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Ecological Consultants
Environmental and Rural Chartered Surveyors

Ecological Design Strategy

Former North Bierley Waste Water Treatment Works

Cliff Hollins Lane, Oakenshaw, BD12 7ET

**North Bierley Phase 2
Planning application 2021/60/94208/E
Condition 19**



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ACCURACY OF REPORT

This strategy sets out habitat establishment, management and monitoring for the current reserved matters phase. The baseline habitat types and condition categories are carried forward from the Brooks assessment within the revised red-line boundary, using Biodiversity Metric 2.0 consistently. The calculated shortfall and matters requiring agreement before discharge are identified in Sections 3 and 4.

An updated ecological walkover and invasive plant survey must inform the construction controls before works. The strategy must be read with the Condition 27 CEMP Biodiversity, the Condition 30 invasive non-native species protocol and the approved landscape, arboricultural, drainage and lighting details. Approval of those separate documents is not assumed.

Quality and Environmental Assurance

This report has been prepared as part of Envirotech NW Ltd's commitment to the ISO 9001 Quality Assurance and ISO 14001 Environmental Assurance standards. Envirotech has been awarded the Gold standard by the Cumbria Business Environmental Network for its environmental management systems.

Item	Details
Project Name	North Bierley Phase 2 - redevelopment of former waste water treatment works
Site Location	Former North Bierley Waste Water Treatment Works, Cliff Hollins Lane, Oakenshaw, BD12 7ET
Planning Reference	2021/60/94208/E
Condition	Condition 19 - Ecological Design Strategy
Applicant (outline permission)	KeyLand Developments Ltd
Current scheme client shown on 2026 drawings	Bond It Group
Ecological Consultant	Envirotech NW Ltd
Report Reference	2021-94208/EDS
Version / Status	1
Date	30.09.2026
Responsible Parties	Developer, landscape contractor, ECoW and long-term estate manager - Section 8
Author	Andrew Gardner
Checked by	Andrew Gardner

1. NON TECHNICAL SUMMARY

This Ecological Design Strategy supports the reserved matters submission for North Bierley Phase 2 at the former wastewater treatment works, Cliff Hollins Lane. It addresses the eleven requirements of Condition 19 through mapped habitat creation and enhancement, phased establishment, assigned responsibilities, aftercare, monitoring, remedial action and waste controls.

The revised phase baseline is 11.1592 habitat units over 3.3996 ha. The Metric 2.0 workbook “North Bierley BNG Metric V2.xlsm” forecasts 7.1675 on-site habitat units, including Good other neutral grassland, Poor modified grassland, Moderate SuDS and 40 Moderate street trees. This is a loss of 3.9917 units or -35.77%.

The 10% gain target is 12.2751 units, leaving 5.1076 effective Metric V2 habitat units to be provided through an agreed additional enhancement and/or secured off-site scheme, subject to trading rules. The on-site proposals alone do not meet the condition.

The strategy retains the original metric framework rather than combining incompatible outputs from different versions. Natural England advises against changing metrics mid-project and requires consistent use across on-site and off-site calculations. However, Condition 19 expressly specifies Metric V3.1 or an update. Kirklees Council must agree the proposed legacy methodology and any necessary change to the condition before a Metric V2 calculation can be relied upon for discharge.

There are no hedgerows within the red-line boundary and no river or watercourse within the boundary or within 10 m of it. No river or hedgerow habitat is therefore recorded in this phase baseline, and neither is available for enhancement as part of this scheme. The two accounts remain zero rather than being treated as separate habitat-unit deficits. Adjoining woodland and the wider Hunsworth Beck corridor remain protected under the construction and invasive species controls.

2. INTRODUCTION AND PLANNING REQUIREMENTS

2.1 Purpose and scope

The strategy applies to the current reserved matters red-line phase shown on Figures 2 and 3 and PWP drawing PWP-1052-DR-001 P02, dated 30 September 2026. It defines ecological delivery for the employment buildings, access, yards, parking, landscaped margins and southern attenuation basin. It does not allocate gains from land outside that boundary without a separate, secured and agreed calculation.

2.2 Condition 19

Condition 19 requires an EDS with the layout and/or landscape reserved matters for each phase approved under Condition 6. It requires at least 10% gain in habitat, river and hedgerow units, based on an up-to-date ecological baseline review using Metric 3.1 or as updated. Approved works must be implemented and features retained thereafter. The reason refers to ecological enhancement and Kirklees Local Plan Policy LP30.

Requirement	Location in this strategy
A. Purpose and conservation objectives	Sections 1 and 5
B. Site potential and constraints	Section 3
C. Detailed designs and working methods	Sections 6 and 7
D. Extent and location of works	Section 4 and Appendices A to C
E. Habitat establishment	Section 6
F. Materials and provenance	Section 6
G. Phased timetable	Section 7
H. Responsible persons	Section 8
I. Aftercare and long-term maintenance	Section 9
J. Monitoring and remedial action	Section 10
K. Waste disposal	Section 11

2.3 Related condition documents

Condition 27 CEMP Biodiversity controls construction protection zones, clearance, nesting birds, lighting, pollution prevention, ecological hold points and habitat handover. Condition 30 INNS Protocol governs Japanese knotweed, Himalayan balsam, contaminated ground, specialist treatment and waste movements. The EDS governs the habitat outcomes and their continuing management. The approved arboricultural details under Condition 16, temporary drainage under Condition 24 and lighting under Condition 31 must be coordinated with all three documents.

The CEMP describes the wider site and refers to drawings 2001 and 2002; the landscape plan is based on KPP drawing 2002. Before mobilisation, one coordinated set of approved red-line, layout, drainage, landscape and ecological drawings must be issued to the contractor. Ecological controls outside the metric boundary remain applicable where works could affect adjoining receptors.

3. BASELINE REVIEW AND METRIC METHODOLOGY

3.1 Historical evidence and revised boundary

Brooks Ecological Ltd prepared the North Bierley Phase 2 Ecological Impact Assessment ER-5528-06-C, Revision C dated 21 February 2022. Figure 2 reproduces its habitat distribution trimmed to the current phase boundary. Areas have been remeasured within that boundary; original habitat condition categories are retained. The wider outline baseline and its earlier indicative 10.17% gain are not transferable totals for the revised phase.

The Brooks report contains inconsistent version labels: page 10 footnote 1 expressly identifies Metric V 2 continued from the PEA, and page 25 labels creation and enhancement tables as Metric V2, whereas other headings and passages refer to Metric V3. The current workbook lodged with the application is Metric V2. The proposed legacy account is therefore based on that Metric V2 evidence.

The application baseline was recorded using Metric V2. Brooks did not provide the original criterion-by-criterion condition evidence needed to reassess that historical baseline against the statutory metric. Habitat categories and the original condition scores can be carried forward in Metric V2, but those scores cannot be transferred directly to a different metric whose condition criteria and other valuation inputs differ. On the evidence available, a defensible statutory-metric valuation of the application baseline cannot be produced. A current survey would record present conditions, not reconstruct the missing historical observations.

3.2 Baseline habitats

Metric V2 habitat category	Area ha	Condition	Units
Vacant or derelict land and bareground	0.8924	Poor	1.7848
Artificial unvegetated unsealed surface	0.1636	N/A	0.0000
Other neutral grassland	2.3436	Poor	9.3744
Total	3.3996		11.1592

No individual tree entries were recorded in the baseline account. No tree units are retrospectively inserted without supporting evidence. This accounting position does not override tree protection or imply that adjoining trees can be removed.

3.3 Strategic significance and the Wildlife Habitat Network

A review identifies the relevant Kirklees Wildlife Network mapping to the site as woodland-related, while no woodland habitat occurs within the assessed phase. On that interpretation, the earlier Kirklees Wildlife Network-related uplift lodged by Brooks has been removed and all baseline parcels use Low Strategic Significance, with the Metric V2 category “Area/compensation not in local strategy/ no local strategy” and multiplier 1.0. The same low category is used for the on-site proposals so there is consistency.

This category means that no qualifying strategic uplift is claimed for the assessed habitat; it does not assert that Kirklees Wildlife Network has no local ecological strategy. Brooks identifies part of the southern grassland as within the Wildlife Habitat Network but this related to “woodland” not grassland as occurs on site.

3.4 Consistent use of the metric

Natural England’s Biodiversity Metric 3.1 Frequently Asked Questions, Section 2, advises against changing metrics mid-project because calculations may differ. Its V3.1 User Guide, paragraph 10.1 and Rule 4, explains that units from different metric versions are not comparable and that one metric should be used across all stages, including off-site provision. The legacy archive also recognises that continued use of a previous version may be needed unless another requirement applies [1-3].

This strategy therefore uses Metric V2 consistently for the historical baseline, post-development account and any proposed bespoke off-site account. There is no justified conversion factor between Metric V2 and statutory units. Changing the development baseline to the statutory metric would require evidence of the historical habitat attributes assessed by that metric; that detail was not recorded in the baseline assessment. A retrospective score based on assumed statutory criteria would not provide a reliable loss or gain calculation for this site.

The explicit V3.1-or-later wording of Condition 19 remains controlling until the Council agrees the proposed approach through the appropriate planning route. Consistent methodology guidance supports the request to retain Metric V2; it does not itself amend the condition.

3.5 Ecological potential and constraints

The southern open space and landscaped margins offer opportunities for grassland enhancement, flowering vegetation and native trees connected to the adjoining green corridor. The SuDS basin provides a gradient of damp and drier vegetation. Constraints include the development footprint, steep slopes, services and drainage easements, retained tree root protection areas, soil contamination and invasive plants, and the sensitivity of Hunsworth Beck and Hanging Wood.

The construction update survey, Condition 27 exclusion zones and Condition 30 specialist checks must precede vegetation and soil disturbance. Ground supporting unresolved invasive plant contamination must not be counted as successfully established habitat. The confirmed absence of any watercourse within 10 m of the red line underpins the zero river account. Any future expansion of the boundary or additional outfall or bank works would require separate ecological review.

4. POST DEVELOPMENT ACCOUNT AND GAIN REQUIREMENT

4.1 Habitats and locations

Habitat or intervention	Extent	Target	V2 units
Developed land and sealed surfaces	2.2259 ha	Default N/A	0.0000
SuDS basin mapped as other wetlands	0.2930 ha	Moderate	0.7056
New other neutral grassland in margins	0.1682 ha	Good	1.1828
Existing grassland enhanced	0.6828 ha	Poor to Good	4.9728
Modified grassland turf	0.0297 ha	Poor	0.0573
Street trees as helper equivalent	40 trees / 0.1628 ha	Medium Moderate	/ 0.2489
Total forecast on-site value			7.1675

The ground habitat areas total 3.3996 ha; the tree helper equivalent is an additional accounting layer and is not extra land. Figure 3 maps the southern basin as UKHab f2f Other Wetlands (SuDS), while the Metric V2 account uses Urban - Sustainable urban drainage feature. These describe the same 0.2930 ha basin in the habitat map and legacy metric respectively; no additional wetland units are claimed. The revised plan also distinguishes g4 modified grassland turf from g3c other neutral grassland.

New and enhanced other neutral grassland target Good condition, score 3, under the Metric V2 grassland criteria in Appendix D. The 0.0297 ha of turf is recorded separately as modified grassland in Poor condition, score 1. The SuDS basin targets Moderate condition, score 2, under the Metric V2 urban criteria in Appendix E. Trees retain the Metric V2 Moderate assumption without a separate condition sheet.

4.2 Tree sizes and quantities

Metric V2 User Guide Chapter 7, paragraphs 7.2-7.6 and Table 7.1, gives Street Tree low distinctiveness, assumes Moderate condition and converts tree size to area using the RPA formula. Its medium reference is 90 cm girth and 30 cm stem diameter, with about 0.0041 ha per tree. The helper equivalent for 40 medium trees is 0.1627776 ha, rounded to 0.1628 ha in the creation input [4].

The Metric V2 time-to-target lookup and creation row use 27 years for Moderate Street Tree condition. The account therefore forecasts the medium reference size over that target period. This is not the planting-stock size and must be supported by species, growing space and management. Small-growing cultivars and constrained trees must not automatically be assumed to achieve the medium size reference. Current Metric V4 and statutory size classes are not imported into this legacy account as Metric V2 allows tree size to be valued at yr 27 not the size at planting.

PWP P02 lists 33 native trees and 7 *Pyrus calleryana* Chanticleer totalling 40 trees.

4.3 Required additional provision

Account item	Habitat units
Baseline	11.1592
Minimum post-development total at 110%	12.2751
Current on-site forecast	7.1675
Additional effective provision required	5.1076
Current net change	-3.9917 / -35.77%

The updated Metric V2 Trading Summary identifies a remaining medium-distinctiveness grassland deficit of 0.4875 units. Additional provision must meet the Metric V2 trading rules and the total 10% gain target. The 5.1076-unit shortfall is expressed as effective Metric V2 habitat units after risk adjustments. A quoted quantity of statutory habitat-bank units cannot be obtained to directly make up the difference as Statutory habitat-bank unit values are generated using different criteria.

Additional habitat enhancement or off-site provision is required to achieve the condition's 10% gain under the Metric V2 calculation criteria. Condition 19 provides for approval and retention of the phase EDS but does not, by itself, secure rights, funding or management obligations over an unidentified third-party site. The proposed route is an identified, Council-approved scheme secured through an appropriate Section 106 planning obligation with the relevant landowner, covering delivery, management, monitoring, remedies and protection against double allocation. Its habitat baseline and gains would be calculated in Metric V2 consistently with the development account. A contracted purchase from a provider could support that route where the provider agrees an identified parcel and compatible legacy calculation; no provision is presently secured.

The outline application and permission predate commencement of mandatory statutory BNG. Reserved matters approval does not independently introduce the statutory biodiversity gain condition. The operative gain requirement here is the expressly imposed Condition 19 [5]. It is therefore not necessary to assume that the only available off-site route is the statutory registered-unit market.

A provider selling registered units normally reports their value through the statutory metric. If that route were proposed, the development baseline and full account would need an adequately evidenced, Council-agreed statutory calculation; the missing historical condition data currently prevents that. A separate bespoke legacy scheme, including a provider's identified habitat parcel reassessed in Metric V2, may instead be considered subject to agreement, legal security and avoidance of double counting. No conversion between the two unit currencies Metric V2 and Statutory units can be assumed.

National guidance recognises that off-site works may sometimes be secured by a suitably worded negative condition, so it would be too broad to state that planning conditions can never address off-site delivery. However, a condition does not automatically bind a third-party landowner or secure the necessary funding and long-term obligations. An appropriate S106 is the proposed mechanism for those commitments here; the precise planning and legal route must be agreed before the gain is treated as secured [6].

4.4 River and hedgerow accounts

There are no hedgerows within the development red line and no river or watercourse within it or within 10 m of its boundary. Accordingly, no qualifying hedgerow or river habitat has been entered in the baseline and no enhancement of either habitat is proposed within this phase. Both accounts remain zero before and after development. A percentage increase from a zero baseline is not meaningful; the requested treatment of the condition is that its 10% requirements apply to the habitat accounts present and affected by the phase, with no separate river or hedgerow compensation requirement arising from these absent features. The absence is recorded explicitly for Council confirmation when considering the EDS.

5. PURPOSE AND CONSERVATION OBJECTIVES

The conservation objectives are to protect adjoining habitats during development; establish and enhance the mapped grassland and SuDS vegetation; maintain healthy trees with adequate growing space; provide flowers, seeds, foliage and shelter for invertebrates, birds and foraging bats; and achieve a verified minimum 10% gain in each applicable metric account through the agreed complete scheme.

Success will be measured by delivery of the agreed areas and 40 trees, achievement of Good other neutral grassland using Appendix D, delivery of the Poor modified grassland turf and Moderate SuDS targets, healthy tree establishment and verification of the tree-size assumptions, prevention of damaging invasive plant spread, and the complete metric balance. Grassland condition is assessed against Appendix D and SuDS against Appendix E; Moderate tree condition is the Metric V2 assumption and does not require a separate tree condition sheet.

6. HABITAT DESIGN MATERIALS AND ESTABLISHMENT

6.1 *Native and ornamental trees*

Species on PWP P02	Itemised number	Wildlife function
Acer campestre field maple	3	Flowers and foliage support insects
Alnus glutinosa alder	5	Wet-ground tree with seeds and insect resources
Betula pendula silver birch	6	Insect host and small seeds
Populus tremula aspen	6	Insect host and structural diversity
Quercus petraea sessile oak	5	Long-lived native canopy and insect resources
Salix caprea goat willow	3	Early pollen and nectar
Sorbus aucuparia rowan	5	Flowers and fruit for insects and birds
Pyrus calleryana Chanticleer	7	Spring flowers and urban canopy

The pear is a non-native ornamental species despite the schedule's Native Cultivar and Street Trees heading. Native stock should be of UK and, where available, local provenance suited to site soils. Obtain supplier provenance, plant health and biosecurity records; avoid peat-based growing media and reject diseased, damaged or INNS-contaminated plants, soils and mulch. Equivalent substitutions require landscape and ecological approval and must preserve the metric assumptions.

Plant deciduous trees between late October and late March, preferably November-March, when soil is workable and neither frozen nor waterlogged. Follow PWP P02 for stock sizes and pit design, including 1.2 m by 1.2 m by 0.9 m standard-tree pits, scarified sides and decompaction. Confirm drainage before planting; gravel alone must not be relied upon to drain a clay pit. Provide adequate rooting volume, approved stakes and ties, irrigation access and protection from browsing.

Maintain the specified 1.5 m diameter mulch circle with clean, suitable mulch, keeping the trunk collar clear. Position root barriers and planting around services with the engineering and landscape teams. Do not cultivate, trench or raise levels within retained RPAs contrary to the approved arboricultural method. No separate tree condition sheet applies: Moderate condition, score 2, is the reasonable Metric V2 Street Tree assumption supported by the Metric V2 User Guide. Survival, health and growth will nevertheless be checked to verify delivery and the medium-size forecast.

6.2 *Other neutral grassland creation and enhancement*

The PWP Other Neutral Grassland mix is Wildflower Experts Biodiversity Net Gain g3c, 40% grass seed and 60% wildflower, sown at 3 g/m². Listed species are false oat-grass, crested dog's-tail, rough meadow-grass, perennial rye-grass, common bent, yarrow, red clover, meadow buttercup, ribwort plantain and red campion. Flowers support pollinating insects; seeds, longer vegetation and varied structure provide further food and shelter. The mix label alone does not demonstrate habitat type or condition.

Create the 0.1682 ha of new other neutral grassland to Good condition and enhance the 0.6828 ha of retained Poor-condition grassland to Good. The updated metric allows 15 years for

creation and 25 years for enhancement. These are calculation risk allowances, not a reason to delay establishment or improvements. Begin reduced mowing with arisings removal and targeted undesirable-species control from Year 0. Test soil fertility and physical suitability before local scarification or overseeding. Do not destroy retained grassland and continue to claim enhancement. Sow in spring or late summer/early autumn in suitable moisture conditions, following the seed supplier's rate and method.

Meadow areas are to be seeded onto suitable prepared subsoil as specified, without fertiliser or compost enrichment. Relieve compaction outside protected roots and suspect INNS ground, provide a firm fine seedbed and prevent erosion. Hydroseed steep embankments where required. Use supplier recommendations specific to the meadow mix rather than the drawing's generic 35 g/m² lawn rate. Maintain protective measures until cover establishes.

6.3 Flowering lawn and landscape grass treatments

PWP specifies John Chambers Heritage Flowering Lawn, 80% grass and 20% wildflower, at 5 g/m². Listed flowers include lady's bedstraw, common bird's-foot-trefoil, bulbous buttercup, cat's-ear, red and white clover, cowslip, daisy, dandelion, harebell, autumn and rough hawkbit, black medick, common mouse-ear, field and wild pansy and hoary plantain. These provide a range of flowering periods when allowed to bloom.

Conventional lawn uses Rolawn Medallion seed at 35 g/m² or John Chambers Premier Lawn Turf as specified, with rye-grasses, fescues and bent. The mapped 0.0297 ha turf area is accounted for as modified grassland in Poor condition, with a one-year establishment allowance and 0.0573 Metric V2 units. Maintain an established, regularly mown turf surface appropriate to its amenity function, repair failures and prevent erosion. This area is separate from the Good other neutral grassland footprint and is not credited with its condition or units. No additional tree or developed-land condition sheet is required.

6.4 SuDS basin vegetation

PWP specifies John Chambers SUDS mix, 70% grass and 30% native wildflower, at 5 g/m². Listed plants include greater bird's-foot-trefoil, meadow buttercup, meadowsweet, purple loosestrife, ragged-robin, red campion, selfheal, teasel, water avens, yellow iris and gipsywort. The damp-ground flowers support insects and the vegetation adds cover and seed resources. Place species according to the designed inundation gradient; do not assume a permanent pond or an aquatic-species benefit unsupported by hydrology.

Install pre-seeded biodegradable coir erosion matting on basin slopes as specified, in contact with prepared soil, overlapped and fixed to supplier requirements. Avoid exposed entangling netting. Repair washout, slippage and poor germination promptly. Maintain inlet, outlet, storage and access functions without routinely stripping the habitat. The drainage engineer and ecologist must agree any desilting or vegetation clearance that alters the habitat footprint or condition.

7. IMPLEMENTATION AND PHASING

Stage	Required delivery and hold point
Before mobilisation	Developer appoints responsible teams; Council agrees full gain account and metric route. ECoW updates constraints; INNS specialist maps affected ground; protection zones and clean routes are installed.
Before landscape earthworks	ECoW and INNS specialist release relevant ground. Engineer confirms drainage, levels, services and basin design. Soil and material suitability records are accepted.
During phase construction	Protect retained enhancement grassland and adjoining habitats under Condition 27. Establish completed slopes and basin vegetation promptly in suitable weather to limit erosion.
First suitable planting season	Install agreed trees and seed treatments after ground preparation; complete before phase occupation where practicable, or to a specific Council-approved seasonal programme.
Landscape completion Year 0	ECoW records as-built areas, tree inventory, seed and provenance records, photographs and defects. Developer hands over funded management and monitoring instructions.
Years 1 to 5	Intensive establishment checks, watering, replacement and annual ecological review. Replace failures in the next suitable season.
Years 10 to 30 and thereafter	Check habitat targets and tree growth at the scheduled years, deliver remedies and maintain approved features thereafter as required by Condition 19.

Year 0 means completion of the phase habitat works, not the grant of planning permission. The landscape contractor's one-year defects period and five-year replacement provision do not end the developer's EDS obligations. The programme includes at least 30 years of active habitat management and monitoring, with approved features retained and managed thereafter. Off-site works must have an agreed programme coordinated with this phase and reflected in the metric temporal adjustments.

8. RESPONSIBILITY AND HANDOVER

Responsible role	Obligation
Developer and landowner	Fund and secure all required delivery, appoint teams, obtain approvals and retain overall responsibility through occupation and transfers.
Principal Contractor and Site Manager	Apply Condition 27 controls, maintain exclusion zones and biosecurity, protect habitat during works and keep waste and delivery records.
Landscape architect and contractor	Reconcile quantities and treatments, implement PWP and EDS specifications, provide material records, watering, establishment and defect replacement.
Envirotech NW Ltd or appointed ECoW	Review constraints, approve ecological methods, verify habitat delivery, apply condition sheets, report monitoring and specify remedial action.
Drainage engineer and operator	Protect hydraulic performance while coordinating basin maintenance with ecological targets.
Estate management body	Implement long-term maintenance, commission monitoring, fund remedies and pass obligations and records to successors.
Appointed INNS specialist	Release affected ground, direct treatment and contaminated material handling, and undertake Condition 30 monitoring.

Before mobilisation the developer will issue a named contact register with telephone numbers and escalation routes, consistent with the CEMP. Before occupation or transfer, identify the long-term estate manager and provide approved plans, individual-tree inventory, management calendar, inspection records, funding arrangements and access rights. A change in owner or contractor must not interrupt habitat management.

9. INITIAL AFTERCARE AND LONG TERM MAINTENANCE

9.1 *Establishment period*

Inspect newly seeded areas regularly through the first growing season. Control competitive annual weeds by appropriately timed cutting above emerging seedlings, remove cuttings and repair bare or eroded patches. Water trees to root-zone need during dry periods, inspect ties and guards for rubbing or constriction, maintain mulch and weed control, and replace dead, missing or seriously diseased stock in the next suitable planting season. Record the cause of failure and correct it before replanting.

The drawing's general instruction to keep areas free of broadleaf weeds must not remove intended meadow and flowering-lawn species. No blanket selective herbicide, fertiliser or routine close mowing is permitted in the biodiversity grassland or SuDS areas. Any local invasive plant treatment follows Condition 30 and relevant near-water controls.

9.2 *Continuing management*

Manage other neutral grassland to meet the Metric V2 Good-condition target in Appendix D. Use a principal late-summer cut after flowering and seed set, remove arisings and apply an additional spring or autumn cut where needed to reduce vigour. Retain a rotating 10-20% uncut refuge without allowing scrub to replace grassland. Achieve more than 30% cover of qualifying wildflowers and sedges, excluding white clover, creeping buttercup and injurious weeds from that total. Maintain undesirable species and physical damage below 5%, bracken below 20% and scrub and bramble below 5%. Use small-scale scarification and suitable additional native seed where monitoring shows insufficient qualifying flowers or excessive competitive grasses. No routine fertiliser, compost enrichment or blanket broadleaf herbicide is permitted.

Manage flowering grassland to allow repeated flowering between cuts and avoid scalping. Where included in mapped other neutral grassland, it must meet the Good target. Maintain the separate modified grassland turf as an amenity sward with the Poor metric assumption. Keep the SuDS basin open and vegetated, retain varied flowering and inundation vegetation, remove litter, control invasive plants and undertake engineer-approved sediment removal in small sections where practicable. Assess the Moderate target against Appendix E and restore disturbed vegetation in a suitable season. The Metric V2 creation allowance is three years; management must support the target by Year 3 and retain it thereafter.

At each grassland monitoring visit, record a criterion-by-criterion result and measured or estimated cover values from representative fixed sampling areas and wider parcel inspection. The Good score must be supported by appropriate species composition and the whole V2 table, not just the seed mixture or one cover threshold. Record any shortfall, its cause, the management change and the next review date. Maintain the agreed interpretation of the printed bare-ground criterion with the monitoring records.

Manage trees for healthy growth with formative pruning only where necessary, adequate rooting space and protection from vehicle or mower damage. Remove stakes and guards when no longer needed. Retain healthy trees long term; avoid repeated crown reduction that invalidates the medium-size assumption. Necessary removal or substantial alteration requires ecological review, replacement and a revised account where unit delivery changes.

10. MONITORING CONTINGENCIES AND REMEDIAL ACTION

10.1 Monitoring programme

The ecologist will undertake an as-built verification at Year 0 and growing-season monitoring in Years 1, 2, 3, 5, 10, 15, 20, 25, and 30. The estate manager will inspect at least annually thereafter and maintain features for the continuing condition obligation. Construction inspections, drainage checks and INNS monitoring remain subject to their separate documents and may be more frequent.

Use fixed photographs, mapped parcel references, area checks, species and structure observations, erosion and invasive plant records, and an individual-tree inventory. Apply Appendix D to other neutral grassland and modified grassland, recording criterion evidence and the overall condition separately for each parcel. Check the trajectory to Good by Year 15 for grassland creation and Year 25 for enhancement; verify establishment of the Poor turf parcel by Year 1. Assess SuDS against the Metric V2 urban criteria in Appendix E, recording vegetation diversity, flowering, habitat structure, undesirable and invasive species, and the basis for Moderate condition by Year 3. Do not interpret the urban table as classifying the basin as priority open mosaic habitat. Record tree survival, health, rooting constraints and stem diameter at breast height and verify the medium forecast at Year 27; retain the Metric V2 Moderate assumption without a separate tree scoring sheet. Developed land uses the default N/A condition.

Indicator or trigger	Required response
Delivered area or tree count below agreed schedule	Map and quantify the deficit; restore the approved footprint or agree equivalent provision; rerun the metric if the design changes.
Poor germination, erosion or persistent bare ground	Investigate soil, moisture and slope; repair ground and matting; reseed at the next suitable window.
Grassland condition below agreed trajectory	Adjust cutting and arisings removal; control competitive species; test soil where needed; use targeted overseeding after ecological review.
Dead trees, constricted roots or inadequate growth	Correct the cause, replace failed stock, improve growing conditions; review medium-size assumptions and unit balance.
INNS or suspect contaminated material	Stop local disturbance and follow Condition 30; prevent spread and re-establish habitat only after specialist release.
Basin maintenance would remove habitat or alter hydrology	Agree a staged method with engineer and ecologist; restore disturbed areas and reassess metric effects.
Gain target or trading rules not met	Submit a quantified remedy and compatible recalculation to Kirklees; secure additional provision and maintain monitoring until the shortfall is resolved.

10.2 Reporting and agreement of remedies

Issue a monitoring report to the developer and estate manager within eight weeks of each ecological visit and make it available to Kirklees; submit at the intervals agreed in the discharge. Each report will state progress against condition and unit targets, defects, corrective actions, responsible person and deadline. Notify Kirklees promptly where a material shortfall or change affects approved conservation objectives.

The ecologist will propose a remedial plan after investigating the cause of failure. Routine aftercare consistent with the approved strategy may proceed immediately; changes to habitats, areas, species assumptions or secured provision require Council agreement before implementation. Complete remedial planting in the next suitable season and inspect it in the following growing season. Continue corrective action and funding until the agreed gain is evidenced; monitoring alone is not compensation.

11. WASTE DISPOSAL

Segregate clean vegetation arisings, soils, construction debris, invasive plant material and other contaminated wastes. Reuse clean suitable soil only within approved earthworks and habitat specifications. Remove grass cuttings from meadow and enhancement areas so nutrients do not accumulate; use an authorised green-waste or composting route. Do not dump arisings, spoil or litter into the basin, beck, exclusion zones or adjoining woodland.

Japanese knotweed, Himalayan balsam and potentially contaminated soils or washings follow the Condition 30 specialist protocol. Do not mix them with clean green waste or landscape soils. Excavation, on-site treatment, reuse or disposal must use the approved specialist method and applicable regulatory route. Use authorised carriers and receiving facilities, contain loads, retain waste documentation and record quantities and destinations. Remove defective matting, guards and packaging without leaving entanglement hazards or plastic litter.

12. REFERENCES

[1] Natural England. Biodiversity Metric 3.1 Frequently Asked Questions. Section 2, Which Version of the Biodiversity Metric Should I Use. <https://publications.naturalengland.org.uk/file/4775594370531328>

[2] Natural England. Biodiversity Metric 3.1 User Guide. Rule 4 and paragraph 10.1. <https://publications.naturalengland.org.uk/file/4711800952848384>

[3] Natural England. Archive Site for Legacy Biodiversity Metrics. Accessed 30 September 2026. <https://publications.naturalengland.org.uk/publication/5850908674228224>

[4] Natural England. Biodiversity Metric 2.0 User Guide, 2019. Chapter 7, paragraphs 7.2-7.6, Table 7.1 and Chapters 4-6. <https://publications.naturalengland.org.uk/file/5366205450027008>

Brooks Ecological Ltd. North Bierley Phase 2 Ecological Impact Assessment ER-5528-06-C, Revision C, 21 February 2022. Especially page 10 footnote 1 and pages 24-26.

PWP Design Ltd. PWP-1052-DR-001 P02 Outline Landscape Masterplan and Specification, Interchange 26, 30 September 2026.

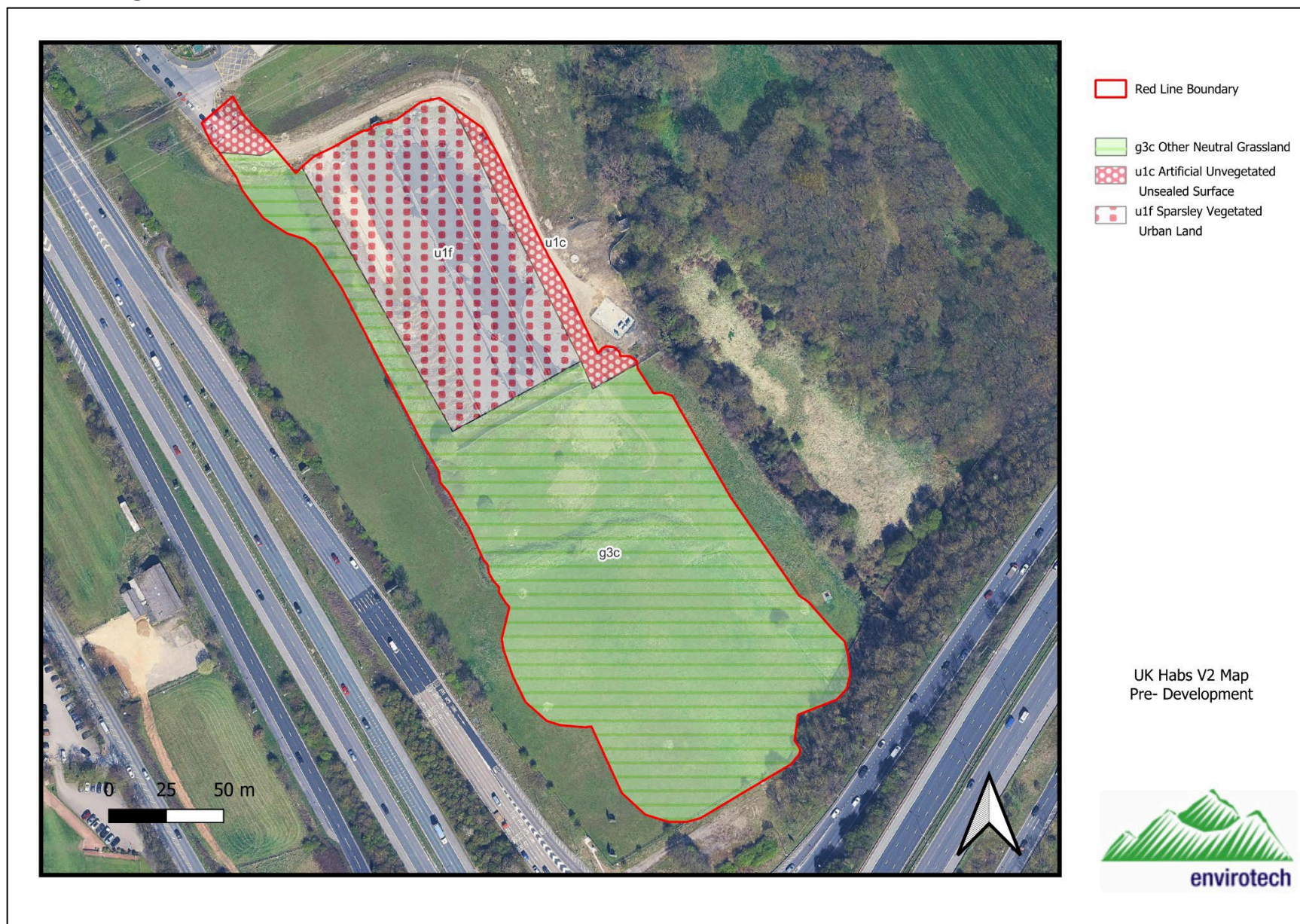
Envirotech NW Ltd. North Bierley Phase 2 CEMP Biodiversity, Condition 27; INNS Protocol, Condition 30; Figure 2 baseline habitat plan and revised Figure 3 post-development habitat plan; North Bierley BNG Metric V2.xlsm, 30 September 2026; V2 technical condition tables for grassland, pages 19-20, and urban habitats, pages 34-35.

Kirklees Council. Planning permission 2021/60/94208/E. Condition 19 and related controls identified in the companion condition reports.

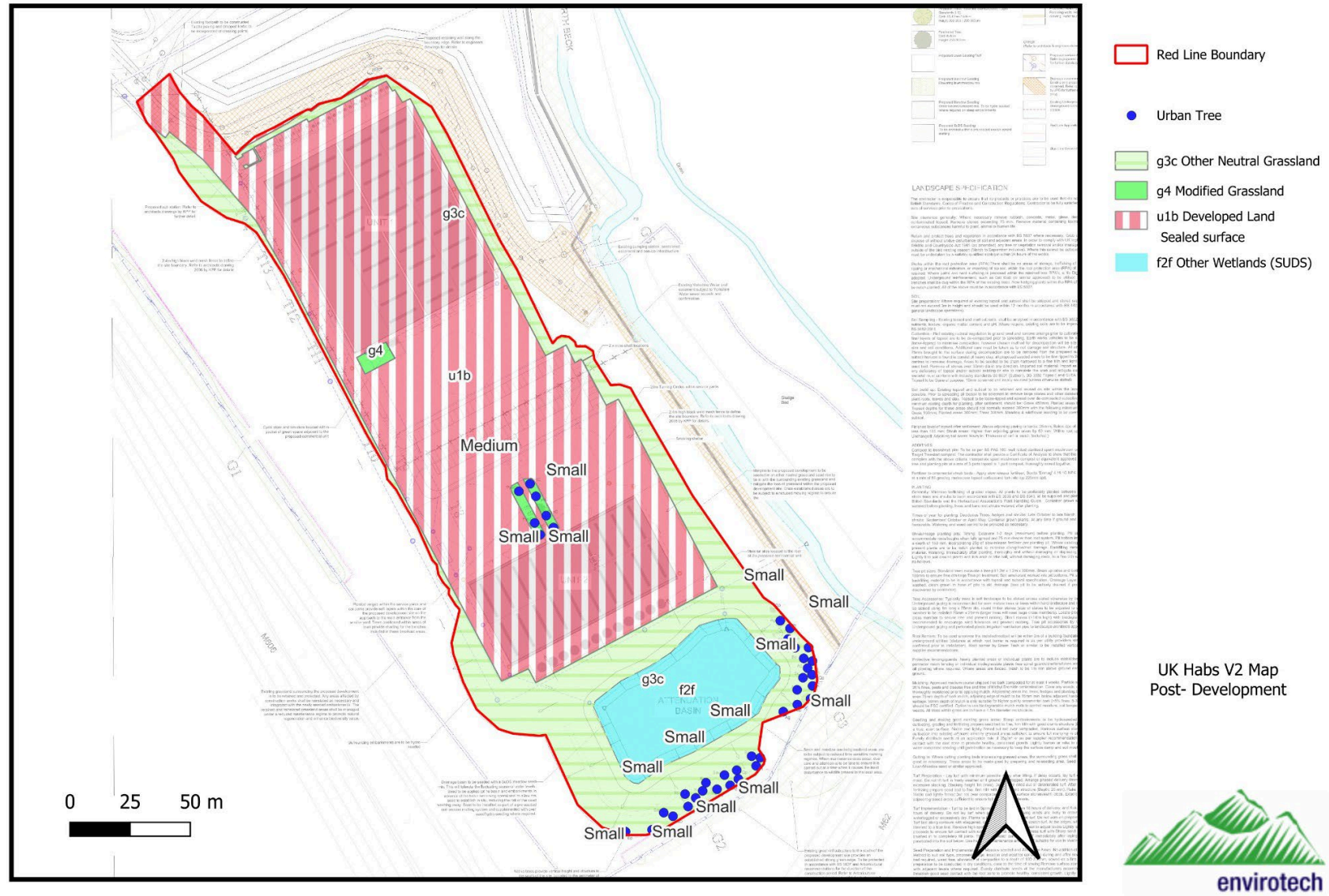
[5] Ministry of Housing, Communities and Local Government. Planning Practice Guidance Biodiversity net gain, paragraph 003, transitional arrangements and reserved matters. <https://www.gov.uk/guidance/biodiversity-net-gain>

[6] Ministry of Housing, Communities and Local Government. Planning Practice Guidance Use of planning conditions, paragraphs 009-010. <https://www.gov.uk/guidance/use-of-planning-conditions>

APPENDIX A BASELINE HABITAT PLAN

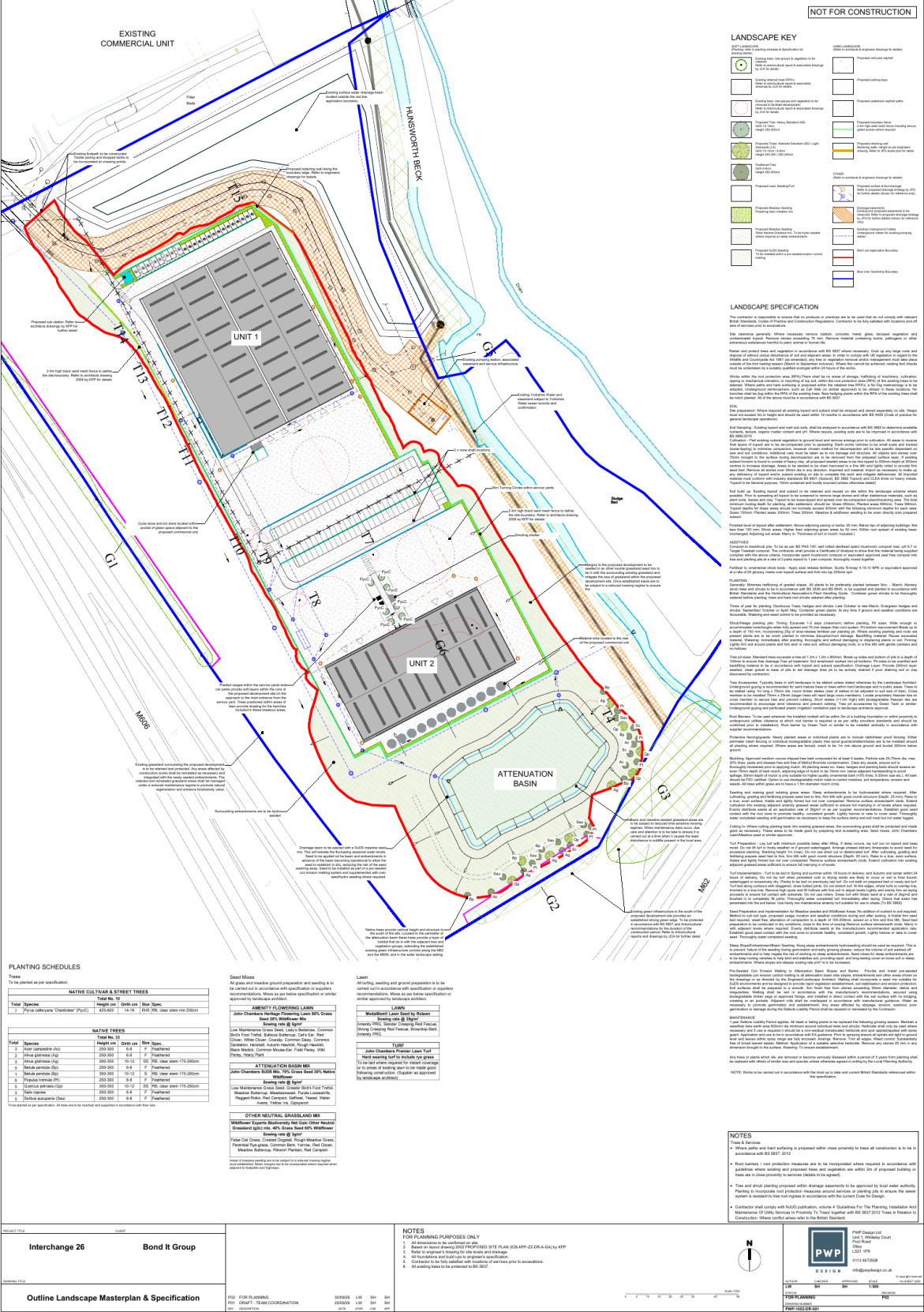


APPENDIX B POST DEVELOPMENT HABITAT PLAN



APPENDIX C LANDSCAPE DESIGN REFERENCE

PWP-1052-DR-001 P02 Outline Landscape Masterplan and Specification dated 30 September 2026 is to accompany this EDS at its original A0 scale of 1:500. The reduced image below is for document navigation only. Use the original drawing to set out works, confirm species and check drainage and service constraints.



APPENDIX D METRIC V2 GRASSLAND CONDITION TABLE

The following two pages set out the Metric V2 grassland condition criteria. Other neutral grassland creation and enhancement target Good condition, score 3; the separate modified grassland turf parcel uses Poor condition, score 1. The criteria define the assessment and future targets; they are not a completed field assessment or evidence that Good condition is already present. The urban criteria used for SuDS follow in Appendix E.

APPENDIX D GRASSLAND CONDITION TABLE PAGE 1

Condition Table Grassland Habitat Types		
Habitat Description		
- Includes both agricultural, recreational, amenity, road verges and semi-natural grassland types including Priority Habitat Grasslands on all soil types. - Will be dominated by grassland species with very little (if any) dwarf shrub, wetland or wooded species within the sward. - Will exist above and below the level of enclosure at all altitudes.		
Condition Assessment Criteria		
- The area is clearly and easily recognisable as a good example of this type of habitat and there is little difference between what is described in the relevant habitat classifications and what is visible on site. - The appearance and composition of the vegetation on site should very closely match the characteristics for the specific Priority Habitat [ie as described by either the Phase 1 Habitat Classification or the UK Habitat Classification], with species typical of the habitat representing a significant majority of the vegetation. - Wildflowers, sedges and indicator species for the specific Priority grassland habitat are very clearly and easily visible throughout the sward and occur at high densities in high frequency. See relevant Habitat Classification for details of indicator species for specific habitat. - Undesirable species and physical damage is below 5% cover. - Cover of bare ground greater than 10% (including localised areas, for example, rabbit warrens). - Cover of bracken less than 20% and cover of scrub and Bramble less than 5%.		
Condition	Assessment Criteria	Score
Good	- Species-rich Grassland of all Priority Habitat Types. Of high to moderate quality. - Wildflower and sedges above 30% excluding white clover <i>Trifolium repens</i>, creeping buttercup <i>Ranunculus repens</i> and injurious weeds. - Meets all the condition criteria with only minor variation. - None of the indicators of poor condition are present (4, 5 & 6).	3
Moderate	- Semi-improved grassland occurs on a wide range of soils and may be derived from higher quality Priority Habitat grassland habitats in poor condition. Often as they deteriorate following nutrient inputs. Typical grasses include: cock's-foot, common bent, creeping bent, crested dog's-tail, false oat-grass, meadow fescue, meadow foxtail, red fescue, sweet vernal grass, Timothy, tufted hair-grass and Yorkshire-fog. - Total cover of wildflowers and sedges less than 30%, excluding white clover, creeping buttercup and injurious weeds. - Rye-grass cover is less than 25% including amenity grasslands. - OR clearly fails at least 1 of the condition criteria. - OR The grassland type has some differences between what is described in the relevant habitat classifications and what is visible on site. It is a Lower Quality Priority Habitat, but clearly recognisable as such.	2

APPENDIX D GRASSLAND CONDITION TABLE PAGE 2

	- Potentially restorable to grassland Priority Habitat with improved management. - Cover of undesirable species at 5-15%.	
Poor	- Agricultural grasslands is characterised by vegetation dominated by a few fast-growing grasses on fertile, neutral soils. It is frequently characterised by an abundance of rye-grass <i>Lolium</i> spp. (above 25% cover) and white clover <i>Trifolium repens</i>. These grasslands are typically either managed as pasture or mown regularly for silage production or in non-agricultural contexts for recreation and amenity purposes; they are often periodically re-sown and are maintained by fertiliser treatment and weed control. They may also be temporary and sown as part of the rotation of arable crops but they are only included in this broad habitat type if they are more than one year old. - Amenity and Road verge grasslands with similar species to description for agriculture grasslands. - OR Most of the condition criteria are being failed. - Cover of undesirable species above 15%, usually resulting in a dense scrub or tree cover, or high cover of exotic species.	1
Undesirable species: creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, curled dock <i>Rumex crispus</i>, broad-leaved dock <i>Rumex obtusifolius</i>, common ragwort <i>Senecio jacobea</i>, common nettle <i>Urtica dioica</i>, creeping buttercup <i>Ranunculus repens</i>, white clover <i>Trifolium repens</i>, cow parsley <i>Anthriscus sylvestris</i>, marsh thistle <i>Cirsium palustre</i> and marsh ragwort <i>Senecio aquaticus</i>.		
Notes Physical damage to the vegetation from: excessive poaching, damage from machinery use or storage, or any other damaging management activities.		

APPENDIX E Metric V2 URBAN CONDITION TABLE FOR SUDS

The urban condition table on the following pages is used to assess the Sustainable urban drainage feature entered in the Metric V2 account. The target is Moderate condition, score 2, by Year 3. It applies to the southern basin mapped as Other Wetlands (SuDS); it does not establish that the basin is priority open mosaic habitat or require industrial spoil to be introduced. Record the applicable vegetation, structural and undesirable-species criteria, with the ecological basis for the overall score. Control invasive plants under Condition 30; the Moderate score does not justify allowing invasive species to increase.

APPENDIX E URBAN CONDITION TABLE PAGE 1

Condition Table	Urban Habitat Type
Habitat Description	
This includes the Priority Habitat Open Mosaic Habitats on Previously Developed Land. Along with other urban habitats, that have high biodiversity value or the potential to deliver for multiple species such as extensive green roof and walls designed for maximum wildlife benefits. - Open mosaic habitat on Previously Developed Land [inc. brownfield sites] can be extremely diverse, supporting a wide range of terrestrial and aquatic habitats. This diversity has made them increasingly important within ecological networks for rare and scarce invertebrates as well as lichens, plants, birds, reptiles and amphibians of conservation concern. However, this same diversity can make them challenging to define, identify and assess appropriately. Without being properly identified, wildlife-rich brownfields supporting open mosaic habitat are vulnerable to being poorly assessed, increasing the likelihood of loss to development or inappropriate restoration. - Open mosaic habitats can be located on wide range of sites such as railway sidings, quarries, former industrial works, slag heap, bings and brick pits. Brownfields with open mosaic habitats show evidence of previous disturbance, either through soil being removed or severely modified by previous use, or the addition of materials such as industrial spoil, with spatial variation developing across the site. The resultant variation allows for a mosaic of different habitats to be supported in close proximity. This habitat diversity can support rich assemblages of invertebrates. - Artificially created & planted areas that mimic semi-natural habitats such as species rich grassland would also be in scope. Where quality features & high native species richness are created to imitate desirable natural ecosystem attributes, such as pollen, nectar and nesting locations within the area. - They can be created and incorporated during the development process as a way of increasing and supporting wildlife in an urban setting. - For more information see: - Identifying Open Mosaic Habitats: https://www.buglife.org.uk/sites/default/files/Identifying%20open%20mosaic%20habit%20at.pdf - Open Mosaic Habitat Survey Handbook both by BugLife; https://www.buglife.org.uk/sites/default/files/omhsurveyhandbookfinal.pdf	
Condition Assessment Criteria	
- Known history of disturbance at the site or evidence that soil has been removed or severely modified by previous use(s) of the site. Extraneous materials/substrates such as industrial spoil may have been added which in turn has led to a low nutrient environment. - The site contains some vegetation. This will comprise of early successional communities consisting mainly of stress-tolerant species (e.g. indicative of low nutrient status or drought). Early successional communities are composed of (a) annuals, or (b) mosses/liverworts, or (c) lichens, or (d) ruderals, or (e) inundation species, or (f) open grassland, or (g) flower-rich grassland, or (h) heathland. - The site contains unvegetated, loose bare substrate and pools may be present and desirable.	

APPENDIX E URBAN CONDITION TABLE PAGE 2

4. The site shows spatial variation, forming a mosaic of one or more of the early successional communities (a)–(h) above plus bare substrate or pools.		
Condition	Assessment Criteria	Score
Good	- Vegetation provides multiple opportunities for a high number of species to live and breed (complete their life cycles). - Bare open ground is common throughout the area. - Plant species are flowering extensively and so providing ready nectar sources for insects. - Insects and butterflies are common and using the site extensively. - None of the indicators of poor condition are present. - The invasive none-native species are low or absent from the site, or in the process of being eradicated if beneficial to wildlife to do so.	3
Moderate	- Cover of undesirable and invasive species at 10-20%. - OR Some of the condition criteria are being failed. - The areas of bare ground with little species colonisation are large, with a high potential for improvement with better wildlife management.	2
Poor	- Most of the condition criteria are being failed. - Cover of undesirable species high above 20%	1
Undesirable species: - American skunk cabbage <i>Lysichiton americanus</i> - Himalayan balsam <i>Impatiens glandulifera</i> - Japanese knotweed <i>Fallopia japonica</i> - Cherry Laurel <i>Prunus laurocerasus</i> - Shallon <i>Gaultheria shallon</i> - Snowberry <i>Symphoricarpos albus</i> - Variegated yellow archangel <i>Lamiastrum galeobdolon</i> subsp. <i>argentatum</i> - Rhododendron <i>Rhododendron ponticum</i> Factsheets of these invasive non-native plant species can be found on the GB non-native species secretariat website. http://www.nonnativespecies.org/home/index.cfm		