

Biodiversity Net Gain Assessment

Site Address:

Land at Broad Street, Leek Street, Leek , Staffordshire, ST13 5NS

Client:

Thistlewood Properties

Assessment Date:

7th August 2025

Project:

This report is prepared to inform a planning application with Staffordshire Moorlands District Council. The proposal is described as:
Construction of drive-thru unit.

BNG assessment methodology and legislation can be found in the Arbtech Supplement: **BNG Methodology and Legislation – 2025.**

The results and recommendations contained within this report are valid for 18 months. An updated site visit and BNG assessment may be required if the report is to be used any longer than 18 months after completion.

Version Control			
Status	Issue	Name	Date
Draft	0.1	Leah Cook, Consultant Ecologist	07/08/2025
Final	1.0	Leah Cook, Consultant Ecologist	08/08/2025

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Site Location and Context

The survey site is centred on National Grid Reference SJ 98299 56312 and has an area of approximately 0.16ha. The site comprises an area of derelict land, located within the centre of the town of Leek, Staffordshire. The site is bound by Broad Street to the south, a commercial unit to the west and dwellings to the north and east. The wider landscape is dominated by extensive areas of urban development, associated with the town of Leek. The underlying geology for the site comprises Chester Formation - Sandstone, pebbly (gravelly), while the underlying soil type comprises slowly permeable seasonally wet acid loamy and clayey soils.

This report should be read in conjunction with the following documents:

- ❖ Statutory BNG Metric (Arbtech Consulting Ltd., 2025)
- ❖ Proposed Plan (Studio PH Architecture, 2025)
- ❖ Preliminary Ecological Appraisal (PEA) (Arbtech Consulting Ltd., 2025)

Executive Summary

The current landscaping proposal generates a net loss of area-based habitat units **(-94.34%)** with unmet trading rules. In line with the Statutory Biodiversity Metric User Guide (2024), any loss of a habitat must be replaced on a like-for-like or like-for-better principle. At present, trading conditions are not satisfied. With unmet trading conditions and a net loss, the proposal fails principal Rules 1 and 2 of BNG and is not compliant with current legislation (Environment Act 2021).

In order to achieve a +10% biodiversity net gain for area-based habitats, a minimum area-based unit score of 0.44 will need to be achieved. At present, there is a unit deficit of **0.42** units. Of these units, 0.24 units must be of mixed scrub, and 0.14 units must be of ruderal/ephemeral to satisfy trading rules.

Introduction

BNG Informative	
Date reflected by BNG calculations	7 th August 2025
Irreplaceable Habitat Statement	No irreplaceable habitats as listed under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024) are currently present nor were present before 30 th January 2020.
Metric Version & Publication Date	Statutory Biodiversity Metric Calculation Tool first published 29 th November 2023 with last updates to metric tools and user guides on 23 rd July 2024.
BNG Target Uplift	+10%
National Character Area (NCA)	64 - Potteries and Churnet Valley
Limitations	
There were no specific limitations to the assessment.	

Baseline

Baseline Biodiversity Value: On-Site				
Area-Based Habitats				
Habitat	Area (ha)	Description	Condition Assessment	Strategic Significance
Developed land; sealed surface	0.039 ha	As described in the PEA.	N/A - Other	Area/compensation not in local strategy/ no local strategy
Artificial unvegetated, unsealed surface	0.032 ha	As described in the PEA.	N/A - Other	Area/compensation not in local strategy/ no local strategy
Ruderal/Ephemeral	0.034 ha	As described in the PEA.	Moderate	Area/compensation not in local strategy/ no local strategy
Mixed scrub	0.033 ha	As described in the PEA.	Moderate	Area/compensation not in local strategy/ no local strategy

Post-Development

Post-Development Biodiversity Value: On-Site					
Area-Based Habitats					
	Habitat	Area (ha)	Description	Condition Assessment	Strategic Significance
Created	Developed land; sealed surface	0.132 ha	As shown in the proposed plans.	N/A - Other	Area/compensation not in local strategy/ no local strategy
	Mixed scrub	0.006 ha	As shown in the proposed plans.	Poor	Area/compensation not in local strategy/ no local strategy

Change of Biodiversity Value

		Biodiversity Units		
		Area-Based	Linear-Based	Watercourse-Based
On-Site	Baseline	0.40	0.00	0.00
	Post-Development	0.02	0.00	0.00
	Net Change	-0.38	0.00	0.00
Off-Site	Baseline	0.00	0.00	0.00
	Post-Development	0.00	0.00	0.00
	Net Change	0.00	0.00	0.00
Overall Net Change		-0.38	0.00	0.00

Results, Discussion, and Next Steps

BNG Informative														
Results	The current landscaping proposal generates a net loss of area-based habitat units (-94.34%) with unmet trading rules. In line with the Statutory Biodiversity Metric User Guide (2024), any loss of a habitat must be replaced on a like-for-like or like-for-better principle. At present, trading conditions are not satisfied. With unmet trading conditions and a net loss, the proposal fails principal Rules 1 and 2 of BNG and is not compliant with current legislation (Environment Act 2021). In order to achieve a +10% biodiversity net gain for area-based habitats, a minimum area-based unit score of 0.44 will need to be achieved. At present, there is a unit deficit of 0.42 units. Of these units, 0.24 units must be of mixed scrub, and 0.14 units must be of ruderal/ephemeral to satisfy trading rules.													
Recommendations and Next Steps	In order to achieve the required net gain in biodiversity as a result of the proposed development, the provision of additional or alternative landscaping should be explored and the proposed plans amended accordingly to achieve a net gain on site. The provisioning of additional landscaping should first be considered within the site boundary. There is limited scope on site, and this provision may not be possible to achieve on site or adjacent with the current arrangement (within the redline boundary) considering the size of the proposed development area and the limited amount of soft landscaping within the parcel. Based on the proposed plans, it is unlikely that net gain will be achieved by ways of habitat creation/enhancement without significant changes to the proposals on site or require unfeasible commitments off-site. As such, a financial contribution to off-site ecological enhancements (i.e. purchasing biodiversity units) within an approved scheme is required to make up the +10% net gain for area-based habitat units. The mechanism for securing this off-setting will need to be proposed to and confirmed by the LPA and would be linked to the application through a planning obligation Section 106 (s106) agreement. The proposed habitat compensation must be of an appropriate distinctiveness to meet the trading rules of BNG. A summary as to what off-site units will be required is detailed in the table below. <table><tr><th></th><th>Distinctiveness</th><th>Broad Habitat Group</th><th>Habitat</th><th>Units Required</th></tr><tr><td></td><td>Medium</td><td>Heathland and shrub</td><td>Mixed scrub</td><td>0.24</td></tr></table>					Distinctiveness	Broad Habitat Group	Habitat	Units Required		Medium	Heathland and shrub	Mixed scrub	0.24
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	Medium	Heathland and shrub	Mixed scrub	0.24										

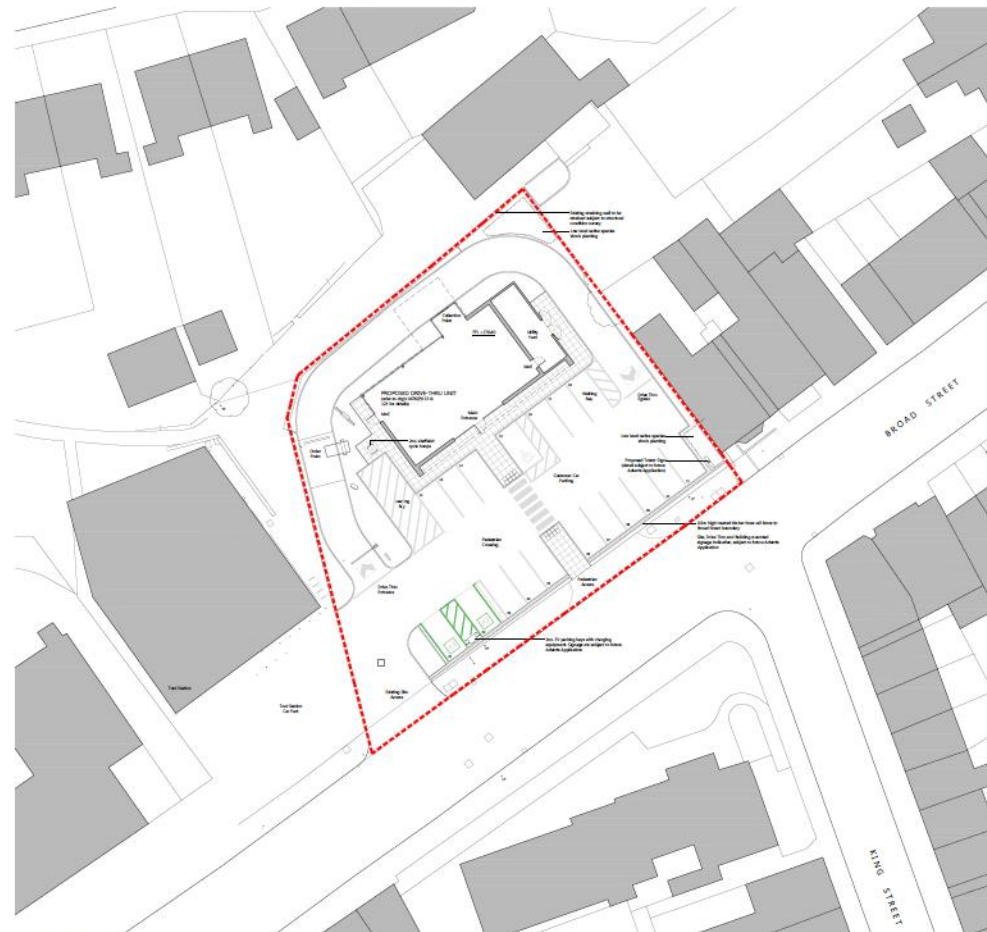
		Area-Based	Low	Sparsely Vegetated Land	Ruderal/Ephemeral	0.14	
				Any		0.04	
			Total				
Pre-Commencement	A Biodiversity Gain Plan (BGP) and Habitat Management and Monitoring Plan (HMMP) must be produced for the site. This should include recommendations for the implementation, management and monitoring of the site for at least 30 years to ensure that biodiversity net gain is delivered.						
	These additional requirements can only be actioned following the finalisation of the BNG assessment – be it on-site or off-site net gains sought.						

Appendix 1: Baseline Habitat Plan



Appendix 2: Post-Development Habitat Plan



PROPOSED SITE PLAN
1-336

GENERAL NOTES	
1	Drawings to be prepared in accordance with: • Use only valid interpretations, all dimensions to be checked and confirmed with the manufacturer. • Drawings & the property of materials limited and included on the drawings. • All dimensions in millimeters.
2	DRAWING NOTES Application for the base and edge: 1.5kg/m² 1.5mm Drawing Label: 001-002-003-004-005-006-007-008-009-010-011-012-013-014-015-016-017-018-019-020-021-022-023-024-025-026-027-028-029-030-031-032-033-034-035-036-037-038-039-040-041-042-043-044-045-046-047-048-049-050-051-052-053-054-055-056-057-058-059-060-061-062-063-064-065-066-067-068-069-070-071-072-073-074-075-076-077-078-079-080-081-082-083-084-085-086-087-088-089-090-091-092-093-094-095-096-097-098-099-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-98

Site	Thistlewood Properties	Date
PROJECT		
LAND AT BROAD STREET, LEEK, ST13 5NS		
PROPOSED SITE PLAN		
DRAFT		
Name	Project	Client
J.2000RA1	PJH	PJH
23/04/2025	Planning	
0336/P1103		#



STUDIO PH
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100% PASSION



Appendix 4: Headline BNG Results

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	-0.38		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	-94.34%	Total net gain achieved is less than target set ▲	
	Hedgerow units	0.00%		
	Watercourse units	0.00%		
Trading rules satisfied?	No - Check Trading Summaries ▲			
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Area habitat units	10.00%	0.40	0.44	0.42
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.00	0.00	0.00
				No additional hedgerow units required to meet target ✓
				No additional watercourse units required to meet target ✓