Appendix 1: Green Infrastructure Statement and Net Biodiversity Benefit

Form completed by:	Jane Atkinson
Date:	01/05/2025
Address of site:	Porthygan Farm, Bangor-Is-Y-Coed, Wrexham
Grid reference:	SJ38244645
Description of Proposal:	New slurry store to comply with Wales water Resources Regulations. Due to the current yard layout and River Dee floodplain the only possible location of this is east of the yard and it is to be dug into the bank with an earth bund around on 3 sides.

1. Details of all existing green infrastructure on site and approximate size:

1:	Mature hawthorn approx. 20cm DBH
2:	Mature hawthorn approx. 40cm DBH with bramble, dog rose and elder scrub beneath
Other:	Semi improved grassland, comprising of timothy, red fescue, crested dogstail, ribwort plantain

2. What green infrastructure features (trees, hedges, hedgebanks) have already been removed from site and/or require removal to facilitate the development (add lengths or areas)?

Tree 1	Mature hawthorn tree - this will have to be removed
Tree 2	Mature hawthorn tree, bramble, dog rose and elder scrub to be impacted. This is adjacent to the site on the north side at the top of the bank. As the new store is to be dug into the bank it is possible the roots will be impacted.
Grassland area:	The semi-improved grassland will be lost to the new slurry store

3. How are the retained features being protected during development (BS5837:2012)?

Tree 2	It is hoped to retain the mature hawthorn Tree 2 and it is not to be removed, however the net gain plan takes into consideration it may not survive in the medium term. It is uncertain how many of the roots will be impacted as the new store is adjacent to the tree and on a bank. While the site will be excavated any roots encountered will be pruned using a sharp handsaw and secateurs. Exposed roots will be kept moist and covered with a moist hessian cloth to protect them while excavation is in progress. Once the concrete panels are in, the area will be backfilled with good quality top soil and tightly firmed.

4. What Green Infrastructure is being planted as mitigation for losses?

Blue line area 1:	This is an old orchard and has two trees remaining one pear and one apple. Currently it is occasionally grazed and used as a small paddock for cows needing close supervision. 5 new fruit trees to be planted. 2 x pear, 2 x Victoria plum, 1 x damson
Blue line area 2:	This is a key wildlife habitat on the farm, an overgrown hedge with south facing bank. Abundant mature hawthorn, dog rose, bramble, oak trees and grassland with structural diversity. 2 crab apples to be planted in existing gaps to diversity the species and provide additional blossom and fruit. 3 oaks to be planted to north of new track which is not now grazed.
New slurry store earth bund sides	The banks of the new store will be an earth bund. This will be seeded with a grass-flower mix.

5. Biodiversity enhancements

The enhancements do not need to be directly attached to the proposed new construction; they can be attached to the host dwelling or placed within the garden, but they do need to be on land within the red or blue line. The principle is that the enhancements should lead to a 'net benefit' for biodiversity. The following biodiversity enhancements have also been added:

√	Measure	Plan	Details
	Boxes. (state type and number) Please make sure they are currently available to buy.	Submit a plan of location and photos of elevation if available.	Height or aspect
	2 barn owl boxes	Attached	To be put in 2 mature oak trees in the blue line 2 area, positioned so the is a clear flight path in, 3-4 m above ground level, facing away from prevailing wind. To be made on farm as Mr Richards is a talented joiner, the guidance and plans to be used are from the Barn Owl Trust tree nest box design. https://www.barnowltrust.org.uk/barn-owl-nestbox/owl-boxes-for-trees/
	2 bat boxes	Attached	To be put on mature trees in blue line 2 area, positioned 3-4m above ground level, facing away from prevailing wind. To be made on farm as Mr Richards is a talented joiner, the guidance and plans to be used are from the Bat Conservation Trust wooden bat box design. https://www.bats.org.uk/our-work/buildings-planning-and-development/bat-boxes/wooden-bat-boxes
	Tree/orchard planting.	Submit planting plan.	Size of tree (at time of planting), species (full latin name) and any proposed protection measures.

	Number of trees.		
	5 new trees	Attached	1 x Conference pear *(Pyrus communis)* 1 x Packhams Triumph pear (*Pyrus communis)* 2 x Victoria plum *(Prunus domestica Victoria)* 1 x Oulins golden gage *(Prunus domestica Oullins)* Size at time of planting 1.2-1.5m tall To be protected with spiral and metal mesh tree guards. Broadleaved wood chip mulch to be used around the tree (30cm) to aid moisture retention
	Wild flower grassland (area in m2).	Submit plan of location.	Species mix and site preparation details. Confirm that appropriate management is achievable.
	40m^2 area around new store on new bund slope on 3 sides.	Attached	Are to be made up with top soil on surface worked to a fine tilth so seed can be broadcast and rolled in with a hand roller. Seed mix: Cotswold seeds nectar stewardship mix https://www.cotswoldseeds.com/products/2938/nectar-stewardship-mix-cipm2-ipm2-ab8 **Contents per Kg** | % | kg certified crested dogstail | 5.0 | 0.050 certified slender creeping red fescue | 10.0 | 0.100 certified smooth stalked meadow grass | 15.0 | 0.150 certified sheeps fescue | 30.0 | 0.300 certified red fescue | 30.2 | 0.302 native Sainfoin (Onobrychis viciifolia) wildflower | 2.5 | 0.025 certified birdsfoot trefoil | 1.8 | 0.018 Yarrow forage herb | 0.8 | 0.008 Lesser Knapweed (Centaurea nigra) | 0.8 | 0.008 native red clover | 0.6 | 0.006 Salad Burnet (Sanguisorba minor) | 0.6 | 0.006 Ox-eye Daisy (Leucanthemum vulgare) | 0.6 | 0.006 Wild Carrot (Daucus carota) | 0.5 | 0.005 Cornflower (Centaurea cyanus) annual wildflower | 0.3 | 0.003 Ladys Bedstraw (Galium verum) | 0.3 | 0.003 Musk Mallow (Malva moschata) | 0.3 | 0.003 Self Heal (Prunella vulgaris) | 0.3 | 0.003 Red Campion (Silene dioica) | 0.3 | 0.003 White Campion (Silene latifolia) | 0.3 | 0.003 Ribwort Plantain (Plantago lanceolata) | 0.1 | 0.001
	Any other measures.		
	2 new crab apple to diversify wildlife area to north	Attached	2 x Crab apple (*Malus sylvestris)* Bare-root or cell grown sapling 40-60cm. To be protected with 1.2m tree guard (tubex) and stake. Broadleaved wood chip mulch to be used around the tree (30cm) to aid moisture retention
	3 new oak trees to north of new track	Attached	3 x Oak *(Quercus robur)* Bare-root or cell grown sapling 40-60cm.

			To be protected with 1.2m tree guard (tubex) and stake. Broadleaved wood chip mulch to be used around the tree (30cm) to aid moisture retention

6. Management and maintenance.

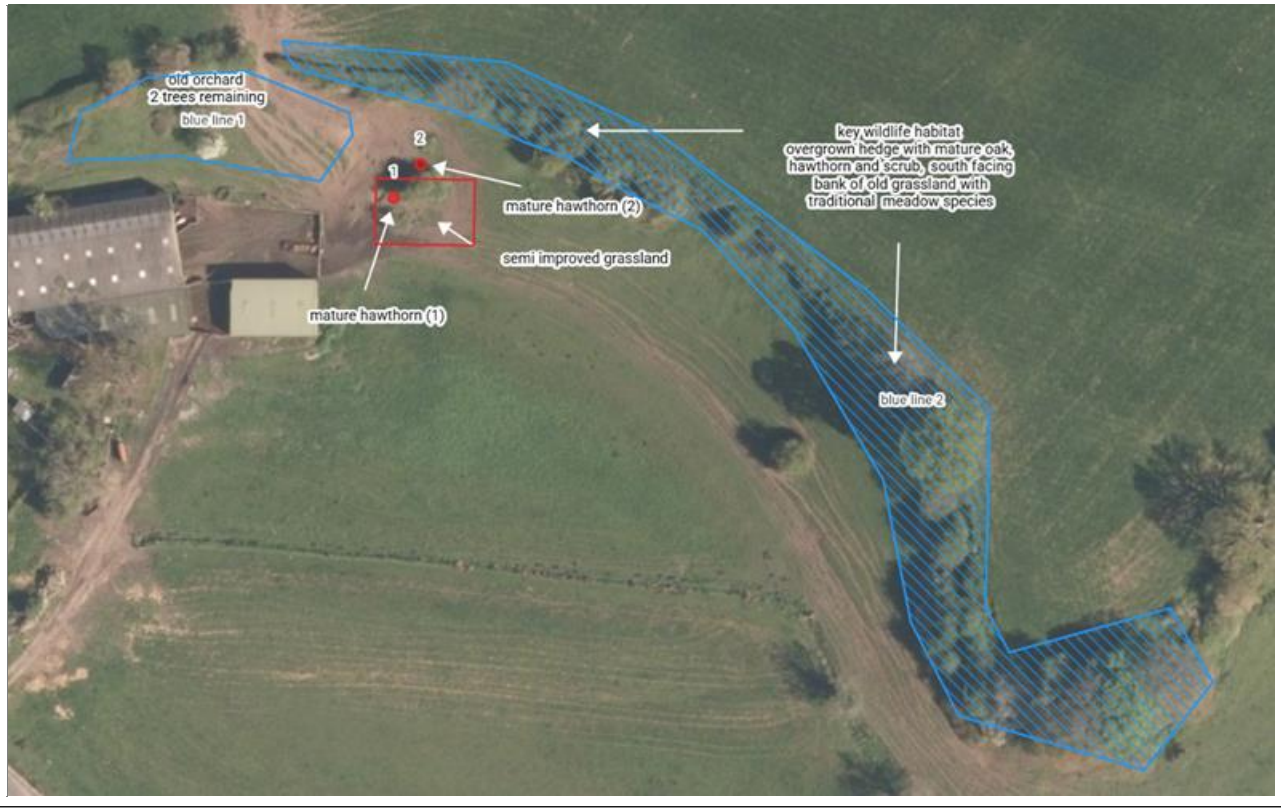
Any information on the long term management and maintenance of the enhancements.

See detailed plan in Net Benefit for Biodiversity Report

7. Conclusion

Based on the information provided above, this development will result in a **Green Infrastructure and Net Biodiversity Benefit** upon completion. The existing habitats on the farm will be strengthened and enhanced and new wildflower grassland around the new store will be of benefit for pollinators.

8. Sketch plan Features of site



9. Sketch plan New Habitats to be created



10. Site photos (as required)

See photos in Net Benefit for Biodiversity Report