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Scotland's North Coast 500 B-Line

NatureScot
Scotland's Nature Agency
Buidheann Nàdair na h-Alba

Saving the small things that run the planet

Summary

The North Coast 500 (NC500) is one of world's most iconic coastal touring routes, it has opened the North Highlands and its beautiful, but fragile, landscapes to billions of visitors to explore and enjoy every year. Since it opened in 2015, the NC500 achieved a 3.3 billion global audience reach, but with such huge visitor numbers, it is now on the verge of becoming a victim of its own success.

Several critically endangered plants are found on the North Coast that are currently under threat. Similarly, the Great yellow bumblebee nests and breeds near the NC500 but is also at risk of extinction, and there are other pollinating insects which rely on the wildflower-rich habitats found along roadside verges and in the local area. The popularity of the NC500 has also created many other visitor management impacts for Highland communities. New landscape viewing areas, stopping points and carparks are needed to maintain the visitor experience and to create space for increased car and motorhome use. If managed with nature in mind, this new infrastructure could also provide opportunities to make space for pollinating insects around the NC500. We present an opportunity to enhance the visitor experience and support nature's recovery.

Much of the Highland NC500 is on Buglife's 'B-Line'. To identify areas which would most benefit from improved management for both increasing visitor numbers and to increase habitat for pollinators, this report has been produced with input from project partners (Highland Council, Plantlife Scotland and the Bumblebee Conservation Trust) and provides recommendations for managing greenspaces and visitor infrastructure in a pollinator friendly way.

We have provided detailed mapping via GIS to enable Highland Council to maximize these opportunities. We hope this report is seen as an exemplar model for auditing road verges and laybys along tourist trails and provides some best practice case studies where infrastructure improvements can have maximum benefits for pollinators and people. We also provide advice on managing roadside verges for pollinators and on reducing pesticide use, which can be used to improve the long-term sustainability and environmental performance of the route.

Contents

Introduction: The North Coast 500 and B-Lines

The North Coast 500 (NC500) route launched in 2015 and covers a 516 mile route around Scotland's most northerly mainland coastline. It starts and finishes at Inverness Castle, a key visitor site in the city of Inverness. Year on year visitor numbers to this part of Scotland are increasing dramatically, this has been exacerbated during 2020, and is expected to be again during 2021, due to the rise in staycations following COVID restrictions. Whilst high visitor numbers can be beneficial for local tourism businesses who are trying to recover from the impacts of the pandemic, it can be challenging for local communities and Highland Council who need to manage and mitigate any negative visitor impacts.

As well as facing the COVID pandemic we are also in a climate and biodiversity crisis. Our precious pollinators are disappearing from large parts of the countryside – there are fewer bees, hoverflies, butterflies and moths – and as well as the loss of abundance, some species are at risk of extinction in Scotland. We can change this, by working together to restore wildflower areas in our countryside and urban areas we can aid nature's recovery. Buglife, supported by partner organisations, realised there was scope to develop a project, combining our B-lines with the NC500 tourist route; to investigate the impacts of visitors on pollinators and explore solutions for enhancing infrastructure in a way that improves visitor experience and supports nature's recovery.

B-Lines are our response to the decline of bees and other pollinating insects, a plan for how to reconnect our wild places by creating a network of wildflowers across our landscapes.

B-Lines provide an opportunity to create a network of wildflower-rich areas across Scotland providing essential routes for pollinators to use. The B-Lines network in Scotland includes our best habitats and identifies key areas to restore and create new wildflower-rich meadows, important grassland verges and pollinator friendly gardens. B-Lines can be adopted by farmers and landowners, local authorities and the general public across all of Scotland. An NC500 B-Line would contribute to the Scottish Pollinator Strategy, part of the Scottish Biodiversity Strategy, and towards actions identified within the Highland Local Biodiversity Action Plan.

The first step developing any B-Line project is a mapping exercise to record existing key and beneficial pollinator habitats and using this information to highlight opportunities for habitat creation. Buglife developed this methodology as part of our B-Lines work and have successfully used it to inform projects throughout the UK. In Scotland, Buglife have been leading B-Lines work across the central belt and we are delighted to now be able to extend this work into rural Scotland.

Tongue, North West Sutherland

Along the NC500 there are: 405 laybys and carparks; 27 places of worship and cemeteries; 112 Scheduled monuments, 5,268 Canmore historical points; 10 archaeological conservation areas and 13 train stations. This exemplifies the diversity of historical and cultural assets in the Highlands, alongside its unique biological and geological importance. We have also considered the location of nearby greenspace, such as golf courses and public parks as we have worked along this route.

Challenges faced by Highland Council around the NC500

From Highland Council's Draft Visitor Management Plan (2021):

Roads, parking and transport issues:

- Insufficient capacity on some narrow rural and single-track roads to cope with large numbers of vehicles; large motorhomes/campervans causing congestion
- Insufficient parking provision in tourist hotspots leading to safety issues - parking congestion, obstruction of the carriageway, and inappropriate use of laybys
- Parking overnight in non-designated areas
- Parking on soft verges causing damage to verge and road edges
- Community tolerance of large visitor volumes and behavior leading to inappropriate responses e.g. erection of signage, barriers across some public roads, introduction of roadside hazards such as placement of boulders/rubble/logs on the verge or in lay-bys

Amenity and waste issues:

- Lack of awareness of Council operated public convenience facilities and Comfort Schemes available
- Inappropriate use of public toilets; disposal of chemical waste, increased water consumption due to topping up of motorhome containers
- Lack of suitable motorhome waste disposal facilities
- Existing bin volume / numbers in key locations not coping with high volumes of waste
- Littering and other unauthorised waste disposal issues

Outdoor access issues:

- Informal camping and associated anti-social issues; fires, litter, toilet, noise, overuse and congregating
- Landowners and communities trying their own solutions which can disperse the problem to other sites – including non-compliant signs or obstructions
- Lack of awareness of the Scottish Outdoor Access Code by newcomers to the countryside
- Increased pressure and erosion on some popular paths
- Limited numbers of Countryside Rangers available to provide advice and guidance or monitor visitor hotspot pressures

Environmental and public health issues:

- Informal camping leading to public health issues with human waste
- Outdoor toileting and risk to private water supplies
- Investigating fly-tipping and taking enforcement action

Public information:

- Limited promotion of some key services e.g. locations of public toilets or motorhome waste facilities
- Dissemination of unhelpful and sometimes inaccurate information – particularly on social media

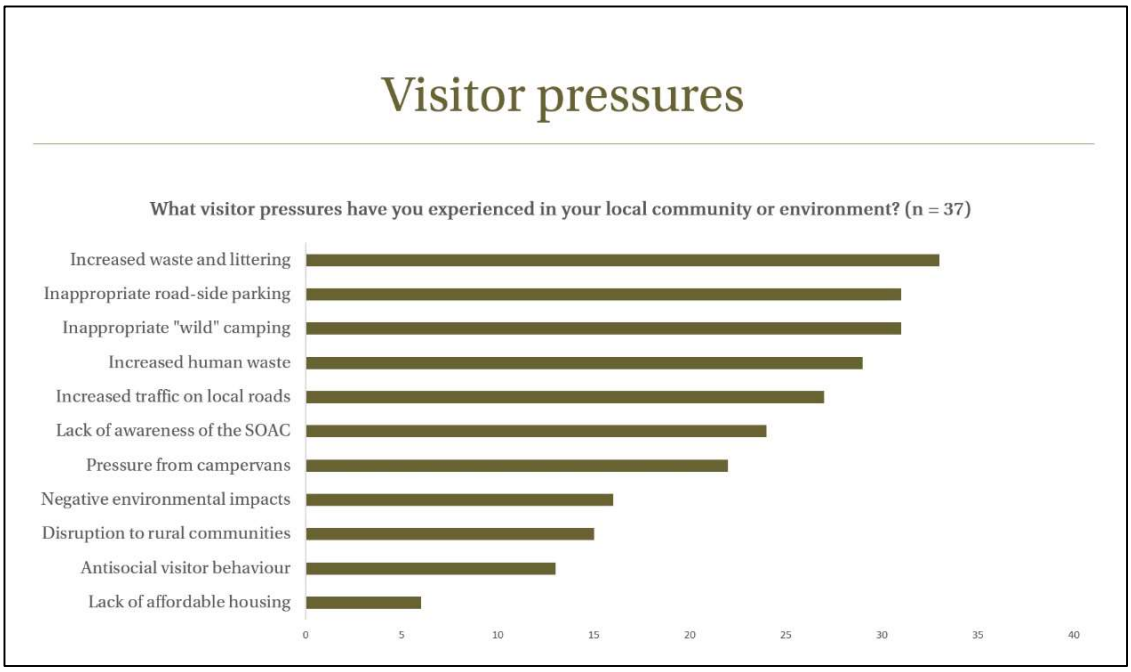

Figure 1: From *Observations from the west: Visitors, access and wild camping: Cecilie Dohm, John Muir Trust*

Last summer, after a quiet spring due to Lockdown, Covid-19 travel restrictions caused large numbers of people to holiday in the UK. Many campsites remained closed or offered restricted capacity which in many cases amplified the tourism volume issue and created widespread problems.

Highland Council is not clear at this stage what impact Covid-19 will have on visitors in 2021. However, they expect visitor numbers to the Highlands to remain high as they have been increasing steadily over the past decade and there will likely be an increase in certain types of tourism as a result of the virus, e.g., campervan/motorhomes, informal camping, short breaks and day trippers.

The Highlands is also now seen as a safe place to visit and as such numbers are likely to continue to rise. There may also be Brexit impacts which could make 'staycationing' even more popular. These visitors will therefore continue to impact on the services that The Highland Council provides and on the communities along the NC500.

Across Scotland, 50% of visits are undertaken for the enjoyment of scenery or landscapes. Within the Highland Council area this is raised to 87% (Colin Simpson, Principal Officer - Europe, Tourism & Film, Highland Council, *pers. comm.*). This means that for a good visitor experience to be maintained it is essential that the special scenery and landscapes that motivate people to visit are undamaged and kept in a thriving condition.

Highland Council members agreed that the Council declare a climate and ecological emergency in May 2019. The Council is keen to develop cross departmental and partnership work to address this emergency. Highland Council currently has a Biodiversity Action Plan and would be really supportive of the development of a NC500 B-Line as an approach to addressing both visitor management and biodiversity issues together (Nicole Wallace, Acting Head of Planning and Environment, Highland Council, *pers. comm.*).

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Bumblebee on Scabious

How do road verges support pollinators?

Road verges have been shown to contain significant numbers and species of pollinators, and they can support similar pollinator communities to other surrounding habitats (Villemey et al., 2018). Rare species can be found along road verges (Heneberg et al. 2017; Raemakers et al. 2001), and some species are completely dependent upon road verges in otherwise unsuitable landscapes (Heneberg et al., 2017). A study in Ayrshire, Scotland found that butterfly, bee and hoverfly abundances, diversity and species richness were greater in road verges than in many other habitats, including arable farmland, intensive and rough grassland, woodland, hedgerows and open scrub (Cole et al., 2017). Road verges can provide beneficial habitats within the agricultural landscape, with bumblebee abundance found to be higher along road verges compared to the field margins of conventionally managed arable fields (Hanley and Wilkins, 2015). Pollinators have been recorded along road verges of many different types and sizes from rural roads to highways (Free et al., 1975; Ouin et al., 2004; Villemey et al., 2018).

Is traffic collision a problem for pollinators along the NC500?

Traffic on roads can be a cause of pollinator mortality through direct collisions (Muñoz *et al.*, 2015). One study found that around 71% of the more than 100,000 dead invertebrates found along a 90 km/h highway with moderate daily traffic rates (average of 9,700 vehicles/day during summer) were pollinators (Lepidoptera and Hymenoptera; excluding Diptera from 2013 due to abnormally high abundances) (Baxter-Gilbert *et al.,* 2015). For Lepidoptera this equated to 10.1 individuals/km/day and for Hymenoptera it was more than double with 26.8 individuals/km/day being killed.

Aside from the A9, the NC500 is predominantly small roads, often single track. As a result, the speed of vehicles will be dramatically reduced. Despite the vast number of visitors to the NC500 the overall

volume of traffic is significantly less than would be seen in an urban area or on a motorway for example. For this reason, we don't believe that traffic collision would be the main threat for pollinators along this route in the Highlands. Far greater risks are likely to come from habitat loss or damage (which could be caused by vehicles parking on road verges), unfavorable land management, construction and development and climate change.

Is vehicle pollution a problem for pollinators on the NC500?

Roads and road traffic are a major source of pollution that may affect road verges in a number of ways (Forman and Alexander, 1998). Lead, zinc, cadmium, copper, nickel, manganese and chromium are the main heavy metal pollutants along roads. Lead is becoming less important, as lead petrol was replaced with unleaded (Löfgren and Hammar, 2000), however it is still present. Other heavy metal pollutants arise from the wear and tear of car parts such as tyres, brake linings, motor oil and the road surface itself. These can impact pollinators both at the adult and the larval stages, as foragers can experience behavioural and reproductive changes when consuming contaminated nectar and pollen, larvae foraging on contaminated leaves experience greater mortalities, and ground-nesting bees also have the potential to be adversely affected.

Along roadsides (and around laybys and carparks) nitrogen deposition from exhaust fumes can also cause nutrient enrichment. This can be a particular problem for verge management, resulting in rank vegetation such as docks and nettles if not managed correctly.

Along the NC500 pollutants will be less due to the smaller vehicle numbers than, for example, alongside a motorway or urban road. Beside laybys and carparks however there may be a localized pollution effect if visitors regularly stop but keep their vehicle engines running.

Natural heritage along the NC500

Great yellow bumblebee (*Bombus distinguendus*)

One of the rarest British bumblebees, now restricted to machair and other flower-rich areas in the Orkneys, Scottish islands, and Caithness and Sutherland. A large species, the abdomen and thorax are entirely covered with sandy-yellow hairs, with the exception of a black band across the thorax between the wing bases. This species appears to have a particular association with Red clover (*Trifolium pratense*) (Bumblebee Conservation Trust, 2020).

Other pollinators

Some other important pollinators that are found along the NC500 include the Northern brown argus butterfly (*Aricia artaxerxes*), Small blue butterfly (*Cupido minimus*), Moss carder bumblebee (*Bombus muscorum*) and the Northern colletes mining bee (*Colletes floralis*). Many other species of pollinating insects, including moths, hoverflies and flies also make up the special biodiversity along this route, each of them important and part of an essential ecosystem. These four species have been mentioned specifically however due to their links to current projects being undertaken by Buglife, Butterfly Conservation and the Bumblebee Conservation Trust in the Highlands.

Threatened and rare plants along the NC500

Purple Oxytropis (*Oxytropis lambertii*) -This nationally rare species is dependent on good management and is vulnerable to scrub encroachment and over-grazing.

Scottish Biodiversity List listed Eyebrights - The area is home to two endangered species of eyebrights (*Euphrasia rotundifolia* and *E. marshalii*) as well as a range of other species and hybrids.

Scottish Primrose (*Primula scotica*) - A rare, delicate perennial wildflower found in the wild only in northern Scotland. It has tiny, yellow-centered, burgundy flowers.

Designated sites, National and Local Nature reserves

There are many designated sites within this area including many Sites of Special Scientific Interest that helped inform our B-Lines, one Biosphere reserve, one Geopark and one potential UNESCO World Heritage Site.

Merkinch Local Nature Reserve (LNR) is the only Local Nature Reserve in the Highlands. On the east coast you can find Loch Fleet National Nature Reserve (NNR), on the west coast, Beinn Eighe and Loch Maree Islands NNR, and Knockan Crag NNR. In the north, Forsinard Flows NNR, and just outside Inverness Ben Wyvis NNR.

Munsary Nature Reserve is a peatland site owned and managed by Plantlife, and the Scottish Wildlife Trust has five reserves around this region (Belmaduthy Dam, Talich, Loch Fleet, Ben Mor Coigach, and Handa Island). Other environmental NGOs such as the John Muir Trust and RSPB Scotland are also working at large sites around the NC500.

Forest and Land Scotland, and local community trusts, both own and manage woodlands along the NC500.

From a Buglife perspective we have identified seven Important Invertebrate Areas (IIAs) close to the NC500. These are nationally or internationally significant places for the conservation of invertebrates and the habitats upon which they rely (https://www.buglife.org.uk/our-work/important-invertebrate-areas/).

- Assynt Coigach IIA
- Strathnaver IIA
- Wester Ross IIA
- Kyle of Sutherland Rivers IIA
- Dornoch Firth IIA
- East Ross and Cromarty IIA
- East Inverness-shire IIA

Creating B-Lines across Scotland

B-Lines Mapping Guiding Principles

B-Lines is a mapping exercise that links existing areas of important habitat, e.g. Sites of Special Scientific Interest, alongside smaller-scale features for pollinators. B-Lines is a Buglife initiative, and we are working with partners and encouraging others to get involved for the benefit of all pollinators and other wildlife.

The B-Lines maps provide a framework within which to promote increased, strategically located wildflower-rich habitat restoration/creation alongside other targeted pollinator habitat measures. The mapped B-Lines network also provides a framework for prioritizing the development of new, or extension of existing projects and delivery programs. The identification of the B-Lines paves the way for further promotion of the initiative and for integrating delivery activities with other partners. It also provides increased emphasis on particular parts of the landscape, now recognized as part of the UK-wide B-Lines network.

The effectiveness of B-Lines is dependent on maintaining the integrity of its vision across a large geographic area and many individual delivery partnerships. The following simple guiding principles have therefore been produced to help partners deliver B-Lines in a reasonably consistent manner.

1) B-Lines should be identified as 3 km wide linear zones within which the aim should be to deliver a continuous wide (averaging 300m wide, but with thinner and thicker stretches) strip of permanent wildflower-rich habitats, encompassing, expanding and linking together existing wildlife areas.

2) Where a continuous strip of habitat is not practical, the core benefits of B-Lines can be delivered through the maintenance, restoration and creation of large blocks of permanent wildflower-rich habitat (minimum 2 ha sized blocks) extending to a minimum of 10% of the identified zone. The aim of these 'stepping stones' should be to ensure that the distance between individual habitat blocks is no greater than 0.5km.

3) B-Lines have been mapped in such a manner as to link together existing important wildflower-rich areas (SSSI, Local Wildlife Sites, nature reserves, BAP habitats) – these areas provide the foundations of the B-Lines network.

4) Within B-Lines the primary aim should be to maintain, restore and create high quality semi-natural habitat types that fulfil the requirements of pollinators and other invertebrates. Wildflower-rich grasslands of a type typical to the locality should comprise the core of this new habitat, however other habitat types which reflect local landscape character and wildlife interests could also be included (for example lowland heathland/grassland mosaics, lowland fen, wood pasture and parkland).

5) Opportunities for wider wildlife enhancements should also be taken within the B-Line zones to help improve the overall environmental quality of the landscape, for example targeting of other agri-environment options, including hedgerow management, floristically enhanced margins, and pollen and nectar mixes

6) Priority should be given to the enhancement of the quality of existing sites and restoration of degraded sites through changes/improvements to management. The formation of the B-Lines will, however, require significant areas of wildflower-rich grassland creation and in these circumstances B-Lines will be sensitive to the conservation of our native flora, and use exclusively seed from native plant species, wherever possible sourcing this from local grassland habitats.

7) At a landscape-scale, B-Lines will look to achieve a diversity of habitat structure and function aimed at supporting the needs of invertebrates and other wildlife. A range of management regimes will therefore be required/promoted designed to create a diverse natural environment and associated wildlife interests. Development of management plans for individual stretches of the B-Lines should be guided by species and habitats in adjacent areas and surrounding habitats.

8) Villages/communities within or adjacent to the B-Lines should be encouraged to participate in the initiative through appropriate garden planting, management of community areas, churchyards, roadside verges, etc.

9) In more urbanised areas, local authorities, local communities and developers will be encouraged to deliver B-Lines through green infrastructure initiatives, enhancing existing community green space and council-owned land, and looking for new opportunities such as living roof initiatives. To ensure the ecological connectivity of the overall network is maintained, it may also be appropriate in some locations to identify a wide B-Line around the urban conurbation.

10) As the NC500 B-Line project will have a visitor infrastructure emphasis we will consider B-line maps alongside additional information about:

- Public parks and other green spaces.
- Laybys and hardstandings
- Carparks
- Walks available near NC500
- Other popular tourist attractions and tourism businesses.

11) Delivery of B-Lines will necessitate a wide range of farmers, landowners, wildlife organizations, government agencies, business and local authorities delivering parts of the network in a co-ordinated fashion. To achieve connectivity across the network will require all these parties to target and deliver habitat creation in a joined up and integrated manner.

12) To enable the success of the B-Lines to be assessed, monitoring must be put in place to help determine changes over time both at a field and landscape-scale.

B-Lines Mapping methodology:

Stage 1: Data collation

The first stage in creating a B-Line is to consider the available data. Many partners contributed datasets for this project. Highland Council provided their draft Visitor Management Plan 2021 and key sites for existing and future infrastructure development.

The NC500 route is available freely online through the portal managed by North Coast 500 Limited https://www.northcoast500.com/.

The Bumblebee Conservation Trust provided mapped areas considered important for Great yellow bumblebee and Plantlife Scotland provided NatureScot derived data on threatened and rare plant sites.

A Google based analysis of route infrastructure (carparks and laybys) was completed remotely due to COVID restrictions preventing site visits.

We also accessed the following datasets:

https://www.ordnancesurvey.co.uk/business-government/products/open-map-greenspace

https://www.nature.scot/information-hub/snhi-data-services

https://portal.historicenvironment.scot/downloads

To create the B-Line, the following data was used:

- Habitat Map of Scotland,
- NatureScot Sites of Special Scientific Interest

The collated data was designed to fulfil the B-Lines criteria by including wildflower-rich grassland habitats, and other wildflower-rich habitat types which reflected local landscape character and wildlife interests (e.g. lowland heathland/grassland mosaics, lowland fen, raised bog, wood pasture and parkland).

Stage 2: Identification of potential B-Lines core habitat areas

This phase of work identified and mapped the B-Lines core habitat areas which provided the working foundations for the B-Lines Network. The ArcGIS model building technique 'Model Builder' was used in analyzing, editing and mapping the collated habitat data.

The developed model is a vector data model based on the following steps:

- Classifying habitats into key and beneficial habitat: The collated habitat datasets are classified into 'key' and 'beneficial' habitats (Table 1 below). Key habitats included those likely to be the most wildflower-rich, and therefore those which should be a priority to include in the B-Lines. A suite of other habitats were defined as beneficial, i.e. habitats which would help support and provide the framework of the network.
- Producing the B-Lines core habitat areas: Sites of Special Scientific Interest (SSSI), i.e. the country's very best wildlife areas, were used as a proxy for habitat quality.

GIS layers were used to map the core areas for the B-Lines (i.e. recognised as the highest priority to include in the network).

Buffering the core habitat areas: The B-Lines core areas were 'buffered' to reflect the quality of the wildflower-rich areas, and their importance within any network (including their potential level of influence and current potential dispersal of species):

- Key habitats within SSSIs were buffered by 500m.
- Key habitats outwith SSSIs were buffered by 250m.
- Beneficial habitats within SSSIs were buffered by 250m.
- Beneficial habitats outwith SSSIs were not buffered.

All the created buffers were merged together to create one map of the B-Lines Core Habitat Areas.

Stage 3: Producing the B-Lines network

In line with the B-Lines Guiding Principles, the B-Lines were mapped to link together existing important wildflower-rich areas. As an aid to build up the B-Lines network, the computer programme 'Linkage Mapper' was used to help identify wildlife habitat connectivity. Linkage Mapper is an open-source tool that consists of several Python scripts, packaged as an ArcGIS toolbox and developed for the Washington Wildlife Habitat Connectivity Working Group (McRae, 2013)

Table 1: The classification of key and beneficial habitats used in this B-Lines mapping project: K = Key habitat, B = Beneficial habitat

Habitat type	Priority status	Habitat type	Priority status
Woodland: broadleaved, semi-natural	B	Fen	K
Scrub: dense/continuous	K	Fen: valley mire	K
Scrub: scattered	B	Fen: valley mire, basic	K
Parkland and scattered trees: broadleaved	B	Fen: basin mire	K
Acid grassland	B	Fen: basin mire, basic	K
Acid grassland: unimproved	B	Fen: flood plain	K
Acid grassland: semi-improved	B	Fen: flood plain, basic	K

Neutral grassland	B	Swamp	B
Neutral grassland: unimproved	K	Saltmarsh	B
Neutral grassland: semi-improved	B	Saltmarsh: saltmarsh/dune interface	B
Calcareous grassland	B	Saltmarsh: scattered plants	B
Calcareous grassland: unimproved	K	Saltmarsh: dense/continuous	B
Calcareous grassland: semi-improved	B	Shingle/gravel above high tide mark	K
Marsh/marshy grassland	B	Sand-dune	K
Other tall herb and fern: tall ruderal	B	Sand-dune: dune slack	K
Other tall herb and fern: non ruderal	B	Sand-dune: dune grassland	K
Heathland	K	Sand-dune: dune heath	K
Dry dwarf shrub heath	K	Sand-dune: dune scrub	K
Dry dwarf shrub heath: acid	K	Sand-dune: open dune	K
Dry dwarf shrub heath: basic	K	Maritime cliff and slope	K
Wet dwarf shrub heath	K	Maritime cliff and slope: hard cliff	K
Lichen/bryophyte heath	K	Maritime cliff and slope: coastal grassland	K
Dry heath/acid grassland	K	Maritime cliff and slope: coastal heathland	K
Wet heath/acid grassland	K		

The entire project area has been mapped and the B-Lines are available as GIS layers – https://www.buglife.org.uk/our-work/b-lines/b-lines-guidance/downloadable-b-lines-maps/

Outputs

List of maps within this report:

1. **Map of the 405 laybys and carparks along the NC500:** showing the existing visitor infrastructure along the route
2. **Overview of Highland B-Line:** mapped by Buglife, the Highland B-Line identifies important pollinator corridors across the Highlands
3. **Map of the 237 NC500 laybys and carparks that intersect with the B-Line**: areas where NC500 infrastructure improvements can also support the Highland B-Line
4. **Case study maps showing example carparks & laybys with potential for visitor management interventions that are also within the B-Line**: areas where there is highest need to mitigate visitor impacts and opportunity to improve the Highland B-Line (particularly focused on carparks and laybys identified by Highland Council)

Maps contained in Appendix 2:

5. **Key and beneficial habitat within the B-Line and close to the NC500** – using existing key and beneficial habitat layer. The detail behind map 2 but specifically where this is relevant to the NC500
6. **Overview of important areas for nature** – four maps showing designated sites, important habitats for Great yellow bumblebees habitat, Buglife's Important Invertebrate areas, and sites particularly important for rare and threatened plants.
7. **Overview map of other opportunities next to the NC500 within the B-Line** – existing greenspace infrastructure (such as parks, sports facilities, cemeteries) and access points that occur alongside the NC500 and within the B-Line where meadow creation projects would benefit an NC500 B-Line

The 405 laybys and carparks along the NC500

Map Title: NC500 Carparks
Data Set: NC500
Version: 1.0.0
Drawn: T.Thomson.
Drawn Date: 30.03.2021

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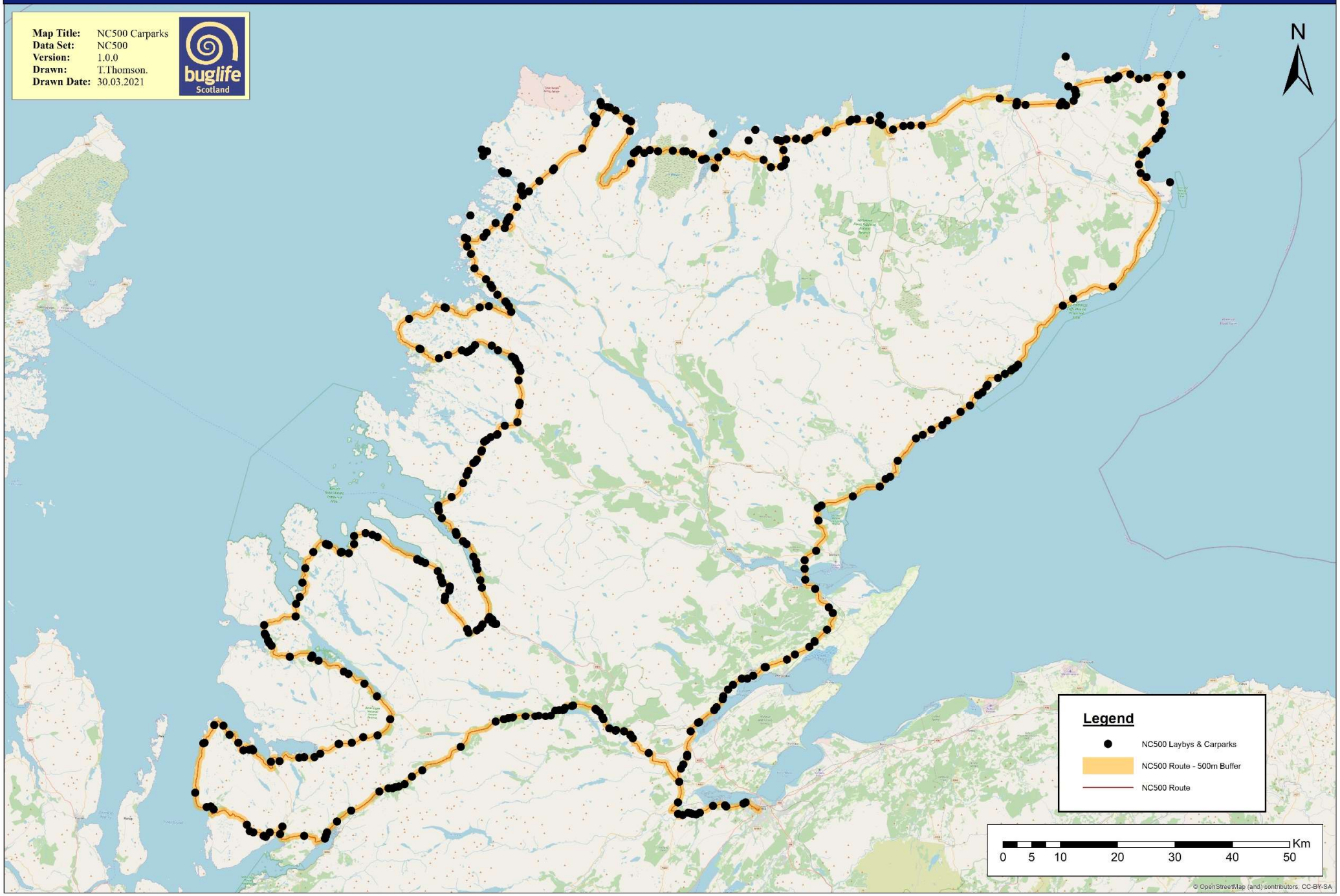

Highland B-Line

Map Title: NC500 B-Line
Data Set: NC500
Version: 1.0.0
Drawn: T.Thomson.
Drawn Date: 30.03.2021

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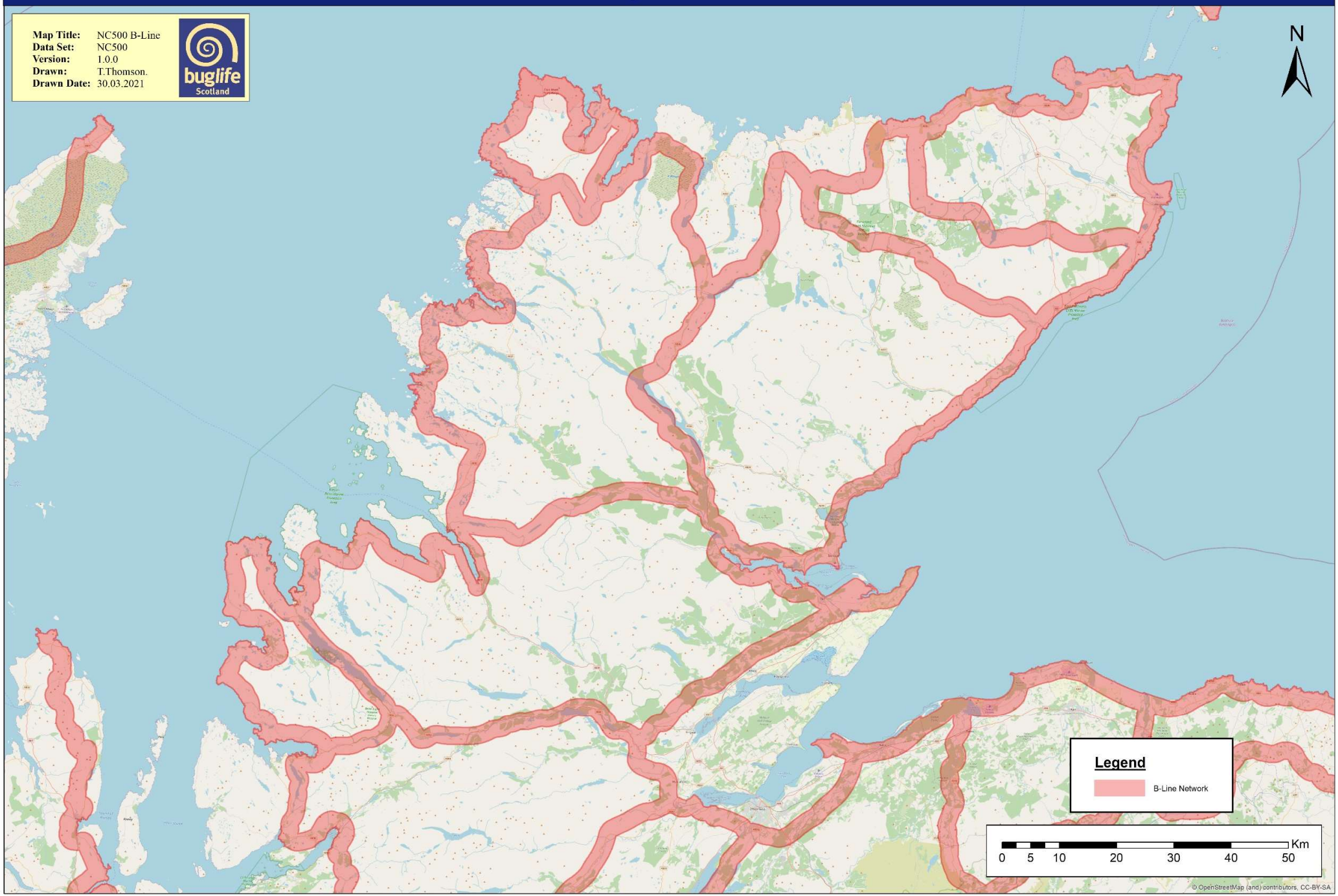


The 237 NC500 laybys and carparks that intersect with the B-Line

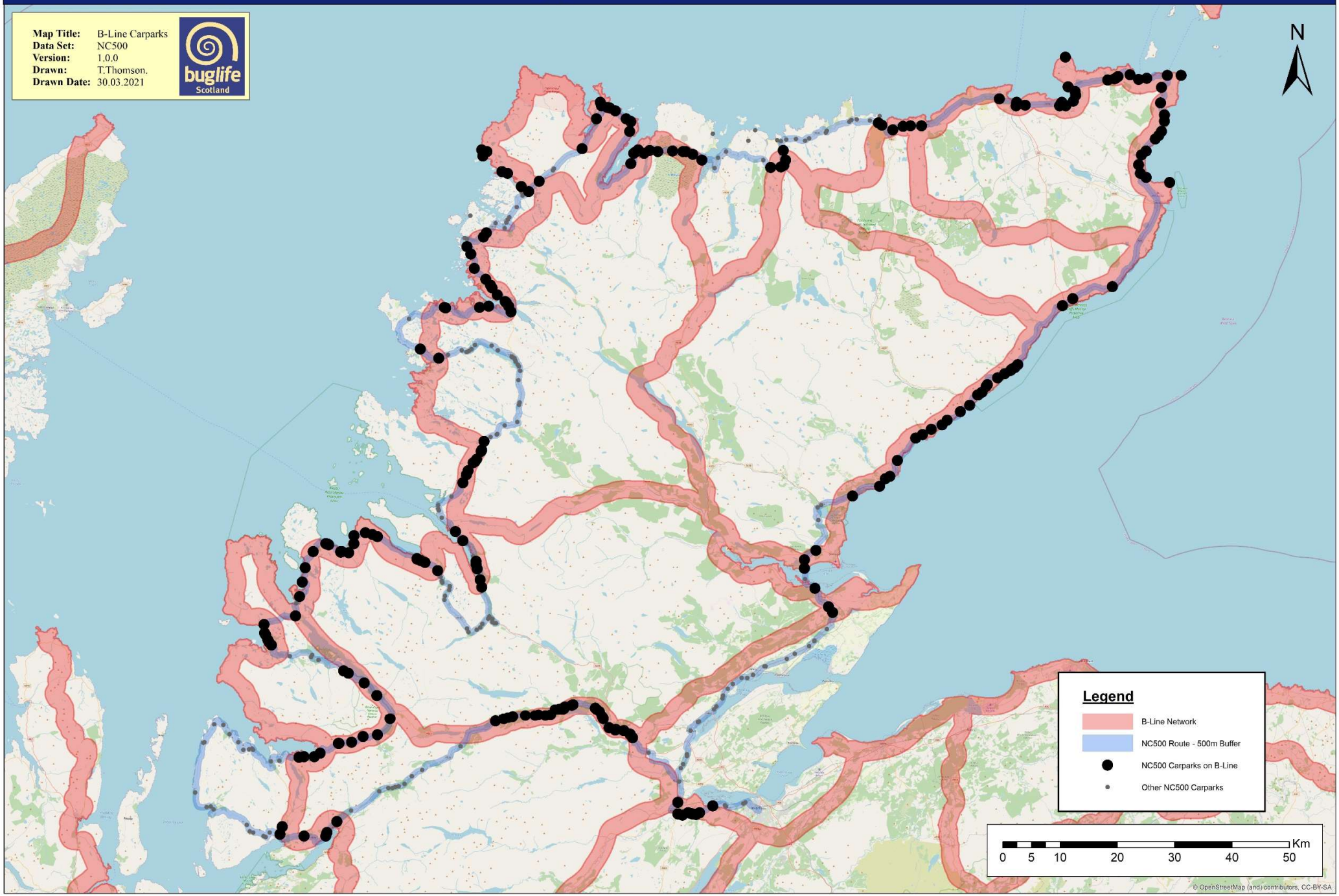


Table 2: List of major settlements along the NC500

Major settlements	Population size	Within 1km of the B-Line?	Has residential areas which fall within the 20% most deprived communities in Scotland (2020) https://simd.scot/#/simd2020_20pc/BTTTFTT/9/-4.8184/57.8160/
Wick	6,954	Yes	Yes
John o'Groats	300	Yes	No
Thurso	7,762	Yes	No
Ullapool	1,500	Yes	No
Muir of Ord	2,690	Yes	No
Beauly	1,365	Yes	No
Inverness	46,870	Yes	Yes
Dingwall	5,470	Yes	Yes
Alness	5,800	Yes	Yes
Tain	3,590	Yes	No
Dornoch (2.5km from NC500)	1,330	No	No
Golspie	1,350	Yes	No
Brora	1,870	Yes	No
Helmsdale	764	Yes	No
Gairloch	950	Yes	No

Table 3: Carparks and laybys within the B-Line

There are 405 car parks and laybys that were mapped as part of this project. Out of these, 237 are located within the B-Line. This list can be found in Appendix 1 to this report.

Table 4: Key National and Highland Council documents

Policy / Plan	Importance	Link if available
Scottish Biodiversity Strategy	"Scotland's Biodiversity: It's In Your Hands" is a landmark strategy for Scotland. It sets out a vision for the future health of our biodiversity and maps out a 25-year framework for action to conserve and enhance biodiversity for the health, enjoyment and well-being of all the people of Scotland.	Scottish Biodiversity Strategy Scottish Biodiversity Strategy post-2020: Statement of intent
Scottish Pollinator Strategy	The Pollinator Strategy for Scotland 2017 – 2027, and the accompanying Implementation Plan, sets out how we can make Scotland a place where pollinators can thrive, and the actions we need to take if we are to achieve our objectives.	Scottish Pollinator Strategy

Scottish Government Green Recovery Report	This report provides advice on actions that will make a difference to businesses across sectors and regions throughout Scotland. Solutions are being brought forward to enable a swift economic recovery and one that also ensures the Scottish economy will emerge stronger and more resilient. This has been done through proactive engagement with those affected by this crisis, and through listening to those who are crucial for the rebuilding of a resilient economy.	Scottish Government Green Recovery Report
Highland Council Development Plan	These plans set out how Highland places could grow and change over time.	Highland Council Local Development Plans
Scotland Outlook 2030 - Responsible tourism for a sustainable future	Scotland Outlook 2030 is a bold new approach that will see tourism act positively in the common interest of Scotland's communities, businesses and everyone who visits and stays with us.	From the Scottish Tourism Alliance
Scottish Outdoor Access Code	The Scottish Outdoor Access Code is based on three key principles: • Respect the interests of others. • Care for the environment. • Take responsibility for your own actions.	https://www.outdooraccess-scotland.scot/
Scottish Tourism Emergency Response Group COVID-19 National Action Plan	The Scottish Tourism Alliance; VisitScotland; COSLA; the three Enterprise Agencies - Scottish Enterprise, South of Scotland Enterprise, Highlands and Islands Enterprise; Skills Development Scotland and the Scottish Government, have developed one single, joined-up, national action plan.	From Visit Scotland
Responsible Tourism Campaign	Launched on 22nd March 2021 by Visit Scotland	Responsible Tourism Campaign
Guide to touring Wester Ross	Wester Ross UNESCO Biosphere published guide to touring	Guide to touring Wester Ross
Highland Biodiversity Action Plan	Sets out Highland Councils biodiversity actions – including action for pollinators	Provided by the Highland Environment Forum
Highland Council Biodiversity information		Highland Council Biodiversity Webpages

Highland Council Declaration of Climate and Ecological Emergency	At a meeting of Highland Council in May 2019 members agreed that the Council declare a climate and ecological emergency.	Highland Council climate and ecological emergency page
Highland Council Draft Visitor Management Plan 2021	This is the culmination of meetings of officers from various services that have dealt with issues and complaints regarding the challenges supporting the increase of visitors to the Highland area last summer.	Highland Council Committee Papers
Highland Council Tourism Infrastructure Plan	An update on the position with a number of tourism infrastructure projects currently under way, most notably those funded through the Scottish Government's Rural Tourism Infrastructure Fund.	Highland Council Committee Papers

Table 5: NC500 Hot Spot areas identified by High Life Highland (https://www.highlifehighland.com/.)

Area	Places under pressure in 2020	Real problem 'hotspots'
North West Sutherland	Durness; Sango sands car parks, Ceanabienne beach areas, Balnakeil beach car parks, golf course car park, Keoldale green. Scourie beach & graveyard car parks; pier area, graveyard grass area. Kinlochbervie; Oldshoremore car park, Blairmore CP. Kylestrome viewpoint CP	Sango sands area, Ceanabienne beach area.
Easter Ross	Chanonry Point, Tarbat Ness SSSI, North Kessock car parks (northbound and southbound)	Chanonry Point
Assynt & West Sutherland	Clachtoll beach, Clashnessie beach, Elphin view point, Knockan, Bone Caves, Inchnadamph, Weeping Widow falls, Kylesku bridge, Little Assynt, Stoer lighthouse, Suilven car park	Achmelvich beach, Ardvreck Castle
South East Sutherland	Loch Fleet NNR, Bonar Bridge car park, The Mound Car park	
North Sutherland	Melvich Beach car park, Strathy Point, Bettyhill Naver River mouth, roadside car park between Strathy and Melvich	Strathy Beach car park and dunes,
Wester Ross	Ardmair, top of Morefield in Ullapool, Rhidorich road, Lael forest car parks, Corrieshalloch gorge.	Stac Pollaidh car park area,
Caithness	East – Keiss beach car park, Auckengill harbour car park, layby above Gills harbour, North - Dunnet Bay car parks	Duncansby Head, Latheronwheel harbour, John O Groats foreshore area and

	x3, Castlehill car park, Dunnet Forest car park, Dunnet Head car park,	car park, Dunnet Bay north end roadside, Sannick Bay, between Castlehill harbour and Dunnet Bay south car park

Table 6: Details of existing Highland Council tourism infrastructure plans on NC500

Project Location	Description	Status	Funding	On the NC500 or on a B-Line?
Bealach Na Ba, Scenic Viewpoints	Six Scenic Viewpoints on the Bealach na Ba - led by The Highland Council.	Construction underway and nearing completion.	RTIF - Round 1	NC500: Yes B-Line: No
Lochinver Campervan Facilities – Phase 1	Motorhome Chemical Waste Facilities at Assynt Leisure Centre - led by Assynt Development Trust.	Construction underway nearing completion.	RTIF - Round 1	NC500: Yes B-Line: Yes
Cromarty Campervan Facilities and Slipways	Campervan Facilities including Hardstanding, Waste Disposal and Toilets, along with improved Slipways for the Cromarty-Nigg Ferry - led by Cromarty Community Development Trust	Campervan Facilities – finalising Community Asset transfer Slipways – project completed	RTIF - Round 2	NC500: Yes B-Line: No
Helmsdale toilets and motorhome facilities	Upgrading the current Highland Council toilets and add motorhome facilities to a vacant land plot nearby.	In the planning process	RTIF - Round 2	NC500: Yes B-Line: Yes
Kinlochewe Tourist Facilities	Provision of new carbon neutral toilets and shower facilities, parking bays with electric hook up points and motorhome waste facility at Kinlochewe - led by Community Out West Trust.	In process of meeting grant conditions	RTIF - Round 3	NC500: Yes B-Line: Yes
Lochinver Campervan Facilities – Phase 1	Installing a motorhome greywater disposal facility connected to the public foul sewer. Tarmac and porous paving resurfacing of the Assynt Leisure Centre car park, with SUDS	In process of meeting grant conditions	RTIF - Round 3	NC500: Yes B-Line: Yes

	surface water drainage into the public surface water sewer.			
Kyle of Sutherland Visitor facilities	Development of motorhomes facilities at South Bonar Bridge with 5 electric hook-up points and a motorhome waste facility, new toilets incorporating showers, a covered eating area and E-bike charging point - led by Kyle of Sutherland Development Trust.	Waitlist Project		NC500: Yes B-Line: Yes
Dornoch Parking	Creation of a car and coach parking site which is 40m from the main square with 40 car parking spaces and 6 coach spaces to cope with increasing numbers of visitors and the increase in the cruise traffic from the nearby Invergordon terminal - led by Dornoch Area Community Interest Company.	Waitlist Project		NC500: Yes B-Line: Yes
North Coast 500 Signage	In addition to the projects being funded through the Rural Tourism Infrastructure Fund, The Highland Council's tourism officers have also been working with NC500 Ltd, Transport Scotland and Council roads colleagues on a project to signpost the NC500 route to enhance the visitor experience and improve road safety.	All local authority signs have now been installed with trunk road signs due to be installed in the upcoming weeks.	LEADER	NC500: Yes B-Line: Yes

Discussion and recommendations

Managing NC500 grassland verges for pollinators

The primary factor affecting the value of NC500 road verges for pollinators will be how they are managed and how they are impacted by visitors. The management of a verge may also impact the likelihood that someone will drive onto it. Beneficial management needs to encourage plant species richness, flower abundance and habitat diversity to support diverse pollinator communities. Management for pollinators needs to consider flowering times and annual cycles of behaviour, such as reproduction and the requirements of different developmental stages of pollinator species.

Frequency of cutting affects both the plant and pollinator communities present in road verges. In general, unmanaged road verges become dominated by vigorous species and are succeeded by scrub leading to relatively low abundances of flowers and insects, and a lower species richness of flowers. Annual mowing maintains a grassland community which is beneficial in terms of both flowers and pollinators (Roberts and Phillips, 2019).

Despite the overall benefits of cutting once or twice per year, there are immediate negative impacts of cutting in terms of direct mortality of pollinators, eggs and larvae and the removal of flowers and larval food plants (Noordijk et al., 2009; Wynhoff et al., 2011). Ideally, verge cutting would be avoided during these times, but negative impacts can be reduced by not mowing the entire verge at once, for example by mowing opposite sides of the verge at different times, or by only partially mowing the verge (Meyer et al., 2017; Noordijk et al., 2009; Skórka et al., 2013). It has been suggested that leaving a strip of the road verge uncut towards the back of the verge will provide permanent undisturbed areas of floral resources and vegetation for pollinator larvae (Noordijk et al., 2009). In support of this, a study on meadows in Switzerland found that leaving a 10-20% uncut area and cutting between mid-June and early-July benefited bees and hoverflies (Meyer et al., 2017). Leaving uncut areas will only be possible on wider verges such as along the A9, many of the smaller roads along the NC500 will have verges that are too narrow to accommodate this method.

The time of the year that road verges are cut can impact plant and pollinator communities. Cole et al. (2017) found, in their study in Ayrshire, Scotland, that flower species richness peaked between July and early-August, hoverfly abundance, diversity and species richness peaked in late-August and bee abundance and diversity peaked in early-August. Much road verge cutting happens during these peak times of activity and will negatively impact pollinators using road verges. For stretches of the NC500 passing through Caithness and Sutherland managing verges to benefit bee abundance is crucial to protect populations of the Great Yellow Bumblebee.

The visitor season along the NC500 is also seasonal, peaking during July and August, a critical time for flowers and pollinating insects. Unfortunately, this also means that visitor damage to road verges during these peak times will have the biggest potential impact on pollinators.

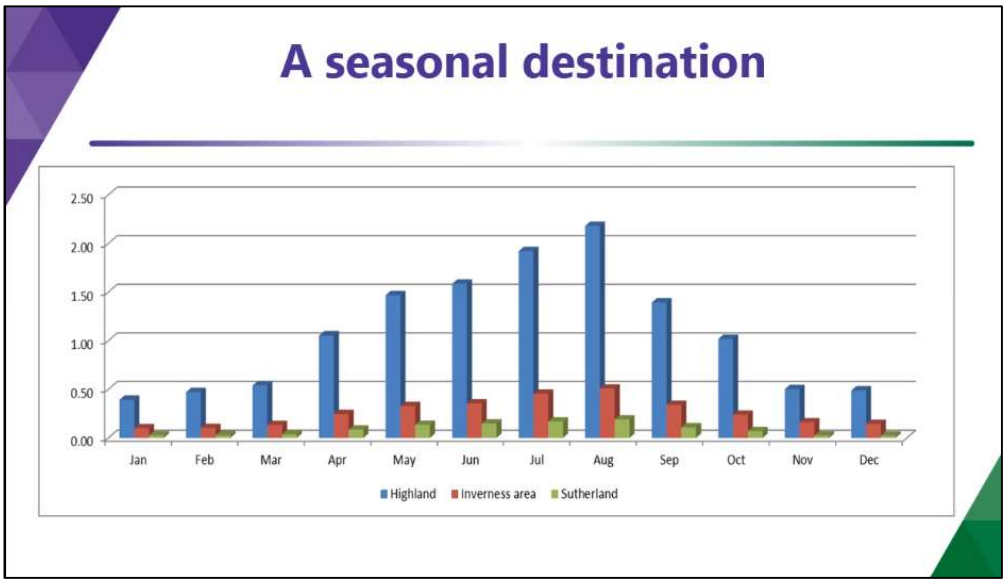


Figure 2: Peak visitor numbers by month in the Highlands: *Colin Simpson, Principal Officer - Europe, Tourism & Film, Highland Council*

Removing cuttings after mowing can be beneficial because it will remove the layer of thatch that would otherwise inhibit the growth of less vigorous plant species. It will also provide gaps for germination of seeds, and reduce soil nutrients, with low soil nutrients being an important characteristic of species-rich grasslands, because high nutrients leads to more vigorous species dominating and outcompeting other herbaceous species (Bonanomi et al. 2006; Parr and Way, 1988).

Overall, removing cuttings results in a greater plant species richness but this may be primarily due to the disturbance to the soil through scarification when the hay is being removed, which provides gaps for germination of seeds. This has important implications for management, because it implies that gathering cuttings into a single area of the road verge (such as under hedges and trees) may provide the same benefits, and that total removal from the site is not necessary. This is significant when considering small remote rural roads such as the NC500 where cuttings would otherwise need to be transported long distances. Reducing the distances that cuttings are transported also has an impact on the carbon cost of road verge management.

Table 6: Recommendations for the management of road verges to support pollinators (*Roberts and Phillips*, 2019).

The "Baseline" is the assumed current management regime of most road verges. Each new row represents an incremental step that could be taken by road verge managers that would benefit pollinators. Each subsequent step is of greater benefit to pollinators, but is more costly to carry out, allowing road verge managers to select a plausible option, based on available resources. It includes optional extras that will benefit pollinators but can be implemented alongside any of the main cutting regimes.

Step	Management action	Expected impacts on vegetation	Expected impacts on pollinators
Baseline	No management, or 1-2 cuts in summer, regular cutting of the sight lines, and no removal of cuttings	Variable sward height, high nutrients, cover of thatch from cuttings, many plant species unable to set seed; resulting in low plant diversity and dominance by few vigorous species such as grasses.	Direct mortality of pollinators, eggs and larvae, removal of larval food plants, and removal of flowers.
Mowing improvement one	One cut/year from September onwards	Prevents loss of grassland to scrub encroachment. May benefit plant diversity because most plant species are able to set seed before cutting.	Reduced mortality of pollinators and loss of flowers because peak flowering and pollinator activity times are avoided.
Mowing improvement two	Two cuts/year between September and March* and removal of cuttings	Should reducing sward height and dominance of vigorous plant species, allowing a greater number of herbaceous species to persist.	May benefit the diversity and abundance of flowers and pollinators.
Removing cuttings one	Move cuttings to a single area of the verge	Removal of thatch, allowing less vigorous plant species to grow and providing disturbance gaps for seed germination, resulting in increased plant diversity.	Greater flower abundance and potentially diversity. Probably greater diversity and abundance of pollinators.
Removing cuttings two	Remove cuttings from the verge	Removal of nutrients from the road verge, possibly providing further benefits to plant diversity.	May benefit pollinator diversity.

Additional management options	10-20% at the back of the verge left uncut	Allows an area of scrub and taller vegetation to persist at the back of the verge, resulting in greater plant and habitat diversity.	Allows larvae, eggs and overwintering species to persist, and provides areas for nesting and sheltering.
	Cut the verge in sections e.g. cut 20 m leave 20 m in order to create a varied habitat and leave areas of scrub	Greater plant and habitat diversity.	Greater pollinator and invertebrate diversity and provides microclimates.

*The literature suggests mowing twice, once in early summer and once in late summer. This leads to a high plant species richness which is beneficial to insect pollinators. However, this is the peak activity time for all pollinator life-stages from eggs to adults. Mowing during this time would cause direct mortality to pollinators and could therefore impact upon their populations. Unfortunately, there are insufficient studies to enable us to make our current recommendation based on the literature, but do not want to base our recommendations solely off a single study suggesting to cut during the peak pollinator activity. Therefore we are making the above recommendation based upon our knowledge of pollinators and their lifecycle.

The size and shape of grasslands around laybys and carparks

The size and shape of the grassland areas around laybys and carparks may affect their value to pollinators. Unlike road verges which are often just a few metres wide and a relatively small total area, limiting their capacity to support pollinators, laybys and carparks often afford greater width and space. A general study on the impact of patch size found that honeybees and hoverflies were not affected by increasing patch size, whereas wild bees such as *Bombus,* Andrenidae and Halictidae occurred in higher densities and richness within $30m^2$ and $100m^2$ compared to the $1m^2$ patch (Blaauw and Isaacs, 2014). This could be especially important for stretches of the NC500 in Caithness and Sutherland where enhancements to laybys and carparks might enable the development of larger habitat patch sizes for bee species, bringing greater benefits than simply focusing on roadside verge management.

The studies on patch size are not conclusive with some varying results, however we expect that wider areas would help reduce road deaths as pollinators may be less inclined to disperse from larger areas. In general, increasing the distance from a road should have a positive impact on exposure to pollution from traffic, however for laybys and carparks this is unlikely due to the concentration of vehicles in these areas. Encouraging visitors to not sit with their engines running would be beneficial from both a carbon and climate perspective, but importantly to reduce the pollution impacts for pollinators at car parks and laybys.

Overall, wider areas associated with visitor infrastructure could probably provide better habitats for pollinators, because they contain areas which are less exposed to traffic and pollution and can provide a greater variety of habitats than narrower verges. In theory, narrow road verges are more likely to be regularly completely mowed to maintain sight lines, whereas wider areas could have the first 1-2 m mowed for sight lines whilst other areas of the verge can be managed to support pollinators and other wildlife.

Seeding and planting around visitor infrastructure

Yellow rattle (*Rhinanthus* species)

Yellow Rattle

Yellow rattle (*Rhinanthus* species) is a root-hemiparasite of moderate- to low-fertility grasslands. It has the potential to be used around visitor infrastructure as a method of reducing the vigour of dominant plant species (Bullock and Pywell, 2005), as it gains nutrients from nearby plants, helping to maintain an open sward structure and reduces the abundance of more competitive species such as grasses. As a result, it may also reduce the frequency with which sites need to be cut. This also has the added benefit of maintaining a neat appearance where this is perceived important as part of the visitor experience of the NC500.

Because *Rhinanthus* species are annuals, their persistence in a grassland is dependent upon a cutting regime that allows flowers and seeds to be set each year, and populations can be quickly lost if this is not carried out. It appears that *Rhinanthus* species have significant potential for improving plant and flower diversity, especially on newly constructed

areas of grassland or in areas where it is possible to remove nutrient-rich topsoil. For these reasons it would be a good species for Highland Council to consider as part of future NC500 infrastructure improvements where areas of ground are likely to be heavily disturbed to make room for increased visitor capacity at sites.

Potential use of rare eyebrights as secondary root hemiparasite

Some areas of the NC500 route are particularly special due to rare species of eyebright (*Euphrasia* spp.). As eyebrights are known to be root hemiparasites (similar to Yellow rattle) there is potential to collect local seed and spread these in grassland to help reduce sward height, whilst increasing the distribution of this species (Hellströma *et al.,* 2004). As eyebright is very variable genetically it is essential that if used that the seed is collected locally.

Short sward seed mixes

Scotia seeds have developed some mixes that are designed to stay short and therefore require less maintenance (cutting) to maintain neater, lower swards, whilst containing a higher diversity of flowers beneficial to wildlife. This mix contains plants that are either low-growing or can be cut low. It should be cut to 10 cm throughout the growing season but left to grow and flower between July & August. These may be useful in areas where it would be of particular concern or cause upset should vegetation be left to grow tall.

Buglife recommends using seeds of local provenance to Scotland. Local Provenance is the term used to describe native plant populations that naturally occur in a given area. This is especially important when thinking about introducing seeds to the very north of Scotland (the most northerly range possible for plants in the UK).

Short seed mix species (from Scotia seeds)	**Common name**	**%**
Mix contains 20% wildflowers		
Achillea millefolium	Yarrow	1.5
Anthyllis vulneraria	Kidney Vetch	1
Dianthus deltoides	Maiden Pink	0.5
Fragaria vesca	Wild Strawberry	0.2
Galium verum	Lady's Bedstraw	1
Helianthemum nummularium	Rock Rose	1
Hypochaeris radicata	Cat's Ear	2
Lotus corniculatus	Birdsfoot Trefoil	1
Origanum vulgare	Wild Marjoram	0.5
Pimpinella saxifraga	Burnet Saxifrage	1
Primula veris	Cowslip	1
Primula vulgaris	Primrose	0.5
Prunella vulgaris	Selfheal	2
Rumex acetosella	Sheep's Sorrel	1.5
Scorzoneroides autumnalis	Autumn Hawkbit	1.4
Silene vulgaris	Bladder Campion	1.5

Succisa pratensis	Devil's-bit Scabious	1
Taraxacum officinalis	Dandelion	0.1
Thymus polytrichus	Wild Thyme	0.5
Trifolium repens	White Clover	0.2
Veronica chamaedrys	Germander Speedwell	0.1
Veronica officinalis	Common Speedwell	0.1
Viola riviniana	Common Dog Violet	0.5
80% grasses		
Agrostis capillaris	Common Bent	8
Festuca brevipila	Hard Fescue	20
Festuca rubra ssp commutata	Chewings Fescue	8
Festuca rubra ssp rubra	Strong Creeping Red Fescue	28
Poa pratensis	Smooth-stalked Meadow Grass	16

Great yellow bumblebee seed mixes

This mix has previously been used on sites of disturbed ground and is tailor made for acidic peaty soils, whilst containing some of the best wildflowers that attract the Great yellow bumblebee, such as Red clover, Common knapweed and Meadow vetchling. This mix needs very little maintenance over time. It has been successfully trialed by the Bumblebee Conservation Trust at sites in Caithness, resulting in a new Great yellow bumblebee sighting (reported in February 2021).

GYB seed mix species (From The Bumblebee Conservation Trust)	**Common name**	**Origin**	**%**
Achillea millefolium	Yarrow	Fife	1.0
Centaurea nigra	Common knapweed	Fife	2.0
Filipendula ulmaria	Meadowsweet	Fife	2.0
Galium verum	Lady's bedstraw	Dumfriess-shire	2.0
Hypocaeris radicata	Cats ear	Inverness-shire	0.3
Lathyrus pratensis	Meadow vetchling	Fife	0.3
Lotus corniculatus	Bird's-foot trefoil	UK	0.3
Plantago lanceolata	Ribwort plantain	Fife	1.0
Prunella vulgaris	Selfheal	Fife	1.0
Ranunculus acris	Meadow buttercup	Fife	1.0
Rhinanthus minor	Yellow rattle	Inverness-shire	1.0
Silene flos-cuculi	Ragged robin	Fife	1.0

Stachys palustris	Marsh woundwort	Moray	0.2
Succisa pratensis	Devil's bit scabious	Fife	0.4
Trifolium pratense	Red Clover	Inverness-shire	1.5
Agrostis capillaris	Common Bent	Cultivated	10.0
Festuca ovina	Sheeps fescue	Cultivated	21.0
Festuca rubra commutata	Chewings Fescue	Cultivated	35.0
Poa pratensis	Smooth Stalked Meadow Grass	Cultivated	19.0
Total			**100.0**

Hedging and nectar rich trees

The addition of native hedging and nectar rich trees, such as Hawthorn, Blackthorn and willows will add a benefit to pollinators but can also be used to control movement of people and could protect people from traffic or pollution from cars. When managed correctly, hedges require very little maintenance, every 2 to 3 years, whilst providing many benefits to wildlife through flowers, buds, berries and more. Once established the trees will reduce erosion, particularly in areas with steep slopes. Additionally, in areas that are particularly exposed this hedging would act as a good wind break, potentially at campsites and picnic areas.

(People's Trust for Endangered Species, 2021 - https://hedgerowsurvey.ptes.org/hedge-management-cycle)

Reducing pesticide use along the NC500

Many pesticides are harmful beyond their intended use and last in the environment for a longer time than expected. In addition to this many of the more common pesticides are more toxic towards humans than originally thought, making it a benefit to reduce and eliminate their use. Instead altered management (such as brushcutting) is suggested to replace pesticide use.

Pesticide-Free Scotland is a grassroots movement that can provide support to local authorities and landowners looking to reduce their use of pesticides https://www.pesticidefreescotland.org/

Ideas for carpark and layby design

Small-scale Features	Detail	Links to further information
Native wildflower planting (seeding or plug plants)	Food supplies (pollen and nectar) for pollinators. Will act as 'steppingstones' along the B-Line. These can be planted or sown as part of amenity space, roadside verges or wildlife areas. Particularly in areas important for Great yellow bumblebee consider using a specific seed mix that provides the ideal habitats for this species.  © Suzanne Burgess Great yellow bumblebee feeding on Kidney vetch	https://cdn.buglife.org.uk/2020/07/Plants-for-bees.pdf https://cdn.buglife.org.uk/2019/07/5.BuglifeCommunityMeadowspackPLANTSFORPOLLINATORSweb.pdf https://cdn.buglife.org.uk/2019/07/2.BuglifeCommunityMeadowspackHOWTOCREATEACOMMUNITYMEADOWweb.pdf https://cdn.buglife.org.uk/2019/07/Make-a-mini-wildflower-meadow-simple.pdf
Native shrubs and tree planting	Very valuable food supplies for insect pollinators, as well as a range of other invertebrates and other wildlife. Willows, hawthorns and fruit trees can provide very important early nectar sources and also nesting and shelter for a range of pollinators and other invertebrates. Along busy roads they can also provide noise and pollution screening, or act as a physical barrier to vehicle access.	https://www.buglife.org.uk/resources/habitat-management/ancient-and-species-rich-hedgerows/
Removal of gorse and bracken	Removing gorse and bracken by mechanical means and replacing with wildflower meadows or nectar rich bulbs will be beneficial for pollinators whilst reducing the chances of visitors using the shelter of particularly gorse bushes as an outdoor toilet or litter bin. Needs to be combined with providing signage to the nearest public conveniences.	https://www.nature.scot/sites/default/files/Publication%202008%20-%20Bracken%20Control%20-%20A%20Guide%20to%20Best%20Practice.pdf

Living roofs and green walls	Providing food and nesting sites for pollinators, other invertebrates and birds. Particularly for new infrastructure such as toilet blocks or motorhome waste disposal sites.	https://cdn.buglife.org.uk/2019/07/Creating-Green-Roofs-for-Invertebrates_Best-practice-guidance.pdf https://scottishpollinators.wordpress.com/2019/11/06/our-living-wall-one-year-on/
Bee hotels and bug houses	Creating nesting sites and shelter for bees and other invertebrates. Bee bricks can be incorporated into new infrastructure. Consider bee and bug hotels to create natural barriers to prevent access by people or vehicles.	https://www.greenandblue.co.uk/products/bee-brick
Ponds	Breeding and feeding habitat for invertebrates (including many pollinators) and a range of other wildlife.	https://www.froglife.org/wp-content/uploads/2013/06/ponds-farmland-web2.pdf
Use of nectar-rich flower species in landscaping and community gardens.	Benefits for butterflies, moths and other insect pollinators. For example, enhanced planting of spring bulbs around the memorial garden in the center of Durness.  © Craig Nisbet Bumblebee on Crocus	https://www.buglife.org.uk/our-work/b-lines/b-lines-guidance/gardening/
Use more sympathetic amenity grassland management	Relaxing gang-mowing to encourage plants like Cow parsley, Hogweed, dandelions, knapweeds, etc. will provide valuable nectar and pollen sources for a range of pollinators	Landowner guidance (for local authorities): Part 1 https://youtu.be/kcFBaJit3_M Part 2 https://youtu.be/xqChkRqnAIg Part 3 https://youtu.be/uaYBl0oPH2A
Provision of advice to home owners or other developers	Small changes to the management of private gardens can add up to a significant change.	https://www.buglife.org.uk/our-work/b-lines/b-lines-guidance/gardening/

Larger-scale Features	Detail	Links to further information
Habitat creation	Creating new high-quality habitat over 2Ha in size will ensure maximum biodiversity benefits.	https://www.buglife.org.uk/our-work/b-lines/b-lines-guidance/habitat-management/
Restoration and management of existing habitats	The highest priority should be given to the sustainable management and restoration of existing wildlife habitats along the NC500.	See NC500 natural heritage maps
Link to surrounding countryside and greenspace	Larger habitats (2Ha+) that are suitable for pollinators along the NC500 could be linked. Consider the proximity of school playing fields, sports centres, cemeteries, etc.	See NC500 B-Line opportunities map
Sustainable Urban Drainage Systems	Wetlands or ponds will support a variety of invertebrates and other wildlife, including the larvae of important pollinators such as certain hoverflies. Specific links: • The biodiversity value of SuDS in Inverness and their ability to provide multiple benefits within the urban environment • Multiple Benefits of SUDS • Wildlife & SUDS • Amphibians in drains	https://www.nature.scot/professional-advice/placemaking-and-green-infrastructure/green-infrastructure/sustainable-drainage-systems-suds Specific links for the Highlands: https://www.highlandenvironmentforum.info/biodiversity/action-plan/sustainable-urban-drainage-systems-suds-management/ • SUDS for people and wildlife • Multiple Benefits of SUDS • Wildlife and SUDS • Amphibians in drains
Bee Banks	A bee bank provides warm, sheltered patches of bare ground where solitary mining bees can nest. A bee bank could also create a physical barrier to support visitor management.  © Natalie Stevenson Bee Bank	https://cdn.buglife.org.uk/2020/04/Bee-bank-booklet-2.pdf

Infrastructure features adapted for pollinators	Detail	Links to further information
Bollards – Planters or bee bricks	Replace bollards with planters filled with nectar rich plants. Where possible consider incorporating bee bricks, posts or bee hotels within the planter structure.  © www.greenandblue.co.uk Beeposts	https://www.greenandblue.co.uk/products/bee-brick https://www.greenandblue.co.uk/products/beepost
Carpark surfaces	Where carparks need resurfacing consider using a geogrid instead of tarmac. Formed from interlocking plastic 'cellular' paving, 'reinforced grass' is typically laid on a level topsoil bedding layer over Type 1 and geotextile. The individual 'cells' are filled with topsoil and seeded with a grass mix seed to provide a durable, grassed surface.	https://www.pathsforall.org.uk/resources/resource/surfacing-guide-for-path-projects---updated
Expanding passing places	Use a geogrid to expand passing places – specifically where convoys of vehicles are already eroding passing place edges. When traffic density is less the geogrid should allow some plant growth.	
Fencing	In areas where there is a high level of grazing pressure from sheep and deer the use of fences can promote wildflower growth. Particularly around access points and footpaths, fencing off an extra wide strip parallel to a footpath will create space for a wildflower bed.	
Drystone dykes	To provide barriers to manage the movement of vehicles or pedestrians, to	

	reduce erosion of banks and provide nesting habitat for solitary bees.	
Engagement opportunities	**Detail**	**Links to further information**
Signage	NatureScot pollinator signage templates. Signs to ask people to turn off their engines when parked and to keep to paths during key bumblebee season to avoid damaging habitat.	Contact Jim Jefferies at NatureScot
Activities for visitors	Encourage visitors to report bee sightings, and to complete FIT counts (as part of the UK Pollinator Monitoring Scheme).	https://www.ceh.ac.uk/our-science/projects/pollinator-monitoring

Managing larger sites for pollinators

Along the NC500 B-Line we have identified many sites that could also create much larger areas of habitat for pollinating insects. Many of these include land currently managed by Highland Council such as school grounds, public parks, cemeteries, and sports facilities.

Existing greenspace infrastructure when combined with interventions along the NC500 enable a much more complete habitat network to be created for pollinators. By choosing areas of around 2Ha to convert to wildflower meadows it will be possible to substantially increase the permeability of the NC500 environment to insects moving along its edges.

Management of larger sites can consist of changes to cutting regimes or rotavating and re-seeding with a wildflower mix. Larger sites can also be used to make a statement or as a focus point for interpretation – particularly in visitor hotspots.

Fly feeding in a meadow

NC500 CASE STUDIES – We have identified a few sites to exemplify how visitor infrastructure could help deliver an NC500 B-Line. At each site we have considered:

- Likely challenges from visitor pressure
- Existing resource for pollinators
- Capacity and future capacity for cars/motorhomes
- Potential actions that would benefit pollinators (such as changed grassland management, planting, installing infrastructure to prevent vehicles from parking outside of designated areas, green car park surfaces and SUDS)
- A map or plan

CASE STUDY 1: Dunnet Bay car parks – Visitor redirection within a SSSI

Located in Caithness and within Dunnet Links Site of Special Scientific Interest (SSSI) that has habitat suitable for Great yellow bumblebees. The SSSI is designated for its nationally important sand dunes and associated links grassland. The sand dunes on this site are the largest and most active dune system in Caithness.

Challenges from visitor pressure:

The Dunnet bay carparks were identified by High Life Highland as under pressure during 2020, with the north and south beach carparks as real hotspots for visitor management issues.

Footpath erosion – particularly through the dunes (designated SSSI habitat and core/expansion areas for Great yellow bumblebee). Particularly impactful during the popular summer months.

Edge of car park / road verge erosion from vehicles and pedestrians.

Potential toileting and litter, fires on beach habitats.

Existing resource for pollinators:

Dunnet bay is designated for its nationally important links, dunes and associated vegetation communities containing a wonderful assortment of rare plants such as Field gentian (*Gentianella campestris),* Grass of Parnassus (*Parnassia palustris*), Frog orchid (*Dactylorhiza viridis*) and Twayblade (*Listera ovata*), as well as the nationally scarce Hair sedge (*Carex capillaris*) and Scottish primrose (*Primula scotica*). This biodiverse species-rich grassland supports a range of invertebrates including the nationally scarce Great yellow bumblebee (*Bombus distinguendus*) and the Small blue butterfly (*Cupido minimus*).

©Melissa Shaw

Scottish Primrose

Capacity and future capacity for cars/motorhomes:

There are three car parks and a layby along this stretch of coastline adding to the total capacity of the Dunnet bay area. Whilst both beach car parks are relatively small, fenced and surrounded by good

habitat, there is potentially an option to extend the forest car park and direct more vehicles to this site. Motorhomes should be directed to the Dunnet bay caravan and motorhome club site. The layby will attract more informal parking and access to the beach.

Potential actions:

Improve footpaths through the dune system to the beach, creating a strip of pollinator habitat alongside paths (potentially using boardwalks and fencing) as well as installation of interpretation signs at all beach access points. The boardwalk will help keep people on the path and the fencing will remove any grazing pressure on the wildflower strips (and keep people within a designated zone).

Creative planters incorporating bee nesting sites and small wildflower beds, planted with plants such as Common Knapweed (*Centaurea nigra*), Yarrow (*Achillea millefolium*), Wild thyme (*Thymus polytrichus)* local to the area could be planted around the edges of both beach car parks, alongside additional provision of litter bins.

At the Dunnet Forest car park, there is an opportunity to change the mowing regime along the verge to include an area managed for pollinators towards the back of the verge. This area could be enhanced by seeding or planting plug plants.

Should the landowner (Dunnet Forest Trust) be keen, it might be possible to extend the tarmac carpark (edged with drystone walls) to accommodate an increase in vehicles (including disabled spaces). Install further interpretation and consider some bug hotels or a bee bank if appropriate. If there is capacity at this site for further visitor infrastructure such as an accessible toilet, ensuring to incorporate living roofs or bee bricks into the design, this would further the ambitions of the Trust to provide all ability access. Additional litter bins could be incorporated into any plans. Improving and extending Dunnet Forest car park would hopefully reduce pressure on the north and south beach car parks.

Support the Dunnet Forest Trust green gym group – offer training to identify and monitor pollinating insects and about how to incorporate meadow management into their forest conservation tasks.

Support the Dunnet bay caravan and motorhome club (private business) with provision of facilities for campervans and motorhomes (56 pitches), encourage the creation of wildflower strips within the site.

Key carpark and layby numbers:

Dunnet Bay Layby A836 - 25 - https://goo.gl/maps/aRgNc9mznK5smPZu9
Dunnet Bay Sands main parking - 26 - https://goo.gl/maps/fdQyyXN3My7tWzaMA
Dunnet Forest parking - 27 - https://goo.gl/maps/wkQUy6tgaUUpeTj87
Dunnet Bay West parking - 28 - https://goo.gl/maps/WStMxuzUqxzQgS2o8

Dunnet Bay car parks and layby, Caithness

CASE STUDY 2: Loch Fleet NNR

© Melissa Shaw

Loch Fleet NNR

© Melissa Shaw

The Mound map Info Board

Located in South East Sutherland just off the main NC500 route along the A9. Important habitats for Northern Brown Argus (*Aricia artaxerxes*) and Moss Carder Bumblebees (*Bombus muscorum*). Opportunities to build work into the proposed Loch Fleet pollinator trail. The Loch Fleet NNR is managed by NatureScot in partnership with the Scottish Wildlife Trust and Sutherland Estates, which owns Loch Fleet itself.

Challenges from visitor pressure:

Although not directly on the NC500 the reserve is a popular visitor destination with trails. Litter and a lack of toilet provision is causing issues (especially as it offers a break from long drives up or down the A9.

Existing resource for pollinators:

Loch Fleet NNR overlaps with several protected areas:

- Loch Fleet Ramsar Site
- Dornoch Firth and Loch Fleet Special Protection Area
- Loch Fleet Site of Special Scientific Interest

The NNR is managed by NatureScot and part of the management plan considers the implementation of insect (butterflies, moths and bees) and dune interpretation on Littleferry Links.

Areas of the NNR have been identified by Bumblebee Conservation Trust where surveys are needed (for Great yellow bumblebee but also for other bee species).

Capacity and future capacity for cars/motorhomes:

There are potentially four or five layby and carpark areas along the NC500 around the Loch Fleet NNR. The most northerly of these (Golspie car park) is directly on the B-Line, however the others are not far from the B-Line and provide a great opportunity to engage visitors to the reserve with pollinators.

The laybys and carparks are all tarmac and size limited. There are no toilets at the NNR, with the nearest being the Highland Council run toilets at Golspie.

Potential actions:

At Golspie carpark there are some areas of mown amenity grassland. There would be potential to relax this regime towards the dunes along the coast to create a wildflower bank. The carpark may also benefit from improved litter bin provision and creative planters incorporating bee nesting sites and small wildflower beds, planted with plants such as Sea holly (*Eryngium maritimum*), Feverfew (*Tanacetum parthenium*) and Birds-foot trefoil (*Lotus corniculatus*) which are local to the area.

The laybys along the A9 are sheltered by trees and scrub. To enhance the provision of forage habitat for pollinators some of the scrub could be removed and replaced with bulbs or additional nectar rich trees.

The Skelbo layby is again surrounded by scrub and trees, on the other side of the road however is a bank up to a fence line above the road, this banking could make great pollinator habitat, particularly if its rocky and nutrient poor. It would be ideal to remove any encroaching scrub and add wildflower seeds or plug plants.

At the Mound there is also an NNR carpark just off the A9 under the level of the road. This site could again benefit from planting nectar rich trees and improving the provision of litter bins.

© Melissa Shaw

Loch Fleet NNR

Key carpark and layby numbers:

Golspie 382 - https://www.google.co.uk/maps/@57.9725161,-3.9782319,3a,75y,171.52h,75.12t/data=!3m6!1e1!3m4!1sGzdEEFaCSW0_EoxPlqbD1Q!2e0!7i13312!8i6656?hl=en-GB&authuser=0

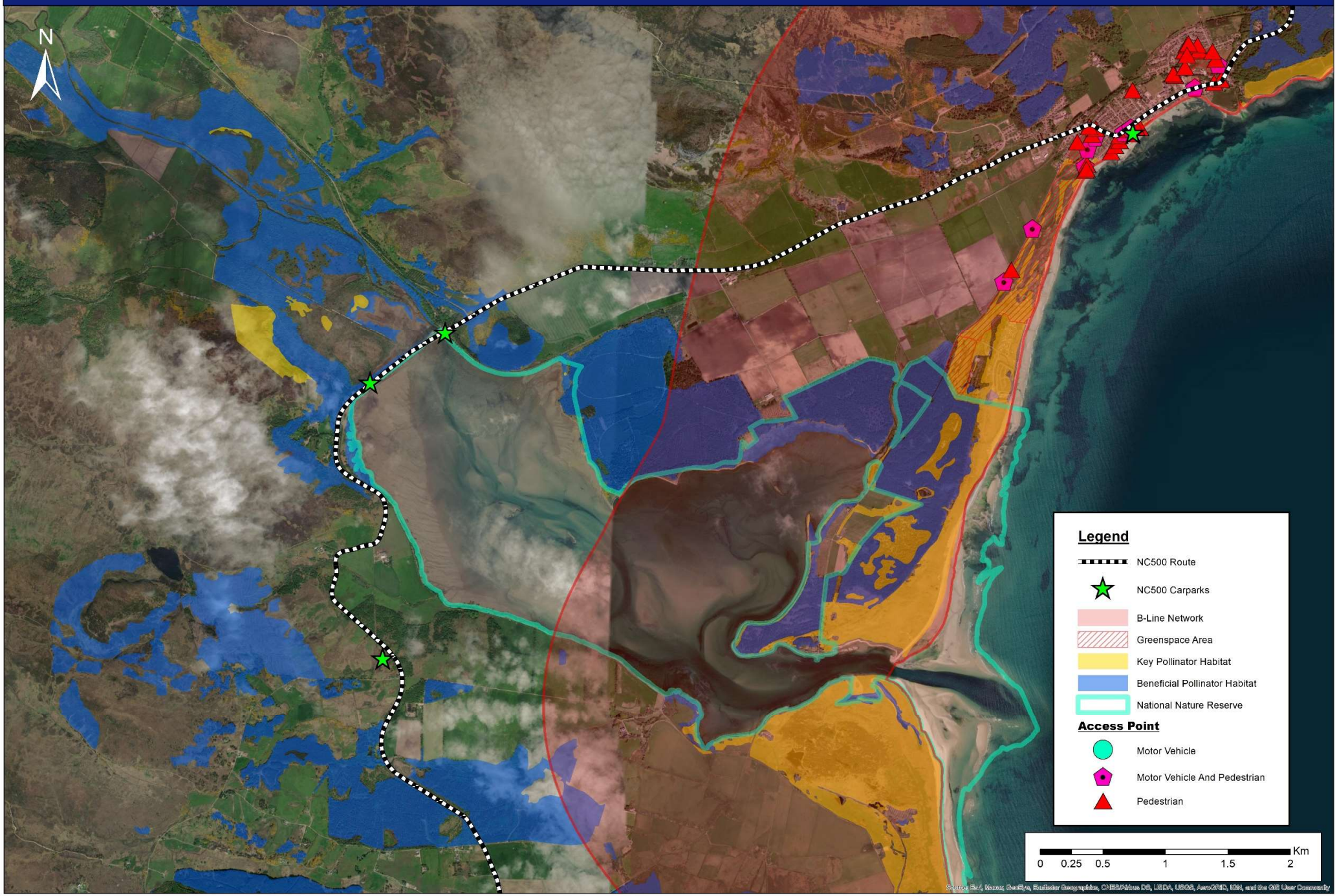
The Mound 381 - https://www.google.co.uk/maps/@57.9568817,-4.0684258,3a,75y,186.45h,75.35t/data=!3m6!1e1!3m4!1ssqs6GrRtzIiAsN9kl5N2nQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0

And Mound car park:
https://www.google.co.uk/maps/@57.9560003,-4.072031,3a,75y,12.14h,61.56t/data=!3m6!1e1!3m4!1se8APWhILGj7i2d84Q4ea9Q!2e0!7i13312!8i6656?hl=en-GB&authuser=0

The Mound 380 - https://www.google.co.uk/maps/@57.9528346,-4.0789369,3a,75y,259.21h,68.8t/data=!3m6!1e1!3m4!1sKLhI0XCdaWh3I8La6Hbswg!2e0!7i13312!8i6656?hl=en-GB&authuser=0

Skelbo 379 - https://www.google.co.uk/maps/@57.933181,-4.0762499,3a,75y,104.21h,94.51t/data=!3m6!1e1!3m4!1sv_fUgHXLP1ernJOQz4AnGw!2e0!7i13312!8i6656?hl=en-GB&authuser=0

Loch Fleet National Nature Reserve, South East Sutherland



CASE STUDY 3: Balnakeil beach car park - Pollinator corridor

Located in North West Sutherland this is another hotspot just off the NC500 within the B-Line and in an ideal area for Great Yellow Bumblebee. This site is surrounded by areas of existing greenspace and could be suitable for some larger scale, low maintenance, wildflower habitat creation between here and Durness.

Challenges from visitor pressure:

The car park is often full and so vehicles encroach onto the grassland verges. Access is required to the Durness golf club (and access should be suitable for emergency vehicles to this point). High Life Highland identified Balnakeil beach and golf club car parks as 'under pressure in 2020' and we would expect this pressure to continue or increase during 2021.

Existing resource for pollinators:

The area falls under the Durness Site of Special Scientific Interest, which is of national importance for its geology and for habitats associated with the Durness limestone that underlies much of the site:

Durness SSSI Habitats
Alpine and subalpine calcareous grasslands
Base-rich fens
Calcium-rich nutrient-poor lakes, lochs and pools
Dry heaths
Dune grassland
Humid dune slacks
Limestone pavements
Shifting dunes with marram
Tall herb communities
Wet heathland with cross-leaved heath

This site already has some good habitat for pollinators in the areas managed as part of the car park. These could further be enhanced by seeding or by planting plug plants. This site is a great example of where work within the carpark could link to other nearby resources – for example by enhancing larger areas within the Balnakeil church grounds (wildflower strips) and at Durness golf club (ideally 2Ha wildflower areas). This area has great potential for Great Yellow Bumblebee, either forming part of the core Great Yellow Bumblebee habitat or being identified as areas for expanding that core area.

Capacity and future capacity for cars/motorhomes:

The beach at Balnakeil will continue to attract high numbers of visitors, although luckily it is just off the NC500 so many tourists may drive past and on to Durness. Motorhomes do use this site but due to the small roads and overcrowding it is not an ideal location for larger vehicles.

Potential actions:

Despite vehicles parking on verges, it probably would not suit this area to expand or change the natural nature of this car park. Increased visitor signage and positive interpretation about the importance of the site for pollinators is key, urging people to take care of grassland wildflowers particularly at key times for foraging Great Yellow Bumblebees. Improved litter bin facilities would help maintain the visitor experience. It would be great to create a 'Pollinator Corridor' from Balnakeil beach car park connecting habitats along the road back to the NC500 at Durness. Much of the verge is narrow but

looks like it would be suitable for a reduced cutting and lifting regime. It would be possible to engage the community of Balnakeil and specifically to try to link larger areas of habitat creation outside the road footprint, such as at Balnakeil church, Durness golf club and with the farmers, residents, and businesses in the area.

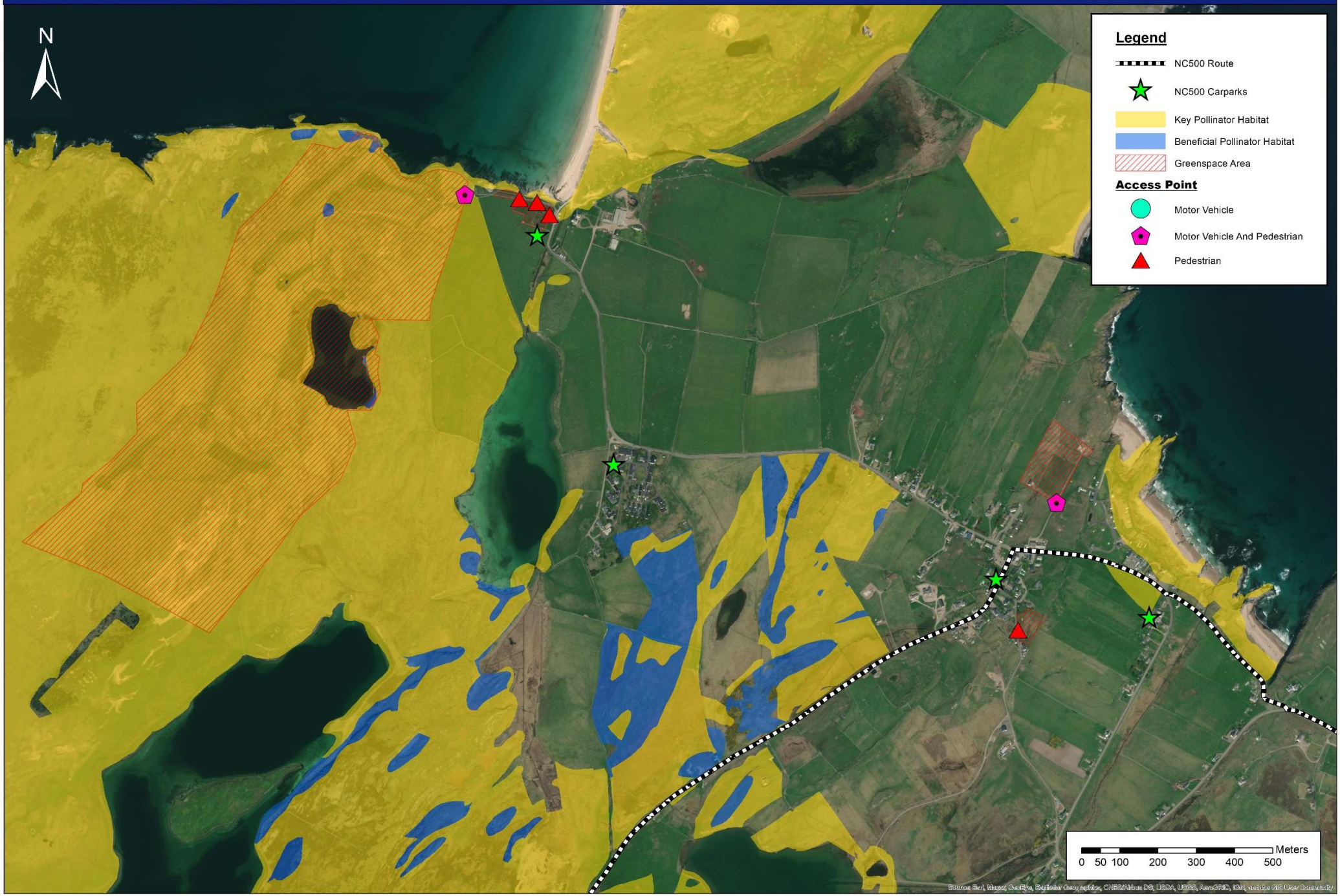
Key carpark and layby numbers:

93 - https://goo.gl/maps/My9cVPPeHwKz2DtA7
94 - https://goo.gl/maps/pT63yEMLBh5miTTZA

CC+

Balnakeil Church

Balnakeil beach car park, North West Sutherland



CASE STUDY 4: Bettyhill to Melvich fencing and passing places

Located in North Sutherland, Bettyhill has a café and is on the North coast of the NC500. Melvich has attractive beaches and nearby Strathy beach car park has been identified as a particular hot spot for visitor pressures. They are accessed via small rural roads that during busy times are under pressure from convoys of traffic travelling between passing spaces. Pollinator impacts here are not all created by visitors; there is also a significant impact on the availability of forage plants for pollinators because of local grazing pressures.

Challenges from visitor pressure:

Volume of traffic, vehicles driving on verges where passing places are too small.

Strathy car park is impacted by footpath erosion, particularly at the entrance to cemetery, beach and on the exit from the car park. As there are no or few bins at the site litter is also likely to be an issue. Strathy car park has been identified by High Life Highland as a particular hotspot needing improved visitor management and given the proximity of important plant sites and pollinator habitat it would be ideal to make improvements here.

The Strathy road to Millburn carpark is one example of a carpark in this area with surrounding grassland habitat that is heavily grazed by sheep.

Existing resource for pollinators:

Reduced due to impacts from grazing. Sites are close to the B-Line although near to Bettyhill the B-Line comes away from the north coast and passes inland slightly. The area is however identified as important core and expansion areas for Great yellow bumblebees and forms one of the most important areas along the north coast for threatened plant species such as *Oxytropis*.

The car parks within Bettyhill village and Invernaver are closest to the B-Line in the west and close to important plant sites although they do not seem to offer much potential for improvements for these species. There is another site at Bettyhill overlooking the River Naver - this site is simply a road end – although people appear to park on the grass and camp.

Melvich and Strathy beach carparks are on or close to the B-Line in the east of this stretch of the NC500. Strathy beach car park has an important plant point identified directly at its location.

Capacity and future capacity for cars/motorhomes:

The road size cannot be changed but it is likely that the number of vehicles in convoys of traffic will increase over the next few years due to increasing numbers of visitors, particularly post COVID.

Potential actions:

If convoying of traffic is indeed an issue along this stretch of the NC500 it could be possible to extending passing places where damage is already evident using geogrids rather than tarmac, therefore improving the visitor experience and preventing the ground getting churned up – but avoiding the use of any additional tarmac.

At access points and around footpaths or carparks, install fences to prevent grazing. These can be part of visitor infrastructure upgrades but by allowing extra space over and above what is needed to create space for visitors to support pollinators. By formalising areas so that visitors remain within a defined space, it would be possible to also create wildflower strips.

The Strathy road to Millburn carpark (NC829655) is an example where it might work to fence off the car park and ground adjacent to the carpark to protect an area for wildflowers, as grazing is evident across the grassland around the car park edges. *https://goo.gl/maps/vk9xBMwqC32rf2yu6*

Actions at Strathy beach car park could include upgrading existing paths and planting low growing shrubs, such as heather, or alternatively a low drystone dyke to provide nesting habitat for solitary bees. Using shrubs or a drystone dyke on each of the corners at the entrance/exit to the car park would help to stabilize the collapsing bank whilst providing a resource for pollinators.

Stone wall

Drystane dyke

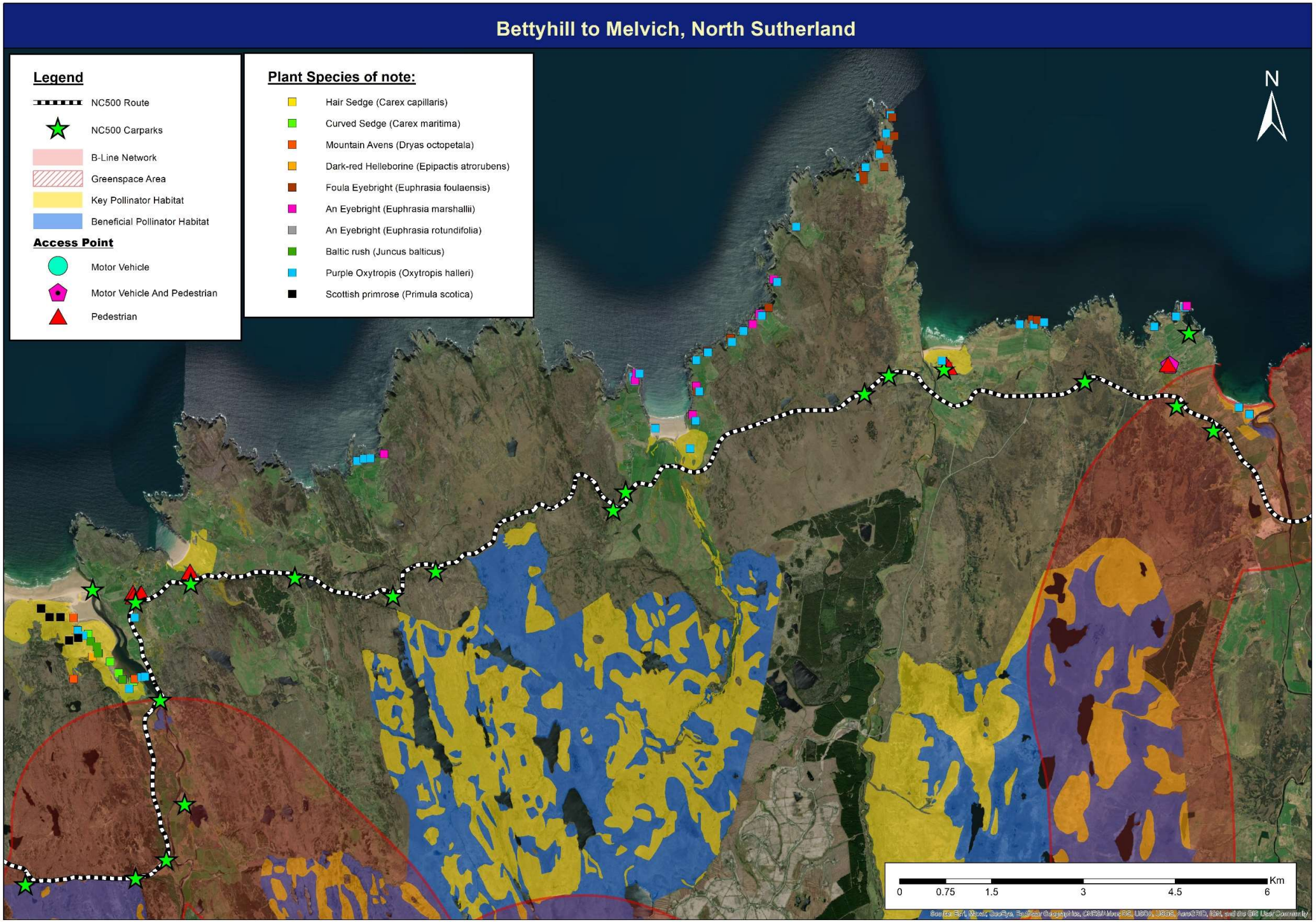
Key carpark and layby numbers:

Strathy beach 47 - https://www.google.com/maps/@58.5633754,-3.999036,3a,60y,90t/data=!3m6!1e1!3m4!1s7IPkqbR0HrFEIDlPBWX9OA!2e0!7i13312!8i6656

Strathy road to Millburn 48- https://goo.gl/maps/vk9xBMwqC32rf2yu6

Bettyhill overlooking River Naver 56 - https://goo.gl/maps/tr46KbPVqc7VFzWbA

Bettyhill to Melvich, North Sutherland



CASE STUDY 5: Gorstan and Garve woodland pollinator corridor

This is a 10 - 15 mile stretch of the NC500 with around 20 laybys and carparks passing between Loch Garve and Loch Luichart in Ross-shire. Many visitors stop to visit Rogie Falls, a Forest and Land Scotland site. During the summer months there are public toilets, run by Highland Council, next to the car park at Rogie Falls.

Challenges from visitor pressure:

There are quite a few stopping places available on this stretch of the NC500, roughly 24 miles from Inverness. The road is two lanes rather than single track, meaning traffic will flow faster along this section. It hasn't been specifically highlighted as a hot spot; however, it could be assumed that littering and overnight parking will happen at some laybys.

Existing resource for pollinators:

There are a lot of scrub and woodland habitats. This stretch of road does not pass through any designated sites although the area around Contin has been identified as an area the Bumblebee Conservation Trust are interested in surveying for Great yellow bumblebee. If Great yellow bumblebees were here, it would be the closest area for the species to Inverness – enabling opportunities for a large population of people to engage with this species close to the city.

Buglife's B-Line follows the road perfectly along this stretch and so it would make an ideal location to champion roadside improvements for pollinators. This could be particularly important as the open verge habitats probably form the most important foraging habitat for pollinators travelling between the lochs and forests. The number of laybys and width of road verge means that there are relatively large parcels of land which could be considered as areas to be managed for pollinators.

Capacity and future capacity for cars/motorhomes:

The roads will experience growth in the amount of traffic, as is true for all the NC500 route. In comparison, this stretch has quite a few laybys creating many stopping places for visitors and their vehicles.

Potential actions:

Across all the laybys in this 10 - 15 mile stretch of the NC500 it might be possible to clear unwanted scrub (for example brushcutting bracken) from around woodland edges and replace with a nectar rich understory, encouraging bulbs such as snowdrops or bluebells. It would also be possible to plant nectar rich tree species such as willows or hawthorns – particularly where this would provide a screen from the road; and to change areas of mown amenity grassland to areas of spring bulbs or wildflower strips away from the roadside edge. Installing additional litter bins at picnic sites would help to manage litter.

Several of the laybys have steep banking behind them, these slopes could be kept clear of encroaching scrub and seeded with wildflowers. Having areas of bare ground would also be beneficial to pollinating insects and other invertebrates (for example sites 321, 322, 323 and 324).

The picnic site at Gorstan (321) is one example of a site with a steep bank up to the railway behind, mown grassland to the front and is big enough that it could easily accommodate several of the changes suggested that would benefit pollinators and enhance the environment for visitors.

Key carpark and layby numbers:

Gorstan:

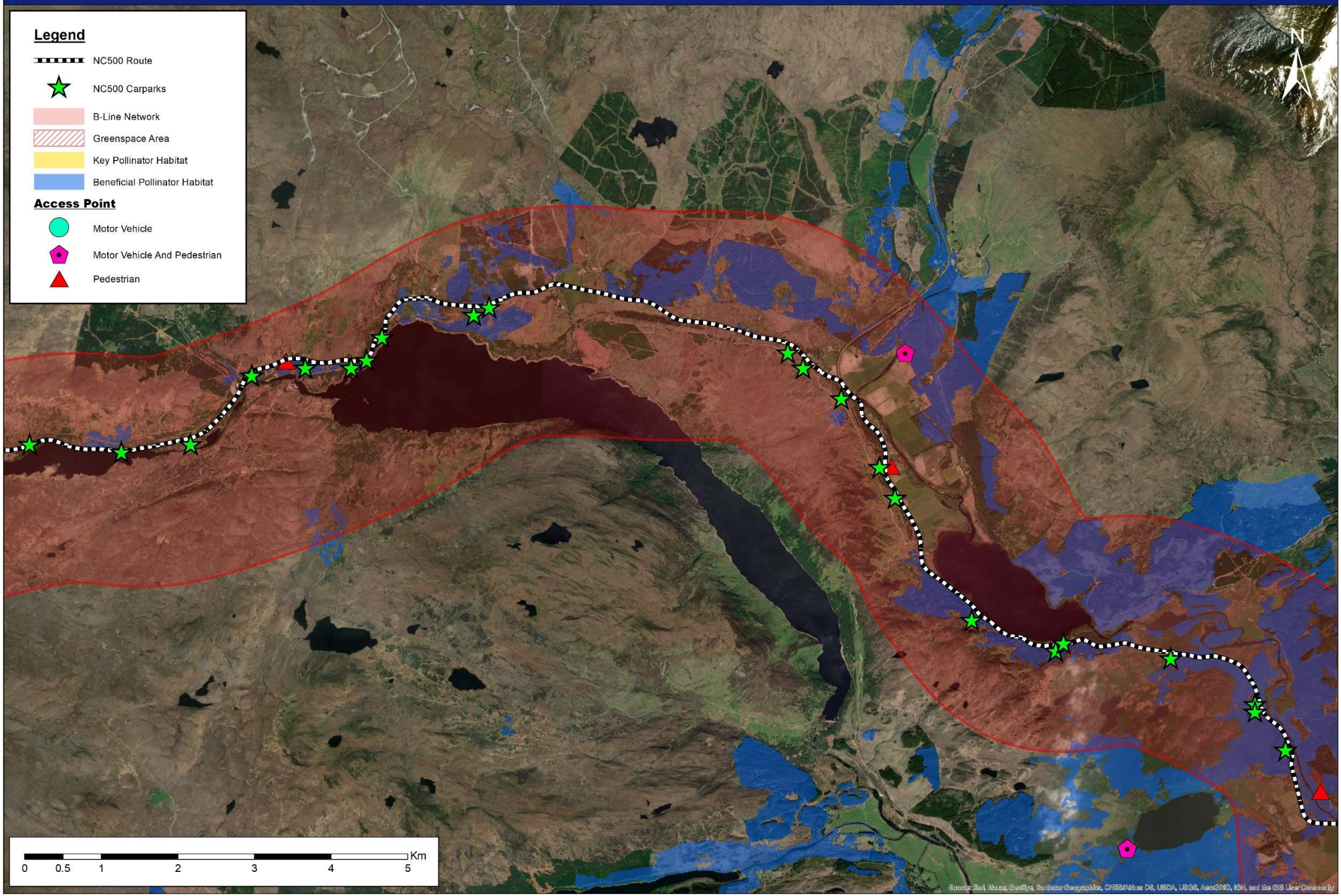
Sites 312 – 320
For Example: https://www.google.co.uk/maps/@57.6213332,-4.6969604,3a,75y,262.66h,86.1t/data=!3m6!1e1!3m4!1s9_uo7o0AzMPeFvPI7K1gNw!2e0!7i13312!8i6656?hl=en-GB&authuser=0

Garve:

Sites 321 – 331
For Example: https://www.google.co.uk/maps/@57.5929311,-4.649066,3a,75y,293.13h,81.17t/data=!3m6!1e1!3m4!1stvjusmXSgsswLvYrIHl5XQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0

Rogie Falls road signs on the A835

Gorstan and Garve, Ross-shire



CASE STUDY 6: John o'Groats meadow and people engagement

Located in Caithness. John o'Groats is one of the go-to visitor locations in Scotland as it lies on the most north-eastern tip of mainland UK. The landmark 'Journey's End' signpost was first installed in 1964. In the summer, a ferry operates between John o'Groats and Burwick on Orkney.

Challenges from visitor pressure:

The number of visitors to John o'Groats is substantial, however in comparison to other areas along the NC500 the village has quite a lot of existing infrastructure. The car park areas are tarmac and the main pressures are likely to come from litter and foot-traffic across grassland areas.

Existing resource for pollinators:

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John o'Groats Visitor Experience

Existing resources for pollinators are very limited within the town at John o'Groats though increasing once outside of the town. Whilst the short-cropped grass is awash in areas with clover, the pollinators would benefit from a greater diversity in flowers.

©John Shaw

John o'Groats

©John Shaw

Milepost at John o'Groats

Capacity and future capacity for cars/motorhomes:

John o'Groats will remain one of the top visitor destinations in the country and as such the number of cars and motorhomes will always be high.

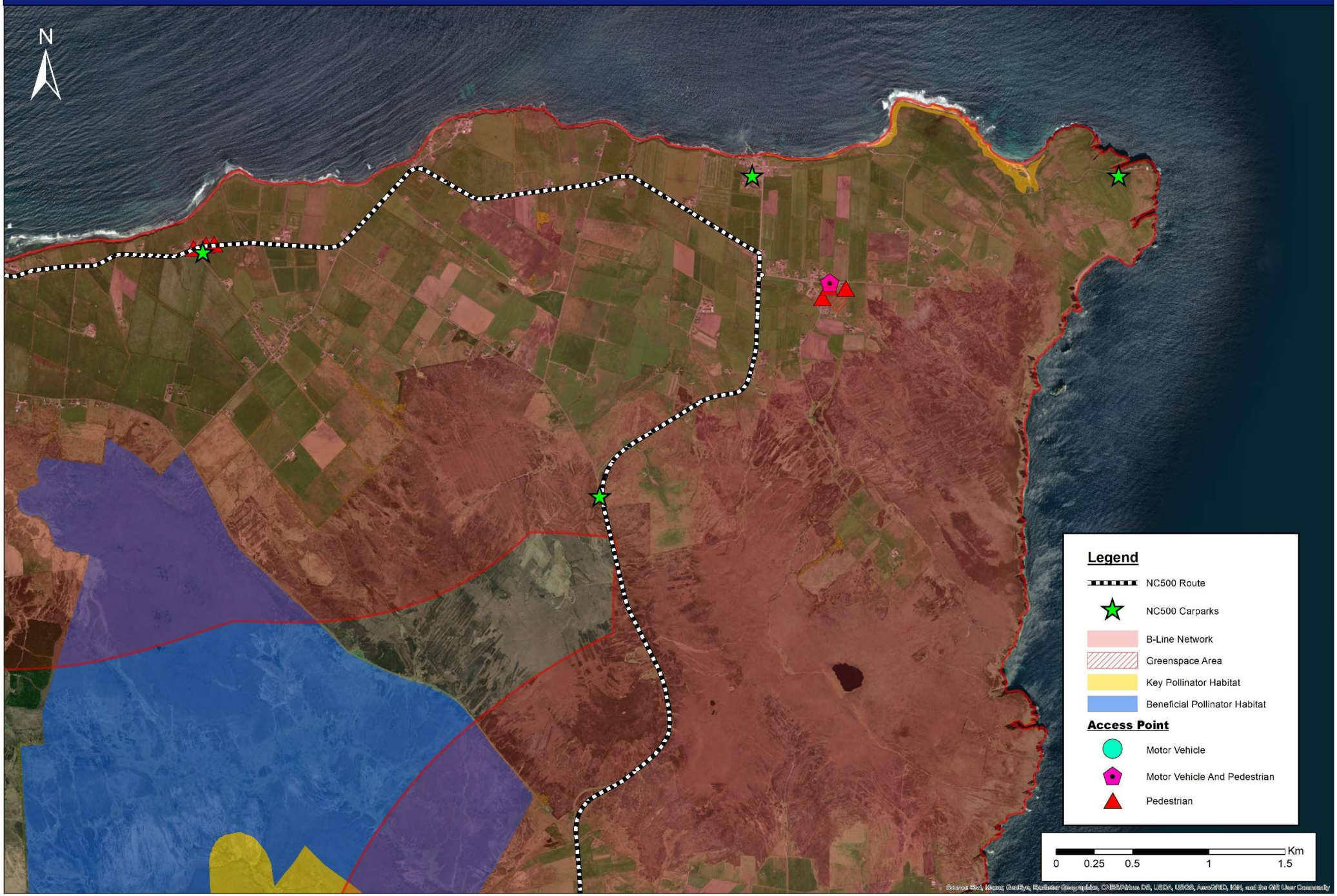
Potential actions:

Create a wildflower meadow in one of the amenity grassland areas with interpretation for visitors explaining the importance of pollinators along the NC500 and providing information about how they can help spot and protect them. Key site for visitor engagement. Provision of additional litter bin infrastructure and cycle parking. The edges of the car park would also be perfect for managing as wildflower strips. The area at ND3805473265 would be perfect for a bee bank. For areas used as picnic spots they can be managed as flowering lawns, or planted with flowering plant plugs, such as Self heal (*Prunella vulgaris*) or Sea thrift (*Armeria maritima*) to increase floral diversity whilst keeping a shorter sward.

Key carpark and layby numbers:

14 - https://goo.gl/maps/kNjiKLNyYfFuZJi5A

John O'Groats, Caithness



CASE STUDY 7: A9 verges and layby mowing regimes with BEAR Scotland

There are several examples along the A9 where there are quite wide verges that appear to be quite heavily mown. The A9 is quite different in that it is managed by BEAR Scotland and is a busy trunk road. From Tain to John o'Groats this entire length of the A9 also lies on the B-Line.

Challenges from visitor pressure:

The biggest challenges will be maintaining line of sight and road safety, however the width of some road verges, particularly around laybys would accommodate a change to a less regular cut and lift management. Some of the local towns and villages along the east coast are working to provide upgraded visitor facilities for NC500 visitors (for example at Helmsdale, Dornoch, Bonar Bridge and at the Cromarty slipways).

Existing resource for pollinators:

The road verges of the A9 hold a lot of potential to provide good foraging habitat for pollinating insects. This is a large area, but it is connected by this transport corridor and the B-Line. There are many important butterfly and bee habitats along the east coast of Scotland.

Capacity and future capacity for cars/motorhomes:

The capacity for cars and motorhomes is increasing along the A9 as more businesses and communities start providing facilities to service visitors. Potentially Highland Council may try to promote capacity in this area, this would help provide income and jobs for the communities along the east coast, some of which fall within the 20% most deprived communities in Scotland.

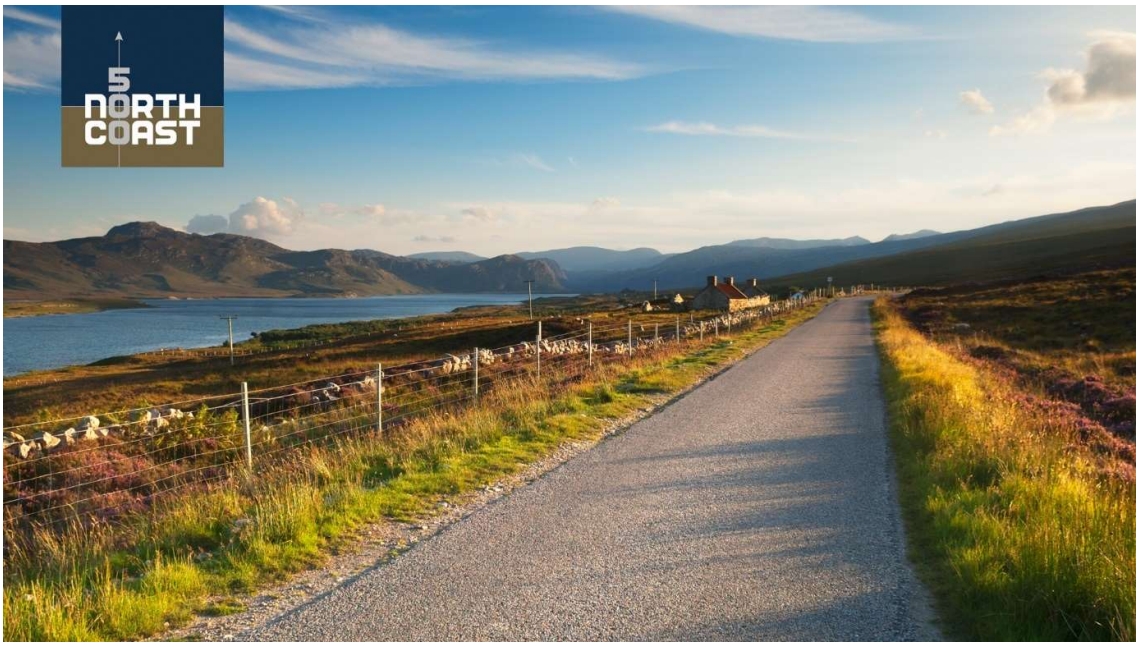
Potential actions:

Encourage BEAR Scotland to manage sections to the back of verges for pollinating insects. Plant nectar rich trees to provide screening from the busy A9 and encourage the use of green urban infrastructure where possible (such as green walls and roofs, and SUDS).

Encourage community and business developments to increase capacity for visitors, and to incorporate action for pollinators where this is feasible (such as green roofs or wildflower areas).

Key carpark and layby numbers:

1-14 – Wick to John o'Groats
371-405 Tain to Wick



NC500 B-Line skills development needs

Should changes be rolled out along all the NC500 there are many areas of skills development that could be worked into a funded project to support greenspace teams, volunteers, Highland rangers, and council staff. Some of this training could be specifically linked to managing sites, such as using scythes, mowing or bailing equipment, the planting of bulbs or trees, and health & safety whilst operating machinery or working alongside roads. There are also many experts advising on the costing and budgeting of changes to local authority greenspace management. During the COVID lockdown Buglife Scotland has provided some of this information through online workshops, and there are lots of similar online workshops or specific training courses can be provided (see landowner guidance workshops below).

Once an area is being managed for their pollinators, we recommend monitoring sites for changes in pollinator abundance. This can be achieved with volunteers through activities such as FIT counts which feed into the National Pollinator Monitoring Scheme (POMS) https://www.ceh.ac.uk/our-science/projects/pollinator-monitoring

Buglife and other conservation groups can offer local authorities and communities delivering B-Line projects training courses and support. To roll out a successful NC500 B-Line initiative, we would recommend the following training is commissioned:

- Plant identification – specific to road verges and the NC500 (delivered by Plantlife)
- Pollinator identification (delivered by Buglife)
- An Introduction to Pollinator monitoring (POMS) and FIT counts (delivered by Buglife)
- Bumblebee Identification in Caithness and Sutherland (delivered by the Bumblebee Conservation Trust)

As a result of the COVID pandemic there is now a wealth of information available online that can help landowners adapt management for pollinators. We would particularly recommend:

- *Landowner guidance workshops (for local authorities)*

Part 1 https://youtu.be/kcFBaJit3_M
Part 2 https://youtu.be/xqChkRqnAIg
Part 3 https://youtu.be/uaYBl0oPH2A

- *Meadows and Floodplains A Natural Partnership* From Pastures for Life.

Benefits of pollinator habitats for people

Connecting people with nature

There is not only a growing body of science that demonstrates connecting with nature has positive benefits to our health and wellbeing, but also that those who notice nature are more inclined to live in an environmentally friendly and sustainable way (Abi Gardner, Biodiversity and Climate Change Engagement Officer, NatureScot, *From Paths for All Blog 2021*).

There are five pathways to nature connectedness, and a number of way to make these connections;

1. Contact – engaging with nature through the senses for pleasure e.g. listening to bees, smelling wild flowers, watching the sunset.
2. Beauty – engaging with the aesthetic qualities of nature, e.g. appreciating natural scenery or engaging with nature through the arts.
3. Meaning – using nature or natural symbolism (e.g. language and metaphors) to represent an idea, thinking about the meaning of nature and signs of nature, e.g. the first butterfly of summer.
4. Emotion – an emotional bond with, and love for nature e.g. talking about, and reflecting on your feelings about nature.
5. Compassion – extending the self to include nature, leading to a moral and ethical concern for nature e.g. making ethical product choices, being concerned with animal welfare.

Think Health Think Nature is the work of the Highland Green Health Partnership, one of four area-wide partnerships developed in Scotland contributing towards "Our Natural Health Service", a programme being led by NatureScot which aims to encourage more use of the outdoors to tackle physical inactivity, mental health issues and health inequalities.

The National Rural Mental Health Forum is a strong dedicated network of over 180 organisations from third, private and public sectors, with an outreach to 500,000 people in rural Scotland. The Forum features as an action point of the Scottish Government's Mental Health Strategy (2017 – 2027) and is named in their Suicide Action Plan, Every Life Matters.

Both initiatives have been set up to support people living in the Highlands to improve their health and wellbeing; nature, pollinators and wildflowers are a fantastic way to improve mental and physical wellbeing and we hope an NC500 B-Line can be another project through which people can connect to nature across the NC500 area.

For ideas (including actions for pollinators): https://www.nature.scot/make-space-nature-spring

Improving the visitor experience:

Across Scotland, 50% of visits are undertaken for the enjoyment of scenery or landscapes. Within the Highland Council area this is raised to 87% (Colin Simpson, Principal Officer - Europe, Tourism & Film, Highland Council, *pers. comm*). This means that for a good visitor experience to be maintained along the NC500 it is essential that the special scenery and landscapes that motivate people to take this journey are undamaged and kept in a thriving condition.

Visitors will enjoy seeing and connecting with nature; we know that connecting with nature improves mental wellbeing and the same experience will be true for those visiting on holiday to our Highland communities. It is essential that when visitors reflect on their NC500 visit they remember the moment they watched a Great yellow bumblebee (*Bombus distinguendus*) or Small blue butterfly (*Cupido minimus*). We want people to share the beautiful wildflowers they saw along our coastal habitats, and not the negative visitor impacts that we know are putting visitors experience of these environments at risk.

Using pollinators to connect communities and reduce isolation:

Within the Highlands many areas have lower resident populations (and high seasonal visitor numbers). Many communities are struggling with issues such as economic hardship, social isolation, and lack of opportunities for young people. Recent research has highlighted that, faced with the on-going pandemic, many of these issues have been magnified and are also felt more acutely by rural Scottish communities (Rose Toney, *pers. comm*). Isolation and loneliness are often identified as challenges for people in rural Scotland, isolation and habitat fragmentation are also a big challenge for pollinating insects. One of the great positives about B-Lines is that they connect populations (both people and pollinators) geographically across our landscapes. At Buglife we hope that by working on B-Lines projects across Scotland we will be able to connect communities physically and socially by engaging with residents, businesses, volunteers, and land managers along B-Lines.

Supporting people living in areas of high deprivation:

Along the A9 on the east coast (Inverness, Dingwall, Alness and Wick) some communities fall within the 20% most deprived communities in Scotland (Scottish Index of Multiple Deprivation 2020). These communities rank low in comparison to the rest of Scotland on income, education, employment, health and crime. One of the big positives in these areas however is access to some fantastic natural environments close by which, with the right support, can really help people living in these communities to get outside and explore nature. B-Lines projects can engage volunteers to manage sites, building skills and confidence, or they can reach right into the heart of communities in a more passive way, by providing beautiful wildflowers. Planting wildflowers and early spring bulbs will benefit areas visually and make residential areas come alive with nature. B-Lines have been successfully delivered across the central belt – and so Buglife has a wealth of expertise around transforming challenging urban sites.

Reflection on the methodology

How well did this methodology work and how suitable is it to apply to other long-distance routes and tourist hotspots where pollinators and people interact?

Due to COVID restrictions we were unable to travel to the NC500 as part of this project, this meant this report has been entirely desk based. Overall, this has been immensely effective to assess the viability of developing an NC500 B-Line proposal.

The B-Lines are designed to be GIS based and so as long as there is access to appropriately mapped information there is a lot we can learn by looking at visitor hotspots, the B-Line and known environmental sensitivities such as special habitats or designated sites.

It would be possible to apply the same methodology to other areas where there are risks that visitor impacts might be detrimentally affecting pollinator habitat, such as in our National Parks for example. As we have mapped B-Lines across all of Scotland it would be entirely possible to repeat this process for any area.

One point of caution however would be that it took substantially longer than expected to map all the laybys and carparks along the NC500 in this way. This would need to be factored into any future project. Using Google Streetview for assessments also requires further ground truthing later as the photo images available are not currently up to date.

Impacts derived from already mapped infrastructure that could be provided in advance as a complete dataset could be easily assessed against our B-Lines routes following this methodology.

Opportunities through grant funding

This project was funded through the Better Places Green Recovery Fund from NatureScot. This fund was designed to address key issues and pressures at visitor “hot spot” sites that were experienced during 2020. These pressures included a lack of capacity for the numbers of people who visited, associated parking and traffic management challenges; very high and concentrated levels of motorhome and camping activity; and widespread issues with litter, toileting, fires and BBQs. These problems are often linked to insufficient or no infrastructure and no associated services such as rangers. They can result from poor awareness of responsible behaviour and in some cases active disregard for it. In some places, visitor numbers may simply be too high to be sustainable. Many of these issues and pressures peak at weekends and during holiday times and during good weather.

The NC500 is one of Scotland’s most popular locations with spectacular scenery along this iconic 500-mile route. Following the impact of COVID restrictions on tourism many communities and businesses are preparing for an influx of staycation holidaymakers during 2021.

To help prepare for 2021 and beyond, the Better Places Green Recovery Fund was made available to help plan and identify ways to accommodate visitors in a low impact and sustainable way. It is important to encourage their enjoyment and understanding of our special places, making connections with nature and realising the many benefits that the NC500 provides.

There are several routes for additional funding following this initial assessment, such as:

- Better Places Green Recovery Fund Round Two (£2.75 Million)
- Rural Tourism Infrastructure Fund Round Four (£6.2 Million)
- National Lottery Heritage Fund

The second round of the **Better Places Green Recovery Fund** will cover additional visitor management activity in "hot spot" locations in Scotland during the 2021 season over and above any service improvements and infrastructure already budgeted for or in place.

It will support:

Visitor management operational services: Funding for new and additional seasonal ranger and visitor management posts. The funding of staff posts is for the 2021 season only and will extend as a maximum to the end of October 2021.

Visitor infrastructure: Funding for projects that can be delivered quickly and help address visitor pressures at busy hot spot locations, including temporary or permanent infrastructure. Applicants can apply for up to a maximum of £75K.

Where these services and infrastructure can be put quickly in place (by May 2021) ready for the 2021 season, the fund is ideal for additional ranger staff posts.

The other main opportunity identified through the Better Places Green Recovery Fund is the **Rural Tourism Infrastructure Fund (RTIF)**. The £6 million Rural Tourism Infrastructure Fund was set up in 2017 to address some of these concerns and a further £3 million was announced by the Scottish Government for a third round of funding in 2020.

Administered by VisitScotland, the third round sought to build on the momentum generated by the first two rounds of funds to create a strategic network of facilities which will meet visitor and community needs as the industry moves into the recovery phase of the STERG National Action Plan. RTIF aims to provide leverage for additional and focused investment, stimulate collaboration and support the transition of Scotland to a low carbon economy.

A fourth round of RTIF is now open and will be available for projects in 2021 including parking, campervan facilities including disposal points, viewpoints and toilet provision.
https://www.visitscotland.org/supporting-your-business/funding/rural-tourism-infrastructure-fund

Successful applications must demonstrate the following:

- A visitor or community pressure point due to increase or anticipated increase in visitor numbers (which is evident along the length of the NC500)
- An enhanced visitor experience (which as this report highlights, is possible through enhancing pollinator habitat – creating beautiful nature rich areas and connecting people to the wonderful species found along the NC500)
- A sustainable approach to the planning design, build and management of the project (such as considering pollinator needs alongside the needs of visitors and vehicle management)
- Effective partnerships and collaboration (with communities and NGOs such as Buglife)
- Project viability and deliverability
- Community capacity building (including skills development to monitor and manage grassland sites)

The **National Lottery Heritage Fund** (NLHF) opened again for applications in February 2021. It will prioritise heritage projects that will; boost the local economy, encourage skills development and job creation, support wellbeing, create better places to live, work and visit, and improve the resilience of organisations working in heritage.

Every NLHF project will need to achieve the Lottery's inclusion outcome, 'a wider range of people will be involved in heritage'. They will also expect all projects to demonstrate that they are building long-term environmental sustainability into their plans, as appropriate.

We hope this report outlines some of the work that could be packaged as a fantastic Better Places, RTIF or NHLF project, including, but not limited to:

- A full audit of the 237 laybys and carparks (plus road verges) along the NC500 B-Line to identify opportunities for pollinators at all locations
- Upgrading layby and carpark infrastructure at sites already identified to enhance the responsible use of these sites by visitors
- Identify and deliver 40ha+ of meadow creation, hedging or nectar rich tree planting at larger sites along the route, locating these interventions to also benefit visitor experience and visitor management along the NC500
- Upgrading Highland Council equipment to enable road verge management that benefits pollinating insects and provide equipment to community groups and volunteers
- Installation of signage and interpretation at key pollinator sites along the route – such as at dune/beach access points asking people to protect habitats particularly at important times for foraging insects, or in laybys asking people to mind the verges and turn their engines off
- Provision of skills development and training
- Monitoring of improved sites to evaluate impacts for pollinators and visitor experience along the NC500

Links to other projects

There are so many exciting projects underway or in development in the Highlands. Any development of an NC500 B-Line would need to be complimentary to these projects.

- Species on the Edge (Rethink Nature and NatureScot)
- Scrabster Harbour Small Blue Butterfly Project (Butterfly Conservation)
- Great Yellow Bumblebee conservation (Bumblebee Conservation Trust)
- Plantlife saving meadows and road verge projects (Plantlife Scotland)
- North West Highlands Geopark
- Wester Ross Biosphere Reserve
- Flow Country application to become an UNESCO World Heritage Site
- Coigach & Assynt Living Landscape
- Green Health Partnership: Think Health, Think Nature
- Caithness Biodiversity Group, Caithness wildflower verges

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Nicole Wallace, Acting Head of Planning and Environment

Tracy Urry, Head of Roads and Transport

Andrew Puls, Acting Environment Manager

Appendix 1

Table 3: The 237 carparks and laybys that lie within the B-Line (out of 405 mapped along the entire NC500 route)

Number	Description	Type	Grid reference	Google link
1	Castle Sinclair Car Park	Car Park off road	ND384546	https://goo.gl/maps/6q2u7K8SVSKaWGcc8
2	Reiss Sands / Wick Golf Club	car park end of road	ND343555	https://www.google.com/maps/@58.4835138,-3.1264424,3a,75y,69.56h,90t/data=!3m7!1e1!3m5!1ss8qP0ffrpLS8gIKfQgkgGg!2e0!6s%2F%2Fgeo2.ggpht.com%2Fcbk%3Fpanoid%3Ds8qP0ffrpLS8gIKfQgkgGg%26output%3Dthumbnail%26cb_client%3Dmaps_sv.tactile.gps%26thumb%3D2%26w%3D20
3	A99 South Of Quoys of Reiss	Layby on A99	ND333562	https://goo.gl/maps/hg2JWjgZayjubaTE7
4	A99 North Of Quoys of Reiss	Layby	ND330577	https://goo.gl/maps/KMwr2TBb92pmBb319
5	A99 North of Lyth Rd End	Layby	ND335594	https://goo.gl/maps/LsU1vWXg2dNRzSXz5
6	Keiss Beach	Parking place	ND343601	https://goo.gl/maps/BYpZ8zsr8QpFx9o18
7	A99 North of Keiss	Layby	ND359622	https://goo.gl/maps/t7w8Wuy1ot7xx58h9
8	A99 parking near Nybster Broch	Layby	ND365628	https://goo.gl/maps/K7DTQggHKFBeWx1d6
9	Car Park North of Nyster Broch	Car Park off road	ND370635	https://goo.gl/maps/aJF6Hd58DihDQeJWA
10	A99 Layby parking near Auckengill	Layby	ND375653	https://goo.gl/maps/7aEQ4zbd6ArF9sh97
11	A99 Layby north of Buchollie Castle	Layby	ND375664	https://goo.gl/maps/uTcR9RMRDxM7g3QP6
12	A99 nr Tofts	Layby /stopping place	ND368685	https://goo.gl/maps/ytnWSDjjHFWH9tGSA
13	Old road south of JOG on A99	Old road offset	ND370712	https://goo.gl/maps/e9s2npXyBd4ckbFeA
14	John o'Groats Visitor centre	car park	ND380733	https://goo.gl/maps/kNjiKLNyYfFuZJi5A
15	Duncansby Head lighthouse car park	car park	ND404733	https://goo.gl/maps/7pgV3H7qXYrgSE3p6
16	Parking for Canisbay Church and Graveyard	Side of A836	ND344728	https://goo.gl/maps/jrh2GcHRb6jk9yBF9
17	Layby A836 Gills Bay	Layby	ND330726	https://goo.gl/maps/fPXdoUu4Sjxj2E576
18	A836 Laby East Mey	Layby	ND315734	https://goo.gl/maps/aVUH5RPXw1Z1mp8LA
19	A836 Layby near Castle Mey	Layby	ND294731	https://goo.gl/maps/6WmkJfzq1zHboTiT6
20	Parking for Mey Market	Commercial parking?	ND290728	https://goo.gl/maps/dyH9VRXM1CY1BQWF6
21	Mey on road parking A836	On road parking	ND288727	https://goo.gl/maps/UsfomK25HMtMk5JK7
22	A836 Layby West Mey	Layby	ND276725	https://goo.gl/maps/nDoyf2tJpjpK7p9a9

Number	Description	Type	Grid reference	Google link
23	Dunnet Head B855	Public Parking	ND202765	https://goo.gl/maps/qM5zbiNtfUJR1Y4n9
24	West Dunnet Pier	Public Parking	ND207713	https://goo.gl/maps/g2JwJ1JSFviQuPk88
26	Dunnet Bay Sands main parking	Public Parking	ND219705	https://goo.gl/maps/fdQyyXN3My7tWzaMA
27	Dunnet Forest Parking	Public Parking	ND220698	https://goo.gl/maps/wkQUy6tgaUUpeTj87
28	Dunnet Bay West Parking	Public Parking	ND216688	https://goo.gl/maps/WStMxuzUqxzQgS2o8
29	A836 East of Castletown	Layby	ND203680	https://goo.gl/maps/JH2z9FZ9gayVfkPq6
30	Castletown Beach	Public Carpark	ND201681	https://goo.gl/maps/n2Jb3BEHN5JsnpQp8
31	Castletown Harbour	old road	ND196686	https://goo.gl/maps/Htmvjes22UTueLRA6
32	Castlehill Harbour Road parking	public parking	ND195685	https://goo.gl/maps/7443nnh1cCEk1Yb97
33	Castletown Trail Street Public Pakring	Public Parking	ND192680	https://goo.gl/maps/a61gmTw4sZ9AH9NUA
34	A836 East of Thurso	Layby	ND132681	https://goo.gl/maps/obwKDiEKZmnHHBGT7
35	Pentland Crescen Car Park Thurso	Public Carpark	ND117686	https://goo.gl/maps/oJLpSKT6tJFPfFWv9
36	Janet St Car Park Thurso	Public carpark	ND116680	https://goo.gl/maps/upEsUu7n7qVN5Nvn7
37	Bridge St Car park Thurso	public car park	ND117682	https://goo.gl/maps/RvrqtKxf3QJYnpN87
38	A836 Laybe West of Thurso	Layby	ND087692	https://goo.gl/maps/nRZhdo77U48ntBzE6
39	A836 Layby West of Reay	Layby	NC951645	https://goo.gl/maps/gXtaGAdQAQXJ1GbEA
40	A836 Layby View	Layby	NC932645	https://goo.gl/maps/mWBH7ATRS774uvoz6
41	A836 parking Mackay Country landmark	Layby	NC919644	https://goo.gl/maps/1oX3SvYU6tU8iCYs8
42	A836 Layby East of Melvich (both sides of road)	Layby / old road	NC901638	https://goo.gl/maps/acJ9q4Gu1NDLvFV7A
43	A836 Layby Near Melvich Beach	Layby	NC882646	https://goo.gl/maps/hjVEgZ6Hf5NRWCmz6
44	A836 Stopping point Melvich	communal space	NC876650	https://goo.gl/maps/HJ5gmAwn6C5gzybs8
58	Invernaver	Roadside Area	NC710602	https://goo.gl/maps/eVgaTUhfKyxQuUbR9
59	Lochan Duinte	Public parking	NC714585	https://goo.gl/maps/KnNyknXBiChK1cJz9
60	B871 Layby	Layby	NC711576	https://goo.gl/maps/WipmVUVKrmBCFqwZ6
61	A836 Layby after Achnabourin	Layby	NC706573	https://goo.gl/maps/jckm3awMyy7u9eD47
62	A836 Layby Lochan Leacach	Layby	NC688572	https://goo.gl/maps/UPTgCv2MG9LVTSgM7
71	Achuvoldrach Road	Roadside Parking	NC568585	https://goo.gl/maps/RcqzEX389eCqntMXA

Number	Description	Type	Grid reference	Google link
72	A838 Layby near An-dubh Loch	Layby	NC552595	https://goo.gl/maps/BjXiJZYfxVxb1JZN8
73	Layby A838	Layby	NC540600	https://goo.gl/maps/bJDe3xLdmDfjotqs9
74	A838 Layby	Layby	NC535600	https://goo.gl/maps/fSHRrrGtDuuBDro5A
75	A838 Roadside Stop (tourist Attaction Moine House)	Old road	NC517601	https://goo.gl/maps/fRxCJjvRSG7D3ioD7
76	A838 Old Layby	Layby	NC491600	https://goo.gl/maps/Q5SrhnaqBZmNLW4s7
77	A838 Layby East Hope	Layby	NC477602	https://goo.gl/maps/oMCmDGmJfvLZq2Y3A
80	A838 Offroad	Offroad	NC467597	https://goo.gl/maps/YXYZyyB6omLv5GAi8
81	A838 Near Heilam	side of road unofficial	NC457603	https://goo.gl/maps/KJuwQ7zDrmzm3SVi6
82	A838 Near Heilam	Layby	NC452599	https://goo.gl/maps/9r33sx59ggFgJxTE6
83	A838 Side of Road	side of road unofficial	NC444579	https://goo.gl/maps/4e3y3VdbYxCjdiiv7
84	Ardneakie Lime Kilns	End of Road	NC449597	https://goo.gl/maps/Ktfyb3yohKyGY2TQ6
85	A838 Side of Road	Side of Road	NC449597	https://goo.gl/maps/mrzM73wdVkmgzAL3A
86	A838 Edge of Road	Edge of Road	NC442635	https://goo.gl/maps/4GuM9HGjn2SUuZoZ6
87	Off Road to Rispond Bay	Side of Road	NC444652	https://goo.gl/maps/XcucRmsg3899pmNJA
88	A838 Ceannabeinn e Beach	Parking place	NC443653	https://goo.gl/maps/7rPcB83mJzednpWy8
89	A838 Ceannabeinn e Township trail	Side of Road	NC436657	https://goo.gl/maps/qHgaYXSUfYmRKFz27
90	Smoo Cave	Public Parking	NC417671	https://goo.gl/maps/jnCHvEojsz4461Hq8
91	Sango Sands Visitor Centre	Parking	NC407676	https://goo.gl/maps/MCGTdxk8UMnBfpYJ9
92	Durness Village Parking	Public Parking	NC403677	https://goo.gl/maps/qK5XNJTFULQvFEfj7
93	Balnakeil Craft Village	Public Parking	NC393680	https://goo.gl/maps/My9cVPPeHwKz2DtA7
94	Balnakeil Car Park	Public Carpakrk	NC391686	https://goo.gl/maps/pT63yEMLBh5miTTZA
95	Keodale /Kyles of Durness	Side of road	NC384657	https://goo.gl/maps/5cop5tjFEmqGwc7N8
98	A838 Layby	Layby	NC359605	https://goo.gl/maps/H5jwHiX45WMrCUi38
101	A838 Nr Loch Taebhaidh	Side of Road	NC284548	https://goo.gl/maps/zNRxwqU6wdF6rs9P6
102	A838 Parking East of Riconoch	Side of Road	NC266530	https://goo.gl/maps/TCTW1zFW6TgBCktz6
103	Shegra	Side of road	NC184603	https://goo.gl/maps/R9AoHVM7LwfB6nmTA
104	Community parking Balchrick	Carpark	NC193600	https://goo.gl/maps/EhQbPn5rcJMWrrnXA
105	Near Oldshore Beg	End of Road	NC186592	https://goo.gl/maps/9eoqJetUazPFqXtN6
106	Kinlochbervie /LochClash Beach	Side of road	NC219565	https://goo.gl/maps/k9jsaLrWz1nRrHpx7
108	Picnic near Kinlochbervie	Layby	NC229562	https://goo.gl/maps/NjtfHJUUsPjjfDLd6

Number	Description	Type	Grid reference	Google link
	/ Macbeath Memorial			
109	B801 Achriesgill	Layby	NC253539	https://goo.gl/maps/xZg4zjNnc9QuUM7q7
119	A894 Layby	Layby	NC192458	https://goo.gl/maps/z25JMqbw4ci7esvh8
121	A894 Layby	Layby	NC187451	https://goo.gl/maps/TWAhAw2LypFM5Uch6
124	A894	layby	NC158434	https://www.google.co.uk/maps/@58.3405574,-5.1467638,3a,75y,302.55h,78.2t/data=!3m6!1e1!3m4!1sFozBo0mzuMf_DWiLDtpRqA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
125	A894	layby	NC165421	https://www.google.co.uk/maps/@58.3294249,-5.134154,3a,75y,41.74h,89t/data=!3m6!1e1!3m4!1s8IfwLfluygLoYK2vCBzQMA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
126	A894	layby	NC171396	https://www.google.co.uk/maps/@58.3071701,-5.1219421,3a,75y,308.54h,72.53t/data=!3m6!1e1!3m4!1scQQcgr5FmB04QeX65glVQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
127	A894	layby	NC191377	https://www.google.co.uk/maps/@58.2906696,-5.0863514,3a,75y,258.88h,87.01t/data=!3m6!1e1!3m4!1s8Tnr5VZx6e9LS7bJPnmP9g!2e0!7i13312!8i6656?hl=en-GB&authuser=0
128	A894	layby	NC199367	https://www.google.co.uk/maps/@58.2817303,-5.071294,3a,75y,319.25h,77t/data=!3m6!1e1!3m4!1s3XFVwDnwY7UbOVbBB9GlZA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
129	A894	layby	NC202362	https://www.google.co.uk/maps/@58.2780269,-5.0660693,3a,75y,334.13h,79.9t/data=!3m6!1e1!3m4!1sM9EZhcxhwoMA_6LDdMDzMw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
130	A894	carpark	NC211350	https://www.google.co.uk/maps/@58.2675584,-5.0510014,3a,75y,247.25h,82.04t/data=!3m6!1e1!3m4!1sJhUSJkKC3Lyq2oeDYTUsdA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
131	A894	carpark	NC225338	https://www.google.co.uk/maps/@58.257819,-5.0266499,3a,75y,193.6h,76.95t/data=!3m6!1e1!3m4!1sNCr2FUQh5kZJsHGbTztL0w!2e0!7i13312!8i6656?hl=en-GB&authuser=0
132	A894	carpark	NC227336	https://www.google.co.uk/maps/@58.2553189,-5.0222718,3a,75y,39.46h,98.13t/data=!3m6!1e1!3m4!1s0ABiUUXSJhyaRm2n9Czmcg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
133	A894	hardstanding	NC231330	https://www.google.co.uk/maps/@58.2506588,-5.0157508,3a,75y,270.7h,79.11t/data=!3m6!1e1!3m4!1s_4_2Hh1aLb5IcLpe5x1cXg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
134	A894	layby	NC235320	https://www.google.co.uk/maps/@58.241166,-5.0088224,3a,75y,63.12h,78.71t/data=!3m6!1e1!3m4!1s6JKvaOOM78sL33MmQP8_Yw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
135	B869	hardstanding	NC196330	https://www.google.co.uk/maps/@58.2493392,-5.0751658,3a,75y,73.56h,72.22t/data=!3m6!1e1!3m4!1s0cHlmyebxuTmBOFY_SqUMw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
136	B869	hardstanding	NC180328	https://www.google.co.uk/maps/@58.2464969,-5.102097,3a,75y,302.01h,72.95t/data=!3m6!1e1!3m4!1suXs2WqYDRpRmzL5KdhWyiw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
137	B869	layby	NC121327	https://www.google.co.uk/maps/@58.2434059,-5.2023672,3a,75y,179.03h,76.31t/data=!3m6!1e1!3m4!1stFeIj2XzH99k8Ys7tK7vTQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
138	B869	carpark	NC119328	https://www.google.co.uk/maps/@58.2443903,-5.2050538,3a,75y,23.8h,75.92t/data=!3m6!1e1!3m4!1ss_UNcnOrl-n2ofPJUe8dvA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
141	B869	layby	NC077254	https://www.google.co.uk/maps/@58.1758004,-5.2707109,3a,75y,358.79h,76.74t/data=!3m6!1e1!3m4!1s7nFVB1gvEw8yt3KGcWO9nQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
142	A837	layby	NC109238	https://www.google.co.uk/maps/@58.1624978,-5.2148062,3a,75y,286.53h,83.63t/data=!3m6!1e1!3m4!1spkBmN2FgO6HIOvG_or2mJQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
170	A835	Layby	NC188093	https://www.google.co.uk/maps/@58.0363733,-5.0697037,3a,75y,15.5h,80.72t/data=!3m6!1e1!3m4!1sCzRq-tkx4e2Zwrp7CQgYCA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
171	A835	Layby	NC184078	https://www.google.co.uk/maps/@58.022768,-5.0759357,3a,75y,54.79h,91.8t/data=!3m6!1e1!3m4!1sUCXwrVwwWwe-YmsqpW9bjw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
172	A835	Layby	NC183076	https://www.google.co.uk/maps/@58.0205408,-5.0770819,3a,75y,359.18h,82.41t/data=!3m6!1e1!3m4!1sMpGFv

Number	Description	Type	Grid reference	Google link
				5OQNYyd7yE13O274A!2e0!7i13312!8i6656?hl=en-GB&authuser=0
173	A835	LAYBY	NC175062	https://www.google.co.uk/maps/@58.0073609,-5.0890814,3a,75y,53.79h,89.27t/data=!3m6!1e1!3m4!1sT4XGKVjGFYG8flOAB5KRCQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
174	A835	Layby	NC172058	https://www.google.co.uk/maps/@58.0038981,-5.0945085,3a,75y,78.09h,70.93t/data=!3m6!1e1!3m4!1sUX52ETliELrZnt3ObH9NkQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
175	A835	Layby	NC169056	https://www.google.co.uk/maps/@58.001958,-5.1004421,3a,75y,95.92h,73.13t/data=!3m6!1e1!3m4!1sFbb3MaBYp2ZtkjLY2qj8QA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
176	A835	Layby	NC160042	https://www.google.co.uk/maps/@57.9892574,-5.1135017,3a,75y,345.07h,67.38t/data=!3m6!1e1!3m4!1sqw9tKWI4jbqLqeD9H6MmgQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
177	A835	Layby	NC157035	https://www.google.co.uk/maps/@57.9828844,-5.1184362,3a,75y,16.12h,92.74t/data=!3m6!1e1!3m4!1sR9da5WTfo5tBkau4sz1XSg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
178	A835	Layby	NC151021	https://www.google.co.uk/maps/@57.9702708,-5.1264885,3a,75y,71.38h,84.14t/data=!3m6!1e1!3m4!1s5dys8uQrJ6EHtsd_paD35g!2e0!7i13312!8i6656?hl=en-GB&authuser=0
184	A835	Layby	NH138936	https://www.google.co.uk/maps/@57.8926816,-5.1422121,3a,75y,339.9h,90.76t/data=!3m6!1e1!3m4!1sPvShzH7_EMtugdOzqH8Ldw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
186	A835	Layby	NH151920	https://www.google.co.uk/maps/@57.8788197,-5.1184696,3a,75y,281.23h,88.59t/data=!3m6!1e1!3m4!1sUY78NOsQpAQMo5hilq6rQw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
189	A835	Layby	NH174884	https://www.google.co.uk/maps/@57.8477323,-5.0775651,3a,75y,290.13h,75.52t/data=!3m6!1e1!3m4!1shUMhVlRuADVVt5o12Ak0BQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
190	A835	Layby	NH174879	https://www.google.co.uk/maps/@57.8426441,-5.0766849,3a,75y,335.62h,91.59t/data=!3m6!1e1!3m4!1sMLrnLdCT_oGwfrQSukM7SA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
191	A835	Layby	NH176871	https://www.google.co.uk/maps/@57.8360746,-5.0724258,3a,75y,10.46h,91.69t/data=!3m6!1e1!3m4!1sKfMF2_nZvMuevgEP8xs76Q!2e0!7i13312!8i6656?hl=en-GB&authuser=0
192	A835	carpark	NH181852	https://www.google.co.uk/maps/@57.8208836,-5.0630135,3a,75y,102.68h,77.82t/data=!3m6!1e1!3m4!1sEOS6kYVDBqpdZ4p0nefOVQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
193	A835	Layby	NH184839	https://www.google.co.uk/maps/@57.8078371,-5.0567996,3a,75y,311.85h,78.46t/data=!3m6!1e1!3m4!1sOMWX4ylEyVudHANkVrA1UQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
214	A832	layby	NH107868	https://www.google.co.uk/maps/@57.8314077,-5.1894653,3a,75y,146.9h,73.89t/data=!3m6!1e1!3m4!1sQPSKpWcVpJDjlAn6DChlFQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
215	A832	layby	NH085882	https://www.google.co.uk/maps/@57.8429189,-5.2267585,3a,75y,152.11h,75.98t/data=!3m6!1e1!3m4!1srMPqm9rmCP7H95R1d8q_Bg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
216	A832	carpark	NH078885	https://www.google.co.uk/maps/@57.8452221,-5.2392607,3a,75y,75.71h,82.41t/data=!3m6!1e1!3m4!1sc3KxyFzxbROFgeJ0OT6XaQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
217	A832	layby	NH071888	https://www.google.co.uk/maps/@57.8475516,-5.2506707,3a,75y,325.5h,83.11t/data=!3m6!1e1!3m4!1sDasuQNFnIdlzMwb4MDy1eQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
218	A832	carpark	NH071889	https://www.google.co.uk/maps/@57.8479348,-5.2524458,3a,75y,85.02h,72.33t/data=!3m6!1e1!3m4!1s2rK0KKcXAoBrylhwF5NzFg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
219	A832	carpark	NH002927	https://www.google.co.uk/maps/@57.8795196,-5.3710453,3a,75y,45.76h,81.28t/data=!3m6!1e1!3m4!1sliEFUKEWZcSJrRlyD94zKg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
220	A832	hardstanding	NG993931	https://www.google.co.uk/maps/@57.88262,-5.3860401,3a,75y,109.77h,84.59t/data=!3m6!1e1!3m4!1sLNeV8HvsOracsq-zjgUjEg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
221	A832	layby	NG981934	https://www.google.co.uk/maps/@57.8844804,-5.4061377,3a,75y,127.92h,68.86t/data=!3m6!1e1!3m4!1scy1-

Number	Description	Type	Grid reference	Google link
				u05r2M6wd4h3PnuCmg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
222	A832	layby	NG961929	https://www.google.co.uk/maps/@57.8793762,-5.4398586,3a,75y,2.39h,77.93t/data=!3m6!1e1!3m4!1sRm30vFYi5s71GS8S2HmYlw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
223	A832	hardstanding	NG961915	https://www.google.co.uk/maps/@57.8650489,-5.4368982,3a,75y,333.09h,73.08t/data=!3m6!1e1!3m4!1s6-1X-oNTZc174z7JxdPTtQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
224	A832	carpark	NG952899	https://www.google.co.uk/maps/@57.8519413,-5.4523929,3a,75y,68.38h,71.91t/data=!3m6!1e1!3m4!1siJyaFDqZ7KzfQ_OGIQW8VA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
225	A832	hardstanding	NG940901	https://www.google.co.uk/maps/@57.8530554,-5.473106,3a,75y,74.72h,89.56t/data=!3m6!1e1!3m4!1spRchwBsnMqyqmYWD6DqfXQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
226	A832	hardstanding	NG938901	https://www.google.co.uk/maps/@57.8528333,-5.4752229,3a,75y,149.75h,75.4t/data=!3m7!1e1!3m5!1shenOdZ9uaajL5qRJChY9yA!2e0!6s%2F%2Fgeo0.ggpht.com%2Fcbk%3Fpanoid%3DhenOdZ9uaajL5qRJChY9yA%26output%3Dthumbnail%26cb_client%3Dmaps_sv.tactile.gps%26thumb%3D2%26w
227	A832	hardstanding	NG938900	https://www.google.co.uk/maps/@57.8525223,-5.4763132,3a,75y,91.69h,83.24t/data=!3m6!1e1!3m4!1sg9J6b4M9xA3Lt96e5PwjLA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
228	A832	hardstanding	NG917913	https://www.google.co.uk/maps/@57.8627226,-5.513022,3a,75y,99.05h,85.91t/data=!3m6!1e1!3m4!1sDEjAUK9-1lSB0SH_j4ps3A!2e0!7i13312!8i6656?hl=en-GB&authuser=0
229	A832	hardstanding	NG916914	https://www.google.co.uk/maps/@57.8634951,-5.5153069,3a,75y,89.22h,89.63t/data=!3m7!1e1!3m5!1sUdjfPi1jgrr_jOGSqCLjkQ!2e0!6s%2F%2Fgeo0.ggpht.com%2Fcbk%3Fpanoid%3DUdjfPi1jgrr_jOGSqCLjkQ%26output%3Dthumbnail%26cb_client%3Dmaps_sv.tactile.gps%26thumb%3D2%26w
230	A832	hardstanding	NG914914	https://www.google.co.uk/maps/@57.8640927,-5.518291,3a,75y,83.8h,72.66t/data=!3m6!1e1!3m4!1sidnZuhAUGwP3FAeKginZaw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
231	A832	hardstanding	NG912915	https://www.google.co.uk/maps/@57.8641597,-5.520307,3a,75y,47.85h,74.25t/data=!3m6!1e1!3m4!1sJcq3IrEWmLisLi1mCni4Vg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
232	Aultbea	carpark	NG890901	https://www.google.co.uk/maps/@57.8504878,-5.5577037,3a,75y,77.05h,75.3t/data=!3m6!1e1!3m4!1sIU6pbWfNgyboKUhUp-qGUQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
233	Aultbea	carpark	NG876873	https://www.google.co.uk/maps/@57.8248339,-5.5767884,3a,75y,321.94h,66.7t/data=!3m6!1e1!3m4!1sh5AfsKaygyJdZpOfvaOmmA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
234	Aultbea	carpark	NG871848	https://www.google.co.uk/maps/@57.8027493,-5.5828184,3a,75y,339.31h,71.14t/data=!3m6!1e1!3m4!1sFmqEa1HlTZ6Bvo6fFd2XUQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
235	Aultbea	layby	NG866823	https://www.google.co.uk/maps/@57.779538,-5.5894919,3a,75y,60.07h,72.41t/data=!3m6!1e1!3m4!1sZzuJH5vEzjOlQ556m4z79g!2e0!7i13312!8i6656?hl=en-GB&authuser=0
237	Poolewe	hardstanding	NG859789	https://www.google.co.uk/maps/@57.7490806,-5.5983533,3a,75y,358.41h,66.41t/data=!3m6!1e1!3m4!1swe8swQLzS8vF8OTUIEKi8A!2e0!7i13312!8i6656?hl=en-GB&authuser=0
238	Gairloch	carpark	NG804774	https://www.google.co.uk/maps/@57.7323527,-5.6897094,3a,75y,301.84h,67.25t/data=!3m6!1e1!3m4!1s4TFQMZPtSjk4fjvlBUjUOw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
239	Charlestown	carpark	NG805759	https://www.google.co.uk/maps/@57.7192707,-5.6865813,3a,75y,305.4h,74.88t/data=!3m6!1e1!3m4!1siCTPtnjSujfFUhpgjcJgNA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
240	Charlestown	carpark	NG807756	https://www.google.co.uk/maps/@57.7164977,-5.6833015,3a,75y,345.49h,74.99t/data=!3m6!1e1!3m4!1soVaLWvueSBnEIqaEFWhyGA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
241	A832	hardstanding	NG811747	https://www.google.co.uk/maps/@57.7085722,-5.6757657,3a,75y,315.1h,86.71t/data=!3m6!1e1!3m4!1sFoadRYthhTqVBVvIlVlUWQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
242	A832	hardstanding	NG813743	https://www.google.co.uk/maps/@57.7054969,-5.6720515,3a,75y,4.27h,74.76t/data=!3m6!1e1!3m4!1s9chysQtofvZ3SL9dL0N2Qw!2e0!7i13312!8i6656?hl=en-GB&authuser=0

Number	Description	Type	Grid reference	Google link
243	A832	hardstanding	NG817738	https://www.google.co.uk/maps/@57.7014211,-5.6652883,3a,75y,8.31h,70.52t/data=!3m6!1e1!3m4!1s3OEommg-GjRuc0T6i5fowg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
248	Talladale	layby	NG943693	https://www.google.co.uk/maps/@57.6672303,-5.4491849,3a,75y,293.95h,87.12t/data=!3m6!1e1!3m4!1shxGEATnQbL7mWrsbT1-uTw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
249	Talladale	carpark	NG951689	https://www.google.co.uk/maps/@57.6637906,-5.4361853,3a,75y,41.99h,62.13t/data=!3m6!1e1!3m4!1siBhy-FYqnHOhyYUtSOyStg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
250	A832	carpark	NG979672	https://www.google.co.uk/maps/@57.6497048,-5.3869959,3a,75y,0.28h,71.68t/data=!3m6!1e1!3m4!1sF1A4HkpHnPaDDHL4cnZ-jg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
251	Glas leitre	carpark	NH001650	https://www.google.co.uk/maps/@57.6302843,-5.3480315,3a,75y,330.06h,82.11t/data=!3m6!1e1!3m4!1sVzXXWcBpSNmInWgD9ELG3Q!2e0!7i13312!8i6656?hl=en-GB&authuser=0
252	Cromsaig	layby	NH024609	https://www.google.co.uk/maps/@57.5951765,-5.3070643,3a,75y,1.43h,72.07t/data=!3m6!1e1!3m4!1so9jztZG3YzyYNUef6PQKfw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
253	Cromasaig	carpark	NH002581	https://www.google.co.uk/maps/@57.5691246,-5.3418975,3a,75y,35.04h,72.62t/data=!3m6!1e1!3m4!1s9VJn8ulbIKg70UPqVF392A!2e0!7i13312!8i6656?hl=en-GB&authuser=0
254	Cromasaig	carpark	NG977578	https://www.google.co.uk/maps/@57.5648848,-5.3831273,3a,75y,339.13h,78.08t/data=!3m6!1e1!3m4!1sbrKycrXylkEDp6gWTjGV3Q!2e0!7i13312!8i6656?hl=en-GB&authuser=0
255	Torridon	carpark	NG957568	https://www.google.co.uk/maps/@57.5551752,-5.4143099,3a,75y,305.68h,81.23t/data=!3m6!1e1!3m4!1sBT9xQ7dqaF5a5mQ-_zkbWg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
256	Torridon	hardstanding	NG935566	https://www.google.co.uk/maps/@57.5526909,-5.4528132,3a,75y,246.7h,85.56t/data=!3m6!1e1!3m4!1sM1CYwbs4Yk-Z4OVkbv8oDw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
257	Torridon	hardstanding	NG934566	https://www.google.co.uk/maps/@57.5527644,-5.4531961,3a,75y,128.78h,65.71t/data=!3m6!1e1!3m4!1spsfVkMhgCQ3W87t2Le5uxw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
258	Annat	hardstanding	NG902549	https://www.google.co.uk/maps/@57.5354227,-5.5064669,3a,75y,301.3h,81.29t/data=!3m6!1e1!3m4!1sROHyFFiDTWSK1ZPdUTeqXw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
259	Annat	hardstanding	NG892543	https://www.google.co.uk/maps/@57.5299714,-5.5230444,3a,75y,353.95h,75.66t/data=!3m6!1e1!3m4!1s4155yok2gaNro9PnB7fJvA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
260	Balgy	hardstanding	NG874543	https://www.google.co.uk/maps/@57.5287181,-5.552016,3a,75y,32.56h,86.47t/data=!3m6!1e1!3m4!1sSkAVKYNN-WgpH8dEyITboA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
261	Balgy	hardstanding	NG865542	https://www.google.co.uk/maps/@57.5275313,-5.5666879,3a,75y,21.54h,68.38t/data=!3m6!1e1!3m4!1sONEkJ_Ixh_Yp8KtOw9Z0ew!2e0!7i13312!8i6656?hl=en-GB&authuser=0
284	Tornapress	layby	NG836422	https://www.google.co.uk/maps/@57.4191213,-5.606896,3a,75y,264.73h,76.37t/data=!3m6!1e1!3m4!1sOr-hJqUYGDRrxYyx288e2Q!2e0!7i13312!8i6656?hl=en-GB&authuser=0
285	Tornapress	layby	NG832409	https://www.google.co.uk/maps/@57.4067308,-5.6104381,3a,75y,253.38h,68.45t/data=!3m6!1e1!3m4!1sf8SQqIcGNBbSQCmJckxo8Q!2e0!7i13312!8i6656?hl=en-GB&authuser=0
286	A896	hardstanding	NG874406	https://www.google.co.uk/maps/@57.4059841,-5.5400804,3a,75y,308.08h,81.63t/data=!3m6!1e1!3m4!1s2hWgtTCydme2VtpXJyMqLg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
288	Lochcarron	layby	NG912406	https://www.google.co.uk/maps/@57.4081738,-5.4766404,3a,75y,163.43h,82.31t/data=!3m6!1e1!3m4!1s3OL2j4ZedcwX_YbRnXbPtg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
289	Lochcarron	carpark	NG914412	https://www.google.co.uk/maps/@57.4139386,-5.4737954,3a,75y,136.69h,72.77t/data=!3m6!1e1!3m4!1sbvrlYHP5yL7_LNSNsV4g1Q!2e0!7i13312!8i6656?hl=en-GB&authuser=0
290	Strathcarron	layby	NG931431	https://www.google.co.uk/maps/@57.4314063,-5.4469999,3a,75y,229.85h,71.79t/data=!3m6!1e1!3m4!1sv5tiwRxP2nx_2Eva4pp2CA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
301	Achanalt	layby	NH208605	https://www.google.co.uk/maps/@57.5997574,-4.9987472,3a,75y,197.08h,69.8t/data=!3m6!1e1!3m4!1siTR_6ypMngWdRPOpKTxLiw!2e0!7i13312!8i6656?hl=en-GB&authuser=0

Number	Description	Type	Grid reference	Google link
302	Achanalt	layby	NH222609	https://www.google.co.uk/maps/@57.6031157,-4.9763322,3a,75y,261.58h,81.01t/data=!3m6!1e1!3m4!1s0i8hHnYs_0zSSFas4Vxg1w!2e0!7i13312!8i6656?hl=en-GB&authuser=0
303	Achanalt	layby	NH223609	https://www.google.co.uk/maps/@57.6035774,-4.9732064,3a,75y,284.15h,78.13t/data=!3m6!1e1!3m4!1scfP15ropUaBtdYwDztUMzQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
304	Achanalt	hardstanding	NH230611	https://www.google.co.uk/maps/@57.6053222,-4.9635649,3a,75y,270.01h,89.64t/data=!3m6!1e1!3m4!1sV5eU4i8cbWqbg-j1cA0HvA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
305	Achanalt	hardstanding	NH237612	https://www.google.co.uk/maps/@57.6070986,-4.950425,3a,75y,287.84h,86.36t/data=!3m6!1e1!3m4!1saPrV6e9kV6Ceq9jPjqFeOg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
306	Achanalt	layby	NH238613	https://www.google.co.uk/maps/@57.6074088,-4.9486025,3a,75y,234.77h,78.53t/data=!3m6!1e1!3m4!1seINNltnKJoX651F5MQ6KrQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
307	Achanalt	layby	NH260615	https://www.google.co.uk/maps/@57.6103697,-4.9140293,3a,75y,300.11h,67.73t/data=!3m6!1e1!3m4!1sOzTuar6sLeEiDY2UKvoXlA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
308	Achanalt	layby	NH277615	https://www.google.co.uk/maps/@57.6108351,-4.8846753,3a,75y,233.33h,77.24t/data=!3m6!1e1!3m4!1sxqFMOAuNdhkV1e94cj-erg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
309	Achanalt	layby	NH283616	https://www.google.co.uk/maps/@57.611956,-4.8737152,3a,75y,222.99h,84.59t/data=!3m6!1e1!3m4!1sK1YM2Ne-8HLB4lgkgkI2ow!2e0!7i13312!8i6656?hl=en-GB&authuser=0
310	Achanalt	layby	NH295615	https://www.google.co.uk/maps/@57.6114229,-4.8533548,3a,75y,240.17h,74.54t/data=!3m6!1e1!3m4!1s8o4HS8XmmgNMtYJR0dHW5Q!2e0!7i13312!8i6656?hl=en-GB&authuser=0
311	Achanalt	layby	NH304616	https://www.google.co.uk/maps/@57.6133855,-4.8394483,3a,75y,234.23h,82.53t/data=!3m6!1e1!3m4!1sKV3FIKp1qZzSH46CgUjZZw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
312	Gorstan	layby	NH312625	https://www.google.co.uk/maps/@57.6216325,-4.825752,3a,75y,240.43h,74.98t/data=!3m6!1e1!3m4!1sL11u-5cM1mEkVGIljwBf7A!2e0!7i13312!8i6656?hl=en-GB&authuser=0
313	Gorstan	layby	NH319626	https://www.google.co.uk/maps/@57.6226752,-4.8156136,3a,75y,235.87h,82.18t/data=!3m6!1e1!3m4!1sT0cdZmhbtiJmWGDNx7NpSg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
314	Gorstan	layby	NH325626	https://www.google.co.uk/maps/@57.6229574,-4.8048267,3a,75y,252.29h,76.59t/data=!3m6!1e1!3m4!1sKph5O8Uw8Ccv2quAxFr6pQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
315	Gorstan	layby	NH327627	https://www.google.co.uk/maps/@57.6239471,-4.802217,3a,75y,183.57h,76.11t/data=!3m6!1e1!3m4!1sN__RYRx8t_Q501zWYTxGgw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
316	Gorstan	layby	NH329630	https://www.google.co.uk/maps/@57.6263534,-4.7995235,3a,75y,197.79h,71.24t/data=!3m6!1e1!3m4!1s3u_PDva16IDYao6E8aozgQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
317	Gorstan	hardstanding	NH341633	https://www.google.co.uk/maps/@57.6300342,-4.7790023,3a,75y,221.74h,83.54t/data=!3m6!1e1!3m4!1sh2--BLKQP5JYQMT55LteuQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
318	Gorstan	hardstanding	NH343634	https://www.google.co.uk/maps/@57.6304142,-4.7762882,3a,75y,301.18h,67.64t/data=!3m6!1e1!3m4!1sulJoCXtjUEBkPGVoF6f8tA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
319	Gorstan	hardstanding	NH382628	https://www.google.co.uk/maps/@57.6266842,-4.7097551,3a,75y,275.95h,81.08t/data=!3m6!1e1!3m4!1sHzAaYqHanzMBqhgoC8ZLPg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
320	Gorstan	layby	NH384626	https://www.google.co.uk/maps/@57.6249052,-4.706236,3a,75y,271.61h,84.63t/data=!3m6!1e1!3m4!1sG23vl_FZcql6dPbOogBCvA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
321	Gorstan	layby	NH389622	https://www.google.co.uk/maps/@57.6213332,-4.6969604,3a,75y,262.66h,86.1t/data=!3m6!1e1!3m4!1s9_uo7o0AzMPeFvPI7K1gNw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
322	Garve	layby	NH394613	https://www.google.co.uk/maps/@57.6129668,-4.6888507,3a,75y,333.03h,75.65t/data=!3m6!1e1!3m4!1sOP60AqUd1cOWvMo4ISKTeA!2e0!7i13312!8i6656?hl=en-GB&authuser=0

Number	Description	Type	Grid reference	Google link
323	Garve	layby	NH396609	https://www.google.co.uk/maps/@57.6094224,-4.685594,3a,75y,304.31h,81.11t/data=!3m6!1e1!3m4!1sOCYpsWlbYWQPBIBpxo_DAw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
324	Garve	hardstanding	NH406593	https://www.google.co.uk/maps/@57.5963348,-4.6672989,3a,75y,278.26h,90.99t/data=!3m6!1e1!3m4!1saM-z-92OnvzO5Yw8A0b37g!2e0!7i13312!8i6656?hl=en-GB&authuser=0
325	Garve	layby	NH417589	https://www.google.co.uk/maps/@57.5929311,-4.649066,3a,75y,293.13h,81.17t/data=!3m6!1e1!3m4!1stvjusmXSgsswLvYrIHl5XQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
326	Garve	layby	NH418590	https://www.google.co.uk/maps/@57.5932805,-4.6467188,3a,75y,282.49h,75.18t/data=!3m6!1e1!3m4!1sXnyZaB27Dj67MWUPOvZ9Dw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
327	Garve	layby	NH432588	https://www.google.co.uk/maps/@57.593364,-4.6363157,3a,75y,282.3h,79.04t/data=!3m6!1e1!3m4!1seSsk2PpsNDkoCAgWHZHz9w!2e0!7i13312!8i6656?hl=en-GB&authuser=0
328	Garve	layby	NH432588	https://www.google.co.uk/maps/@57.5925206,-4.6239089,3a,75y,289.24h,77t/data=!3m6!1e1!3m4!1sdEaNyOSGAqX8N9khgIoBNA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
329	Garve	layby	NH443582	https://www.google.co.uk/maps/@57.5875164,-4.6053842,3a,75y,296.71h,87.83t/data=!3m6!1e1!3m4!1sbGi0Wlk7VMIYxDbt_pIi5w!2e0!7i13312!8i6656?hl=en-GB&authuser=0
330	Garve	layby	NH443581	https://www.google.co.uk/maps/@57.5864715,-4.60469,3a,75y,268.66h,88.14t/data=!3m6!1e1!3m4!1sDtqtho1-lUghZmdSoxq2Kw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
331	Garve	layby	NH447576	https://www.google.co.uk/maps/@57.5826271,-4.5987648,3a,75y,122.24h,65.1t/data=!3m6!1e1!3m4!1slopt4qVROJjJIW-LxaLfFw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
337	Inchberry	layby	NH587458	https://www.google.co.uk/maps/@57.480449,-4.3586617,3a,75y,49.76h,88.48t/data=!3m6!1e1!3m4!1sklBg91qTBPeM36XN6NuprA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
338	Achnagairn	layby	NH564446	https://www.google.co.uk/maps/@57.4693478,-4.3951759,3a,75y,70.55h,60.75t/data=!3m6!1e1!3m4!1sWKgaJCC-VAMP3App-qcUyQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
339	Achnagairn	layby	NH558443	https://www.google.co.uk/maps/@57.4664362,-4.404733,3a,75y,223.95h,62.6t/data=!3m6!1e1!3m4!1sda6Mxyx5z1TH5QkyRIojEA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
340	Achnagairn	layby x2	NH551444	https://www.google.co.uk/maps/@57.4670722,-4.4170144,3a,75y,102.72h,58.62t/data=!3m6!1e1!3m4!1sNz-Qmfy21ht3gN3qEqtVLg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
341	Achnagairn	Layby	NH548445	https://www.google.co.uk/maps/@57.4684209,-4.42322,3a,75y,82.11h,76.29t/data=!3m6!1e1!3m4!1sE4fRcTSst7p-59Y1bbZVcQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
342	Achnagairn	hardstanding	NH544446	https://www.google.co.uk/maps/@57.4689557,-4.4286804,3a,75y,41.54h,79.27t/data=!3m6!1e1!3m4!1sf3-hiKIEdbELBA9hFs1PkQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
343	Kirkhill	hardstanding	NH534442	https://www.google.co.uk/maps/@57.4644794,-4.4445286,3a,75y,87.71h,72.23t/data=!3m6!1e1!3m4!1so03y4-Y3B3y3eMri8S0bUg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
344	Teawig	hardstanding	NH526444	https://www.google.co.uk/maps/@57.4658384,-4.4586628,3a,75y,14.17h,84.45t/data=!3m6!1e1!3m4!1sX9MfrvJ0Jfc_z0qcjzwRgg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
345	Beauly	carpark	NH526464	https://www.google.co.uk/maps/@57.4835271,-4.4594936,3a,75y,17.64h,63.15t/data=!3m6!1e1!3m4!1sxXKTDGMv2iA1VqAqt5S_mg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
371	Aldie	Layby	NH796795	https://www.google.co.uk/maps/@57.7879191,-4.0259658,3a,75y,128.46h,85.1t/data=!3m6!1e1!3m4!1szxeUUgsGuaTP_MQlKux2wg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
372	Knockbrek	Layby	NH789805	https://www.google.co.uk/maps/@57.7984092,-4.0389633,3a,75y,132.9h,73.63t/data=!3m6!1e1!3m4!1s-mrb1wxVsLXp9IBIQoAGtw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
373	Glenmorangie	Layby	NH765837	https://www.google.co.uk/maps/@57.8259277,-4.0797977,3a,75y,192.67h,73.01t/data=!3m6!1e1!3m4!1sMPnrYu

Number	Description	Type	Grid reference	Google link
				MMYm-lNmHXNyNi5Q!2e0!7i13312!8i6656?hl=en-GB&authuser=0
375	Dornoch Firth bridge	Layby	NH747872	https://www.google.co.uk/maps/@57.8501643,-4.1115895,3a,75y,144.99h,90.05t/data=!3m6!1e1!3m4!1sdx2n_SIVx3myUSMeFV4IUA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
376	Cuthill	Layby	NH747872	https://www.google.co.uk/maps/@57.8571608,-4.1117631,3a,75y,200.05h,74.34t/data=!3m6!1e1!3m4!1sT9sB8qQLL5zi52Tg7uHiEA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
377	Clashmore	Layby	NH747887	https://www.google.co.uk/maps/@57.8710505,-4.1121595,3a,75y,223.1h,86.14t/data=!3m6!1e1!3m4!1sXTcIppfOGtqlwBIxZJZDyg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
378	Evelix	hardstanding	NH767903	https://www.google.co.uk/maps/@57.8857915,-4.0807259,3a,75y,195.68h,70.17t/data=!3m6!1e1!3m4!1smBwmubIkDu3m0YAhy7Z3xw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
382	Golspie	carpark	NH831998	https://www.google.co.uk/maps/@57.9725161,-3.9782319,3a,75y,171.52h,75.12t/data=!3m6!1e1!3m4!1sGzdEEFaCSW0_EoxPlqbD1Q!2e0!7i13312!8i6656?hl=en-GB&authuser=0
383	Brora	Layby	NC878015	https://www.google.co.uk/maps/@57.9889464,-3.8977142,3a,75y,226.31h,90.65t/data=!3m6!1e1!3m4!1s4ygd-g1iXy2w69pHtItjaA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
384	Doll	Layby	NC888028	https://www.google.co.uk/maps/@58.0007195,-3.8819972,3a,75y,209.74h,92.7t/data=!3m6!1e1!3m4!1supY3jKPfV-YVtlU4u462bg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
385	Doll	Layby	NC896032	https://www.google.co.uk/maps/@58.004394,-3.8674155,3a,75y,277.45h,72.13t/data=!3m6!1e1!3m4!1svVSqyS-j947TS6oNzbZAiw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
386	Greenhill	Layby	NC909060	https://www.google.co.uk/maps/@58.0306155,-3.847582,3a,75y,205.1h,79.85t/data=!3m6!1e1!3m4!1sfNpYRh-M2I-jGpAWZKeNAg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
387	The wolf stone	Layby	NC941099	https://www.google.co.uk/maps/@58.0662837,-3.79572,3a,75y,227.11h,77.48t/data=!3m6!1e1!3m4!1sFNOPWnEE3jqZp5zGCIs8vw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
388	Crakaig	hardstanding	NC953105	https://www.google.co.uk/maps/@58.0719399,-3.7757847,3a,75y,261.85h,79.7t/data=!3m6!1e1!3m4!1sQmmBca3YNLOH9goENdw6yw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
389	Lothmore	Layby	NC968114	https://www.google.co.uk/maps/@58.0802405,-3.7505844,3a,75y,240.42h,85.22t/data=!3m6!1e1!3m4!1s1qvERJGLekt9SW6qh7LQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
390	South of Portgower	Layby	NC987122	https://www.google.co.uk/maps/@58.0884225,-3.7175035,3a,75y,213.99h,77.35t/data=!3m6!1e1!3m4!1sKnW3inY7Gy64-RBpsQBu4w!2e0!7i13312!8i6656?hl=en-GB&authuser=0
391	Portgower	Layby	NC996130	https://www.google.co.uk/maps/@58.0950602,-3.7037363,3a,75y,204.79h,79.57t/data=!3m6!1e1!3m4!1sXYkcGBQSpwR2sl1vaZR4gw!2e0!7i13312!8i6656?hl=en-GB&authuser=0
392	Helmsdale	hardstanding	ND019145	https://www.google.co.uk/maps/@58.1089123,-3.6654602,3a,75y,195.34h,84.29t/data=!3m6!1e1!3m4!1sTQKBzpx01IJvXHLtBOrxhg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
393	Helmsdale	hardstanding	ND035156	https://www.google.co.uk/maps/@58.1350463,-3.6160931,3a,75y,230.21h,90t/data=!3m7!1e1!3m5!1sThjGbtluEmgowiLxwvW1oA!2e0!6s%2F%2Fgeo0.ggpht.com%2Fcbk%3Fpanoid%3DThjGbtluEmgowiLxwvW1oA%26output%3Dthumbnail%26cb_client%3Dmaps_sv.tactile.gps%26thumb%3D2%26w%3
394	A9 south of Ousdale	carpark	ND049174	https://www.google.co.uk/maps/@58.1352166,-3.6152608,3a,75y,293.62h,80.57t/data=!3m6!1e1!3m4!1seS1tvhVcL1E_9ZNdGcvk4g!2e0!7i13312!8i6656?hl=en-GB&authuser=0
395	A9 south of Ousdale	carpark	ND050174	https://www.google.co.uk/maps/@58.135621,-3.6132944,3a,75y,233.75h,78.01t/data=!3m6!1e1!3m4!1st6lHSy7csr5lPzRFfQLOXg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
396	A9 south of Ousdale	carpark	ND057179	https://www.google.co.uk/maps/@58.1407699,-3.6025222,3a,75y,240.39h,79.66t/data=!3m6!1e1!3m4!1scwAMQucBqqubOwuohbLnKQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
397	A9 south of Ousdale	hardstanding	ND064189	https://www.google.co.uk/maps/@58.1506705,-3.5898699,3a,75y,218.57h,91.57t/data=!3m6!1e1!3m4!1sOwMA9t8H1aqKMqIIVhMz-g!2e0!7i13312!8i6656?hl=en-GB&authuser=0

Number	Description	Type	Grid reference	Google link
398	A9 south of Ousdale	carpark	ND066192	https://www.google.co.uk/maps/@58.1522501,-3.5877576,3a,75y,209.24h,93.38t/data=!3m6!1e1!3m4!1ssGAaMyQQIC6UUk_NOcfKCA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
399	Badbea Historical Village Car Park	carpark	ND084204	https://www.google.co.uk/maps/@58.1638097,-3.5567628,3a,75y,191.14h,82.38t/data=!3m6!1e1!3m4!1ssZJbOcpd93lAufHzEf3ELg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
400	A9 south of Berriedale	hardstanding	ND096211	https://www.google.co.uk/maps/@58.169648,-3.5371679,3a,75y,210.41h,71.76t/data=!3m6!1e1!3m4!1sG00h3_Z6333GjiLolpYgQA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
401	A9 south of Berriedale	carpark	ND107217	https://www.google.co.uk/maps/@58.1755514,-3.519527,3a,75y,17.07h,91.63t/data=!3m6!1e1!3m4!1sN-lxq20LdHRnykSIiAYUKQ!2e0!7i13312!8i6656?hl=en-GB&authuser=0
402	A9 south of Berriedale	hardstanding	ND109219	https://www.google.co.uk/maps/@58.1776563,-3.5160649,3a,75y,256.09h,81.19t/data=!3m6!1e1!3m4!1s32627poArRP8We6g-pDKLA!2e0!7i13312!8i6656?hl=en-GB&authuser=0
403	A9 south of Berriedale	hardstanding	ND114222	https://www.google.co.uk/maps/@58.1800577,-3.50777,3a,75y,194.9h,72.25t/data=!3m6!1e1!3m4!1sF1S-oAe6RUj14Mdwan2FZg!2e0!7i13312!8i6656?hl=en-GB&authuser=0
404	Berriedale braes viewpoint	viewpoint	ND119227	https://www.google.co.uk/maps/@58.1851617,-3.4986203,3a,75y,179.77h,85.41t/data=!3m7!1e1!3m5!1slfcpMzngAGNUxgnlhQal5A!2e0!6s%2F%2Fgeo2.ggpht.com%2Fcbk%3Fpanoid%3DIfcpMzngAGNUxgnlhQal5A%26output%3Dthumbnail%26cb_client%3Dmaps_sv.tactile.gps%26thumb%3D2%26
405	A9 south of Latheron	layby	ND197331	https://www.google.co.uk/maps/@58.2799617,-3.369349,3a,75y,150.07h,84.42t/data=!3m6!1e1!3m4!1s2ZQB5sUAJGMil1QeWK7o-Q!2e0!7i13312!8i6656?hl=en-GB&authuser=0
406	near Forse A99	carpark	ND215343	https://www.google.co.uk/maps/place/A99/@58.2867522,-3.338648,8529m/data=!3m1!1e3!4m13!1m7!3m6!1s0x489ad1c932122449:0xb711d561bf63dcfa!2sA99!3b1!8m2!3d58.2909979!4d-3.339506!3m4!1s0x489ad1c932122449:0xb711d561bf63dcfa!8m2!3d58.2909979!4d-3.339506?hl=en-G
407	Between Blackness and Occumster A99	Layby	ND284364	https://www.google.co.uk/maps/@58.310691,-3.2215671,3a,49y,230.15h,70.67t/data=!3m6!1e1!3m4!1sI75TVj0ooN7PI24vIaJGpw!2e0!7i13312!8i6656?hl=en-GB&authuser=0

Appendix 2

Maps attached as A3 pdf copies:

- *Key and beneficial habitat within the B-Line and close to the NC500* – using existing key & beneficial habitat layer - The detail behind map two but specifically where this is relevant to the NC500

- *Overview of important areas for nature showing:*
  a. Designated sites (SSSIs)
  b. Important habitats for Great yellow bumblebees
  c. Buglife's Important Invertebrate areas, and,
  d. Sites particularly important for rare and threatened plants.

- *Overview map of other opportunities next to the NC500 within the B-Line* – Existing greenspace infrastructure (such as parks, sports facilities, cemeteries) and access points that occur alongside the NC500 and within the B-Line where meadow creation projects would benefit an NC500 B-Line

Key and beneficial habitat within the B-Line and close to the NC500

Map Title: B-Line Habitats
Data Set: NC500
Version: 1.0.0
Drawn: T.Thomson.
Drawn Date: 30.03.2021

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N

Legend

- Key Pollinator Habitat
- Beneficial Pollinator Habitat
- NC500 Route - 500m Buffer
- NC500 Route

0 5 10 20 30 40 50 Km

Overview of important areas for nature - Sites of Special Scientific Interest

Map Title: B-Lines & SSSI's
Data Set: NC500
Version: 1.0.0
Drawn: T.Thomson.
Drawn Date: 30.03.2021

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N

Legend

- B-Line Network
- Sites of Special Scientific Interest
- NC500 Route - 500m Buffer
- NC500 Route

0 5 10 20 30 40 50 Km

Overview of important areas for nature - BBCT important habitats for Great Yellow Bumblebee

Map Title: B-Lines & BYBB
Data Set: NC500
Version: 2.0.0
Drawn: T.Thomson.
Drawn Date: 30.03.2021

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N

Legend

- B-Line Network
- Great Yellow Bumblebee - Core Areas
- Great Yellow Bumblebee - Corridors
- Great Yellow Bumblebee - Expansion Areas
- NC500 Route - 500m Buffer
- NC500 Route

0 2.5 5 10 15 20 25 Km

Overview of important areas for nature - Important Invertebrate Areas

Map Title: Opportunities
Data Set: NC500
Version: 1.0.0
Drawn: T.Thomson.
Drawn Date: 30.03.2021

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N

Legend

- B-Line Network
- Important Invertebrate Areas (IIAs)
- NC500 Route - 500m Buffer
- NC500 Route

0 5 10 20 30 40 50 Km

Overview of important areas for nature - Plantlife sites particularly important for rare and threatened plants

Map Title: B-Lines & Plants
Data Set: NC500
Version: 1.0.0
Drawn: T.Thomson.
Drawn Date: 30.03.2021

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N

Legend

- B-Line Network
- Sites of Special Scientific Interest
- Hair Sedge (Carex capillaris)
- Curved Sedge (Carex maritima)
- Mountain Avens (Dryas octopetala)
- Dark-red Helleborine (Epipactis atrorubens)
- Foula Eyebright (Euphrasia foulaensis)
- An Eyebright (Euphrasia marshallii)
- An Eyebright (Euphrasia rotundifolia)
- Baltic rush (Juncus balticus)
- Purple Oxytropis (Oxytropis halleri)
- Scottish primrose (Primula scotica)
- NC500 Route - 500m Buffer
- NC500 Route
- NC500 Carparks

0 0.5 1 2 3 4 5 Km

Overview map of other opportunities next to the NC500 within the B-Line

Map Title: Opportunities
Data Set: NC500
Version: 1.0.0
Drawn: T.Thomson.
Drawn Date: 30.03.2021

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Existing greenspace infrastructure (such as parks, sports facilities, cemeteries) and access points that occur alongside the NC500 and within the B-Line provide additional meadow creation opportunities. Importantly some of these sites may enable much larger areas to be improved for pollinators.

N

Legend

- Greenspace Near NC500 & Within B-Line
- Access Point Near NC500 & Within B-Line
- NC500 Route - 500m Buffer
- B-Line Network
- NC500 Route

0 5 10 20 30 40 50 Km

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