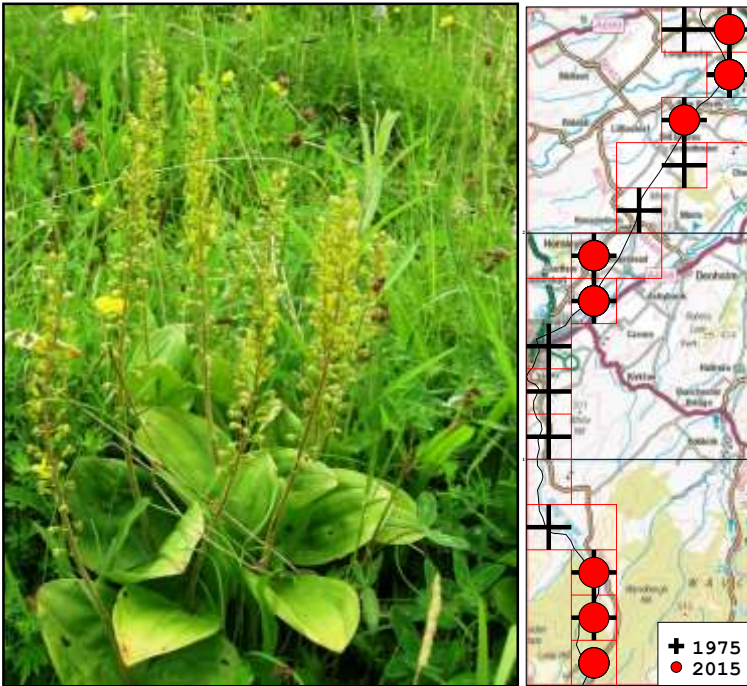


The Railway Flora of Teviotdale revisited



Michael Braithwaite

The Railway Flora
of Teviotdale
revisited

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Hawick Archaeological Society

2015

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The photograph on page 7 of the steam train at Whitrope Tunnel was kindly provided by the Waverley Route Heritage Association © M G Stoddon and that of Bluebells on page 25 by D Moore. All other photographs were taken on the old railway in 2015 by the author (except one in Hawick taken in 2014).

The distribution maps have been prepared using DMAP © Dr Alan Morton.

The author

Michael Braithwaite was born in Northumberland. He came to work in Hawick as a chartered accountant in 1969, just after the Waverley Line was closed. He took up the study of wild flowers as a hobby and made the flora of the old railway his first project. *A Railway Flora of Teviotdale* was published in 1975. He was soon to be appointed vice-county recorder for Berwickshire for the Botanical Society of Britain and Ireland (BSBI) and recorded in that area for thirty-five years before publishing *A short Flora of Berwickshire* in 2014. The completion of that work has allowed him to turn his attention once again to his home area.

Hawick Archaeological Society

The Hawick Archaeological Society, founded in 1856, promotes the study of the antiquities and natural history of Hawick and the surrounding district. More information will be found on the Society's website at www.airchieoliver.co.uk

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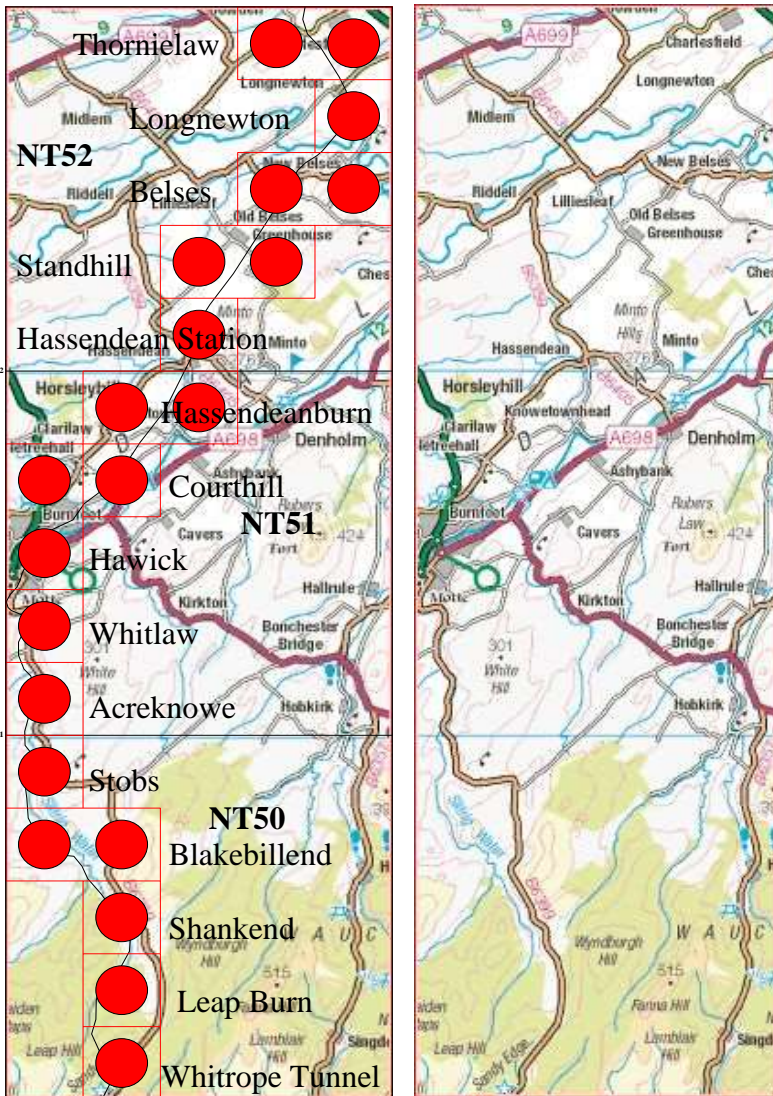
The Botanical Society of Britain and Ireland has been the major inspiration for the author's botanical work. It is the leading charitable society promoting the study and enjoyment of British and Irish wild plants, including the publication of local Floras. More information will be found on the BSBI website at www.bsbi.org.uk

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Map showing the fifteen survey sections

INTRODUCTION

History and geology

This is an account of a botanical resurvey in 2015 of a stretch of the disused 'Waverley Line' railway first surveyed in 1975.

The Waverley Line ran between Edinburgh and Carlisle. The section from Edinburgh to Hawick was opened in November 1849, it had been built in stages over four years. There was then a delay while rival plans for the route south were assessed, one for it to pass through Langholm and the other through Liddesdale. Eventually the Liddesdale route was chosen and construction started in September 1859. The first train from Carlisle to Edinburgh ran in July 1862.

The line was in use for a little over a century. The 1960's saw the closure of many railways across Britain as the rise in road traffic had made rural railways uneconomic. The last train ran in January 1969.

Recently road congestion and environmental issues have led to a renewed demand for railways. The section of the Waverley Line from Edinburgh to Galashiels has been rebuilt and the first train ran in September 2015.

Meanwhile a short section of the line just south of Whitrope Tunnel was acquired by the Waverley Route Heritage Association and the Whitrope Heritage Centre has been opened there with a working railway. Work commenced in September 2002 and is ongoing with a view to extending the line to Riccarton Junction.



Whitrope Tunnel north entrance

The survey area

The 1975 and 2015 surveys covered the same 36km stretch of the Waverley Line falling within the three ten kilometre squares or 'hectads' of the National Grid

NT50, NT51 and NT52. These fall largely within the catchment of the River Teviot with its tributaries the Slitrig Water and the Ale Water. The whole was divided into fifteen survey sections bounded by 2km grid lines. The sections vary somewhat in length but all are a little over 2km, except for the section that includes the Whitrope Tunnel where its 1,105m length must be discounted.

The five sections in NT50 Shankend fall in an area of upland grassland (some now afforested) between 170m and 307m (1,006ft), those in NT51 Hawick in a lowland area with varied habitats (including the town of Hawick) between 100m and 170m, and those in NT52 Lilliesleaf in a predominantly arable area between 110m and 150m.

Geology and soils

The short stretch south of Whitrope Tunnel lies on calciferous sandstone of the Carboniferous age. To the north there is then a short stretch on the Old Red Sandstone before coming to the greywaches of the Silurian age. These continue through to Belses survey section in the Lilliesleaf hectad where the Old Red Sandstone returns and continues to the northernmost survey section. All three rock formations include individual layers that vary from being neutral to slightly basic in reaction. Some of the Silurian is more acidic. As a result the soil reaction can vary over short distances.

The undulating nature of the landscape dictates that the railway is largely a succession of cuttings and embankments with very little level ground. Where the railway skirts the side of a hill there is a cutting on one side of the line and an embankment on the other. Although the embankments were built with the material excavated from the cuttings, the surface material often included some of the ballast and cinder brought in to create the bed for the railway track itself. A herring-bone shaped network of shallow ditches was often dug in the cuttings to drain away water where it welled up from the rock. These ditches might be filled with coarse ballast to limit the need for maintenance. It is often difficult to recognise these construction features in the field now that they have long been colonised by vegetation.

The composition of the railway track itself introduces a wholly artificial habitat. The base is a thick layer of cinder ballast which extended over the full width of the track and continued over the station yards and sidings. Under the railway sleepers there was a layer of coarse ballast about 10cm deep. The individual lumps are two to seven centimetres across. Both these ballast materials were waste from iron works and are fairly rich in mineral nutrients.

Introduction

The track was sprayed with herbicides, especially towards the end of the period when the railway was in use. By 1975 these had largely been washed out, but in some places the 'up' and 'down' lines had contrasting vegetation relating to the extent of herbicide residues. No evidence of such residues was found in 2015.

Land use

When the Waverley Line was in use the banks were ungrazed. Scrub was controlled where necessary by cutting and some of the grassland was burnt at intervals. Since closure most of the southern survey sections have been grazed, at least seasonally, but most of the northern sections have been left ungrazed as they adjoin arable land. The ungrazed sections have been much invaded by scrub, mostly of hawthorn but sometimes of whins (gorse). The scrub invasion is far less complete than might have been expected and in some stretches the trackway has been kept cleared so that it can be used for vehicle access. Recently a few stretches have been included in farm stewardship schemes. Here the scrub is cut back periodically and there is seasonal grazing only.

Trees have been planted in various places, sometimes for amenity, sometimes as shelterbelts. Some of the cuttings are being utilised as farm rubbish dumps and garden refuse has been dumped in a number of places. There are some manure heaps, often in connection with horses stabled nearby.

Only in one place, at Standhill, has a short stretch of the track been reinstated as arable land, though there has been reseeded by agricultural grasses here at Standhill and in several other places.



Ballast removal Thornielaw

When the railway was closed and passed out of public ownership the individual farmers began to exploit the ballast as construction material, well suited as a base material for farm buildings, farm yards and farm tracks. At least some of the underlying cinder ballast was removed at the same time. This process was well underway by 1975 and is still ongoing. In the arable areas almost all

the ballast has gone, in some of the upland areas it is still intact over long stretches.

The removal of ballast has often damaged the drainage and has left an uneven surface, so much so that many of the cuttings now feature substantial water-logged stretches, some with more or less permanent open water. Elsewhere the drainage system inter-connects with that of the adjacent fields and has had to be maintained in good condition.

There has been some physical redevelopment. The railway station in Hawick with its associated yards has been redeveloped as the Teviotdale Leisure Centre, opened in 1982. None of the open ‘railway’ habitats of the station yards survive there. The remainder of the railway line in Hawick north of the River Teviot has either been landscaped or redeveloped for industry. In the landscaped areas the grassland has been re-sown and trees and shrubs have been planted. At Stobs, Acreknowe, Hassendean and Belses stations some new private housing has been built and the old station buildings and cottages have been converted. At Standhill



Shankend Viaduct

and Greenend new farm buildings and yards have been erected on the trackway. In many places there are now farm and forestry access tracks across the line of the old railway. Meanwhile some of the old farm access bridges across or under the railway have been removed or have collapsed. Viaducts remain at Shankend and across the Ale Water at Belses Mill, but the former viaduct across the Slitrig Water on the south side of Hawick

was demolished in the 1980's as was the bridge across the River Teviot in the town.

Except in Hawick itself, there is rather little formal recognition of the value of the trackway for walking. The west end of the Courthill survey section is waymarked, as is a much longer stretch at Stobs where the railway provides a convenient route for walkers wishing to bypass the private policies of Stobs Castle.

VEGETATION AND SPECIES

(THE VEGETATION COMMUNITIES AND CHANGES IN THEIR SPECIES COMPOSITION)

Note: in the following discussion the change in the distribution of a species is indicated by stating the number of the 15 survey sections in which it has been recorded in each of the two surveys. Thus (5/1) indicates records from five sections in 2015, an increase from the one section where there was a record in 1975. Similarly (1/5) indicates that there was a 2015 record from only one section, a decrease compared with the five where there were records in 1975. The four sections in which there were no refinds, and where there may have been losses, must be calculated by subtraction.

Woodland and scrub

With the exceptions of some small recent plantations, there is little woodland on the former railway land but much scrub. A very wet bankside above the trackway at Shankend is protected from grazing by fencing and has mature birch with much willow. An embankment in the Stobs survey section which adjoins woodland has Bird Cherry *Prunus padus* with birch and willows. In the Whitlaw section the cutting and embankment through Whitlaw Wood has reverted to woodland and the rock cutting north of the Slitrig Water now has a closed canopy of trees including birch and ash. The west end of the Courthill section has merged with adjacent woodland.

Except in the hills, the scrub is usually dominated by Hawthorn *Crataegus monogyna*, with Goat Willow *Salix caprea* as much the most widespread willow colonising the banks. Birch is rather local. Silver Birch *Betula pendula* is the more frequent around Hawick and Downy Birch *Betula pubescens* elsewhere. It is not clear whether the Silver Birch is native or is naturalised from introductions. In recent years it has almost always been the birch species chosen for plantings. Whins (Gorse) *Ulex europaeus* are surprisingly scarce, being most prominent at Longnewton. Blackthorn *Prunus spinosa* is also local, as are brambles. Roses are very widespread and a wide range of species and hybrids is represented over an extensive area that provides an opportunity for the species to show their habitat preferences.

In the hills, and by the former railway sidings at Acreknowe, there are some interesting wetland areas, often associated with burn crossings, where the willows are more diverse. Eared Willow *Salix aurita* becomes the most frequent species on the highest ground.

The increase in scrub has been mainly of the already ubiquitous Hawthorn but Blackthorn (11/5) and Gorse (10/7) have also spread, as have roses including Sweet-briar *Rosa rubiginosa* (5/1). Brambles *Rubus fruticosus* agg. are becoming much more of a problem. Sitka Spruce *Picea sitchensis* (8/0) has self-sown from adjacent forestry as well as being planted as has Douglas Fir *Pseudotsuga menziesii* (2/0). Broad Buckler-fern *Dryopteris dilatata* (11/7) has increased under the trees.

Tree planting has taken place in a few places, notably in Hawick following redevelopment of the station area. The species introduced give a fair indication of recent fashions in municipal and amenity planting and include European Silver-fir *Abies alba* (1/0), Giant Fir *Abies grandis* (1/0), Field Maple *Acer campestre* (2/0), Norway Maple *Acer platanoides* (3/0), Alder *Alnus glutinosa* (6/4), Grey Alder *Alnus incana* (1/0), Red-osier Dogwood *Cornus sericea* (1/0), Hazel *Corylus avellana* (7/3), Hybrid Hawthorn *Crataegus x media* (*C. laevigata x monogyna*) (1/0), Beech *Fagus sylvatica* (8/1), Wild Cherry *Prunus avium* (8/3), Cherry Laurel *Prunus laurocerasus* (1/0), Portugal Laurel *Prunus lusitanica* (1/0), Pear *Pyrus communis* (1/0), Pedunculate Oak *Quercus robur* (10/6), Japanese Rose *Rosa rugosa* (2/0), Snowberry *Symphoricarpos albus* (6/3), Yew *Taxus baccata* (1/0), Lime *Tilia x europaea* (1/0) and Leyland Cypress *X Cuprocyparis leylandii* (*Cupressus macrocarpa x Xanthocyparis nootkatensis*) (1/0). Some of the cherry and oak is self-sown. The one sapling of European Silver-fir is the only example that I have come across of recent planting of this species, as other Silver-firs are currently in favour. It has been damaged by Roe Deer and may not survive. The Hybrid Hawthorn was the odd-one-out in a hedge of Common Hawthorn. It frequently finds its way into commercial hedging stock.

Willows, roses, apples and plums

As already noted willows and roses are a prominent feature of the vegetation of the old railway and are worthy of further discussion.

The three common native willows of the Scottish Borders are Goat Willow *Salix caprea*, Rusty Willow *Salix cinerea* subsp. *oleifolia* and Eared Willow *Salix aurita*. Goat Willow is most frequent in the drier parts of lowland woods. Rusty Willow is the most plentiful of the three and is frequent in the wetter parts of lowland woods, along burn-sides at intermediate altitude and in mosses. Eared Willow is most frequent in the hills and in mosses. Goat Willow and Rusty Willow often grow close together and their hybrid is frequent, the same is true for Rusty Willow and Eared Willow, but Goat Willow and Eared Willow seldom grow together so their hybrid is rare. The situation on the old railway is different. The drainage was efficient enough to leave many dry banks eminently suitable

for Goat Willow and it is much the most plentiful willow at all altitudes. Rusty Willow and Eared Willow are more localised and often present only in and near natural wetland that has been enclosed by the railway. Where Goat Willow and Eared Willow are brought close together their hybrid is frequent.

Osier *Salix viminalis* was probably introduced to station gardens following a long-established custom of planting it practically anywhere as a source of basket-making material and it was frequent on the old railway in 1975. Osier (3/8) has now declined, a reflection of the redevelopment of station premises. While it has declined, the hybrids it has formed with the three common native willows often survive on railway bankings nearby as single trees. Most of these hybrids appear to have arisen naturally, but some planting cannot be ruled out as they too had basket-making uses.



Soft Downy-rose *Rosa mollis*

Many of the roses of the Scottish Borders are most familiar as a component of hedges, where they may or may not have been planted along with the hawthorn that is normally the principal species. So the native distributions of the individual species is obscured by plantings. A better appreciation of the native distributions can be gleaned from the populations in deans and on

the coast in Berwickshire. Roses are plentiful in much of the scrub on the old railway where the individual species have had the opportunity to form extensive populations, so the proportions found are of interest even though some of the populations may have been founded from hips bird-sown from planted hedges.

Dog-rose *Rosa canina* is frequent at all altitudes while *Rosa x dumalis*, its hybrid with another Dog-rose, *Rosa caesia*, is the most plentiful rose. The two subspecies of *Rosa caesia*, Hairy Dog-rose *subsp. caesia*, and Glaucous Dog-rose *subsp. vosagiaca* are notably scarce. Soft Downy-rose *Rosa mollis* is perhaps the rose most typical of the area and is found at all altitudes but forms smaller colonies than the Dog-roses. It favours species-rich banks. A related species, Sherard's Downy-rose *Rosa sherardii*, is scarce, but a good colony was noted at Longnewton. It is more frequent near the coast. Burnet Rose *Rosa*

spinosissima is most typical of coastal sand, but is also found inland on rocky knowes. It occurs only at Whitlaw where it is associated with Common Rock-rose *Helianthemum nummularium*. A surprise of the resurvey was the discovery of several very healthy colonies of Sweet-briar *Rosa rubiginosa*. It was found in six survey sections from Whitlaw to Thornilaw, always in association with species-rich basic grassland. It is difficult to judge whether these colonies are native or naturalised introductions.



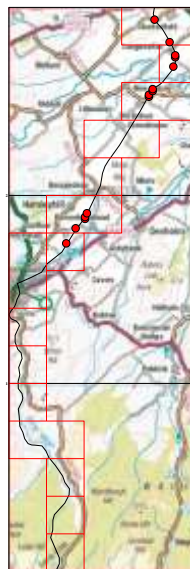
Sweet-briar *Rosa rubiginosa* Belses

Hedgerow apples in the Scottish Borders are a mixture of Crab Apple *Malus sylvestris* and seedlings of the Cultivated Apple *Malus pumila*. Both species seem to have been included randomly in nurserymen's stock as 'crab apples'. Self-sown apples are rare. On the old railway apples were recorded from four survey sections in 1975 and the same number of sections in 2015, though only two were the same. All the six trees found in 2015 were wildings from cultivated apples. None had regenerated to form colonies. Some of the trees are far from houses, so it is not clear how the seeds were dispersed, whether brought by birds from gardens or hedgerows, by discarded apple cores from some workman's lunchtime 'piece' or by discarded cores hurled from carriage windows.

Wild Plum *Prunus domestica* is quite scarce in the Scottish Borders. The trees are most often found in hedgerows but also occur in woodland where they may sucker to some extent, though not nearly as much as the native Sloes (Blackthorn) *Prunus spinosa*. In hedges they are not spaced out methodically like the crab apples, so they do not seem to have been

Unlike willows and roses, apples and plums are very scarce along the old railway. However, like the roses, their occurrences give an insight into the dispersal pattern of species most often found in hedges, where they are usually planted.

Rosa rubiginosa



included in nurserymen's stock, instead they are clustered near habitation. On the railway they were found in four places within three survey sections in 1975 and in four sections in 2015, of which two were the same as in 1975. All are fairly near habitation and all had suckered modestly. It seems rather likely that they have been bird-sown from gardens.

Grassland



False Oat-Grass *Arrhenatherum elatius* Hassendeanburn

It is probable that the railway banks were left to revegetate naturally after construction. If they had been sown with agricultural grasses, one would have expected the sowings to have included Perennial Ryegrass *Lolium perenne* and Timothy *Phleum pratense*. Ryegrass is scarce on the railway, except where it has been sown recently, and Timothy is almost absent, so there is no evidence of sowing after construction. However, in the absence of grazing, both these species would have been expected to have been gradually replaced by two coarser species, False Oat-Grass *Arrhenatherum elatius* and Cock's-foot *Dactylis glomerata*, so this matter of history remains unresolved.

There are a few invasive species that dominate substantial areas of grassland, largely excluding other species. Bracken *Pteridium aquilinum* (5/2) is becoming more of a problem, but remains localised and is only found from Whitrope Tunnel to Stobs. Rosebay Willowherb *Chamerion angustifolium* is found along the whole length of the former railway but there are surprisingly few large colonies. False Oat-grass is very widespread and can form a monoculture where there is no grazing. It may have declined in abundance since 1975 as its stands are readily colonised by hawthorn scrub. Meadowsweet *Filipendula ulmaria* is more of a wetland plant than a grassland one but is plentiful in damp grassland. It may form a monoculture on really wet banks if they are left ungrazed. There is very little Heather *Calluna vulgaris* even on the highest ground.



**Rough Hawkbit *Leontodon hispidus*
Belses**

Two grassland communities can be distinguished that are especially characteristic of the railway banks, one on shallow soils that are slightly base-rich and may be dry or lightly flushed and the other on deeper soils that are often damp. Oxeye Daisy *Leucanthemum vulgare* is perhaps the most characteristic species of railway grassland on shallow soils and, when in flower, acts as a focus for the botanist wishing to home in on areas of possible interest. Common Bird's-foot Trefoil *Lotus corniculatus*, Rough Hawkbit *Leontodon hispidus* and Zigzag Clover *Trifolium medium* are often the next species to be noted. These were formerly associated with Quaking-grass *Briza media*, Glaucous Sedge *Carex flacca* and Fairy Flax *Linum catharticum* but all three species have declined

considerably in abundance, though only Quaking-grass (9/13) has been lost from whole survey sections. In some sections it may have only been present on the ballast. Common Spotted-orchid *Dactylorhiza fuchsii* and Common Twayblade *Neottia ovata* (8/13) remain locally plentiful in this community, while Chalk Fragrant-orchid



Oxeye Daisy *Leucanthemum vulgare* Belses

Gymnadenia conopsea (4/8) has declined considerably and is now

scarce. There are many other associates. These include three species of Lady's-mantle *Alchemilla spp.*, Hybrid St John's-wort *Hypericum x desetangsii* (the

hybrid between Perforate St John's-wort *H. perforatum* and Imperforate St John's-wort *H. maculatum*) and Yellow Oat-grass *Trisetum flavescens*. Burnet-saxifrage *Pimpinella saxifraga* (7/12) has declined. Cowslip *Primula veris* is very plentiful in some of the survey sections north of Hawick, with three separate colonies each a kilometre in extent. Elsewhere in the Scottish Borders, it is only on the coast that Cowslips are now found in anything like this quantity. Primrose



Cowslip *Primula veris* Courthill

Primula vulgaris is very widespread, being found both in scrub and in grassland where it favours north-facing slopes. Local rarities include Pepper-saxifrage *Silaum silaus* (4/6), quite frequent on the railway in 1975 but no longer so, and Great Burnet *Sanguisorba officinalis* at Thornielaw.

The grassland community on damper soils includes Water Avens *Geum rivale*, Wood Crane's-bill *Geranium sylvaticum* and Melancholy Thistle *Cirsium heterophyllum*. Two of the colonies of Melancholy Thistle are more or less continuous for a full kilometre and there are some splendid colonies of Wood Crane's-bill, but only as far north as Hassendeanburn. Further north it is largely replaced by Meadow

Crane's-bill *Geranium pratense* (7/9), though that species grows on drier soils. It is nowhere plentiful on the railway and has declined. Colt's-foot *Tussilago farfara* is very frequent, especially where there is ongoing erosion of the banks or where there has been erosion in the past.

Almost all the more specialised species have suffered a degree of decline, though the decline is perhaps less than might have been expected from an oversimplified perception that the spread of scrub has been ubiquitous. The individual species not already mentioned have fared as follows: Harebell *Campanula rotundifolia* (8/14), Wild Carrot *Daucus carota* subsp. *carota* (2/4), Lady's Bedstraw *Galium verum* (10/14), Slender St John's-wort *Hypericum pulchrum* (5/10), Field Scabious *Knautia arvensis* (9/12), Wild Marjoram

Origanum vulgare (1/3), Small Scabious *Scabiosa columbaria* (1/2), Bladder
Campion *Silene vulgaris* (7/9), Goat's-beard *Tragopogon*
pratensis (3/8). Three native
species could not be refound
anywhere: Hairy Rock-cress
Arabis hirsuta (0/2), Common
Milkwort *Polygala vulgaris* (0/4)
and Hairy Violet *Viola hirta* (0/2).
Nor could three introduced
species be refound that were
formerly present in very small
quantity: Heath False-brome
Brachypodium pinnatum (0/1),
Cypress Spurge *Euphorbia*
cyparissias (0/1) and Musk-
mallow *Malva moschata* (0/1).



Field Scabious and Common
Twayblade are still locally
abundant and are remarkable
features of the old railway.

Common Twayblade *Neottia ovata*

Ballast and cinder

Where the railway ballast remains in place a grassland community develops over time. Initially it has several characteristic species, but these are replaced progressively by communities similar to those on dry banks, sometimes accompanied by tree seedlings. Where the ballast is removed but cinder remains there is a similar vegetation succession with a slightly different species mix. Species characteristic of the open ballast include Field Horsetail *Equisetum arvense*, Field Bindweed *Convolvulus arvensis*, Herb-Robert *Geranium robertianum*, Common Toadflax *Linaria vulgaris* and Perforate St John's-wort *Hypericum perforatum*. Locally scarce species are Kidney Vetch *Anthyllis vulneraria*, Wild Carrot *Daucus carota* subsp. *carota* and Hedge Bedstraw *Galium album*. These are also found on cinder where they are joined by Oxford Ragwort *Senecio squalidus*, Creeping Cinquefoil *Potentilla reptans*, Wild Strawberry *Fragaria vesca*, Biting Stonecrop *Sedum acre* and a range of annuals. Small Toadflax *Chaenorhinum minus* is especially characteristic of this group of annuals, with the rayed form of Groundsel *Senecio vulgaris* var. *hibernicus* (a fertile F₂ hybrid between Common Groundsel *Senecio vulgaris* and Oxford Ragwort that could almost be recognised as a new species). Thyme-leaved

Vegetation and species

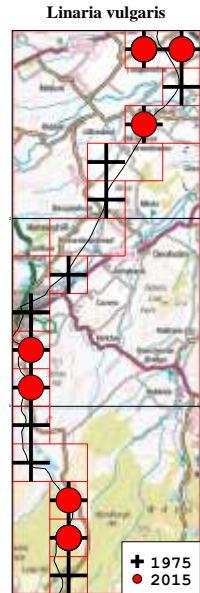
Sandwort *Arenaria serpyllifolia*, Thale Cress *Arabidopsis thaliana* and Hairy Bitter-cress *Cardamine hirsuta* are also prominent.

These species have had varying fortunes now that the ballast and cinder habitats have declined. Field Horsetail *Equisetum arvense* has penetrated the grassland on the banks where it remains very widespread and abundant, but seldom produces fertile stems. Kidney Vetch (6/7) and Eyebrights *Euphrasia* *agg.* (10/14) have survived better than might have been expected but their abundance is much reduced. Field Bindweed (0/4) and Common Toadflax (6/14) have declined dramatically while Herb-Robert *Geranium robertianum* has found an alternative habitat under hawthorn scrub. The St John's Worts make an interesting study. Perforate St John's-wort (6/12) is almost restricted to the ballast and has declined sharply, while Hybrid St John's-wort *Hypericum x desetangsii* has found a home in the grassland and may even



Common Toadflax *Linaria vulgaris* Thornielaw

be increasing. Imperforate St John's-wort *Hypericum maculatum* remains an uncommon plant of damp woodland margins where it is native to the area, unlike the other two taxa. Oxford Ragwort (0/5) and Biting Stonecrop (1/8) have gone or almost gone while Creeping Cinquefoil and Wild Strawberry remain plentiful in dry grassland with the Strawberry also exploiting more shaded habitats. Common Figwort *Scrophularia nodosa* (4/7) and Wild Thyme *Thymus polytrichus* (2/6) are two declining species that might not have been recognised as former ballast specialists if detailed records had not been made. The specialist annuals have declined dramatically, with Hairy Bitter-cress surviving better than the others as



it can exploit gaps in a wider variety of dry habitats. Individual declines of these annuals have been as follows: Silver Hair-grass *Aira caryophylla* (3/6), Thale Cress (6/9), Smith's Pepperwort *Lepidium heterophyllum* (0/2), Sheep's Sorrel *Rumex acetosella* (1/12), Upright Pearlwort *Sagina filicaulis* (1/5), Heath Groundsel *Senecio sylvaticus* (0/2), Sticky Groundsel *Senecio viscosus* (2/12), Groundsel *Senecio vulgaris* (7/12), Groundsel (rayed form) (2/4), Common Cornsalad *Valerianella locusta* (0/2). Small Toadflax (7/13) is a cinder specialist that was formerly abundant but is now very sparse in those survey sections where it is still found. Mugwort *Artemisia vulgaris* (0/2) and Great Mullein *Verbascum thapsus* (4/5) were most often found in railway yards that are now redeveloped, but the Mullein has sometimes colonised disturbed ground nearby.



**Herb-Robert *Geranium robertianum*
Thornielaw**



**Marsh-marigold *Caltha palustris*
Hassendeanburn**

Two species appear to have exploited the rather unfertile grassland left after ballast removal. These are Dove's-foot Crane's-bill *Geranium molle* (5/0) and Thyme-leaved Speedwell *Veronica serpyllifolia* (15/5).

Wetland

In 1975 the main wetland habitats were at burn crossings and in ditches. A few relatively sizable wetland areas were enclosed

in this way and most of the widespread wetland species found sanctuary somewhere. This situation continues, though some such areas have been modified by grazing without significant change in diversity. Meanwhile the flooding that has followed ballast removal in some cuttings has allowed a remarkable number of species to colonise. Brooklime *Veronica beccabunga* (14/5) is now very frequent and plentiful, often with Jointed Rush *Juncus articulatus* (11/6) and Cuckooflower *Cardamine pratensis* (15/10). These are



**Cuckooflower *Cardamine pratensis*
Hassenden Station**

sometimes accompanied by Marsh-marigold *Caltha palustris* (4/5), Lesser Spearwort *Ranunculus flammula* (5/1), Common Spike-rush *Eleocharis palustris* (5/0) and Branched Bur-reed *Sparganium erectum* (2/0). Surprising colonists include Greater Tussock-sedge *Carex paniculata* (1/0), Greater Pond-sedge *Carex riparia* (1/0), Bladder-sedge *Carex vesicaria* (1/0), Common Water-crowfoot *Ranunculus aquatilis* (1/0) and Bay Willow *Salix pentandra* (2/1). Carnation Sedge *Carex panicea* is now more frequent in damp parts of the former trackway than on the banks of the cuttings and is usually accompanied by Common Spotted-orchid *Dactylorhiza fuchsii*.

Other colonists include Marsh Foxtail *Alopecurus geniculatus* (10/1), Common Water-starwort *Callitriche stagnalis* (4/0), Large Bitter-cress *Cardamine amara* (3/2), Wavy Bitter-cress *Cardamine flexuosa* (13/3), Lesser Pond-sedge *Carex acutiformis* (1/0), Common Sedge *Carex nigra* (9/3), Bottle Sedge *Carex rostrata* (6/1), Great Willowherb *Epilobium hirsutum* (11/6), Marsh Willowherb *Epilobium palustre* (5/2), Hoary Willowherb *Epilobium parviflorum* (4/1), Floating Sweet-grass *Glyceria fluitans* (3/0), Plicate Sweet-grass *Glyceria notata* (4/0), Toad Rush *Juncus bufonius* (6/2), Hard Rush *Juncus inflexus* (6/3), Common Duckweed *Lemna minor* (4/0), Small Pondweed *Potamogeton bertholdii* (1/0), Broad-leaved Pondweed *Potamogeton natans* (1/0) and Blue Water-speedwell *Veronica anagallis-aquatica* (2/1).

The ability to colonise shown by these wetland species is impressive. Many of these species often utilise water-courses to disperse but this mechanism is not applicable here. The willowherbs and the willows are wind-dispersed. Some, such as Sweet-grass and Toad Rush, may have been dispersed by farm vehicles. As for the others, the sedges in particular, the most likely medium for dispersal is the droppings of waterfowl, particularly Mallard duck, which often contain

some viable seeds. All the colonists, even Greater Pond-sedge as the scarcest, have populations within seven kilometres of their new localities, well within the feeding range of resident duck.



Bladder-sedge *Carex vesicaria* Belses

stalked St John's-wort *Hypericum tetrapterum* (5/8) may have declined, but it is not clear why.

In the ditches and small wetlands away from the flooded cuttings, Marsh Hawk's-beard *Crepis paludosa* (2/6) and Square-

A modest rise in the water-table of a species-rich moss near Standhill that is adjacent to the railway has allowed three unusual species to spread one metre onto former railway land: Mare's-tail *Hippuris vulgaris*, Bogbean *Menyanthes trifoliata* and Greater Spearwort *Ranunculus lingua*.

Rock cuttings and bridges

The rock cuttings provide a habitat for ferns. Maidenhair Spleenwort *Asplenium trichomanes* subsp. *quadrialeans* is the most plentiful species sometimes with much Polypody *Polypodium vulgare*. Wall-rue *Asplenium ruta-muraria* is the most frequent fern on bridges. Brittle Bladder-fern *Cystopteris fragilis* (2/4) is now very scarce, but formerly favoured railway platforms, while Hard Shield-fern *Polystichum aculeatum* and Rustyback *Asplenium ceterach* are only found in the rock cutting in the Whitlaw survey section. In 1975 Hart's-tongue *Asplenium scolopendrium* (6/1) was only found on the stonework in Hawick station yards, where it has been lost to redevelopment, but it is a species that has been spreading in the Scottish Borders and it is now found in several places on the old railway: in rock cuttings, on bridges and on retaining walls. Maidenhair Spleenwort (5/3) and Wall-rue (9/4) also appear to have spread.

Agricultural use

Where farm tracks now cross the old railway some common weeds, such as Pineappleweed *Matricaria discoidea* (14/8), have been introduced. The most notable is Silverweed *Potentilla anserina* (8/1) which was formerly almost



**Red Bartsia *Odontites vernus*
Hassendeanburn**

absent from the railway. Red Bartsia *Odontites vernus* (9/2) has probably also been introduced by farm vehicles and is now very widespread along the damp ground on the trackway where ballast has been removed. It has largely replaced the Eyebrights *Euphrasia* agg. which were frequent on cinder ballast. Other weeds that have increased are Shepherd's-purse *Capsella bursa-pastoris* (10/6), Sticky

Mouse-ear *Cerastium glomeratum* (13/6) and Greater Plantain *Plantago major* (15/7). Lesser Burdock *Arctium minus* (7/0) was notably absent in 1975 but is now occasional: its arrival also seems to be related to agricultural use.

As already noted, Perennial Rye-grass *Lolium perenne* (14/3) has been sown in some places following the removal of ballast from the trackway and fertiliser is sometimes applied, reducing the diversity of the flora.

Dumping of waste, garden escapes and other alien species

There are several farm dumps and manure heaps, some related to horse stabling. These have introduced arable weeds and crop residues. Sadly such use has led to a local abundance of Common Nettle *Urtica dioica*, Hogweed *Heracleum sphondylium*, Creeping Thistle *Cirsium arvense* and Cleavers *Galium aparine*. In one place head-high nettles matted together with cleavers presented a formidable barrier to the botanist.

Meanwhile domestic fly-tipping has introduced horticultural species such as Garden Lady's-mantle *Alchemilla mollis* (4/0), Common Blue-sow-thistle *Cicerbita macrophylla* (4/0), Montbretia *Crocsmia x crocosmiiflora* (*C. aurea* x *potsii*) (1/0), Druce's Crane's-bill *Geranium x oxonianum* (1/0), Garden Yellow-archangel *Lamiastrum galeobdolon* subsp. *argentatum* (3/0), Broad-leaved Everlasting-pea *Lathyrus latifolius* (1/0), Oriental Poppy *Papaver*

pseudoorientale (1/0), Garden Solomon's-seal *Polygonatum x hybridum* (*P. multiflorum x odoratum*) (2/0), A garden Primula *Primula x polyantha* cultivar (2/0) and Glory-of-the-snow *Scilla forbesii* (1/0).



Common Blue-sow-thistle *Cicerbita macrophylla* Hassendean

flowered Garlic *Allium paradoxum* (2/0), Wild Onion *Allium vineale* (2/0), Butterfly-bush *Buddleja davidii* (1/0), Pink Purslane *Claytonia sibirica* (1/0) and Fringecups *Tellima grandiflora* (1/0) have been spreading quite widely in and around Hawick. Hedge Bindweed *Calystegia sepium* (6/2) is increasing in hedges and in urban habitats. New Zealand Will owherb *Epilobium brunnescens* (2/0) is colonising widely in the hills as is American Willowherb *Epilobium ciliatum* (10/0) in the lowlands (the latter was probably overlooked to some extent in 1975). Garden throw-outs that often naturalise away from their points of introduction include Hybrid Bluebell *Hyacinthoides x massartiana* (*H. hispanica x non-scripta*) (7/1), Welsh Poppy *Meconopsis cambrica* (4/0) and Star-of-Bethlehem *Ornithogalum umbellatum* subsp. *campestre* (1/0). Purple Toadflax *Linaria purpurea* (1/0) at Hassendean Station is a species only found close to housing. Tuberous Comfrey *Symphytum tuberosum* (3/0) and Russian Comfrey *Symphytum x uplandicum* (*S. asperum x officinale*) (4/0) are mainly spreading along riversides but are sometimes found in ruderal habitats.

Introductions that have spread naturally from nearby gardens include Wild Teasel *Dipsacus fullonum* (1/0), Laburnum *Laburnum anagyroides* (1/0), Shasta Daisy *Leucanthemum x superbum* (*L. lacustre x maximum*) (1/0), Oregon-grape *Mahonia aquifolium* (1/0) and Feverfew *Tanacetum parthenium* (2/0).

Garden Daffodils *Narcissus* agg. (5/3) occur in a number of places where they always appear to have been planted and where they have hardly naturalised at all.

Some of the alien species that have colonised the old railway since 1975 have done so as part of a more general expansion of their range rather than in response to changes in the railway habitats. Of these Few-

While the lists of alien introductions are considerable, it is necessary to keep a sense of perspective. Almost all the introductions remain highly localised and are having a negligible impact on the vegetation communities in which they occur.



Hybrid Bluebell *Hyacinthoides x massartiana* Courthill

In 1975 Himalayan *Cotoneaster simonsii* (0/2) appeared to be colonising a variety of grassland and woodland-edge habitats and seemed destined to spread widely. This has not happened and it was not refound anywhere.

Redevelopment

The redevelopment of Hawick railway station and yards and the conversion of the other stations as private housing has inevitably led to losses in a range of alien species that had found a place there. These include Snapdragon *Antirrhinum majus* (0/1), Columbine *Aquilegia vulgaris* (1/4), Confused Michaelmas-daisy *Aster novibelgii* (0/1), Hairy Bindweed *Calystegia pulchra* (1/2), Snow-in-summer *Cerastium tomentosum*

(0/1), Leopard's-bane *Doronicum pardalianches* (0/1), Common Stork's-bill *Erodium cicutarium* (0/1), Japanese Knotweed *Fallopia japonica* (0/1), Hawkweeds *Hieracium* *agg.* (11/15), Pyrenean Lily *Lilium pyrenaicum* (0/1), Russell Lupin *Lupinus x regalis* (*L. arboreus x polyphyllus*) (0/1), Small Melilot *Melilotus indicus* (0/1), Hybrid Monkeyflower *Mimulus x robertsii* (*M. guttatus x luteus*) (0/1), Reflexed Stonecrop *Sedum rupestre* (0/2), Early Goldenrod *Solidago gigantea* (0/1), Sand Spurrey *Spergularia rubra* (0/2), Bridewort *Spiraea* *agg.* (0/1) and Dark Mullein *Verbascum nigrum* (0/1).

In 1975 there was a curious community of moorland plants on the cinder ballast of the railway yards at Acreknowe, with Alpine Clubmoss *Diphasiastrum alpinum* (0/1), Stag's-horn Clubmoss *Lycopodium clavatum* (0/1), Creeping Willow *Salix repens* (0/1) and Cross-leaved Heath *Erica tetralix* (1/2). This habitat has now gone along with all four of these associated species.

Discussion

It is interesting to reflect on the floristic change over a forty-year period on the Teviotdale railway and to consider how it compares with that in the countryside of the Scottish Borders as a whole over the same period. As there are no directly comparable studies, the comparison is made subjectively using the author's experience built up during his extensive botanical recording in the region, Berwickshire in particular.

Although the old railway is a continuous corridor that has facilitated plant dispersal, it is essentially a series of fragmentary habitat patches. This fragmentation of habitats is very much the reality much more generally in the Scottish Borders. Even in the uplands, where more extensive natural habitat survives, the species-rich communities are often present only in small pockets of vegetation.

Nevertheless the railway habitats differ strikingly in several respects from the wider countryside. The grassland on the steep banks of the cuttings and embankments is protected from eutrophication from adjacent fields to a much greater extent than that of road verges and such small rocky knowes as remain unploughed. Were it not for scrub invasion, these railway grasslands would have effectively preserved grassland communities that were formerly more widespread. As it is, their effectiveness for conservation has been compromised, but it is still impressive. While many of the scarcer grassland species have declined, very few have been lost entirely and some fine populations of the individual species remain.

The railway grasslands differ in species-composition from other grasslands of conservation value in the region. There is a disproportionate number of species that favour relatively ruderal habitats, reflecting the substrate they have colonised. Ballast, both coarse ballast and cinder, was not only used to form a stable foundation for the railway sleepers but, as already noted, was also used to infill the herring-bone shaped drainage channels on the bankings. This artificial habitat was colonised by a distinctive set of species. Now that most of the ballast on the trackway has been removed there has been a corresponding decline in these specialist species, change that has no particular relevance to change in the wider countryside. Less obviously, there has been change in the species that colonised the drainage channels, some of these are the same as the ballast species and some are not. Quaking-grass *Briza media*, Glaucous Sedge *Carex flacca* and Fairy Flax *Linum catharticum* are species that would have been expected in the old meadows but were especially plentiful in the railway drainage channels. They have now declined in abundance. At least some of the conspicuous orchids would have been present in the old meadows but their abundance on the railway

relates more to the artificial habitat and to the disturbance caused by the removal of the ballast. Then there are three species of light soils which lack a characteristic native habitat in the Scottish Borders, perhaps because it was a habitat readily cultivated by farmers and thus fragmented from early times. These are Wild Carrot *Daucus carota subsp. carota*, Hedge Bedstraw *Galium album* and Bladder Campion *Silene vulgaris*. These species, as well as the ballast species, must be discounted before making comparisons with the wider countryside.



Bladder Campion *Silene vulgaris*
Thornielaw

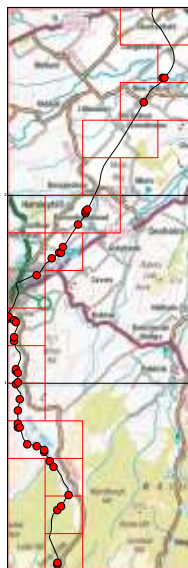
There has been a loss in diversity in the railway grasslands after discounting the ballast species and other ruderals, but it is much less severe and the positives become more apparent. These positives include the survival in the lowland grasslands of large populations of Cowslip *Primula veris* and Field Scabious *Knautia arvensis* along with smaller populations of Great Burnet *Sanguisorba officinalis*, Small Scabious *Scabiosa columbaria* and Pepper-saxifrage *Silaum silaus*. Similarly in the wetter, more upland grasslands, the survival of large populations of Wood Crane's-bill *Geranium sylvaticum* and Melancholy Thistle *Cirsium heterophyllum* is notable.

The railway habitats other than grasslands are not really representative. The woodlands are fragmentary, so the focus turns to a few groups of pioneering species which have been favoured, especially the willows and roses. While the remarkable colonising ability of wetland species has been demonstrated where flooding has followed ballast removal from the railway, the wetlands created are tiny. Indeed there is a danger that the success of wetland species on the railway deflects concern from the all-too-real decline in the diversity of the larger wetlands in the region.

The increase in the ferns of rock-faces, stonework and brickwork is worthy of note. It parallels change in these habitats across the region, change that is thought to relate to less-polluted air in towns and to climate change.

The large increase in the number of aliens is instructive. Here is detailed evidence of the consequences of the fly-tipping which has taken place anywhere perceived to be 'out of sight'. Most of the introductions have naturalised very little or not at all, so the impact of the new arrivals is modest.

Geranium sylvaticum



Wood Crane's-bill *Geranium sylvaticum* Courthill

In reflecting on the analysis of floristic change on the Teviotdale railway three key results emerge. First that the railway was, and remains, remarkably species-rich, much more so than a comparable area of the wider countryside even if the area of the cultivated fields is excluded. Secondly the railway has acted as a refuge for good examples of grassland habitats that have been largely lost elsewhere, but not without some decline in diversity. Thirdly that there has nevertheless been an enormous amount of change along the railway whose consequences are complex and not readily reduced to a few simple statements. The author's work on the Berwickshire flora over thirty-five years suggests that, discounting the ballast species, many of the changes on the railway have close parallels with those that have been taking place in the wider countryside of the Scottish Borders. There has been a loss in diversity among the native species and an increase in alien species, but the losses are unrelated to the arrival of the aliens.

*Survey statistics***1. The number of species recorded in the surveys and the number of survey sections in which they were recorded**

The results of the two surveys of the Teviotdale railway are compared by habitat. Each species present in the survey area is allocated to the habitat in which it is most often found. The grassland and woodland species are further divided by status between native and alien. One of the differences between the two surveys has been that subspecies and other segregates have been better recorded in the second survey, so these are excluded.

Habitat group	Species 2015	Species 1975	Survey section records 2015	Survey section records 1975
Arable (native/alien)	21	25	68	76
Grassland (native)	105	107	1,001	978
Grassland (alien)	21	12	49	18
Moorland (all native)	23	24	74	97
Riverside (native/alien)	13	7	22	9
Rock (native/alien)	15	17	46	53
Ruderal (native/alien)	63	63	376	342
Wetland (all native)	83	60	384	279
Woodland (native)	83	72	605	494
Woodland (alien)	52	27	131	77
Total	479	414	2,756	2,423
Lost / new	33	62		
Casual	10	10		
Overlooked	17	53		
Total both surveys	539	539		

414 species were recorded in the first survey. 60 of these were not refound in the second survey, of which 33 are considered lost, 10 to have been casual only and 17 to have been overlooked. 125 species were found for the first time, of which 62 are considered to be new colonisation or planting, 10 to be casual only and 53 to have been previously overlooked. 479 species were recorded in the second survey.

The Railway Flora of Teviotdale revisited

The number of records in the 15 survey sections is also shown. It is notable that native grassland species and the native woodland species are much more frequent than those in the other groups.

2. Species thought to have increased or declined

The species considered to have been increasing or declining on the Teviotdale railway were assessed from the survey section records, making allowance for those species considered to have been recorded more effectively in one or other of the two surveys.

Habitat group	Taxa increasing	Taxa declining	Comment
Arable (native/alien)	1	0	(most casual)
Grassland (native)	5	20	Scrub invasion
Grassland (alien)	12	4	Dumping
Moorland (all native)	0	8	Grazing
Riverside (native/alien)	2	1	
Rock (native/alien)	4	7	Climate change
Ruderal (native/alien)	17	28	Ballast removal
Wetland (all native)	31	3	Flooding of cuttings
Woodland (native)	7	3	
Woodland (alien)	24	4	Planting
Total	103	78	

The comment column gives an indication of the factor that has most influenced change in those habitat groups with substantial change.

3. Comparison between the three hectads surveyed

The number of species recorded in each of the three hectads represented in the Teviotdale railway survey is compared.

Survey species	Shankend NT50	Hawick NT51	Lilliesleaf NT52	Teviotdale Railway
Survey 2015	301	379	313	479
Survey 1975	273	350	252	414
Net increase	28	29	61	65
<i>New</i>	<i>70</i>	<i>101</i>	<i>102</i>	<i>125</i>
<i>Not refund</i>	<i>42</i>	<i>72</i>	<i>41</i>	<i>60</i>

Vegetation and species

The greatest number of species was found in the Hawick hectad, reflecting the presence of species specialising in urban habitats. The smallest number of species was found in the largely upland Shankend hectad.

The relatively large number of species not refound in the Hawick hectad reflects the substantial number of species lost when Hawick station was redeveloped.

4. Comparison with wider areas

The number of species recorded in the Teviotdale railway survey area in 2015 is compared, hectad by hectad, with the number recorded in BSBI's national Atlas survey of the hectad as a whole between 1987 and 1999. The subspecies and other segregates recorded are included. The land area surveyed on the railway in each of the three hectads is about 0.67km², 2km² in total. Each hectad is 10x10km so it has a land area of 100km², or 300km² for the three hectads.

Survey species	Shankend NT50	Hawick NT51	Lilliesleaf NT52	Teviotdale Railway
Railway 2015	314	397	324	501
Hectad 1987-1999	488	637	562	768
% Railway	64%	62%	58%	65%

Almost two-thirds of the species diversity of the area crossed by the Teviotdale railway is represented in what was formerly railway property.

BSBI guidance suggests that the survey of three tetrads (2x2km units) targeted at species-rich habitats is required to record two-thirds of the species diversity of a hectad. In this special case, the five survey units of 0.13km² (13 hectares) each have been almost as effective as three units of 4km² each.

RAILWAY GUIDE

The survey area begins to the south at Whitrope, on the bridge over the Hawick to Newcastleton road at 300m (about 1000ft).

Digressing from the survey, there is a long cutting to the south of Windshielknowe which is just south of the survey area and is the start of a walking route to Riccarton Junction. This cutting is notable for the species-rich flora on the undisturbed ballast that includes Kidney Vetch *Anthyllis vulneraria* and a large population of Marsh Fragrant-orchid *Gymnadenia densiflora*. The Fragrant-orchid is also found in a colony of Water Avens *Geum rivale* on the wet bankings on the east side with Butterwort *Pinguicula vulgaris* not far away. In 1975 the Fragrant-orchid was plentiful on the west side but absent from the ballast. Common Twayblade *Neottia ovata* grows in the woodland on the west side.

Shankend NT50



1. Whitrope Tunnel

Entering the survey area, the part of the section south of the tunnel has recently been rebuilt as a railway and is run from the Whitrope Heritage Centre. The tunnel itself is closed off for safety reasons following a roof fall. Some of the ballast is the original ironworks waste but some consists of newly quarried stone chippings quite unlike the original. The ballast is only lightly colonised by scrub but there is a quite extensive area of willow scrub on the bankings with a moorland flora. This part of the section is ungrazed.

North of the tunnel there is a cutting where woodland is well established. Here there is a little moorland vegetation and the ditches beside the track have a varied flora. The original ballast is in place and is quite well vegetated. This part of the section is also ungrazed.



Common Spotted-orchid
Dactylorhiza fuchsii

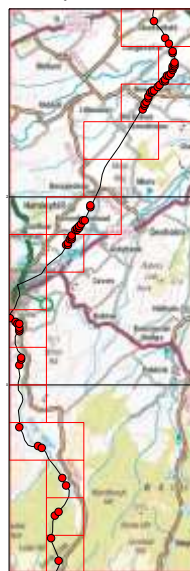
Viola palustris as well as Heather *Calluna vulgaris* and Bilberry *Vaccinium myrtillus*. There is Lemon-scented Fern *Oreopteris limbosperma* and much Narrow Buckler-Fern *Dryopteris carthusiana* in the wettest part with Broad Buckler-fern *Dryopteris dilatata* nearby and their hybrid *Dryopteris x deweveri* occurs. The willows appear from afar to be typical Eared Willow *Salix aurita* scrub but close inspection reveals a wide range of species including Purple Willow *Salix purpurea* and Osier *Salix viminalis* together with a number of perplexing hybrids including *Salix x capreola* (*S. aurita x caprea*), *Salix x fruticosa* (*S. aurita x viminalis*), *Salix x multinervis* (*S. aurita x cinerea*) and *Salix x smithiana* (*S. viminalis x caprea*). Dark-leaved Willow *Salix myrsinifolia* was not refound.

Away from the moorland influence there is Hedge Bedstraw *Galium album*, Wood Crane's-bill *Geranium sylvaticum*,

The ballast south of the tunnel has several species that have become scarce on the old railway including Thale Cress *Arabidopsis thaliana*, Thyme-leaved Sandwort *Arenaria serpyllifolia* and Perforate St John's-wort *Hypericum perforatum*. The Eyebrights *Euphrasia arctica subsp. borealis* and *E. confusa* are also present. New Zealand Willowherb *Epilobium brunescens* is a recent colonist. However neither Small Toadflax *Chaenorhinum minus* nor Common Toadflax *Linaria vulgaris* were refound.

The bankings are partly acidic with moorland vegetation and partly more neutral. The moorland vegetation includes Cross-leaved Heath *Erica tetralix* and Marsh Violet

Dactylorhiza fuchsii



Hairy St John's-wort *Hypericum hirsutum*, Hybrid St John's-wort *Hypericum x desetangsii* and Common Twayblade *Neottia ovata*.



Whitrope Tunnel south entrance 2015

In the woodland at the north entrance to the tunnel there is Bird Cherry *Prunus padus* with Greater Stitchwort *Stellaria holostea*, while the ditches and ballast have Pale Sedge *Carex pallescens*, Flea Sedge *Carex pulicaris*, Common Spotted-orchid *Dactylorhiza fuchsii* and Yellow-rattle *Rhinanthus minor*. Goldenrod *Solidago virgaurea* was not refound, but is likely to persist in the fenced-off area at the tunnel

entrance.

2. Leap Burn

This is one of the few sections with the original ballast largely in place and little colonised by scrub. It is ungrazed and much of it is in use by forestry vehicles. A short section at the north end has had the ballast replaced by stone chippings for use by farm vehicles and the adjoining ditch has been cleaned. The adjacent land was formerly moorland but is now commercial forestry, mainly Sitka Spruce. Traces of the moorland flora survive on the banks of a shallow cutting at the south end of the section.

The ballast is unusually calcareous and carries a large population of Kidney Vetch *Anthyllis vulneraria* and a little Common Restharrow *Ononis repens*. Species are present which were formerly very



Common Restharrow *Ononis repens* and Wild Thyme *Thymus polytrichus*



Red Clover *Trifolium pratense*

widespread on ballast throughout the Teviotdale railway. These include Quaking-grass *Briza media*, Glaucous Sedge *Carex flacca*, the Eyebrights *Euphrasia arctica* subsp. *borealis* and *E. confusa*, the St John's-worts *Hypericum perforatum* and *H. x desetangii*, Common Toadflax *Linaria vulgaris*, Burnet-saxifrage *Pimpinella saxifraga*, Fairy Flax *Linum catharticum* and Wild Thyme *Thymus polytrichus*. The edge of the ballast and the grassland adjacent have Common Spotted-orchid *Dactylorhiza fuchsii*, a little Northern Marsh-orchid *Dactylorhiza purpurella*, Field Scabious *Knautia arvensis* and much Yellow-rattle *Rhinanthus minor*. One fine clump of Mountain Pansy *Viola lutea* was found.

There is a curious spoil heap on the east side of an embankment above the Leap Burn of which at least the surface layer seems to be surplus ballast. This has a magnificent colony of Wood Crane's-bill *Geranium sylvaticum* with some surprising associates: Upright Brome *Bromopsis erecta*, Flea Sedge *Carex pulicaris*, Dog's Mercury *Mercurialis perennis*, Common Twayblade *Neottia ovata*, Wood Vetch *Vicia sylvatica* and a hybrid willow *Salix x smithiana* (*S. viminalis x caprea*).

The ditches contain a range of the wetland plants of moorland including Sneezewort *Achillea ptarmica*, Marsh-marigold *Caltha palustris*, Square-stalked St John's-wort *Hypericum tetrapterum* and Marsh Valerian *Valeriana dioica*, while the banks have a range of willows, some Bracken *Pteridium aquilinum* and a little Heather *Calluna vulgaris* associated with Hard-fern *Blechnum spicant*, Slender St John's-wort *Hypericum pulchrum*, Lemon-scented Fern *Oreopteris limbosperma*, Goldenrod *Solidago virgaurea*, and Bilberry *Vaccinium myrtillus*.

Sitka Spruce *Picea sitchensis* has self-sown in several places and there is one modest colony of Blackthorn *Prunus spinosa*.

3. Shankend

The south end of the section from Shankendshiel is grazed by sheep. The shallow cutting is no longer species-rich but there is more botanical interest in the flushed areas on the slope towards the Lang Burn which was formerly ungrazed railway property, though grazing had commenced by 1975. Part of this is now a smallholding where Jacob sheep and a goat are kept. To the north there is a long section cut into the hillside with a wooded bank on the west side and an embankment on the east side. The wooded bank has some open areas where there are springs.



Mountain Pansy *Viola lutea*

The former station is now a private house. To the north there is a high embankment leading to the Shankend viaduct where the ballast is still in place.

The flushed areas towards the Lang Burn have Sneezewort *Achillea ptarmica*,



Wetland Shankend

Brown Sedge *Carex disticha*, Pale Sedge *Carex pallescens*, Marsh Hawk's-beard *Crepis paludosa*, Common Spotted-orchid *Dactylorhiza fuchsii*, Northern Marsh-orchid *Dactylorhiza purpurella* and a very little Lousewort *Pedicularis sylvatica*.

The grazed cutting no longer supports Fragrant-orchid *Gymnadenia conopsea sensu lato*.

The wet wooded slope has Eared Willow *Salix aurita* and Rusty Willow *Salix cinerea subsp. oleifolia* with their hybrid *Salix x multinervis* and a little Honeysuckle *Lonicera periclymenum*, while Goat Willow *Salix caprea* prefers the drier soils of the embankment below. The wet woodland edge has a massive colony of Melancholy Thistle *Cirsium heterophyllum* extending for 1,700m with



Globeflower *Trollius europaeus*

Wood Crane's-bill *Geranium sylvaticum* and Water Avens *Geum rivale*. There is a little Lemon-scented Fern *Oreopteris limbosperma* and Devil's-bit Scabious *Succisa pratensis* while the largest flush has two small colonies of Globeflower *Trollius europaeus*.

The former trackway is used by vehicles. Here, where cinder is exposed, there are very few plants of Silver Hair-grass *Aira caryophyllea*, Small Toadflax *Chaenorhinum minus* and Common Toadflax *Linaria vulgaris*.

The approaches to the Shankend Viaduct and the viaduct itself have much Kidney Vetch *Anthyllis vulneraria*, the Eyebrights *Euphrasia arctica subsp. borealis* and *Euphrasia confusa*, Rough Hawkbit *Leontodon hispidus*, Oxeye Daisy *Leucanthemum vulgare* and Fairy Flax *Linum catharticum*. There is also a small colony of Upright Brome *Bromopsis erecta*. The viaduct



Globeflower habitat Shankend

stonework has the two wall-ferns Wall-rue *Asplenium ruta-muraria* and Maidenhair Spleenwort *Asplenium trichomanes subsp. quadrivalens*

4. Blakebillend and Penchrise Burn

The section starts on the Shankend Viaduct, which is maintained in good condition though the ballast on the track surface has vegetated over. To the north the old railway is grazed, mainly by sheep. First there is a long cutting around the hill recognised on old maps as Blakebillend. Here there are traces of a moorland flora at the top of its banks and more typical railway grassland below. The trackway has been partially reseeded in places after the removal of some of the ballast. Then there is an embankment crossing the first of three burns. Here an area of wetland has been enclosed on the south side of the track which is dominated by willows. After a further cutting lies the high embankment over Penchrise Burn. The next length, along which there is only seasonal grazing, follows the lie of the land to a gate on the footpath round the Stobs Castle policies. Here the trackway runs past the ruins of Primrose Cottages to the crossing of Gibby's Sike at Primrose Wood where a small portion of the woodland is enclosed by the railway.



Dewdrops on Silver Hair-grass *Aira caryophyllea*

The grassland on the Shankend Viaduct is notable for the large population of Kidney Vetch *Anthyllis vulneraria* with Lady's Bedstraw *Galium verum*, Rough Hawkbit *Leontodon hispidus* and Fairy Flax *Linum catharticum*. Small Toadflax *Chaenorhinum minus* and Common Toadflax *Linaria vulgaris* recorded here in 1975 are no longer evident. Wall-rue *Asplenium ruta-muraria* grows on the stonework.

The cutting to the north has, at the top of the bank, a little well-grazed Heather *Calluna vulgaris* with Bilberry *Vaccinium myrtillus* and a good colony of Lemon-scented Fern *Oreopteris limbosperma* along the boundary ditch. The grassland is relatively uniform along the whole of this section but is usually a little more species-rich along the embankments at the burn crossings where ballast and cinder surface some of the bank sides. Harebell *Campanula rotundifolia*, Lady's Bedstraw *Galium verum*, Rough Hawkbit *Leontodon hispidus* and Fairy Flax *Linum catharticum* occur at intervals with a few small colonies of Common Spotted-orchid *Dactylorhiza fuchsii*. Common Twayblade

Neottia ovata was not refound. Some of the banks are quite well wooded, mainly with Goat Willow *Salix caprea*. Here Primrose *Primula vulgaris* is plentiful with a little Wood Crane's-bill *Geranium sylvaticum*. The trackway has substantial colonies of Eyebright. Both *Euphrasia arctica subsp. borealis* and *Euphrasia confusa* were recorded and hybrids between them were suspected. Silver Hair-grass *Aira caryophyllea* was found in two places, one being a dense colony on an anthill, while Wild Thyme *Thymus polytrichus* was only found in three places where it had colonised exposed ballast. New Zealand Willowherb *Epilobium brunnescens* has colonised a retaining wall. Maidenhair Spleenwort *Asplenium trichomanes subsp. quadrivalens* is found on one of the small bridges over the trackway.

The willows in the wetland by the first burn crossing are mainly Eared Willow *Salix aurita* and Rusty Willow *Salix cinerea subsp. oleifolia*. Dark-leaved Willow *Salix myrsinifolia*, recorded in 1975, was not refound. The hybrid *Salix x fruticosa* (*S. aurita x viminalis*) is present with *Salix x holosericea* (*S. cinerea x viminalis*) on the opposite side of the track. The ground flora includes Downy Oat-grass *Avenula pubescens*, Quaking-grass *Briza media*, Pale Sedge *Carex pallescens*, Flea Sedge *Carex pulicaris*, Bottle Sedge *Carex rostrata*, Marsh Horsetail *Equisetum palustre*, Ragged-Robin *Silene flos-cuculi* and Marsh Valerian *Valeriana dioica*.

5. Stobs

The first 500m from the south of this section is lightly grazed grassland, the next 500m is only seasonally grazed and the banks carry much woodland and scrub though there are also open areas and the trackway itself is kept open as a walkway. To the north again the old railway has merged with the Stobs Castle woods. There are now two private houses where the station platform of Stobs Halt once stood. The Barns Viaduct nearby remains in good condition while the embankment at the north end of this section is grazed but also carries scrub.



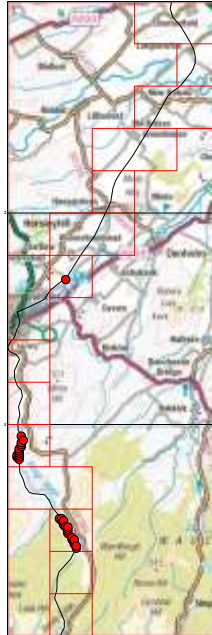
Woodland by trackway Stobs

The woodland flora is well developed and includes Hazel *Corylus avellana*, Birch *Betula pubescens* and some Bird Cherry *Prunus padus* as well as Goat Willow *Salix caprea*, Rusty Willow *Salix cinerea subsp. oleifolia*, Eared Willow *Salix aurita* and some Blackthorn *Prunus spinosa*. The ground flora has much Dog's Mercury *Mercurialis perennis* with Wood-sedge *Carex sylvatica*, Woodruff *Galium odoratum*, Wood Meadow-grass *Poa nemoralis* and Goldilocks Buttercup *Ranunculus auricomus*.



Melancholy Thistle *Cirsium heterophyllum*

Cirsium heterophyllum



The wet bankings have an abundance of Melancholy Thistle *Cirsium heterophyllum* over a distance in excess of 1,000m and Wood Crane's-bill *Geranium sylvaticum* with Water Avens *Geum rivale* and Common Valerian *Valeriana officinalis*. The dry grassland has a little Hedge Bedstraw *Galium album*, Bulbous Buttercup *Ranunculus bulbosus* and Goat's-beard *Tragopogon pratensis*.

Small Toadflax *Chaenorhinum minus* is still present on Barns Viaduct but not Common Toadflax *Linaria vulgaris*. Wild Carrot *Daucus carota subsp. carota* was not refound: the 1975 record is thought to have related to the viaduct or the station.

Hawick NT51



1. Acreknowe

From the embankment by Barns Viaduct to Acreknowe lies a stretch of grazed grassland and scrub with modest interest. The former bridge over the lane to Acreknowe has been demolished. Nearby there is some new housing at the former railway yards serving the military at Stobs Camp. Here the sides of a driveway provide a cinder habitat where some of the species persist that were once found more widely in the yards, but much of the ballast has been removed from the rest of the yards and it is now coarse grassland. The adjacent wetland is also overgrown. Away from the sidings there is a short stretch of ungrazed old trackway with intact ballast before some racehorse stabling. Beyond the stabling the trackway is used by the horses but is ungrazed and continues

through a rock cutting and then to an embankment that carried the railway over the Acreknowe Burn where some deep ballast has been quarried. The stretch to the north of the burn crossing is grazed and has low biodiversity.



Clover-rich sward on embankment

grows not far away. Common Blue-sow-thistle *Cicerbita macrophylla* has escaped from the former Railway Cottages and has formed a large patch.

Species found between Barns Viaduct and Acreknowe include a little Agrimony *Agrimonia eupatoria* with Tormentil *Potentilla erecta* and Primrose *Primula vulgaris*. As the trackway approaches the site of the former bridge there is a little exposed ballast and cinder. Here grow Silver Hair-grass *Aira caryophyllea* and Smooth Tare *Vicia tetrasperma*. Hairy Tare *Vicia hirsuta*

Ballast specialists present by the driveway in the station yards include Thyme-leaved Sandwort *Arenaria serpyllifolia*, Hybrid St John's-wort *Hypericum x desetangsii*, Common Toadflax *Linaria vulgaris*, Bladder Campion *Silene vulgaris* and Great Mullein *Verbascum thapsus*. However many species once present in the yards have been lost, such as Heather *Calluna vulgaris*, Small Toadflax *Chaenorhinum minus*, Alpine Clubmoss *Diphasiastrum alpinum*, Perforate St John's-wort *Hypericum perforatum*, Smith's Pepperwort *Lepidium heterophyllum*, Stag's-horn Clubmoss *Lycopodium clavatum*, Creeping Willow



Wood Crane's-bill *Geranium sylvaticum*

Salix repens and Sand Spurrey *Spergularia rubra*. Northern Marsh-orchid *Dactylorhiza purpurella* was formerly present in the adjacent wetland but it is now too overgrown for that species though there is still much Wood Crane's-bill *Geranium sylvaticum* and the scrub includes Blackthorn *Prunus spinosa*, Bay Willow *Salix pentandra* and the hybrid willow *Salix x smithiana* (*S. viminalis* x *caprea*).

Along the trackway before the stabling grow Field Scabious *Knautia arvensis*, Rough Hawkbit *Leontodon hispidus* and Yellow-rattle *Rhinanthus minor*. Beyond the stabling the trackway is used by the horses but is ungrazed. Wall-ferns plentiful in the rock cutting are Wall-rue *Asplenium ruta-muraria*, Hart's-tongue *Asplenium scolopendrium* and Maidenhair Spleenwort *Asplenium trichomanes subsp. quadrivalens*. Here also are Common Spotted-orchid *Dactylorhiza fuchsii*, Meadow Crane's-bill *Geranium pratense* and a variety of willows including the hybrid *Salix x reichardtii* between Goat Willow *S. caprea* and Rusty Willow *S. cinerea* growing with its parents. The quarry area by the Acreknowe Burn has Kidney Vetch *Anthyllis vulneraria* and more Great Mullein.

2. Whitlaw

The Whitlaw section has a wide variety of habitats. At the south there is a long ungrazed cutting at Flex Farm of which the northern part is cut through rock and here there has been some recent quarrying. The next part is grazed and more



**View north, cutting with one bush of
Burnet Rose *Rosa spinosissima***

recolonised by trees.

North of the Slitrig, steps provide access to a deep rock cutting. Here the ferns are spectacular though the trackway has become almost engulfed in trees. The formerly more open stretch to the north end of the section is much colonised by scrub and there has been some grass reseeding near the housing.

A bridge at the south of the section has a little Brittle Bladder-fern *Cystopteris fragilis*. The rock cutting near Flex Farm supports much Maidenhair Spleenwort *Asplenium trichomanes subsp. quadrivalens* and Polypody *Polypodium vulgare* but Hairy Rock-cress *Arabis hirsuta* was not refound.

The grassland adjacent has

Cowslip *Primula veris* while to the north the steep embankment on the east side has areas of exposed cinder with much Smooth Hawk's-beard *Crepis capillaris*

open, but with a steep fall on the east side towards the Slitrig Water. The deep cutting to the north has a mixture of scrub and grassland. It is seasonally grazed and carries a rich flora. The railway then passes through Whitlaw Wood to the crossing over the Slitrig where the former viaduct, known locally as the Six-arch Bridge, has been demolished. The cutting and embankment through the wood has been



View south, cutting in early spring

and a little Wall Whitlowgrass *Draba muralis* with Hazel *Corylus avellana* below. The west side is cut into the hill and here is Wood Vetch *Vicia sylvatica* and Agrimony *Agrimonia eupatoria* with the hybrid between Wild Plum and Blackthorn *Prunus x fruticans* (*P. domestica* x *spinosa*).



Wall Whitlowgrass *Draba muralis*

Lady's-mantles occur here, *Alchemilla filicaulis* subsp. *vestita*, *A. glabra* and *A. xanthochlora*, as do two Eyebrights, *Euphrasia arctica* s ubsp. *borealis* and *E. nemorosa*. These are accompanied by Downy Oat-grass *Avenula pubescens*, False-brome *Brachypodium sylvaticum* and Quaking-grass *Briza media* with much Common Spotted-orchid *Dactylorhiza fuchsii*, Field Scabious *Knautia arvensis*, Oxeye Daisy *Leucanthemum vulgare*, Fairy Flax *Linum cathart icum*, Common Restharrow *Ononis repens*, Wild Marjoram *Origanum vulgare* and Burnet-saxifrage *Pimpinella saxifraga*. Wild Basil *Clinopodium vulgare* and Small Scabious *Scabiosa columbaria* are two locally scarce species with good colonies, while Chalk

At the south end of the long deep cutting there is a small bank on the east side which falls away towards the Slitrig. Here there is Common Rock-rose *Helianthemum nummularium* and Burnet Rose *Rosa spinosissima*. The Burnet Rose occurs again a little to the north. The main cutting has some excellent grassland communities. Three



**Common Restharrow *Ononis repens*
Small Scabious *Scabiosa columbaria***

Fragrant-orchid

Gymnadenia conopsea is very sparse. Species seen here in 1975 but not refound include Common Twayblade *Neottia ovata*, Common Milkwort *Polygala vulgaris*, Common Cornsalad *Valerianella locusta* and Hairy Violet *Viola hirta*.



Wood Vetch *Vicia sylvatica*.

On the west side of the cutting there is a spring with a number of flush species: Long-stalked

Yellow-sedge *Carex lepidocarpa*, Purple Moor-grass *Molinia caerulea*, Butterwort *Pinguicula vulgaris*, Devil's-bit Scabious *Succisa pratensis* and Marsh Valerian *Valeriana dioica*. This may be where Globeflower *Trollius europaeus* was reported in 1976.



Wild Marjoram *Origanum vulgare*

Towards Whitlaw Wood there is more scrub and here there is Wood Crane's-bill *Geranium sylvaticum* and much Wood Vetch *Vicia sylvatica*.

The stretch that runs through Whitlaw Wood has recolonised with trees, especially Silver Birch *Betula pendula*. The ground flora is varied and includes Moschatel *Adoxa moschatellina*, Bugle *Ajuga reptans*, Ramsons *Allium ursinum*, Wood Anemone *Anemone nemorosa*, Hairy-brome *Bromopsis ramosa*, Wood-sedge *Carex sylvatica*, Woodruff *Galium odoratum*, Goldilocks Buttercup *Ranunculus auricomus* and Sanicle *Sanicula europaea*. Wood Vetch *Vicia sylvatica* is plentiful but is

beginning to suffer from the dense canopy while Cowslip *Primula veris* and its hybrid with Primrose, *Primula x polyantha*, have almost been lost as a result of the shade. Stone Bramble *Rubus saxatilis* has colonised the embankment from the woodland adjacent.



Chalk Fragrant-orchid *Gymnadenia conopsea*

The riverside has Giant Bellflower *Campanula latifolia*, Large Bitter-cress *Cardamine amara*, Alternate-leaved Golden-saxifrage *Chrysosplenium alternifolium* and Opposite-leaved Golden-saxifrage *C. oppositifolium* with a number of aliens especially Sweet Cicely *Myrrhis odorata*, White Butterbur *Petasites albus* and Giant Butterbur *Petasites japonicus*. Dewberry *Rubus caesius* occurs in a sunny corner around the foundations of the old viaduct. There is also a well-established colony of Lungwort *Pulmonaria officinalis* and two good clumps of Green Hellebore *Helleborus viridis*, also noted here in 1975. Few-flowered Garlic *Allium paradoxum* is a recent arrival.

Just north of the Slitrig there is a small colony of Agrimony *Agrimonia eupatoria*. Bittersweet *Solanum dulcamara* flourishes along the wall by the B6399 road, drooping down from the bank above. The steep bank with the steps to the cutting above was not reseeded when the viaduct was demolished and it has re-colonised naturally with an interesting mix of species including Imperforate St John's-wort *Hypericum maculatum*, Common Restharrow *Ononis repens*, Wild Marjoram *Origanum vulgare* and Wood Sage *Teucrium scorodonia*, but somehow Shasta Daisy *Leucanthemum x superbum* has been introduced and has naturalised.

The cutting itself is very rich in ferns. The three most plentiful species are Hart's-tongue Fern *Asplenium scolopendrium*, Maidenhair Spleenwort *A. trichomanes* subsp. *quadrivalens* and Polypody *Polypodium vulgare*. Hard Shield-fern *Polystichum aculeatum* is surprisingly scarce and there is very little Wall-rue *Asplenium ruta-muraria*. The most interesting fern is Rustyback Fern *Asplenium*



Scrub overhanging railway ballast

orchids on the ballast floor of the rock cutting. One plant of Early-purple Orchid *Orchis mascula* was found here in 2014 and, later in the year, a colony of Common Spotted-orchid *Dactylorhiza fuchsii*. Some of the railway ballast is wet and shady while other parts are dry and open, so the flora is varied with Harebell *Campanula rotundifolia*, Field Horsetail *Equisetum arvense*, Wild Strawberry *Fragaria vesca*, Wood Crane's-bill *Geranium sylvaticum*, Field Scabious *Knautia arvensis*, Oxeye Daisy *Leucanthemum vulgare*, Burnet-saxifrage *Pimpinella saxifraga* and Creeping Cinquefoil *Potentilla reptans*. The path along the railway winds its way through scrub and small trees, mainly blackthorn and silver birch.

To the east of the rock cutting in the more open ground grow London-pride *Saxifraga x urbium*, Zig-zag Clover *Trifolium medium* and one colony of Smooth Tare *Vicia tetrasperma*, which, unlike the common Hairy Tare *Vicia hirsuta*, has pale blue flowers, rather than pink, and four small peas per pod, rather than two. There is a strong colony of Common Blue-sow-thistle *Cicerbita macrophylla* on a bank where it is a throw-out from the houses nearby. Here there are still a few plants of Kidney Vetch *Anthyllis vulneraria* which used to be plentiful on this stretch of the old railway and supported a colony of the Small Blue butterfly *Cupido minimus*.

3. Hawick

The line of the old railway is preserved as a walkway as it skirts the town centre until it comes to the A698 at the foot of Weensland Road but from there the former bridges and embankment leading to and across the River Teviot have been removed entirely and redeveloped as a roundabout and a car park. North of the Teviot, the site of the old station has been redeveloped as the Teviotdale Leisure

Centre. The rich flora formerly associated with the railway yards has been lost. The continuation of the railway through Burnfoot to the east has been extensively re-landscaped and here the bankings have been reseeded and are kept closely mown. As a result they are now very species-poor.



Walkway to Burnfoot

At the south of the section, where the trackway runs above the site of the former Turnbull's dyeworks, introductions occur. These include Butterfly-bush *Buddleja davidii*, the pink-flowered Hairy Bindweed *Calystegia pulcra*, Hedge Bindweed *C. sepium*, Waterer's Cotoneaster *Cotoneaster x watereri* and Great Mullein *Verbascum thapsus*. There are several colonies of strawberries with large leaves, some

appear to relate to the 'Alpine Strawberry' cultivar of Wild Strawberry *Fragaria vesca* and others to the Garden Strawberry *Fragaria x ananassa*, also recorded here in 1975.

There is a steep grassy bank where the railway used to cross Weensland Road. Here there is still a small colony of the rayed form of Common Groundsel *Senecio vulgaris* var. *hibernicus*, which was once frequent around the town centre but is no longer so. It is thought to have been introduced with railway ballast.

Green Alkanet *Pentaglottis sempervirens* has survived the station redevelopment and grows by the Leisure Centre. To the east through Burnfoot, an improbable colony of Prickly Sedge *Carex muricata* subsp. *pairae* grows on a bank just above the mown area while the variegated garden form of Yellow Archangel *Lamiastrum galeobdolon* subsp. *argentatum* occurs as a naturalised throw-out near houses. Planted hawthorns include the hybrid *Crataegus x media* while other shrubs include Japanese Rose *Rosa rugosa*.

4. Courthill

This section falls into two parts. The part from Burnfoot to the south of the road bridge carrying the lane to Courthill is wooded and some of it is a waymarked

track that has to bypass a damaged bridge over a field access-road. It adjoins a plantation that has much mature Beech. There has been a little dumping of garden material and some introductions have naturalised.

To the north of the bridge there is grassland where the scrub is controlled under a stewardship scheme and there is only seasonal grazing. Most of the ballast has been removed and some of the trackway has been reseeded with Rye-grass. The flora of the bankings is species-rich and there is contrast between the embankment near the bridge, the long cutting beyond and the tall embankment to its north. The trackway is used to test the weather-resistant properties of cabling that is manufactured nearby.



Moschatel *Adoxa moschatellina* on cinder

The wooded portion has a little Moschatel *Adoxa moschatellina* and Woodruff *Galium odoratum* with a strong colony of Sanicle *Sanicula europaea*. As well as Water and Wood Avens there is their hybrid *Geum x intermedium* (*G. rivale x urbanum*). There is one patch of Melancholy Thistle *Cirsium heterophyllum*.

The introductions include Few-flowered Garlic *Allium*

paradoxum, Lords-and-Ladies *Arum maculatum*, Perennial Cornflower

Centaurea montana, Pink Purslane *Claytonia sibirica*, two Snowdrops *Galanthus nivalis* and *Galanthus nivalis x plicatus*, Garden Bluebell *Hyacinthoides x massartiana*, Welsh Poppy *Meconopsis cambrica* and Fringecups *Tellima grandiflora*.

Strangely there is one clump of Common Bluebell *Hyacinthoides non-scripta* and, although it is well



Primrose *Primula vulgaris*



Agrimony *Agrimonia eupatoria*

arvensis though this, unlike the cowslips, can compete with the coarse grasses, even the dominant False Oat-Grass *Arrhenatherum elatius*. Here also is a little Meadow Crane's-bill *Geranium pratense* while Oxeye Daisy *Leucanthemum vulgare* is plentiful.

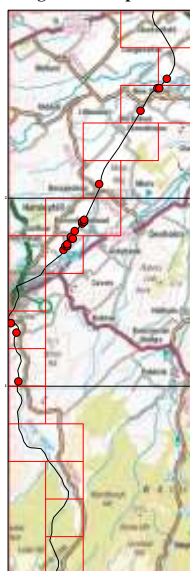
The cutting has a wide range of species with Agrimony *Agrimonia eupatoria*, three Lady's Mantles *Alchemilla filicaulis* subsp. *vestita*, *A. glabra* and *A. xanthochlora*, a very little Kidney Vetch *Anthyllis vulneraria*, Downy Oat-grass *Avenula pubescens*, Glaucous Sedge *Carex flacca*, Common Spotted-orchid *Dactylorhiza fuchsii*, a little Wild Carrot *Daucus carota* subsp. *carota*, the Eyebrights *Euphrasia arctica* subsp. *borealis* and *E. nemorosa*, Hedge Bedstraw *Galium album*, Chalk Fragrant-orchid *Gymnadenia conopsea*, Hairy St John's-wort *Hypericum hirsutum*, Hybrid St John's-wort *H. x desetangsii*, Fairy Flax *Linum catharticum*, Common Restharrow *Ononis repens*, Yellow-rattle *Rhinanthus minor* and roses that

away from the colony of Garden Bluebell, it too must surely be of garden origin. The scrub contains both Blackthorn *Prunus spinosa* and Wild Plum *Prunus domestica*.

The first embankment in the grassland portion has much Wood Crane's-bill *Geranium sylvaticum* on the east side and a surprising amount of Goldilocks Buttercup *Ranunculus auricomus* on the west side. Here is the start of a magnificent colony of Cowslip *Primula veris* that runs the whole length of the grassland with Primrose *Primula vulgaris* in the more shaded places, frequently with their hybrid *Primula x polyantha*. Later in the season there is an equally fine and extensive colony of Field Scabious

Knautia

Agrimonia eupatoria



include Sweet-briar *Rosa rubiginosa*. Strangely Quaking-grass *Briza media* could not be refound nor the introduced Heath False-brome *Brachypodium pinnatum* last seen in 1975.

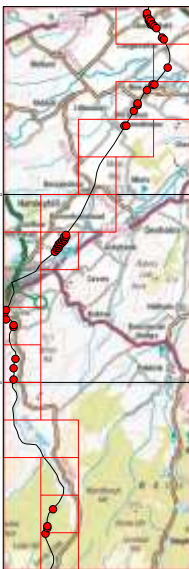
The west side of the embankment beyond has a very large colony of Common Twayblade *Neottia ovata* with much Wood Crane's-bill *Geranium sylvaticum* below. There is a little Upright Brome *Bromopsis erecta* over a bridge that provides access between fields. The east side of this bridge has more Wild Carrot, somewhat threatened by one of the few colonies of whins *Ulex europaeus*.



Field Scabious *Knautia arvensis*
Courthill

The former trackway has a large population of Red Bartsia *Odontites vernus* and a

Knautia arvensis



tiny amount of Small Toadflax *Chaenorhinum minus* on disturbed cinder, but Common Toadflax *Linaria vulgaris* and Oxford Ragwort *Senecio squalidus* appear to have died out.

5. Hassendeanburn

From the south of the section, the first stretch to the road bridge at Hassendeanburn Farm is seasonally grazed grassland where the scrub is controlled. Here the trackway enters a deep cutting of which the lower half is rank herbage where sheep were fed in winter some years ago. The upper half is species-rich. Beyond the bridge is a short wooded area associated with the burn crossing and then an area used as an extension to the farmyard. Next there is a long cutting with some scrub and a shallow pond in the trackway, which had flooded following works at the farmyard. To the north again is a grazed section followed by a short cutting. This too has flooded and here a remarkable wetland community has developed. The sides of the cutting have been planted

with trees. The final long stretch across more level ground is seasonally grazed and has grassland of low species-diversity. The ballast has been removed from the trackway almost throughout this section.



Species-rich bank Hassendeanburn

Leontodon hispidus, Oxeye Daisy *Leucanthemum vulgare*, Fairy Flax *Linum catharticum*, Common Restharrow *Ononis repens* and Burnet-saxifrage *Pimpinella saxifraga*. Frog Orchid *Coeloglossum viride*, discovered here in 1976, is no longer present.

Native species in the woodland at the burn crossing include Moschatel *Adoxa moschatellina*, Ramsons *Allium ursinum*, Hairy-brome *Bromopsis ramosa*, Woodruff *Galium odoratum*, Wood Crane's-bill *Geranium sylvaticum*, Water Avens *Geum rivale*, Wood Avens *Geum urbanum*, Hybrid Avens *Geum x intermedium* (*G. rivale x urbanum*), Hairy St



Wild Carrot *Daucus carota subsp. carota*

John's-wort *Hypericum hirsutum*, Dog's Mercury *Mercurialis perennis* and Sanicle *Sanicula europaea*. There are also naturalised introductions including Lords-and-Ladies *Arum maculatum*, Hybrid Bluebell *Hyacinthoides x*

The cutting south of the road bridge has a fine flora where the modest colony of Wild Carrot *Daucus carota subsp. carota* is particularly notable. It is associated with False-brome *Brachypodium sylvaticum*, Quaking-grass *Briza media*, Glaucous Sedge *Carex flacca*, much Common Spotted-orchid *Dactylorhiza fuchsii*, Chalk Fragrant-orchid *Gymnadenia conopsea*, Field Scabious *Knautia arvensis*, Rough Hawkbit

massartiana (*H. non-scripta* x *hispanica*), Londonpride *Saxifraga* x *urbium* (*S. spathularis* x *umbrosa*), Tuberos Comfrey *Symphytum tuberosum* and Wayfaring-tree *Viburnum lantana*.

The area used as a farmyard has several species that were formerly widespread on the ballast including Perforate St John's-wort *Hypericum perforatum* and Black Medick *Medicago lupulina*. Red Bartsia *Odontites vernus* is much more widespread on the old trackway.



Farmyard with Perforate St John's-wort
Hypericum perforatum

The next cutting is quite scrubby and is notable for its roses which include a fine colony of Sweet-briar



Species-rich scrub Hassendeanburn

Rosa rubiginosa. In the spring there is much Cowslip *Primula veris* and Primrose *Primula vulgaris* with their hybrid *Primula x polyantha*. A little later in the season these are followed by a large colony of Common Twayblade *Neottia ovata*. Sadly this was selectively grazed-out in 2015 by a small group of tups. Here also is much Agrimony *Agrimonia eupatoria*, a little of the locally rare Spiked Sedge *Carex spicata*, Hybrid St John's-wort *Hypericum x desetangsii* and a colony of the locally scarce Pepper-saxifrage *Silaum silaus* with a few plants of Bladder Campion *Silene vulgaris* and Goat's-beard *Tragopogon pratensis*. The wetland in the

The tups of Hassendeanburn (*with apologies to Lewis Carroll*)

The old tup and a younger yin
Were grazing nose to nose;
They wept like anything to see
Such quantities of rose
'If this were only cleared away',
They said, 'it would be cose'!

'O Orchids, come and walk with us!'
The old yin did beseech,
'A pleasant walk, a pleasant talk,
Along a shady reach:
We cannot do with more than four,
To give a hand to each.'

The oldest Orchid looked at him,
But never a word he said:
The eldest Orchid winked his eye,
And shook his heavy head –
Meaning to say he did not choose
To leave the orchid-bed.

But four young orchids hurried up.
All eager for the treat:
Their coats were brushed, their faces washed,
Their shoes all clean and neat –
And this was odd, because, you know,
They hadn't any feet.

Four other Orchids followed them,
And yet another four,
And thick and fast they came at last,
And more, and more, and more –
All hopping through the flowery grass,
And scrambling to the fore.

'O Orchids,' said the older tup,
'You've had a pleasant run!
Shall we be trotting home again?'
But answer came there none –
And this was scarcely odd, because
They'd eaten every one.



Habitat of Spiked Sedge *Carex spicata*

colony of Greater Tussock-sedge *Carex paniculata*. This is accompanied by Bottle Sedge *Carex rostrata*, Marsh Willowherb *Epilobium palustre*, Hoary Willowherb *Epilobium parviflorum*, Water Horsetail *Equisetum fluviatile*, one tuft of Hare's-tail Cottongrass *Eriophorum vaginatum*, Common Water-crowfoot *Ranunculus aquatilis* and Lesser Spearwort *Ranunculus flammula*.

It is only in the northern stretch dominated by False Oat-grass *Arrhenatherum elatius* that a little Lady's Bedstraw *Galium verum* and Meadow Crane's-bill *Geranium pratense* are met with.

In some places in this survey section there is an orange-and-yellow colour form of Common Bird's-foot-trefoil *Lotus corniculatus* sometimes known as 'Bacon-and-eggs'.



Common Bird's-foot-trefoil *Lotus corniculatus* var. 'Bacon-and-eggs'

trackway has Marsh-marigold *Caltha palustris*, Common Spike-rush *Eleocharis palustris*, Hard Rush *Juncus inflexus*, Small Pondweed *Potamogeton berchtoldii*, Branched Bur-reed *Sparganium erectum* and Brooklime *Veronica beccabunga*.

The wetland in the small cutting further north is remarkable for a large

Lilliesleaf NT52



1. Hassendean Station

At Hassendean some of the trackway is used in connection with the farmyard and there has been a little dumping. While there is now private housing at Hassendean Station, part of the station yard is an access road and some untended grassland adjoins. To the north of the road bridge there is a long shallow cutting which is ungrazed. Here some of the grassland has been colonised by hawthorn, but willows are absent. North again the railway is cut into a low hill with a slight cutting on one side and an embankment on the other. Here the grassland is lightly fertilised and seasonally grazed and there is very little scrub. Towards Minto Kames there is a further embankment with a deep-set ditch alongside. Most of the ballast has been removed from this section.

Cast-outs established near Hassendean Farm include Common Blue-sow-thistle *Cicerbita macrophylla* and Garden Solomon's-seal *Polygonatum x hybridum*. The former station yard has Perennial Cornflower *Centaurea montana*, Small Toadflax *Chaenorhinum minus*, Shining Crane's-bill *Geranium lucidum*, Black Medick *Medicago lupulina*, Biting Stonecrop *Sedum acre*, Great Mullein *Verbascum thapsus*, Common Vetch *Vicia sativa subsp. sativa* and Rat's-tail *Fescue Vulpia myuros*. The surviving St John's-wort all appears to be the Hybrid St John's-wort *Hypericum x desetangsii* (*H. maculatum x perforatum*).

The grassland of the railway bankings are most notable for Cowslip *Primula veris* with some Primrose *Primula vulgaris* and their



Cowslip *Primula veris*

hybrid *Primula x polyantha*. Three Lady's-mantles are present, *Alchemilla filicaulis* subsp. *vestita*, *A. glabra* and *A. xanthochlora*, and there are small quantities of Spring-sedge *Carex caryophylla* and Tormentil *Potentilla erecta*. Rough Hawkbit *Leontodon hispidus* and Zigzag Clover *Trifolium medium* are more widespread.



Smooth Hawk's-beard *Crepis capillaris* on cinder

Ditches towards Minto Kames hold Marsh-marigold *Caltha palustris*, Common Spike-rush *Eleocharis palustris*, Hoary Willowherb *Epilobium parviflorum* and Blue Water-speedwell *Veronica anagallis-aquatica*.

Species not refound include Hairy Rock-cress *Arabis hirsuta*, Common Toadflax *Linaria vulgaris*, Common Twayblade *Neottia ovata*, Pepper-saxifrage *Silaum silaus* and Bladder Champion *Silene vulgaris*.

2. Standhill

The stretch north from Minto Kames has been incorporated in the adjacent field. The trackway is reseeded and the whole is fertilised. North of the access road to Minto Kaimes a small moss lies adjacent to the old railway and, curiously, it continues just beyond the fence-line allowing a range of improbable wetland species to be recorded from the railway. North again there is a ditch with further wetland species but the remainder of the stretch to the road bridge by Standhill has been



Mire with Bogbean *Menyanthes trifoliata*

incorporated into the adjoining arable field. At the farm itself, farm buildings have been constructed on the old trackway. To the north of the farm lies a cutting which is mostly ungrazed, though part of the east bank is grazed with the adjacent field. The banks of the cutting are mostly covered in hawthorn scrub. Beyond the cutting lies a further reseeded stretch.

The fertilised banks north of Minto Kames still have an extensive colony of Cowslip *Primula veris*. The margin of the moss has Mare's-tail *Hippuris vulgaris*, Bogbean *Menyanthes trifoliata* and Greater Spearwort *Ranunculus lingua*. In the ditch beyond Celery-leaved Buttercup *Ranunculus sceleratus* is found.

Medium-flowered Winter-cress *Barbarea intermedia* grows near Standhill steading. The cutting beyond has Rough Hawkbit *Leontodon hispidus* and Oxeye Daisy *Leucanthemum vulgare* with a little Field Scabious *Knautia arvensis* and Bitter-vetch *Lathyrus linifolius*. The last is a surprising survivor in the middle of a dairy farm.

3. Belses

From the south there is a short reseeded stretch followed by a farm dump. Next there is an ungrazed stretch with a wetland area to the north. The long stretch almost to the road at Belses Cottage is grazed by a pony. The ballast has been removed and the banks are relatively low and correspondingly narrow, but carry



Pony-grazed cutting with Oxeye Daisy
Leucanthemum vulgare

quite a rich flora. Just before the point from which the road bridge has been removed there is a short stretch of scrub. To the north of the road crossing there is an overgrown stretch before the private housing on the site of the former Belses Station. Here again a road bridge has been removed. The embankment to the north has scrub on the banks but species-rich grassland on the undisturbed ballast. At the

end of the embankment a new access road to New Belses crosses the trackway. An ungrazed cutting follows with much scrub but there are still patches of



Pepper-saxifrage *Silaum silaus*

dominated by Tufted Hair-grass *Deschampsia cespitosa* with a little Wild Angelica *Angelica sylvestris*. The grassland beyond is typical 'railway grassland' with Oxeye Daisy *Leucanthemum vulgare*, Rough Hawkbit *Leontodon hispidus*, Field Scabious *Knautia arvensis*, Fairy Flax *Linum catharticum*, Black Medick *Medicago lupulina*, Hop Trefoil *Trifolium campestre* and Zigzag Clover *Trifolium medium* with a little Harebell *Campanula rotundifolia*, Meadow Crane's-bill *Geranium pratense* and Burnet-saxifrage *Pimpinella saxifraga*. There is much Common Spotted-orchid *Dactylorhiza fuchsii*. In one place, scattered over the trackway and the bank, there is a colony of Pepper-saxifrage *Silaum silaus* which is selectively avoided by the pony.



Ground-elder *Aegopodium podagraria*

grassland on the banks and an interesting wetland community has developed where the trackway has flooded following ballast removal. A short reseeded stretch follows, then a shallow cutting. This again has wetland on the trackway. The banks are scrub, with the addition of some amenity planting and there are only very modest areas of open grassland. The final hundred metres is in the process of being developed as a garden.

The farm dump has a few arable weeds, the next stretch has Hybrid Avens *Geum x intermedium* (*G. rivale x urbanum*) with its parents and is the unlikely location of a self-sown Crab Apple *Malus pumila* while the wetland is

Weld *Reseda luteola* grows nearby. However Wild Carrot *Daucus carota* subsp. *carota* and Common Milkwort *Polygala vulgaris* were not refound. Red Bartsia *Odontites vernus* is plentiful on the trackway from which the ballast has been removed.

A steep bank by the road crossing has some huge Common Twayblade *Neottia ovata* up to 60cm tall. Wood Crane's-bill *Geranium sylvaticum* grows nearby. Leaving the private housing at the old station aside and turning to the embankment beyond there is a fine display of Cowslip *Primula veris* extending for 1,000m, with some Primrose *Primula vulgaris* and their hybrid *Primula x polyantha*. Associates are Quaking-grass *Briza media*, Upright Brome *Bromopsis erecta*, Hairy St John's-wort *Hypericum hirsutum* and Bladder



Damp trackway in cutting Belses

Campion *Silene vulgaris*. There is much Common Spotted-orchid but only one plant of Northern Marsh-orchid *Dactylorhiza purpurella* was seen. Quite a strong colony of Common Toadflax *Linaria vulgaris* survives on the ballast. There has been a little amenity planting including Guelder-rose *Viburnum opulus* while Honeysuckle *Lonicera periclymenum* appears to be native. Beyond the access road to New Belses a huge colony of Ground-elder *Aegopodium podagraria* has developed, presumably from dumping, but beyond that there are still interesting grassland fragments with more Cowslip, a little Twayblade, Sweet-briar *Rosa rubiginosa* and at least one plant of Pepper-saxifrage.

The wetland on the trackway has been colonised by a remarkable range of species. There is much Cuckooflower *Cardamine pratensis* with a little Large Bitter-cress *Cardamine amara*. The sedges are mainly Glaucous Sedge *Carex flacca* and Bottle Sedge *Carex rostrata* but there is also Carnation Sedge *Carex panicea* and Bladder-sedge *Carex vesicaria*. Associates are Branched Bur-reed *Sparganium erectum* and Brooklime *Veronica beccabunga*. Common Spotted-

orchid is abundant but Northern Marsh-orchid is strangely absent. A bush of Bay Willow *Salix pentandra* has seeded into the wet trackway.

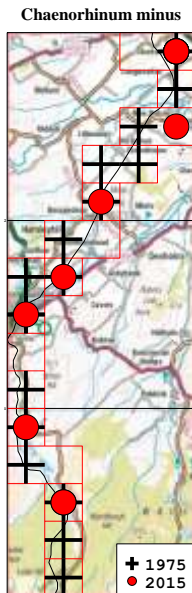


Small Toadflax *Chaenorhinum minus*

The cutting at the north of the section is not very remarkable but has a colony of Agrimony *Agrimonia eupatoria*. There has been some amenity planting including Field Maple *Acer campestre*. Just where a garden is to be developed by a cottage, a quantity of railway cinder has been dumped on a bank and here a colony of Small Toadflax *Chaenorhinum minus* had sprouted from its seed bank in the cinder.

4. Longnewton

At the south of the section, the bridge over the lane to Belses Mill Farm has been dismantled leaving the embankment between the lane and the viaduct over the Ale Water. Most of this embankment remains open grassland with a rich flora. There is also woodland on both sides of the Ale Water with a varied ground flora. To the north lies a length of ungrazed



Scubby cutting Longnewton

grassland with some scrub and then a cutting that retains some very species-rich grassland but is much invaded by whins, blackthorn and other scrub species.



Pyramidal Orchid *Anacamptis pyramidalis* with *Geranium* leaves

modest colony of Pyramidal Orchid *Anacamptis pyramidalis*. Upright Brome *Bromopsis erecta* is present here as a presumed introduction with ballast. The woodland has a colony of a white-flowered variety of Primrose, doubtless of garden origin but well naturalised, Wood Anemone *Anemone nemorosa* and Sanicle *Sanicula europaea* while Great Bellflower *Campanula latifolia* grows by the Ale Water and Imperforate St

This grassland is an SSSI that was assessed by SNH in 2014 to be in ‘unfavourable declining’ condition. To the north of the minor road at Briarlee there is scrub, a small shelterbelt of Sitka Spruce and a farm dump. North to Greenend there is a cutting with hawthorn on the banks and a very damp trackbed which turns to open water near the farm. This relates to the infilling of the cutting to extend the farmyard which has prevented the cutting from draining to the north.

The embankment by Belses Mill Farm has a good colony of Cowslip *Primula veris* with Primrose *Primula vulgaris* mostly in the shade. Later in the year there is a fine display of orchids with many Common Spotted-orchid *Dactylorhiza fuchsii* with Common Twayblade *Neottia ovata* and a



Glaucous Dog-rose *Rosa caesia* subsp. *vosagiaca*



Damp, species-rich trackway

Potentilla anserina grow on the trackway with a one of several colonies in the section of the Eyebright *Euphrasia nemorosa*.

The species-rich cutting has Oxeye Daisy *Leucanthemum vulgare*, Rough Hawkbit *Leontodon hispidus*, Hybrid St John's-wort *Hypericum x desetangsii* and more Common Spotted-orchid along with Common Twayblade. Also on the bankings are a few Common Centaury *Centaureum erythraea*, Field Scabious *Knautia arvensis* and more Pepper-saxifrage. However many of the orchids are along the damp trackway rather than on the bankings, quite unlike the situation in 1975, and include small colonies of Chalk Fragrant-orchid

John's-wort *Hypericum maculatum* occurs at the woodland edge. Despite ongoing control measures, Giant Hogweed *Heracleum mantegazzianum* was still present in 2015 both on the ballast of the viaduct and also by the Ale Water below.

The grassland and scrub to the immediate north is dominated by False Oat-Grass *Arrhenatherum elatius* and Blackthorn *Prunus spinosa* with a colony of Sherard's Downy-rose *Rosa sherardii*. Agrimony *Agrimonia eupatoria* and Pepper-saxifrage *Silaum silaus* are present in modest quantity. Red Bartsia *Odontites vernus* and Silverweed



Goat's-beard *Tragopogon pratensis*

Gymnadenia conopsea and Pyramidal Orchid *Anacamptis pyramidalis*. Here on the trackway they are among large colonies of Quaking-grass *Briza media*, Glaucous Sedge *Carex flacca* and Fairy Flax *Linum catharticum* which have also migrated from the bankings.

In a more open area among the coarse vegetation north of Briarlee there is a little Hedge Bedstraw *Galium album* and Sweet-briar *Rosa rubiginosa*. The flooded cutting near Greenend has a most unexpected colony of Greater Pond-sedge *Carex riparia*, which is a scarce species in Roxburghshire.

5. Thornielaw



Rocky, species-rich bank

There is a cutting at the south end of this section by Greenend that has flooded and supports some wetland plants. The bankings here are much invaded by scrub but there is a short stretch on the east side with species-rich grassland. There is then a further ungrazed stretch interrupted at the next short cutting by a farm dump. To the north of this the trackway is almost at the level of the adjacent fields. Here the margins are home to some unusual plants of damp grassland. After a further scrub-bordered cutting there is another level area where the former trackway has been merged with the adjacent fields and reseeded. There are some disturbed areas where arable weeds are found. The long embankment and bridge that

crosses the road to Charlesfield has scrub and planted trees. Just north of the bridge there is exposed ballast and cinder, both where ballast is being extracted and on the eroding sides of the embankment. This provides a window of opportunity for species that are ballast specialists. The cutting at the north of the section has been planted with Sitka Spruce.

The flooded cutting by Greenend supports Large Bitter-cress *Cardamine amara*. The species-rich bank nearby has much Common Spotted-orchid *Dactylorhiza fuchsii* and Common Twayblade *Neottia ovata* with Glaucous Sedge *Carex*



**Hedge Bedstraw *Galium album* with
Great Burnet *Sanguisorba
officinalis* behind**

Carrot *Daucus carota subsp. carota* was not refound. Field Scabious *Knautia arvensis* is very widespread. A damp area on the trackway has a little Long-stalked Yellow-sedge *Carex lepidocarpa*.

Blue Water-speedwell *Veronica anagallis-aquatica* is found in a further flooded area while Small Toadflax *Chaenorhinum minus*, Common Toadflax *Linaria vulgaris* and Bittersweet *Solanum dulcamara* grow where there is open ballast a little to the north.

flacca, Hairy St John's-wort *Hypericum hirsutum*, Oxeye Daisy *Leucanthemum vulgare*, Rough Hawkbit *Leontodon hispidus*, Fairy Flax *Linum catharticum* and a few plants of Pepper-saxifrage *Silaum silaus*. Fragrant-orchid *Gymnadenia conopsea sensu lato* was not refound. Scrub is now invading this last stretch of grassland and there are a surprising number of oak seedlings. The roses include Sweet-briar *Rosa rubiginosa*.

The damp grassland north of the farm dump is notable for large colonies of Hedge Bedstraw *Galium album* with a little Great Burnet *Sanguisorba officinalis*, more Pepper-saxifrage and Bladder Campion *Silene vulgaris* but Wild



Great Burnet

Long-headed Poppy *Papaver dubium* was prominent among the arable weeds in disturbed ground within the reseeded stretch.



Great Mullein *Verbascum thapsus*

Plants naturalised from dumped garden waste included a colourful cultivar of an alien Scabious *Knautia macedonica*.



Field Scabious *Knautia macedonica* cultivar

ANNOTATED CHECK-LIST

Explanatory Notes

The species are listed alphabetically, each with a supporting caption. The records from the two railway surveys are summarised alongside each species entry. First the 2015 records in black and then the 1975 records in red. The number of survey sections (out of five) in which the species was recorded in each hectad are shown under **S** (Shankend NT50), **H** (Hawick NT51) and **L** (Lilliesleaf NT52). The total of the three entries is shown under **Tot** (Total).

Some species groups are shown individually and as aggregates. Thus the aggregate *Agrostis canina sens. lat.* includes the two segregates *Agrostis canina* and *Agrostis vinealis*. Any records made as a segregate are also included in the aggregate.

Nomenclature follows Stace, C A, *New Flora of the British Isles*, 3rd edn, 2010.

Check-list

S	H	L	Tot	Species / Caption
0	0	1	1	<i>Abies alba</i> European Silver-fir
0	0	0	0	Planted at Belses
0	0	1	1	<i>Abies grandis</i> Giant Fir
0	0	0	0	Planted at Belses
1	0	1	2	<i>Acer campestre</i> Field Maple
0	0	0	0	Occasional in amenity plantings
0	3	0	3	<i>Acer platanoides</i> Norway Maple
0	0	0	0	Planted and self-sown
3	5	5	13	<i>Acer pseudoplatanus</i> Sycamore
3	4	4	11	Planted and widely self-sown
5	5	4	14	<i>Achillea millefolium</i> Yarrow
3	5	5	13	Not very plentiful
3	0	0	3	<i>Achillea ptarmica</i> Sneezewort
4	1	2	7	Wet places on the higher ground
1	2	1	4	<i>Adoxa moschatellina</i> Moschatel
1	2	0	3	Very local in woodland.
3	5	4	12	<i>Aegopodium podagraria</i> Ground-elder
2	5	5	12	Strong colonies occasional, often near habitation
0	0	0	0	<i>Aesculus hippocastanum</i> Horse-chestnut
0	1	0	1	Lost from Hawick
0	4	3	7	<i>Agrimonia eupatoria</i> Agrimony
0	2	3	5	Local, colonies of modest size

The Railway Flora of Teviotdale revisited

1	1	0	2	<i>Agrostis canina</i> Velvet Bent
0	0	0	0	Scarce on the higher ground
2	2	0	4	<i>Agrostis canina sens. lat.</i> Velvet Bent
4	4	2	10	Scarce on the higher ground
4	4	2	10	<i>Agrostis capillaris</i> Common Bent
5	5	2	12	Most plentiful in grazed turf on the higher ground
1	2	4	7	<i>Agrostis stolonifera</i> Creeping Bent
3	3	2	8	In ditches and plentiful in flooded cuttings
1	1	0	2	<i>Agrostis vinealis</i> Brown Bent
0	0	0	0	Scarce on the higher ground
2	1	0	3	<i>Aira caryophyllea</i> Silver Hair-grass
2	2	2	6	Now rare on cinder and anthills
1	1	0	2	<i>Aira praecox</i> Early Hair-grass
1	2	0	3	Now rare on cinder and rocky places
5	2	0	7	<i>Ajuga reptans</i> Bugle
4	1	0	5	Frequent on the higher ground, scarce elsewhere
3	2	3	8	<i>Alchemilla filicaulis subsp. vestita</i> Hairy Lady's mantle
1	2	2	5	Local and rather scarce in species-rich grassland
5	5	5	15	<i>Alchemilla glabra</i> Smooth Lady's-mantle
5	5	4	14	Very frequent
1	0	3	4	<i>Alchemilla mollis</i> Garden Lady's-mantle
0	0	0	0	As dumped garden waste, sometimes naturalised
4	5	4	13	<i>Alchemilla xanthochlora</i> Intermediate Lady's-mantle
5	5	5	15	Very frequent, generally more plentiful than <i>A. glabra</i>
0	5	5	10	<i>Alliaria petiolata</i> Garlic Mustard
0	4	4	8	Occasional
0	2	0	2	<i>Allium paradoxum</i> Few-flowered Garlic
0	0	0	0	By the Slitrig at Whitlaw and in woodland at Courthill
1	2	1	4	<i>Allium ursinum</i> Ramsons
0	2	0	2	Where woodland is enclosed by the railway
0	2	0	2	<i>Allium vineale</i> Wild Onion
0	0	0	0	Spreading at Whitlaw and Hawick
4	1	1	6	<i>Alnus glutinosa</i> Alder
1	1	2	4	Wet woodland, sometimes planted
0	1	0	1	<i>Alnus incana</i> Grey Alder
0	0	0	0	Planted at Hawick
2	3	5	10	<i>Alopecurus geniculatus</i> Marsh Foxtail
0	0	1	1	Especially in flooded cuttings
3	5	2	10	<i>Alopecurus pratensis</i> Meadow Foxtail
3	3	1	7	Scarce in grassland
0	0	1	1	<i>Anacamptis pyramidalis</i> Pyramidal Orchid
0	0	1	1	Two colonies at Longnewton
2	1	1	4	<i>Anemone nemorosa</i> Wood Anemone
3	2	0	5	In woodland and on heathy banks
5	4	3	12	<i>Angelica sylvestris</i> Wild Angelica
5	3	4	12	Frequent where drainage impeded

Annotated check-list

0	0	0	0	<i>Anisantha sterilis</i>	Barren Brome
0	1	0	1		Former casual
5	5	5	15	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
5	5	4	14		Frequent everywhere
4	5	5	14	<i>Anthriscus sylvestris</i>	Cow Parsley
4	5	4	13		Frequent almost everywhere
3	3	0	6	<i>Anthyllis vulneraria</i>	Kidney Vetch
2	4	1	7		Quite plentiful where ballast survives, rare on species-rich banks
0	0	0	0	<i>Antirrhinum majus</i>	Snapdragon
0	0	1	1		Formerly at Hassendean Station
0	1	0	1	<i>Aphanes australis</i>	Slender Parsley-piert
0	1	0	1		Rare in rocky places, Acreknowe
0	1	0	1	<i>Aquilegia vulgaris</i>	Columbine
2	1	1	4		Now only in Hawick
3	3	0	6	<i>Arabisidopsis thaliana</i>	Thale Cress
5	4	0	9		Mainly where there is open cinder
0	0	0	0	<i>Arabis hirsuta</i>	Hairy Rock-cress
0	1	1	2		Formerly on dry banks at Whitlaw and Hassendean Station
1	3	3	7	<i>Arctium minus</i>	Lesser Burdock
0	0	0	0		Occasional single plants
3	3	2	8	<i>Arenaria serpyllifolia</i>	Thyme-leaved Sandwort
3	2	4	9		Scarce on ballast and cinder
5	5	5	15	<i>Arrhenatherum elatius</i>	False Oat-Grass
5	5	5	15		Dominant in many places
0	0	0	0	<i>Artemisia vulgaris</i>	Mugwort
0	2	0	2		Not re-found at Hawick or Courthill
0	1	0	1	<i>Arum maculatum</i>	Lords-and-Ladies
0	0	0	0		Rare in woodland, Courthill
0	1	0	1	<i>Asplenium ceterach</i>	Rustyback
0	1	0	1		A few plants in rock cutting, Whitlaw
3	5	1	9	<i>Asplenium ruta-muraria</i>	Wall-rue
0	4	0	4		Frequent on bridges, scarce in rock cuttings
1	4	1	6	<i>Asplenium scolopendrium</i>	Hart's-tongue
0	1	0	1		Rock cuttings, bridge and retaining wall
2	3	0	5	<i>Asplenium trichomanes subsp. quadrivalens</i>	Maidenhair Spleenwort
0	3	0	3		Locally plentiful in rock cuttings, occasional on bridges
0	0	0	0	<i>Aster novi-belgii</i>	Confused Michaelmas-daisy
0	1	0	1		Lost to redevelopment at Hawick
5	2	0	7	<i>Athyrium filix-femina</i>	Lady-fern
3	3	1	7		Occasional
0	1	2	3	<i>Atriplex patula</i>	Common Orache
3	2	3	8		Disturbed ground
0	0	0	0	<i>Avena fatua</i>	Wild-oat
1	0	0	1		Former casual
0	0	0	0	<i>Avenula pratensis</i>	Meadow Oat-grass
2	1	0	3		Probable errors for <i>A. pubescens</i>

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5	3	1	9	<i>Avenula pubescens</i>	Downy Oat-grass
3	2	0	5		Local in species-rich grassland
0	0	3	3	<i>Barbarea intermedia</i>	Medium-flowered Winter-cress
1	2	1	4		Occasional
2	3	3	8	<i>Barbarea vulgaris</i>	Winter-cress
1	2	0	3		Occasional
5	5	5	15	<i>Bellis perennis</i>	Daisy
4	4	4	12		Not plentiful anywhere
0	3	2	5	<i>Betula pendula</i>	Silver Birch
0	0	0	0		Frequent around Hawick, scarce elsewhere
4	3	2	9	<i>Betula pubescens</i>	Downy Birch
5	5	4	14		Locally plentiful
2	0	0	2	<i>Blechnum spicant</i>	Hard-fern
4	1	0	5		Boundary banks and ditches on the higher ground
0	0	0	0	<i>Brachypodium pinnatum</i>	Heath False-brome
0	1	0	1		No longer at Courthill
1	4	3	8	<i>Brachypodium sylvaticum</i>	False-brome
3	3	1	7		Mainly in woodland
0	0	1	1	<i>Brassica napus subsp. oleifera</i>	Oil-seed Rape
0	0	0	0		Disturbed ground
4	2	3	9	<i>Briza media</i>	Quaking-grass
5	4	4	13		Locally plentiful, but often scarce
1	1	2	4	<i>Bromopsis erecta</i>	Upright Brome
0	0	1	1		A few patches on embankments by bridges
1	3	1	5	<i>Bromopsis ramosa</i>	Hairy-brome
1	3	1	5		Mainly in woodland
0	1	3	4	<i>Bromus hordeaceus subsp. hordeaceus</i>	Soft-brome
2	1	0	3		Disturbed ground
0	1	0	1	<i>Buddleja davidii</i>	Butterfly-bush
0	0	0	0		Stonework in Hawick
2	0	2	4	<i>Callitriche stagnalis</i>	Common Water-starwort
0	0	0	0		Occasional in flooded cuttings
3	0	0	3	<i>Calluna vulgaris</i>	Heather
4	1	0	5		Sparse on a few banks on the higher ground
2	1	1	4	<i>Caltha palustris</i>	Marsh-marigold
2	2	1	5		Ditches and flooded cuttings
0	1	0	1	<i>Calystegia pulchra</i>	Hairy Bindweed
0	1	1	2		Hawick only
1	3	2	6	<i>Calystegia sepium</i>	Hedge Bindweed
0	1	1	2		Occasional
0	1	1	2	<i>Campanula latifolia</i>	Giant Bellflower
0	1	1	2		Riversides at Whitlaw and Longnewton
3	3	2	8	<i>Campanula rotundifolia</i>	Harebell
5	5	4	14		Sparse on banks and ballast
1	5	4	10	<i>Capsella bursa-pastoris</i>	Shepherd's-purse
1	3	2	6		Disturbed ground

Annotated check-list

0	1	2	3	<i>Cardamine amara</i>	Large Bitter-cress
1	1	0	2		Flooded cuttings
5	3	5	13	<i>Cardamine flexuosa</i>	Wavy Bitter-cress
2	1	0	3		Flooded cuttings
4	5	5	14	<i>Cardamine hirsuta</i>	Hairy Bitter-cress
5	4	4	13		Sparse on ballast and disturbed ground
5	5	5	15	<i>Cardamine pratensis</i>	Cuckooflower
5	3	2	10		Wet places including flooded cuttings
0	1	1	2	<i>Carduus crispus</i>	Wetted Thistle
0	1	1	2		A few specimens only
0	1	0	1	<i>Carex acutiformis</i>	Lesser Pond-sedge
0	0	0	0		By the Slitrig at Whitlaw
1	1	1	3	<i>Carex caryophyllea</i>	Spring-sedge
2	1	0	3		Very sparse in species-rich grassland
0	0	0	0	<i>Carex demissa</i>	Common Yellow-sedge
1	0	0	1		Not refound at Blakebillend
2	0	0	2	<i>Carex disticha</i>	Brown Sedge
3	1	0	4		Wet places on the higher ground
3	0	0	3	<i>Carex echinata</i>	Star Sedge
0	0	0	0		Wet places on the higher ground
5	3	4	12	<i>Carex flacca</i>	Glaucous Sedge
5	4	4	13		Locally plentiful on damp trackway, also on banks
1	3	1	5	<i>Carex hirta</i>	Hairy Sedge
1	0	0	1		Occasional
0	0	0	0	<i>Carex laevigata</i>	Smooth-stalked Sedge
1	0	0	1		Not refound at Stobs
0	1	1	2	<i>Carex lepidocarpa</i>	Long-stalked Yellow-sedge
0	0	0	0		Flush at Whitlaw, flooded cutting Thornielaw
4	1	2	7	<i>Carex leporina</i>	Oval Sedge
2	0	0	2		Occasional
0	1	0	1	<i>Carex muricata subsp. pairae</i>	Prickly Sedge
0	0	0	0		Top of reseeded bank, Hawick
5	2	2	9	<i>Carex nigra</i>	Common Sedge
2	1	0	3		Wet places including flooded cuttings
4	0	0	4	<i>Carex pallescens</i>	Pale Sedge
1	0	0	1		Wet banks on the higher ground
3	0	1	4	<i>Carex panicea</i>	Carnation Sedge
2	1	0	3		Wet places, mainly on the higher ground
0	1	0	1	<i>Carex paniculata</i>	Greater Tussock-sedge
0	0	0	0		Large colony in flooded cutting, Hassendeanburn
2	0	0	2	<i>Carex pilulifera</i>	Pill Sedge
0	0	0	0		Very sparse on the higher ground
3	0	0	3	<i>Carex pulicaris</i>	Flea Sedge
0	0	0	0		Wet places on the higher ground
0	0	1	1	<i>Carex riparia</i>	Greater Pond-sedge
0	0	0	0		Large colony in flooded cutting, Longnewton

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2	1	3	6	<i>Carex rostrata</i>	Bottle Sedge
1	0	0	1		Wet places including flooded cuttings
0	1	0	1	<i>Carex spicata</i>	Spiked Sedge
0	0	0	0		Species-rich bank at Hassendeanburn
1	1	0	2	<i>Carex sylvatica</i>	Wood-sedge
0	0	0	0		Woodland at Stobs and Whitlaw
0	0	1	1	<i>Carex vesicaria</i>	Bladder-sedge
0	0	0	0		Small patch in flooded cutting, Belses
0	1	1	2	<i>Centaurea montana</i>	Perennial Cornflower
0	1	0	1		Naturalised from dumpings
5	5	5	15	<i>Centaurea nigra</i>	Common Knapweed
5	5	5	15		Plentiful everywhere
0	0	1	1	<i>Centaureum erythraea</i>	Common Centaury
0	0	1	1		A few plants at Longnewton
5	5	5	15	<i>Cerastium fontanum</i>	Common Mouse-ear
5	5	5	15		Very frequent everywhere
4	4	5	13	<i>Cerastium glomeratum</i>	Sticky Mouse-ear
1	1	4	6		Frequent on the trackway
0	0	0	0	<i>Cerastium tomentosum</i>	Snow-in-summer
0	1	0	1		Lost to redevelopment at Hawick
2	2	3	7	<i>Chaenorhinum minus</i>	Small Toadflax
5	4	4	13		Very sparse on open cinder
0	3	3	6	<i>Chaerophyllum temulum</i>	Rough Chervil
0	3	1	4		Occasional in partial shade
5	5	5	15	<i>Chamerion angustifolium</i>	Rosebay Willowherb
5	5	5	15		Plentiful everywhere
1	1	1	3	<i>Chenopodium album</i>	Fat-hen
0	1	1	2		Disturbed ground
0	1	0	1	<i>Chrysosplenium alternifolium</i>	Alternate-leaved Golden-saxifrage
0	0	0	0		By the Slitrig at Whitlaw
2	1	1	4	<i>Chrysosplenium oppositifolium</i>	Opposite-leaved Golden-saxifrage
3	1	0	4		Burnsides
0	3	1	4	<i>Cicerbita macrophylla</i>	Common Blue-sow-thistle
0	0	0	0		Naturalised from dumpings
2	0	0	2	<i>Circaea lutetiana</i>	Enchanter's-nightshade
0	0	0	0		Local in woodland
5	5	5	15	<i>Cirsium arvense</i>	Creeping Thistle
5	5	5	15		Only locally abundant
2	1	0	3	<i>Cirsium heterophyllum</i>	Melancholy Thistle
3	3	0	6		Abundant at Shankend and Stobs, sparse at Courthill
5	1	0	6	<i>Cirsium palustre</i>	Marsh Thistle
5	2	0	7		Frequent on the higher ground
5	5	5	15	<i>Cirsium vulgare</i>	Spear Thistle
4	5	5	14		Sparse
0	1	0	1	<i>Claytonia sibirica</i>	Pink Purslane
0	0	0	0		Woodland at Courthill

Annotated check-list

0	1	0	1	<i>Clinopodium vulgare</i> Wild Basil
0	1	0	1	Good colonies at Whitlaw
3	4	2	9	<i>Conopodium majus</i> Pignut
3	1	0	4	Sparse
0	0	0	0	<i>Convolvulus arvensis</i> Field Bindweed
0	2	2	4	Not refound, formerly on ballast
0	1	0	1	<i>Cornus sericea</i> Red-osier Dogwood
0	0	0	0	Planted in Hawick
2	4	1	7	<i>Corylus avellana</i> Hazel
2	1	0	3	Dispersing naturally from woodland, sometimes planted
0	1	0	1	<i>Cotoneaster horizontalis</i> Wall Cotoneaster
0	1	0	1	Hawick only
0	0	0	0	<i>Cotoneaster simonsii</i> Himalayan Cotoneaster
0	2	0	2	Not refound at Hawick or Courthill
0	1	0	1	<i>Cotoneaster</i> sp. A cotoneaster
0	2	1	3	Hawick only
0	1	0	1	<i>Cotoneaster x watereri</i> Waterer's Cotoneaster
0	0	0	0	Hawick only
5	5	5	15	<i>Crataegus monogyna</i> Hawthorn
4	5	5	14	Often dominant, frequent everywhere
0	1	0	1	<i>Crataegus x media</i> (<i>C. laevigata x monogyna</i>) Hybrid Hawthorn
0	0	0	0	Planted in Hawick
3	5	3	11	<i>Crepis capillaris</i> Smooth Hawk's-beard
0	5	4	9	Locally plentiful especially on cinder-covered embankments
2	0	0	2	<i>Crepis paludosa</i> Marsh Hawk's-beard
4	2	0	6	Wet places, not refound on the lower ground
0	1	0	1	<i>Crocoshmia x crocosmiiflora</i> (<i>C. aurea x potsii</i>) Montbretia
0	0	0	0	Established from dumping, Whitlaw
5	5	5	15	<i>Cruciata laevipes</i> Crosswort
5	5	4	14	Frequent everywhere
0	1	0	1	<i>Cymbalaria muralis</i> Ivy-leaved Toadflax
0	1	0	1	On a wall in Hawick
5	5	4	14	<i>Cynosurus cristatus</i> Crested Dog's-tail
4	3	3	10	Frequent everywhere
1	1	0	2	<i>Cystopteris fragilis</i> Brittle Bladder-fern
1	3	0	4	Scarce in rock cuttings and on stonework
5	4	3	12	<i>Cytisus scoparius</i> Broom
5	5	3	13	Widespread in modest quantity
5	5	5	15	<i>Dactylis glomerata</i> Cock's-foot
5	5	5	15	Plentiful except where there is grazing
4	4	3	11	<i>Dactylorhiza fuchsii</i> Common Spotted-orchid
2	5	4	11	Plentiful in many places
3	2	2	7	<i>Dactylorhiza purpurella</i> Northern Marsh-orchid
1	2	1	4	Scarce, despite the increase in wetland
1	1	1	3	<i>Dactylorhiza x venusta</i> (<i>D. fuchsii x purpurella</i>) A hybrid Marsh-orchid
1	1	0	2	Usually with the parents

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0	2	0	2	<i>Daucus carota subsp. carota</i>	Wild Carrot
1	1	2	4		On banks at Courthill and Hassendeanburn, no longer on ballast
5	4	5	14	<i>Deschampsia cespitosa</i>	Tufted Hair-grass
5	3	5	13		Frequent everywhere
4	0	0	4	<i>Deschampsia flexuosa</i>	Wavy Hair-grass
4	0	0	4		Occasional on the higher ground
2	0	1	3	<i>Digitalis purpurea</i>	Foxglove
1	1	0	2		Scarce, garden escape at Longnewton
0	0	0	0	<i>Diphasiastrum alpinum</i>	Alpine Clubmoss
0	1	0	1		No longer at Acreknowe
0	0	1	1	<i>Dipsacus fullonum</i>	Wild Teasel
0	0	0	0		Garden escape, Hassendean Station
0	0	0	0	<i>Doronicum pardalianches</i>	Leopard's-bane
0	1	0	1		Lost to redevelopment at Hawick
0	1	0	1	<i>Draba muralis</i>	Wall Whitlowgrass
0	1	0	1		Several small colonies at Whitlaw on cinder
3	2	2	7	<i>Dryopteris affinis</i> agg.	Scaly Male-fern
0	0	0	0		Occasional
1	0	0	1	<i>Dryopteris carthusiana</i>	Narrow Buckler-Fern
0	0	0	0		Whitrope Tunnel
5	3	3	11	<i>Dryopteris dilatata</i>	Broad Buckler-fern
4	2	1	7		Occasional in shady places, more frequent on the higher ground
5	5	4	14	<i>Dryopteris filix-mas</i>	Male-fern
5	5	5	15		Frequent everywhere
1	0	0	1	<i>Dryopteris x deweveri</i> (<i>D. carthusiana</i> x <i>dilatata</i>)	A hybrid Buckler-fern
0	0	0	0		Whitrope Tunnel, with the parents
0	1	4	5	<i>Eleocharis palustris</i>	Common Spike-rush
0	0	0	0		Flooded cuttings
0	2	1	3	<i>Elymus caninus</i>	Bearded Couch
0	1	1	2		A few small colonies in woodland
0	2	2	4	<i>Elytrigia repens</i>	Common Couch
0	2	3	5		Occasional
2	0	0	2	<i>Epilobium brunnescens</i>	New Zealand Willowherb
0	0	0	0		Yard at Whitrope Tunnel and retaining wall at Blakebillend
1	4	5	10	<i>Epilobium ciliatum</i>	American Willowherb
0	0	0	0		Widespread on the lower ground
1	5	5	11	<i>Epilobium hirsutum</i>	Great Willowherb
0	4	2	6		Ditches and flooded cuttings
5	5	5	15	<i>Epilobium montanum</i>	Broad-leaved Willowherb
5	5	4	14		Frequent everywhere
4	2	2	8	<i>Epilobium obscurum</i>	Short-fruited Willowherb
4	3	5	12		Occasional, no longer on ballast
3	1	1	5	<i>Epilobium palustre</i>	Marsh Willowherb
2	0	0	2		Ditches and flooded cuttings
0	1	3	4	<i>Epilobium parviflorum</i>	Hoary Willowherb
0	0	1	1		Ditches and flooded cuttings

Annotated check-list

5	5	5	15	<i>Equisetum arvense</i>	Field Horsetail
5	5	5	15		Plentiful everywhere on bankings
0	1	1	2	<i>Equisetum fluviatile</i>	Water Horsetail
1	0	1	2		In small pools
4	0	1	5	<i>Equisetum palustre</i>	Marsh Horsetail
2	0	0	2		Wet places on the higher ground
0	0	0	0	<i>Equisetum sylvaticum</i>	Wood Horsetail
2	0	0	2		Not refound at Shankend or Stobs
1	0	0	1	<i>Erica tetralix</i>	Cross-leaved Heath
1	1	0	2		Whitrope Tunnel only
0	1	0	1	<i>Eriophorum vaginatum</i>	Hare's-tail Cottongrass
1	0	0	1		One anomalous tuft in a flooded cutting, Hassendeanburn
0	0	0	0	<i>Erodium cicutarium</i>	Common Stork's-bill
0	1	0	1		Formerly in Hawick railway yards
4	4	2	10	<i>Erophila verna sens. lat.</i>	Common Whitlowgrass
2	1	1	4		Scarce on cinder and rocky outcrops
0	0	0	0	<i>Euphorbia cyparissias</i>	Cypress Spurge
1	0	0	1		Formerly at Leap Burn
0	0	0	0	<i>Euphorbia helioscopia</i>	Sun Spurge
0	1	1	2		Former casual
0	0	1	1	<i>Euphorbia peplus</i>	Petty Spurge
0	0	0	0		In dumped material
5	3	2	10	<i>Euphrasia agg.</i>	Eyebright
5	4	5	14		On ballast and in grassland, less plentiful than formerly
5	3	0	8	<i>Euphrasia arctica subsp. borealis</i>	Eyebright
0	0	0	0		Not on the lower ground
4	1	0	5	<i>Euphrasia confusa</i>	Eyebright
0	0	0	0		On the higher ground
0	3	2	5	<i>Euphrasia nemorosa</i>	Eyebright
0	0	0	0		On the lower ground
2	4	2	8	<i>Fagus sylvatica</i>	Beech
0	1	0	1		Occasional, self-sown and planted
0	1	0	1	<i>Fallopia convolvulus</i>	Black-bindweed
1	3	0	4		Disturbed ground
0	0	0	0	<i>Fallopia japonica</i>	Japanese Knotweed
0	1	0	1		Formerly in Hawick railway yards
5	1	1	7	<i>Festuca ovina</i>	Sheep's-fescue
5	3	4	12		Frequent on the higher ground, occasional elsewhere
5	5	5	15	<i>Festuca rubra</i>	Red Fescue
5	5	5	15		Frequent everywhere, often plentiful
3	5	5	13	<i>Ficaria verna</i>	Lesser Celandine
3	4	3	10		Frequent everywhere except on the highest ground
1	0	0	1	<i>Ficaria verna subsp. fertilis</i>	Lesser Celandine
0	0	0	0		Not searched for
0	3	0	3	<i>Ficaria verna subsp. verna</i>	Lesser Celandine
0	0	0	0		Not searched for

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5	5	5	15	<i>Filipendula ulmaria</i>	Meadowsweet
5	4	5	14		Dominant in many places
0	1	0	1	<i>Fragaria ananassa</i>	Garden Strawberry
0	1	0	1		On ballast at Hawick
5	4	5	14	<i>Fragaria vesca</i>	Wild Strawberry
5	5	5	15		Plentiful everywhere
4	5	5	14	<i>Fraxinus excelsior</i>	Ash
2	5	5	12		Frequent, mainly self-sown
0	0	0	0	<i>Fumaria officinalis</i>	Common Fumitory
0	1	0	1		Former casual
0	0	0	0	<i>Fumaria purpurea</i>	Purple Ramping-fumitory
0	1	0	1		Former casual
0	2	2	4	<i>Galanthus nivalis</i>	Snowdrop
0	1	1	2		Near habitation
0	1	0	1	<i>Galanthus nivalis x plicatus</i>	A hybrid Snowdrop
0	0	0	0		Near habitation, Courthill
2	0	0	2	<i>Galeopsis bifida</i>	Bifid Hemp-nettle
0	0	0	0		Scarce in wetland
0	0	1	1	<i>Galeopsis speciosa</i>	Large-flowered Hemp-nettle
0	0	0	0		Disturbed ground
2	0	1	3	<i>Galeopsis tetrahit</i> agg.	Common Hemp-nettle
1	3	1	5		Scarce in wetland and as casual
2	1	2	5	<i>Galium album</i>	Hedge Bedstraw
1	1	3	5		Local, but with strong colonies
3	5	5	13	<i>Galium aparine</i>	Cleavers
3	5	5	13		Frequent everywhere
1	3	0	4	<i>Galium odoratum</i>	Woodruff
1	1	0	2		Where woodland is enclosed by the railway
5	0	1	6	<i>Galium palustre</i> subsp. <i>palustre</i>	Common Marsh-bedstraw
4	1	0	5		Wet places
4	1	0	5	<i>Galium saxatile</i>	Heath Bedstraw
5	0	1	6		Scarce on the higher ground
4	1	0	5	<i>Galium uliginosum</i>	Fen Bedstraw
4	2	1	7		Wet places
4	4	2	10	<i>Galium verum</i>	Lady's Bedstraw
5	5	4	14		Nowhere plentiful
0	1	3	4	<i>Geranium dissectum</i>	Cut-leaved Crane's-bill
1	1	0	2		Occasional
0	0	1	1	<i>Geranium lucidum</i>	Shining Crane's-bill
0	1	0	1		Garden escape, Hassendean Station
1	3	1	5	<i>Geranium molle</i>	Dove's-foot Crane's-bill
0	0	0	0		Scarce on the trackway
0	5	2	7	<i>Geranium pratense</i>	Meadow Crane's-bill
0	5	4	9		Scarce on the lower ground
5	5	5	15	<i>Geranium robertianum</i>	Herb-Robert
4	5	5	14		Quite plentiful everywhere

Annotated check-list

5	5	2	12	<i>Geranium sylvaticum</i>	Wood Crane's-bill
4	5	1	10		Plentiful in many places
0	0	1	1	<i>Geranium x oxonianum</i>	Druce's Crane's-bill
0	0	0	0		Established from dumping, Belses
5	4	5	14	<i>Geum rivale</i>	Water Avens
5	5	5	15		Plentiful in many places
2	5	5	12	<i>Geum urbanum</i>	Wood Avens
2	4	3	9		Frequent except on the higher ground
0	3	3	6	<i>Geum x intermedium</i> (<i>G. rivale x urbanum</i>)	Hybrid Avens
0	1	1	2		Frequent where the parents grow together
0	0	0	0	<i>Glechoma hederacea</i>	Ground-ivy
0	1	0	1		Not refound at Whitlaw
1	0	2	3	<i>Glyceria fluitans</i>	Floating Sweet-grass
0	0	0	0		Flooded cuttings
0	2	2	4	<i>Glyceria notata</i>	Plicate Sweet-grass
0	0	0	0		Flooded cuttings
2	0	0	2	<i>Gnaphalium uliginosum</i>	Marsh Cudweed
0	1	1	2		Casual in damp places
0	3	1	4	<i>Gymnadenia conopsea</i>	Chalk Fragrant-orchid
1	4	3	8		Local and much less plentiful than formerly
0	3	2	5	<i>Hedera helix</i>	Ivy
0	2	2	4		Occasional
0	1	1	2	<i>Hedera 'Hibernica'</i>	Irish Ivy
0	0	0	0		Near habitation
0	1	0	1	<i>Helianthemum nummularium</i>	Common Rock-rose
0	1	0	1		Rock outcrop at Whitlaw
0	1	0	1	<i>Helleborus viridis</i>	Green Hellebore
0	1	0	1		By the Slitrig at Whitlaw Wood
0	0	1	1	<i>Heracleum mantegazzianum</i>	Giant Hogweed
0	0	1	1		On and below viaduct, Longnewton
0	0	1	1	<i>Heracleum mantegazzianum x sphondylium</i>	Hybrid Hogweed
0	0	0	0		With the parents, Longnewton
5	5	5	15	<i>Heracleum sphondylium</i>	Hogweed
5	5	5	15		Frequent everywhere
3	5	3	11	<i>Hieracium agg.</i>	Hawkweed
5	5	5	15		Mainly on bridges
0	0	0	0	<i>Hieracium vulgatum</i>	Common Hawkweed
0	2	1	3		Not searched for
0	0	1	1	<i>Hippuris vulgaris</i>	Mare's-tail
0	0	0	0		Margin of moss, Standhill
4	5	5	14	<i>Holcus lanatus</i>	Yorkshire-fog
5	5	5	15		Plentiful in most places
5	5	5	15	<i>Holcus mollis</i>	Creeping Soft-grass
5	4	3	12		Frequent everywhere
0	0	2	2	<i>Hordeum distichon</i>	Two-rowed Barley
0	0	0	0		Casual at farm tips

The Railway Flora of Teviotdale revisited

0	1	0	1	<i>Hyacinthoides non-scripta</i>	Bluebell
0	0	0	0	One clump at Courthill, garden origin	
1	4	2	7	<i>Hyacinthoides x massartiana</i> (<i>H. hispanica x non-scripta</i>)	Hybrid Bluebell
0	1	0	1	Spreading where dumped	
4	4	2	10	<i>Hypericum hirsutum</i>	Hairy St John's-wort
4	3	3	10	Locally plentiful, prefers some shade	
0	1	2	3	<i>Hypericum maculatum</i>	Imperforate St John's-wort
1	3	1	5	Local, at the edge of woodland	
2	3	1	6	<i>Hypericum perforatum</i>	Perforate St John's-wort
3	5	4	12	Now quite scarce, formerly plentiful on ballast	
4	1	0	5	<i>Hypericum pulchrum</i>	Slender St John's-wort
5	2	3	10	Scarce on the higher ground	
3	1	1	5	<i>Hypericum tetrapterum</i>	Square-stalked St John's-wort
4	2	2	8	Scarce in wet places	
2	3	4	9	<i>Hypericum x desetangsii</i> (<i>H. maculatum x perforatum</i>)	Hybrid St John's-wort
0	2	1	3	Locally plentiful on banks	
4	2	2	8	<i>Hypochaeris radicata</i>	Cat's-ear
1	1	0	2	Occasional	
0	1	1	2	<i>Ilex aquifolium</i>	Holly
0	0	0	0	Scarce	
0	1	0	1	<i>Impatiens glandulifera</i>	Indian Balsam
0	0	0	0	Beside the River Teviot	
1	0	0	1	<i>Iris pseudacorus</i>	Yellow Iris
1	0	1	2	Site of former pond at Shankend	
3	2	0	5	<i>Juncus acutiflorus</i>	Sharp-flowered Rush
5	1	0	6	Wet places	
4	3	4	11	<i>Juncus articulatus</i>	Jointed Rush
4	1	1	6	Wet places and flooded cuttings	
1	2	3	6	<i>Juncus bufonius</i>	Toad Rush
2	0	0	2	Damp disturbed ground	
1	0	0	1	<i>Juncus bulbosus</i>	Bulbous Rush
0	0	0	0	Rare in wet places, Leap Burn	
5	2	4	11	<i>Juncus conglomeratus</i>	Compact Rush
4	2	2	8	Frequent in wet places	
5	2	5	12	<i>Juncus effusus</i>	Soft-rush
5	2	4	11	Frequent in wet places	
0	2	4	6	<i>Juncus inflexus</i>	Hard Rush
0	2	1	3	Frequent in wet places on the lower ground	
1	0	0	1	<i>Juncus squarrosus</i>	Heath Rush
0	0	0	0	Whitrope Tunnel	
2	3	4	9	<i>Knautia arvensis</i>	Field Scabious
2	5	5	12	Less widespread than formerly but still locally plentiful	
0	0	1	1	<i>Knautia macedonica</i>	Garden Scabious
0	0	0	0	Naturalised from dumping at Thornielaw	

Annotated check-list

0	1	0	1	<i>Laburnum anagyroides</i>	Laburnum
0	0	0	0		Hawick only
0	2	1	3	<i>Lamiasstrum galeobdolon subsp. argentatum</i>	Garden Yellow-archangel
0	0	0	0		Forming large patches where dumped
0	5	3	8	<i>Lamium album</i>	White Dead-nettle
1	2	0	3		Occasional
1	2	4	7	<i>Lamium purpureum</i>	Red Dead-nettle
1	1	1	3		Disturbed ground
2	4	5	11	<i>Lapsana communis</i>	Nipplewort
2	3	4	9		Occasional
1	0	0	1	<i>Larix decidua</i>	European Larch
2	1	1	4		Self-sown, Stobs
1	3	2	6	<i>Larix x marschlinsii (L. decidua x kaempferi)</i>	Hybrid Larch
0	0	0	0		Self-sown from woodland
0	1	0	1	<i>Lathyrus latifolius</i>	Broad-leaved Everlasting-pea
0	0	0	0		Established from dumping, Courthill
2	3	1	6	<i>Lathyrus linifolius</i>	Bitter-vetch
3	2	0	5		Rather scarce and local on dry banks
5	5	5	15	<i>Lathyrus pratensis</i>	Meadow Vetchling
5	5	5	15		Plentiful everywhere
1	1	2	4	<i>Lemna minor</i>	Common Duckweed
0	0	0	0		Flooded cuttings
5	5	5	15	<i>Leontodon hispidus</i>	Rough Hawkbit
5	5	5	15		Plentiful in many places
0	0	0	0	<i>Lepidium heterophyllum</i>	Smith's Pepperwort
1	1	0	2		Formerly on ballast
5	4	5	14	<i>Leucanthemum vulgare</i>	Oxeye Daisy
5	5	5	15		Plentiful in many places
0	1	0	1	<i>Leucanthemum x superbum</i>	Shasta Daisy
0	0	0	0		At site of demolished viaduct, Whitlaw
0	2	2	4	<i>Ligustrum vulgare</i>	Wild Privet
0	3	2	5		Occasional, self-sown
0	0	0	0	<i>Lilium pyrenaicum</i>	Pyrenean Lily
0	0	1	1		Formerly at Longnewton
0	0	1	1	<i>Linaria purpurea</i>	Purple Toadflax
0	0	0	0		Garden escape, Hassendean Station
2	2	2	6	<i>Linaria vulgaris</i>	Common Toadflax
5	4	5	14		Very modest colonies where ballast survives, formerly frequent
5	5	4	14	<i>Linum catharticum</i>	Fairy Flax
5	4	5	14		Still a notable feature of the old railway
0	0	1	1	<i>Lolium multiflorum</i>	Italian Rye-grass
0	0	1	1		Edge of arable field, Standhill
4	5	5	14	<i>Lolium perenne</i>	Perennial Rye-grass
1	1	1	3		Sown on the trackway, occasional elsewhere
2	2	2	6	<i>Lonicera periclymenum</i>	Honeysuckle
2	1	0	3		In woodland

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5	5	5	15	<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil
5	5	5	15		No longer as plentiful as formerly
2	1	0	3	<i>Lotus pedunculatus</i>	Greater Bird's-foot-trefoil
2	0	0	2		Scarce in wet places
0	0	0	0	<i>Lupinus x regalis</i> (<i>L. arboreus x polyphyllus</i>)	Russell Lupin
0	1	0	1		Formerly at Hawick
4	4	2	10	<i>Luzula campestris</i>	Field Wood-rush
5	2	4	11		Frequent
3	0	0	3	<i>Luzula multiflora</i>	Heath Wood-rush
5	1	1	7		On the higher ground
2	1	0	3	<i>Luzula pilosa</i>	Hairy Wood-rush
4	1	0	5		On the higher ground
2	1	0	3	<i>Luzula sylvatica</i>	Great Wood-rush
1	1	0	2		In woodland and with moorland species
0	0	0	0	<i>Lycopodium clavatum</i>	Stag's-horn Clubmoss
0	1	0	1		No longer at Acreknowe
1	0	0	1	<i>Lysimachia nemorum</i>	Yellow Pimpernel
2	0	0	2		Rare in wet places, Leap Burn
0	1	0	1	<i>Mahonia aquifolium</i>	Oregon-grape
0	0	0	0		Planted in Hawick
1	1	2	4	<i>Malus pumila</i>	Apple
1	1	2	4		Occasional self-sown trees
0	0	0	0	<i>Malva moschata</i>	Musk-mallow
0	0	1	1		Formerly at Thornielaw
4	5	5	14	<i>Matricaria discoidea</i>	Pineappleweed
3	3	2	8		Mainly on access tracks
1	2	1	4	<i>Meconopsis cambrica</i>	Welsh Poppy
0	0	0	0		Naturalised in woodland
2	5	5	12	<i>Medicago lupulina</i>	Black Medick
1	3	5	9		Widespread, locally plentiful on the trackway
0	0	0	0	<i>Melilotus indicus</i>	Small Melilot
0	1	0	1		Formerly at Hawick
0	2	0	2	<i>Mentha aquatica</i>	Water Mint
0	0	0	0		Scarce in wet places
0	0	0	0	<i>Mentha x verticillata</i> (<i>M. arvensis x aquatica</i>)	Whorled Mint
0	1	0	1		Formerly at Hawick
0	0	1	1	<i>Mentha x villosa</i>	Apple-mint
0	0	0	0		Former station yard at Hassendean
0	0	1	1	<i>Menyanthes trifoliata</i>	Bogbean
0	0	0	0		Margin of moss, Standhill
3	5	1	9	<i>Mercurialis perennis</i>	Dog's Mercury
2	5	0	7		Where there is woodland
0	0	0	0	<i>Mimulus x robertsii</i> (<i>M. guttatus x luteus</i>)	Hybrid Monkeyflower
0	1	0	1		Formerly at Hawick
0	1	1	2	<i>Moehringia trinervia</i>	Three-nerved Sandwort
0	0	0	0		Rare on ballast

Annotated check-list

4	1	0	5	<i>Molinia caerulea</i>	Purple Moor-grass
4	1	0	5		Frequent on the higher ground, also at Whitlaw
0	0	0	0	<i>Mycelis muralis</i>	Wall Lettuce
0	1	0	1		Not refound at Courthill
5	5	5	15	<i>Myosotis arvensis</i>	Field Forget-me-not
5	4	4	13		Frequent everywhere but in small quantities
1	1	1	3	<i>Myosotis discolor</i>	Changing Forget-me-not
0	0	1	1		Very scarce
2	1	1	4	<i>Myosotis laxa</i>	Tufted Forget-me-not
0	0	1	1		In wet places
0	1	1	2	<i>Myosotis scorpioides</i>	Water Forget-me-not
0	0	3	3		Riversides at Whitlaw and Longnewton
1	0	0	1	<i>Myosotis secunda</i>	Creeping Forget-me-not
1	0	0	1		Wet places, Leap Burn
1	5	2	8	<i>Myosotis sylvatica</i>	Wood Forget-me-not
2	2	1	5		Occasional in shaded places
0	2	0	2	<i>Myrrhis odorata</i>	Sweet Cicely
0	1	0	1		By the Teviot and Slitrig in Hawick
1	2	2	5	<i>Narcissus</i> <i>agg.</i>	Garden Daffodil
1	1	1	3		Planted in a few places, also dumped
1	0	0	1	<i>Nardus stricta</i>	Mat-grass
2	0	0	2		Whitrope Tunnel
0	0	0	0	<i>Nasturtium microphyllum</i>	Narrow-fruited Water-cress
0	1	0	1		Not searched for
0	1	2	3	<i>Nasturtium officinale</i> <i>agg.</i>	Water-cress
2	1	2	5		Ditches and flooded cuttings
3	2	3	8	<i>Neottia ovata</i>	Common Twayblade
3	5	5	13		Still plentiful on some north-facing banks, but scarce or lost elsewhere
2	3	4	9	<i>Odontites vernus</i>	Red Bartsia
0	1	1	2		Plentiful on the trackway following ballast removal
1	3	0	4	<i>Ononis repens</i>	Common Restharrow
0	3	1	4		Rather rare, except at Whitlaw
0	1	0	1	<i>Orchis mascula</i>	Early-purple Orchid
0	0	0	0		One plant at Whitlaw
4	0	0	4	<i>Oreopteris limbosperma</i>	Lemon-scented Fern
2	0	0	2		On a few wet banks on the higher ground
0	1	0	1	<i>Origanum vulgare</i>	Wild Marjoram
0	3	0	3		Still plentiful at Whitlaw, not refound elsewhere
0	1	0	1	<i>Ornithogalum umbellatum</i> <i>subsp. campestre</i>	Star-of-Bethlehem
0	0	0	0		Naturalised garden escape, Courthill
3	1	0	4	<i>Oxalis acetosella</i>	Wood-sorrel
1	1	0	2		Occasional in damp shade
1	0	1	2	<i>Papaver dubium</i>	Long-headed Poppy
0	1	0	1		Disturbed ground
0	1	0	1	<i>Papaver pseudoorientale</i>	Oriental Poppy
0	0	0	0		Established from dumping, Hawick

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1	0	0	1	<i>Pedicularis sylvatica</i>	Lousewort
2	0	0	2		Scarce at Shankend
0	1	1	2	<i>Pentaglottis sempervirens</i>	Green Alkanet
0	1	0	1		Has survived the redevelopment of Hawick station
0	0	1	1	<i>Persicaria amphibia</i>	Amphibious Bistort
0	0	0	0		Wetland at Standhill
0	1	0	1	<i>Persicaria bistorta</i>	Common Bistort
0	0	0	0		By the Slitrig Water
0	0	0	0	<i>Persicaria hydropiper</i>	Water-pepper
0	1	0	1		Former casual
1	1	2	4	<i>Persicaria maculosa</i>	Redshank
1	2	3	6		Disturbed ground
0	1	0	1	<i>Petasites albus</i>	White Butterbur
0	0	0	0		By the Slitrig Water
0	1	2	3	<i>Petasites hybridus</i>	Butterbur
0	1	1	2		Mainly riversides
0	1	0	1	<i>Petasites japonicus</i>	Giant Butterbur
0	0	0	0		By the Slitrig Water
3	2	2	7	<i>Phalaris arundinacea</i>	Reed Canary-grass
3	1	1	5		Occasional, associated with <i>Trollius</i> at Shankend
0	1	0	1	<i>Phalaris arundinacea</i> var. <i>picta</i>	Variegated Reed Canary-grass
1	0	0	1		Dumped at Hawick
0	0	0	0	<i>Phleum bertolonii</i>	Smaller Cat's-tail
1	0	1	2		Not refound, agricultural <i>P. pratense</i> may contain similar plants
1	3	3	7	<i>Phleum pratense</i>	Timothy
1	2	2	5		Scarce, associated with agricultural use
0	0	0	0	<i>Phragmites australis</i>	Common Reed
0	0	1	1		Formerly at Hassendean Station
1	0	1	2	<i>Picea abies</i>	Norway Spruce
1	0	0	1		Planted, rare
3	2	3	8	<i>Picea sitchensis</i>	Sitka Spruce
0	0	0	0		Planted and self-sown from forestry
0	1	0	1	<i>Pilosella aurantiaca</i> subsp. <i>carpathicola</i>	Fox-and-cubs
0	1	0	1		Naturalised in Hawick
5	4	4	13	<i>Pilosella officinarum</i>	Mouse-ear-hawkweed
3	4	5	12		Frequent, especially on cinder
2	3	2	7	<i>Pimpinella saxifraga</i>	Burnet-saxifrage
3	5	4	12		Rather scarce on banks, formerly on ballast
0	1	0	1	<i>Pinguicula vulgaris</i>	Common Butterwort
0	0	0	0		Flush at Whitlaw
3	2	3	8	<i>Pinus sylvestris</i>	Scots Pine
2	3	2	7		Occasionally planted, seldom self-sown
5	5	5	15	<i>Plantago lanceolata</i>	Ribwort Plantain
5	5	5	15		Frequent everywhere
5	5	5	15	<i>Plantago major</i>	Greater Plantain
1	4	2	7		Mainly on access tracks

Annotated check-list

5	5	5	15	<i>Poa annua</i>	Annual Meadow-grass
5	5	5	15		Frequent everywhere
5	3	3	11	<i>Poa humilis</i>	Spreading Meadow-grass
0	0	0	0		Frequent in short grass
1	2	1	4	<i>Poa nemoralis</i>	Wood Meadow-grass
0	0	1	1		Scarce in woodland
3	3	4	10	<i>Poa pratensis</i>	Smooth Meadow-grass
0	0	0	0		Not very plentiful
5	4	5	14	<i>Poa pratensis sens. lat.</i>	Smooth Meadow-grass
2	4	4	10		Not very plentiful
4	5	5	14	<i>Poa trivialis</i>	Rough Meadow-grass
4	4	4	12		Frequent everywhere
1	0	0	1	<i>Polygala serpyllifolia</i>	Heath Milkwort
1	0	0	1		Rare, Blakebillend
0	0	0	0	<i>Polygala vulgaris</i>	Common Milkwort
0	3	1	4		Formerly quite plentiful locally
0	1	1	2	<i>Polygonatum x hybridum (P. multiflorum x odoratum)</i>	Garden Solomon's-seal
0	0	0	0		Established from dumping
0	3	1	4	<i>Polygonum arenastrum</i>	Equal-leaved Knotgrass
0	0	0	0		Access tracks
1	3	4	8	<i>Polygonum aviculare</i>	Knotgrass
0	0	0	0		Disturbed ground
1	4	4	9	<i>Polygonum aviculare agg.</i>	Knotgrass
3	2	2	7		Disturbed ground and access tracks
0	2	0	2	<i>Polypodium vulgare</i>	Polypody
0	3	0	3		Locally plentiful in rock cuttings
0	1	0	1	<i>Polystichum aculeatum</i>	Hard Shield-fern
0	1	0	1		Rock cutting at Whitlaw
0	0	0	0	<i>Populus alba</i>	White Poplar
0	1	0	1		Not refound at Hassendeanburn
0	0	0	0	<i>Populus x canadensis (P. deltoides x nigra)</i>	Hybrid Black-poplar
1	1	0	2		Formerly in Hawick railway yards
0	1	0	1	<i>Potamogeton berchtoldii</i>	Small Pondweed
0	0	0	0		Flooded cutting, Hassendeanburn
1	0	0	1	<i>Potamogeton natans</i>	Broad-leaved Pondweed
0	0	0	0		Ditch at Leap Burn
1	4	3	8	<i>Potentilla anserina</i>	Silverweed
1	0	0	1		Mainly near access tracks
5	2	2	9	<i>Potentilla erecta</i>	Tormentil
5	2	3	10		Nowhere plentiful
5	5	5	15	<i>Potentilla reptans</i>	Creeping Cinquefoil
5	5	5	15		Prefers cinder, not as plentiful as formerly
4	4	3	11	<i>Potentilla sterilis</i>	Barren Strawberry
1	4	2	7		Occasional
0	3	4	7	<i>Primula veris</i>	Cowslip
0	3	4	7		Very fine colonies at Courthill, Hassendean Station and Belses

The Railway Flora of Teviotdale revisited

3	5	4	12	<i>Primula vulgaris</i>	Primrose
3	5	3	11		Rather local but often plentiful. 'Var. <i>alba</i> ', colony by Belses Mill
0	3	3	6	<i>Primula x polyantha</i> (<i>P. veris x vulgaris</i>)	False Oxlip
0	1	0	1		Frequent with the parents
0	1	1	2	<i>Primula x polyantha</i> cultivar	A garden Primula
0	0	0	0		Established from dumping
4	5	5	14	<i>Prunella vulgaris</i>	Selfheal
4	2	4	10		Frequent everywhere
2	3	3	8	<i>Prunus avium</i>	Wild Cherry
1	2	0	3		Bird-sown and planted
0	2	2	4	<i>Prunus domestica</i>	Wild Plum
0	2	1	3		A few bird-sown trees, suckering modestly
0	1	0	1	<i>Prunus laurocerasus</i>	Cherry Laurel
0	0	0	0		Planted at Hawick
0	1	0	1	<i>Prunus lusitanica</i>	Portugal Laurel
0	0	0	0		Planted at Hawick
2	0	0	2	<i>Prunus padus</i>	Bird Cherry
0	0	0	0		Whitrope Tunnel and Stobs
3	5	3	11	<i>Prunus spinosa</i>	Blackthorn
0	2	3	5		Frequent dense colonies, increasing
0	1	0	1	<i>Prunus x fruticans</i> (<i>P. domestica x spinosa</i>)	Hybrid Plum
0	0	0	0		Hedge near Flex farm, Whitlaw
2	0	0	2	<i>Pseudotsuga menziesii</i>	Douglas Fir
0	0	0	0		Planted at Shankend, self-sown at Stobs
5	0	0	5	<i>Pteridium aquilinum</i>	Bracken
2	0	0	2		Some dense colonies on the higher ground
0	1	0	1	<i>Pulmonaria officinalis</i>	Lungwort
0	0	0	0		By the Slitrig, Whitlaw Wood
0	1	0	1	<i>Pyrus communis</i>	Pear
0	0	0	0		Planted at Hawick
0	0	0	0	<i>Quercus petraea</i>	Sessile Oak
0	1	0	1		Not separated from <i>Q. robur</i>
3	3	4	10	<i>Quercus robur</i>	Pedunculate Oak
0	3	3	6		Seedlings quite widespread but seldom surviving, also planted
5	5	5	15	<i>Ranunculus acris</i>	Meadow Buttercup
5	5	4	14		Frequent everywhere
0	1	0	1	<i>Ranunculus aquatilis</i>	Common Water-crowfoot
0	0	0	0		Flooded cutting, Hassendeanburn
1	2	0	3	<i>Ranunculus auricomus</i>	Goldilocks Buttercup
0	3	0	3		Woodland at Stobs and Whitlaw, grassland at Courthill
3	3	0	6	<i>Ranunculus bulbosus</i>	Bulbous Buttercup
0	1	0	1		On well-vegetated ballast
3	1	1	5	<i>Ranunculus flammula</i>	Lesser Spearwort
1	0	0	1		Wet places and flooded cuttings
0	0	1	1	<i>Ranunculus lingua</i>	Greater Spearwort
0	0	0	0		Margin of moss, Standhill

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5	5	5	15	<i>Ranunculus repens</i>	Creeping Buttercup
5	5	5	15		Frequent everywhere
0	0	1	1	<i>Ranunculus sceleratus</i>	Celery-leaved Buttercup
0	0	1	1		Ditch, Standhill
0	0	0	0	<i>Raphanus raphanistrum subsp. raphanistrum</i>	Wild Radish
0	1	0	1		Former casual
0	0	2	2	<i>Reseda luteola</i>	Weld
0	0	1	1		On cinder at Belses and Thornielaw
2	3	0	5	<i>Rhinanthus minor</i>	Yellow-rattle
2	1	2	5		Local, but with a few good colonies
0	0	2	2	<i>Ribes nigrum</i>	Black Currant
0	0	0	0		A few bushes
0	0	1	1	<i>Ribes rubrum</i>	Red Currant
2	2	2	6		A few bushes, Longnewton
0	2	0	2	<i>Ribes sanguineum</i>	Flowering Currant
0	1	0	1		A few bushes
1	2	3	6	<i>Ribes uva-crispa</i>	Gooseberry
0	4	3	7		Occasional bushes
0	1	0	1	<i>Rosa caesia subsp. caesia</i>	Hairy Dog-rose
0	0	0	0		Rare, Courthill
0	1	1	2	<i>Rosa caesia subsp. vosagiaca</i>	Glaucous Dog-rose
0	0	0	0		Rare, Whitlaw and Longnewton
3	4	3	10	<i>Rosa canina</i>	Dog-rose
0	2	1	3		Very frequent
5	5	5	15	<i>Rosa canina</i> agg.	Dog-rose
5	5	5	15		Frequent everywhere
3	4	5	12	<i>Rosa mollis</i>	Soft Downy-rose
1	2	2	5		Very frequent, especially on species-rich banks
3	4	5	12	<i>Rosa mollis</i> agg.	Downy-rose
5	5	5	15		Very frequent, especially on species-rich banks
0	2	3	5	<i>Rosa rubiginosa</i>	Sweet-briar
0	1	0	1		Several strong colonies on species-rich banks
1	1	0	2	<i>Rosa rugosa</i>	Japanese Rose
0	0	0	0		Planted and suckering at Shankend and Hawick
0	2	1	3	<i>Rosa sherardii</i>	Sherard's Downy-rose
0	1	4	5		Very local
0	2	0	2	<i>Rosa spinosissima</i>	Burnet Rose
0	1	0	1		Native at Whitlaw, planted hedge at Hawick
2	4	3	9	<i>Rosa x dumalis (R. caesia x canina)</i>	A hybrid Rose
1	2	0	3		Very frequent
0	0	1	1	<i>Rosa x molletorum (R. canina x mollis)</i>	A hybrid Rose
0	0	0	0		Belses. Hybrid roses were not searched for
0	1	0	1	<i>Rubus caesius</i>	Dewberry
0	0	0	0		By the Slitrig, Whitlaw
2	5	5	12	<i>Rubus fruticosus</i> agg.	Bramble
4	4	4	12		Widespread and locally dominant

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5	5	3	13	<i>Rubus idaeus</i>	Raspberry
5	5	3	13		Widespread and locally plentiful on banks
0	1	0	1	<i>Rubus saxatilis</i>	Stone Bramble
0	0	0	0		Embankment in Whitlaw Wood
5	5	5	15	<i>Rumex acetosa</i>	Common Sorrel
5	5	5	15		Frequent everywhere
0	1	0	1	<i>Rumex acetosella</i>	Sheep's Sorrel
5	4	3	12		Acreknowe, formerly abundant on cinder ballast
4	4	5	13	<i>Rumex crispus</i>	Curled Dock
4	3	5	12		Occasional but scarce
5	5	5	15	<i>Rumex obtusifolius</i>	Broad-leaved Dock
5	4	5	14		Frequent everywhere
2	4	4	10	<i>Rumex sanguineus</i>	Wood Dock
0	1	2	3		Occasional in shaded places
0	1	0	1	<i>Sagina filicaulis</i>	Upright Pearlwort
3	0	2	5		Now rare on cinder, Hawick
4	3	3	10	<i>Sagina procumbens</i>	Procumbent Pearlwort
5	3	1	9		On trackway in small quantity
5	1	0	6	<i>Salix aurita</i>	Eared Willow
4	1	0	5		Frequent on the higher ground
5	5	4	14	<i>Salix caprea</i>	Goat Willow
5	5	5	15		Plentiful almost everywhere
5	4	3	12	<i>Salix cinerea subsp. oleifolia</i>	Rusty Willow
2	3	1	6		Frequent, becoming local on the lower ground
0	0	0	0	<i>Salix myrsinifolia</i>	Dark-leaved Willow
2	1	0	3		Not refound at Whitrope Tunnel, Blakebillend or Whitlaw
0	1	1	2	<i>Salix pentandra</i>	Bay Willow
0	1	0	1		Possibly planted at Acreknowe, self-sown in flooded cutting
1	2	0	3	<i>Salix purpurea</i>	Purple Willow
0	1	0	1		At Whitrope, by the Slitrig and Teviot
0	0	0	0	<i>Salix repens</i>	Creeping Willow
0	1	0	1		Formerly at Acreknowe
1	1	1	3	<i>Salix viminalis</i>	Osier
2	3	3	8		Less frequent than formerly following redevelopment
1	1	0	2	<i>Salix x capreola (S. aurita x caprea)</i>	A hybrid Willow
0	0	0	0		With the parents
0	0	1	1	<i>Salix x fragilis sens. lat. (S. fragilis or S. alba x fragilis)</i>	Hybrid Crack-willow
1	1	2	4		Ale Water at Belses Mill
2	0	0	2	<i>Salix x fruticosa (S. aurita x viminalis)</i>	Shrubby Osier
0	0	0	0		Near the parents
1	0	0	1	<i>Salix x holosericea (S. cinerea x viminalis)</i>	Silky-leaved Osier
0	0	1	1		Near the parents, Blakebillend
3	0	0	3	<i>Salix x multinervis (S. aurita x cinerea)</i>	A hybrid Willow
0	0	0	0		With the parents
1	1	3	5	<i>Salix x reichardtii (S. caprea x cinerea)</i>	A hybrid Willow
0	0	0	0		With the parents

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0	1	0	1	<i>Salix x sepulcralis</i> <i>nothovar chrysocoma</i> (<i>S. alba</i> var. <i>vitellina</i> x <i>babylonica</i>) Weeping Willow
0	0	0	0	By the River Teviot
2	1	1	4	<i>Salix x smithiana</i> (<i>S. caprea</i> x <i>viminalis</i>) Broad-leaved Osier
1	0	1	2	Near the parents
0	0	0	0	<i>Salix x tetrapla</i> <i>S. myrsinifolia</i> x <i>phylicifolia</i>) A hybrid Willow
1	1	0	2	Formerly at Acreknowe
2	5	5	12	<i>Sambucus nigra</i> Elder
1	4	4	9	Frequent
0	0	0	0	<i>Sambucus racemosa</i> Red-berried Elder
0	0	1	1	Formerly at Standhill
0	0	1	1	<i>Sanguisorba officinalis</i> Great Burnet
0	0	1	1	A few colonies at Thornielaw
0	3	1	4	<i>Sanicula europaea</i> Sanicle
0	0	0	0	Where there is woodland
0	0	0	0	<i>Saxifraga granulata</i> Meadow Saxifrage
0	1	0	1	Formerly by the Slitrig, Whitlaw
0	3	0	3	<i>Saxifraga x urbium</i> (<i>S. spathularis</i> x <i>umbrosa</i>) Londonpride
0	1	0	1	Garden outcast naturalised at Hassendeanburn
0	1	0	1	<i>Scabiosa columbaria</i> Small Scabious
0	2	0	2	Good colonies at Whitlaw
1	2	0	3	<i>Schedonorus arundinaceus</i> Tall Fescue
0	0	0	0	Scarce
0	2	0	2	<i>Schedonorus giganteus</i> Giant Fescue
0	0	0	0	Scarce in woodland
0	0	0	0	<i>Schedonorus pratensis</i> Meadow Fescue
0	2	0	2	Not refound, records may relate to <i>S. arundinaceus</i>
0	1	0	1	<i>Scilla forbesii</i> Glory-of-the-snow
0	0	0	0	Established from dumping, Courthill
0	1	0	1	<i>Scorzoneroides autumnalis</i> Autumn Hawkbit
4	4	5	13	Rare, a plant of short turf
1	2	1	4	<i>Scrophularia nodosa</i> Common Figwort
3	4	0	7	Occasional in woodland, formerly also on ballast
0	0	1	1	<i>Sedum acre</i> Biting Stonecrop
4	3	1	8	Hassendean Station, losses to ballast removal and redevelopment
0	1	0	1	<i>Sedum album</i> White Stonecrop
0	0	0	0	Ruderal at Hawick
0	0	0	0	<i>Sedum rupestre</i> Reflexed Stonecrop
1	1	0	2	Lost to station redevelopment
4	4	5	13	<i>Senecio jacobaea</i> Common Ragwort
5	5	3	13	Occasional
0	0	0	0	<i>Senecio squalidus</i> Oxford Ragwort
1	3	1	5	Formerly on ballast
0	0	0	0	<i>Senecio sylvaticus</i> Heath Groundsel
0	1	1	2	Formerly on ballast
1	0	1	2	<i>Senecio viscosus</i> Sticky Groundsel
4	5	3	12	Formerly on ballast

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1	3	3	7	<i>Senecio vulgaris</i>	Groundsel
4	4	4	12		Scarce in disturbed ground, formerly on cinder
1	1	0	2	<i>Senecio vulgaris</i> subsp. <i>vulgaris</i> var. <i>hibernicus</i>	Groundsel (rayed form)
1	2	1	4		Rare, formerly on ballast
0	1	3	4	<i>Silaum silaus</i>	Pepper-saxifrage
0	2	4	6		Scarce on banks north from Courthill, formerly also on ballast
1	5	3	9	<i>Silene dioica</i>	Red Campion
1	3	0	4		Where there is woodland
3	0	0	3	<i>Silene flos-cuculi</i>	Ragged-Robin
3	1	0	4		Scarce in wet places
0	0	1	1	<i>Silene latifolia</i>	White Campion
0	0	0	0		Rare at Thornielaw
0	3	4	7	<i>Silene vulgaris</i>	Bladder Campion
1	5	3	9		Scattered in small colonies
0	0	1	1	<i>Silene x hampeana</i> (<i>S. dioica</i> x <i>latifolia</i>)	Hybrid Campion
0	0	0	0		With the parents, Thornielaw
0	0	1	1	<i>Sinapis arvensis</i>	Charlock
1	1	3	5		Disturbed ground
0	1	0	1	<i>Sisymbrium officinale</i>	Hedge Mustard
0	1	0	1		Disturbed ground
0	1	1	2	<i>Solanum dulcamara</i>	Bittersweet
0	1	0	1		Rock cutting at Whitlaw, Thornielaw
0	1	0	1	<i>Solanum lycopersicum</i>	Tomato
0	0	0	0		Riverside at Hawick
0	0	0	0	<i>Solidago gigantea</i>	Early Goldenrod
0	1	0	1		Formerly at Hawick
1	0	0	1	<i>Solidago virgaurea</i>	Goldenrod
1	1	0	2		Near Whitrope Tunnel
0	0	2	2	<i>Sonchus arvensis</i>	Perennial Sow-thistle
0	0	2	2		Colonies at Longnewton and Thornielaw
4	4	5	13	<i>Sonchus asper</i>	Prickly Sow-thistle
4	5	5	14		Occasional
0	1	0	1	<i>Sonchus oleraceus</i>	Smooth Sow-thistle
0	1	1	2		Disturbed ground
0	1	0	1	<i>Sorbus aria</i>	Common Whitebeam
0	1	0	1		Planted at Hawick
3	3	1	7	<i>Sorbus aucuparia</i>	Rowan
4	4	4	12		Widespread but scarce
0	1	1	2	<i>Sparganium erectum</i>	Branched Bur-reed
0	0	0	0		In flooded cuttings
0	0	0	0	<i>Spergula arvensis</i>	Corn Spurrey
0	2	0	2		Former casual
0	0	0	0	<i>Spergularia rubra</i>	Sand Spurrey
0	2	0	2		Formerly on cinder at Acreknowe and Hawick
0	0	0	0	<i>Spiraea</i> agg.	Bridewort
1	0	0	1		Formerly at Shankend station

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0	1	0	1	<i>Stachys palustris</i> Marsh Woundwort
0	1	1	2	Very scarce, Whitlaw
3	4	1	8	<i>Stachys sylvatica</i> Hedge Woundwort
4	2	2	8	Occasional
4	0	0	4	<i>Stellaria alsine</i> Bog Stitchwort
4	0	0	4	Wet places on the higher ground
5	4	3	12	<i>Stellaria graminea</i> Lesser Stitchwort
5	4	3	12	Frequent
4	5	0	9	<i>Stellaria holostea</i> Greater Stitchwort
4	5	1	10	Occasional
1	4	4	9	<i>Stellaria media</i> Common Chickweed
3	3	4	10	Occasional
0	1	0	1	<i>Stellaria nemorum</i> Wood Stitchwort
0	0	0	0	Riverside at Hawick
5	1	0	6	<i>Succisa pratensis</i> Devil's-bit Scabious
5	2	1	8	Frequent on the higher ground
1	4	1	6	<i>Symphoricarpos albus</i> Snowberry
0	2	1	3	Established in a few places
0	3	0	3	<i>Symphytum tuberosum</i> Tuberous Comfrey
0	0	0	0	Naturalised in a few places
2	2	0	4	<i>Symphytum x uplandicum</i> (<i>S. asperum x officinale</i>) Russian Comfrey
0	0	0	0	Naturalised in a few places
0	1	1	2	<i>Tanacetum parthenium</i> Feverfew
0	0	0	0	Garden escape in a few places
5	5	5	15	<i>Taraxacum</i> agg. Dandelion
5	5	5	15	Frequent everywhere
1	0	0	1	<i>Taraxacum faeroense</i> Marsh Dandelion
2	0	1	3	Wet places, Shankend
1	0	0	1	<i>Taxus baccata</i> Yew
0	0	0	0	Planted at Whitrope Tunnel
0	1	0	1	<i>Tellima grandiflora</i> Fringecups
0	0	0	0	Naturalised at Courthill
0	1	0	1	<i>Teucrium scorodonia</i> Wood Sage
0	1	0	1	Rock cutting at Whitlaw
2	0	0	2	<i>Thymus polytrichus</i> Wild Thyme
5	1	0	6	On ballast in a few places
0	0	1	1	<i>Tilia x europaea</i> Lime
0	0	0	0	Planted at Thornielaw
1	4	5	10	<i>Torilis japonica</i> Upright Hedge-parsley
1	3	5	9	Frequent on the lower ground
1	1	1	3	<i>Tragopogon pratensis</i> Goat's-beard
0	3	5	8	A few isolated plants
2	5	4	11	<i>Trifolium campestre</i> Hop Trefoil
0	5	3	8	Locally plentiful, especially on cinder
5	4	2	11	<i>Trifolium dubium</i> Lesser Trefoil
2	4	3	9	In more acidic habitats than <i>T. campestre</i>

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4	5	5	14	<i>Trifolium medium</i>	Zigzag Clover
4	5	5	14		Plentiful in many places
5	5	5	15	<i>Trifolium pratense</i>	Red Clover
5	5	4	14		Widespread but often rather scarce
5	5	5	15	<i>Trifolium repens</i>	White Clover
5	5	4	14		Frequent everywhere
0	0	0	0	<i>Triglochin palustris</i>	Marsh Arrowgrass
1	0	0	1		Not refound at Whitrope Tunnel
0	0	1	1	<i>Tripleurospermum inodorum</i>	Scentless Mayweed
1	1	0	2		Disturbed ground
4	5	5	14	<i>Trisetum flavescens</i>	Yellow Oat-grass
2	5	2	9		Frequent in species-rich grassland
0	0	1	1	<i>Triticum aestivum</i>	Bread Wheat
0	0	0	0		Casual at farm tip
1	0	0	1	<i>Trollius europaeus</i>	Globoseflower
1	0	0	1		Two small colonies on a wet bank at Shankend
4	4	5	13	<i>Tussilago farfara</i>	Colt's-foot
5	5	5	15		Frequent almost everywhere
2	4	4	10	<i>Ulex europaeus</i>	Gorse
1	3	3	7		Locally dominant in cuttings, but absent many areas
3	5	5	13	<i>Ulmus glabra</i>	Wych Elm
2	5	4	11		In woodland and self-sown on banks
5	5	5	15	<i>Urtica dioica</i>	Common Nettle
5	5	5	15		Frequent everywhere, seldom rampant
4	0	0	4	<i>Vaccinium myrtillus</i>	Bilberry
4	0	0	4		Small colonies on the higher ground
4	1	0	5	<i>Valeriana dioica</i>	Marsh Valerian
3	0	0	3		Wet places on the higher ground
2	1	1	4	<i>Valeriana officinalis</i>	Common Valerian
3	1	0	4		Scarce in wet places
0	0	0	0	<i>Valerianella locusta</i>	Common Cornsalad
0	2	0	2		Not refound at Whitlaw
0	0	0	0	<i>Verbascum nigrum</i>	Dark Mullein
0	1	0	1		Not refound at Hawick
0	2	2	4	<i>Verbascum thapsus</i>	Great Mullein
1	2	2	5		Several colonies on ballast
0	0	0	0	<i>Veronica agrestis</i>	Green Field-speedwell
0	1	0	1		Former casual
0	0	2	2	<i>Veronica anagallis-aquatica</i>	Blue Water-speedwell
0	0	1	1		In a ditch and a flooded cutting
4	4	3	11	<i>Veronica arvensis</i>	Wall Speedwell
4	1	2	7		Occasional, especially on cinder
4	5	5	14	<i>Veronica beccabunga</i>	Brooklime
3	1	1	5		In ditches and plentiful in flooded cuttings
5	5	5	15	<i>Veronica chamaedrys</i>	Germander Speedwell
5	5	5	15		Frequent everywhere

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0	1	0	1	<i>Veronica filiformis</i>	Slender Speedwell
0	0	0	0		In mown grass, Hawick
0	1	1	2	<i>Veronica hederifolia</i>	Ivy-leaved Speedwell
0	2	1	3		Very scarce
0	2	0	2	<i>Veronica montana</i>	Wood Speedwell
1	0	0	1		Very scarce in woodland
2	0	1	3	<i>Veronica officinalis</i>	Heath Speedwell
1	0	1	2		Very scarce
0	1	4	5	<i>Veronica persica</i>	Common Field-speedwell
1	1	2	4		Disturbed ground
1	0	0	1	<i>Veronica scutellata</i>	Marsh Speedwell
0	0	0	0		Wet ground at Shankend
5	5	5	15	<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell
2	2	1	5		Occasional everywhere
0	1	0	1	<i>Viburnum lantana</i>	Wayfaring-tree
0	2	0	2		Naturalised at Hassendeanburn
0	0	1	1	<i>Viburnum opulus</i>	Guelder-rose
0	0	1	1		Recent planting, Belses
5	5	5	15	<i>Vicia cracca</i>	Tufted Vetch
5	5	5	15		Frequent everywhere
2	4	2	8	<i>Vicia hirsuta</i>	Hairy Tare
0	4	3	7		Occasional in small quantity
3	3	0	6	<i>Vicia sativa subsp. nigra</i>	Narrow-leaved Vetch
0	1	0	1		Occasional in small quantity
0	0	1	1	<i>Vicia sativa subsp. sativa</i>	Common Vetch
0	0	0	0		Old railway yard at Hassendean Station
5	5	5	15	<i>Vicia sepium</i>	Bush Vetch
5	5	5	15		Frequent everywhere
1	1	0	2	<i>Vicia sylvatica</i>	Wood Vetch
1	1	0	2		Plentiful at Whitlaw, scarce on a spoil heap at Leap Burn
0	2	0	2	<i>Vicia tetrasperma</i>	Smooth Tare
0	0	0	0		Rare, with <i>V. hirsuta</i> at Acreknowe and Whitlaw
1	0	1	2	<i>Viola arvensis</i>	Field Pansy
0	1	0	1		Disturbed ground
0	0	0	0	<i>Viola hirta</i>	Hairy Violet
0	2	0	2		Not refound at Acreknowe or Hawick
1	0	0	1	<i>Viola lutea</i>	Mountain Pansy
0	0	0	0		One clump on ballast, Leap Burn
2	0	0	2	<i>Viola palustris</i>	Marsh Violet
0	0	0	0		Rare on the highest ground
5	4	5	14	<i>Viola riviniana</i>	Common Dog-violet
5	5	5	15		Frequent everywhere
0	0	0	0	<i>Viola x wittrockiana</i>	Garden Pansy
0	0	1	1		Former garden escape, Longnewton
0	0	1	1	<i>Vulpia myuros</i>	Rat's-tail Fescue
0	0	0	0		Old railway yard at Hassendean Station

The Railway Flora of Teviotdale revisited

0	1	0	1	<i>X Cuprocyparis leylandii</i> (<i>Cupressus macrocarpa</i> x <i>Xanthocyparis nootkatensis</i>) Leyland Cypress
0	0	0	0	Planted in Hawick
0	0	0	0	<i>X Dactyloдения sp.</i> (<i>Gymnadenia conopsea</i> x <i>Dactylorhiza fuchsii</i>) A hybrid Orchid
0	1	1	2	Not refound at Whitlaw

SURVEY METHODOLOGY

The two surveys

In the 1975 survey species lists were compiled for each of the fifteen survey sections. Where one section included parts of two tetrads (2x2 km squares) a list was made for the tetrad best represented and additional species recorded in the second tetrad were recorded separately. Only a few records were made at finer scales, these were 100m scale records for some of the scarcest species.

In planning the 2015 repeat survey, it was decided to record in greater detail. The methodology chosen was that developed for a survey of Hawick Burgh in 2014 in which all records were made at 100m scale.

It was never going to be possible to make lists for all 100x100m units. The best that could be hoped for was coverage of the fifteen survey sections, so there was a need to plan exactly what was to be done in the field. It was chosen to survey by survey sections, making a species list while walking along each survey section, frequently climbing the banks of cuttings and descending the banks of embankments to record the species-rich habitats in as much detail as possible in a visit of between two and three hours. A notebook was used, rather than a recording card, and the 100m GR was recorded from a wrist-held GPS for all records made. For the more widespread species, a record was made only for the first sighting in a survey section. For 'more interesting' species, those expected to be relatively scarce or to be especially good habitat indicators, separate records were made in every 100m unit where the species was found, often with supporting details such as 10m cell precision and quantity found. Each survey section was visited about three times over the season at around six-week intervals, a similar schedule to the 1975 survey. Full lists were made during at least two visits. More selective records were made during early-season visits and late-season visits, the latter targeted to record species overlooked during the two main recording visits.

The first visit in 1975 was on 17th March and the last on 7th October, the first visit in 2015 was on 14th February and the last on 12th August. Most of the recording in both surveys was carried out during the three months May, June and July.

An exception was made for the two sections partly covered by the author's survey of Hawick Burgh in 2014. Here the relevant 2014 records were accepted and the survey in 2015 focussed on the parts not covered in 2014 and in targeting species overlooked then.

There is some private housing on the old railway, part converted station buildings and part 'new build'. Such property was excluded from the survey area.

This methodology proved satisfying to carry out. As the survey area is fairly close to the author's home, he was out for a two to three hour session twice or thrice a week, never covering more than one survey section in an outing. That way he was able to work with a notebook remembering, good enough, what had or had not been recorded in a survey section on the day without using a recording card with a pre-printed list of species.

The fieldwork for the 1975 survey was carried out in the evenings after work and took around 60 hours: that for the 2014/2015 survey was carried out in the mornings and took around 100 hours. The reduced agility of the author is a compensating factor when comparing survey time, but the second survey was nevertheless more intensive than the first.

The records were entered in a specialist computer database programme, MapMate, where maps of individual species were generated. Further analysis of the records was carried out by exporting the records to an Excel spreadsheet.

The individual botanical records made during the two surveys are being shared with the BSBI vice-county recorder for Roxburghshire and, in turn, with the BSBI distribution database.

Species selection

The species recorded in the survey included all native plants and introductions whether naturalised or present as casuals or as clumps, often arising from dumped garden material, that perpetuate themselves by vegetative growth. Planted trees and shrubs were also recorded.

The microspecies of Hawkweed *Hieracium*, Dandelion *Taraxacum* and Bramble *Rubus* were not recorded.

References

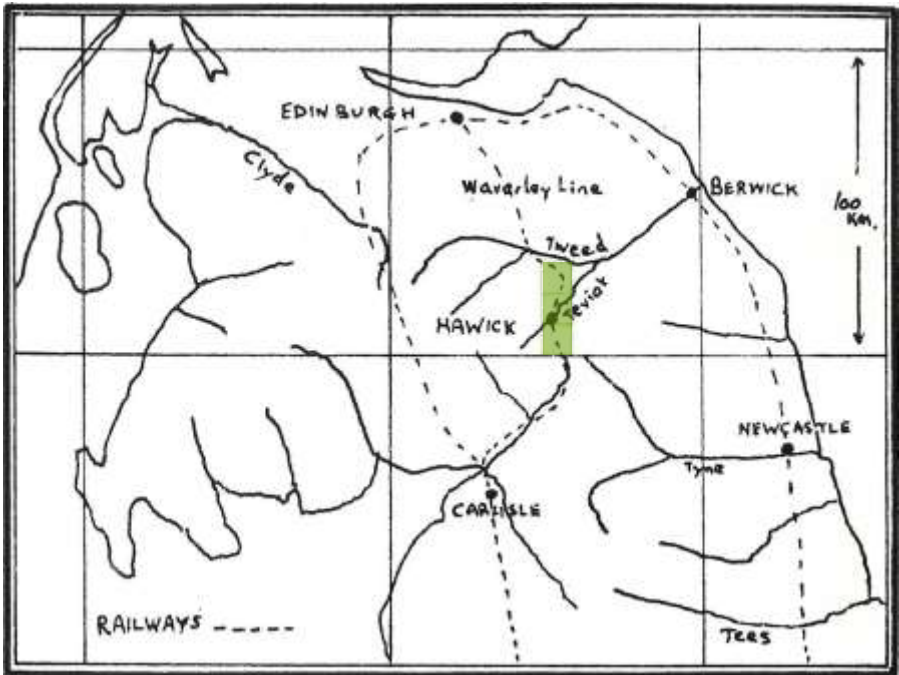
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The rich flora of a twenty-mile stretch of the disused Waverley Line railway between Carlisle and Edinburgh was surveyed in 1975, only a few years after the last train ran in 1969. The flora was resurveyed in 2015. The changes over the forty-year period have been considerable and have included many surprises. The flora remains very rich for the area and the orchid on the front cover is one of its delights.



Front cover – Common Twayblade *Neottia ovata*