Volume 2, Chapter 14: Land quality

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Illustrative land contamination and minerals study area

Illustrative agricultural land quality study area

Figure 14.1: Land quality study area
Figure 14.2: Ground investigation and soil sample locations

- Draft Development Consent Order limits
- Soil sampling locations
- Ground investigation locations completed as of 15 February 2019

Company: Heathrow Expansion Project
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Ground investigation locations completed as of 15 February 2019

Groundwater sampling locations
Figure 14.4: Surface water sampling locations
Discharges (Surface & Groundwater)

Surface water receptors (rivers, ponds and streams) Ecological Receptors

Landfills, Waste Management Facilities, Radioactive Substance Sites, Asbestos in the Ground

Industrial & Commercial Operations, Transport (Road & Airport), Railway Land, Mineral Sites & Potentially Infilled Ground, Other.

Agricultural and Horticulture

Public Open Space

Energy, Electrical & Fuel Installations

Made Ground

Superficial deposits (River Terrace Deposits & Langley Silt Member)

Thames Group (London Clay and Harwich Formations)

Chalk Group

Lambeth Group

Groundwater

1. Discharges
2. Made Ground and contamination associated with sources
3. Landfills, waste management facilities & radioactive substances
4. Oil/fuel storage, electrical substations, tanks and gas works
5. Asbestos in the ground

6. Sources
7. Pathways
8. Receptors

- Dermal contact, inhalation and ingestion of soil and soil dusts
- Inhalation of gases and vapours
- Consumption of home grown vegetables
- Leaching through saturated and unsaturated zone
- Migration through boreholes
- Lateral migration through saturates zone
- Direct contact
- Gas migration and accumulation
- Migration via drainage

- Current site users (commercial/industrial)
- Current site users (residential assumed with gardens)
- Current site users (public open space)
- Current allotment user
- Water environment - superficial deposits (Principal and Secondary A Aquifers)
- Water environment - bedrock deposits (Principal Aquifer)
- Water environment - surface water
- Current Property (including buildings, utilities and infrastructure)
- Current Property (crops and livestock)
- Ecological receptors

Figure 14.5: Schematic conceptual site model - current use

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Project Name: Heathrow Expansion Project

Heathrow Project No: HEP53

Title: Made Ground

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ISO A3 Landscape
Surface water receptors (rivers, ponds & streams)

Airport facilities (fuel, storage and maintenance)

Runways, taxiways & aprons (including associated developments)

Terminals and associated developments

Landscaped areas

Adjacent users

1. Made Ground associated with historical sources and earthworks
2. Landfills
3. Airport facilities
4. Discharges

Pathways

1. Dermal contact, inhalation and ingestion of soil and soil dusts
2. Inhalation of gases and vapours
3. Leaching through saturated and unsaturated zone
4. Lateral migration through saturates zone and utilities
5. Direct contact and discharge
6. Gas migration and accumulation
7. Migration via drainage

Receptors

1. Future site users (commercial/industrial)
2. Future site users (maintenance and construction workers)
3. Future Adjacent land users (residential with gardens)
4. Water environment - Principal and Secondary A Aquifers
5. Water environment - surface water
6. Future property (including buildings, utilities and infrastructure)
7. Future property (landscaped areas)
Soilscape

Freely draining slightly acid but base-rich soils
Freely draining slightly acid loamy soils
Freely draining very acid sandy and loamy soils
Loamy and clayey floodplain soils with naturally high groundwater
Loamy soils with naturally high groundwater
Slowly permeable seasonally wet acid loamy and clayey soils
Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils
Water
Draft Development Consent Order limits

Surveys undertaken in 2018
Grade 1
Grade 2
Grade 3a
Grade 3b
Grade 4
Grade 5
Not surveyed
Other

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Figure 14.9: Site specific agricultural land classification studies (post 1988 ALC field studies)
**Figure 14.10: Geodiversity sites**
Mineral sites:
1. Sipson Quarry
2. Harlington Quarry
3. Poyle Quarry
4. Horton (Brook) Quarry
5. Land north of Harmondsworth
6. Land to the west of Harmondsworth
7. King George VI Reservoir
8. North of Skyport Drive
9. Car park east of Cranford Lane
10. Cranford Park
11. Sipson Lane West
12. Ansell Garden Centre
13. Land north of Harmondsworth B
14. Bedfont Court
15. Richings Park

Mineral safeguarding areas:
10. Thorney Mill rail depot
11. Buckinghamshire safeguarding area
12. Surrey safeguarding areas
13. Berkshire safeguarding areas