

Southern Water Gate 2 - Natural Capital component assessments

Water Recycling Option Components

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Havant Thicket to [redacted] Route 1 No Sites Habitat

Element ref	
Element ID	Havant_Thicket_to_[redacted]Route_1_No_Sites_Habitat
Element Name	
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)	Permanent habitat loss (ha)	Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	Water abstraction, recreation, flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Freshwater				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment Water purification services are currently provided by greenspace and urban habitats. Hermitage Stream WFD waterbody is currently achieving Moderate status. Therefore, the decrease in flow has a potential to decline water purification services as dilution of pollutants downstream will decline.

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Havant Thicket to [redacted] Route 2 No Sites Habitat

Element ref	
Element ID	Havant_Thicket_to_[redacted]Route_2_No_Sites_Habitat
Element Name	
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)	Permanent habitat loss (ha)	Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
Arable land	quality management				
Freshwater	Water abstraction, recreation, flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub	No environmental benefits				
Urban	Timber, carbon sequestration, air quality management, recreation				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment

Water purification services are currently provided by greenspace and urban habitats. Hermitage Stream WFD waterbody is currently achieving Moderate status. Therefore, the decrease in flow has a potential to decline water purification services as dilution of pollutants downstream will decline.

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Havant Thicket to [redacted] Route 3 No Sites Habitat

Element ref	
Element ID	Havant_Thicket_to_[redacted]Route_3_No_Sites_Habitat
Element Name	
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within ZoI) (ha)	Permanent habitat loss (ha)	Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment Water purification services are currently provided by greenspace and urban habitats. Hermitage Stream WFD waterbody is currently achieving Moderate status. Therefore, the decrease in flow has a potential to decline water purification services as dilution of pollutants downstream will decline.

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within ZoI) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Havant Thicket to [redacted] Route 4 No Sites Habitat

Element ref	
Element ID	Havant_Thicket_to_[redacted]Route_4_No_Sites_Habitat
Element Name	
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)	Permanent habitat loss (ha)	Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
Arable land	quality management				
Freshwater	Water abstraction, recreation, flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment Water purification services are currently provided by greenspace and urban habitats. Hermitage Stream WFD waterbody is currently achieving Moderate status. Therefore, the decrease in flow has a potential to decline water purification services as dilution of pollutants downstream will decline.

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

to WRP Route 1 No Sites Habitat

Element ref	
Element ID	to_WRP_Route_1_No_Sites_Habitat
Element Name	
Description	
Zone of interest area (ha)	

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
		Permanent habitat loss (ha)			
Arable land	quality management				
Freshwater	Water abstraction, recreation, flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Water Purification	Assessment
Qualitative assessment	The final effluent from [redacted] WTW will be transferred to WRP. Therefore, there would be no change to water purification to the WRP as the water will be transferred via a pipeline from [redacted].

Recreation	Welfare Value (per year)	Estimated visits (per year)

Agricultural	Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

Air Quality  
Area not within Air Quality Management Area

Natural hazard regulation	
Temporary habitat lost during construction (Area within Zol) (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)	
Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

WRP\_to\_Havant\_Thicket\_Route\_1\_No\_Sites\_Habitat

Element ref	
Element ID	WRP_to_Havant_Thicket_Route_1_No_Sites_Habitat
Element Name	
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
		Permanent habitat loss (ha)			
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment Water purification services are currently provided by greenspace and urban habitats. Hermitage Stream WFD waterbody is currently achieving Moderate status. There would be no change in water purification services.

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

WRP\_to\_Havant\_Thicket\_Route\_2\_No\_Sites\_Habitat

Element ref	
Element ID	WRP_to_Havant_Thicket_Route_2_No_Sites_Habitat
Element Name	
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
			Permanent habitat loss (ha)		
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment	Assessment
Qualitative assessment	Water purification services are currently provided by greenspace and urban habitats. Hermitage Stream WFD waterbody is currently achieving Moderate status. There would be no change in water purification services.

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	



WRP to [redacted] Route 1 No Sites Habitat

Element ref	
Element ID	WRP_to_[redacted]Route_1_No_Sites_Habitat
Element Name	
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)	Permanent habitat loss (ha)	Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	Water abstraction, recreation, flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
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Marine	Fisheries, recreation, water desalination				
Shrub	No environmental benefits				
Urban	Timber, carbon sequestration, air quality management, recreation				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment

The water will be transferred to [redacted] Lake which will be created as an environmental buffer lake. The lake will not be in hydraulic continuity with the groundwater. River Itchen flows nearby and the WFD waterbody is achieving a Moderate status. During an emergency when drawdown of the lake is required, water will be discharged to River Itchen. Therefore, this will temporarily improve water or decline water purification with the increased flow during an emergency,

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Element ref	
Element ID	WRP_to [redacted] Route_2_No_Sites_Habitat
Element Name	
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)	Permanent habitat loss (ha)	Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
Arable land	quality management				
Freshwater	Water abstraction, recreation, flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
<p>Qualitative assessment</p> <p>The water will be transferred to [redacted] Lake which will be created as an environmental buffer lake. The lake will not be in hydraulic continuity with the groundwater. River Itchen flows nearby and the WFD waterbody is achieving a Moderate status. During an emergency when drawdown of the lake is required, water will be discharged to River Itchen. Therefore, this will temporarily improve water or decline water purification with the increased flow during an emergency.</p>

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

to WRP Route 1 No Sites Habitat

Element ref	
Element ID	to_WRP_Route_1_No_Sites_Habitat
Element Name	
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
		Permanent habitat loss (ha)			
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
<p>Qualitative assessment</p> <p>Therefore, this could potentially decline water purification of the receiving waterbody as dilution of pollutants downstream will decline. No change to water purification to the WRP as the water will be transferred via a pipeline from WTW.</p>

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary loss estimated

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

  

Permanent habitat loss (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

  

Area planned for habitat creation (ha)	
Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Element ref	
Element ID	Lake, ████████ Habitats
Element Name	
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
			Permanent habitat loss (ha)		
Arable land	quality management				
Freshwater	Water abstraction, recreation, flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub	No environmental benefits				
Urban	Timber, carbon sequestration, air quality management, recreation				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment

██████████ Lake will be an environmental buffer lake. The lake will be lined and will therefore have no effect on water purification services. There may be some vegetation planting around the lake but this is currently unknown therefore impacts on water regulation cannot be assessed.

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Element ref	
Element ID	
Element Name	HTPS 3
Description	
Zone of interest area (ha)	

Stocks and BNG				
Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat improvement (ha)
		Permanent habitat loss (ha)	Area planned for habitat creation (ha)	
Arable land	Crops, carbon sequestration, air quality management			
Freshwater	flood regulation			
Grassland	Carbon sequestration, air quality management, recreation			
Heathland	Livestock, carbon sequestration, recreation			
Marine	Fisheries, recreation, water desalination			
Shrub				
Urban	No environmental benefits			
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation			
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation			

Carbon sequestration - temporary habitat loss during construction				
Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Carbon sequestration - permanent habitat loss				
Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Carbon sequestration - area planned for habitat creation				
Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Water Purification	Assessment
Qualitative assessment	Water purification services are currently provided by greenfield habitats. Hermitage Stream WFD waterbody is currently achieving Moderate status. A pumping station will be constructed. Therefore, the change in land cover has a potential to decline water purification services.

Recreation	
Welfare Value (per year)	Estimated visits (per year)

Agricultural	
Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**  
Area not within Air Quality Management Area

Natural hazard regulation	
Temporary habitat lost during construction (Area within Zol) (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)	
Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Element ref	
Element ID	
Element Name	HTPS 5
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)	Permanent habitat loss (ha)	Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment Water purification services are currently provided by greenfield and woodland habitats. Park Lane Stream has no WFD classification which flows into Hermitage Stream WFD waterbody is currently achieving Moderate status. A pumping station will be constructed. Therefore, the change in land cover has a potential to decline water purification services.

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Element ref	
Element ID	
Element Name	HTPS 8
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
			Permanent habitat loss (ha)		
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment Water purification services are currently provided by greenfield and woodland habitats. Park Lane Stream has no WFD classification which flows into Hermitage Stream WFD waterbody is currently achieving Moderate status. A pumping station will be constructed. Therefore, the change in land cover has a potential to decline water purification services.

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Element ref	
Element ID	
Element Name	HTPS 9
Description	
Zone of interest area (ha)	

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
			Permanent habitat loss (ha)		
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Water Purification	Assessment
Qualitative assessment	Water purification services are currently provided by greenfield habitats. Park Lane Stream has no WFD classification which flows into Hermitage Stream WFD waterbody is currently achieving Moderate status. A pumping station will be constructed. Therefore, the change in land cover has a potential to decline water purification services.

Recreation	Welfare Value (per year)	Estimated visits (per year)

Agricultural	Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**  
Area not within Air Quality Management Area

Natural hazard regulation	
Temporary habitat lost during construction (Area within Zol) (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)	
Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	



WRP to [redacted] SIA

Element ref	
Element ID	
Element Name	WRP to [redacted] SIA
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)	Permanent habitat loss (ha)	Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
<p>Qualitative assessment</p> <p>The water will be transferred to [redacted] Lake which will be created as an environmental buffer lake. The lake will not be in hydraulic continuity with the groundwater. River Itchen flows nearby and the WFD waterbody is achieving a Moderate status. During an emergency when drawdown of the lake is required, water will be discharged to River Itchen. Therefore, this will temporarily improve water or decline water purification with the increased flow during an emergency,</p>

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

WRP 68

Element ref	
Element ID	
Element Name	WRP 68
Description	
Zone of interest area (ha)	

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
			Permanent habitat loss (ha)		
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment

Water purification services are currently provided by grassland habitats. The Langstone Harbour is nearby, and a water recycling plant will be constructed. Therefore, the change in land cover has a potential to decline water purification services.

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Element ref	
Element ID	
Element Name	WRP 70
Description	
Zone of interest area (ha)	

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
			Permanent habitat loss (ha)		
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Water Purification	Assessment
Qualitative assessment	Water purification services are currently provided by arable, pasture, and grassland habitats. Lavant Stream flows nearby and the WFD waterbody is currently achieving Poor status. The construction of water recycling plant will change the land cover which could potentially decline water purification services

Recreation	Welfare Value (per year)	Estimated visits (per year)

Agricultural	Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**  
Area not within Air Quality Management Area

Natural hazard regulation	
Temporary habitat lost during construction (Area within Zol) (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)	
Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

WRP 71

Element ref	
Element ID	
Element Name	WRP 71
Description	
Zone of interest area (ha)	

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
			Permanent habitat loss (ha)		
Arable land					
Freshwater					
Grassland					
Heathland					
Marine					
Shrub					
Urban					
Woodland (coniferous)					
Woodland (deciduous)					

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Water Purification	Assessment
Qualitative assessment	Water purification services are currently provided by greenspace and urban habitats. Brockhampton Stream flows adjacent to the land parcel and has no WFD classification. However, the Stream flows into the Langstone Harbour and a water recycling plant will be constructed. Therefore, the change in land cover has a potential to decline water purification services.

Recreation	Welfare Value (per year)	Estimated visits (per year)

Agricultural	Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**  
Area not within Air Quality Management Area

Natural hazard regulation	
Temporary habitat lost during construction (Area within Zol) (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)	
Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Element ref	
Element ID	
Element Name	WRP 72
Description	
Zone of interest area (ha)	

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
		Permanent habitat loss (ha)			
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

Broad habitat	Cumulative area (ha)	Carbon sequestration - temporary habitat loss during construction		
		Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Broad habitat	Cumulative area (ha)	Carbon sequestration - permanent habitat loss		
		Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Broad habitat	Cumulative area (ha)	Carbon sequestration - area planned for habitat creation		
		Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

Water Purification	Assessment
Qualitative assessment	Water purification services are currently provided by grassland and woodland habitats. Hermitage Stream flows adjacent to the land parcel and the WFD waterbody is currently achieving Moderate status. The construction of water recycling plant will change the land cover which could potentially decline water purification services.

Recreation	Welfare Value (per year)	Estimated visits (per year)

Agricultural	Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**  
Area not within Air Quality Management Area

Natural hazard regulation	
Temporary habitat lost during construction (Area within Zol) (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)	
Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)	
Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

WRP 73

Element ref	
Element ID	
Element Name	WRP 73
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
			Permanent habitat loss (ha)		
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
<p>Qualitative assessment</p> <p>Water purification services are currently provided by grassland and woodland habitats. Hermitage Stream flows adjacent to the land parcel and the WFD waterbody is currently achieving Moderate status. Langstone Harbour is nearby, and the construction of water recycling plant will change the land cover which could potentially decline water purification services.</p>

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

WRP 74

Element ref	
Element ID	
Element Name	WRP 74
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
		(Area within Zol) (ha)	Permanent habitat loss (ha)		
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment

Water purification services are currently provided by grassland and woodland habitats. The Langstone Harbour is nearby, and a water recycling plant will be constructed. Therefore, the change in land cover has a potential to decline water purification services

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

WRP 75

Element ref	
Element ID	
Element Name	WRP 75
Description	
Zone of interest area (ha)	

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
			Permanent habitat loss (ha)		
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Sparsely vegetated land					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment Water purification services are currently provided by grassland and woodland habitats. The Langstone Harbour is nearby, and a water recycling plant will be constructed. Therefore, the change in land cover has a potential to decline water purification services.

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	



Overflow and drawdown to overland

Element ref	
Element ID	
Element Name	Overflow and drawdown to overland
Description	
Zone of Interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
		(Area within Zol) (ha)	Permanent habitat loss (ha)		
Arable land	Crops, carbon sequestration, air quality management regulation				
Freshwater					
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
<p>Qualitative assessment</p> <p>Water purification services are currently provided by arable, pasture, and grassland habitats. River Itchen flows nearby and the WFD waterbody is achieving a Moderate status. During an emergency when drawdown of the lake is required, water will be discharged to the overflow land area. Therefore, this will temporarily improve water purification with the increased flow during an emergency. However, this impact will be negligible.</p>

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Overflow and drawdown to the River Itchen Tributary

Element ref	
Element ID	
Element Name	Overflow and drawdown to the River Itchen Tributary
Description	
Zone of interest area (ha)	

**Stocks and BNG**

Broad habitat	Ecosystem services	Temporary habitat lost during construction (Area within Zol) (ha)		Area planned for habitat creation (ha)	Area planned for habitat improvement (ha)
			Permanent habitat loss (ha)		
Arable land	Crops, carbon sequestration, air quality management				
Freshwater	Water abstraction, recreation, flood regulation				
Grassland	Carbon sequestration, air quality management, recreation				
Heathland	Livestock, carbon sequestration, recreation				
Marine	Fisheries, recreation, water desalination				
Shrub					
Urban	No environmental benefits				
Woodland (coniferous)	Timber, carbon sequestration, air quality management, recreation				
Woodland (deciduous)	Timber, carbon sequestration, air quality management, recreation				

**Carbon sequestration - temporary habitat loss during construction**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - permanent habitat loss**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Carbon sequestration - area planned for habitat creation**

Broad habitat	Cumulative area (ha)	Low non-traded carbon (£2019)	Medium non-traded carbon (£2019)	High non-traded carbon (£2019)
Arable land				
Grassland				
Heathland				
Shrub				
Woodland (coniferous)				
Woodland (deciduous)				

**Water Purification**

Assessment
Qualitative assessment Water purification services are currently provided by arable, pasture, and grassland habitats. River Itchen flows nearby and the WFD waterbody is achieving a Moderate status. During an emergency when drawdown of the lake is required, water will be discharged to River Itchen. Therefore, this will temporarily improve water purification with the increased flow during an emergency.

**Recreation**

Welfare Value (per year)	Estimated visits (per year)

**Agricultural**

Permanent Loss Estimated agriculture value (£2019)	Temporary Loss Estimated agriculture value (£2019)

**Air Quality**

Area not within Air Quality Management Area

**Natural hazard regulation**

Temporary habitat lost during construction (Area within Zol) (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Permanent habitat loss (ha)

Broad habitat type	Value of natural hazard regulation lost (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	

Area planned for habitat creation (ha)

Broad habitat type	Value of natural hazard regulation gained (£2019)
Woodland	
Semi-natural grasslands	
Freshwater	