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BOW FARM ENVIRONMENTAL RISK ASSESSMENT TO SUPPORT A DEPOSIT OF WASTE FOR RECOVERY ENVIRONMENTAL PERMIT APPLICATION

For

MORETON C CULLIMORE (GRAVELS) LIMITED

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BOW FARM ENVIRONMENTAL RISK ASSESSMENT TO SUPPORT A DEPOSIT OF WASTE FOR RECOVERY ENVIRONMENTAL PERMIT APPLICATION

1. INTRODUCTION

Moreton C Cullimore (Gravels) Limited (MCC) has commissioned GWP Consultants LLP (GWP) to prepare an Environmental Risk Assessment (ERA) in support of a Bespoke Environmental Permit application to provide for the permanent placement of imported inert fill material at Bow Farm, Ripple, Worcestershire (the site) as a deposit for recovery activity to achieve the approved restoration landform.

This ERA provides an assessment of the risks to the environment and human health from emissions that may be associated with the deposit for recovery activity at the site.

The objective of the assessment is to identify any significant risks, to demonstrate that the risk of environmental impact or harm is acceptably low and to identity mitigation measures which will need to be implemented in order to manage the risks at acceptable levels.

2. PROPOSED DEVELOPMENT

The works approved by Planning Permission 19/000048/CM (Worcestershire County Council) and Planning Permission 19/0081/TWMAJM (Gloucestershire County Council) provide for, *inter alia*, site restoration using imported inert fill material at Bow Farm, Ripple, Worcestershire.

Planning Permission 19/0081/TWMAJM was approved by Gloucestershire County Council through the successful appeal (Appeal Ref. APP/T1600/W/23/3324695) by the applicant following initial refusal of Planning Permission 19/0081/TWMAJM.

Completion of the approved site restoration scheme, involving the restoration of the mineral extraction areas requires 1.4Mm^3 (approximately 2.45Mt using a standard conversion factor of 1.75t/m^3) of imported inert fill material within Phases 1 to 9 of the excavation area in the main site area.

The thickness of imported fill to be placed ranges from 0m to *c.* 7.5m (average 4.5m).

The approved site restoration scheme also provides for excavation and low-level restoration of Flexible Working Areas A and B in the west of the site. Flexible Working Areas A and B will only be excavated seasonally during non-high flow periods of the River Severn. The River Severn is located *c.* 25m to the west of the EPR Permit Application area and *c.* 400m to the west of the Phases 1 to 9 excavation area, at its closest approach. Restoration of Flexible Working Areas A and B will be to wetlands and water features using only site derived mineral waste (silts and clays) and will have a final landform below pre-extraction ground levels. No imported inert fill material will be placed in Flexible Working Areas A and B.

An application is being made for a Bespoke Environmental Permit (use of waste in a deposit for recovery activity).

The Environmental Permit application is submitted on the basis that the permanent placement of imported inert fill material within excavation area Phases 1 to 9 at the site to achieve the approved restoration scheme is a deposit for recovery activity and not a waste disposal activity.

The recovered waste will be imported inert fill material sourced from construction sites within the general Tewkesbury area.

To ensure that the recovered waste material is suitable for its intended use, the works will be managed by staff having the appropriate level of technical competence with relevant qualifications gained from one of the accepted industry schemes. Waste Acceptance Criteria inspection procedures will be in place to ensure that the inert fill material used in the works is as described on Waste Transfer Notes, is permitted by the Environmental Permit and is fit for purpose.

3. SITE SETTING

3.1 Site Location

The application site is located at Bow Farm, Ripple, Worcestershire (National Grid Reference SO 87565 36504).

Drawing No. BOWFEPR2511-1 shows the site location and Drawing No. BOWFEPR2511-2 shows the different areas of the site, including the excavation area Phases 1 to 9 where imported inert fill material will be placed under the EPR Permit. Drawing No. BOWFEPR2511-3 shows the Environmental Permit application area within the context of the site approved under the Planning Permissions.

The total site area approved under the Planning Permissions covers *c.* 65ha, straddling the county boundary between Worcestershire and Gloucestershire. An area of *c.* 45ha of land has been approved for mineral extraction in the north and centre of the site (this is located entirely within Worcestershire). The approved mineral extraction areas are made up of excavation area Phases 1 to 9 (*c.* 30.9ha), Flexible Working Area A (*c.* 8.8ha) and Flexible Working Area B (*c.* 5.3ha). The processing plant and site access route will be located in Gloucestershire (eastern part of the site).

A site plan is presented as Drawing No. BOWFEPR2511-4.

The Phases 1 to 9 excavation area in the main part of the site is located *c.* 500m south of the village of Ripple. The processing plant and main access road is located *c.* 300m south of the village of Puckrup and *c.* 900m southwest of the village of Twyning. The town of Tewkesbury is located *c.* 2.5km to the south of the site.

From a geomorphological terrain perspective, the site can be split into three areas:

- a flat low lying (<10mAOD) area south of Ripple Quarry Lake;
- a raised north-west south-east trending 300m wide, 1000m long ridge rising to 14mAOD, separated from the Ripple Quarry area by the Napps Local Wildlife Site (LWS) wetland area (a former osier bed); and
- a hill side slope rising to >30mAOD, above the River Severn valley, separated from the southern end of the raised ridge and floodplain by a small stream named the Ripple Brook.

The Ripple Brook valley has an elevation of 9mAOD to 11mAOD adjacent to the site and divides the site in two.

The site is accessed from the A38 to the east of the site.

3.2 Site Layout

The approved design and operation of the site reflects the three areas' different elevations and proximities to the River Severn (*c.* 25m to the west of the full site area, and *c.* 400m to the west of the Phases 1 to 9 excavation area).

The north-south ridge in the centre of the site, approved under Planning, is where excavation area Phases 1 to 9 are situated. Phases 1 to 9 is the location for year-round sand and gravel extraction and is the area of the site where the imported inert fill material will be placed with restoration back to pre-extraction ground levels. The Phases 1 to 9 area of the site is the focus of the deposit for recovery Environmental Permit being applied for, as this is the part of the site where the imported inert fill material will be used to restore the site.

The elevated hill slope area in the east of the site will be the location for the processing plant, main site office and weighbridge, silt settlement lagoons associated with the processing plant/mineral washing and the site access road from the A38.

The low-lying area of Flexible Working Areas A and B, *c.* 25m to the east of the River Severn at its closest approach, will only be excavated seasonally during non-high flow periods of the river. Restoration of Flexible Working Areas A and B will be to wetlands and water features using only site derived mineral waste (silts and clays) and will have a final landform below pre-extraction ground levels. No imported inert fill material will be placed in Flexible Working Areas A and B.

3.3 Geological Setting

The geological setting of the site has been determined based on a review of published information and historical and recent site investigation information.

3.3.1 Bedrock Deposits

The solid geology underlying the site comprises the Triassic Branscombe Mudstone Formation of the Mercia Mudstone Group which consists of a sequence of red-brown mudstones and siltstones.

The Tewkesbury Fault crosses the site access road to the east of the processing plant area. The fault is therefore situated to the east of the Phases 1 to 9 excavation area of the EPR Permit application area. The Tewkesbury Fault has a north-south trend and juxtaposes limestone and shale of the younger Jurassic Rugby Limestone Member against the Branscombe Mudstone Formation.

3.3.2 Superficial Deposits

The bedrock mudstone is overlain by a series of stepped river Terrace Deposits of sand and gravel formed during the Pleistocene by the early River Severn system. The Terrace Deposits are believed to have formed in a braided river environment in which lateral variation from clay or silty channel fill to gravel islands can be expected. Erosion of the bedrock clay may lead to thickening of Terrace Deposits.

The Terrace Deposits collectively belong to the Severn Valley Formation. The youngest Terrace Deposit at Ripple is concealed beneath alluvial sediment of the modern River Severn.

The four lowest (youngest) of the River Severn terrace sand and gravel deposits are present on the site:

Kidderminster Station Member (British Geological Survey (BGS) 4th Terrace of the River Severn)

The upper surface level is *c.* 32mAOD to 33mAOD and is found only at the eastern boundary of the full site area east of Ripple Brook. The Terrace Deposit comprises predominantly brown and red brown silty sand with pockets of fine and coarse gravel beneath a thin soil cover. The maximum proven thickness of this Member at the site is 4.7m, where reddish-brown silty sand with rare gravel is present.

Holt Heath Member (BGS 3rd Terrace or Main Terrace of the River Severn)

The Holt Heath Member underlies the level ground lying at *c.* 15mAOD to 17mAOD between the processing plant area and Puckrup Lane, to the east of the Phases 1 to 9 excavation area. A wedge-shaped remnant of this terrace also lies between the northern site boundary and Ripple Brook, extending north of the M50 as far as Ripple Village. It is evident that part of the terrace has been excavated in the past, possibly during construction of the M50 bridge in 1960.

Worcester Member (BGS 2nd Terrace of River Severn)

The Worcester Member is the main sand and gravel resource on the site within the Phases 1 to 9 excavation area and forms a prominent landform 3m to 4m above the floodplain. On the site, the front edge of the terrace forms a well-defined slope between the top of the Terrace Deposit at 12mAOD to 14mAOD and the floodplain at 9mAOD to 10mAOD. The Terrace Deposit appears to be continuous but thins to the edge of the site area against the rising bedrock mudstone adjacent to Bow Lane. A thickness of 5.5m of Terrace Deposit has been proven. The deposit is described as medium dense, reddish-brown slightly clayey and occasionally pebbly fine to medium sand. The gravel and clay content varies but the Terrace Deposit is always predominantly sand.

Power House Member (BGS 1st Terrace of River Severn)

The current channel and floodplain of the River Severn are cut into the Power House Member, the youngest of the terrace gravel deposits of the Severn Valley Formation. The deposit is described as brown medium to fine grained sandy gravel. The deposit is entirely obscured by silty clay alluvium and overbank sediments. The maximum thickness of the sand and gravel deposit intersected on site was 3.3m. This is consistent with reported thickness from Ripple Quarry (adjacent to the north of the site) which reported an average thickness of 3.19m over the proposed extraction area with a maximum of 6.25m and minimum of 1.5m. Similar variation should be expected at Bow Farm.

3.4 Hydrogeological Setting

Available groundwater level monitoring data from eight piezometers installed within the Worcester Member (2nd Terrace) on the perimeter of the proposed excavation area for the site indicate that groundwater is present typically around 8mAOD to 9mAOD, with minimums recorded at *c.* 6mAOD and maximums at *c.* 11mAOD. A consistent seasonal fluctuation of groundwater between 0.5m and 1.0m is observed within the Worcester Member (2nd Terrace).

The regional groundwater flow direction within the Worcester Member (2nd Terrace) is towards the west, towards the River Severn.

3.4.1 Aquifer Designations

The superficial deposits, including the Worcester Member (2nd Terrace), at the site and the surrounding area is classified by the Environment Agency's (EA's) Aquifer Designation Dataset for England and Wales map, accessed through the Defra Magic Map application, as a 'Secondary A' superficial aquifer, defined as 'permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of baseflow to rivers'.

The bedrock at the site and the surrounding area is shown on the Aquifer Designation map as a 'Secondary B' aquifer, defined as 'mainly lower permeability layers that may store and yield limited amounts of groundwater through characteristics like thin cracks (called fissures) and openings or eroded layers'. Site investigations have shown the solid geology underlying the site comprises the Triassic Branscombe Mudstone Formation of the Mercia Mudstone Group which consists of a sequence of red-brown mudstones and siltstones. The existence of the mudstone dominated bedrock at the site means it does not transmit groundwater flow.

3.4.2 Source Protection Zones (SPZs)

The site is not located within a groundwater Source Protection Zone (SPZ).

3.4.3 Groundwater Abstractions

There are 5 No. licensed groundwater abstractions within 1km of the site.

Of the identified abstractions, two near Twyning are reported to abstract groundwater from a hydraulically separate gravel terrace and hydraulically separate bedrock to those at the site, and is used for irrigation. The historical abstraction at Bowbridge Farm *c.* 210m to the east of the Phases 1 to 9 excavation area is from an isolated area of the Holt Heath Member superficial deposits, separate to the Worcester Member sand and gravel in the Phases 1 to 9 excavation area.

The groundwater abstraction reported to be *c.* 80m to the west of the site is recorded as abstracting from a lagoon and not a borehole. It is also reported as owned by a farm in Ryall 4km north of the site and is used for spray irrigation in summer months. It is possible the abstraction location is misplaced, although equally, satellite images appear to show abstraction infrastructure in the northern end of Ripple Quarry Lake. The licence has an annual limit of 30,000m^3/year (equivalent to 1 l/s) and a maximum daily limit of 1,600m^3/d (equivalent to 18 l/s).

There are no reported unlicensed/private groundwater abstractions within 1km of the site.

3.5 Hydrological Setting

3.5.1 Waterbodies

The closest watercourses to the site are the River Severn and the Ripple Brook. The River Severn is located *c.* 25m to the west of the full site boundary and *c.* 400m to the west of the Phases 1 to 9 excavation area, at its closest approach. The River Severn is affected by high tides and tidal gates on the River Avon at Tewkesbury.

The Ripple Brook flows from north to south and separates the Phases 1 to 9 and Flexible Working Areas A and B excavation areas from the processing plant area to the east. The Ripple Brook joins the Mythe Brook, which in turn flows into the River Severn *c.* 1.5km south of the site.

The nearest external surface water bodies are ponds and surface water drain/wetland features located adjacent to the west of the excavation areas in the north of the site and the restored Ripple Quarry Lake feature to the west of the site. Ponds are also situated within the grounds of the Hilton Puckrup Hall Hotel and Golf Club to the north of the eastern part of the site (processing plant area).

There are no identified springs located within *c.* 500m of the site.

3.5.2 Surface Water Abstractions

There are 10 No. identified licensed surface water abstractions within *c.* 1km of the site.

The closest surface water abstraction is from the River Severn, *c.* 25m to the west of the full site boundary.

Other surface water abstractions exist *c.* 45m to the south of the site access road to the excavation Phases 1 to 9 area at the Ripple Brook and also to the north of the processing plant area, to the east of the excavation area Phases 1 to 9. All of the surface water abstraction records within 1km of the site are for spray irrigation and most are of a historical status and have been present for several years/decades.

3.5.3 Flood Risk

The majority of the Phases 1 to 9 excavation area is located within fluvial flood risk Flood Zone 1 (less than 0.1% annual chance of flooding from rivers) and Flood Zone 2 (between 0.1% and 1% annual chance of flooding from rivers). Only the outer extremities of the Phases 1 to 9 area is located in Flood Zone 3 (annual chance river flooding is greater than 1%). Flood defences exist on the banks of the River Severn and the Mythe Brook.

Flexible Working Areas A and B are situated within Flood Zone 3. Part of the site situated in Gloucestershire, to the east of Ripple Brook, is also located within fluvial flood risk Flood Zone 3.

The majority of the Environmental Permit Application area is situated within a low (between 0.1% and 1% annual chance of flooding from surface water) or very low (less than 0.1% annual chance of flooding from surface water) pluvial flood risk area. The Environmental Permit Application area is not at risk of pluvial flooding.

3.6 Wind Rose

A wind rose for Pershore, the nearest available reporting station to the site, is presented in Figure 1. The Pershore station is located *c.* 11km to the northeast of the site. The predominant wind direction is from the southwest (national prevailing wind direction).

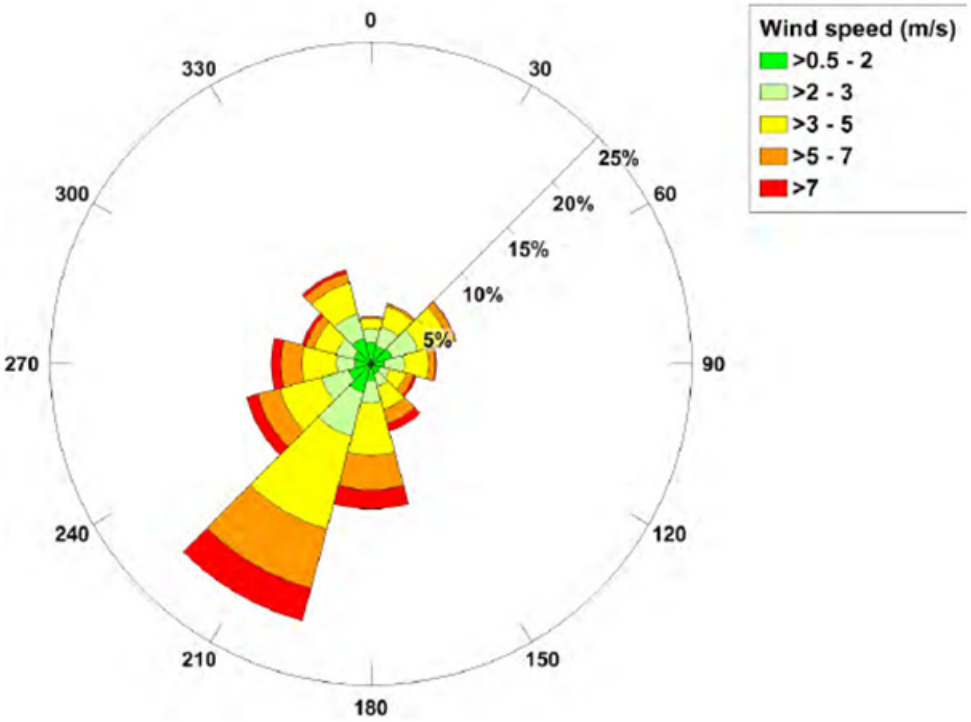

Figure 1 – Wind rose, dry hours (five-year average), Pershore 2013 – 2017

4. ENVIRONMENTAL RISK ASSESSMENT

4.1 Overview of Methodology

This ERA presents an assessment of the environmental risks posed by the deposit for recovery activity.

The ERA has been completed in accordance with the EA Technical Guidance *'Risk Assessments for your Environmental Permit'* .

The objective of the assessment is to identify any significant risks, to demonstrate that the risk of environmental impact or harm is acceptably low and to identity mitigation measures which will need to be implemented in order to manage the risks at acceptable levels.

The ERA follows the steps under the *'How to do a risk assessment'* section of the EA guidance, as follows:

1. Identify and consider risks for your site, and the sources of the risks;
2. Identify the receptors (people, animals, property and anything else that could be affected by the hazard) at risk from your site;
3. Identify the possible pathways from the sources of the risks to the receptors;
4. Assess risks relevant to your specific activity and check they are acceptable and can be screened out;
5. State what you will do to control risks if they are too high;
6. Submit your risk assessment as part of your permit application.

4.2 Consideration of Risks

Step 1 considers the potential risks to the environment from the proposed development. The risk assessment must identify whether any of the following risks could occur and what the environmental impact could be:

- any discharge, for example sewage or trade effluent to surface or groundwater;
- accidents;
- odour (not for standalone water discharge and groundwater activities);
- noise and vibration (not for standalone water discharge and groundwater activities);
- uncontrolled or unintended ('fugitive') emissions, for which risks include dust, litter, pests and pollutants that should not be in the discharge;
- visible emissions, *e.g.* smoke or visible plumes;
- release of bioaerosols, for example from shredding, screening and turning, or from stack or open point source release such as a biofilter.

In addition, the EA guidance identifies risks from specific activities for which additional risk assessments must be completed depending on the activity being carried out and where substances are released or discharged into the environment.

Additional risk assessments have been prepared and submitted by GWP comprising:

- Hydrogeological Risk Assessment (GWP Report No. 251041 v.01 November 2025);
- Stability Risk Assessment (GWP Report No. 251042 v.01 November 2025);
- Gas Risk Assessment (GWP Report No. 251040 v.01 dated November 2025).

Potential risks can be screened out if they are not relevant for the site or by carrying out tests to check whether they are within acceptable limits or environmental standards. If they are, any further assessment of the pollutant is not necessary because the risk to the environment is insignificant.

4.3 Receptors

Step 2 of the risk assessment methodology outlined in Section 4.1 considers the receptors that could be at risk from the waste recovery activities at the site.

The following distances from the Environmental Permit application boundary have been used to identify potential receptors:

- 1km radius – European ecological important sites including RAMSAR sites, Special Areas of Conservation, Local Wildlife Sites and Special Protection Areas;
- 1km radius – potentially sensitive receptors of ecological importance and sites of cultural and natural heritage. These include National Nature Reserves, Local Nature Reserves, Sites of Special Scientific Interest and Scheduled Monuments;
- 500m radius – all other potentially sensitive receptors *e.g.* residential, commercial, industrial, agricultural and surface water receptors.

4.4 Receptors – General Risk Assessment

Receptors for which a general risk assessment schedule has been completed are listed in Table 1.

The general risk assessment schedule is provided in Appendix 1. Steps 3, 4 and 5 of the risk assessment methodology outlined in Section 4.1 are covered in the general risk assessment schedule.

Table 1 – Receptors (general risk assessment)

Receptor name	Receptor type	Receptor direction from site	Approximate distance from application boundary
Land use receptors within 500m of the application boundary (Drawing No. BOWFEPR2511-5)			
Puckrup Hall Farm	Industrial/Commercial/Residential Property	Centre/East (of excavation area Phases 1 to 9)	Adjacent
Bow Farm	Industrial/Commercial	East (of excavation area Phases 1 to 9)	50m
Ripple Quarry (restored)	Industrial/Commercial	West (of excavation area Phases 1 to 9)	Adjacent
All Seasons Cars Taxi Service	Commercial	Southeast (of plant and access road area)	250m
The Crown Inn at Shuthonger	Commercial	Southeast (of plant and access road area)	450m
Tewkesbury's Hand Car Wash	Commercial	Southeast (of plant and access road area)	450m
3C Legal Limited	Commercial	East (of plant and access road area)	350m
Hilton Puckrup Hall, Tewkesbury	Commercial (accommodation and leisure)	North (of plant and access road area)	50m (to golf course grounds)
Hill View Lakes (Fishing Lakes)	Commercial/Leisure	Northeast (of plant and access road area)	320m

Tewkesbury Riding School	Commercial/Leisure	Northeast (of plant and access road area)	450m
Glebe Cottage Bed & Breakfast	Commercial/Residential	East (of plant and access road area)	400m
Properties along Bow Lane	Residential Properties	East (of excavation area Phases 1 to 9)	50m (closest)
Properties along Puckrup Lane	Residential Properties	Northeast (of connection between excavation area Phases 1 to 9 and plant and access road area)	200m (closest)
Properties within Shuthonger	Residential Properties	Southeast (of plant and access road area)	240m (closest)
Properties within Puckrup	Residential Properties	North (of plant and access road area)	300m (closest)
Properties within Church End	Residential Properties	South (of plant and access road area)	200m (closest)
Property along Bow Lane to the north of the M50	Residential Property	North (of excavation area Phases 1 to 9)	400m
Bow Lane	Local Transport Network	East (of excavation area Phases 1 to 9)	Adjacent
Puckrup Lane	Local Transport Network	East (of excavation area Phases 1 to 9)	100m
M50	Local Transport Network	North (of excavation area Phases 1 to 9)	20m
A38	Local Transport Network	East (of access road area)	Adjacent
Owls Lane	Local Transport Network	Southeast (of plant and access road area)	200m
Church End	Local Transport Network	East (of plant and access road area)	300m

River Severn	Surface Water Feature	West (of excavation area – Flexible Working Area A)	25m
		West (of excavation area Phases 1 to 9)	400m
Ripple Brook	Surface Water Feature	North to south, crossing the site between the main site area and plant and access road area	Crosses the site between the connection between excavation area and plant and access road area
Mythe Brook	Surface Water Feature	Southeast (of excavation area Phases 1 to 9)	110m
Bushley Brook	Surface Water Feature	West (of excavation area – Flexible Working Area A)	350m
Drain between Flexible Working Areas A and B	Surface Water Feature	North to southeast, crossing the site between Flexible Working Areas A and B	Crosses the site between Flexible Working Areas A and B
Pond and surface water drain/wetland areas	Surface Water Feature	West (of excavation area Phases 1 to 9)	Adjacent
Ripple Quarry Lake (restored)	Surface Water Feature	West and north (of excavation area Phases 1 to 9)	50m (closest)
Ponds at Hilton Puckrup Hall Hotel and Golf Club	Surface Water Features	North (of plant and access road area)	50m (closest)
Twyning Cricket Club	Open Ground (leisure)	North (of plant and access road area)	380m
Agricultural land	Open Ground	North, east, south and west of whole site	Adjacent (closest – south)
Cultural and heritage receptors within 1km of the application boundary (Drawing No. BOWFEPR2511-6)			
Puck Cottage	Listed building (closest)	East (of excavation area Phases 1 to 9)	50m
Towbury Hill camp	Scheduled Monument	East (of excavation area Phases 1 to 9)	250m

Ripple village cross	Scheduled Monument	North (of excavation area Phases 1 to 9)	630m
Cross north of St Mary's Church	Scheduled Monument	North (of excavation area Phases 1 to 9)	650m
Uckinghall cross	Scheduled Monument	North (of excavation area Phases 1 to 9)	950m
Churchyard cross in St Nicholas's churchyard	Scheduled Monument	West (of excavation area Phases 1 to 9)	1km
Church End Twyning	Historical Conservation Area	East (of plant and access road area)	300m

4.5 Receptors – Bespoke Risk Assessment

Receptors identified by screening undertaken by the EA and GWP for which a bespoke risk assessment schedule has been completed are listed in Table 2.

The bespoke risk assessment schedule is provided in Appendix 2. Steps 3, 4 and 5 of the risk assessment methodology outlined in Section 4.1 are covered in the bespoke risk assessment schedule.

Table 2 – Receptors (bespoke risk assessment)

Receptor name	Receptor type	Receptor direction from site	Approximate distance from site boundary
Ecological receptors within 1km of the application boundary (Drawing No. BOWFEPR2511-7)			
Ripple Lake and the Napps	Local Wildlife Site	On-site (western edge of excavation area Phases 1 to 9)	On-site
Ripple Brook	Local Wildlife Site	North to south, crossing the site between the main site area and plant and access road area	On-site
Ripple Meadow	Local Wildlife Site	Northwest (of excavation area – Flexible Working Area A)	Adjacent
		West (of excavation area Phases 1 to 9)	430m
River Severn	Local Wildlife Site	West (of excavation area – Flexible Working Area A)	25m
		West (of excavation area Phases 1 to 9)	400m

Queenhill Brickpit	Local Wildlife Site	Northwest (of excavation area Phases 1 to 9)	900m
Mythe Composite Site	Gloucester Key Wildlife Site	Northeast (of plant and access road area)	860m
Mythe Railway	Gloucester Key Wildlife Site	Northeast (of plant and access road area)	980m
Brockeridge Common	Gloucester Key Wildlife Site	Northeast (of excavation area Phases 1 to 9)	830m
Priority Habitat Inventory – Deciduous Woodland	Protected Woodland	Northwest (of excavation area Phases 1 to 9)	Adjacent (closest)
Priority Habitat Inventory - Traditional Orchards	Protected Woodland	East (of plant and access road area)	230m (closest)
Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh	Protected Grassland	On-site (adjacent to the north of excavation area – Flexible Working Area B	On-site (closest)
		West (of excavation area Phases 1 to 9)	125m
Priority Habitat Inventory - Good quality semi-improved grassland	Protected Grassland	East (of excavation area Phases 1 to 9)	250m
Priority Habitat Inventory - Lowland Dry Acid Grassland	Protected Grassland	South (of plant and access road area)	830m
Priority Habitat Inventory - Lowland Meadows	Protected Grassland	East (of excavation area Phases 1 to 9)	300m
Woodpasture and Parkland BAP Priority Habitat	Woodpasture and Parkland	North (of plant and access road area)	60m (closest)
Non-fish Protected Species – Code 2	Protected Species	Southeast (of site entrance/exit)	200m
Non-fish Protected Species – Code 2	Protected Species	East (of excavation area Phases 1 to 9)	410m
Fish Protected Species – Bullhead (*Cottus gobio*)	Protected Species	East (of excavation area Phases 1 to 9)	15m

Fish Protected Species – European Eel (Anguilla anguilla) migratory route	Protected Species (migratory route)	North to south, crossing under the access road between the excavation Phases 1 to 9 area and plant and access road area	Within site boundary (passing under access road)

4.6 Searches For Other Designated Sites

Further searches completed by GWP have confirmed that none of the following designations are located within 1km of the site:

- Special Areas of Conservation;
- Special Protection Areas;
- National Nature Reserves;
- Local Nature Reserves;
- Sites of Special Scientific Interest;
- Areas of Outstanding Natural Beauty;
- Ancient Woodland;
- RAMSAR sites;
- National Trust Properties;
- Registered Parks and Gardens;
- World Heritage Sites;
- Registered Battlefields.

5. SUMMARY AND CONCLUSIONS

This ERA report presents an assessment of the environmental risks posed by the deposit for recovery activity at Bow Farm.

The ERA has been completed in accordance with the EA Technical Guidance *'Risk Assessments for your Environmental Permit'* .

The objective of the assessment is to identify any significant risks, to demonstrate that the risk of environmental impact or harm is acceptably low and to identity mitigation measures which will need to be implemented in order to manage the risks.

Based on the findings of this ERA and other risk assessment reports which have been prepared and submitted with the Environmental Permit application, it is considered that the permanent placement of imported inert fill material at the Bow Farm site as a deposit for recovery activity to achieve the approved restoration landform will not have a significant detrimental impact on the environment.

GWP CONSULTANTS
JANUARY 2026

APPENDIX 1

General risk assessment schedule

APPENDIX 2

Bespoke risk assessment schedule