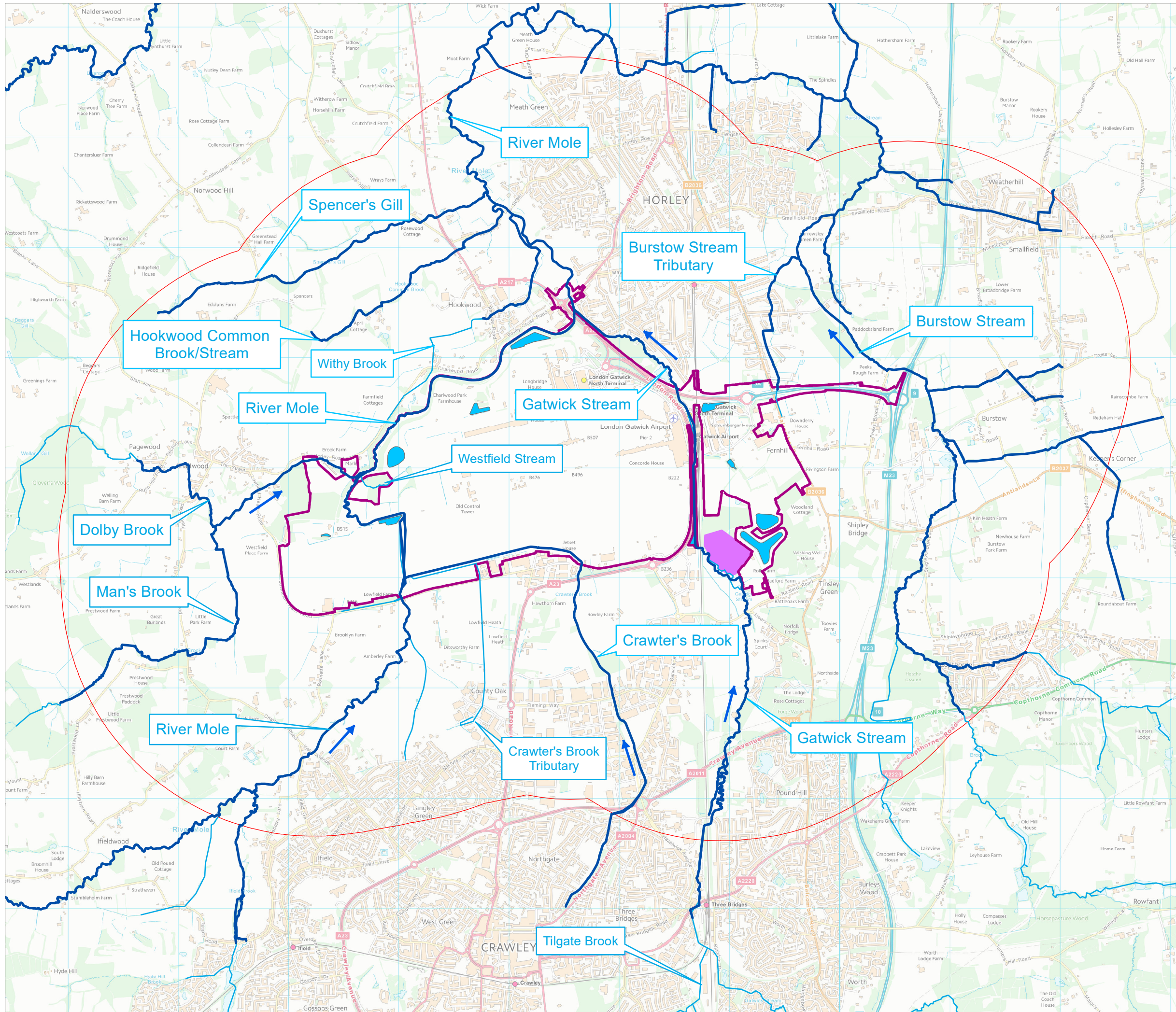
Book 5

VERSION: 1.0

DATE: JULY 2023

Application Document Ref: 5.2

PINS Reference Number: TR020005



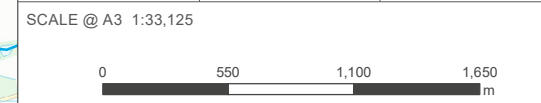
- KEY**
- Project Boundary (DCO)
 - Study Area based on 2km radius from Project boundary
 - Main River
 - Ordinary Watercourse
 - Existing Surface Water Drainage Ponds
 - Crawley Sewage Treatment Works
 - Flow direction

DOCUMENT
Environmental Statement

DRAWING TITLE
Water Environment Study Area

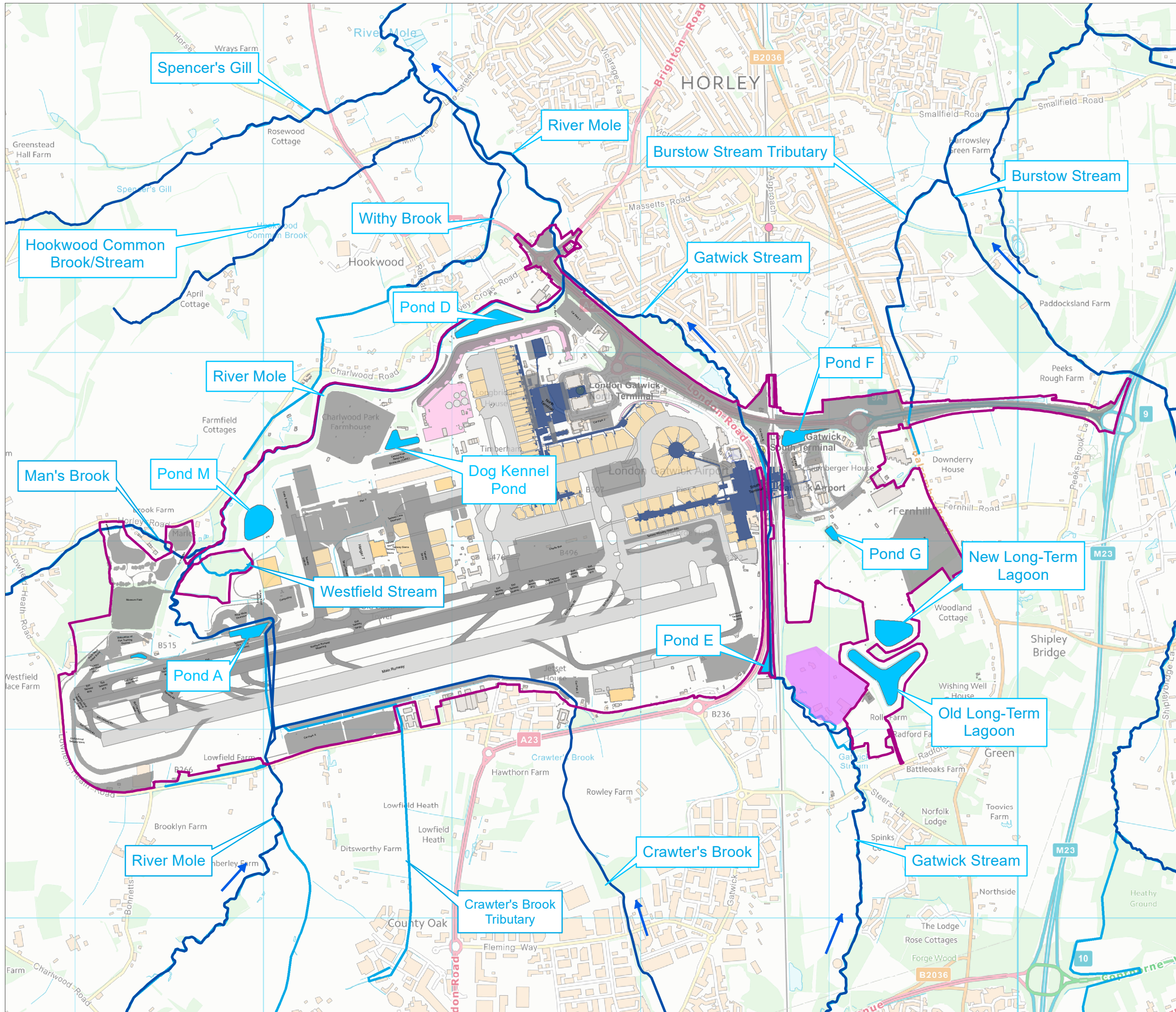
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June 2023

	DRAWING NO. FIGURE 11.4.1	REVISION For ES
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KEY

- Project Boundary (DCO)
- Main River
- Ordinary Watercourses
- Crawley Sewage Treatment Works
- Existing Surface Water Drainage Ponds
- Flow direction

Existing Elements

- Terminal
- Runway/Taxiway
- Hangar
- Stands
- Environmental Mitigation
- Other existing airport infrastructure

Proposed Project Elements

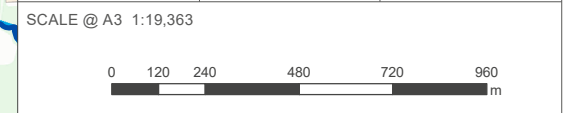
- Proposed Project Elements

DOCUMENT
Environmental Statement

DRAWING TITLE
General Water Features

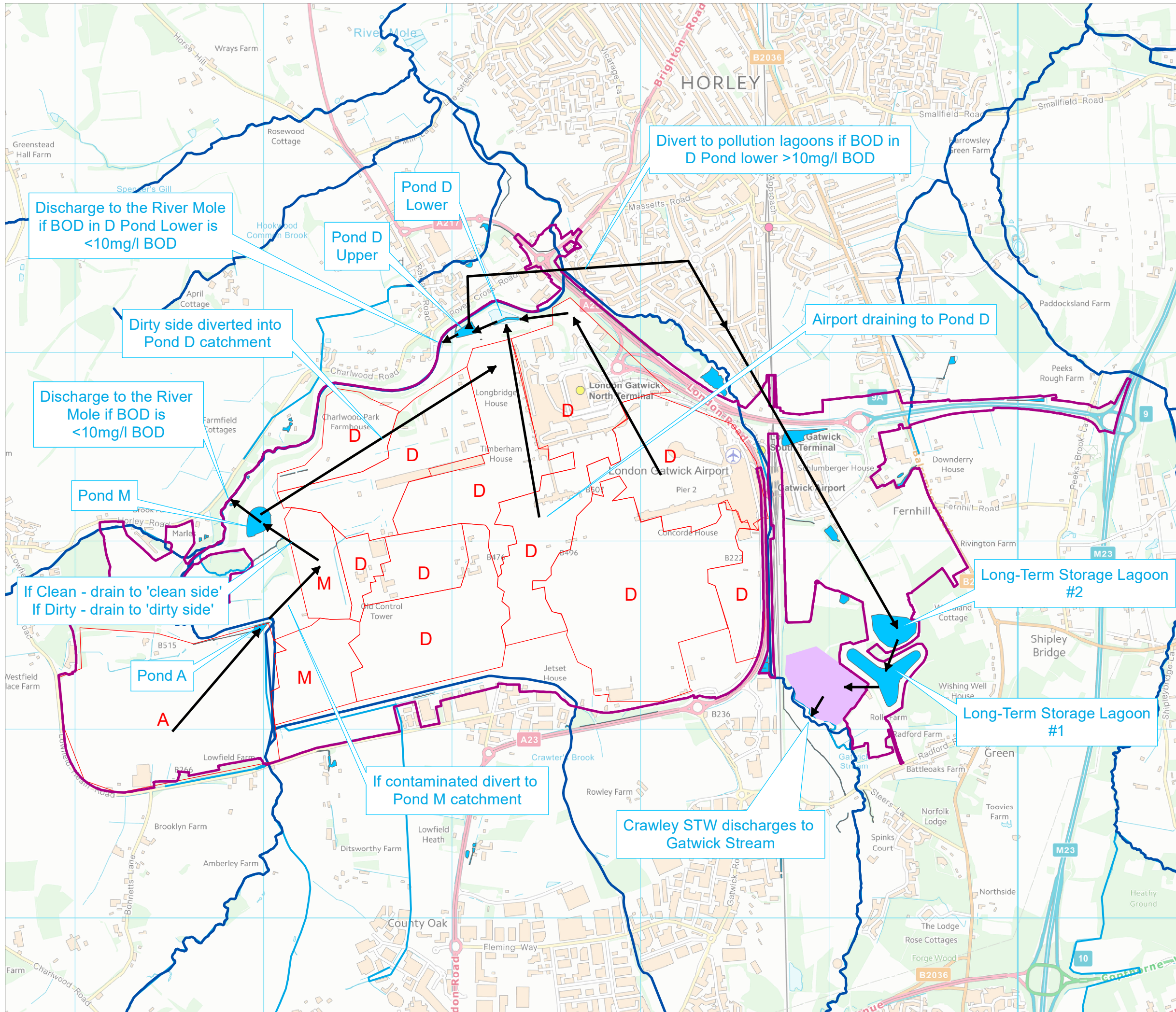
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ORIENTATION 	DRAWING NO. FIGURE 11.6.1	REVISION For ES
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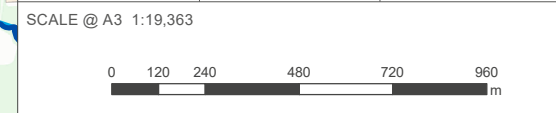
- KEY**
- Project Boundary (DCO)
 - Main Rivers
 - Ordinary Watercourses
 - Pond Catchments
 - Crawley Sewage Treatment Works
 - Existing Surface Water Drainage Ponds
 - D Drains to Pond D
 - M Drains to Pond M
 - A Drains to Pond A
 - ← Water Pathways

DOCUMENT
Environmental Statement

DRAWING TITLE
Contaminated Water Path Existing

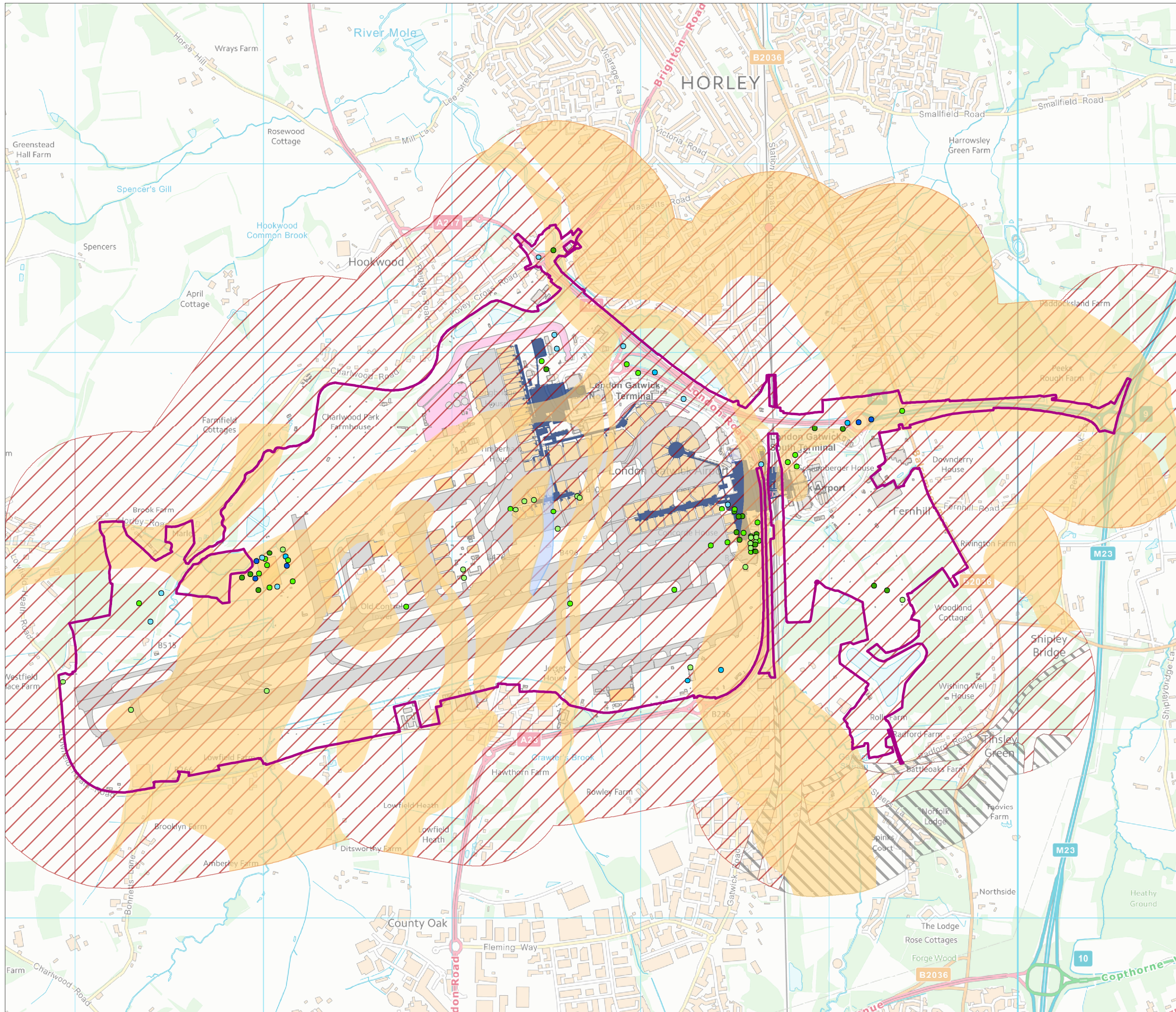
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ORIENTATION	DRAWING NO.	REVISION
	FIGURE 11.6.2	For ES
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KEY

Project Boundary (DCO)

Groundwater Levels (mbgl)

- 0 - 1
- 1 - 2
- 2 - 3
- 3 - 4
- 4 - 5
- >5

Aquifer Designations

- Secondary (A) Superficial Aquifer
- Secondary Superficial Aquifer Undifferentiated
- Secondary (A) Bedrock Aquifer
- Unproductive Bedrock Aquifer

Existing Elements

- Terminal
- Runway/Taxiway
- Hangar
- Stands
- Environmental Mitigation
- Other existing airport infrastructure

DOCUMENT

Environmental Statement

DRAWING TITLE

Groundwater Level and Aquifer Designation

DATE

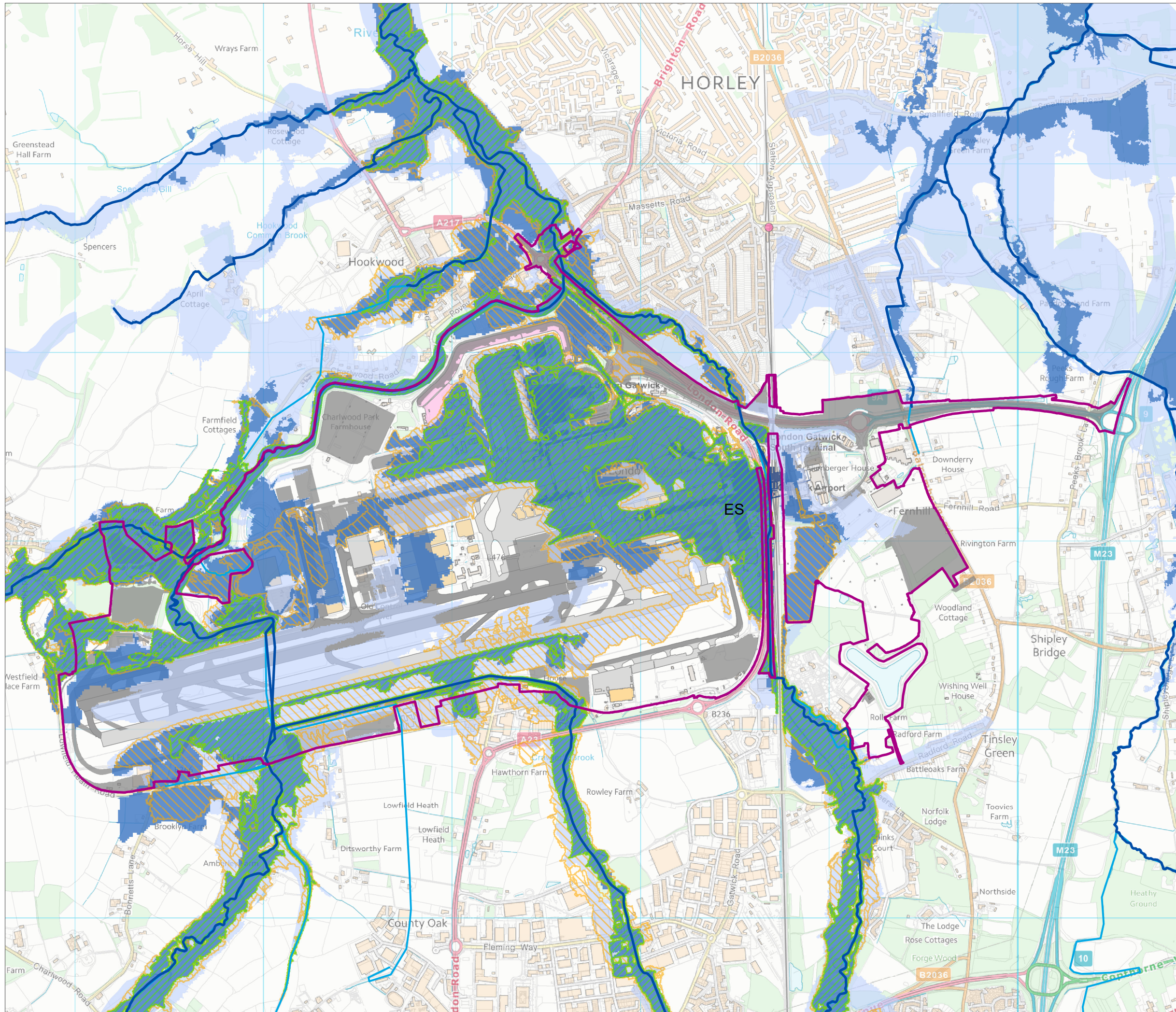
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	ORIENTATION	DRAWING NO.	REVISION
		FIGURE 11.6.3	For ES
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KEY

- Project Boundary (DCO)
- Main Rivers
- Ordinary Watercourses
- Upper Mole Model 1% AEP event
- Upper Mole Model 0.1% AEP event
- Flood Zone 3
- Flood Zone 2

Existing Elements

- Terminal
- Runway/Taxiway
- Hangar
- Stands
- Environmental Mitigation
- Other existing airport infrastructure

Proposed Project Elements

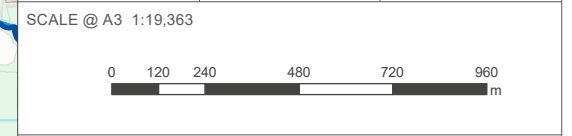
- Proposed Project Elements

DOCUMENT
Environmental Statement

DRAWING TITLE
Environment Agency Published Flood Zones
Upper Mole Model 1% and 0.1% AEP Event
Extents (Baseline Undefended Scenario)

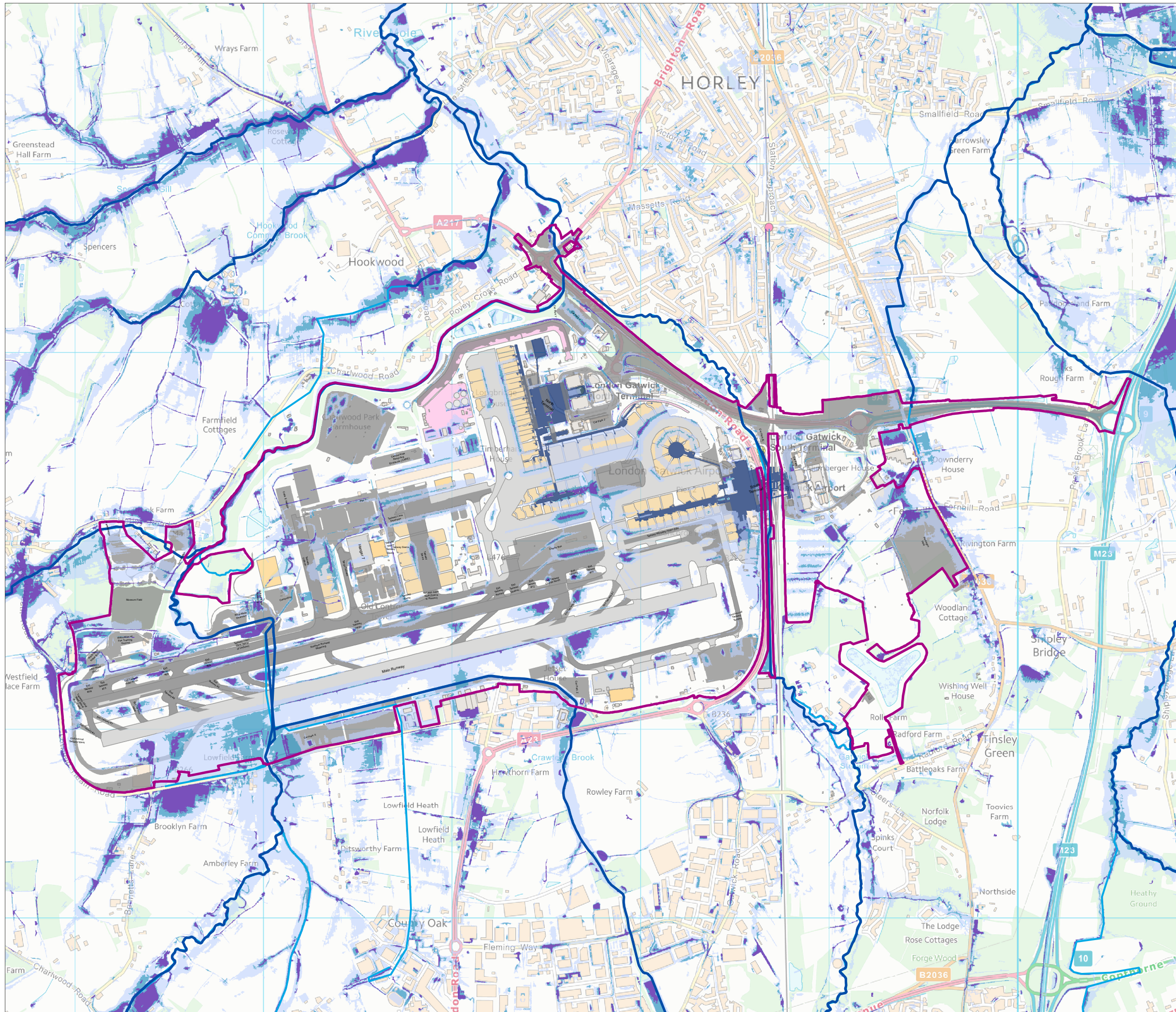
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	DRAWING NO. FIGURE 11.6.4	REVISION For ES
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- KEY**
- Project Boundary (DCO)
 - Main Rivers
 - Ordinary Watercourses
 - EA RoFSW 3.3% (1 in 30) Flood Extent (High Risk)
 - EA RoFSW 1% (1 in 100) Flood Extent (Medium Risk)
 - EA RoFSW 0.1% (1 in 1000) Flood Extent (Low Risk)

- Existing Elements**
- Terminal
 - Runway/Taxiway
 - Hangar
 - Stands
 - Environmental Mitigation
 - Other existing airport infrastructure

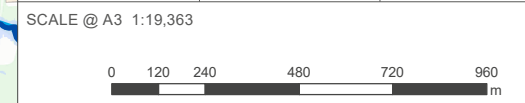
- Proposed Project Elements**
- Proposed Project Elements

DOCUMENT
Environmental Statement

DRAWING TITLE
Risk of Flooding from Surface Water Flooding Extents

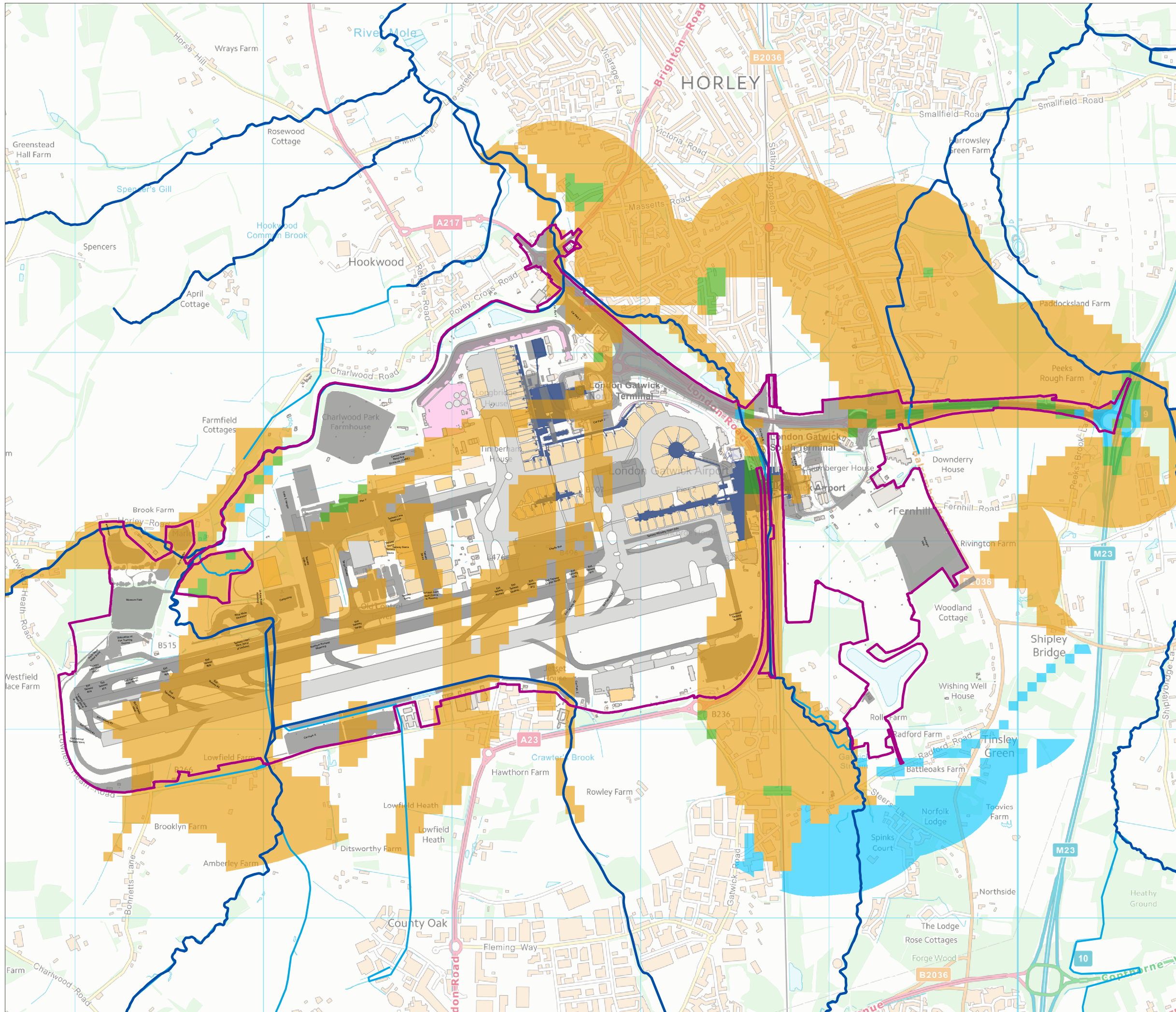
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	DRAWING NO. FIGURE 11.6.5	REVISION For ES
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KEY

- Project Boundary (DCO)
- Main Rivers
- Ordinary Watercourses

Areas Susceptible to Groundwater Flooding

- Limited potential for groundwater flooding to occur
- Potential for groundwater flooding of property situated below ground level
- Potential for groundwater flooding to occur at surface

Existing Elements

- Terminal
- Runway/Taxiway
- Hangar
- Stands
- Environmental Mitigation
- Other existing airport infrastructure

Proposed Project Elements

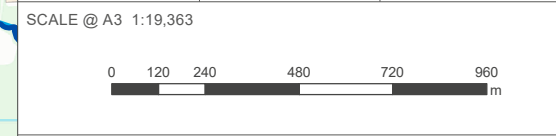
- Proposed Project Elements

DOCUMENT
Environmental Statement

DRAWING TITLE
Areas Susceptible to Groundwater Flooding

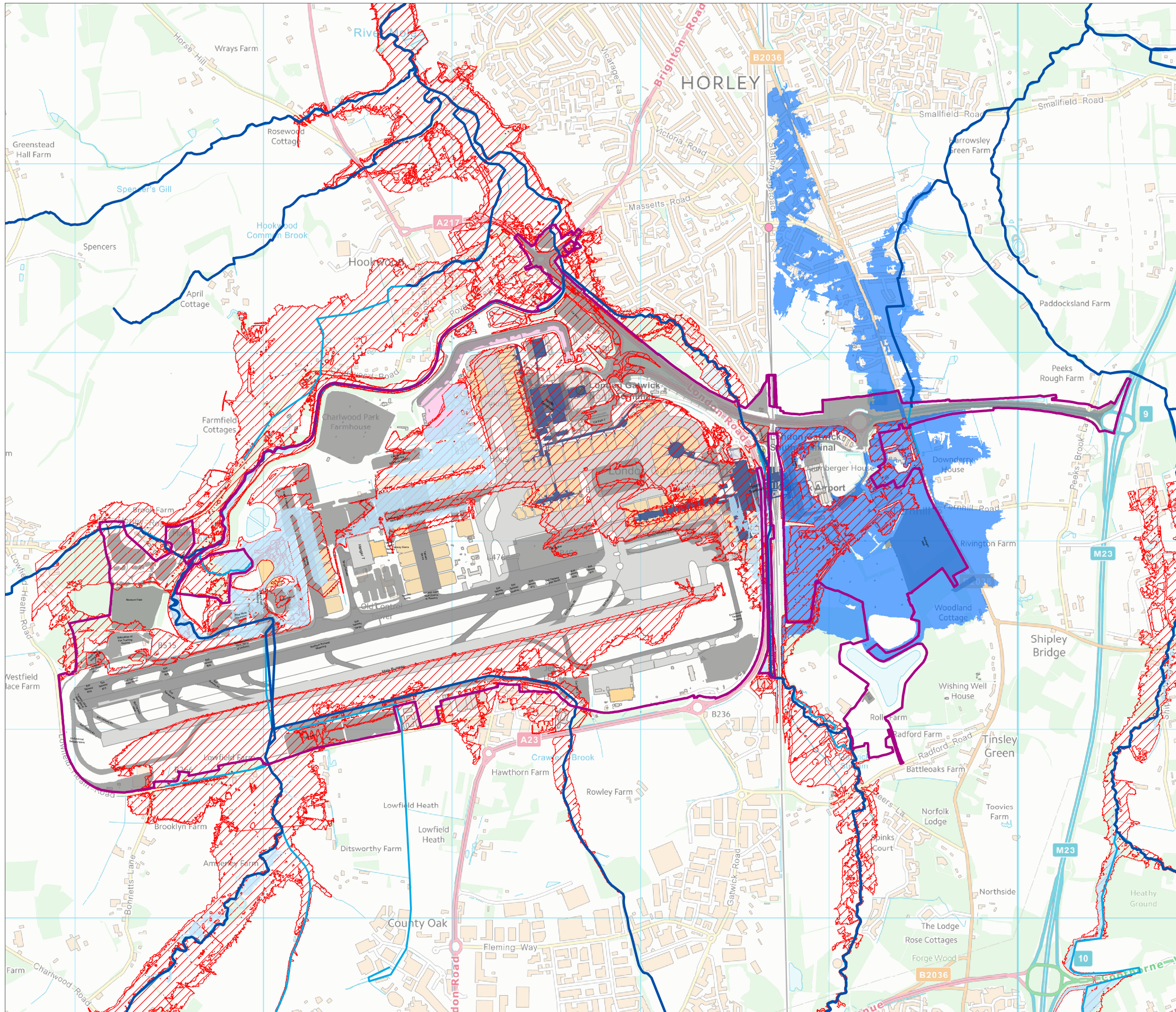
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	ORIENTATION	DRAWING NO.	REVISION
		FIGURE 11.6.6	For ES
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- KEY**
- Project Boundary (DCO)
 - Main Rivers
 - Ordinary Watercourses
 - Maximum Reservoir Flood Extent - when river levels are normal
 - Maximum Reservoir Flood Extent - when there is also flooding from rivers
 - Gatwick Breach Flood Extents

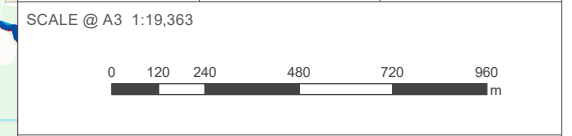
- Existing Elements**
- Terminal
 - Runway/Taxiway
 - Hangar
 - Stands
 - Environmental Mitigation
 - Other existing airport infrastructure
- Proposed Project Elements**
- Proposed Project Elements

DOCUMENT
Environmental Statement

DRAWING TITLE
Risk of Reservoir Failure Flood Extents

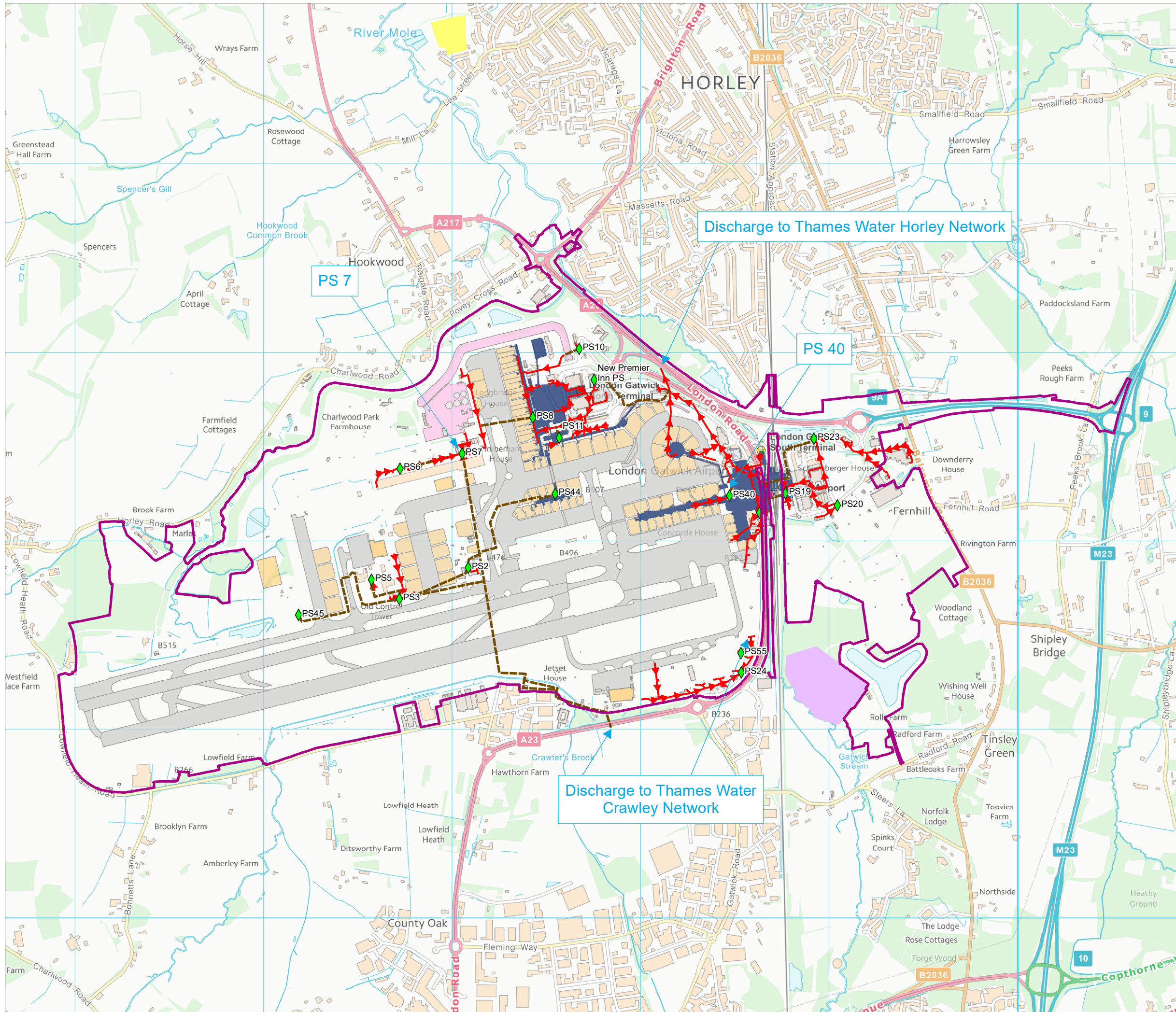
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	DRAWING NO. FIGURE 11.6.5	REVISION For ES
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KEY

- Project Boundary (DCO)
- ◆ Pumping Stations
- Pumping Main
- Gravity Pipes
- Horley Sewage Treatment Works
- Crawley Sewage Treatment Works

Existing Elements

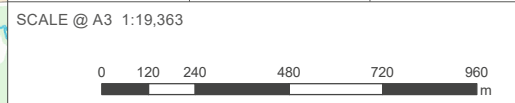
- Terminal
- Runway/Taxiway
- Hangar
- Stands
- Environmental Mitigation
- Other existing airport infrastructure

DOCUMENT
Environmental Statement

DRAWING TITLE
Existing Wastewater Infrastructure

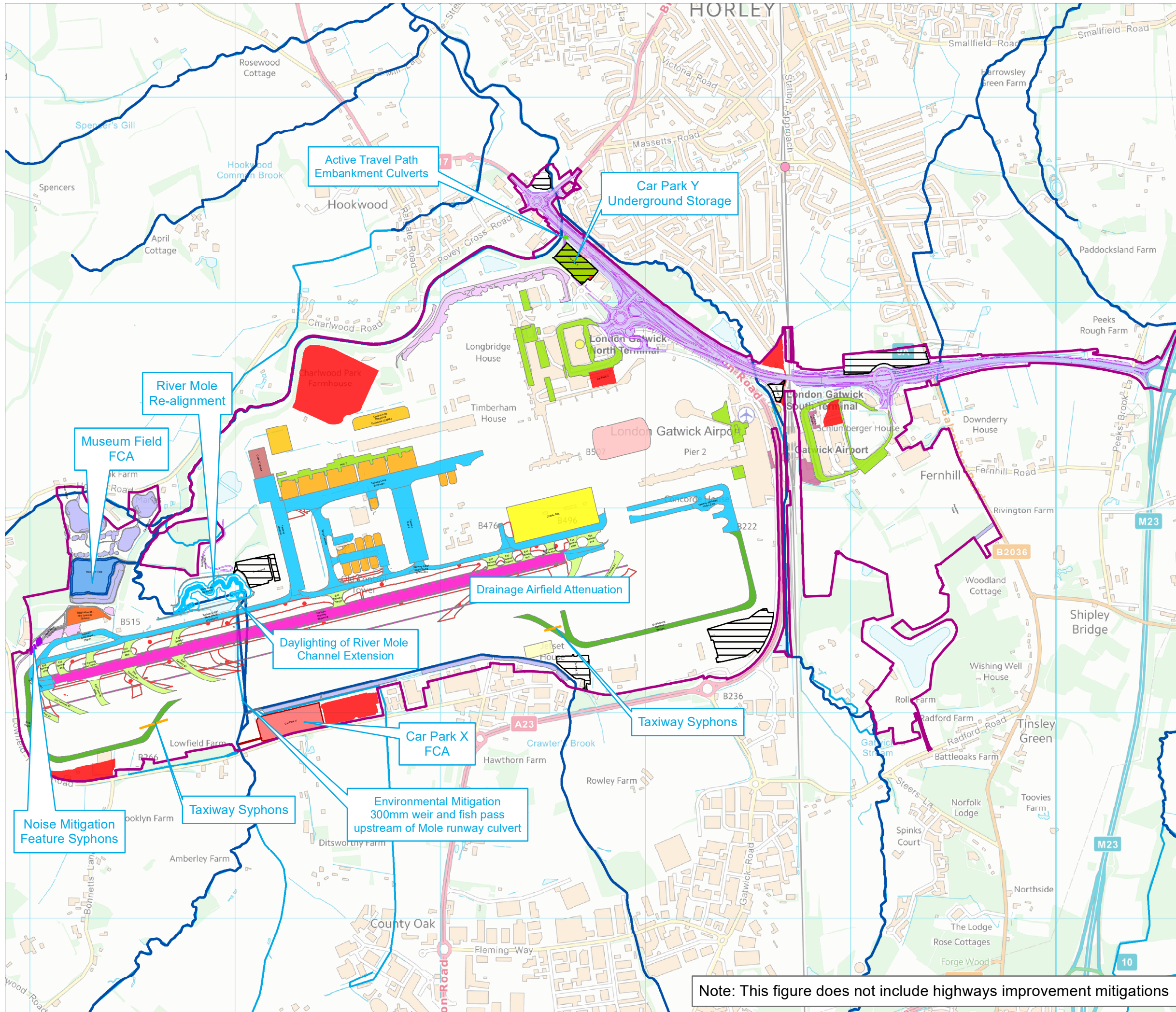
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	ORIENTATION	DRAWING NO.	REVISION
		FIGURE 11.6.8	For ES
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KEY

- Project Boundary (DCO)
- Main Rivers
- Ordinary Watercourses

Proposed Project Elements

- Aircraft Holding Area
- Car Park
- CARE
- Compound
- End Around Taxiway
- Environmental Mitigation
- Existing taxiway to be replaced with grass
- Exit/Entrance Taxiway
- Hangar
- Hotel
- Noise Mitigation
- Northern Runway 08L/26R
- Overnight parking/remote stands
- Relocation of Fire Training Ground
- Satellite Airport Fire Service
- Facility provision south of main runway
- Stands
- Surface Access works
- Taxiway
- Terminal Works

Proposed Mitigation Elements

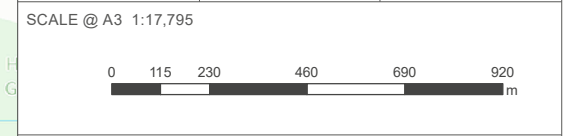
- Embankment Culverts
- Airfield Syphons
- Noise Mitigation Feature Syphons
- River Realignment
- Car Park X FCA
- Museum Field FCA
- Car Park Y Underground Storage

DOCUMENT
Environmental Statement Chapter 11

DRAWING TITLE
Project Elements, Proposed Mitigation and Enhancement Measures

DATE
June 2023

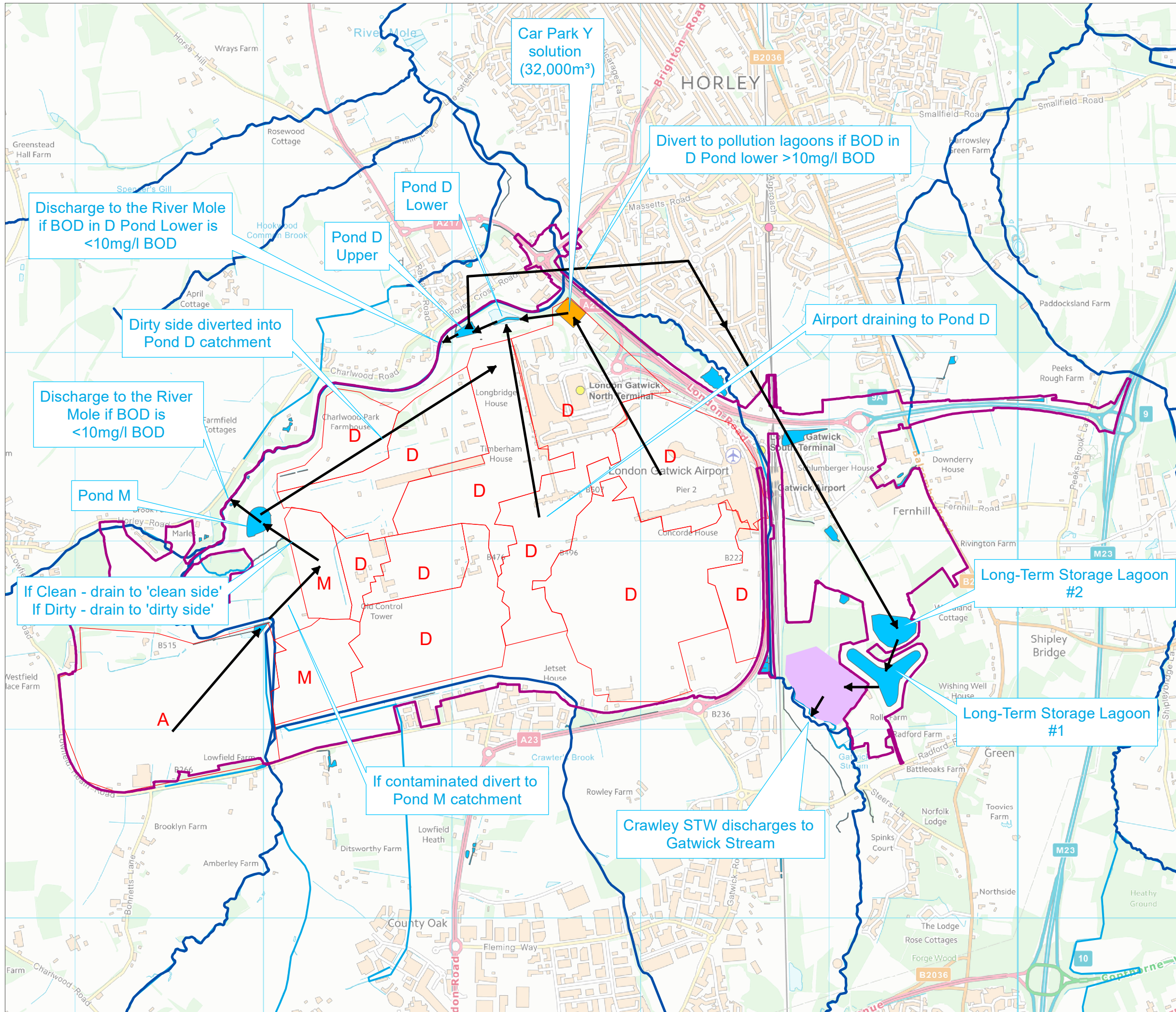
	ORIENTATION	DRAWING NO. FIGURE 11.7.1	REVISION For ES
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Note: This figure does not include highways improvement mitigations



- KEY**
- Project Boundary (DCO)
 - Main Rivers
 - Ordinary Watercourses
 - Pond Catchments
 - Car Park Y
 - Crawley Sewage Treatment Works
 - Existing Surface Water Drainage Ponds
 - D Drains to Pond D
 - M Drains to Pond M
 - A Drains to Pond A
 - ← Water Pathways

DOCUMENT
Environmental Statement

DRAWING TITLE
Contaminated Water Pathway

DATE
June 2023

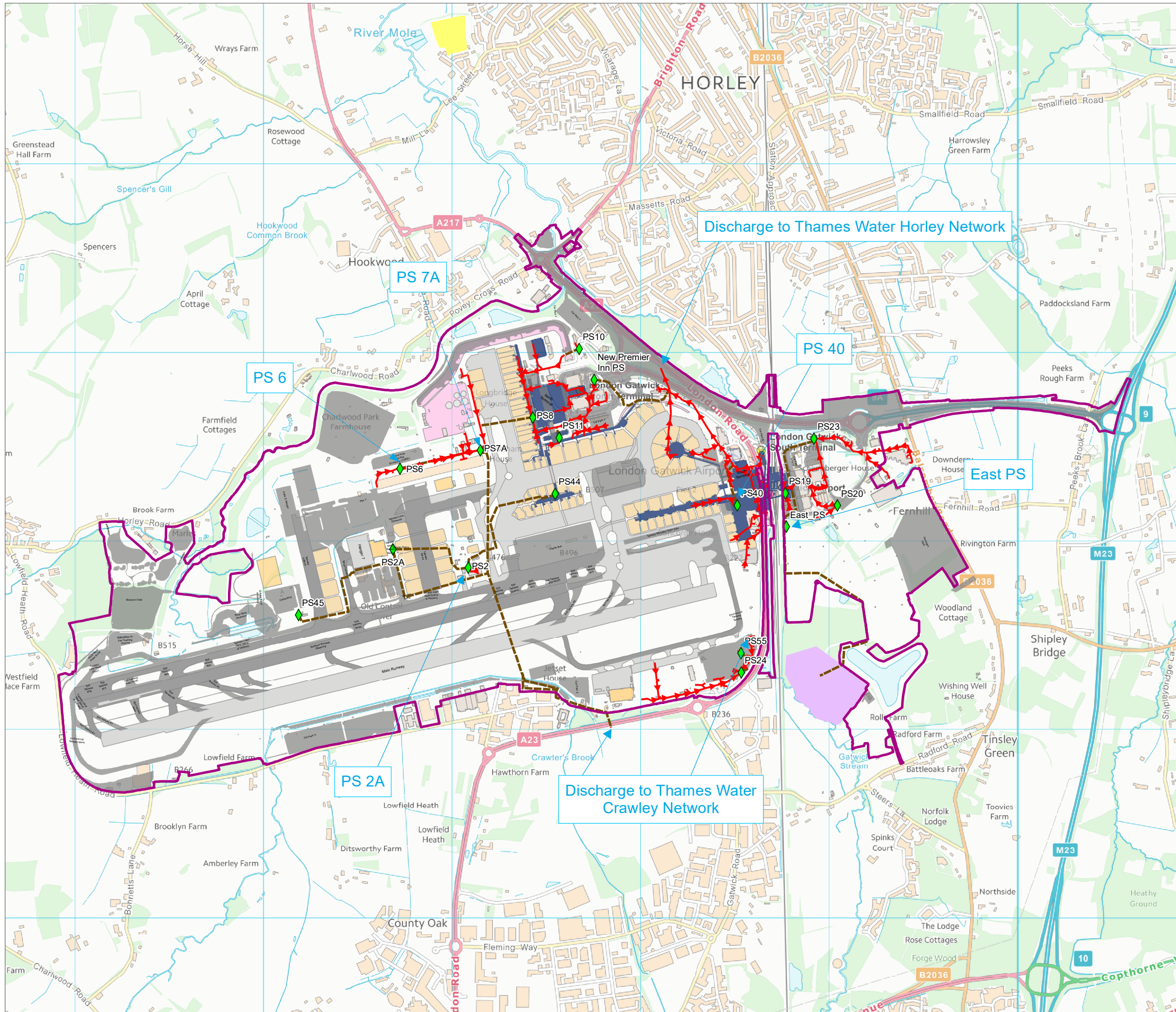
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KEY

- Project Boundary (DCO)
- Pump Stations
- Gravity Pipes
- Pumping Main
- Horley Sewage Treatment Works
- Crawley Sewage Treatment Works

Proposed Project Elements

- Proposed Project Elements

Existing Elements

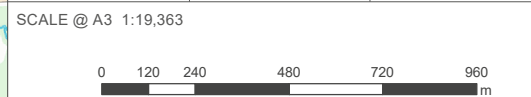
- Terminal
- Runway/Taxiway
- Hangar
- Stands
- Environmental Mitigation
- Other existing airport infrastructure

DOCUMENT
Environmental Statement

DRAWING TITLE
Project Wastewater Infrastructure

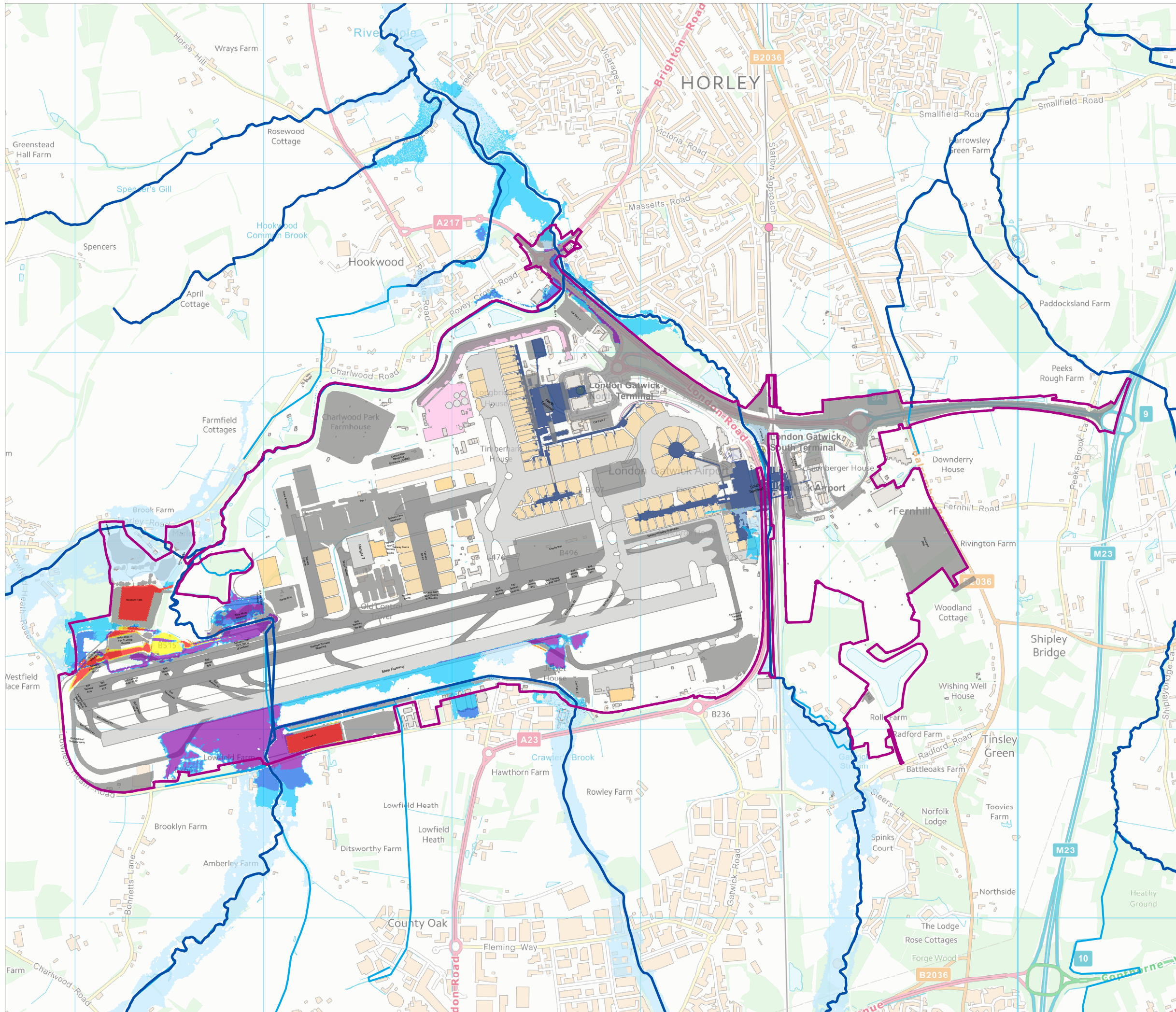
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ORIENTATION 	DRAWING NO. FIGURE 11.8.2	REVISION For ES
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KEY

- Project Boundary (DCO)
- Main Rivers
- Ordinary Watercourses

1% (1 in 100) + 12%CC AEP Event Depth Difference

Depth (m)

- 10 to -0.1
- 0.1 to -0.05
- 0.05 to -0.01
- 0.01 to 0.01 Negligible
- 0.01 to 0.05
- 0.05 to 0.1
- >=0.1

Existing Elements

- Terminal
- Runway/Taxiway
- Hangar
- Stands
- Environmental Mitigation
- Other existing airport infrastructure

Proposed Elements

- Proposed Elements

DOCUMENT

Environmental Statement

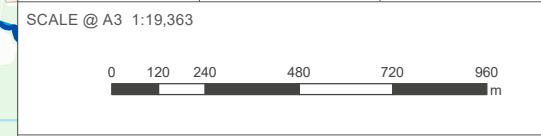
DRAWING TITLE

Upper Mole Hydraulic Model 1% + 12%CC AEP Event Depth Difference to Baseline (With-Project, With-Mitigation Scenario)

DATE

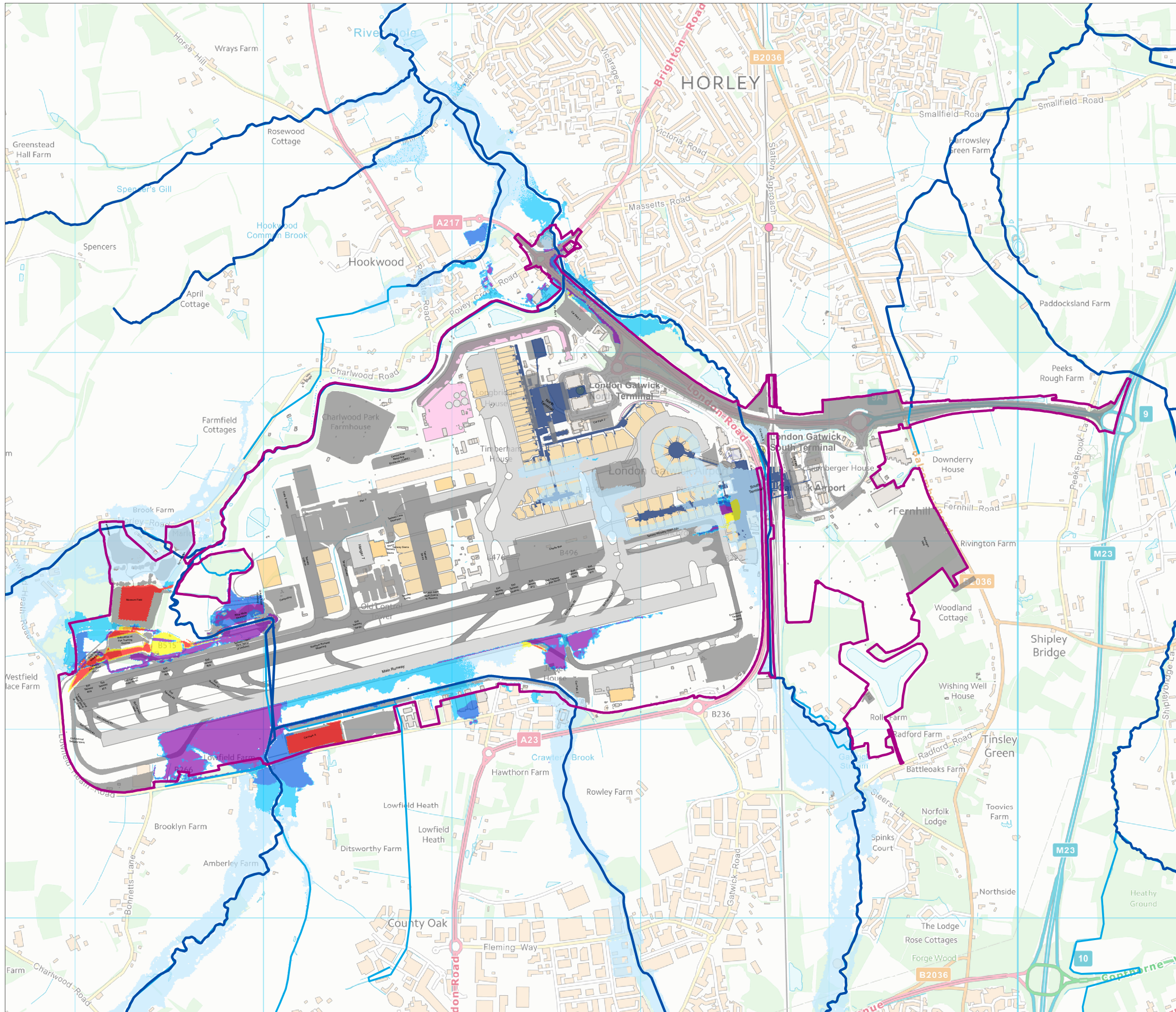
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ORIENTATION	DRAWING NO.	REVISION
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KEY

- Project Boundary (DCO)
- Main Rivers
- Ordinary Watercourses

1% (1 in 100) + 20%CC AEP Event Depth Difference

Depth (m)

- 10 to -0.1
- 0.1 to -0.05
- 0.05 to -0.01
- 0.01 to 0.01 Negligible
- 0.01 to 0.05
- 0.05 to 0.1
- >=0.1

Existing Elements

- Terminal
- Runway/Taxiway
- Hangar
- Stands
- Environmental Mitigation
- Other existing airport infrastructure

Proposed Elements

- Proposed Elements

DOCUMENT

Environmental Statement

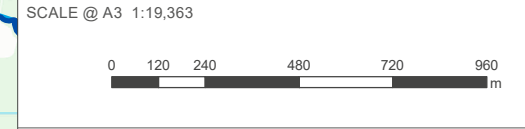
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Upper Mole Hydraulic Model 1% + 20%CC AEP Event Depth Difference to Baseline (With-Project, With-Mitigation Scenario)

DATE

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	FIGURE 11.9.2	For ES
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