Biodiversity Net Gain Assessment

Land at Springwood Drive

Whalley, Clitheroe

October 2025 Rev A

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This document is to be read in conjunction with:

- **The Statutory Biodiversity Metric Calculation Tool– Springwood Drive Rev A**
- **The Habitat Condition Assessment Sheets – Springwood Drive Rev A**
- **Wisewell Brook Baseline – Enhancement RCA Data excel sheet**

EXECUTIVE SUMMARY

- On 15th July 2024 a site visit to inform the Biodiversity Net Gain Assessment was undertaken at Springwood Drive, Whalley, Clitheroe to inform the proposals for a residential development. This site visit was updated on 29th September 2025.
- The site supports modified grassland with tall herb vegetation and scattered trees. There is a watercourse along the northeast boundary.
- Adjacent native and non-native hedgerows are off-site and not under the control of the site ownership and management. For this reason, they are not included in the BNG Metric.
- The development will result in the loss of the majority (0.0607ha) of modified grassland and six small urban trees.
- The proposals will include enhancement of 0.078ha of other modified grassland along the watercourse to other neutral grassland, and planting of 20 small native trees. This enhancement will result in the improvement of the riparian encroachment of the watercourse.
- There will be an 6.57% increase in Watercourse Units. However, due to the development there will be a loss of -16.05% of Habitat Units. Including the spatial risk multiplier this will result in a unit shortfall of 0.79 Habitat Units and 0.07 Watercourse Units. These units will be purchased from a Habitat Bank.

1. Introduction

1.1 Application Site

1.1.1 This report details a Biodiversity Net Gain Assessment of Land at Springwood Drive, Whalley, Clitheroe, BB7 9GZ. Ordnance Survey grid reference (centre of site): SD 73553658.

1.1.2 CRJ Developments Ltd. commissioned Verity Webster Ltd to undertake a Biodiversity Net Gain Assessment in order to inform the proposals for the site.

1.2 Objectives

1.2.1 The objectives of the Biodiversity Net Gain Assessment are to determine:

- Potential for enhancement or compensation (offsetting) on the site for protected species, habitats of conservation interest and overall biodiversity with the aim of achieving 10% net gain in biodiversity.

1.3 Proposals

1.3.1 The proposals comprise construction of a residential housing with associated access, parking and landscape.

1.4 Ecologist

1.4.1 The Ecological Assessment was undertaken by Verity Webster. Verity is a Chartered Ecologist and a full member of the Chartered Institute of Ecology and Environmental Management.

1.4.2 Verity has worked as an ecological consultant since 2007. She has undertaken Ecological Assessments and protected species surveys for a large variety of projects and schemes, producing the required impact assessment and subsequent mitigation schemes and method statements when necessary. She has botanical skills FISC level 4, qualified for NVC survey.

1.5 Landscape Design and Ecologist Limitations

1.5.1 This document includes recommendations for measures to achieve Biodiversity Net Gain (BNG). These recommendations do not comprise a landscape design or planting prescriptions as provided by a Landscape Architect and the ecologist has no Design Liability associated with these recommendations. This document includes measures to achieve BNG based upon the Proposed Site Plan by Cassidy and Ashton. Drawing number. 12477 SWD-CAA-xx-xx-D-A-1002, Rev P4. 13.09.24.

2. Site Location and Description

2.1 Site Location

2.1.1 The survey site is located in the semi-rural village of Whalley, approximately 3.6km north of Great Harwood in Blackburn and 4km south of the outskirts of Clitheroe.

2.1.2 Whalley village lies between the A59, which runs northeast to southwest approximately 6km northwest of the survey site and the A671 Accrington Road, which runs northwest to southeast approximately 400m to the east of the survey site.

2.1.3 The River Calder weaves through the landscape approximately 600m to the south. Wisewell brook runs along the northeast boundary of the survey site discharges into the River Calder.

2.1.4 Houses with gardens lie to the north, south and west. To the southeast the site is continuous with open ground and open countryside divided only by the A617 Accrington Road.

2.1.5 The open countryside to the east comprises grassland, woodland and scattered waterbodies.

2.1.6 Overall, the site is in an area with high suitability for protected species in the locality. See Figures 1 and 2.

2.2 Site Description

2.2.1 The survey site encompasses a roughly triangular area of land to the southwest of Springwood Drive.

2.2.2 The survey site encompasses modified grassland with patches of tall forb vegetation and scattered immature trees. There is a brook along the northeast boundary, bordered by modified grassland with tall forb vegetation.

2.2.3 See UK Habitat Classification Plan, Figure 3.

Figure 1: Ordnance survey map showing the location of the proposed development site.

Figure 2: Aerial image showing the proposed development site and immediate surroundings

3. Legislation

3.1 Planning Policy and Legislation

3.1.1 In England, biodiversity net gain is required under a statutory framework introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021). This is referred to as biodiversity net gain in Planning Practice Guidance to distinguish it from other or more general biodiversity gains.

3.1.2 Under the statutory framework for biodiversity net gain, every grant of planning permission is deemed to have been granted subject to a general biodiversity gain condition to secure the biodiversity gain objective. This objective is to deliver at least a 10% increase in relation to the pre-development biodiversity value of the development granted permission. This increase can be achieved through onsite biodiversity gains, registered offsite biodiversity gains or statutory biodiversity credits (Gov.Uk Biodiversity Net Gain, 2023).

3.1.3 Under the NERC Act 2006, planning authorities are obliged to make sure that they have all the information on the presence of protected species on site before they make a decision on the planning permission.

3.1.4 The National Planning Policy Framework (NPPF, 2021) encourages Local Planning Authorities to conserve and enhance biodiversity.

Chapter 15, Para 180 of NPPF states: *''The planning system should contribute to and enhance the natural and local environment by:*

a) ***protecting and enhancing valued landscapes, sites of biodiversity*** *or geological value and soils....*

d) ***minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures***".

Para 181 states: "*Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.''*

Para 185 identifies that plans should do the following to protect and enhance biodiversity and geodiversity:

a) "***Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and***

b) ***Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and peruse opportunities for securing measurable net gains for biodiversity.***"

Para 186 states that "*when determining planning applications, local authorities should apply the following principles:*

a) ***if significant harm to biodiversity from a development cannot be avoided...,adequately mitigated, or, as a last resort compensated for, then planning permission should be refused***''

3.1.5 The local planning authority has a responsibility, therefore, to obtain all information regarding the potential for protected species on a site prior to making a decision about a proposal.

4. Methodology

4.1 Site Survey

4.1.1 A site visit was undertaken on 15th July 2024 and 29th September 2025 to inform the Biodiversity Net Gain Metric and Assessment. Habitats on site were assessed and described in accordance with UK Habitat Classification (UK Hab Ltd, 2023) and a list of conspicuous species recorded. The condition of the habitats was determined using the condition sheets provided for the Statutory Metric (DEFRA, 2023).

4.1.2 The Ecological Assessment was undertaken by Verity Webster BSc MSC CEcol MCIEEM. Verity is a Chartered Ecologist and a full member of the Chartered Institute of Ecology and Environmental Management. She has botanical skills FISC level 4.

4.2 River Condition Assessment

4.2.1 To inform the watercourse tab of the Statutory Metric, a River Condition Assessment (RCA) of the Rochdale Canal and brook was undertaken using the Modular River Physical (MoRPh) survey (Gurnell et al, 2022). Cartographer software was used to do a River Type Assessment and produce a preliminary condition score.

Wisewell Brook

4.2.2 A standard MoRPh 5 survey was undertaken to inform the condition score for the brook.

4.3 Biodiversity Net Gain Assessment

4.3.1 Biodiversity Offsetting was developed by Defra. The pilots of the study were first published in 2012.

4.3.2 The Biodiversity Calculator is a system created by Defra to quantify change in biodiversity of a site in biodiversity units.

4.3.3 *The Biodiversity Offsetting Pilots: Guidance for Developers* (Defra, 2012) details the original metric for calculating biodiversity loss or gain as a result of development proposal.

4.3.4 *The Statutory Biodiversity Metric* (DEFRA, 2023) and the associated guidance was used to assess the habitat condition and calculate potential change in biodiversity within the survey site.

4.3.5 To determine strategic significance of the habitats at baseline and post-development, the relevant documentation was considered including Local and Neighbourhood Plans, Priority Habitats, Local Biodiversity Action Plans and Local Ecological Networks. When available the relevant Local Nature Recovery Strategy will be utilised for this purpose.

4.3.6 The Mitigation. Hierarchy and the Biodiversity Net Hierarchy and was used to inform recommendations about habitat retention, loss, enhancement and creation as per the Biodiversity Net Gain: Good Practice principles for development (CIRIA C776a, 2019).

4.3.7 The calculation of change in biodiversity units has been based upon areas provided by Cassidy and

Ashton from the Proposed Site Plan. Drawing number. 12477 SWD-CAA-xx-xx-D-A-1002, 13.09.24.

4.4 Limitations

4.4.1 The survey work was undertaken in July 2024 and September 2025. At these times of the year the majority of higher plants are visible, but some species are more conspicuous or only present at some times of the year, and some species may have been missed. The species list constructed is not comprehensive.

5. Biodiversity Net Gain Assessment

5.1 Baseline condition and potential impacts on Biodiversity

Offsetting and the Biodiversity Calculator

5.1.1 The baseline condition of the habitat and the predicted change as a result of the proposals has been assessed with the use of the Biodiversity Offset principals.

5.1.2 Biodiversity offsetting principal: What is it?

> "Using the biodiversity offsetting approach means than an offset provider delivers quantifiable amount of biodiversity benefit to offset the loss of the biodiversity resulting from the development. The losses and gains are measured in the same way, even if the habitats concerned are different. In the biodiversity offsetting pilot, the measurement is done in **'biodiversity units'**, which are the product of the **size of an area**, **the distinctiveness** and **the condition** of the habitat it comprises. The assessment of biodiversity units lost and gained can be calculated" (Defra, 2012).

5.1.3 The Biodiversity Calculator is a system created by Defra to quantify change in biodiversity of a site in biodiversity units. The current calculator is known as Statutory Biodiversity Metric (Gov.UK Statutory Biodiversity Metric Tool, 2023).

5.1.4 This quantitative assessment will be considered in relation to the other qualitative ecological functions of the site in order to assess the impact (i.e. functionality for protected species), but is a useful tool to show predicted or potential loss of habitat, change in condition and enhancement (net gain).

Habitats at Baseline

5.1.5 The survey site supports, unvegetated land, sparsely vegetated ground, tall forb vegetation, tree lines and scattered individual small urban trees.

5.1.6 The UK Habitat classifications are as follows:

- Modified grassland g4 with secondary code 161 (tussocky) and secondary code 11 (scattered trees).
- Tall forb vegetation: Modified grassland g4 with secondary code 16 (tall forb).
- Tall forb vegetation: Modified grassland g4 with secondary code 16 (tall forb), secondary code 10 (bramble scrub), secondary code 11 (scattered trees), secondary code 524 (invasive non-native species).
- Urban trees g 200
- Other rivers and streams (Wisewell brook) r2b
- Developed land; sealed surface u1b6
- Native hedgerow h2a (off-site but adjacent)

- Non-native and ornamental hedgerow h2b (off-site but adjacent)

Habitat descriptions

Modified grassland g4, 161, 11

5.1.7 The grassland (TN1) is dominated by Yorkshire fog (*Holcus lanatus*) and rye grass (*Lolium perenne*). False oat grass (*Arrhenatherum elatius*) is abundant with occasional creeping bent-grass (*Agrostis stolonifera*) in patches. Herbs were rare and comprise white clover (*Trifolium repens*), broad-leaved dock (*Rumex obtusifolius*), spear thistle (*Cirsium vulgare*), and dandelion (*Taraxacum* agg.).

5.1.8 This stand meets the criteria under the UK Habitat Classification of Modified grassland as it supports under 9 species per m^2, is dominated by palatable grasses including Yorkshire fog and rye grass, and because the grass cover is over 75%.

5.1.9 There are scattered, immature trees including willow (*Salix* Sp.) and oak (*Quercus* sp.), which have been planted. These are included separately under urban trees below.

Tall forb vegetation g4, 16

5.1.10 The rectangular area off the northwest boundary supports recently cut tall forb vegetation (TN2). This is still classified under g4, modified grassland. The habitat is composed of common nettle (*Urtica dioica*), creeping thistle (*Cirsium arvense*), common hogweed (*Heracleum sphondylium*), alexanders (*Smyrnium olustrum*), cock's-foot grass (*Dactylus glomerata*), false oat grass and hedge bindweed (*Calystegia sepium*).

5.1.11 Nettle and creeping thisle are also abundant in patches along the southwest boundary.

Modified grassland – looking northwest

Modified grassland (TN1)

Wisewell Brook with adjacent tall forb vegetation and scattered trees (TN3)

Wiswell Brook and bankside vegetation g4, 16, 10, 11, 524.

5.1.12 Wiswell Brook (TN3) runs along the northeast boundary of the site. Tall forb habitat runs along the banks comprising false oat grass, rosebay willowherb, common nettle, hedge bindweed, ragwort (*Senecio jacobae*), cleavers (*Galium aperine*), meadow sweet (*Filipendula ulmaria*) and bramble (*Rubus fruticosus* agg.). Tutsan (*Hypercium androsaemum*) is present, but this may be introduced, since the species is widely planted in gardens. The invasive plant species Himalayan balsam (*Impatiens grandulifera*) is also present. Trees present along the brook are all immature and include alder (*Alnus glutinosa*), willow and hawthorn.

Native beech hedgerow (TN4)

5.1.13 Himalayan balsam (*Impatiens grandulifera*) is present in small amounts along Wisewell Brook. Measures to manage and avoid spreading the plant must be undertaken during works.

Native and non-native hedgerows h2a, h2b

5.1.14 There is a line of hedgerows at the boarder of adjacent gardens in the southeast corner of the site. This includes a stretch of native beech (*Fagus sylvatica*) hedge (TN4) and non-native laurel (*Prunus laurocerasus*) hedgerow (TN5). These are off-site and not under the control of the site ownership and management. For this reason, they are not included in the BNG Metric.

Non-native laurel hedgerow (TN5)

Developed land; sealed surface u1b6

5.1.15 A small area of hard standing is present in the southeast corner of the site.

Developed land; sealed surface

Other rivers and streams (the brook) r2b, 525

5.1.16 Wisewell Brook, which flows southeast along the northeast boundary of the site is partially culverted and partially unculverted. These two sections are treated separately within the BNG metric. Tall forb vegetation is present along both banks. The channel is narrow. There is no submergent or emergent vegetation.

5.1.17 There is no evident watercourse encroachment, but riparian encroachment is considered to be major both sides of the open section of the brook. This is because disturbed land, or highly maintained land encroaches within 4m of the bank top.

5.1.18 The brook is considered to be river type K, a partially confined brook with silt/sand/gravel bed. It is likely that the brook has

Tall forb habitat along Wisewell Brook

been modified and straightened in the past. However, works will not result in alteration of the brook channel.

Urban Trees g 200

5.1.19 Six scattered small trees include alder (*Alnus glutinosa*), oak (*Quercus* sp.) and cherry laurel (*Prunus laurocerasus*) which have been previously planted.

Wisewell Brook

Showing damaged, mown modified grassland in the riparian zone of Wisewell Brook

Small alder trees

Figure 3: The Survey Site – UK Habitat Classification Plan

Distinctiveness of the Habitat and Trading Rules

5.1.20 Under the Biodiversity Calculator principals each habitat is categorised into a distinctiveness band.

5.1.21 The distinctiveness of the habitat is based upon parameters such as species richness, diversity, rarity (at local, regional, national and international scales) and the degree to which a habitat supports species rarely found in other habitats (Treweek *et al*, 2010)

- Modified grassland including the tall forb habitat is considered to have LOW distinctiveness.
- Urban trees are considered to have MODERATE distinctiveness.

Trading Rules

5.1.22 Habitats of moderate distinctiveness, if lost, must be compensated for with the same broad habitat type or a higher distinctiveness habitat.

5.1.23 The urban trees must therefore be replaced with individual trees or a habitat of higher distinctiveness.

Habitat Condition Assessment

5.1.24 The condition the habitat on site can be categorised as low, moderate or good and is based upon the Habitat Condition Assessment Sheets within the Statutory Biodiversity Metric. See excel condition assessment.

Modified Grassland (tall forb)

5.1.25 The Modified Grassland, tall forb habitat is considered to be of poor condition because the species richness is poor. This is true for all stands. The majority of the site (TN1) does support a varied structure, but the tall forb habitat (TN2) and along wisewell Brook (TN3) is relatively uniform in height.

Urban trees g 200

5.1.26 The small willow, alder and oak planted on site are considered to be of moderate condition. They lack the features of more mature trees. The non-native cherry laurel area considered of poor condition as they are non-native.

Wisewell Brook

5.1.27 To determine the condition of the watercourse a MoRPh survey was undertaken on 15th July 2024.

5.1.28 At this time, it was possible to view all the necessary physical features including the riverbed, banks and bankside vegetation.

5.1.29 The river type is determined as 'K' – straight, sinuous.

5.1.30 The River Condition Assessment undertaken as part of the Biodiversity Net Gain Assessment confirmed the open portion of the brook to be of moderate condition, with a condition score of 0.437. The watercourse is certainly over deep, so this score could be reduced to fairly poor. For the purposes of this assessment and the BNG Metric, for consistency the watercourse is considered to be moderate as no alteration to the depth will take place as a result of the work and so enhancement will be a result of bank top alterations only.

The Brook along the southwest boundary

5.1.31 Of the baseline indicators, it is evident that the bank top vegetation structure, and tree feature richness is low, and could be significantly improved. The non-native invasive species cover is high and could be reduced, improving the condition. If these condition indicators are improved to the maximum richness, with Himalayan balsam eradicated, this would result in an improvement in condition from moderate to fairly good. However, this is considered ambitious, so although management will work towards this, has not been included in the metric.

5.1.32 Watercourse encroachment will be significantly improved as a result of the works, reducing the major encroachment on the west side to moderate, with a buffer of 6-10m between the bank top and the managed ground.

5.1.33 The culverted section of the watercourse will not be impacted by the proposals.

Strategic Significance

5.1.34 The strategic significance of the habitat present is based upon the value of the habitat in the wider landscape. Consideration is given to local and neighbourhood plans, priority habitats, local nature reserves and local ecological networks.

5.1.35 The Ribble Valley Borough Council Core Strategy 2008-2028 A Local Plan for Ribble Valley Regulation 22 Submission Draft, Key Statement EN4: Biodiversity and Geodiversity details the objective to conserve and enhance biodiversity and geodiversity and to avoid the fragmentation and isolation of natural habitats ad to help develop green corridors. Wisewell Brook could be considered a habitat corridor.

5.1.36 Lancashire Ecological Network Approach and Analysis (Version 1), 2015 (LERN) emphasises the value of an ecological network of movement corridors in a wider habitat matrix. Wisewell Brook and the adjacent riparian habitat is considered of value in this respect, linking to Springwood Biological Heritage Site.

5.1.37 For this reason, Wisewell Brook has been recorded as 'formally in local strategy'.

5.1.38 The other terrestrial habitats on site are not considered to be of local conservation value and are not Habitats of Principal Importance under the NERC Act, 2006. For this reason, the modified grassland, including tall forb habitat and small trees are recorded as 'area not in local strategy/no local strategy'.

5.2 Achieving Biodiversity Net Gain

5.2.1 The EU is committed to halt the loss of biodiversity and the degradation of ecosystem services by 2020. The Biodiversity Strategy sets out 6 targets and 20 specific actions geared towards this overall objective. Action 7 is to ensure no net loss of biodiversity and ecosystem services.

5.2.2 The 'mitigation hierarchy' is included with current planning policy, aiming to halt the loss of biodiversity. The National Planning Policy Framework, consolidating planning guidance states that '*if significant harm cannot be avoided, adequately mitigated, or as a last resort, compensated for, planning permission should be refused*'.

5.2.3 Defra's biodiversity offsetting pilot was developed to address this requirement and ensure development, economic growth and biodiversity conservation are compatible (British Ecological Society, 2013).

5.2.4 Biodiversity net gain, as a good practice principal, has been developed by Ciria, CIEEM and IEMA (BNG, 2016). At the very least developments should aim for no net loss as part of the proposals.

5.2.5 The Headline Results in the Statutory Biodiversity Metric show the overall net change in Biodiversity Units as a result of the development and creation of new habitat.

Habitat Lost and Trading Rules

5.2.6 All the soft landscape will be lost or damaged as a result of the development. A portion of the existing tall forb vegetation is likely to remain as a result of the protection of the brook, but this cannot be guaranteed.

Area habitats to be created

5.2.7 The following habitats are to be created on site:

- **780m^2 of other neutral grassland of moderate condition.** Grassland will be sown with a native species mix along the brook. Management objectives will be to achieve moderate condition.
- **2800m^2 of vegetative gardens.**
- **20 small native trees will be planted on site.** These are considered likely to reach moderate condition and will be planted within the riparian zone along the brook.

Watercourse habitats to be enhanced

5.2.8 The following watercourses are to be enhanced on site:

- **Wisewell Brook:** Major riparian encroachment will be reduced to moderate encroachment on the southwest side of the brook (northeast site boundary). This will be achieved by creating a 6-10m buffer from the watercourse bank. Watercourse bank top habitat within this buffer will be improved to increase the condition over time.

5.3 Habitat Creation and Enhancement

Other Neutral Grassland of Moderate Condition.

5.3.1 To create modified grassland of moderate condition, the following is proposed:

- A native species seed mix will be sown across the newly dispersed soil to encourage biodiversity and development of the grassland. Seed recommended is the Dual Purpose Wildflower Seeds LWXM 80/20 from Landlife Wildflowers. This includes a mix of grasses and annual and perennial wildflowers that will suit the site. Seed is best sown in autumn or spring.

- Creation of a variation in sward height. A portion of the grassland will be cut *twice per year* in early May and again in August/September and if possible, arisings removed after being left to dry and to allow dispersal of seed.

- Patches of the grassland can be cut more regularly to create shorter openings and pathways. Given the riparian zone along the brook, access into seating areas could be created to allow residents in the locality to enjoy the watercourse.

- The habitat along the brook will be subject to a management plan including the control and eradication of Himalayan balsam.

Small Trees

5.3.2 20 small native trees will be planted along the watercourse banking and within the area of other neutral grassland. These will include rowan (*Sorbus aucuparia*), hazel (*Cotylus avellana*), holly (*Ilex aquofolium*), crab apple (*Malus sylvestris*), and alder (*Alnus glutinosa*).

Watercourse enhancement

Wisewell Brook

5.3.3 To reduce to none the riparian encroachment, 5m of the bankside habitat must be vegetated and managed appropriately. This will be achieved by:

- Creating other neutral grassland within the 6-10m strip along the bank top.

- Planting small native trees and shrubs in the grassland to achieve a diverse structure in the habitat.

- The condition of the watercourse will be improved over time by creating a good bank top structure and by planting more trees. Eradication of the Himalayan balsam will also be required.

Figure 4: Proposed Habitat Creation and Enhancement

5.4 Percentage Change in Biodiversity Units

Baseline Habitat Units: 1.52

Baseline Watercourse Units: 0.97

Habitat Units Change: -0.24

Watercourse Units Change: 0.06

Total percentage change in Habitat Units: -16.05%

Total percentage Change in Watercourse Units: 6.57%

5.4.1 The proposals will include enhancement of 0.078ha of other modified grassland along the watercourse to other neutral grassland, and planting of 20 small native trees. This enhancement will result in the improvement of the riparian encroachment of the watercourse.

5.4.2 An appropriate Habitat Management and Monitoring Programme will be required to ensure the habitats created reach their appropriate condition over the 30 year period.

5.4.3 There will be an 6.57% increase in Watercourse Units. However, due to the development there will be a loss of -16.05% of Habitat Units. Including the spatial risk multiplier this will result in a unit shortfall of 0.79 Habitat Units and 0.07 Watercourse Units. These units will be purchased from a Habitat Bank.

6. References

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