# The Duddon Estuary: the Myriad Lines of its Relations

## **Introductory Note:**

Over the summer, I finally got around to reading a short-ish book that has been sitting on my shelf for years: *Lines: A Brief History* (2007) by Tim Ingold. The book opens with a clear question: 'What do walking, weaving, observing, singing, storytelling, drawing and writing have in common?' Ingold's answer is deceptively simple: 'they all proceed along lines of one kind or another.' <sup>1</sup>

One morning, our son came into our bedroom and, unusually, asked me what I was reading. A few seconds later, Joseph and I embarked on a journey around the room: we travelled from the weave in the carpet to the visible joins in the wallpapered ceiling; we roamed from the wood enframing the print above the bed to the entangled lines on the palms of our hands. It was an imaginative expedition that seemed to confirm Ingold's claim that, after 'only a moment's reflection', we come to the realisation that 'lines are everywhere'. <sup>2</sup>

I was reading Ingold's book when I started to think about Irene Rogan's invitation to write about the Duddon Estuary. Sitting at home in Lancaster, all I could see – in my mind's eye – was a landscape of lines.

This piece of writing is an attempt to explore some ways of thinking about the estuary and its environs in terms of lines. Threaded through the text are six autobiographical fragments – 'Life Lines' – that reflect on the shifting nature of my own durational relationship with the estuary: fragments that are concerned with, amongst other things, poetry and memory, the body and community. At the same time, the piece is informed by an anxiety regarding the limitation of purely first-person accounts of moving through and remembering place. In and around the personal passages, then, are short extracts from a range of disparate written sources relating to the local landscape. Crucially, though, those extracts, do not always clearly relate to the personal texts that appear either side. The overarching aim, in reproducing these different textual voices, is to think about the estuary through multiple discourses and from multiple – and, at times, complicatedly competing – perspectives. By extension, then, the use of a range of sources highlights the entanglement of lines that weave together – often creating difficult-to-unpick knots – in the making of a place.

'Lines [...] are phenomena in themselves. They are really there, in us and around us. Indeed there is no escaping them, for in any attempt to flee we only lay another one' (p. xv). <sup>3</sup>

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The Iron Line is conceived as one element in South Copeland's tourism offer, somewhere to return to because of its natural beauty and the quality of its educational and commercial offers. The aim of the Iron Line is to transform the area around the unique coastal lagoon at Millom into a recreational attraction that fuses ecology, heritage and culture within a fully inclusive natural green space. <sup>4</sup>



## Life Line I: Poetry (August 1999)

Poetry is the literature of lines. It begins, of course, with the lines of individual letters: the textual inscriptions on the page of a material notebook or the summoning up of digital markings on the screen. To write, with a pencil or a keyboard, is to mark; to write is to make lines. In contrast to other types of writing, though, the line is also crucial to the form of the poem. For writers of prose fiction, line endings are determined, more often than not, by the practical demands of the publisher. The poet, on the other hand, agonises over the ending of each line. Sometimes, that compositional process is shaped by the poet's decision to write within the framework of a regular poetic metre: think back to school and Shakespeare's iambic pentameter. But even when the poet liberates themselves to play around with free verse, they necessarily have to think about the look and sound of each individual line and the way it shapes the white space around it.

The Duddon Estuary began, for me, with poetry, with lines on the page. I moved up to Cumbria to live in a shared terrace opposite Dove Cottage on the edge of Grasmere. Having taken a course on the Romantics at university, I thought that I knew my William Wordsworth. I soon came to realise, though, that the anthologies had only scratched the surface. Wordsworth had written a *lot* and I'd read very little.

I'm not sure now how it started but I became obsessed with *The River Duddon*: the sequence of sonnets, first published in 1820, in which Wordsworth maps the river from its source to the sea. Perhaps it was the poetry of toponymy that caught my eye and, by extension, my ear: Seathwaite Chapel, the Plain of Donnerdale, the Kirk of Ulpha. Maybe it was the sense that, in capturing the flow of the river, Wordsworth was also charting the inexorable linearity of a human life. Perhaps that spoke to me as I felt the pressure to work out to do next. I'm not certain. What I do know, though, is that, for weeks, I lived in the poem when I went back to my tiny room. Each time I reached the point where the 'Majestic Duddon' was said to glide 'over smooth flat sands', I went back to the beginning to 'seek the birthplace of a native Stream'. <sup>5</sup>

Norman Nicholson came a little later. I picked up his *Selected Poems* from Sam Read's in the village and I opened the book on the banks of the Rothay. The opening poem, 'To the River Duddon' (1944), immediately grabbed me. Here was a Cumbrian poet – from a town I'd only vaguely heard of - who had the confidence to articulate how his attitude towards Wordsworth restlessly oscillated between reverence and critique. More specifically, here was a writer who

questioned the portrait of the Duddon as a river 'remote from every taint/ Of sordid industry' and, instead, presented an estuarial landscape dominated by the infrastructure of industry. <sup>6</sup> The voice, in the lines of this meandering poem, carried the quiet authority of a writer for whom the Duddon Estuary was inextricably interwoven into the practice of everyday life.

I soon discovered, however, that, in the *Collected Poems*, Nicholson's tone seemed less assured. In the late poem, 'On the Dismantling of Millom Ironworks' (1981), he documented how, once again, the Duddon flowed unimpeded by the architecture and detritus of heavy industry. In *these* lines, Nicholson tried to find the language to figure out what the collapse of industry might mean for his home-town and its people. At the same time, he looked back on his former self, retracing his earlier poem of place and revising his earlier critical judgement of Wordsworth. Whereas Nicholson had once gently ridiculed the Romantic writer, he now imagined Wordsworth's spectre staring out from Duddon Bridge with a poetic vision that was beyond his own.

Twenty years on, and several births and deaths later, I perform my own retracings when I revisit the Duddon poems of Wordsworth and Nicholson. Roaming around the white space between the lines of the poems of place, I double back upon myself and bump into my own ghost.

11:16.8	Duddon	Hold the Line –	Managed realignment -	Managed realignment -
	Estuary	Manage flood risk by	Depending on studies, withdraw	Depending on approach in
	(inner)	maintaining existing	from maintenance of existing	earlier epochs, manage
		defences. Undertake	defences and manage a retreat to	realigned defences. <sup>7</sup>
		studies and	higher land to allow natural	
		consultation on	processes to resume. Implement	
		opportunities to	localised set back defences to	
		withdraw from	manage risk to the main A595	
		maintenance of	if required.	
		defences and manage		
		a retreat to higher		
		land. Localised		
		defences to manage		

	risk to the A595	
	road maybe required.	



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## Life Line II: Genealogy (July 2015)

When I took that photo, I didn't know – I *couldn't* know - that it would be the final trip that we'd make together. It was his seventieth birthday and we'd decided to take the coastal line from Lancaster to Carlisle. There was no rush, so we planned to break up the journey by spending the night in Ravenglass with stop-offs along the way. More than anything, I was desperate to show my Dad Millom. I wanted him to look up at the dormer of 14 St George's Terrace. I wanted him to settle down in the corner of the sandstone public library. I wanted him to sit in the park and to gaze across the slate roofs towards the estuary and the fells beyond.

I do remember him doing those things in Millom. But, looking back, it's the journey on the railway line around the estuary that's remained most deeply scored in my mind. I travelled backwards as I knew what was coming. When the train pulled into Askam, I asked if he could spot the steeple somewhere beneath Black Combe; a few minutes later, I nudged him to look up to his left just before the train crossed the viaduct at Foxfield. I assumed the role of unofficial tour guide.

My Dad always said that, if he could have had his time again, he'd have been a Geography teacher. A love of places must have come down the line. I've also inherited my Dad's love of the *anticipation* of places. When we were kids, he was fuelled by enthusiasm and anxiety as he drove us through the Peak District towards his home-town of Nottingham. He was excited to be heading back to the city that he'd left, reluctantly, at the age of 16. At the same time, though, he was desperately hoping that we, his young children, wouldn't disapprove of the sites of his childhood and youth: Slab Square and the City Ground, the Theatre Royal and the streets of Mapperley. Here, on this half-empty, middle-of-the-day Northern Rail carriage, the roles were reversed. I was desperate for him to approve of Millom. I wanted him to like the place as much as I did.

A little later, as we sat alongside one another on the bench in the park, we spotted the next train pulling into Sand Side on the other side of the estuary. I was envious of those passengers as, already, I was nostalgic for the anticipation of the arrival.

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At present, the only way to go from Barrow to Millom and the West Coast of Cumbria, is along the A595 - a journey of around 20 miles each way. This road is little more than a dangerous single track in places and the return journey takes around one hour. This road is also the main access road to Sellafield. A Bridge across the Estuary would cut the journey time to under 10 minutes, would save fuel and greatly reduce the Carbon Footprint of the vehicles making this journey. The Bridge could also incorporate a Barrage which could generate Tidal Energy and power - a much more predictable form of power generation than Wind Generators. The cost of this Bridge has been put at around £620,000,000 and could be funded by Sellafield, the EU and from the energy generated by the Barrage. The Duddon Estuary is a beautiful, and largely unknown, part of Cumbria and could become a large Wildlife Sanctuary that would bring much needed revenue to this part of the UK. 8



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#### Life Line III: Texturality (18 May 2020)

In the archives of the Tate, there's a sketchbook that contains several pencil drawings of Millom Castle and Holy Trinity Church that Turner made during a tour of the north-west in 1809. The faint lines on these pages are provisional studies; visual notes for never-to-be-realised paintings of the Cumbrian landscape. The same collection holds a later work – vaguely dated as being composed sometime between 1825 and 1832 – that captures Duddon Sands through a combination of pencil, watercolour, and chalk. Inspired by his reading of Wordsworth's sonnets, Turner – according to Eric Shanes – had intended this study to provide the basis for a contribution to his *Picturesque Views in England and Wales* (1827-38); but, once again, that painting was never brought-into-being. <sup>9</sup>

I think that I once held this image. One of the best jobs, when working at the Wordsworth Trust, was to pull together the loans for special exhibitions. It was a job that meant that I spent as much time in London's subterranean archives and libraries as I did walking up Easedale or across Loughrigg Terrace. Joseph Farington and Thomas Girtin, David Cox and Francis Towne:

the names of many of the artists were completely new to me. But I knew of Turner, of course, and I still remember the transgressive thrill of being permitted to get so close to the page. I remember trying to compute that it was Turner's hand that had held the pencil that had made these lines. Back then, though, I'd yet to visit the Duddon Estuary for myself.

I stumbled across this image again on 18 May 2020. The date's remained fixed in my mind as it was our son's birthday and, during those weeks and months of lockdown and home-schooling, I was getting up at a ridiculously early hour to work before the children were awake. I should have been doing something else but, that early summer morning, I allowed myself to become immersed in the image on the screen. In spite of the rising sun outside, Turner's storm clouds seemed to encapsulate the oppressive weight of the moment. The picture's lack of clarity also seemed to sum up my own relationship with Duddon Sands. As Matthew Imms has pointed out, Turner's study, 'with its silhouetted trees and vast mass of storm clouds can hardly be described as conventionally topographical'; and, as a result, the precise geography is difficult to make out. <sup>10</sup> Since those early research days at the Tate, I had come to know the estuary a little through spending so much time in Millom. During lockdown, though, for us – at home in Lancaster – the Duddon remained frustratingly out of reach. My memory of the estuary was becoming as opaque as Turner's painterly portrayal of place.

Yet the image on the screen brought some clarity too. Over the past eighteen months, the thick texturality of what it means to be-in-the-world has been flattened as we've spent our days and nights in the realm of the digital. We've been living, for the most part, disembodied digital lives. But digital technologies carry their affordances too. On that May morning, the Tate's site allowed me to zoom in on the undated image so that I could see, over the storm clouds, Turner had pencilled the words 'Duddon Sands'; it enabled me to rotate the image so that I could read, from different angles, the series of inscriptions and stamps relating to its status as part of the Turner Bequest of 1856. What is more, Imms's accompanying notes drew my attention to things that I'm sure that I'd missed when I'd held the study in my hand: at the bottom centre of the page, 'white chalk has been applied over the washes, apparently to suggest figures'; and, to the left, 'Turner's fingerprints are evident at the ragged edge of the clouds above the silhouetted trees'. <sup>11</sup> The code travelling down the broadband lines reminded me that, fuelled by his admiration for Wordsworth's sonnets, the much-mythologised Turner had simply been a body making lines on paper as he looked out across the Sands.

Term

Advance the Line (ATL)

Definition

Advance the Line. A Shoreline Management Plan policy to build new defences on the seaward side of the existing defence line to reclaim land. <sup>12</sup>

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## Life Line IV: Geometry (24 August 2021)

I got down on my hands and knees so that I could take in the detail. The next morning I was driving up to Millom for the first time in two years and I wanted to remind myself of the lay of the land. I found myself sounding out names when roaming over the map - Explorer OL6 ('The English Lakes: South-Western Area'), South Sheet - spread out on our living room floor: Hawthwaite House, Nicle Wood, Greety Gate Marsh, Bullstone Bed, High Haume Farm, Waterblean, Whelpshead Crag, Pear Tree Beck, Tippins Lane, Blea Beck, Stoup Dub, Thwaite Yeat, Mouzel Farm, Boothwaite Nook. I smiled at the functional matter-of-factness of others:

Wet Meadow, Park Plantation, Wall End, Southfield, Bailiff Ground, Clay Lake, Round Hills, and Watery Crag.

I was also drawn to those markings that are used to 'join locations of equal elevation': contour lines. <sup>13</sup> Earlier on, I'd come across an article about the YouTuber, Tom Davies, who uses GPS tracking to attempt to cross vast landscapes – entire countries even – in a direct line. <sup>14</sup> Hunched in our house in Lancaster, I cut across the contours as I imagined my own improbable route from Black Dub on the coast to the top of Black Combe: I went through High Layriggs and past Giant's Grave, across the railway line and over the A5093, through Whicham to Parsonage Breast before finally reaching the top to take in 'the line of Erin's coast'. <sup>15</sup>

If you momentarily blur your vision, the eye is drawn to an orangey lacuna slap bang in the centre of OL6: Duddon Sands. Refocus, though, and it becomes clear that this cartographic space is, in fact, rich with geographical data. Rotate your head 90°, vertically arranged text on both sides of the estuary – from Shaw Marsh in the north-west to Askam Pier in the south-east – highlights the line, or thereabouts, of 'Mean High Water'. In the moment of the map's making, therefore, the tide was clearly out. Then, right in the centre of this space, in the centre of the map, is a small rectangular box:

#### WARNING:

Public Rights of Way across Duddon Sands can be dangerous. See local guidance.

On the unfolded cartographic plane, the estuary is an entanglement of lines. Blue ones curve, come together, and pull apart again as the Duddon Channel and its tributaries are shown to flow seawards towards and around Haverigg Spit. Cutting across these blues is a series of green dashed lines. Some of these lines run parallel, more or less, to the eastern shore of the estuary, connecting Foxfield and Angerton and Dunnerholme. Others are pretty much horizontal, linking east with west: Askam to Millom, Sand Side to The Hill. The estuary as geometry. Bridleways. Desire paths, across the floor of the estuary, that have made the Sands a site of connectivity rather than rupture. Over the years, of course, there have been countless attempts to impose an utilitarianly direct line over the top of the Sands in the form of a road bridge or barrage. The map confirms, however, that, for now, none of these plans has seen the light of day.

To map, of course, is always a political act. As I started to fold the OL6 away, I spotted more lines in the sandy space. Again, they were dashed; but this time they were grey rather than green. These lines weren't paths of desire but administrative borders: marks on the map separating Copeland from Barrow, one local authority from the next. This estuary *has* been a site of connection. The grey dashed line was a reminder, however, that the Sands has also been a site of invisible division and, up until the boundary changes of the 70s, separated the historic counties of Cumberland and Lancashire. In *The Song of the Earth*, the literary scholar Jonathan Bate - in a discussion of what he calls the 'critical regionalism' that informs Wordsworth's Duddon sonnets - describes county boundaries as 'pressure-points'. <sup>16</sup> The lines on the map, then, act as visual reminders that the spatial history of the estuary has always been knotty: an inextricable intertwining of the physical and the practical and the political and the poetic.

That night, before I went to sleep, I had a thought: if I was to go out into the middle of the Sands, and stop at a point marked on the map by the grey dashed line, then where would I be standing? If I was looking north, when out in the estuary, then Copeland would be to my left and Barrow would be to my right. But what about the sandscape immediately beneath my feet? Who owns this line of land? Where would I be?

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The Duddon Estuary can be considered to extend from a line between the northern end of Walney Island and Haverigg Point to the normal tidal limit at Duddon Bridge. Most of the estuary lies within sub-cell 11c although the northern shore west of Hodbarrow Point lies within sub-cell 11d. The entire estuary is of high nature conservation importance and is designated as a SSSI, SAC, SPA and Ramsar site. <sup>17</sup>



## Life Line V: Fragility (25 August 2021)

In *The Practice of Everyday Life*, Michel de Certeau – an influential theorist of space and place to whom Ingold repeatedly returns when thinking about lines – establishes a famous distinction between two distinct but intersecting kinds of spatial story: a 'map' and a 'tour'. <sup>18</sup> For de Certeau, the map is essentially a way of seeing the world geometrically as a series of fixed coordinates or locations. The tour, on the other hand, signifies an individual's embodied movement through the world of matter. So, to look down from the trig point on Black Combe is to *map* the landscape below. To walk along the sea wall at Hodbarrow, though, is to undertake a *tour*. As de Certeau makes clear, the practice of everyday life necessarily involves a constant oscillation between the two.

De Certeau's distinction came to mind as, for the first time in months and months, I drove — windows down, music on - north and west to Millom. Irene had put together a full itinerary — we were to spend the day taking a clockwise line around the edge of the estuary — and I readied myself for re-entering the world of conversation and movement. We dropped down from Lady Hall and walked along Shaw Marsh to sit beneath the viaduct at Foxfield. We sat at the foreshore at Sand Side and listened to the curlews whilst, behind us, the train slowly came in from Barrow.

Yet, over the course of the day, I couldn't shake off a residual anxiety. In the days before, I'd been reading *Abundance*: a collection of literary essays in which the Cumbrian writer, Karen Lloyd, travels across Europe to meet both professional experts and committed volunteers working on a series of conservation and restoration projects. It's a book that's deeply and ethically concerned with the more-than-human. At the same time, it's a book about family as Lloyd repeatedly articulates her fears for the future landscapes that will be inhabited by her children and, potentially, her children's children. The previous night, then, I found myself holding onto our daughter a little tighter than usual as she slipped off to sleep; and it was difficult to forget about this visceral reader-response as we limned the estuary and discussed – inexpertly on my part – the possible futures for this particular place.

As we walked towards the viaduct, we came across a wooden installation that had been placed parallel to the water. I realised that it had been erected to counter some sort of erosion but it was Irene who gave it a name. Willow spiling: a practice in which live willow rods are woven around vertical willow posts that are driven into the bank of a river. It is the adaption of an ancient technique, the creation of a willow hurdle designed to reduce excess silt input into water.

Lloyd's book is frequently characterised by solastalgia: the term that has been coined to describe the homesickness generated by the trauma of living through environmental crisis. At the last, though, Lloyd allows herself to hope as she looks up to spot a skein of pinkfoots shifting direction as they fly over the Cumbrian landscape: 'So, there we are; you realise you're heading in the wrong direction, you recalibrate the trajectory [...] You understand that to continue in the wrong direction is to take you somewhere you really don't want to go. And you change your bearings. Of course you do. Wouldn't we all, given the knowledge, the choice and the ability to act?' <sup>19</sup> Lloyd's words came back to me as we momentarily lost ourselves in the intricate weaves of the willows.

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The middle estuary has been influenced by reclamation of saltmarsh and construction of sea defences. In addition, the Cumbrian Coastal railway line and associated embankment, constructed in the mid 19th century, runs along the eastern bank of the estuary providing a potential constraint on shoreline position. <sup>20</sup>



## Life Line VI: Despondency (9 October 2021)

It was difficult to make out the steeple of St George's let alone the top of the Combe. It wasn't cold, though, as, suited up, we followed the instructions to kneel in the boat and Neil and ?? [find name] took us up to the viaduct before heading back out, on the slack, towards the sea. The estuary was uncannily still. But, although it was calm, it was still quite tricky to type out notes as the middle-aged cramp began to kick in.

# Lines in the estuary

#### Horizontal:

- Towards Foxfield: wires linking pylons; aerial ley lines?
- Ahead: perfectly straight line of viaduct
- Below: (almost) perfectly straight surface of millpond-esque water
- Above: few hundred geese heading south; promise of another, warmer estuary
- Behind: temporary trace of our boat moving up  $\boldsymbol{\xi}$  down estuary
- Towards Hodbarrow: row of formidably large concrete cubes

#### vertical:

- Towards Foxfield: pylons; visual rhyme with St George's steeple?
- Frayed blue rope dangling from viaduct; trace of kids, memories of hot summer
- Blue line on screen: mapping our linear movements up & down estuary
- Over side of boat; cf. Nicholson's 'From a Boat at Coniston'. How deep to bottom?
- Towards Towsey Hole windmill: cloud lifting, becoming clearer.
- Towards Askam: heading back; lookout tower at hq = hope

We were giddy as the tractor towed us beneath the pier and back towards the headquarters at the end of Sharp Street. We'd been in the boat for well over an hour but, in spite of the numbness in my left leg, I'd have happily stayed out in the estuary for much longer. After months stuck indoors, in front of screens of various sizes, it had been good to be able to feel and hear and smell and taste the estuary. It was difficult for us to stop chatting, then, as we were hosed down in our rescue suits before going back indoors for a cup of tea, leaving the team to clean the boat with the care and attention taken over the first bath of a first-born.

The Duddon Inshore Rescue was founded, via a public meeting held in the Mission Room at Askam in November 1969, following the drowning of a number of local people. Inside the hq, a gold-framed display presents a series of press cuttings and notices detailing the formation of the action group. One cutting – presumably from the *Evening Mail* – describes the first volunteers as a 'Home Guard Style Group of 12 Men', led by the Rev. D. R. Grant and including 'the village post master, doctor, policeman, fishermen and other boat owners'. Another display presents a gallery of photographs – some colour, some black and white – taken at the opening of the hq in the following July. The caption invites the viewer to recall 'were you here?'

We headed upstairs to go into the tower – a lightless beacon – that we'd been watching when out on the water. There, at the far end of the room, the windows neatly framed the landscape that we'd just been in. From inside, on this unseasonably still day, it looked like a world of shape and order. Foreground: the vertical mast – transplanted from a Dutch vessel - of the seventy year old Oakdale, one of only two Mersey Flats left in the world. Middle ground: the expanse of the estuary. Background: the lower fields of the fells on the other side. For a moment, it was all a calm tableau.

Soon, though, fat raindrops began to create mobile archipelagos on the glass. Our time on the estuary had been reassuringly undramatic. As the water slid down the pane, however, we were reminded that, outside, is a weathered world of movement and uncertainty; we were reminded that this large window was installed to enable volunteers to look out into an environment characterised by fatal flux and threat as well as beauty and plenty. The black and yellow binoculars on the table were not always used to zoom in on red knots and common redshanks and red-breasted mergansers.

At the back of the room, a portable TV was fixed to the wall, allowing volunteers to catch up with *Corrie* as an alternative to the spectacle outside. It was two words on the whiteboard, though, that really caught the eye: 'Despondent Person'. For us, the trip in the boat had felt like a day out; something to look forward to at the end of a working week. But the collocation 'Despondent Person' – written down alongside the necessarily functional details of a call-out – underscored why there is a need for volunteers and why they've had to head out into the Duddon so many times since the start of the pandemic. Over time, the adjective 'despondent' has perhaps lost some of its sharpness. In everyday life, the term has perhaps come to be associated with someone who is in low spirits and is mildly dejected. The word on the whiteboard, then, felt euphemistic; a coded term used by colleagues, friends, to mask some all-too-real estuarial trauma. The *Oxford English Dictionary* reminds us, however, that 'despondent' refers to someone who is: 'Characterized by loss of heart or resolution; labouring under mental depression'. To be 'despondent', therefore, is to be hopeless; it refers to someone who, for whatever complicated reasons, finds themselves on the edge.

I couldn't get this word out of my head as I made the journey back to Lancaster. As I drove, in silence, my mind meandered. I imagined those extraordinary volunteers receiving a call early one winter's morning and heading out into the half-light to try to find a young person who, a little while earlier, had gone out into the deep. I imagined a hopeful geometry: the boat creating lines through the rising estuarial water as that young person — cold but conscious - is brought back to land to start again.

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'Life will not be contained, but rather threads its way through the world along the myriad lines of its relations' (Ingold, p. 106). <sup>21</sup>

### **Images:**

- 1. © Laurence Campbell
- 2. © Laurene Campbell
- 3. J M W Turner, 'Duddon Sands' (c. 1825-32); © Tate; Creative Commons (CC-BY-NC-ND 3.0 (Unported)); Tate Britain Turner Bequest.
- 4. © Laurence Campbell
- 5. © Irene Rogan
- 6. © Laurence Campbell

#### **References:**

<sup>&</sup>lt;sup>1</sup> Tim Ingold, Lines: A Brief History (London: Routledge, 2007; repr. 2016), p. 1.

<sup>&</sup>lt;sup>2</sup> Ingold, p. 1.

<sup>&</sup>lt;sup>3</sup> Ingold, p. xv.

<sup>&</sup>lt;sup>4</sup> 'Iron Line: Millom, Cumbria', *Colander: Designing Better Practice* <a href="https://www.colander.co.uk/architectural-competitions/colander-competitions/iron-line-millom-cumbria">https://www.colander.co.uk/architectural-competitions/colander-competitions/iron-line-millom-cumbria</a> [Accessed: 17 October 2021].

<sup>&</sup>lt;sup>5</sup> William Wordsworth, 'The River Duddon', in *Wordsworth: Complete Poetical Works*, ed. by Ernest de Selincourt (Oxford: Oxford University Press, 1936), pp. 296-303 (p. 303).

<sup>&</sup>lt;sup>6</sup> Wordsworth, 'The River Duddon', p. 297.

<sup>7</sup> Cumbria Coastal Strategy: Technical Appraisal Report for Policy Area - Policy Area 11c16 Duddon Estuary (2020), p. 5.

<sup>8 &#</sup>x27;Build a Bridge/Barrage over the Duddon Estuary, connecting Barrow in Furness to the West Coast of Cumbria', petition submitted to Conservative-Liberal Democrat Coalition Government, 19 March 2013 < https://petition.parliament.uk/archived/petitions/31453> [Accessed: 17 October 2021].

<sup>&</sup>lt;sup>9</sup> Eric Shanes, Turner's Watercolour Explorations, 1810-1842 (London: Tate Gallery, 1997), p. 96.

<sup>&</sup>lt;sup>10</sup> Matthew Imms, 'Duddon Sands, Cumbria c.1825–32 by Joseph Mallord William Turner', catalogue entry, March 2013, in David Blayney Brown (ed.), J.M.W. Turner: Sketchbooks, Drawings and Watercolours, (London: Tate Research Publication, 2013) <a href="https://www.tate.org.uk/art/research-publications/jmw-turner/joseph-mallord-william-turner-duddon-sands-cumbria-r1144312">https://www.tate.org.uk/art/research-publications/jmw-turner/joseph-mallord-william-turner-duddon-sands-cumbria-r1144312</a> [Accessed: 17 October 2021].

<sup>&</sup>lt;sup>11</sup> Imms, 'Duddon Sands, Cumbria c.1825-32 by Joseph Mallord William Turner'.

<sup>&</sup>lt;sup>12</sup> North West Estuaries Processes Report: Duddon Estuary (December 2013), p. x.

<sup>&</sup>lt;sup>13</sup> Karen Rann and R. S. Johnson, 'Chasing the Line: Hutton's Contribution to the Invention of Contours', *Journal of Maps* 15: 3 (2019), 48-56 (p. 48).

<sup>&</sup>lt;sup>14</sup> Rachel Hall, 'Straight story? The YouTuber taking a direct route to success', *The Guardian*, 11 June 2021 < https://www.theguardian.com/technology/2021/jun/11/straight-story-the-youtuber-taking-a-direct-route-to-success> [Accessed: 17 October 2021].

<sup>&</sup>lt;sup>15</sup> William Wordsworth, 'View from the Top of Black Comb', in Wordsworth: Complete Poetical Works, p. 174.

<sup>&</sup>lt;sup>16</sup> Jonathan Bate, The Song of the Earth (London: Picador, 2000), p. 224.

<sup>&</sup>lt;sup>17</sup> North West Estuaries Processes Report: Duddon Estuary, p. v.

<sup>&</sup>lt;sup>18</sup> Michel de Certeau, *The Practice of Everyday Life*, trans. by Steven Rendall (Berkeley: University of California Press, 1984), pp. 118-22.

<sup>&</sup>lt;sup>19</sup> Karen Lloyd, ??? [find page number].

<sup>&</sup>lt;sup>20</sup> Cumbria Coastal Strategy, p. 13.

<sup>&</sup>lt;sup>21</sup> Ingold, p. 106.