Department
for Environment
Food & Rural Affairs

The Small Sites Metric

(Statutory Biodiversity Metric)

User Guide

First published: February 2024
Last updated: July 2024

We are the Department for Environment, Food and Rural Affairs. We are responsible for improving and protecting the environment, growing the green economy, sustaining thriving rural communities and supporting our world-class food, farming and fishing industries.

We work closely with our 33 agencies and arm's length bodies on our ambition to make our air purer, our water cleaner, our land greener and our food more sustainable. Our mission is to restore and enhance the environment for the next generation, and to leave the environment in a better state than we found it.

OGL

Contents

Acknowledgements

The Small Sites Metric builds on a series of previous versions of the biodiversity metric developed with input from Natural England, Environment Agency, and the Forestry Commission, including authors and contributors cited in previous versions.

All versions of the biodiversity metric build on the biodiversity loss/gain framework developed by Jo Treweek and Bill Butcher, incorporating habitat condition and a new concept of distinctiveness scores, which was subsequently adopted by Defra and Natural England for their biodiversity offset pilots and metric.

Find out more about biodiversity offset pilots.

The UK Habitat Classification System is used under licence from UKHab Ltd.

No onward licence implied or provided and, where applicable, the same shall be out of scope of the OGL v3.0 (and subject to its own licencing terms).

Find out more about UK habitat classification system and full licencing terms.

Document History

Date	Details of document
29th November 2023	Published as draft
12th February 2024	Draft status removed. Details and clarification added for: • the assessment of strategic significance • recording individual trees
23rd July 2024	Document history table added. Amendments to Appendix 2 relating to list of hedgerow habitats. Clarifications on private gardens provided. Restructured sections on: • urban trees found in lines and rural lines of trees • strategic significance

1 Document Guidance

Purpose of this guidance

This document provides guidance to support a competent person (user or reviewer) using the small sites metric calculation tool (hereafter referred to as the SSM).

This guidance has been developed to provide essential information on how to input the relevant data values into the SSM.

It is recommended this guidance is read in full before using the SSM.

Competency requirements

Principles and rules underpin the use of the SSM. The first principle is that the SSM assessment should be completed by a competent person.

A competent person has the knowledge and skills to perform specified tasks to complete and review SSM calculations. You obtain this through training, qualifications, experience, or a combination of them.

A competent person completing the SSM is known as the SSM 'user'.

Users of the SSM should be competent in identifying:

- habitats present on site (pre-development)
- management requirements for habitats to be created or enhanced within the landscape design (post-development)

Competency is aligned with the British Standard 'Process for designing and implementing biodiversity net gain: BS 8683:2021'.

The developer is responsible for selecting the competent person for completing the SSM. The competent person does not need to be an ecologist for the SSM. The Local Planning Authority does not need to verify the competent person.

Evidencing data

Evidence for metric decisions should be provided and signposted within the 'User comments' column of the metric calculation tool.

Use of the SSM

The SSM is used to calculate biodiversity value for the purposes of biodiversity net gain for 'small sites'.

Find out more about biodiversity net gain and if you need to use this tool.

You can use the SSM to calculate the biodiversity value of:

- existing habitats
- habitat enhancement
- habitat creation

The SSM can calculate different types of 'biodiversity units'. There are three types of biodiversity units, which are calculated in separate 'modules' of the metric. These are:

- area habitat units
- hedgerow units
- watercourse units

You can use the SSM throughout all stages of a project, from site selection to detailed design and delivery. The earlier you use it, the greater the opportunity to design your development for biodiversity and wider ecological benefits. Early and repeated use of the SSM can help to:

- assess or audit the biodiversity unit value of an area of land
- compare different biodiversity options for a site
- calculate and forecast biodiversity units and percentage change
- advise on design improvements
- advise on how the results can inform planning decisions
- re-run the calculation as plans develop and change

You should follow up to date industry good practice principles (CIRIA, CIEEM and IEMA) and BS 8683:2021 when using the metric.

Off-site habitats and the SSM

The SSM does not have an off-site section. If your small site requires any off-site units, you can still use the SSM to calculate any on-site gains and you should submit this when required by the planning authority. Your biodiversity gain plan will need to summarise how you have met your BNG requirement, including details of the off-site habitat enhancements and the trading summaries.

You should send your completed SSM to the off-site provider you are buying units from. The off-site provider can then enter this in the statutory biodiversity metric calculation tool and complete the off-site tab to submit this when recording the allocation on the biodiversity gain sites register.

Restrictions on use of the SSM

You can only use the SSM for 'small sites'. Small sites are defined as not major developments under the [Town and Country Planning (Development Management Procedure) (England) Order 2015](#)). This means:

- residential development where the number of dwellings is between 1 and 9 on a site of an area 1 hectare or less, or if the number of dwellings is unknown, the site area is less than 0.5 hectares, or
- commercial development where floor space created is less than 1,000 square metres or total site area is less than 1 hectare, or
- development that is not the winning and working of minerals or the use of land for mineral-working deposits, or
- development that is not waste development

The statutory biodiversity metric calculation tool (SBMCT) must be used for any development which meets the definition for major development.

It is not possible to use the SSM on all sites defined as 'small sites'. The following criteria also need to be met to use the SSM:

- where only the habitats available in the SSM are present on-site
  - o any site containing any additional habitats (including riparian zones) not included in the SSM must use the SBMCT
- where no priority habitats are present on-site
  - o some hedgerows and arable field margins are excluded from the above as these are medium distinctiveness habitats and are included in the SSM
- where no statutory protected sites or habitats are present
- where no European protected species are present

Even where the above criteria are met, the SSM does not have to be used. The SBMCT can always be used in its place.

If statutory protected sites or priority habitats are located within 500m of the development site boundary, you should consider whether you need to contact an ecologist and use the SBMCT. If the user chooses to continue to use the SSM, a section of the SMM must be filled in to reflect this and a warning flag will appear where this is the case.

Only one biodiversity metric tool (either the SSM or SBMCT) should be used for the on-site calculation of a development, not a combination of both. If habitat parcels need to be assessed within the statutory biodiversity metric calculation tool because of the criteria above or any other reasoning described in this document, the whole development should use the statutory biodiversity metric calculation tool.

2 Terms and definitions

See table 1 for an explanation of the terms used within the SSM.

Table 1 Explanation of SSM terms

SSM term	Explanation
Area habitat	Habitats recorded in the SSM in area (m^2).
Biodiversity unit	'Biodiversity units' are used to describe relative biodiversity value. There are three types of biodiversity units: area habitat units, hedgerow units and watercourse units. Each of these are calculated in separate 'modules' of the SSM.
Condition	A measure of the habitat quality against its ecological optimum state. Condition is a way of measuring variation in the quality of parcels of the same habitat type. Habitat conditions are fixed at baseline in the SSM to simplify the process and cannot be amended. Some post-intervention habitats have limited choices for targeted condition, however condition assessments are not required.
Difficulty	A measure which represents the uncertainty in the effectiveness of management techniques used to enhance or create habitat.
Distinctiveness	A measure based on the type of habitat and its distinguishing features. This includes: consideration of species richness and rarity the extent to which the habitat is protected by designations the degree to which a habitat supports species rarely found in other habitats. In the SSM, distinctiveness scores of very low, low, and medium are the only options. Sites which include high or very high distinctiveness habitats must be assessed using the statutory biodiversity metric.
Habitat quality	To assess the quality of a habitat, the SSM scores habitats of different types according to their relative biodiversity value. Habitats that are scarce or declining typically score highly relative to habitats that are more common and widespread.

SSM term	Explanation
Habitat type	The technical data sheets in the SSM list the SSM habitat types and their source material. Sources of these habitats include: UK Habitat Classification (UKHab) Natura 2000 (Annex I habitats) European Nature Information System (EUNIS) habitat type hierarchical view Water Framework Directive (WFD) Lake typologies.
Hedges and lines of trees	Habitats recorded in the SSM in length (m). Nine hedgerow and lines of tree habitat types are available in the SSM.
Parcel	A linked area of habitat of the same distinctiveness, condition, and strategic significance.
Project timeframe	The timeframe over which the SSM calculates gains and losses for specific habitat interventions.
Reviewer	A person reviewing the SSM, usually from a determining body or planning authority.
Risk	Where new habitat is created, or existing habitat is enhanced, the difficulty and associated risks of doing so are taken into account by the SSM.
Size	The size of the habitat parcel to be retained, enhanced, created, or lost. Size is measured in metres squared for area features and in metres for linear features. The SSM accepts size measurements to any number of decimal places.
Strategic significance	Describes the local significance of the habitat based on its location and the habitat type.
Time to target condition	The average time taken between starting creation or enhancement of habitats and that habitat reaching its target condition and distinctiveness.
User	The competent person completing the SSM.
Watercourses	Habitats recorded in the SSM in length (m). Three watercourse habitats are available in the SSM.

3 SSM rules and principles

Small sites metric rules

You must follow the SSM rules set out in Table 2. If you do not follow these, your project cannot claim biodiversity net gain.

Table 2 SSM rules

Rule number	Rule detail
Rule 1	The trading rules of the SSM must be followed.
Rule 2	Biodiversity unit outputs, for each type of unit, must not be summed, traded, or converted between types. The requirement to deliver at least a 10% net gain applies to each type of unit.
Rule 3	To accurately apply the biodiversity metric formula, you must use the biodiversity calculation tool or small sites biodiversity metric tool (SSM) for small sites. The tools remove the need for a user to manually calculate the change in biodiversity value. The tool will summarise the results of the calculation and inform a user whether the biodiversity net gain objective has been met.

Trading rules (Rule 1)

The trading rules set minimum habitat creation and enhancement requirements to compensate for specific habitat losses, up to the point of no net loss. They are based on the habitat type and distinctiveness of the lost habitat.

You'll find information on how the biodiversity metric tool applies trading rules in table 3.

Table 3 Trading rules (Rule 1) to compensate for losses

Baseline habitat distinctiveness band	Area module (area units)	Hedgerow module (hedgerow units)	Watercourse module (watercourse units)
Medium	Losses must be replaced by area habitat units of medium band habitats within the same broad habitat type	Losses must be replaced with hedgerow units of the same band	Losses must be replaced with watercourse units of the same habitat type
Low	Losses must be replaced with area habitat units of the same or higher band	Losses must be replaced with hedgerow units of the same or of a higher band	Losses must be replaced with watercourse units of a higher band
Very low	Trading rules do not apply	Losses must be replaced with hedgerow units of the same or of a higher band	Not applicable

Notes on trading rules

The trading rules only apply to the point of no net loss. Once trading rules have been met, biodiversity net gain requirements can be met by the creation and enhancement of any habitat type, provided it is within the relevant module.

Notes on watercourse unit trading

Any enhancement or restoration of rivers or streams must be calculated using the statutory biodiversity metric tool. Creation of new culverts is not suitable compensation for the loss of any watercourse habitat.

Compensation for the loss of any watercourse units should be on a section of watercourse with similar habitat features. For example:

- impacts on canals cannot be offset on rivers
- impacts on ditches cannot be offset on canals or rivers

Small sites metric principles

Use the SSM principles in Table 4 to inform the use of the metric.

Table 4 SSM principles

Principle number	Principle detail
Principle 1	The SSM assessment should be completed by a competent person.
Principle 2	The SSM does not change existing biodiversity protections, statutory obligations, or policy requirements. The use of the SSM does not override the ecological mitigation hierarchy and other requirements. This includes consenting or licensing processes, for example those applied over woodlands.
Principle 3	The SSM should be used in accordance with established good practice guidance and professional codes.
Principle 4	The SSM is not a complex or comprehensive ecological model and is not a substitute for expert ecological advice.
Principle 5	Biodiversity units are a proxy for biodiversity and should be treated as relative values.
Principle 6	The SSM is designed to inform decisions in conjunction with locally relevant evidence, expert input, or guidance.
Principle 7	Habitat interventions need to be realistic and deliverable within a relevant project timeframe.
Principle 8	Created and enhanced habitats should be, where practical and reasonable, local to any impact and deliver strategically important outcomes for nature conservation.
Principle 9	The SSM does not enforce a minimum habitat size ratio for compensation of losses. Proposals should aim to: maintain habitat extent - supporting more, bigger, better and more joined up ecological networks ensure that proposed or retained habitat parcels are of sufficient size for ecological function

Data requirements

Data should be collected through desk studies and site visits by a competent person.

Any data should be supported by ecological good practice. You should provide ecological justification and evidence for data in the 'user comments' column of the SSM.

Table 5 identifies SSM data requirements. More information on how to collect and input data as part of an assessment are provided in the sections below.

Table 5 Data inputs required for area, hedgerow, and watercourse biodiversity units

Calculation input	Area	Hedgerow	Watercourses
Habitat type	Required	Required	Required
Size	Square metres	Metres	Metres
Distinctiveness	Automatically assigned by SSM	Automatically assigned by SSM	Automatically assigned by SSM
Condition and target condition	Required for some created and enhanced habitats only	Required for some created and enhanced habitats only	Required for some created and enhanced habitats only
Strategic significance	Required	Required	Required
Area retained, enhanced, or lost	Required	Not required	Not required
Length retained, enhanced, or lost	Not required	Required	Required

4 Habitat inputs

The SSM takes the size of a habitat and accounts for the three core quality components which contribute towards the calculation of biodiversity units, these are:

- distinctiveness
- condition
- strategic significance

All quality components require data values for both baseline and post development, in the SSM some of these are automatically applied.

Size

Area module

You should record all habitats measured in meters squared, such as grassland and woodland, within the area unit module of the SSM. For individual trees, areas are automatically calculated by the tool and only a count is required.

You should record areas of intertidal habitats which are above water at low tide and under water at high tide.

The SSM tool sums the baseline, created and enhanced habitat areas, and includes a cross-check to ensure that the area of habitats present post-intervention match the area present at baseline. You should explain any difference between site area, baseline habitat area and post-development habitat area in the user comments sections of the SSM.

Hedgerow module

You should record hedgerows and lines of trees in metres. You should:

- use the centre line measurement along the length of the feature
- use OS maps where possible
- record hedgerows bounding green lanes as two separate lengths
- record double hedgerows as two separate lengths

When accounting for the area adjacent to hedgerows you should:

- map the area of habitat to the centre line of the hedgerow.
- not subtract hedgerow footprint or canopy cover from any area habitat
- not record the loss of area habitat where hedgerows are planted

Watercourses

You should record watercourses in metres. You should use the centre line measurement along the length of the feature, using OS maps where possible.

Habitat type and distinctiveness

Distinctiveness is a measure based on a habitat's type and its distinguishing features. The SSM automatically assigns a distinctiveness category based on habitat type.

Table 6 identifies metric distinctiveness categories and scores in the SSM.

Table 6 SSM distinctiveness categories and scores

Distinctiveness category	Distinctiveness score applied in the SSM
Medium	4
Low	2
Very low (hedgerow module)	1
Very low (area module)	0

Condition

Habitat condition is a measure of the state of a habitat and is used to measure variation between parcels of the same habitat type. When using the SSM, condition assessments do not need to be undertaken as condition is automatically assigned by the SSM at the baseline stage. Table 7 outlines SSM condition categories and scores.

Some habitats allow the user to assign the condition post-intervention from a set number of options. As a default, the lowest available condition should be chosen, unless evidence can be provided as to how the higher condition will be achieved. A summary of this evidence should be provided in the user comments column.

Table 7 SSM condition categories and scores

Condition category	Condition score applied in the SSM
Good	3
Moderate	2
Poor	1
Condition Assessment N/A	1
N/A – Other	0

Strategic significance

Strategic significance is the local significance of the habitat based on its location and habitat type.

You should assess each individual habitat parcel, both at baseline and at post-intervention, for on-site and off-site. You should split habitat parcels where they are intersected by:

- a boundary between two areas of different strategic significance
- a planning authority boundary

You should assign strategic significance for off-site habitats using relevant local documents for the off-site location rather than the development location.

Where a Local Nature Recovery Strategy (LNRS) has been published

You should use the relevant published LNRS, and the descriptions set out in table 7 to assign strategic significance.

Find out more about Local Nature Recovery Strategies

Where an LNRS has not yet been published

You should use the specified alternative documents, and the descriptions set out in table 8 to assign strategic significance. When there are no alternative suitable documents for assigning high strategic significance, medium strategic significance can be assigned when the criteria in table 8 are met.

A relevant planning authority should specify alternative documents for assigning strategic significance whilst an LNRS is put in place. Examples include:

- Draft Local Nature Recovery Strategies
- Local Plans and Neighbourhood Plans
- Local Planning Authority Local Ecological Networks
- Tree Strategies and Woodland Strategies
- Area of Outstanding Natural Beauty Management Plans
- Biodiversity Action Plans
- Species conservation and protected sites strategies
- Green Infrastructure Strategies
- River Basin Management Plans
- Catchment Plans and Catchment Planning Systems
- Shoreline management plans
- Estuary Strategies

Table 8 Biodiversity metric strategic significance categories where an LNRS has been published

Strategic significance category	Score applied in the metric	Description
High (Formally identified in local strategy)	1.15	This category can be applied when: the location of the habitat parcel has been mapped in the Local Habitat Map as an area where a potential measure has been proposed to help deliver the priorities of that LNRS; and the intervention is consistent with the potential measure proposed for that location If your project delivers the mapped potential measure set out in the LNRS you should: record strategic significance as low in the baseline record strategic significance as high in habitat creation and enhancement sections of the SSM record that you have applied the published LNRS in your gain plan
Low	1	Where the definition for high strategic significance is not met. Even if your project is an area mapped with a potential measure, if it does not deliver the specific actions outlined for your location you should record strategic significance as low.

Table 9 Biodiversity metric strategic significance categories where an LNRS has not yet been published

Strategic significance category	Score applied in the metric	Description
High (Formally identified in local strategy)	1.15	The habitat type is mapped and described as locally ecologically important within a specific location, within documents specified by the relevant planning authority. If your project delivers the mapped habitat creation, enhancement or actions set out within specified alternative documents, or enhances an existing habitat identified within specified alternative documents as locally ecologically important, strategic significance can be recorded as high in the habitat creation and enhancement sections of the SSM. If the specified alternative documents identify existing habitat as locally ecologically important within a specified location, strategic significance may be recorded as high in the baseline. You should record the name of the plan the relevant planning authority has specified in the user comments and record that you have used the specified document in your gain plan.
Low (Area / compensation not in local strategy)	1	Where the definition for high strategic significance is not met.

5 Defining project actions

Project actions can be assessed as one of three interventions, these are:

- habitat retention
- habitat enhancement
- habitat creation

The SSM only allows for the creation or enhancement of very low, low, and medium distinctiveness habitats. If you want to create or enhance to habitats of higher distinctiveness bands to provide biodiversity units post intervention, the statutory biodiversity metric must instead be used.

Habitat retention

Habitat should be recorded as retained when:

- there is no loss of habitat
- there is no change to baseline condition
- there is no action to enhance the habitat

If a habitat is retained, the baseline biodiversity units are carried over to the post development score.

If intervention steps must be taken to maintain the baseline condition of a habitat parcel, details of these should be provided in the user comments box.

Habitat enhancement

Habitat enhancement is where the baseline habitat is retained and there is:

- an improvement in condition compared to the baseline state
- a change to a higher distinctiveness habitat within the same broad habitat group compared to the baseline state

Within the SSM, only certain habitats can be enhanced. Condition must stay the same or improve, including when enhancing to a higher distinctiveness habitat.

The technical data sheets in the SSM sets out habitats which can be enhanced, and the habitats they can be enhanced to within the SSM. If a habitat that is targeted for enhancement to is not included within the SSM, the statutory biodiversity metric should be used.

When entering an enhancement into the SSM, users should ensure they have the expertise available to achieve the desired intervention within the required timescales.

Habitat creation

Habitat creation is where one habitat type is replaced by another habitat type and includes:

- a loss of baseline habitat that is replaced with another
- a change in broad habitat type such as a change from grassland to woodland

Within the SSM, only certain habitats can be created. These are listed in the technical data sheets in the SSM. If a habitat proposed for creation is not included within the SSM, the statutory biodiversity metric should be used.

For some habitats, there are multiple target condition options that can be selected from for created habitats. You should select the most appropriate category based on the proposed design. If you are not able to make this decision, the lowest available condition should be used or specialist advice from an ecologist should be sought.

You should use habitat creation if the works do not clearly fall within the definitions for habitat enhancement or retention.

When entering habitat creation into the SSM, users should ensure they have the expertise available to achieve the desired intervention within the required timescales.

6 Risk multipliers

The SSM applies two risk multipliers to post-development enhancement and creation interventions:

- difficulty of creation or enhancement
- temporal risk

Difficulty of creation or enhancement

The creation and enhancement multipliers represent the uncertainty in the effectiveness of techniques to create or enhance habitats. The SSM automatically assigns the delivery risk and score for each habitat, based on its habitat intervention category (creation or enhancement).

Despite this partial accounting for risk in the SSM, your proposals must still be based on sound ecological judgement and should consider the ecological context of the change.

Time to target condition

The time to target condition (temporal risk) multiplier represents the average time lag between the start of habitat creation or enhancement works and the target outcome. This is known as 'time to target condition'.

Time to target condition is measured in years. The temporal risk multiplier is automatically applied by the SSM and changes depending on data input.

Advanced or delayed action

Advanced or delayed creation cannot be entered into the SSM. Where you have justification and evidence for using these functions, the statutory biodiversity metric should be used.

Accounting for temporary losses

You do not need to record a habitat as lost where there are temporary impacts to a habitat and the area can be restored to both:

- baseline habitat type within two years of the initial impact; and
- baseline condition within two years of the initial impact

In these cases, you can enter a habitat into the SSM as retained.

Accounting for temporary losses cannot be used where policies or permissions require that a specific baseline is applied.

7 Watercourse habitats only

The following sections detail specific assessment methodologies for watercourses.

Watercourse type and distinctiveness

You should assign watercourse type using the definitions provided in table 10.

Table 10 Watercourse distinctiveness categories

Watercourse type	Biodiversity metric watercourse definition	Distinctiveness
Canals	An artificial body of water originally created for the purposes of navigation, whether it is currently navigable or not. You should check: • Canal and River Network • MAGIC • historic local data Canalised rivers meeting this definition should be recorded as canals.	Medium
Ditch	Artificially created linear water-conveyancing features which are: • less than 5 metres wide; and • are likely to retain water for more than 4 months of the year Do not record as a ditch if the watercourse meets the definition of: • a higher distinctiveness habitat; or • a canal	Medium
Culvert	A covered channel or pipe designed to prevent the obstruction of a watercourse or drainage path by an artificial construction. As defined by the Flood and Water Management Act 2010. Record culverted sections of any watercourse type as 'culvert'. A site visit may be required to identify extent of culverting.	Low

Recording ditches associated with hedgerows

Ditches associated with hedgerows may or may not hold water for part of the year. To record a ditch associated with hedgerows it should:

- not meet the definition of a ditch within the watercourse module
- be a linear depression running adjacent to a hedgerow or line of trees

If a ditch adjacent to a hedgerow meets the definition of a ditch within the watercourse module, record that ditch in the watercourse module and do not record it as associated with a hedgerow.

Defining watercourse interventions

Use the definitions and descriptions in the sections below to determine if retention, creation, or enhancement is applicable to the scheme, and whether to record loss at baseline.

You should consider how the intervention impacts the natural function of the watercourse when deciding which intervention to choose.

Watercourse retention

Watercourse retention is where there are no interventions on the watercourse or riparian zone.

Watercourse enhancement

A watercourse is enhanced where the project interventions promote natural function, processes, and the development of natural habitats. An example would include removing a culvert from a watercourse.

The SSM only allows watercourses to be enhanced where there will be no encroachment on the watercourse or riparian zone post-intervention. Where encroachment is expected, the statutory biodiversity metric must be used.

Watercourse creation

If your watercourse interventions do not promote natural functions and processes, or the development of natural habitats, then this is creation.

Record decreases in the baseline condition, length, or distinctiveness of watercourses as a loss of the impacted watercourse section.

Creation can also be the installation of a new length of canal or ditch where there is no applicable baseline loss.

8 Specific habitat recording notes

Modelling realistic targets

You should follow the SSM rules and principles when projecting target habitat type and target condition.

For example, you should prioritise habitats prescribed in local plans for retention, creation, and enhancement.

Setting appropriate target outcomes

You should provide evidence that project targets are achievable and viable within the project time frame. Any evidence should be supported by ecological good practice.

If the time for a habitat to reach target condition exceeds the project timeframe, then either you, the relevant planning authority or responsible body should consider whether:

- more achievable outcomes would be more appropriate
- a longer project timeframe or agreement is required, for example, where like-for-like replacement of a high distinctiveness habitat is required.

Landscape plans

You can geo-spatially link habitat parcels recorded in the SSM. Record them against landscape and planting plans, so that the size and location of post-development habitats parcels may be fully understood.

Limiting factors

You should incorporate any limiting factors into your assessment of target habitat type and condition, examples include:

- habitat size and fragmentation
- environmental limits to condition and distinctiveness
- any future use of the area which may degrade habitat type and condition

Habitats with a land-use function

A habitat parcel might contain areas which meet the definition of multiple habitat types, sometimes of different distinctiveness scores. For example, arable margins may meet the definition of a higher quality habitat, or an allotment might contain an area of traditional orchard within its boundary. Examples of where this may occur include:

- cropland – arable field margins
- lakes – reservoirs
- urban – allotments
- urban – vegetated garden
- urban – cemeteries and churchyards
- urban – sustainable drainage system

When assessing these habitat types, ensure that habitat types are mapped as individual habitat parcels to avoid under-recording biodiversity. For example, the SSM habitat type 'urban – actively worked sand pit quarry or open cast mine' relates to non-vegetated working areas only.

Urban broad habitat type

Recording residential development (at post-development)

You should use detailed landscaping plans where available.

Where detailed plans are not available, you should use a default 70:30 ratio of 'urban – developed land; sealed surface' to 'urban – vegetated garden' when assessing habitats within areas outlined for housing. This ratio:

- does not account for access roads and public open spaces
- may be adjusted for particularly high-density or low-density developments

If adjustments are made you should provide justification in the user comments.

Private gardens

A private garden is a garden within the curtilage of a privately owned or tenanted dwelling house. Private gardens can contain important features for biodiversity, including mature trees and hedgerows.

When recording habitats at baseline within a private garden you may need to assess any important features as individual habitat parcels to avoid under-recording biodiversity. This may include:

- recording individual trees
- recording hedgerows

- recording other habitats, such as ponds

See more about which individual trees to record at baseline within private gardens.

The post-development private garden has no public access, and biodiversity net gains cannot be legally secured. As these gains cannot be secured you should only record created private gardens as either:

- 'urban – vegetated garden'; or
- 'urban - unvegetated garden'

You should not:

- record the creation of any other new habitats within private gardens
- record enhancement of any habitat within private gardens

Habitats which are recorded in the baseline and remain within a private garden may be recorded as retained.

Calculating area of green roofs

Green roofs are found on top of buildings. You should:

- subtract the area of green roof from the building footprint
- record any other overlapping habitats

Calculating area of green walls

Areas of green walls generate biodiversity units. You should:

- record vegetated areas of green walls only
- use the area of projected growth for created green walls

As green walls are calculated by their vertical area, this habitat type does not contribute towards the total site area.

Individual trees broad habitat type

When to record individual trees

Individual trees are classed as 'urban' or 'rural'. You should consider the degree of 'urbanisation' of habitats around the tree and assign the best fit for the location.

Use the broad habitat type 'Individual trees' to record:

- individual rural trees
- individual urban trees
- lines, blocks or groups of trees found within and around the perimeter of urban land

If ancient and veteran trees are present you cannot use the SMM.

Other clarifications

Do not use the hedgerow module classifications 'line of trees' and 'ecologically valuable line of trees' to record linear formations of trees in the urban environment. These classifications should only be used for rural lines of trees.

Trees within overgrown non-native and ornamental hedges (for example, leylandii) should not be classified as individual trees, or as lines of trees. Record these as non-native ornamental hedges within the hedgerow module.

Trees recorded as individual trees that will be removed for any purpose, including development, disease, or safety must be recorded in your baseline and recorded as lost.

Do not otherwise record individual trees if they occur within a habitat type characterised by the presence of trees, unless specified within the section on 'recording individual trees at baseline', which covers:

- trees within private gardens
- removal of trees within hedgerows
- removal of trees within rural lines of trees

Recording individual trees at baseline

The biodiversity metric uses set values to represent the area of individual trees depending on their diameter at breast height. Table 11 sets out class sizes of trees and their area equivalent.

Table 11 Tree size classes and area equivalents

Size class	Diameter at breast height (cm)
Small	greater than 7.5cm and less than or equal to 30cm
Medium	greater than 30cm and less than or equal to 60cm
Large	greater than 60cm and less than or equal to 90cm
Very large	greater than 90cm

Report the number of individual trees within your project and input tree count into section A of the 'tree area calculator' within the SMM. An illustration of the tree area calculator is shown in figure 1. You should:

- count each individual tree greater than 7.5cm
- use the DBH of the largest stem for multi-stemmed trees
- record the habitat underneath the tree canopy separately

1d. - Tree area calculator

Tree size (Diameter at breast height)	A. Total number of trees pre development	B. Number of trees retained (but not enhanced)	C. Number of new trees planted post development
Small - DBH ≤ 30cm			
Medium - DBH > 30 to ≤ 60cm			
Large - DBH > 60 to ≤ 90cm			
Very Large - DBH > 90cm			
Total	**0**	**0**	**0**

Figure 1 The tree area calculator

You should not deduct the area of individual trees from other habitats recorded underneath the tree canopy.

There are additional circumstances when you should report individual trees as part of your baseline, these are outlined below.

Recording baseline trees within private gardens

Count all medium, large and very large individual trees within private gardens.

[See more information on assessing habitats within private gardens.](#)

Recording baseline trees within hedgerows and lines of trees

If any medium, large or very large trees within a hedgerow or 'rural' line of trees are being removed, count these in the area baseline as individual trees.

Where there is no loss of individual trees within a hedgerow or 'rural' line, the individual trees within that feature do not need to be counted at baseline.

Recording planted individual trees at post-development

Using the tree area calculator

Use the tree area calculator to input the count of planted trees. You should:

- record the count of planted individual trees
- enter the count into the tree helper to determine area

You should not:

- count newly planted trees sited within private gardens
- count trees planted as part of hedgerow creation or enhancement

Post-development size classes

When planting trees post-development size class is determined by the size of the tree at site-planting. When using the tree helper:

- record newly planted individual trees as 'small', unless 'medium' size or above at the time of site-planting
- record trees planted with a DBH less than 7.5cm as 'small'

You should not:

- record natural size increases of retained trees within post-development sheets
- record natural size increases of planted trees within post-development sheets

Intertidal broad habitat type

Calculating area of artificial hard structures and integrated greening of grey infrastructure (IGGI)

Areas of artificial hard structures and IGGI generate biodiversity units. To record these in the biodiversity metric you:

- should record all artificial hard structures and IGGI at baseline and post intervention, (including any vegetated sea walls)
- may record artificial hard structures and IGGI as the surface area (as a plane) of intertidal habitat between mean low water and mean high water

Artificial hard structures and IGGI do not contribute towards total site area cross checks in the SSM tool. To account for area discrepancies, you should record the footprint of artificial hard structures (including those with IGGI) as developed land sealed surface. This does not generate biodiversity units.

Hedgerows habitat types

Overgrown non-native and ornamental hedges

Do not record overgrown non-native and ornamental hedges as lines of trees.

Natural succession

Where natural succession results in scrub growing directly adjacent to established hedgerows, meaning the hedgerow becomes less defined, you should:

- record the baseline hedgerow as retained
- show the hedgerow as retained in any post-development mapping
- record habitat changes adjacent to the hedgerow within the post-development sheet of the area habitat module

9 Understanding the results

Outputs

The SSM compares the relative biodiversity value of a site pre-intervention and post-intervention. The quality and reliability of outputs will depend on the quality of the inputs.

The SSM uses habitat as a proxy to describe biodiversity. These habitats are converted into measurable 'biodiversity units'.

You must submit a completed Small Sites Metric (Statutory Biodiversity Metric) Calculation to evidence BNG.

Results

The results show the change in biodiversity value for the area habitats, hedges and lines of trees, and watercourses separately.

The results are set out to show the:

- change in area or length of the habitat
- change in units for each habitat type
- percentage change in units for each different habitat module

If a percentage change is not being provided, this may be because there are no habitats of value on-site before the development, and a percentage change cannot be calculated from zero.

If your results do not show the gain percentage required, further work to avoid impacts, enhance additional habitats or create new areas of habitat will be needed to deliver a net gain.

The additional actions required will need to be targeted to the habitats that do not show the required gain. For example, creating a greater length of hedgerow where the hedgerow percentage increase in units is not at the required level.

The units required to deliver gains will be identified within the 'headline results' tabs. If additional avoidance, creation, or enhancement is required that cannot be met on-site, you should seek off-site units from off-site providers, or as a last resort, statutory credits.

Preparing a metric for submission

There is a requirement to submit a biodiversity metric tool with the baseline tab completed with a planning application for a development subject to BNG. Planning authorities may also have local requirements for further information to be provided in the biodiversity metric tool.

A completed biodiversity metric tool is required as part of the biodiversity gain plan.

Once your metric is completed you must submit your biodiversity metric tool. To prepare the tool for upload onto a planning portal:

- unhide all sheets using the 'view all' button on the start page
- save a copy as a macro disabled excel file (.xlsx)
- check document size is less than 10MB

You may need to replace embedded images to ensure file size remains below 10MB. If you do not take these steps the file may be rejected during the upload process.

10 Data entry guide

Tab 1 – Introduction

Open the SSM on any device with Excel software installed. Any Excel version after and including 2010 can be used.

Tab 2 – Site Details

This is the Site Details tab. Input details of your project into the corresponding white cells (Cells 1-9).

Sheet Name	Site Details
1. Planning authority:	
2. Site name:	
3. Applicant:	
4. Planning application type:	
5. Planning application reference:	
6. Metric completed by (name & job title):	
7. Date of metric completion:	
8. Revision number:	
9. Masterplan document title / drawing number:	

On the same tab there is a box for the project's net gain targets (cells 10 and 11). These will be determined by the % target required of the project.

If you change these targets from 10%, for example to match targets set by the consenting body or the organisation you are running the assessment for, a note pops up highlighting that this change has been made.

Net Gain Targets

10. Targeted % increase in Units	10a. Habitat	10.00
	10b. Hedgerow	10.00
	10c. River	10.00

If no unit-generating habitat is present (all habitats are of very low distinctiveness) at the start of the development (for example, if the site is entirely hard standing) it will not be possible to get a percentage gain in units. In this situation a unit increase target should be set. This could be set by or agreed with the consenting body and should be added into cell 11.

11. Targeted increase in Units if baseline value is zero - agreed with local planning authority	11a. Habitat units	0.00
	11b. Hedgerow units	0.00
	11c. River units	0.00

Tab 3 – Desktop Assessment

The desktop assessment includes details of the site and the relevant surrounding area and should be entered into cells 14 to 25. Cells 16 and 17 will not populate until Cell 14 is filled in.

The data to populate this tab should be sourced by:

- understanding the type of development in planning terms
- carrying out a data search of the site and immediate area for valuable ecological habitats
- confirming the details through a site walkover. An error flag will be present until the date of the site walkover is added.

Enter data into the Desktop Assessment tab. This clarifies whether the SSM can be used. If the SSM is not appropriate for your site, a note directing you to use the statutory biodiversity metric and to seek advice from a suitably qualified ecologist will appear. This includes clarifying whether the site is within or in close proximity (500m) to designated sites or priority habitats.
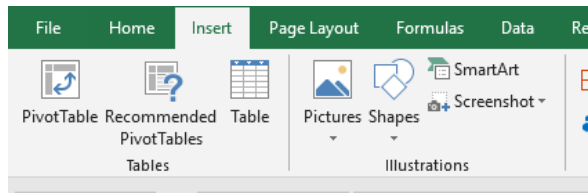
Site Name:	Enter site name on 2. Site Details	
Sheet Name	Desktop Assessment	
Development		
14. Select the type of proposed development. If Other provide details at Q.24 below		
15. Site area (m^2)		
Designated sites and priority habitats		
18. Any designated sites on or within 500m of the site?		
19. Any priority habitats on or within 500m of the site?		
20. List the designated sites and/or priority habitats		
21. Information sources used for assessment of designated sites and priority habitats (See guidance)		
Site walkover		
22. Site walkover completed?		
23. Date of site walkover - DD/MM/YY		Walkover date required ▲
24. Who completed the walkover? (Name and job title)		
Additional details		
25. Any additional information or notes		

Tab 4 – Supporting information

This tab should be used to provide information to support your assessment. This should include a short description of the habitats present in the baseline and dated photos identifying the habitats. Space is provided for up to 40 photographs / descriptions to be included. At least one photograph must be provided for each habitat parcel entered into the SSM.

Images can be added by using the Pictures button located within the Insert section of the tool ribbon at the top of Excel.

If the file size becomes too big once you have completed the SSM, you may wish to reduce the resolution of these images by using picture formatting options.

Tab 5 – Area Habitats General Overview

In this tab you first add information on habitats before the development (the baseline). Only habitats where area is measured in square metres should be entered in this tab. White fields can have information entered. Use the drop-down menus wherever available.

The tab also provides results for the habitats, allowing you to check results as you enter data.

Step 1 – Broad Habitat

In section 1a. Baseline habitats, fill in the broad habitat type from the drop-down menu in column A. Each different habitat parcel should be added as a separate row. If you run out of rows, habitat parcels of the same type can be combined.

Step 2 – Habitat type

In the same section, fill in the habitat type from the drop-down list in column B. Each habitat parcel should be added as a separate row.

If any of the habitats present on site are unavailable within the SSM, you will need to use the statutory biodiversity metric instead.

Step 3 – Strategic significance

Fill in the strategic significance of the habitat from the drop-down in column C for each habitat parcel.

C. Strategic significance	Areas (M²)			Baseline results		
	D. Total Area	E. Area retained	F. Area	Total habitat	Area Lost	Units lost
Area/compensation not in local strategy/ no local strategy						
Formally identified in local strategy	0.00	0.00	0.00	0.0000	0.00	0.0000
Totals (areas excl Trees)	0.00	0.00	0.00	0.0000	0.00	0.0000
Error Check 1	Areas Acceptable ✓					
Error Check 2	Areas Acceptable ✓					
Error Check 3	Areas Acceptable ✓					

Step 4 – Total area

For each habitat parcel fill in the total area in square metres in column D. If part or all of the habitat parcel is retained or enhanced fill in the relevant column with the area that is retained or enhanced in columns E and F, respectively.

C. Strategic significance	Areas (M²)			Baseline results		
	D. Total Area	E. Area retained	F. Area	Total habitat	Area Lost	Units lost
Area/compensation not in local strategy/ no local strategy						
Formally identified in local strategy	0.00	0.00	0.00	0.0000	0.00	0.0000
Totals (areas excl Trees)	0.00	0.00	0.00	0.0000	0.00	0.0000
Error Check 1	Areas Acceptable ✓					
Error Check 2	Areas Acceptable ✓					
Error Check 3	Areas Acceptable ✓					

If a habitat is enhanced, do not include the area in the retained column and vice-versa.

If the corresponding cell for the area enhanced is coloured grey it is not possible to enhance the selected habitat type within the SSM, and no area should be entered in the grey cell.

Step 5 – Habitats to be created

Below Table 1a go to the '1b Habitats to be created' table.

The white columns within this table should be completed in the same way as for Table 1a with information on each habitat that will be created on the site.

Step 6 – Habitats to be enhanced

Below Table 1b go to the '1c Habitats to be enhanced' table.

The first three columns will be automatically completed if you entered an area of habitat that will be enhanced in Table 1a. You will need to complete the habitat type that the enhancement is resulting in and the strategic significance of the habitat parcel in columns A and B respectively.

The condition will be automatically completed for many habitats.

Note that if you are not enhancing any habitats then this table will be left blank.

Step 7 – Tree area calculator

At the bottom of Table 1a, 1b and 1c there is a row for trees. If you have trees on site, they are treated as an area-based habitat. To include the trees in the assessment, add the

number of trees present before the development, the number being lost, and the number being created into Table 1d. Note, individual trees cannot be enhanced within the SSM.

The trees should be split into the following categories: small (≤ 30cm diameter at breast height (DBH)), medium (more than 30 to less than or equal to 60cm DBH), large (more than 60 to less than or equal to 90cm DBH), or very large (more than 90cm DBH). Adding information into Table 1d will automatically fill in the information into Tables 1a, 1b and 1c.

1d. - Tree area calculator

Tree size (Diameter at breast height)	A. Total number of trees pre development	B. Number of trees retained (but not enhanced)	C. Number of new trees planted post development	Areas		
				Area pre development	Area retained	Area of new trees planted post development
Small - DBH ≤ 30cm				0	0	0
Medium - DBH > 30 to ≤ 60cm				0	0	0
Large - DBH > 60 to ≤ 90cm				0	0	0
Very Large - DBH > 90cm				0	0	0
Total	0	0	0	0	0	0

Step 8 – Results

The results of the area-based habitat assessment are set out in Tables 1e and 1f below Table 1d.

1e . Trading Summary

Broad Habitat Type	Trading Rules Satisfied ✓
Distinctiveness Band	Trading Rules Satisfied ✓

1f . Habitat trading assessment

Broad habitat types	Distinctiveness band	Baseline units	Onsite provision	Net change	Trading satisfied?
Cropland	Low	0.0000	0.0000	0.0000	-
	Medium	0.0000	0.0000	0.0000	N/A
Grassland	Low	0.0000	0.0000	0.0000	-
	Medium	0.0000	0.0000	0.0000	N/A
Heathland and shrub	Low	0.0000	0.0000	0.0000	-
	Medium	0.0000	0.0000	0.0000	N/A
Intertidal Hard Structures	Low	0.0000	0.0000	0.0000	-
	Medium	0.0000	0.0000	0.0000	N/A
Intertidal sediment	Low	0.0000	0.0000	0.0000	-
	Medium	0.0000	0.0000	0.0000	N/A
Lakes	Low	0.0000	0.0000	0.0000	-
	Medium	0.0000	0.0000	0.0000	N/A
Sparsely vegetated land	Low	0.0000	0.0000	0.0000	-
	Medium	0.0000	0.0000	0.0000	N/A
Urban	Low	0.0000	0.0000	0.0000	-
	Medium	0.0000	0.0000	0.0000	N/A
Woodland and forest	Low	0.0000	0.0000	0.0000	-
	Medium	0.0000	0.0000	0.0000	N/A
Coastal Saltmarsh	Low	0.0000	0.0000	0.0000	-
	Medium	0.0000	0.0000	0.0000	N/A

Distinctiveness band	Baseline units	Onsite provision	Net change	Trading satisfied?
Medium distinctiveness	0.0000	0.000	0.0000	Yes ✓
Low distinctiveness	0.0000	0.000	0.0000	Yes ✓
Are there sufficient Medium distinctiveness units to cover low distinctiveness losses?	0.0000			Yes ✓

Tabs 6 and 7 - Hedges and Lines of Trees and Watercourses

For hedgerows and lines of trees and watercourses, the information should be completed in the same way as for the area-based habitats. Instead of an area measurement, a length measurement in metres, should be used.

For hedgerows, if there is a significant gap, then the habitat should be mapped as two separate hedgerows.

If any of the habitats present on site are unavailable within the SSM, you will need to use the statutory biodiversity metric instead.

Table 1 — 6. Hedges & Lines of Trees

	Retained Units	0.0000
Site Name: Enter site name on 2. Site Details	Lost Units	0.0000
Sheet Name: 6. Hedges & Lines of Trees	Created Units	0.0000
	Enhancement Units	0.0000
	Net Change	0.0000

Instructions:
1. Enter data in the Baseline Habitat table
2. Scroll down to enter data for any habitats to be created
3. Scroll down again to enter data for any habitats being enhanced

All Key Rules Satisfied ✓

1a. Baseline habitats

Ref	Habitat		C. Strategic significance	Length M			Baseline results			Comments	
	A. Broad Habitat	B. Habitat type		D. Total Length	E. Length	F. Length	Total units	Length Lost	Units lost	User comments	LPA comments
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
			Totals	0.00	0.00	0.00	0.0000	0.00	0.0000		
			Error Check 1	Lengths Acceptable ✓							
			Error Check 2	Lengths Acceptable ✓							

Table 2 — 7. Watercourses

	Retained Units	0.0000
Site Name: Enter site name on 2. Site Details	Lost Units	0.0000
Sheet Name: 7. Watercourses	Created Units	0.0000
	Enhancement Units	0.0000
	Net Change	0.0000

Instructions:
1. Enter data in the Baseline Habitats table
2. Scroll down to enter data for any habitats to be created
3. Scroll down again to enter data for any habitats being enhanced

All Key Rules Satisfied ✓

1a. Baseline habitats

Ref	Habitat		C. Strategic significance	Length M			Baseline results			Comments	
	A. Broad Habitat	B. Habitat type		D. Total Length	E. Length	F. Length	Total units	Length Lost	Units lost	User comments	LPA comments
1	Watercourses										
2	Watercourses										
3	Watercourses										
4	Watercourses										
5	Watercourses										
6	Watercourses										
7	Watercourses										
8	Watercourses										
9	Watercourses										
10	Watercourses										
11	Watercourses										
12	Watercourses										
13	Watercourses										
14	Watercourses										
15	Watercourses										
16	Watercourses										
17	Watercourses										
18	Watercourses										
19	Watercourses										
20	Watercourses										
			Totals	0.00	0.00	0.00	0.0000	0.00	0.0000		
			Error Check 1	Lengths Acceptable ✓							
			Error Check 1	Lengths Acceptable ✓							

Tab 8 – Headline Results

The results are presented in tab '8. Headline Results'.

Site Name		Enter site name on 2. Site Details
Sheet Name		Headline Results

Headline Results

Headline	BNG Targets Met ✓

Trading Rules	Trading Rules Satisfied ✓

Next steps	Check for input errors/rule breaks present in the metric ⚠

Baseline Units	*Habitat units*	Zero Units Baseline
	Hedgerow units	Zero Units Baseline
	Watercourse units	Zero Units Baseline

Post-development Units	*Habitat units*	0.0000
	Hedgerow units	0.0000
	Watercourse units	0.0000

Total net unit change	*Habitat units*	0.0000
	Hedgerow units	0.0000
	Watercourse units	0.0000

Total net % change	*Habitat units*	% target not appropriate
	Hedgerow units	% target not appropriate
	Watercourse units	% target not appropriate

Habitats units required to meet target	0.0000
Hedgerow units required to meet target	0.0000
Watercourse units required to meet target	0.0000

The headline results tab presents the results for the area habitats, hedges and lines of trees, and watercourses. This tab also shows the overall result.

If net gain is not delivered on-site, it can be delivered through habitat enhancement or creation off-site. The statutory biodiversity metric will need to be used by the off-site provider, you can still enter the on-site information in the SSM.

If there are gaps in the information you have added to the SSM, or you have added the information incorrectly, error messages will be flagged within the SSM. An error message will be highlighted in a red box and with a white triangle. Appendix 2 sets out what these errors are and how to address them.

It is important that all errors are addressed before the results are reviewed.

Appendix 1 – SSM troubleshooting guide

Table A1 details potential errors you may encounter when completing the SSM and solutions that may fix these.

Table A1 SSM Error List

SSM Error	SSM Tab where error occurs	Comments to address error
ERROR - Site too large for metric - USE STATUTORY BIODIVERSITY METRIC	3. Desktop Assessment	If your site is above 5000m^2 or is above 10,000m^2 and classed as "residential" in cell Q14, the statutory biodiversity metric must be used.
ERROR - Footprint too large for metric - USE STATUTORY BIODIVERSITY METRIC	3. Desktop Assessment	The building footprint entered is too high. The statutory biodiversity metric must be used.
ERROR - Footprint larger than development area	3. Desktop Assessment	The building footprint entered must be lower than the total site area in cell Q15.
ERROR - Number of units too large for metric - USE STATUTORY BIODIVERSITY METRIC	3. Desktop Assessment	If your development is 10 or more residential units, the statutory biodiversity metric must be used.
ERROR - Site too complex for metric - USE STATUTORY BIODIVERSITY METRIC	3. Desktop Assessment	If a statutory designated site is within your site boundary, the site must be assessed by an ecologist and the statutory biodiversity metric must be used
ERROR - Site walkover required	3. Desktop Assessment	A site walkover by an ecologist or competent person is a requirement of completing the SSM.

SSM Error	SSM Tab where error occurs	Comments to address error
ERROR - Site photographs required to support application	4. Supporting Information	Photos are required of each habitat type on site if the walkover is not completed by an ecologist or competent person.
Rule Based Errors Present On Sheet - Red Cells Highlight Errors	5. Area Habitats 6. Hedges & Lines of Trees 7. Watercourses	One or more errors or important matters for consideration are present. Please read the content of all the red highlighted cells below and carry out the required actions.
Technical Errors On Sheet	5. Area Habitats 6. Hedges & Lines of Trees 7. Watercourses	This error indicates that there is a drop-down option or an area that is incorrectly entered or is missing from a row on the sheet. Please check all cells requiring data entry.
ERROR - Site exceeds areas appropriate for the small site metric	5. Area Habitats	The total area of habitats entered for the site baseline is greater than that which is acceptable within the SSM, please use the statutory biodiversity metric.
ERROR - Areas Retained and Enhanced Exceed Total Area	5. Area Habitats	The areas recorded as retained and or enhanced exceeds the total area of that habitat type.
ERROR - Areas Entered Does Not Match Stated Site Area	5. Area Habitats	The total area of baseline habitats entered does not match the site area stated on the site details sheet.
ERROR - Area of habitat creation must match area lost	5. Area Habitats	The total area of habitats created must match the total area of habitats lost.

SSM Error	SSM Tab where error occurs	Comments to address error
ERROR - Trading Rules Not Satisfied - Insufficient Medium Distinctiveness Units Created	5. Area Habitats 6. Hedges & Lines of Trees 7. Watercourses	Habitat types lost to development are of higher value than those created or enhanced to replace them. It is recommended you consider the habitats created or enhanced further to see if any improvement is feasible.
ERROR - Trading Rules Not Satisfied - Insufficient Units Created Within Habitat Groups	5. Area Habitats 6. Hedges & Lines of Trees 7. Watercourses	The amount of habitat units lost to development is higher than those created or enhanced to replace them. It is recommended you consider the habitats created or enhanced further to see if any improvement is feasible.
ERROR - Lengths Retained and Enhanced Exceed Total Length	6. Hedges & Lines of Trees 7. Watercourses	The lengths recorded as retained and or enhanced exceed the total length of that habitat type.
Area error	5. Area Habitats	One of the area values required for the calculation has not been entered, been entered incorrectly, or falls outside the SSM parameters. Please check that all required fields have been completed and that no mistakes have been made.
Value missing	5. Area Habitats	One of the area values required for the calculation has not been entered or has been entered incorrectly. Please check that all required fields have been completed and that no mistakes have been made.

SSM Error	SSM Tab where error occurs	Comments to address error
Length error	6. Hedges & Lines of Trees 7. Watercourses	One of the lengths required for the calculation has not been entered or has been entered incorrectly. Please check that all required fields have been completed and that no mistakes have been made.
Error - Areas Retained and Enhanced Exceed Total Area	5. Area Habitats	The total area of habitats retained and enhanced is greater than the total baseline area for that habitat. Please check that the correct areas have been added to all columns.
Error - Areas Entered Does Not Match Stated Site Area	5. Area Habitats	The total baseline area for habitats entered into the SSM is greater than the site area entered into the site details tab. Please check that both are correct, for any habitats situated outside of the site, the statutory biodiversity metric must be used.
This intervention is not permitted within the SSM	5. Area habitats 6. Hedges & Lines of Trees 7. Watercourses	The intended enhancement in condition is not possible within the SSM. Please select a different target condition.

Appendix 2 – UKHab translation table

Table A2 is provided to assist landscape architects, architects, planning consultants and other professionals who may be more familiar with landscape terminologies to use the SSM.

Table A2 UKHab Translation Table

Landscape Term	Unique Landscape Term (including code)	SSM Broad Habitat and Habitat Type	Distinctiveness
Saltmarsh	Saltmarsh - A2.5	Coastal saltmarsh - Saltmarshes and saline reedbeds	Medium
Cropland	Arable - c1c	Cropland - Cereal crops	Low
Cropland	Arable - c1c7	Cropland - Cereal crops other	Low
Cropland	Arable - c1d	Cropland - Non-cereal crops	Low
Cropland	Arable - c1b	Cropland - Temporary grass and clover leys	Low
Cropland margins	Arable - c1a7	Cropland - Arable field margins cultivated annually	Medium
Cropland margins	Arable - c1a8	Cropland - Arable field margins game bird mix	Medium
Cropland margins	Arable - c1a6	Cropland - Arable field margins pollen & nectar	Medium
Cropland margins	Arable - c1a	Cropland - Arable field margins tussocky	Medium
Cropland margins	Arable - c1c5	Cropland - Cereal crops winter stubble	Low
Horticulture	Horticulture - c1f	Cropland - Horticulture	Low
Orchard	Orchard - c1e	Cropland - Intensive orchards	Low

Landscape Term	Unique Landscape Term (including code)	SSM Broad Habitat and Habitat Type	Distinctiveness
Amenity Grassland or Grassland Seed Mix	Amenity Grassland - g4	Grassland - Modified grassland	Low
Amenity Grassland or Grassland Seed Mix	Amenity Grassland - g4	Grassland - Other neutral grassland	Medium
Bracken	Bracken - g1c	Grassland - Bracken	Low
Meadow Grassland or Wildflower Seeding	Meadow Grassland - g1d	Grassland - Other lowland acid grassland	Medium
Meadow Grassland or Wildflower Seeding	Meadow Grassland - g3c	Grassland - Other neutral grassland	Medium
Meadow Grassland or Wildflower Seeding	Meadow Grassland - g1b	Grassland - Upland acid grassland	Medium
Invasive Scrub	Invasive Scrub - h3g	Heathland and shrub - Rhododendron scrub	Low
Native Scrub	Native Scrub - h3a	Heathland and shrub - Blackthorn scrub	Medium
Native Scrub	Native Scrub - h3d	Heathland and shrub - Bramble scrub	Medium
Native Scrub	Native Scrub - h3e	Heathland and shrub - Gorse scrub	Medium
Native Scrub	Native Scrub - h3f	Heathland and shrub - Hawthorn scrub	Medium

Landscape Term	Unique Landscape Term (including code)	SSM Broad Habitat and Habitat Type	Distinctiveness
Native Scrub	Native Scrub - h3b	Heathland and shrub - Hazel scrub	Medium
Native Scrub	Native Scrub - h3h	Heathland and shrub - Mixed scrub	Medium
Native Scrub	Native Scrub - h3cNE2	Heathland and shrub - Sea buckthorn scrub (other)	Low
Native Hedge	Native Hedge - h2NE5	Hedgerow - Native hedgerow	Medium
Native Hedge	Native Hedge - h2NE2	Hedgerow - Species-rich native hedgerow	Medium
Native Hedge	Native Hedge - h2NE9	Hedgerow - Native hedgerow - associated with bank or ditch	Medium
Native Hedge with Standard Trees	Native Hedge with Standard Trees - h2NE4	Hedgerow - Native hedgerow with trees	Low
Ornamental Hedge	Ornamental Hedge - h2NE3	Hedgerow - Non-native and ornamental hedgerow	Low
Standard Trees	Standard Trees - w1g6NE4	Hedgerow - Line of trees - associated with bank or ditch	Low
Standard Trees	Standard Trees - w1g6NE2	Hedgerow - Line of trees	Low
Standard Trees	Standard Trees - w1g6NE1	Hedgerow - Ecologically valuable line of trees - associated with bank or ditch	Medium
Standard Trees	Standard Trees - w1g6NE3	Hedgerow - Ecologically valuable line of trees	Medium
INTERTIDAL TBC	INTERTIDAL TBC - ART_A1.4	Intertidal hard structures - Artificial features of hard structures	Low

Landscape Term	Unique Landscape Term (including code)	SSM Broad Habitat and Habitat Type	Distinctiveness
INTERTIDAL TBC	INTERTIDAL TBC - ART_A1	Intertidal hard structures - Artificial hard structures	Low
INTERTIDAL TBC	INTERTIDAL TBC - ART_A1_IGGI	Intertidal hard structures - Artificial hard structures with integrated greening of grey infrastructure (IGGI)	Medium
INTERTIDAL TBC	INTERTIDAL TBC - ART_A2.7	Intertidal sediment - Artificial littoral biogenic reefs	Low
INTERTIDAL TBC	INTERTIDAL TBC - ART_A2.1	Intertidal sediment - Artificial littoral coarse sediment	Low
INTERTIDAL TBC	INTERTIDAL TBC - ART_A2.4	Intertidal sediment - Artificial littoral mixed sediments	Low
INTERTIDAL TBC	INTERTIDAL TBC - ART_A2.3	Intertidal sediment - Artificial littoral mud	Low
INTERTIDAL TBC	INTERTIDAL TBC - ART_A2.24	Intertidal sediment - Artificial littoral muddy sand	Low
INTERTIDAL TBC	INTERTIDAL TBC - ART_A2.21	Intertidal sediment - Artificial littoral sand	Low
INTERTIDAL TBC	INTERTIDAL TBC - ART_A2.6	Intertidal sediment - Artificial littoral seagrass	Low
INTERTIDAL TBC	INTERTIDAL TBC - A2.4	Intertidal sediment - Littoral mixed sediments	Low
INTERTIDAL TBC	INTERTIDAL TBC - A2.21	Intertidal sediment - Littoral sand	Medium
Reservoirs	Reservoirs - 108	Lakes - Reservoirs	Medium
Wildlife Pond	Wildlife Pond - r1b	Lakes - Ponds (non-priority habitat)	Medium
Canal	Canal - r1eNE1	Rivers & Streams - Canals	Medium

Landscape Term	Unique Landscape Term (including code)	SSM Broad Habitat and Habitat Type	Distinctiveness
Culvert	Culvert - rNE1	Rivers & Streams - Culvert	Low
Ditch	Ditch - r1eNE2	Rivers & Streams - Ditches	Medium
Ruderals	Ruderals - 17	Sparsely vegetated land - Ruderal/ephemeral	Low
Scree	Scree - s1d	Sparsely vegetated land - Other inland rock and scree	Medium
Allotments	Allotments - 910	Urban - Allotments	Low
Bare ground	Bare ground - 350	Urban - Vacant/derelict land/ bare ground	Low
Biodiverse Roof	Biodiverse Roof - 1113	Urban – Biodiverse green roof	Medium
Bioswale	Bioswale - 1191	Urban - Bioswale	Low
Cemetery	Cemetery - 800	Urban - Cemeteries and churchyards	Medium
Garden	Garden - 231	Urban - Vegetated Garden	Low
Garden	Garden - 232	Urban - Un-vegetated garden	Very low
Green Roof	Green Roof - 1111	Urban - Other green roof	Medium
Green Roof - Sedum	Green Roof - Sedum - 1112	Urban - Intensive green roof	Low
Green Wall	Green Wall - 1122	Urban - Facade-bound green wall	Low
Green Wall	Green Wall - 1121	Urban - Ground based green wall	Low
Impermeable Hardscape	Impermeable Hardscape - u1b	Urban - Developed land; sealed surface	Very low

Landscape Term	Unique Landscape Term (including code)	SSM Broad Habitat and Habitat Type	Distinctiveness
Ornamental Pond	Ornamental Pond - 362	Lakes - Ornamental Lake or pond	Low
Ornamental Shrub Planting	Ornamental Shrub Planting - 1160	Urban - Introduced shrub	Low
Permeable Hardscape	Permeable Hardscape - u1c	Urban - Artificial unvegetated, unsealed surface	Very low
Planters	Planters - 1140	Urban - Ground level planters	Low
Quarry	Quarry - 1030	Urban - Sand pit quarry or open cast mine	Low
Standard Tree	Standard Tree - 1170	Urban - Urban tree	Low
SuDS	SuDS - 1192	Urban - Rain garden	Low
SuDS	SuDS - 1119	Urban - Sustainable drainage system	Low
Wall	Wall - u1e	Urban - Built linear features	Very low
Conifer Woodland	Conifer Woodland - w2c	Woodland and forest - Other coniferous woodland	Low
Conifer Woodland	Conifer Woodland - w2b	Woodland and forest - Other Scot's pine woodland	Medium
Native Broadleaved Woodland	Native Broadleaved Woodland - w1g	Woodland and forest - Other woodland; broadleaved	Medium
Native Mixed Woodland	Native Mixed Woodland - w1h	Woodland and forest - Other woodland; mixed	Medium