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## Electric Scotland's Weekly Newsletter for September 14th, 2018

To see what we've added to the Electric Scotland site view our What's New page at:

<http://www.electricscotland.com/whatsnew.htm>

To see what we've added to the Electric Canadian site view our What's New page at:

<http://www.electriccanadian.com/whatsnew.htm>

For the latest news from Scotland see our ScotNews feed at:

<https://electricscotland.com/scotnews.htm>

### Electric Scotland News

Our Help program is now working again.

I got our recipe program back again but have to say that I've decided not to make use of it as it would take a lot of work to make it a worthwhile resource and there are really some very good ones on Google.

#### Mailing List

This program is not working currently but again am working on this and hope to get this fixed by next week.

#### Postcard program

I have placed an order for an upgrade to this program and purchased an install option so I hope this will be working by next week.

As to the Arcade in the community. The software company isn't offering any support anymore so this might be an issue in getting it working again but trying to contact Steve to see if he had a copy of the folder we are missing.

Printer Friendly.. we got this working on a test page but somehow it got overwritten so we're still working on this.

We'll get there.

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Here is the video introduction to this newsletter...

<https://youtu.be/pndTjwbBl60>

#### Scottish News from this weeks newspapers

Note that this is a selection and more can be read in our ScotNews feed on our index page where we list news from the past 1-2 weeks. I am partly doing this to build an archive of modern news from and about Scotland as all the newsletters are archived and also indexed on Google and other search engines. I might also add that in newspapers such as the Guardian, Scotsman, Courier, etc. you will find many comments which can be just as interesting as the news story itself and of course you can also add your own comments if you wish.

#### Smacking ban bill published at Holyrood

The bill, lodged by Green MSP John Finnie, has been backed by the government and looks certain to pass.

Read more at:

<https://www.bbc.co.uk/news/uk-scotland-45437473>

Disney delight on the streets of Stornoway

The wonder of Disney came to Stornoway this afternoon thanks to the Western Isles Lifestyle Lottery,

Read more at:

<https://www.stornowaygazette.co.uk/lifestyle/disney-delight-on-the-streets-of-stornoway-1-4793501>

Celebrating 200 years of civil engineering in Scotland

The Institution of Civil Engineers (ICE) in Scotland celebrates its 200th anniversary this year, the organisation is keen to open our eyes to the innovations its unsung heroes have helped to design, create and continue to maintain.

Read more at:

<https://www.stornowaygazette.co.uk/lifestyle/celebrating-200-years-of-civil-engineering-in-scotland-1-4793275>

Enjoy an adventure on Scotland's Storybook Trail

Several years ago it was feared electronic devices would soon replace paper and hardback books in the nation's hearts.

Read more at:

<https://www.stornowaygazette.co.uk/lifestyle/enjoy-an-adventure-on-scotland-s-storybook-trail-1-4793370>

From sands to standing stones, Orkney's an oasis of attractions

WHAT would make the ideal holiday isle? An oasis awash with epic sandy beaches? Or one swimming with historic sites, cute villages and bountiful wildlife?

Read more at:

<https://www.sundaypost.com/fp/travel-from-sands-to-standing-stones-orkneys-an-oasis-of-attractions/>

Exiting the EU

Some factual background to where we now are

Read more at:

<http://johnredwoodsdiary.com/2018/09/10/exiting-the-eu-some-factual-background-to-where-we-now-are>

Why a World Trade Deal - Brexit on WTO terms - would be highly advantageous

Today Economists For Free Trade publish A World Trade Deal: The Complete Guide

Read more at:

<https://brexitcentral.com/world-trade-deal-brexit-wto-terms-highly-advantageous/>

A World Trade Deal

The Complete Guide

Read this at:

<https://www.economistsforfreetrade.com/wp-content/uploads/2018/09/A-World-Trade-Deal-The-Complete-Guide-Final-Upload.pdf>

Sort Brexit and then rebuild our national pride

THE sooner we leave the European Union the better. That is the conclusion I have reached after talking to my granddaughter, 26, who is soon to embark on a career as a fully-fledged GP.

Read more at:

<https://www.yorkshirepost.co.uk/news/opinion/bernard-ingham-sort-brexit-and-then-rebuild-our-national-pride-1-9344629>

The Queen's Diamond Jubilee Portrait Undertakes a Canada Cross-Country Tour

This initiative will allow for more Canadians to see the painting in person and is meant to honour and pay tribute to Her Majesty's ongoing and unwavering service.

Read more at:

<http://www.gg.ca/document.aspx?id=17147&lan=eng>

Why Scots words like splorrach can't be allowed to die

The reemergence of lost words - like splorrach, clawscrunt and gralloch - would have delighted Scotland's lexicographical pioneers, writes Martyn McLaughlin.

Read more at:

<https://www.scotsman.com/news/opinion/martyn-mclaughlin-why-scots-words-like-splorrach-can-t-be-allowed-to-die-1-4798328>

European Research Group publishes guide to keeping the Irish border invisible post-Brexit  
The paper, The Border between Northern Ireland and the Republic of Ireland post-Brexit, reminds us that both the UK and EU have committed to introduce no new physical infrastructure at the border

Read this at:

<https://brexitcentral.com/european-research-group-publishes-guide-keeping-irish-border-invisible-post-brexit/>

A new batch of contingency planning documents has been released by the government.  
The paper, The Border between Northern Ireland and the Republic of Ireland post-Brexit, reminds us that both the UK and EU have committed to introduce no new physical infrastructure at the border.

Read more at:

<https://brexitcentral.com/european-research-group-publishes-guide-keeping-irish-border-invisible-post-brexit/>

## Electric Canadian

Canada and its Provinces

Added Volume XII. The Dominion: Missions; Arts and Letters Part II. which you can read at:

<https://www.electriccanadian.com/history/canadaprovinces.htm>

The Engineering Journal

Added the volume for 1952.at: <https://www.electriccanadian.com/transport/industrial/index.htm>

Includes topics on: The Engioneer in the Labour Force, Circuit Breaker Testing, Small Pipe System for Warm Air Heating, Slow Braking of Mine Hoists, Water is a Forest Product, A Helluva Shortage of Engineers, Obituaries, etc.

Mining Review

Added the volume for 1904 at: <https://www.electriccanadian.com/transport/mines/mining.htm>

Oceana Canada

Seafood Fraud and Mislabelling Across Canada

Seafood fraud is a global problem that hurts our health, our wallets and our oceans. A 2016 review of more than 200 published studies from 55 countries found that one in five seafood samples were mislabelled.

Results of testing done by Oceana Canada in 2017 and 2018 show that Canada is no exception. Of the nearly 400 samples tested from food retailers and restaurants in five cities, 44 per cent were mislabelled.

Read the report at: <https://oceana.ca/en>

My Canadian Journal

Added some additional information which you can read at:

[https://www.electriccanadian.com/canada\\_add.htm](https://www.electriccanadian.com/canada_add.htm)

The Life and Times of Sir Leonard Tilley

Being a Political History of New Brunswick for the past seventy years by James Hannay (1897) (pdf)

You can read this at:

<https://www.electriccanadian.com/makers/lifetimesofsirle00hannuoft.pdf>

Lithographical Views of Military Operations in Canada

Under His Excellency Sir John Colborne, G.C.B., during the late insurrection from Sketches by Lord Charles Beauclerk, Captain, Royal Regiment accompanies by notes historical and descriptive. (1850) (pdf)

You can read this at:

<https://www.electriccanadian.com/forces/militaryoperationsinCanada.pdf>

Statistical Sketches of Upper Canada

For the use of Emigrants by a Backwoodsman (Third Edition) (1833) (pdf)

You can read this at: <https://www.electriccanadian.com/pioneering/sketches-upper-canada.pdf>

Conrad Black

A NAFTA deal is achievable — which is a lucky thing for Canada

<http://www.conradmblack.com/1416/a-nafta-deal-is-achievable-which-is-a-lucky-thing>

Trump and His Enemies

<http://www.conradmblack.com/1417/trump-and-his-enemies>

## Electric Scotland

Duncan McIntyre and the Search for Leichhardt

By J.C.H. Gill, M.B.E., B.A., LL.B., F.R.Hist.S.Q.

You can read this at: <https://electricscotland.com/webclans/m/mcintyreaus.pdf>

Father Duncan McNab

By Bill Worth (pdf)

A great defender of the native people in Australia.

You can read this at: <https://electricscotland.com/history/australia/fatherduncanmcnab.pdf>

The Reign of Law

By the Duke of Argyll (1868) (Fifth Edition) (pdf)

You can read this at: <https://electricscotland.com/history/law/lawreignof.pdf>

The James Hutton Institute

Women in Science (pdf)

You can read this at: <https://electricscotland.com/history/women/publication.pdf>

Lessons in Combat Service Support Tactical Mobility

The Afghanistan Conflict, Falklands War and Operation Desert Shield/Desert Storm, A Monograph by Major Carol D. Clair  
Transportation (1993) (pdf)

You can read this at: <https://electricscotland.com/history/scotreg/lessonsofconflict.pdf>

Narrative of a Voyage to India

Of Shipwreck on board the Lady Castlereach and a description of New South Wales by W. B. Cramp (1823) (pdf)

You can read this at: <https://electricscotland.com/history/india/narrativeofvoyage.pdf>

Old Manawatu

Or The Wild Days of the West in New Zealand by T. Lindsay Buick, J. P. (1903) (pdf)

You can read this at: <https://electricscotland.com/history/nz/oldmanawatanz.pdf>

A World Trade Deal

The Complete Guide by Economists for Free Trade and published this week to explore what an agreement with the EU on doing a no deal under WTO terms.

You can read this at:

<https://electricscotland.com/independence/sip/A-World-Trade-Deal-The-Complete-Guide.pdf>

Minstrelsy, Ancient and Modern

With an Historical Introduction and Notes by William Motherwell in two volumes (1846)

You can read this at: <https://electricScotland.com/poetry/minstrelsy.htm>

Border between Northern Ireland and the Republic of Ireland post-Brexit

By the European Research Group (pdf) which explores how the border between N. Ireland and Ireland can be handled post Brexit.

You can read this report at:

<https://electricScotland.com/independence/sip/The-Border-between-Northern-Ireland-and-the-Republic-of-Ireland.pdf>

Guide Book to Tomintoul, Banffshire

The Highest Village in Scotland (pdf) to which I've added a couple of videos. The guide can be read at:

<https://www.electricScotland.com/history/moray/tomintoul.pdf> and the videos can be viewed at:

<https://www.electricScotland.com/history/moray/>

## The Story

Scottish agritech business Intelligent Growth Solutions unveils first vertical indoor facility to revolutionise global horticulture market



IGS technology set to address key challenges facing global indoor farming market

24 August 2018 - Intelligent Growth Solutions Ltd (IGS), the Scottish-based agritech business, has today unveiled its first indoor vertical farming demonstration facility. Based at the James Hutton Institute, Perthshire, it is arguably the world's most technically advanced indoor farm.

The IGS facility utilises its ground-breaking, patented power and communications technologies to address the key challenges facing the indoor farming industry. Fundamental barriers of cost of power and labour have inhibited the sector's expansion to date, as well as the inability to produce consistent and quality produce at scale. The IGS technology has been designed to overcome these barriers and significantly lower the cost of production overall.

With global market growth predicted at 24 per cent over the next three years, the opportunities for IGS are substantial, with over 95 per cent of its technology solutions expected to be exported. IGS will not be producing crops for sale, but will be collaborating with growers, retailers and international organisations to deliver the hardware and software platforms to revolutionise indoor growing environments.

Approximately 150 jobs are expected to be created by 2021 in areas such as software, data, engineering, robotics and automation. Significant demand is already being realised amongst growers, retailers and national governments aiming to address food security issues and alternative methods of production in their regions.

Vertical farming offers huge reductions in water wastage, the elimination of the use of pesticides and a huge reduction in food miles. It allows produce to be grown locally and on demand, which could reduce fresh food waste by up to 90 per cent.

The Scottish-led team at IGS has developed, patented and productised a breakthrough, IOT-enabled power and communications platform consisting of patented electrical, electronic and mechanical technologies. All this is managed by a SaaS & data platform using AI to deliver economic and operational benefits to indoor growing environments across the globe. This technical solution enables the

reduction of energy usage by 50 per cent and labour costs by 80 per cent when compared with other indoor growing environments. It also can produce yields of up to 200 per cent more than that of a traditional greenhouse.

David Farquhar, CEO of IGS commented: "The opportunity to unveil Scotland's first vertical farm, and arguably the world's most technically advanced indoor facility, is a hugely exciting one for the whole team. As a Scottish-founded and led team we have captured horticultural, engineering and software skills from within Scotland to make this business flourish.

"The global horticulture market is crying out for new approaches to enhancing food production in terms of yield, quality and consistency. It is also searching for ways to reduce power consumption and labour costs and our technology has been designed to fundamentally address this.

"Annual industry spend exceeds \$10 billion with compound annual growth of 24 per cent. We are well positioned to help our customers profitably expand their businesses on the back of this growth."

The location of IGS' first vertical farm at the James Hutton Institute, a world leading crop research facility, was deliberately chosen to enhance collaboration opportunities. Scientists and researchers at the Institute will be working with the team at IGS to better understand how growing under lights can impact different varieties of crop growth, as well as drive increased productivity.

Professor Colin Campbell, CEO of James Hutton Institute commented: "There have been fantastic synergies coming out of the combination of the IGS technologies and Hutton's cutting-edge plant science and collaboration. There are genuine potential game-changing opportunities both for new and conventional horticultural and agricultural systems that can come from our collaboration.

"The fact that Scottish innovation and Scottish science have again led the world with something that has massive economic potential locally, as well as globally, with benefits for the environment due to more efficient energy, water and nutrient use is hugely exciting."

IGS was established in 2013 as an indoor horticulture business with a vision to deliver commercial viability to the vertical farming model by improving productivity - yield, quality and consistency - whilst dramatically driving down the cost of power and labour through Total Controlled Environment Agriculture (TCEA).

John Swinney, MSP for Perthshire North and Deputy First Minister of Scotland unveiled the plaque to mark the official launch of Scotland's first vertical farm.

Ends

IGS was formed in 2013 [www.intelligentgrowthsolutions.com](http://www.intelligentgrowthsolutions.com). Its purpose was to bring indoor horticulture to commercial reality by combining efficient internet-enabled smart lighting with automation and power management. The founders' experience combined extensive knowledge of horticulture, industrial automation and big data.

It launched its first indoor vertical demonstration facility in August 2018. David Farquhar was appointed CEO of IGS in November 2017. A seasoned transformation and business growth technology entrepreneur, he joined the company to drive its global expansion and raise its next funding round.

About James Hutton Institute:

The James Hutton Institute is a world-leading, multi-site scientific organisation encompassing a distinctive range of integrated strengths in land, crop, waters, environmental and socio-economic science. The Institute has a staff of nearly 550 and 125 PhD students, and takes its name from the 18th-century Scottish Enlightenment scientist, James Hutton, widely regarded as the founder of geology, a farmer and pioneering agronomist. [www.hutton.ac.uk](http://www.hutton.ac.uk)

And that's it for this week and hope you have a great weekend.

Alastair