

Nature's bounty

A self-guided walk in the foothills of the Mourne Mountains



Explore the lower slopes of Slieve Donard above Newcastle
Discover how different natural resources have been exploited
See how the landscape has been changed by human activities
Consider how we can sustain our use of the environment

www.discoveringbritain.org

*the stories of our landscapes
discovered through walks*







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Cover image: Slieve Donard and its forested lower slopes above Newcastle, Albert Bridge, Geograph (CCL)

Nature's bounty

Discover a wealth of natural resources in the Mourne Mountains

Rock, soil, trees, rivers. These are some of the basic natural resources found across the countryside. They have also been exploited by humans throughout history.

This walk explores a spectacular hillside where 'the mountains of Mourne sweep down to the sea'. Hidden in and around the Donard Forest is evidence of how this landscape has been used – and abused.



Explore a granite quarry and find out how the rock was transported down the mountainside. Find out why forested land was once cleared and has now been replanted. Learn about the impact of the hooves of cattle and sheep when they graze the land. Discover how the pure and plentiful water of the mountains is captured and transported away.



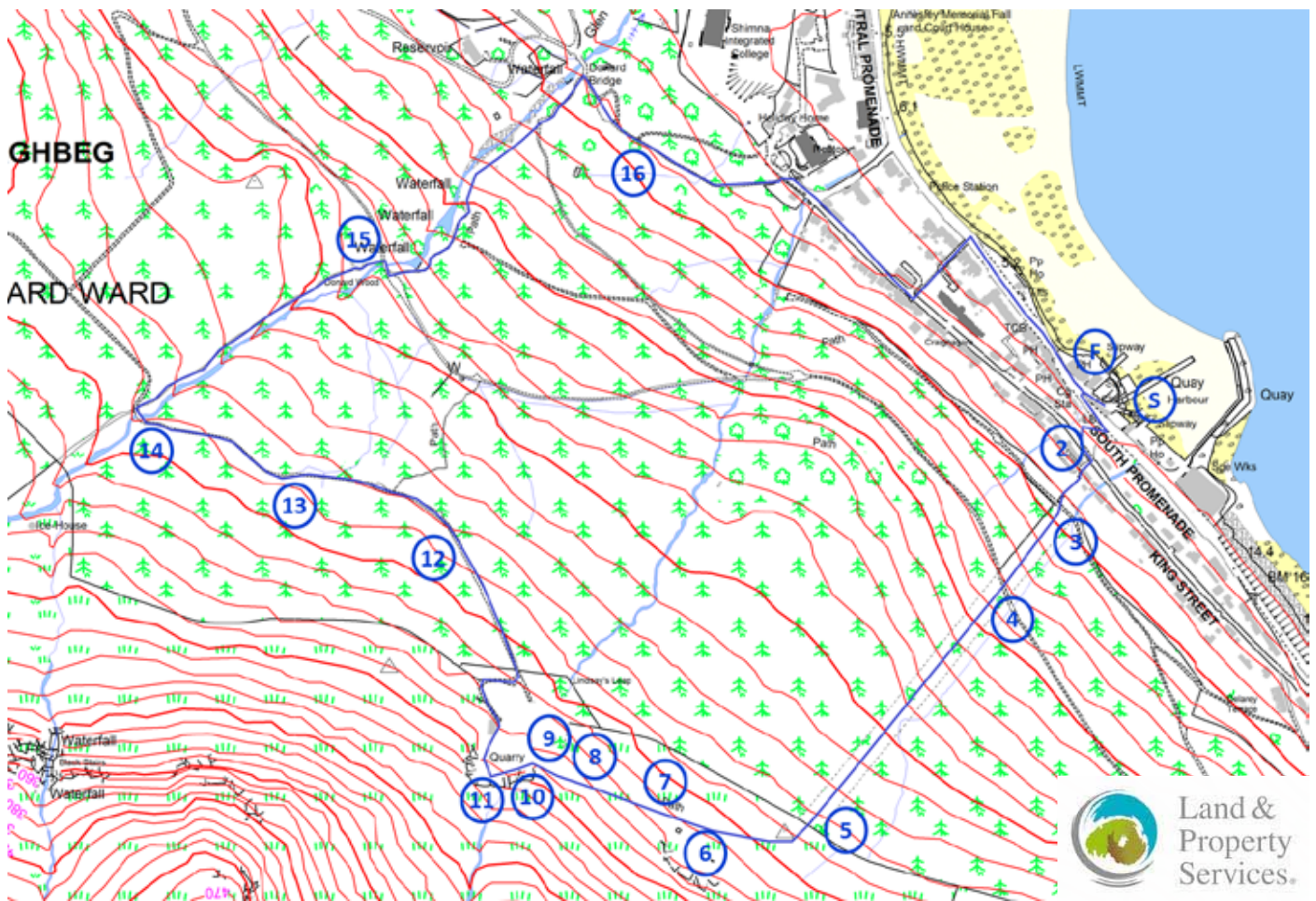
The 'pleasure grounds' of an old aristocratic estate reveal how people liked to enjoy nature's beauty but also how they manipulated it.

There's also an opportunity to think about how best to balance landscape conservation and protection with public access and recreation.

This fascinating walk takes in a forest, moorland and a river glen. Along the way there are some spectacular views to enjoy of the coastline and surrounding mountains.

Top: Thomas' Mountain Quarry © Howard Lunn
Bottom: Glen River © Jenny Lunn

Route map



Stopping points

- | Stopping points | Start | Description |
|-----------------|---------------|---|
| | | Newcastle harbour |
| | 2. | View from King Street across bay |
| | 3. | First crossing of paths on bogie line |
| | 4. | Second crossing of paths on bogie line |
| | 5. | Top of bogie line by wooden shelter |
| | 6. | Millstone Quarry |
| | 7. | Path above forest |
| | 8. | Stile |
| | 9. | Viewpoint |
| | 10. | Thomas' Mountain Quarry |
| | 11. | Waterfall in Thomas' Mountain Quarry |
| | 12. | Path through Donard Forest |
| | 13. | Circular stone structure in Donard Forest |
| | 14. | Upper bridge over Glen River |
| | 15. | Middle bridge over Glen River |
| | 16. | Annersley Demesne |
| | Finish | Newcastle harbour |

Practical information

Location	Newcastle, County Down, Northern Ireland
Start and finish	Newcastle harbour, South Promenade BT33 0EZ
Getting there	<p>Car – Newcastle is about 30 miles due south of Belfast, 15 miles southwest of Downpatrick and 20 miles east of Newry.</p> <p>In Newcastle follow the one way system along the main street. At the end continue along the A2 main coastal road south (signposted Kilkeel and with brown signs for ‘Mourne Coastal Route’.</p> <p>After about half a mile, look for the Harbour House Inn on the left side. Here the road rises slightly with Newcastle Yacht Club on the left. On top of the rise, take the left fork (Quay Road). You can park by the wall on Quay Road or continue to the bottom and turn left into the free car park by the harbour.</p> <p>Bus – Newcastle is served by buses from most towns in the region. Alight at the bus station and either walk to the start (less than a mile) or catch a regular shuttle bus along the South Promenade to the harbour. Check with Translink before travel www.translink.co.uk</p> <p>Bicycle – Newcastle is at the end of National Cycle Route 99 which runs from Belfast south through County Down</p>
Walk distance	3 miles
Level	Challenging – Although the walk is not long, there is a steep ascent and descent with some uneven ground.
Terrain	Gravel path up mountainside (with steps), clamber onto loose quarry rocks (optional), uneven grassy path above forest, gravel track through forest, uneven rocky path down through forest (can be wet and slippery), short walk on pavements and paths along promenade.
Conditions	<p>Always be prepared for rain in the Mourne. Most of the walk is under the cover of trees but the middle section on the mountainside is exposed.</p> <p>Wear strong walking footwear; a walking pole may be useful for the ascent and descent.</p>
Best time to go	Visit on a clear, dry day in order to enjoy the views!

Suitable for

Families – But note the steep ascent and descent.

Dogs – A great walk for energetic dogs.

Refreshments

There is nowhere to stop en route. At the end of the walk (between Stop 16 and 17) there are a few shops and cafes, as well as The Harbour House Inn. There are also plenty of places for refreshment in Newcastle town.

Toilets

Public facilities on South Promenade between Bath Lane and the harbour.

Places to visit

Slieve Donard – An extension to this walk is to divert at Stop 14 and follow the Glen River uphill rather than downhill and climb some or all of Slieve Donard, the highest of the Mourne Mountains. Recommended for experienced walkers only.
www.walkni.com/walks/344/slieve-donard-via-glen-river/

Silent Valley – Head Road, Annalong, BT34 4HU

Visit the spectacular reservoir nestled in the mountains that supplies Belfast's water and see parts of the Mourne Wall that protect the catchment. It is a 20 minute drive south from Newcastle first following the signs for 'Mourne Coastal Route' and shortly before Annalong turning right to follow the brown signs for 'High Mourne Scenic Loop'.

In the grounds is a network of marked trails, as well as play areas

Open daily from 10am to 6.30pm (May to Sept) and 10am to 4pm (Oct to April); entry charge for cars £4.50.

www.discovernorthernireland.com/Silent-Valley-Mountain-Park-Kilkeel-Newry-P16373

Delamont Country Park (four miles northeast of Downpatrick off the A22) 200 acre park on the shores of Strangford Lough with excellent walks and views; includes the enormous Strangford Stone.

Family friendly activities including outdoor adventure playground and miniature railway.

Open every day from 9am to dusk; charge for car parking.

www.discovernorthernireland.com/Delamont-Country-Park-Killyleagh-Downpatrick-P2883

Tourist information

Newcastle Visitor Information Centre

10-14 Central Promenade, Newcastle BT33 0AA

Open all year

Discover Northern Ireland – The Mourne Mountains

www.discovernorthernireland.com/mournes

1. Welcome to the Mournes

Newcastle harbour

There are few landmarks in Ireland as well-known and well-loved as the Mourne Mountains. The name Mournes derives from a Gaelic clan called Múghdorna that once inhabited this area.

Situated in the southeast of Northern Ireland, this Area of Outstanding Natural Beauty boasts dozens of rugged peaks sitting cheek by jowl in an area only fifteen miles by eight.

Many of the mountain names are prefaced with the word Slieve, an anglicised version of the Gaelic for mountain. There are six peaks over 700 metres of which Slieve Donard is the highest at 849 metres.



Slieve Donard
Albert Bridge, Geograph (CCL)



Dry stone dyke
© Verity Peet

This walk starts and finishes in the seaside town of Newcastle at the eastern edge of the range where, as the Irish songwriter Percy French famously described, 'the mountains of Mourne sweep down to the sea'.

On this walk we will explore the beautiful Donard Forest and Glen River in the northeast corner of the Mournes to find out how humans have exploited the various natural resources found here over the centuries. From minerals, rocks and soil to water, timber and beauty, the history of the use of natural resources challenges us to reflect on the boundary between use and abuse of the environment.

This walk was created by Verity Peet who admires the Mournes from afar on the school run during the week, and close up on foot at weekends.

Directions 1

From the harbour carefully cross the busy main road (Kilkeel Road) to the steep grassy slope signposted 'Granite Trail'. Follow the zigzag path or steps up the hillside to the next road (King Street). Stop here and turn back to face the sea, enjoying the view down to the harbour and across the bay.

2. From fishing village to fashionable resort

View from King Street across bay

From here you can look across the long sweep of the bay to the town. For centuries Newcastle was a small village with its inhabitants living a simple life: animals were grazed in the mountains, crops harvested in the foothills, and fish captured from the sea.

In his topographical dictionary of the period Samuel Lewis noted that it was 'only an inconsiderable fishing village previous to the year 1822'.

The reasons for the town's development and growth lie in the mountains behind you. In 1824 John Lynn opened a granite quarry in the foothills above Newcastle.



Newcastle harbour in the early 20th century
Courtesy of Down County Museum

He also built a small railway line to transport the quarried stone straight down the mountainside to the harbour. The large harbour that you can see below was built to accommodate the larger ships needed to export this commodity across the seas. With its abundance of granite and proximity to the sea.



Old postcard of Newcastle beach
Courtesy of Down County Museum

Newcastle had a natural geological and geographical advantage and the new trade flourished. But it was not only an important industrial town. With the coming of the railway, it also became a popular holiday destination.

By 1837 Samuel Lewis declared that Newcastle 'has made great advances as a fashionable place for sea-bathing and is now nearly a mile in length, containing several large and handsome private dwelling-houses, and numerous comfortable and respectable lodging-houses'.

Directions 2

With your back to the sea cross King Street and follow the path to the left of the terrace of houses signposted 'Granite Trail'. Go up the steps, through the archway and up more steps. Stop when you reach the first crossing of paths.

3. We love to bogie

First crossing of paths on bogie line

The very straight and steep pathway stretching up into the distance is the old 'bogie line', the specially-built railway line where trucks (or 'bogies') carried the granite down the mountainside from the quarry to the harbour.

The railway was funicular, meaning that the ascending trucks were counter-balanced with the descending ones using cables, so no engine or fuel was needed.



The bogie line running down to Newcastle harbour
Unknown source and date

In order for this efficient system to work the tracks had to be as straight as possible so there was one long track from the quarry at the top down to King Street at the bottom.

In the latter half of the nineteenth century tens of thousands of tons of granite were produced at the quarry above and ferried down this line to the harbour below every year.



Stone blocks that held the rails
© Howard Lunn



View from the original quarry down the bogie line to the sea
© Jenny Lunn

By the 1930s the line had fallen into disuse. Cheaper and easier construction materials had become available such as concrete, macadam and tarmac and granite was no longer the material of choice. During the Second World War the line disappeared completely as all the rails and metal bogies were taken to Belfast for the war effort.

Here you can see a replica of one of the bogies. As you walk up the path look for remaining evidence of the line including stone blocks with holes to which the rails were attached and fragments of rusty rail.



A little further up the path look out for a replica of a 'slipe', a sledge-like cart without wheels.

Replica bogie (left) and replica slipe (right)
© Jenny Lunn / © Verity Peet

Before the bogie line was installed, this was the means of transporting the rock down the mountainside. It's hard to imagine such practices passing health and safety regulations today!



Evidence of the bogie line
© Verity Peet / Jenny Lunn /
Howard Lunn

Directions 3

Continue straight on up the steep, straight path. Stop at the next crossing of paths where you will see the replica slipe to the left. Look a little closer at the granite blocks that have been used to construct the steps of the path ahead.

4. Magma and minerals

Second crossing of paths on bogie line

This eastern part of the mountain range is known as the High Mourne. It was created about 56 million years ago during a period of time when there was intense volcanic activity.

Magma (molten rock) from inside the earth rose towards the surface. Here it didn't break through the earth's crust as lava but rather slowly cooled beneath the existing surface layer of sandstone.

The name granite comes from the Latin 'granum' – which means grain – in reference to its coarse-grained structure. It is made up of interlocking crystals of mica, feldspar and quartz and sometimes other minerals.



Close up of white crystals of feldspar and dark quartz crystals in granite from the Mourne Mountains
© National Museums Northern Ireland
Collection Ulster Museum

The particular combination of minerals creates granites that can be white, pink, or grey. The granite here varies in shades from grey to pink with visible quartz. The rusty-brown you can frequently see is a result of the weathering of the mica element in the granite.



Granite blocks
© Jenny Lunn

The geological processes didn't just cause the formation of granite. Chemicals in the molten rock created other minerals. These crystallised at different temperatures leaving veins (or 'lodes') in the rock. One of the most notable minerals was gold but more on that later.

Once the granite was formed it took some time for it to become visible. Several millennia and at least six Ice Ages occurred before the layer of rock above the granite was eroded away. It is only in more recent geological history (the last two million years) that the latest Ice Ages shaped the landscape into the peaks and valleys that we see today.

Directions 4

Continue straight on up the steep, straight path which is a mixture of steps and stony track. Take care as the rocks and gravel underfoot can be slippery. Stop when you reach a wooden shelter at the top.

5. Are you calling my hut shoddy?

Top of bogie line by wooden shelter

Life for the granite workers, or stone-men as they workers were called, was seriously tough. They worked long hours and often stayed up the mountainside all week.

Once the granite had been quarried from the rock face, the stone-men shaped it into different sized blocks such as plinths or kerbstones using large hammers and chisels.

The surfaces of the stones were then 'dressed' meaning that finer chisels were used to carve designs or produce flat surfaces for the finished product before it was carted down the bogie line to the harbour.



Rock being broken by hand
© Belfast Telegraph
Collection Ulster Folk and Transport Museum
(Ref: HOYFM.BT.0948)



Replica shoddy hut
© Jenny Lunn

This wooden shelter is a replica of a 'shoddy hut' which offered protection for the more fortunate of the workers.

The name comes from the pieces of granite left after the stone was dressed, known as 'shoddies'.



Grass patches in the Millstone Quarry may indicate the former positions of shoddy huts
© Jenny Lunn

Directions 5

Go over the stile or through the gate and continue straight ahead up the mountainside leaving the forest behind. After about 20 metres the path curves around to the right. Here you have a choice. You can stop here and look straight up at the large piles of stones ahead. Alternatively, you can make your way straight up the path through the grass and heather to the base of the large piles of stones. Carefully clamber up, taking great care as the rocks can be loose. On top of the stones is a plateau area that you can explore and go across to the quarry face. There are also excellent views (on a clear day).

6. Who wants to be a millionaire?

Millstone Quarry

This is Millstone Quarry, the first quarry used to supply granite to the bogie line but was soon abandoned in favour of a richer supply at another quarry that we will see shortly.

Although we have been finding out about the quarrying industry in the nineteenth century, recent scientific investigations have revealed that humans made use of rocks and minerals from the Mourne in prehistoric times.

A significant number of gold objects have been found in Ireland dating to the early Bronze Age (2400-1800 BC).



Millstone Quarry
© Jenny Lunn

Scientists have examined more than 400 of these gold objects and analysed the distinct compositional signature of the minerals in each. They have also carried out experiments to extract gold from the rock using fire as prehistoric people would have done. The source of the gold has been identified as here in the Mourne Mountains.



Gold lunula on display at Ulster Museum
Notafly, Wikimedia Commons (CCL)

Like the stone-men of the nineteenth century prehistoric workers were skilled craftsmen too. After heating the rock, crushing it and panning the resultant sand the gold extracts were removed, heated again, and fashioned into ornaments and jewellery such as 'lunula', crescent-shaped collar-style necklaces.

Other minerals such as emerald, amethyst and topaz can be found here, particularly in streams where running water has eroded away the rock below and exposed mineral lodes near the surface. However, according to the Northern Ireland government, the source for these riches found in sedimentary matter in the streams is still "elusive". Feel free to look!

Directions 6

If you climbed all the way up to Millstone Quarry, retrace your steps back down the path. At the bend in the path above the top of the bogie line, turn left. Follow the path as it traverses steadily up the hillside with the forest on your right. Stop about halfway along this path.

7. Stone walled

Path above forest

Look below the path to the edge of the forest and you will see a traditional stone wall. In fact there are stone walls all across the Mournes marking out territory and keeping animals in place. Many were built following the Agrarian Revolution of the eighteenth century.

Locals used the stones found scattered across this landscape to build their walls. Quarrying was not necessary as the stones were abundant. For the cost of a shilling a year landlords gave the inhabitants the right to dig two feet down to retrieve more stones to use.



Dry stone wall boundary between forest and open slopes
Albert Bridge, Geograph (CCL)



Single-depth dykes are common in the Mournes
© Verity Peet

It weaves for 22 miles around the higher peaks of the Mournes, passing over fifteen mountains. It is about 1½ metres high and 80 centimetres thick.

Built between 1904 and 1922 it was designed by the Belfast Water Commissioners to keep animals out of an area devoted to water capture, but more on that shortly.

Across the Mournes a variety of techniques are used for building dry stone walls. Construction styles vary from single row depth to double, from solid to gapped, with tops that can be levelled or unlevelled, or even with large stones mirroring those usually found only at the bottom.

The most impressive stone wall of the Mournes can be found less than a mile away: the famous Mourne Wall.



Mourne Wall looking towards Slieve Donard
Peter Lyons, Geograph (CCL)

Directions 7

Continue along the path. Stop when you reach the stile.

8. Booleying

Stile

Watch where you're walking or you might stand in something unpleasant. If you can't actually see any animals the chances are that you can see evidence of the fact they've been here recently!

Animals have been grazing on the Mourne for millennia. Pottery and flint has been excavated locally and dated to the Neolithic period (4000-2500 BC) which reveals a culture of small-scale pastoral farming with sheep and cattle.

Until the latter half of the nineteenth century the locals carried out a type of seasonal nomadism called 'booleying'.

In 1744 the Irish historian Walter Harris noted: 'In the bosom of the Mourne Mountains, there is a place called the King's Meadow (because people have their grazing in it for free) extending some miles in breadth and length; to which a great number of poor people resort in the summer months to graze their cattle. They bring with them their wives, children and little wretched furniture, erect huts, and there live for two months, and sometimes more...'

Using the land for grazing was, and to some extent still is, an economic necessity for farmers, and the battles over grazing rights continue to this day. In 2012 when Northern Ireland Water decided to put its land in the Mourne out to open tender for grazing rights there was public outcry. The farmers who currently use the land claimed that their knowledge of the traditional methods of grazing keep the delicate ecosystem in balance. Offering the land to outsiders would lead to the deterioration of the environment insist the locals, as well as their economic ruin.

The grazing of animals in the Mourne brings other controversies. Animals may fertilise the land but they also cause damage to vegetation and soils. This has been heightened in the last century as changes in agricultural practices have favoured sheep over cattle. It is said that four sheep can graze where one cow would but the erosive effect of sixteen hooves is much greater than four. Furthermore while cattle eat grass sheep chew plants into extinction. This change in grazing practices has contributed to visible changes in the landscape of fewer shrubs and greater erosion.



Sheep grazing near Slievenagore
Ross, Geograph (CCL)

Directions 8

Go over the stile or through the gate. About 20 metres ahead along the path is a viewpoint marked by a granite pillar.

9. Natural beauty

Viewpoint

From this viewpoint it's easy to see why the Mourne and this stretch of the coast are designated an Area of Outstanding Natural Beauty.

To the left, the highest peak that you can see is Slieve Croob, below which is the town of Castlewellan. Directly below us is the town of Newcastle.



Topograph on the Granite Trail
© Jenny Lunn

If you follow the sweep of the bay to the right you will see the heathland, woodland and sands of Murlough National Nature Reserve, a Special Area of Conservation that is the largest and most important dune heath site in Northern Ireland with a 5,000 year old complex system of shifting sand dunes.

Beyond the estuary mouth is Tyrella Beach with more miles of sand used for recreational purposes. At the far right, The lighthouse at St John's Point marks the headland. Beyond that in the distance you can see Strangford Lough, and, if it is a very clear day, you can make out the Mull of Galloway in Scotland and the Isle of Man.



Panorama across Newcastle, Murlough and Tyrella
© Verity Peet

From here you can appreciate the importance of the proximity of the mountains to the sea. It enabled the transportation of granite by ship up the coast to Belfast and across the Irish Sea to England and beyond.

Apart from fishing, the sea brought other bounties too. The high tidal range and stony beaches provided an abundance of inter-tidal seaweeds. For many centuries this 'sea wrack' was used to fertilise thin soils to produce crops, particularly potatoes. These days seaweed is a protected species but you can experience its therapeutic effects personally by visiting the Seaweed Baths in Newcastle.

Directions 9

From the viewpoint follow the wide gravel track uphill. Stop when you reach the quarry.

10. Memorial stones and millennium stones

Thomas' Mountain Quarry

This is Thomas' Mountain Quarry on Thomas' Hill - although quite who Thomas was nobody seems to know for sure. This replaced Millstone Quarry that we saw earlier.

Originally the rock was split with hand tools. Look for small holes in neat rows on rock surfaces known as 'plug and feathers' marks. These show where chisel-like plugs were hammered into the rock by hand to split it up into a straight line.



Thomas' Mountain Quarry
© Jenny Lunn



A stoneworker splitting granite by hand using the plug and feather technique
Courtesy of Mr Norman Ervine

Also look out for bits of rusty cast iron rails sticking out, all that remains of the bogie line that was extended up to this quarry.

This is still a working quarry, one of the last active granite quarries in the Mourne. These days the rock is split using explosives and you may see electric wires from detonations in some of the rocks.



Left: Electric wires still in the rock; Centre and right: Evidence of plug and feather
© Verity Peet

Mourne granite can be found far and wide. It was used to construct churches, courthouses, hospitals and gaols in Ulster, to build the docks in Belfast and Liverpool, and to pave the streets of Lancashire's towns and cities. It was also used in the construction of notable structures including the plinths of the Albert Memorial in London and Stormont, home of the Northern Ireland Parliament.



Stormont is built of Portland stone on a plinth of Mourne granite
robertpaulyoung, Flickr (CCL)

More recently one of the most significant stones taken from here was the 12 metre high and 47 tonne 'Strangford Stone'. It was placed at Delamont on the edge of Strangford Lough to celebrate the recent millennium. It is the highest standing stone in Northern Ireland.

Today the most common use for granite is gravestones. It is probably its most ancient use by humans too. There is plenty of evidence of megalithic tombs in this area. Nearby, on top of Slieve Donard, there is the remains of a Bronze Age cairn.



The Strangford Stone in Delamont Country Park
Paul McIlroy, Geograph (CCL)

Directions 10

Walk around the left side of the quarry to the waterfall.

11. Plentiful and pure

Waterfall in Thomas' Mountain Quarry

The greatest of all the natural resources that the Mourne Mountains provides is water. In the eighteenth century the softness of Mourne water – softened by its filtering through acid peats and granite – was recognised as perfect for bleaching linen and utilised by 26 local linen mills on the River Bann. However, a far more important need for this high quality water was already developing.

During the nineteenth century, industrialisation saw Belfast grow rapidly. The population was around 25,000 in 1808 but had exploded to near 270,000 by 1891. Existing sources of water could not provide enough so the authorities set about finding an additional source.



Waterfall in Thomas' Mountain Quarry
© Jenny Lunn



A thriving city: Royal Avenue Belfast (c.1890-1900)
Wikimedia Commons (CCL)

An ambitious and complex three-stage project began which included the erection of the Mourne Wall to protect the surrounding catchment area that we found out about earlier.

Then a whole valley inside the walled area was transformed into a massive reservoir capable of holding 3,000 million gallons of water, and a vast network of dams, tunnels and pipes was constructed.



The Mourne Wall looking towards Slieve Binnian
Ross, Geograph (CCL)

Like the granite industry nearly a hundred years before, this exploitation of natural resources provided much-needed jobs for local people. Indeed, so many jobs were created that a small town sprang up in the mountains called, fittingly, Watertown.

Silent Valley, as the area is now known, is well worth a visit to appreciate the majestic beauty of the reservoirs amongst the mountains.



Silent Valley
© Jenny Lunn / Howard Lunn

Directions 11

From the quarry, go back down the wide gravel track. Follow the bend round to the left and downwards towards the forest. About 150 metres down the first straight section of track inside the forest, look on the left side for a wide gap between the rows of trees.

12. Mind the gap

Path through Donard Forest

Forests of ash, oak, holly and hazel once covered nearly all the lower slopes around the Mourne. By the eighteenth century the Agrarian Revolution, in which land was divided up into enclosures, had led to the clearance of most of the woodland.

Whatever the criticisms of the landed gentry, one benefit was that they preserved some natural habitats in grand estates. This included the Annesley family who purchased this land in 1747.



Section of deciduous woodland in Donard Forest
Albert Bridge, Geograph (CCL)



Scots pine plantation in Donard Forest
Albert Bridge, Geograph (CCL)

When the state bought the land in the early twentieth century they continued the reforestation process, evident here in the straight rows of trees.

Predominantly coniferous, these are Corsican pine, Scots pine, douglas fir and larch with occasional deciduous broad-leaved trees such as oak and birch on the lower slopes.

Commercial forestry is allowed but regulations require careful integration with the surrounding hills for example with irregular edges to the patches of deforestation and planting a mixture of coniferous and broadleaf trees.



Commercial felling in Donard Forest
Albert Bridge, Geograph (CCL)



Top edge of planted forest near Millstone Quarry
© Jenny Lunn

Here you can see a wide gap between the rows of trees. This is a firebreak designed to slow the progress of fire.

With the high rainfall that the Mourne are notorious for this may seem unlikely but both wildfires and arson are common.

In 2011 fires were started deliberately at more than 12 locations on the same day, and in 2012 large gorse fires raged on Slieve Donard less than a mile from here.



Fire break in Donard Forest
© Verity Peet



Shoots of recovery in the gorse after fire
© Verity Peet

Fires do more than burn down surface vegetation. The roots and seeds of plants can be destroyed resulting in very slow regeneration. Birds and other wildlife lose their habitat and sometimes their lives. The impact is felt by humans, too, as the quality of the water suffers.

Directions 12

Continue on the track down through the forest. After the first long straight downhill section, the track bears to the left and flattens out. It then rises up a small hill. About 50 metres after the brow of that hill look on the left side for a large round stone construction about 10 metres back from the track.

13. Going underground

Circular stone structure in Donard Forest

This stone construction is an access point to one of the tunnels deep underground that carries water from the Silent Valley reservoir to supply the surrounding areas as well as Belfast.

The most famous water tunnel created in the Mourne was driven through Binnian Mountain about three miles south of here.

The two metre high and 2½ mile long tunnel through a granite mountain was an impressive feat of engineering. Even more challenging was creating a perfect gradient in the tunnel for the water to flow at the right rate.



Water tunnel access point in Donard Forest
© Verity Peet



Sam McMurray, the Contractor's Engineer,
at an entrance to the Binnian Tunnel (1950)
Courtesy of Mr Norman Ervine

Equally importantly, they had to make sure that the teams starting at either side of the mountain met in the middle in the correct place! It took four years and a workforce of 150 men to complete the tunnel. When the two sides met in 1951 they were only five centimetres apart.

The Binnian Tunnel completed the third stage of the transformation of the Mourne into the main supplier of water for Northern Ireland's biggest city.

The ambitious Victorian scheme had taken decades to build, faced a series of complex engineering issues and cost the lives of nine men in construction accidents.

While there is a visible impact on the natural landscape in terms of the reservoirs, much of the infrastructure is hidden from sight. The finished scheme is one of great ingenuity as well as incredible design. Not only does it provide the most essential element for life but it also skilfully manages to balance our immediate human need for resources with the longer term preservation of this beautiful landscape.

Directions 13

Continue on the track which undulates and bends through the forest. Stop when you reach a bridge over the Glen River.

14. Invisible enemies

Upper bridge over Glen River

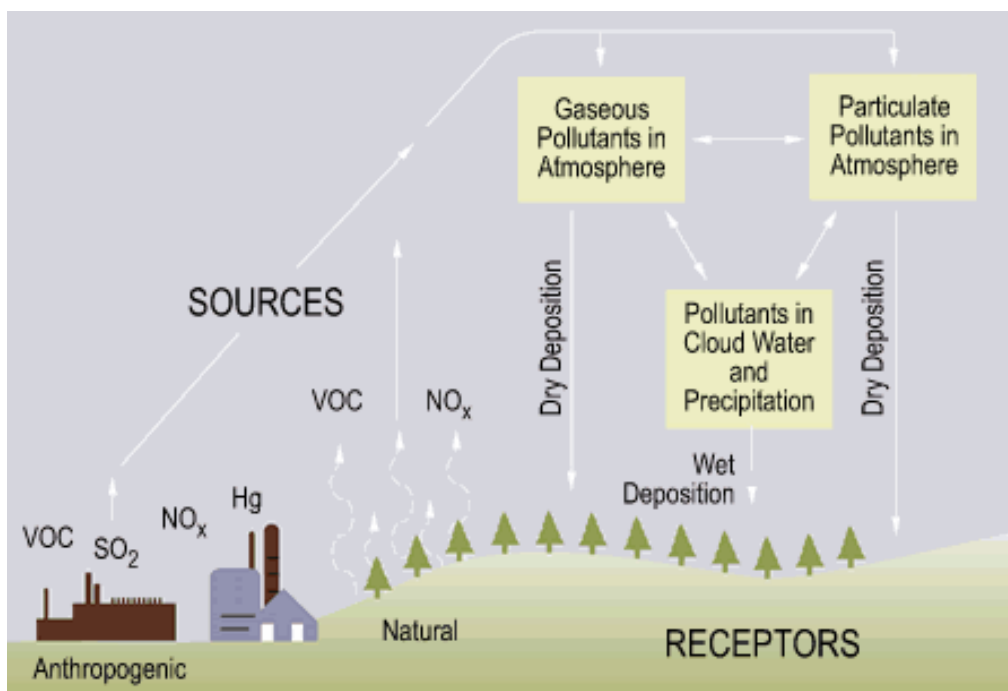
We have seen the visible impact of the exploitation of natural resources on this landscape but there are other less visible human activities that have disturbed the natural balance of the environment.

One invisible cause of damage is the pollutants carried in rainwater that makes its way into the soil and streams.

The main chemicals that cause the problem are sulphur released from power stations and volcanoes and nitrogen from vehicle exhausts.



Glen River: picturesque but polluted?
© Howard Lunn



Process of acid rain formation
PD-USGOV, Wikimedia Commons (CCL)

When these gases mix with water in the air they become different chemicals – sulphur dioxide and nitrogen oxides.

These can have a significant impact on the health of different habitats and on biodiversity.

Government policies introduced in the 1980s have reduced emissions of pollutants from power stations and industrial processes.

But some forests in the UK, including this one, have not been able to fully neutralise the acidic effects of polluted rain because of the particular geological composition already existing: due to the granite, the soil here is already fairly acidic.

When the acid-alkali balance in streams and rivers is altered some fish manage to adapt but some species cannot and dwindle. For example, until the early twentieth century wild salmon leaping upstream was said to be a common sight in the Mourne. Today wild salmon numbers have fallen so much it has been designated a Species of Conservation Concern.



Wild salmon
Joe Mabel, Wikimedia Commons (CCL)



Juniperus communis
MPF, Wikimedia Commons (CCL)

The effect of pollution can also be seen on plants.

For example, the juniper shrub with its distinctive blue-black berries is one of only three conifers native to the Mourne and so rare in the UK it is classified as a Priority Species. But since 1986 the number of sites with native juniper has declined by over 50 per cent.

Monitoring levels of pollution across water, soil and wildlife is a complex and on-going operation carried out by Northern Ireland's Forest Service, Water Service, Rivers Agency, Department of Agricultural and Rural Development, Environmental and Heritage Service, and Environment Agency.

Together these agencies not only monitor existing levels of pollution but have also created a system for identifying and managing the effect of human activities on the natural world through a process called Strategic Environmental Assessment. This means that any plans for development of any kind in protected areas such as the Mourne must be checked for potential negative impacts on the environment before being carried out.

Optional walk extension – If you are feeling energetic and want to climb Slieve Donard cross the bridge, turn left and follow the riverside path uphill. Be warned: this is the highest peak in the Mourne and will add about another two hours to your walk.

Directions 14

Cross the bridge and follow the gravel track as it bears round to the right (do not take the rock steps immediately to the right of the bridge which just lead to a viewpoint of the waterfall). After about 30 metres where the main track bears to the left, take the narrower path on the right which leads down into the woods. Follow this path downhill always keeping the river on your right. Stop when you reach the next bridge.

15. Pleasure gardens

Middle bridge over Glen River

As we have already discovered, the local aristocracy in this area was the Annersley family.

Throughout the eighteenth and nineteenth centuries they owned and cared for much of the land around Newcastle including the beautiful nearby estates of Tollymore and Castlewellan (now public parks).

The Annersley's main residence was in Castlewellan but they wanted a seaside home too and in 1837 decided to build Donard Lodge here in the sparsely-wooded foothills of the Mournes.

This was no beach hut but rather a mansion of Classical style with Doric colonnades and an enormous semi-circular conservatory.

Sadly it was demolished in 1966 but we can still enjoy the elegant paths and exotic gardens that were part of the estate.

For over a century the landed gentry had made use of the natural landscape around their country estates.

In some cases they created ways to access and enjoy the natural landscape; in other cases they artificially created a landscape to highlight magnificent views and vistas.

This was done partly for the purposes of engaging in pleasurable activities and partly to show off.

Here the Annersley family engaged in a combination of showcasing natural beauty and deliberately manipulating it.

the Glen River descends over two miles down the mountain to the sea. They enhanced the river's twists and turns with a charming series of waterfalls and cascades. Then they created pathways, platforms and bridges to enjoy it.



Top to bottom: Waterfalls on the Glen River, stone pathways through the forest, a stone shelter dated 1842, stone steps Albert Bridge, Geograph (CCL) / © Verity Peet

Care was taken to conserve native wildlife such as the sweet gale that grows in boggy hollows and the diverse mosses. Bright green mosses can be found in abundance but sometimes pink and red sphagnum moss can be spotted too.

New species and ornamental plants were introduced reflecting the travels of the wealthy landowners to the Americas, Australia and Asia. These included rhododendrons, redwoods and monkey puzzle trees.



Sphagnum rubellum
b.gliwa, Wikimedia Commons (CCL)



Rhododendrons in Donard Forest
Albert Bridge, Geograph (CCL)

Directions 15

Cross the bridge and turn left to continue downhill on the riverside path, this time keeping the river on your left. This path is rocky and steep so take great care. When you reach the next bridge (Donard Bridge), do not cross it but turn right and follow the main track away from the river which leads through a woodland known as Annersley Demesne. Stop part way along this path.

16. The pursuit of leisure

Annegersley Demesne

The landed gentry in Victorian times may have been the first to devote time and effort to the pursuit of leisure in the Mourne but they certainly weren't the last. Today visitors come from all over the world, drawn here for a host of reasons. The juxtaposition of sea and rugged mountains makes for a dramatic landscape, said to have inspired C S Lewis' world of Narnia, and a few thousand amateur writers and artists beside!

Bouldering, climbing, fishing, golf, hiking, horse riding, kayaking and mountain biking, as well as just walking, are all ways to enjoy the landscape of peaks, parks and forests. Irish hospitality pulls in the punters too: seafood, Guinness, traditional music and banter are all part of the 'craic'.



The beauty of the natural landscape is a major draw for tourists
Ross, Geograph (CCL)

Today tourism in the Mourne generates an estimated £55 million each year making it the largest source of industry and employment in the region. Like farming or quarrying before it, though, growth in an industry that makes use of the land's natural resources brings with it the challenge of balancing public access with conservation needs. Paths, roads, car parks and cafes are undeniably useful in providing access for recreational purposes but they may not be best option for preserving it as an Area of Outstanding Natural Beauty.

Since plans were first put forward in 1946 government agencies and locals have argued over the pros and cons of making the Mourne a National Park. Those in favour compare the economic advantages that have resulted for comparable areas in England such as the Peak District. Opponents insist that National Park status would deter big businesses from investing in the region and bring nothing but bureaucracy and house price rises for residents. In 2012 the Northern Ireland Environment Minister said that 'the voice of opposition in the Mourne is greater than the voice of support' and put plans on hold. Again.

Recent controversial plans to boost tourism include an aerial cable car that would transport people from Donard Park at the edge of Newcastle up the hillside to Thomas's Quarry. Watch this space!

Directions 16

Follow the path until you reach King Street. Go right (effectively straight ahead) onto King Street. Look on the left for a sign for Bath Lane. Follow the steps down to the lane. At the end, cross over the main road and turn right onto the promenade path. This takes you back past the Harbour House Inn to the harbour.

17. Use or abuse?

Newcastle harbour

We have now come full circle back to the harbour. We hope that you've enjoyed this walk that has explored how humans have used – and some might say abused – the natural resources of this beautiful place in different ways through the centuries.

This has encompassed the underlying rock, the soils and vegetation, the abundant rainfall and streams, and the natural beauty of the landscape.

The granite rock and the veins of precious minerals were exploited in prehistoric times, the industrial era and modern times.



View from Newcastle Harbour up the bogie line
© Jenny Lunn

We have seen two granite quarries and found out how the rock was extracted. We saw some stone in use on the mountain in the form of dry stone walls but also found about that which was transported down the mountain by bogie line and exported. This hard rock was turned into hard cash and brought wealth to the town of Newcastle but left a very visible impact on the landscape.

We have seen hillsides cleared of natural woodland to be grazed by livestock. While cattle and sheep provided a livelihood for local farmers they also trampled the ground and degraded its fertility. Some of the slopes have been reforested and we found out about a mixed planting strategy that seeks to avoid the mono-species plantations found elsewhere and create a more diverse habitat for wildlife. However the trees, soils and streams are affected by pollution carried by rain from distant industrial areas.

We found out how engineers solved the problem of a growing city by turning to an area of high mountains. In the forest we discovered surface evidence of an underground network of infrastructure for water distribution. It is easy to take the plentiful rainfall and pure water found here for granted but we must take care to safeguard this most precious of natural resources.

We have also seen how the natural beauty of the landscape has been appreciated. We admired the design work done by an aristocratic family for their 'pleasure grounds' and found out about recreational enjoyment of the landscape today. We also reflected on the line to be trod between conservation and public access of natural landscapes.

Song of the Mournes

Sing a song of pleasant beaches
Where the mountains meet the sea.
Sing of woods and shadowed streamlets
From the uplands bounding free.

Sing of crags against the high sky,
Shepherd's path and quarry track,
Stone fringed fields, scots pine and fuchsia,
All the things that call us back.

Sing of remote tarn and valley,
Brown bog, castellated ridge.
Sing of quiet road and loanin
Winding to a granite bridge.

Sing of gorse and rock-strewn foothills,
And of tidy homesteads where
Peace-loving, kindly people
Smile a Mourne welcome there.

From 'Wayfarer in the Mournes' by J S Doran (1980)



View across Dundrum Inner Bay towards the Mournes
© Howard Lunn

Further information

The Mourne Mountains

Official visitor website for Northern Ireland
www.discovernorthernireland.com/mournes

The Mourne Mountains

Information about the prominent mountains and bodies of water as well as local activities
www.mourne-mountains.com

Mourne Heritage Trust

Find out about the Mourne AONB, its special landscapes and how it is managed
www.mournelive.com

Mourne Foothills Geodiversity Profile

Find out about the particular geology of the Mourne
www.doeni.gov.uk/niea/land-home/landscape_home/country_landscape/84/84-geo.htm

About Newcastle

A detailed history of the town on the website of the lifeboat station
www.newcastlelifeboat.info/index.php/history/about-newcastle

Newcastle

Description of the town in Samuel Lewis' Topographical Dictionary of Ireland (1837)
www.lecalehistory.co.uk/lewisN.htm

Donard Lodge

Blog post with information about the Annesley family and their 'marine residence' at Newcastle
<http://lordbelmontinnorthernireland.blogspot.co.uk/2013/03/donard-lodge.html>

Silent Valley

Find out about access plus information leaflet and walking trails
www.niwater.com/silent-valley.aspx

A century of water from the Mourne

Website about the Silent Valley water project including plenty of archive images
www.bbc.co.uk/northernireland/yourplaceandmine/down/A1068518.shtml

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The Mourne Mountains from St John's Point
Mark83, Wikimedia Commons (CCL)

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Discover the Killard peninsula where Strangford Lough opens into the Irish Sea

<http://www.discoveringbritain.org/walks/region/northern-ireland/killard.html>



If riverbanks could talk

Discover how the River Quoile has shaped the landscape around Downpatrick

<http://www.discoveringbritain.org/walks/region/northern-ireland/downpatrick.html>



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<http://www.discoveringbritain.org/walks/region/west-midlands/wrekin-forest.html>



The most loved hill in Britain?

Discover the secrets of Bennachie in Aberdeenshire

<http://www.discoveringbritain.org/walks/region/scotland/bennachie.html>



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<http://www.discoveringbritain.org/walks/region/south-west-england/dartmoor.html>



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<http://www.discoveringbritain.org/walks/region/south-west-england/bodmin-moor.html>



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**Discover the spectacular dams and reservoirs of the
Elan Valley in mid Wales**

<http://www.discoveringbritain.org/walks/region/wales/elan-valley.html>





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